

[Start Lab](#)

01:07:30

APIs Explorer: Cloud Storage

 Lab  45 minutes  No cost  Introductory**GSP421**

Google Cloud Self-Paced Labs

Storage

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Google Cloud Self-Paced Labs

Lab instructions and tasks

GSP421

Overview

Setup and requirements

Task 1. Create Cloud Storage Buckets



Task 2. Make a second Cloud Storage bucket

Task 3. Upload files to your Cloud Storage bucket

Task 4. Copy files between Cloud Storage buckets

Task 5. Delete files from a Cloud Storage bucket

Task 6. Delete your Cloud Storage bucket

Task 7. Test your understanding

Congratulations!

Storage

Lab 45 minutes No cost Introductory



GSP421



Google Cloud Self-Paced Labs

How to start your lab and sign in to the Google Cloud console

1. Click the **Start Lab** button. If you need to pay for the lab, a pop-up opens for you to select your payment method. On the left is the **Lab Details** panel with the following:

- The **Open Google Cloud console** button
- Time remaining
- The temporary credentials that you must use for this lab
- Other information, if needed, to step through this lab

2. Click **Open Google Cloud console** (or right-click and select **Open Link in Incognito Window** if you are running the Chrome browser).

The lab spins up resources, and then opens another tab that shows the **Sign in** page.

Tip: Arrange the tabs in separate windows, side-by-side.

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Note: To view **Credentials FAQs**, click on the question mark icon next to **Credentials** title.

7. Click the **Execute** button.
8. Select the student account you started the lab with.
9. On the next screen, click **Allow** to give APIs Explorer access.

Your response should resemble the following:

```
{  
  "kind": "storage#bucket",  
  "id": "qwiklabs-bucket01",  
  "selfLink": "https://www.googleapis.com/storage/v1/b/qwiklabs-  
bucket01",  
  "projectNumber": "250399850182",  
  "name": "qwiklabs-bucket01",  
  "timeCreated": "2019-10-18T13:59:08.300Z",  
  "updated": "2019-10-18T13:59:08.300Z",  
  "metageneration": "1",  
  "iamConfiguration": {  
    "bucketPolicyOnly": {  
      "enabled": false  
    },  
    "uniformBucketLevelAccess": {  
      "enabled": false  
    }  
  },  
  "location": "US",  
  "locationType": "multi-region",  
  "storageClass": "STANDARD",  
  "etag": "CAE="
```

Click *Check my progress* to verify the objective.



Create a Cloud Storage Bucket.

[Check my progress](#)

Task 2. Make a second Cloud Storage bucket

Now make another Cloud Storage bucket so you can get hands-on practice copying files between the two.

1. Still, in the `insert` method, ensure that your Project ID is still in the project field.
2. In the request body, for the `name` key-value pair, give your second bucket a unique name.
3. Make sure that there are no trailing spaces in any of the fields.
4. Click the **Execute** button. Your response should resemble the following:

```
{  
  "kind": "storage#bucket",  
  "id": "qwiklabs-bucket02",  
  "selfLink": "https://www.googleapis.com/storage/v1/b/qwiklabs-  
bucket02",  
  "projectNumber": "250399850182",  
  "name": "qwiklabs-bucket02",  
  "timeCreated": "2019-10-18T13:59:08.300Z",  
  "updated": "2019-10-18T13:59:08.300Z",  
  "metageneration": "1",  
  "iamConfiguration": {  
    "bucketPolicyOnly": {  
      "enabled": false  
    },  
    "uniformBucketLevelAccess": {  
      "enabled": false  
    }  
  },  
  "location": "US",  
  "locationType": "multi-region",  
  "storageClass": "STANDARD",  
  "etag": "CAE="
```

You have successfully created two buckets with the `insert` method. Next you'll find them in the Cloud console.

Click *Check my progress* to verify the objective.



Make a second Cloud Storage bucket.

[Check my progress](#)

View your Cloud Storage buckets in the Cloud console

1. Return to the Cloud console and from the **Navigation menu** go to **Cloud Storage** to ensure that your Cloud Storage buckets were created.
2. From the **Navigation menu** select **Cloud Storage > Buckets**. You should see your newly created buckets added.

Remain in the Cloud console for the following step. Keep the APIs Explorer tab open.

Task 3. Upload files to your Cloud Storage bucket



View your Cloud Storage buckets in the Cloud console

1. Return to the Cloud console and from the **Navigation menu** go to **Cloud Storage** to ensure that your Cloud Storage buckets were created.
2. From the **Navigation menu** select **Cloud Storage > Buckets**. You should see your newly created buckets added.

