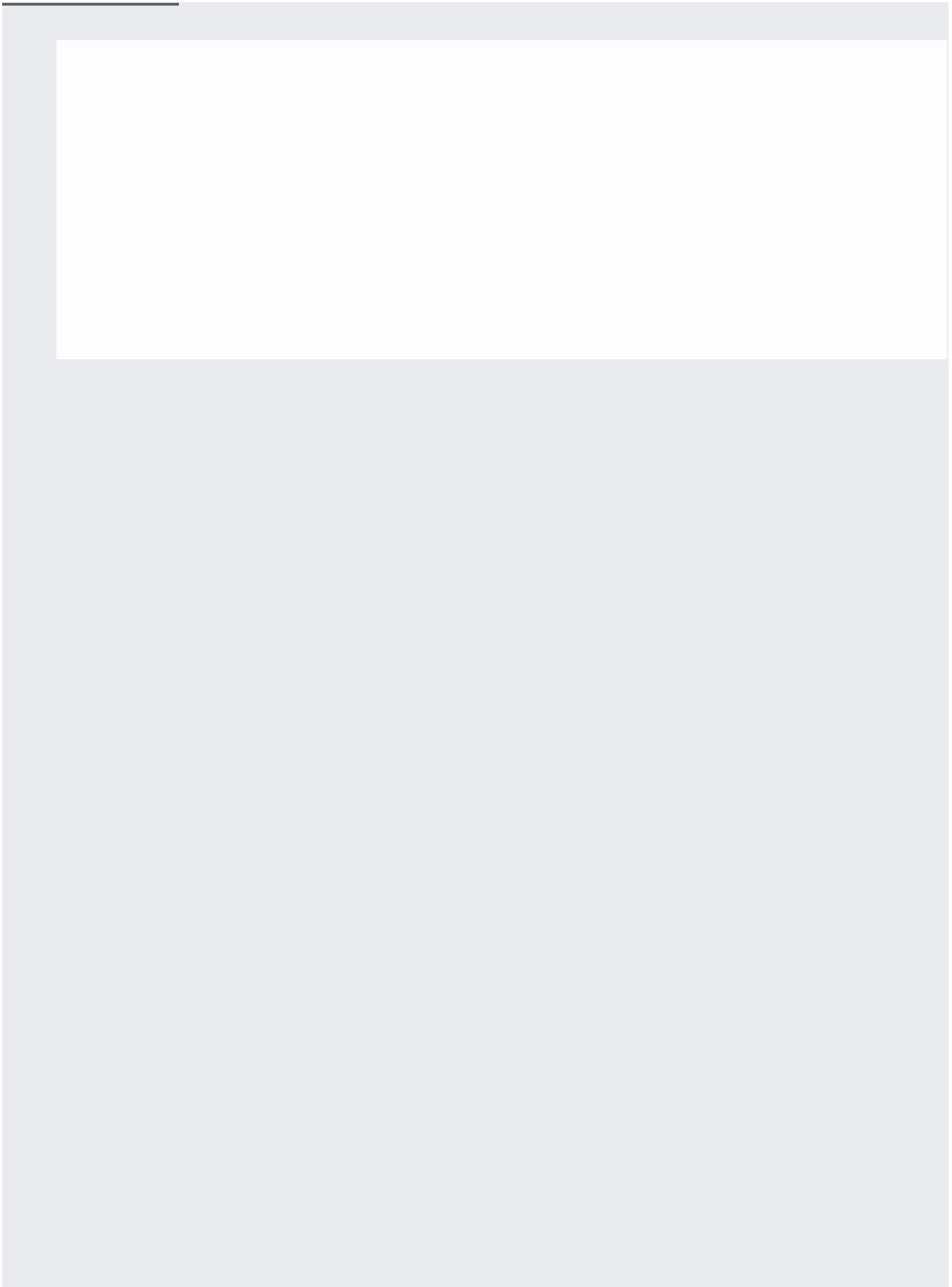


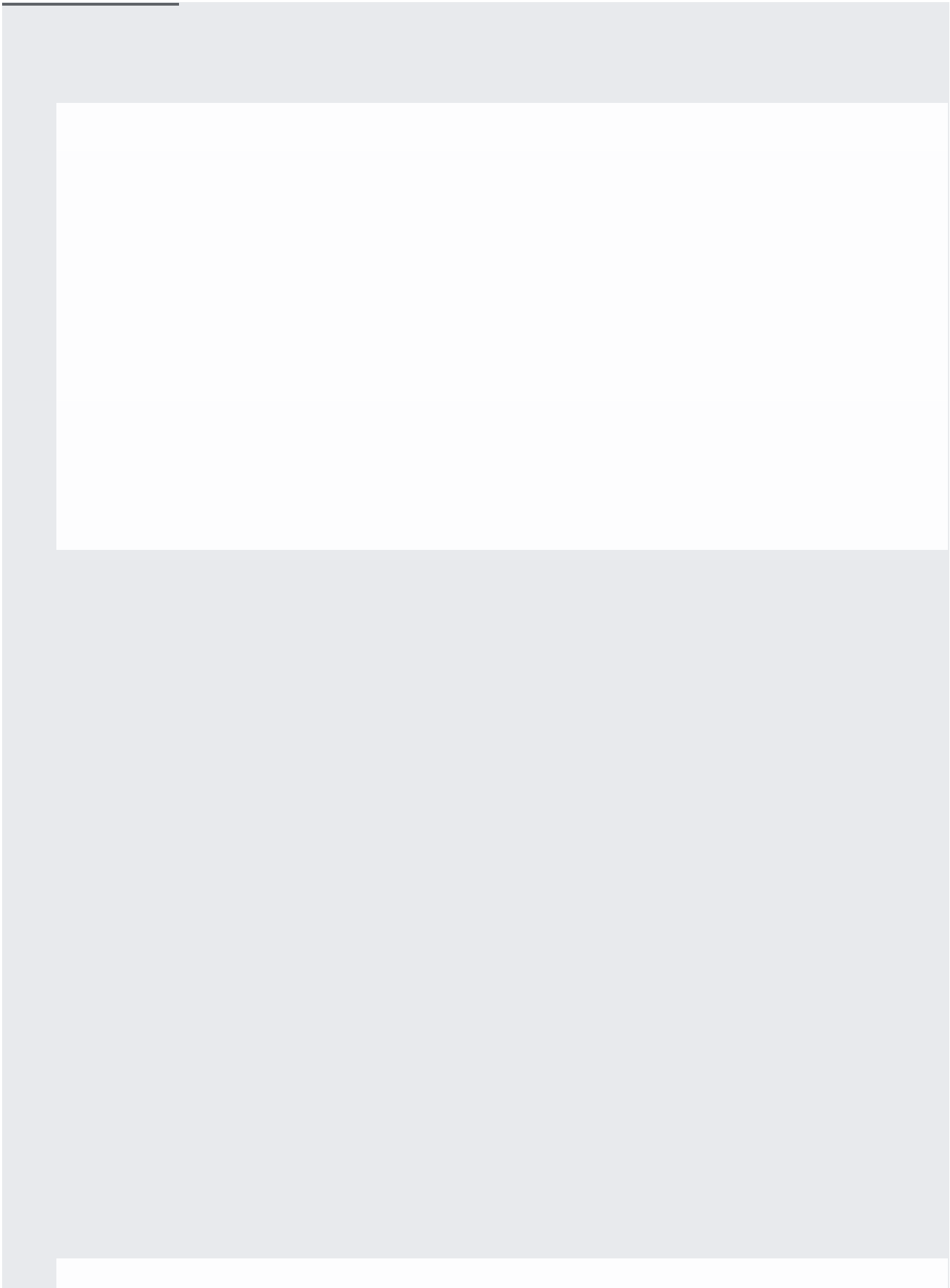
Running a Machine Learning (ML) model requires a Compute Engine VM and Cloud TPU resources. This page describes how to manage these resources using:

- The `ctpu` (</tpu/docs/ctpu-reference>) utility, which provides a CLI specifically designed for managing Cloud TPU resources
- The `gcloud command-line tool` (<https://cloud.google.com/sdk/gcloud/reference/compute/tpus/>), which provides the primary CLI to Google Cloud Platform (GCP)
- The `Cloud Console` (<https://console.cloud.google.com/>), which provides an integrated management console for your GCP resources.

To run these procedures, you need to have a Google Cloud Platform (GCP) project set up. If you don't have a project, see [Creating and managing projects](https://cloud.google.com/resource-manager/docs/creating-managing-projects) (<https://cloud.google.com/resource-manager/docs/creating-managing-projects>) to set one up.

