

This page describes how to set up and use Pub/Sub Notifications for Cloud Storage. Pub/Sub Notifications allow you to track changes to your Cloud Storage objects. To learn more about the feature, see [Pub/Sub notifications for Cloud Storage \(/storage/docs/pubsub-notifications\)](/storage/docs/pubsub-notifications).

The Pub/Sub Notifications feature is a separate feature from [Object change notification \(/storage/docs/object-change-notification\)](/storage/docs/object-change-notification). Pub/Sub Notifications sends notifications to [Pub/Sub \(/pubsub/\)](/pubsub/), while Object change notification sends HTTPS notifications to a client application that you've set up.

You cannot currently manage Pub/Sub Notifications with the Cloud Console, XML API, or Java client library.

Before using this feature, you should:

1. Enable the Pub/Sub API for the project that will receive notifications.

[Enable the API \(https://console.cloud.google.com/flows/enableapi?apiid=pubsub\)](https://console.cloud.google.com/flows/enableapi?apiid=pubsub)

2. Have sufficient permissions on the bucket you wish to monitor:

- If you own the project that contains the bucket, you most likely have the necessary permission.
- If you use IAM, you should have [storage.buckets.update permission \(/storage/docs/access-control/iam#permissions\)](/storage/docs/access-control/iam#permissions). See [Using IAM Permissions \(/storage/docs/access-control/using-iam-permissions#bucket-add\)](/storage/docs/access-control/using-iam-permissions#bucket-add) for instructions on how to do this.
- If you use ACLs, you should have [OWNER permission \(/storage/docs/access-control/lists#permissions\)](/storage/docs/access-control/lists#permissions). See [Setting ACLs \(/storage/docs/access-control/create-manage-lists#set-an-acl\)](/storage/docs/access-control/create-manage-lists#set-an-acl) for instructions on how to do this.

3. Have sufficient permissions on the project that will receive notifications:

- If you own the project that will receive notifications, you most likely have the necessary permission.

- If you plan to create topics for receiving notifications, you should have [pubsub.topics.create](/pubsub/docs/access_control#tbl_roles) permission.
- Whether you plan to use new or existing topics, you should have [pubsub.topics.setIamPolicy](/pubsub/docs/access_control#tbl_roles) permission. If you create a topic, you typically have [pubsub.topics.setIamPolicy](/pubsub/docs/access_control#tbl_roles) for it.

See [Pub/Sub Access Control](/pubsub/docs/access_control#console) for instructions on how to get these Pub/Sub permissions.

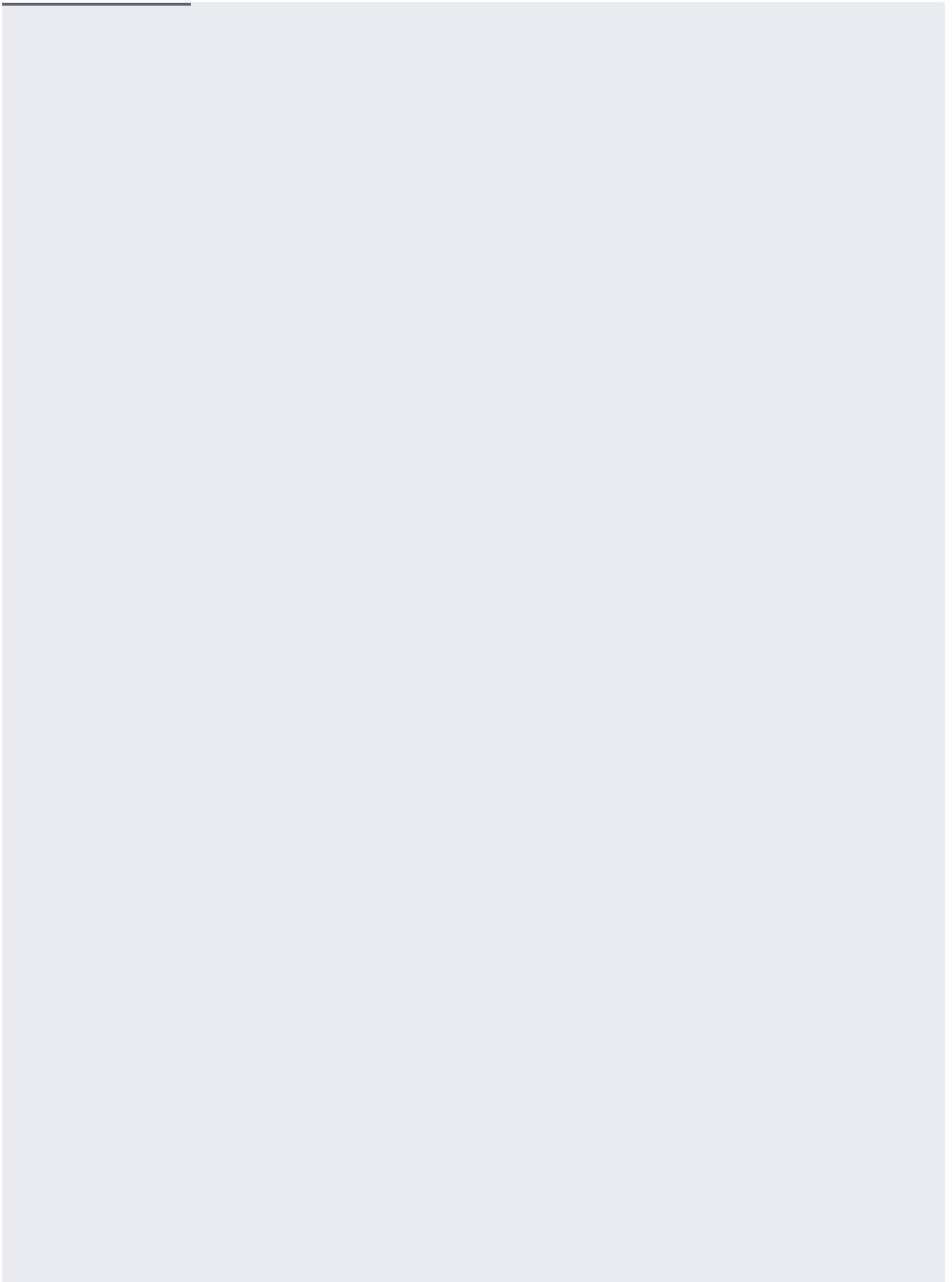
★4. **Note:** The remaining steps are not necessary if you are using the gsutil tool.

