

This page introduces [Cloud Storage \(/storage/docs/\)](/storage/docs/) as an option for storing your machine learning data, and describes how to give your Cloud TPU access to the data objects on Cloud Storage.

Follow the instructions found in either the [Cloud TPU quickstart guide \(/tpu/docs/quickstart\)](/tpu/docs/quickstart) or the [Creating and deleting TPUs document \(/tpu/docs/creating-deleting-tpus\)](/tpu/docs/creating-deleting-tpus) to configure your Google Cloud project, create a Compute Engine VM, and create a Cloud TPU resource.

Set up the Cloud Storage bucket in the same location (region) that you set up the Cloud TPU. See [creating storage buckets \(/storage/docs/creating-buckets\)](/storage/docs/creating-buckets) for all options available for managing storage buckets.



If you're using the [Cloud TPU Provisioning Utility](https://github.com/tensorflow/tpu/tree/master/tools/ctpu) (<https://github.com/tensorflow/tpu/tree/master/tools/ctpu>) (`ctpu`) and manage your Cloud TPU, you can skip the steps below for granting your Cloud TPU access to your Cloud Storage buckets. The `ctpu` tool takes care of the permissions for you, as part of the processing when you run `ctpu up`.

You need to give your Cloud TPU read/write access to your Cloud Storage objects. To do that, you must grant the required access to the service account used by the Cloud TPU. Follow these steps to find the Cloud TPU service account and grant the necessary access:

Determine the name of the Cloud TPU service account. The name follows this format:

See how to [find your project number](#)

(/resource-manager/docs/creating-managing-projects#identifying_projects).

If you store training data on Cloud Storage, the Cloud TPU service account needs read and write permission on the bucket.

If you want to grant broader permissions instead of whitelisting access to each bucket explicitly, you can grant the Identity Access Management (IAM) Storage Admin role to the Cloud TPU service account.

1. Go to the Cloud IAM page for your project.

[Go to Cloud IAM \(https://console.cloud.google.com/iam-admin/iam\)](https://console.cloud.google.com/iam-admin/iam)

2. Click the **+Add** button to add members to the project.

3. Enter the names of the Cloud TPU service accounts in the **Members** text box.

4. Click the **Roles** dropdown list.

5. Enable the following roles:

- **Project > Viewer**
- **Storage > Storage Admin**

- For more information about creating Cloud Storage buckets and writing data to those buckets, see the [Cloud Storage documentation \(/storage/docs/getting-started-gsutil#create\)](/storage/docs/getting-started-gsutil#create).
- For more information about Google Cloud service accounts, see the [authentication overview \(/docs/authentication/\)](/docs/authentication/).