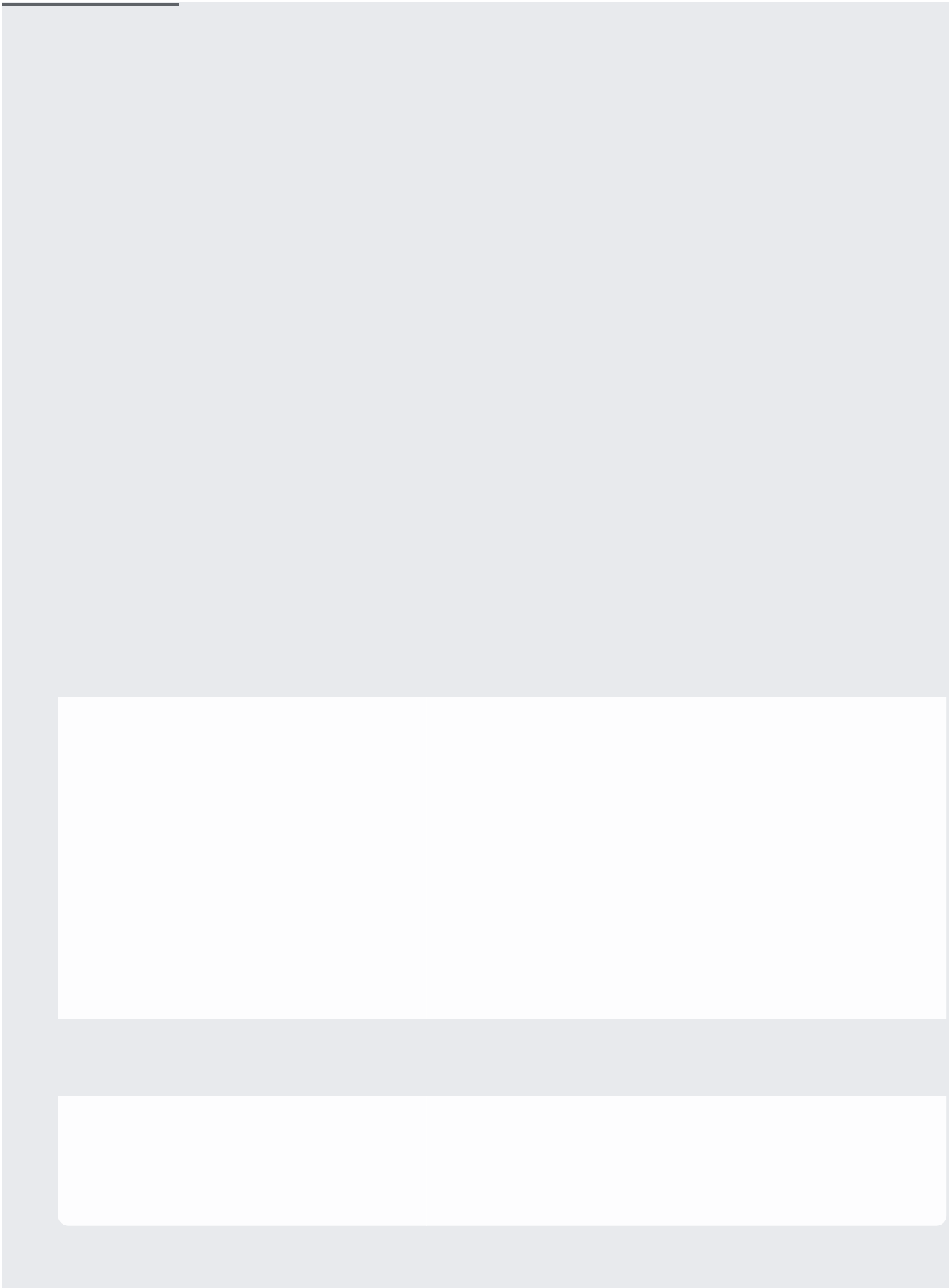
Use the same name and zone for the VM and TPU resources.