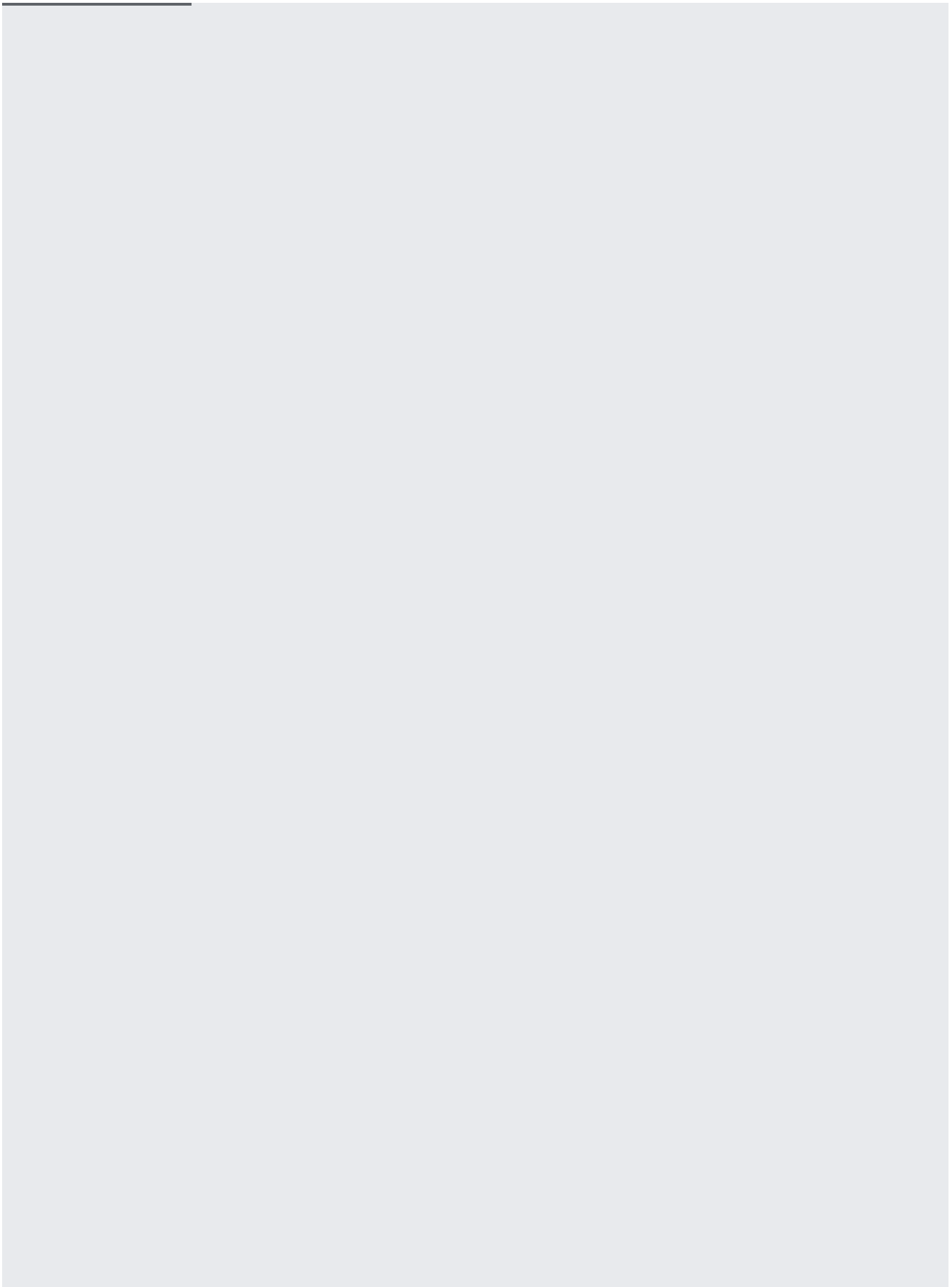
Have an existing [Pub/Sub topic](/pubsub/docs/quickstart-console#create_a_topic) that you wish to send notifications to.

