

Storing and managing build logs

When you run builds, Cloud Build collects and stores your build logs. This page explains how to store, view, and delete build logs.

Storing build logs in Cloud Storage

By default, Cloud Build stores build logs in both Logging and Cloud Storage. In your Cloud Build configuration file, add a `logging`

(</cloud-build/docs/api/reference/rest/v1/projects.builds#loggingmode>) field to store build logs in Logging or Cloud Storage. To store build logs only in Cloud Storage:

1. In your build config file, set the `loggingMode` field to `GCS_ONLY`:

YAMLJSON (#json)

```
steps:
- name: 'gcr.io/cloud-builders/docker'
  args: ['build', '-t', 'gcr.io/myproject/myimage', '.']
options:
  logging: GCS_ONLY
```

2. Use the build config file to [manually start a build](/cloud-build/docs/running-builds/start-build-manually)

(</cloud-build/docs/running-builds/start-build-manually>) or to [automate builds using triggers](/cloud-build/docs/automating-builds/create-manage-triggers) (</cloud-build/docs/automating-builds/create-manage-triggers>).

Storing build logs in the default Google-created bucket

By default, Cloud Build stores your build logs in a Google-created Cloud Storage bucket. You can view build logs store in the Google-created Cloud Storage bucket, but you cannot make any other changes to it. If you require full control over your logs bucket, store the logs in a user-created Cloud Storage bucket.

Storing build logs in a user-created bucket

IAM permissions:

- If your Cloud Storage bucket and Cloud Build are in the same Cloud project, your Cloud Build service account has the necessary IAM permissions by default. You do not have to grant any additional permissions.
- If your Cloud Storage bucket and Cloud Build are in different Cloud projects, grant the **Storage Admin** role to the **Cloud Build service account**:

1. Open the IAM page:

[Open the IAM page \(https://console.cloud.google.com/iam-admin/iam\)](https://console.cloud.google.com/iam-admin/iam)

2. Select the project in which you're running builds using Cloud Build.
3. In the permissions table, locate the email address ending with `@cloudbuild.gserviceaccount.com` and note it down. This is your Cloud Build service account.
4. Open the IAM page in the project where your Cloud Storage bucket is located:

[Open the IAM page \(https://console.cloud.google.com/iam-admin/iam\)](https://console.cloud.google.com/iam-admin/iam)

5. Click **Add**.
6. Enter the email address of the Cloud Build service account.
7. Select **Cloud Storage > Storage Admin**.
8. Click **Save**.

To specify a Cloud Storage bucket to store build logs:

1. In your Cloud project, [create a Cloud Storage bucket](#) (`/storage/docs/creating-buckets#storage-create-bucket-console`) to store your build logs.
2. In your config file, add a `logsBucket` field pointing to the Cloud Storage bucket that you created to store build logs. The following example build config file contains instructions to build a container image and store the build logs in a bucket named `mylogsbucket`:

YAMLJSON (#json)

```
steps:  
- name: 'gcr.io/cloud-builders/docker'  
  args: [ 'build', '-t', 'gcr.io/myproject/myimage', '.' ]  
logsBucket: 'gs://mylogsbucket'
```

3. Use the build config file to manually start a build

(/cloud-build/docs/running-builds/start-build-manually) or to automate builds using triggers

(/cloud-build/docs/automating-builds/create-manage-triggers).

When the build completes, Cloud Build stores the logs in the Cloud Storage bucket you specified in the build config file.

Viewing build logs

IAM permissions:

- If your build logs are in the **default Google-created Cloud Storage bucket**, grant the **Project Viewer** role on the project where the build is configured to members who want to view build logs:

1. Open the IAM page:

[Open the IAM page \(https://console.cloud.google.com/iam-admin/roles\)](https://console.cloud.google.com/iam-admin/roles)

2. Select your project and click **Open**.
3. In the permissions table, locate the email ID of the member and click on the pencil icon.
4. Select **Project > Viewer** role.
5. Click **Save**.