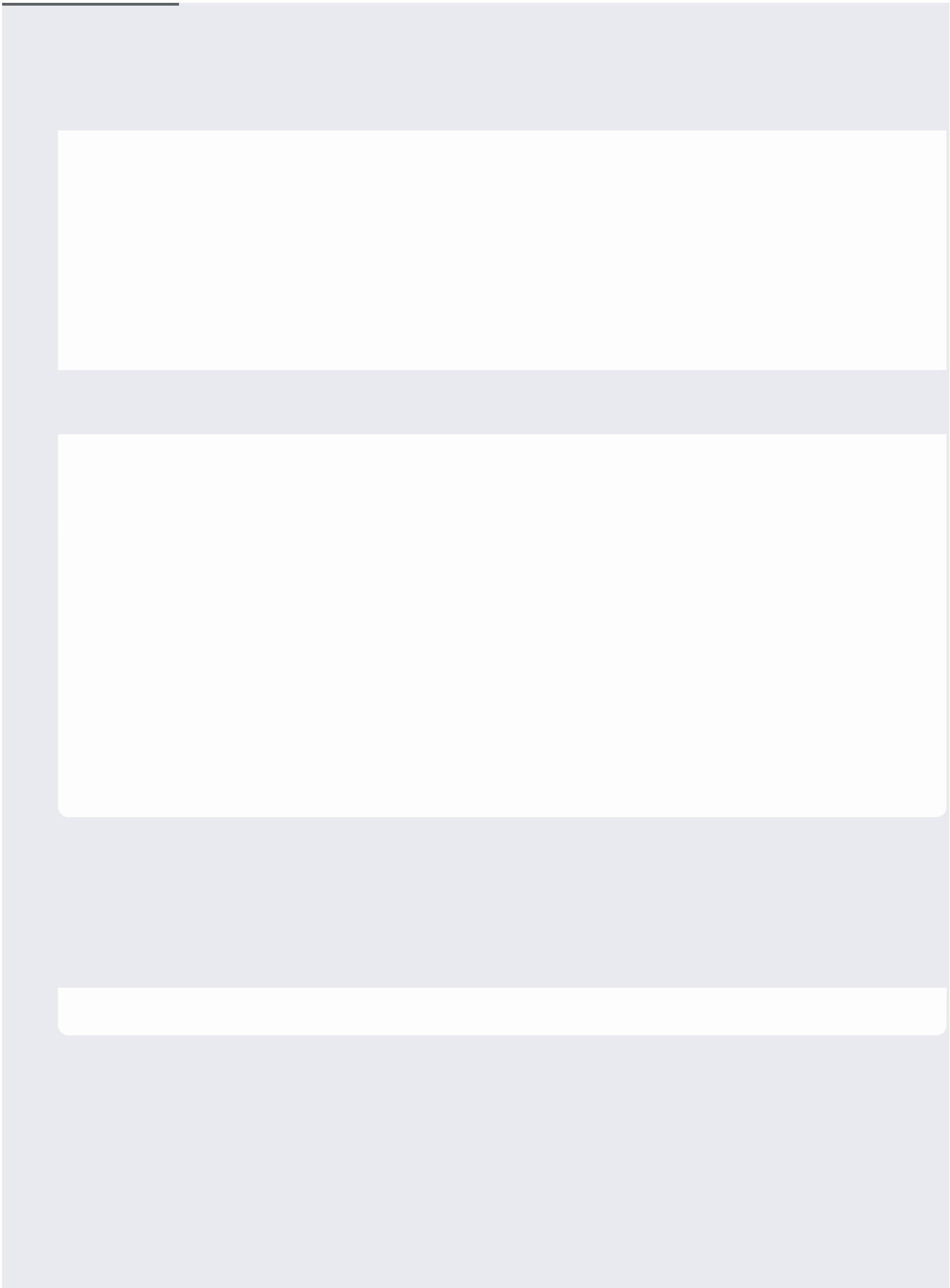


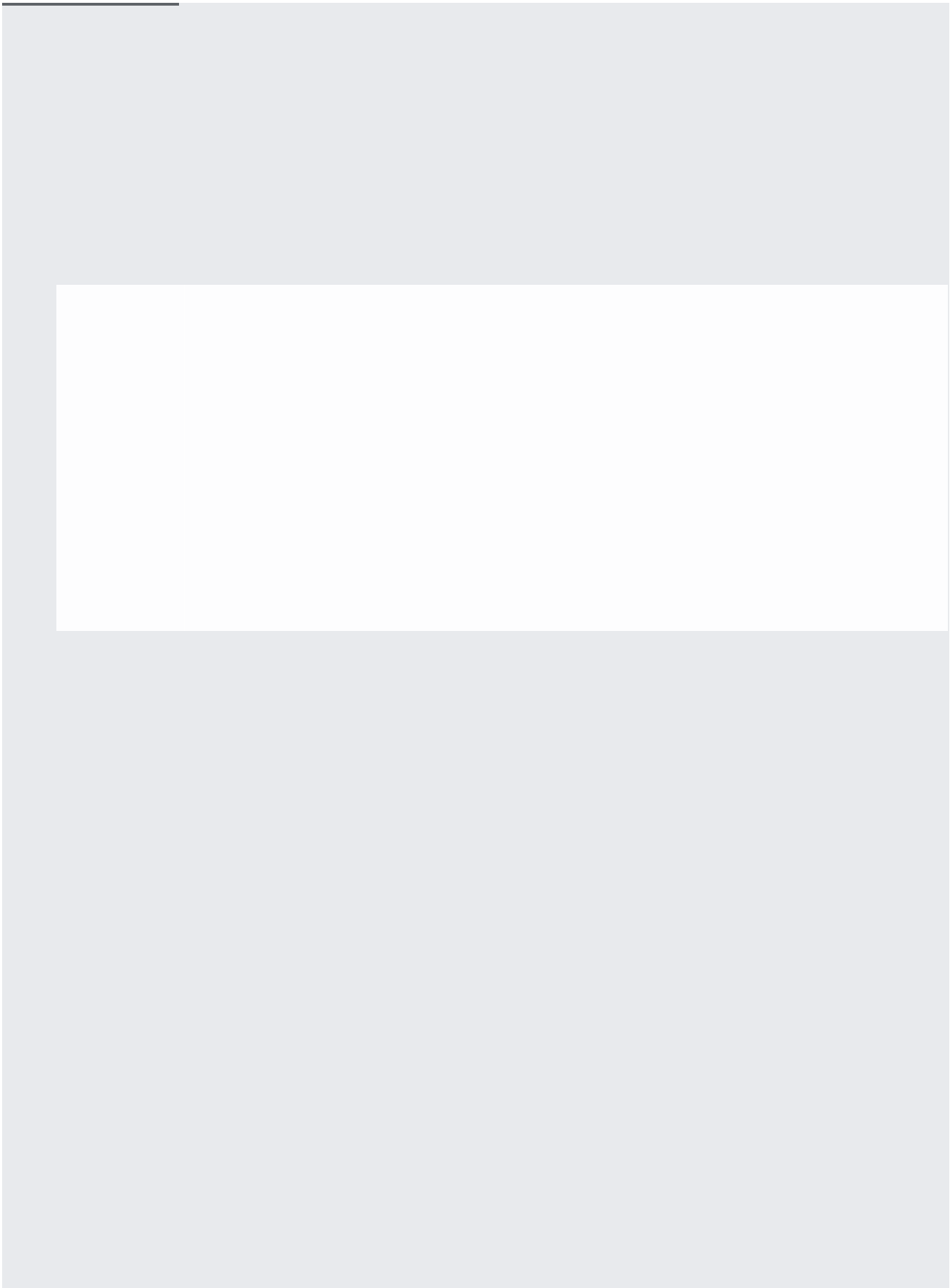


Use the same name and zone for the VM and TPU resources.

Set up your Compute Engine VM using the [VM setup procedure](#) (#setup\_VM\_only) before setting up your Cloud TPU. You can allocate and start your TPU resources using the `ctpu` utility, `gcloud` commands, or the Cloud Console.