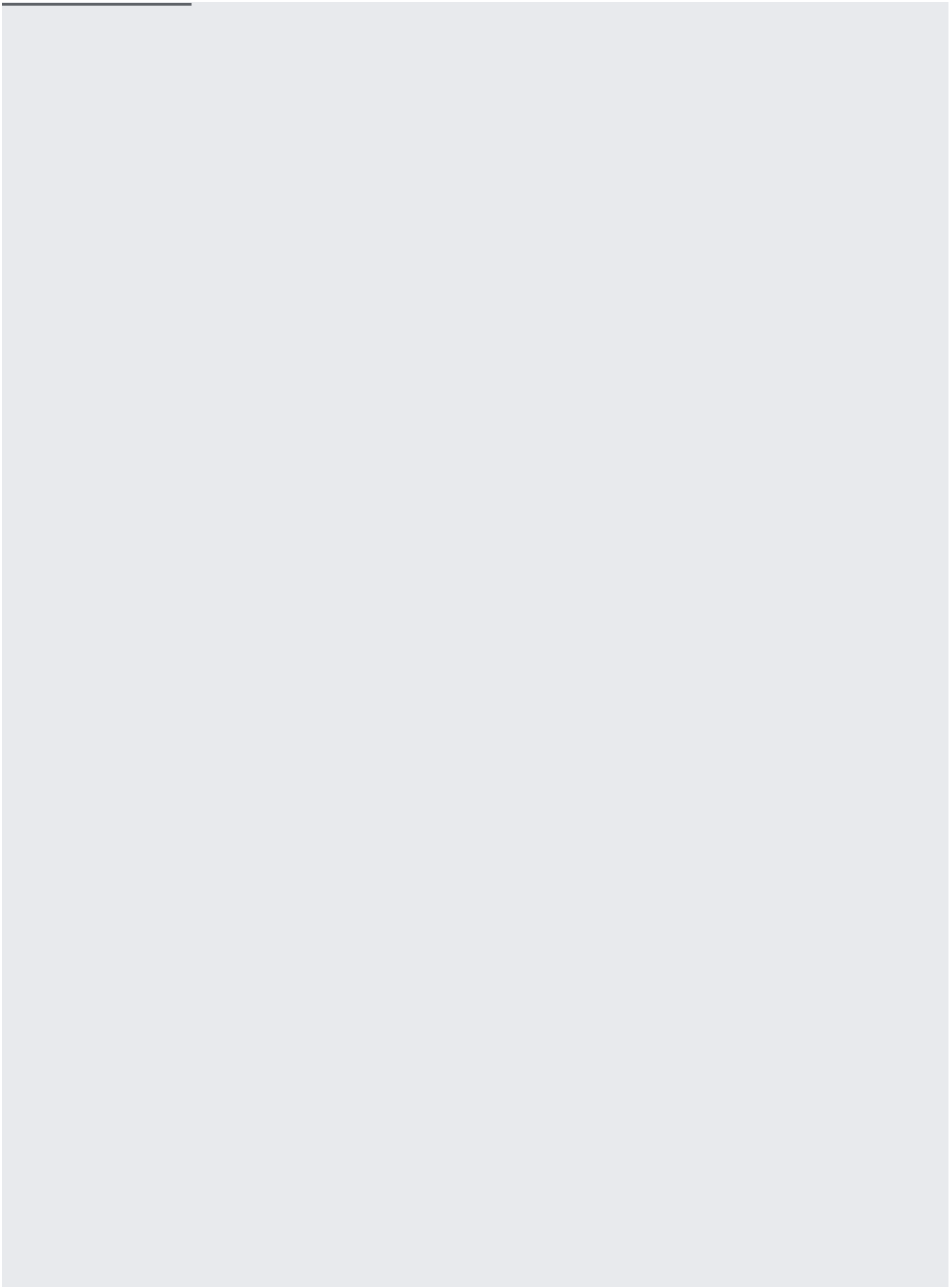
5. [Get the email address of the service account](/storage/docs/getting-service-account) associated with the project that contains your Cloud Storage bucket.
6. Use the email address that you obtained in the previous step to [give the service account the IAM role pubsub.publisher](/pubsub/docs/access_control#console) for the desired Pub/Sub topic.