Remain in the Cloud console for the following step. Keep the APIs Explorer tab open.

Task 3. Upload files to your Cloud Storage bucket



2. Now save this public domain image of [Ada Lovelace](#) to your computer and name it **demo-image2.png**:





3. In the Cloud Storage browser select the first bucket from the list.

4. Click **Upload files** and select **demo-image1.png** and **demo-image2.png** from your computer.

Your bucket should now have both image files added to it and should resemble the following:

qwiklabs-bucket01									
Objects		Overview	Permissions	Bucket Lock					
Upload files Upload folder Create folder Manage holds Delete									
Buckets / qwiklabs-bucket01									
Name	Size	Type	Storage class	Last modified	Public access	Encryption	Retention expiration date		
demo-image1.png	392.53 KB	image/png	Standard	10/18/19, 7:37:55 PM UTC+5:30	Not public	Google-managed key	–		
demo-image2.png	2 MB	image/png	Standard	10/18/19, 7:37:58 PM UTC+5:30	Not public	Google-managed key	–		

Click *Check my progress* to verify the objective.

Upload Files to Your Cloud Storage Bucket (demo-image1.png and demo-image2.png)

[Check my progress](#)

Next, you will copy one of the image files to your second Cloud Storage bucket.

Task 4. Copy files between Cloud Storage buckets

1. From the left APIs & Reference section, navigate to **JSON API > API reference > Objects > copy** to copy method or, to copy files between storage buckets using API Explorer, use the [Objects: copy reference](#).

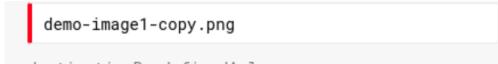
2. Update as follows:

- **sourceBucket**: type in the name of the bucket that contains the demo image files.
- **sourceObject**: enter in **demo-image1.png**.
- **destinationBucket**: enter intype the name of your second (empty) bucket.
- **destinationObject**: type in **demo-image1-copy.png**.

Your method should resemble the following:

Request parameters

sourceBucket	qwiklabs-bucket01
sourceObject	demo-image1.png
destinationBucket	qwiklabs-bucket02
destinationObject	



demo-image1-copy.png

3. Make sure that **Google OAuth 2.0** and **API key** checkboxes are selected under **Credentials** section.

Note: To view **Credentials FAQs**, click on question mark icon next to **Credentials** title.

4. Make sure that there are no trailing spaces in any of the fields.

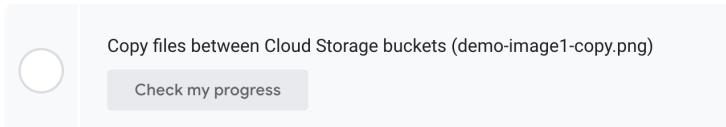
5. Now scroll down and click **Execute**.

You should receive a similar output:

```
{  
  "kind": "storage#object",  
  "id": "qwiklabs-bucket02/demo-image1-copy.png/1571408245199237",  
  "selfLink": "https://www.googleapis.com/storage/v1/b/qwiklabs-  
bucket02/o/demo-image1-copy.png",  
  "name": "demo-image1-copy.png",  
  "bucket": "qwiklabs-bucket02",  
  "generation": "1571408245199237",  
  "metageneration": "1",  
  "contentType": "image/png",  
  "timeCreated": "2019-10-18T14:17:25.198Z",  
  "updated": "2019-10-18T14:17:25.198Z",  
  "storageClass": "STANDARD",  
  "timeStorageClassUpdated": "2019-10-18T14:17:25.198Z",  
  "size": "401951",  
  "md5Hash": "LbpHpwknApQKQx9IEXjTsQ==",  
  "mediaLink":  
    "https://www.googleapis.com/download/storage/v1/b/qwiklabs-  
bucket02/o/demo-image1-copy.png?generation=1571408245199237&alt=media",  
  "owner": {  
    "entity": "user-gcpstaging93416_student@qwiklabs.net"  
  },  
  "crc32c": "j5oPrg==",  
  "etag": "CIWjgvL/peUCEAE="  
}
```

You have successfully copied a file from one bucket to another using the `objects.copy` method.

Click *Check my progress* to verify the objective.



Copy files between Cloud Storage buckets (demo-image1-copy.png)

Check my progress

View your updated bucket in the Cloud console

1. Return to the Cloud console for this step. You should have left off on your Cloud Storage bucket details page.
2. From the left-hand menu, click **Buckets** and select your second bucket. You should see the copy of **demo-image1.png** added.

Task 5. Delete files from a Cloud Storage bucket

1. From the left APIs & Reference section navigate to **JSON API > API reference > Objects > delete** or, to delete files from a Cloud Storage bucket using API Explorer, use the [Objects: delete reference](#).