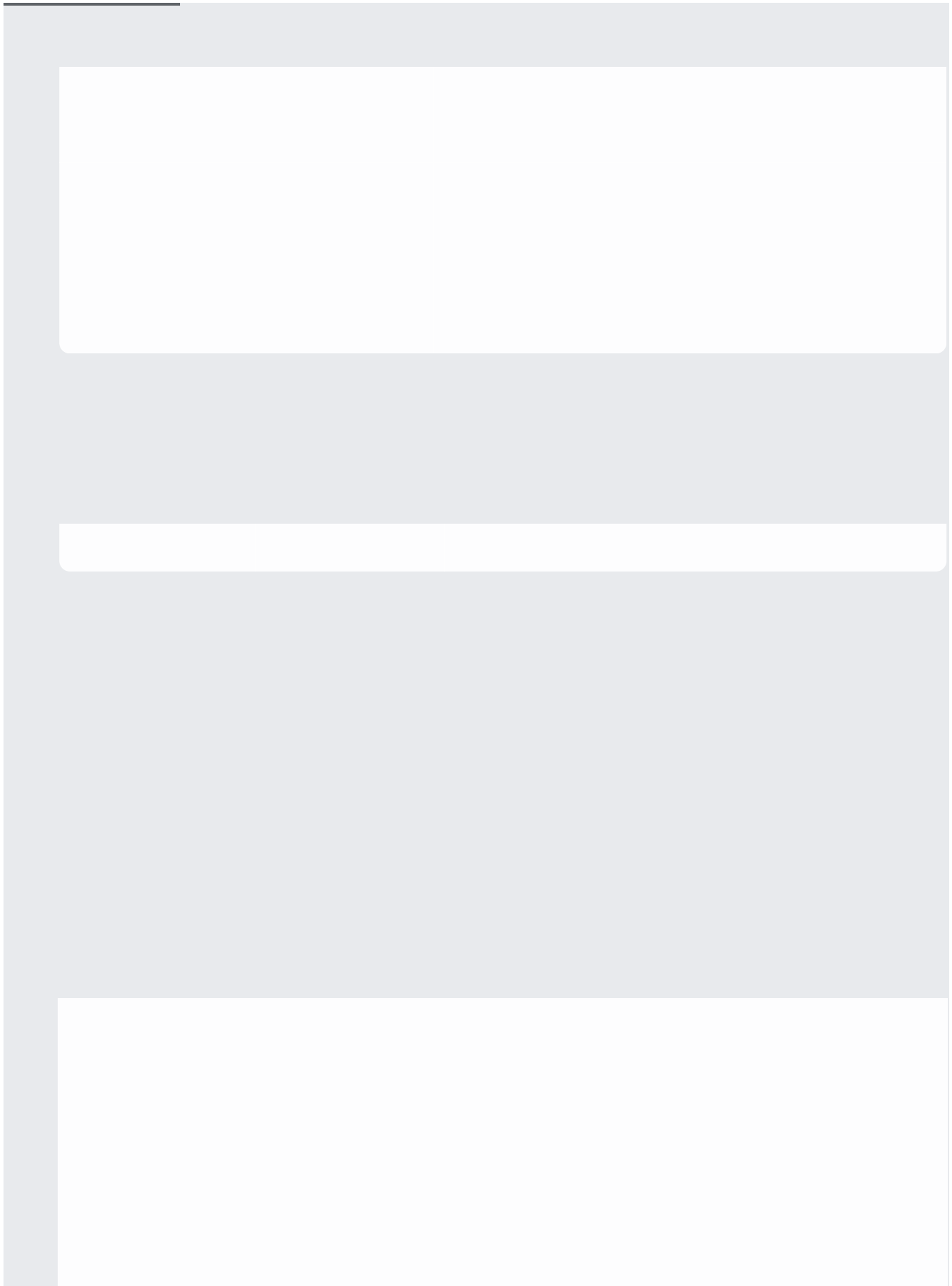


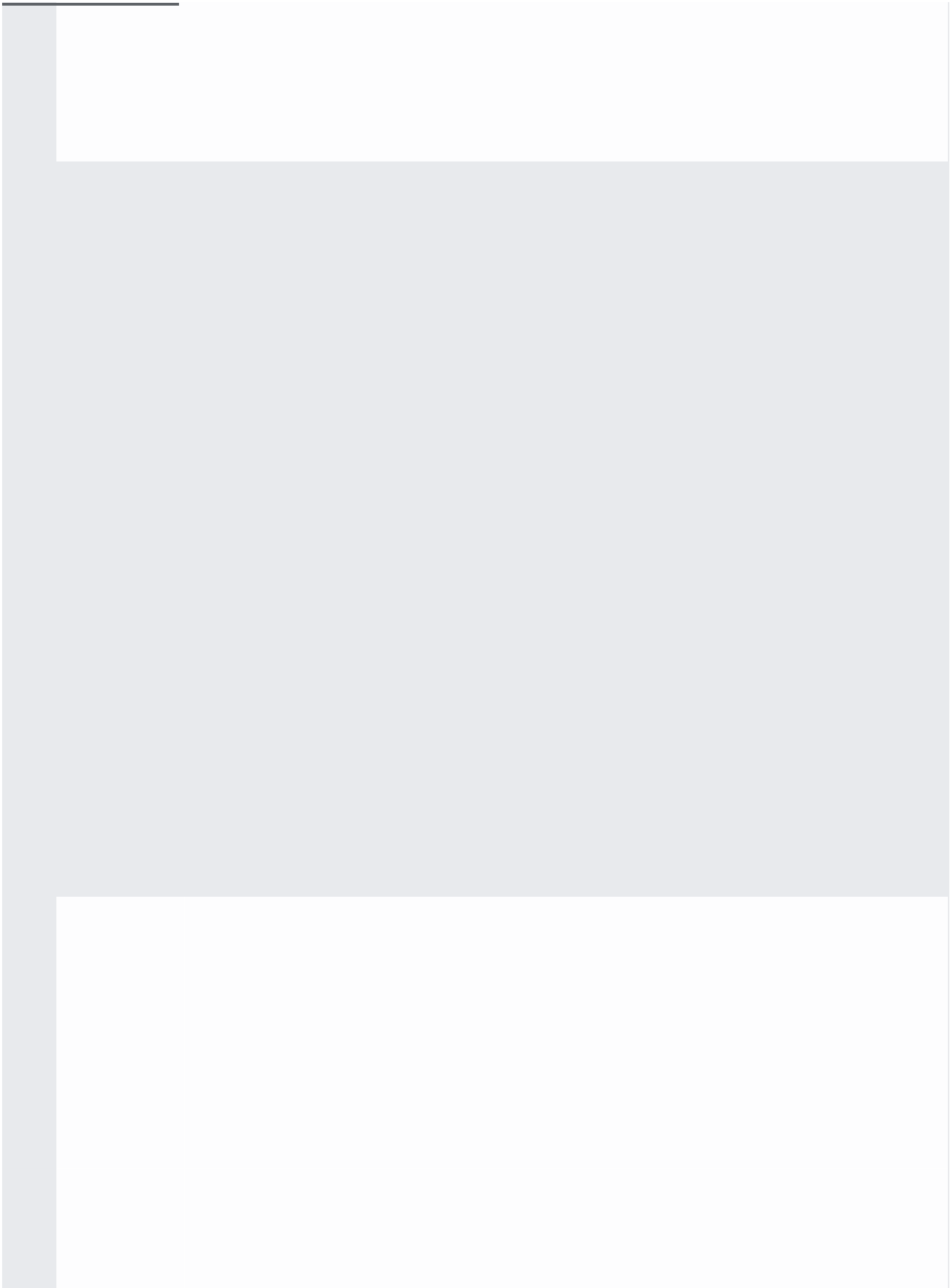
You can allocate and start your VM and TPU resources using the `ctpu` utility, `gcloud` commands, or the Cloud Console.