★ **Note:** Project Owner and Project Editor roles also allow members to view build logs from the default Cloud Storage bucket. This is because the Owner role includes the permissions in the Editor role, and the Editor role includes the permissions in the Viewer role. But to view build logs in the default Cloud Storage bucket, we recommend granting Project Viewer role to comply with the security principle of least privilege (/iam/docs/using-iam-securely#least_privilege).

★ **Note:** To avoid granting the primitive Project Viewer role, store build logs in a user-specified bucket. We recommend this practice especially if your builds are invoked via [triggers](/cloud-build/docs/automating-builds/create-manage-triggers) (/cloud-build/docs/automating-builds/create-manage-triggers) and you only want to grant access to invoke builds and view build progress.

If your build logs are in a **user-specified Cloud Storage bucket**, grant the **Storage Object Viewer** role to members who want to view build logs:

1. Open the IAM page:

[Open the IAM page](https://console.cloud.google.com/iam-admin/roles) (https://console.cloud.google.com/iam-admin/roles)

2. Select your project and click **Open**.

3. In the permissions table, locate the email ID of the member and click on the pencil icon.

4. Select **Cloud Storage > Storage Object Viewer** role.

5. Click **Save**.

To view build logs:

[Consolegcloud](#) (#gcloud)

1. Open the Cloud Build page in the Google Cloud Console.

[Open the Cloud Build page](https://console.cloud.google.com/cloud-build) (https://console.cloud.google.com/cloud-build)

2. Select your project and click **Open**.

3. In the **Build history** page, click on a particular build.

4. In the **Build details** page, under **Steps**, click on **Build summary** to view build logs for your entire build or click on a build step to view build logs for that step.

✔ **Successful: a9db9408**

Started on Jan 15, 2020, 12:48:03 PM

Source

gs://gcb-docs-project_cl

Steps	Duration	BUILD LOG
<p>✔ Build Summary</p> <p>2 Steps</p>	00:00:19	<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p><input type="checkbox"/> Wrap lines</p> <p><input type="checkbox"/> Show newest entries first</p> <p>↑ ↓</p> </div> <div style="width: 50%;"> <pre> 1 Pulling image: node:12 2 12: Pulling from library/node 3 146bd6a88618: Already exists 4 9935d0c62ace: Already exists 5 db0efb86e806: Already exists 6 e705a4c4fd31: Already exists 7 c877b722db6f: Already exists 8 645c20ec8214: Already exists 9 72851fd0a9e4: Pulling fs layer 10 c97d6cf2691b: Pulling fs layer 11 7df0baa2324d: Pulling fs layer 12 c97d6cf2691b: Verifying Checksum 13 c97d6cf2691b: Download complete 14 7df0baa2324d: Verifying Checksum </pre> </div> </div>
<p>✔ 0: node:12</p> <p>install</p>	00:00:12	
<p>✔ 1: node:12</p> <p>run build</p>	00:00:01	

Deleting build logs

You cannot delete build logs in the Google-created logs bucket.

To delete build logs in a user-created logs bucket:

1. Grant the **Storage Object Admin** role to the user or the service account deleting logs.
2. Delete the build logs using the instructions to delete Cloud Storage objects in [Deleting objects](/storage/docs/deleting-objects) (/storage/docs/deleting-objects).

To delete the user-created logs bucket:

1. Grant the **Storage Admin** role to the user or the service account deleting the logs bucket.
2. Delete the logs bucket using the instructions to delete a bucket in [Deleting buckets](/storage/docs/deleting-buckets) (/storage/docs/deleting-buckets).

What's next

- Learn about [audit logs created by Cloud Build](/cloud-build/docs/securing-builds/audit-logs) (/cloud-build/docs/securing-builds/audit-logs).
- Learn how to [view build results](/cloud-build/docs/view-build-results) (/cloud-build/docs/view-build-results).

- Learn more about [Cloud Build IAM permissions](#) (/cloud-build/docs/securing-builds/configure-access-control).

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Last updated 2020-08-17 UTC.