2. Now you'll delete an image file from a Cloud Storage bucket.

- **bucket:** enter in the name of your bucket that contains both demo image files.
- **object:** enter in **demo-image1.png**. Your method should resemble the following:

Request parameters

bucket	qwiklabs-bucket01
object	demo-image1.png

3. Make sure that **Google OAuth 2.0** and **API key** checkboxes are selected under **Credentials** section.

Note: To view **Credentials FAQs**, click on question mark icon next to **Credentials** title.

4. Make sure that there are no trailing spaces in any of the fields.

5. Now scroll down and click **Execute**.

You should receive a similar output as below:



6. Now remove the second image from the Cloud Storage bucket. Still in the same method, for the **object** field, enter in **demo-image2.png**. Your bucket name will remain the same. Your method should resemble the following:

Request parameters

bucket	qwiklabs-bucket01
object	demo-image2.png

7. Now scroll down and click **Execute**. You should receive a similar output:



You have successfully deleted files from a bucket using the `objects.delete` method. You will now view your removed file in the Cloud console.

View your updated bucket in the Cloud console

1. Return to the Cloud console for this step. You should have left off on your Cloud Storage bucket details page.

2. From the left-hand menu, click **Buckets** and select your first bucket. You should see that both images have been removed.

Task 6. Delete your Cloud Storage bucket

- From the left APIs & Reference section navigate to [JSON API > API reference > Buckets > delete](#) to `buckets.delete` method or, to delete a Cloud Storage bucket using API Explorer, use the [Buckets: delete reference](#).

You will now delete your first (empty) Cloud Storage bucket.

- For the **bucket** field, enter in the name of your first bucket. Your method should resemble the following:

The screenshot shows a 'Request parameters' section of an API Explorer. It has a single input field labeled 'bucket' with the value 'qwiklabs-bucket01' entered.

- Make sure that **Google OAuth 2.0** and **API key** checkboxes are selected under **Credentials** section.

Note: To view **Credentials FAQs**, click on question mark icon next to **Credentials** title.

- Make sure that there are no trailing spaces in any of the fields.

- Now scroll down and click **Execute**. You should receive a similar output:



You have successfully deleted a bucket using the `buckets.delete` method.

View your updated bucket in the Cloud console

- Return to the Cloud console for this step. You should have left off on the Details page.
- From the left-hand menu, click **Buckets**. You should see that your first bucket has been removed.

You have successfully completed all steps of the lab. You can end your lab here, or experiment with some new methods in the remaining time.

Task 7. Test your understanding

Below are multiple-choice questions to reinforce your understanding of this lab's concepts. Answer them to the best of your abilities.

The screenshot shows a multiple-choice question. The statement is: 'Each bucket has a default storage class, which you can specify when you create your bucket.' There are two options: 'True' and 'False'. The 'True' option is preceded by a radio button.

Each bucket has a default storage class, which you can specify when you create your bucket.

True

	<input checked="" type="radio"/> False
	<input checked="" type="radio"/> Every bucket must have a unique name across the entire Cloud Storage namespace.
	<input checked="" type="radio"/> True
	<input checked="" type="radio"/> False

	Cloud Storage offers four storage classes:
	<input type="checkbox"/> Multi-Regional Storage
	<input type="checkbox"/> Nearline Storage
	<input type="checkbox"/> Local storage
	<input checked="" type="checkbox"/> Regional Storage
	<input type="checkbox"/> Cross region storage
	<input type="checkbox"/> Coldline Storage
	<input type="button" value="Submit"/>

Congratulations!

In this lab you created Cloud Storage buckets with the APIs Explorer. You also copied and deleted image files with specific APIs Explorer methods. After deleting image files, you learned how to delete an entire bucket with the `delete` method. At this point, you have a solid understanding of Cloud Storage and how you can provision this service's methods through the APIs Explorer.

Finish your quest

This self-paced lab is part of the [Exploring APIs](#) quest. A quest is a series of related labs that form a learning path. Completing this quest earns you a badge to recognize your achievement. You can make your badge or badges public and link to them in your online resume or social media account. [Enroll in this quest](#) and get immediate completion credit. Refer to the [Google Cloud Skills Boost catalog](#) for all available quests.

Next steps / Learn more

For more practice with the APIs Explorer, try this lab:

[APIs Explorer: Create and Update a Cluster](#)

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skills and best practices to help you get up to speed quickly and continue your learning journey. We offer fundamental to advanced level training, with on-demand, live, and virtual options to suit your busy schedule. [Certifications](#) help you validate and prove your skill and expertise in Google Cloud technologies.

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