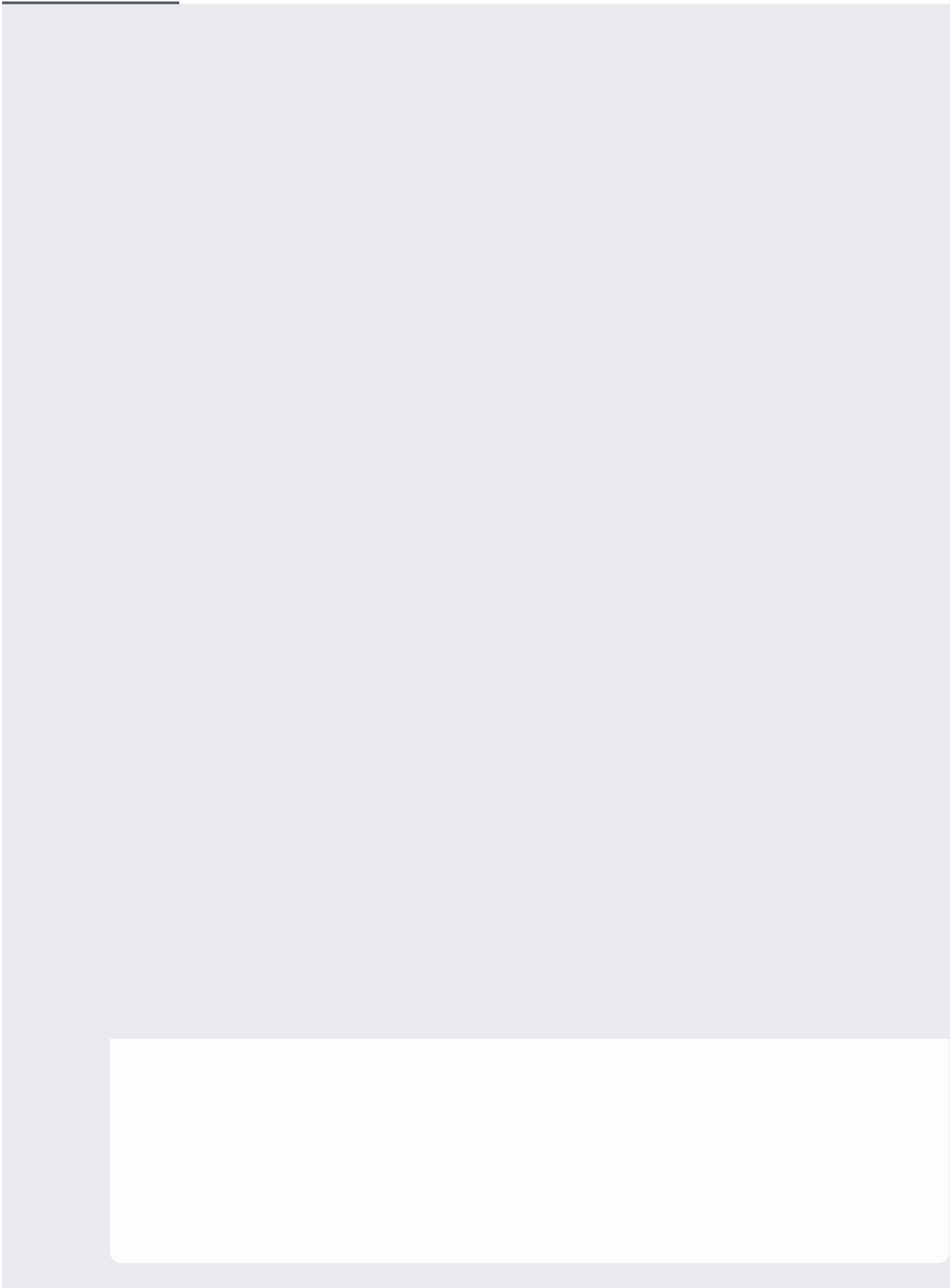












Charges for Cloud TPU resources begin when the Cloud TPU starts, even if it is not yet actively training a model. To avoid being charged while the Cloud TPU is inactive, you can stop it and restart it when you are ready to train a model.

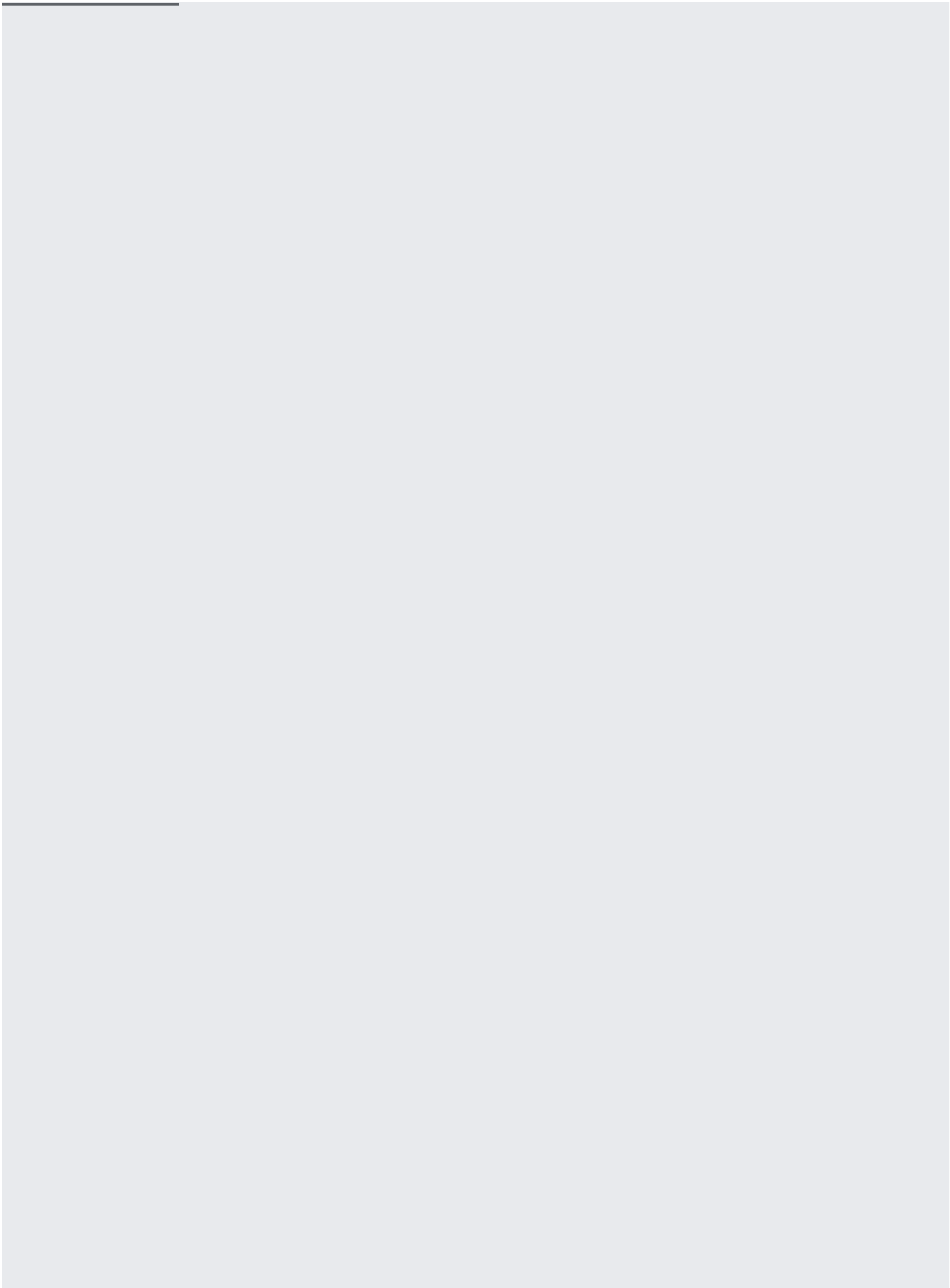
You can also start only the Compute Engine VM to download the dataset and start the Cloud TPU later when you are training. See the `--vm-only` and `--tpu-only` flags under `ctpu up` in the [CTPU reference](/tpu/docs/ctpu-referer) (/tpu/docs/ctpu-referer

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This section shows how to stop the Cloud TPU using the `ctpu` utility, `gcloud` commands, or the Cloud Console.

This section shows how you can view your currently active VM and TPU resources using the `ctpu` utility, `gcloud` commands, or the Cloud Console.





You can delete your VM and TPU resources using the `ctpu` utility, `gcloud` commands, or the Cloud Console.