★ **Note:** There may be a delay of several seconds between assigning the role and having it applied to your service account. If you grant this permission programmatically, wait 30 seconds before configuring Cloud Storage.

The following steps add a [notification configuration](/storage/docs/pubsub-notifications#notification-configs) to your bucket that sends notifications for all [supported events](/storage/docs/pubsub-notifications#events).

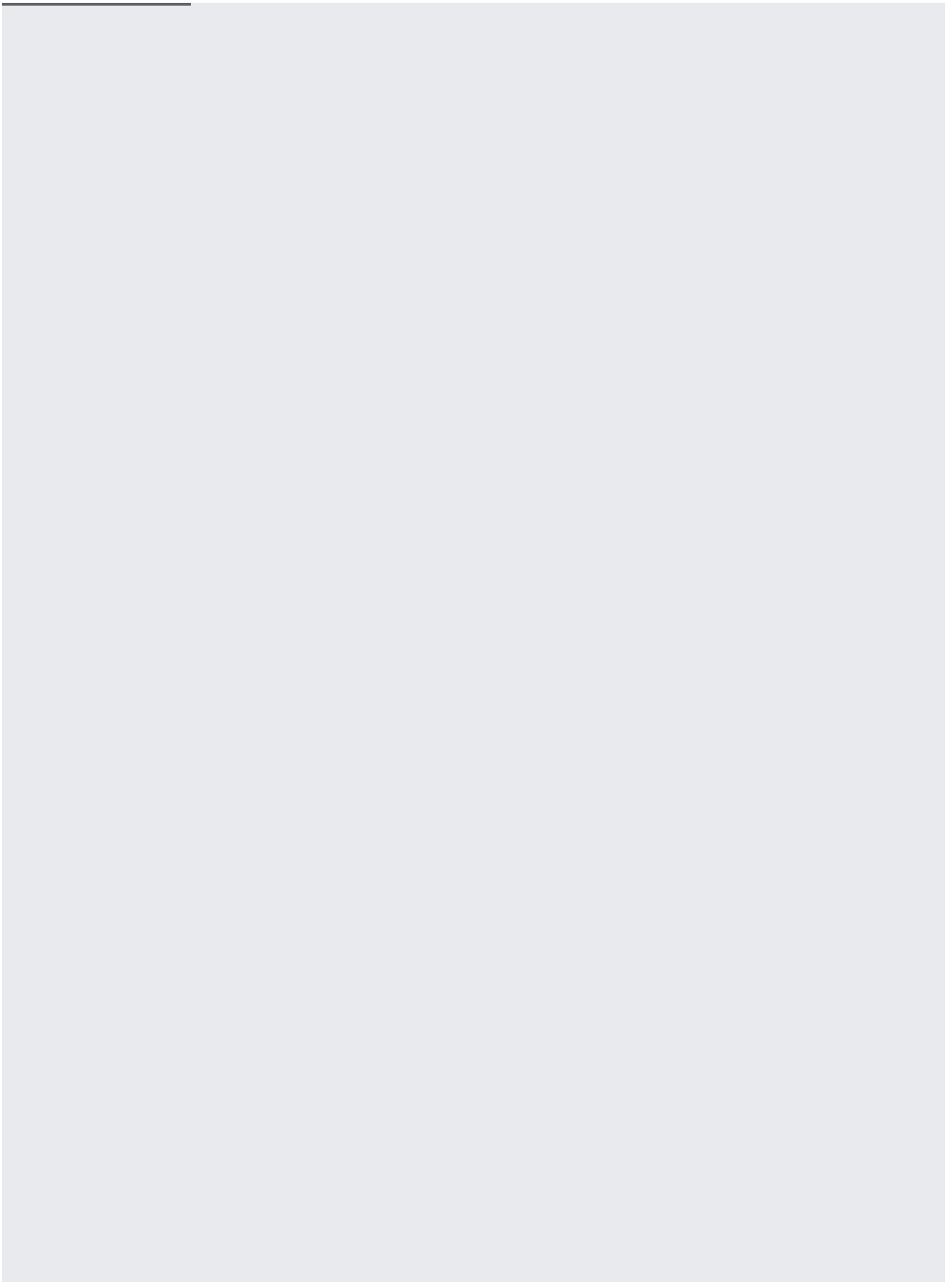


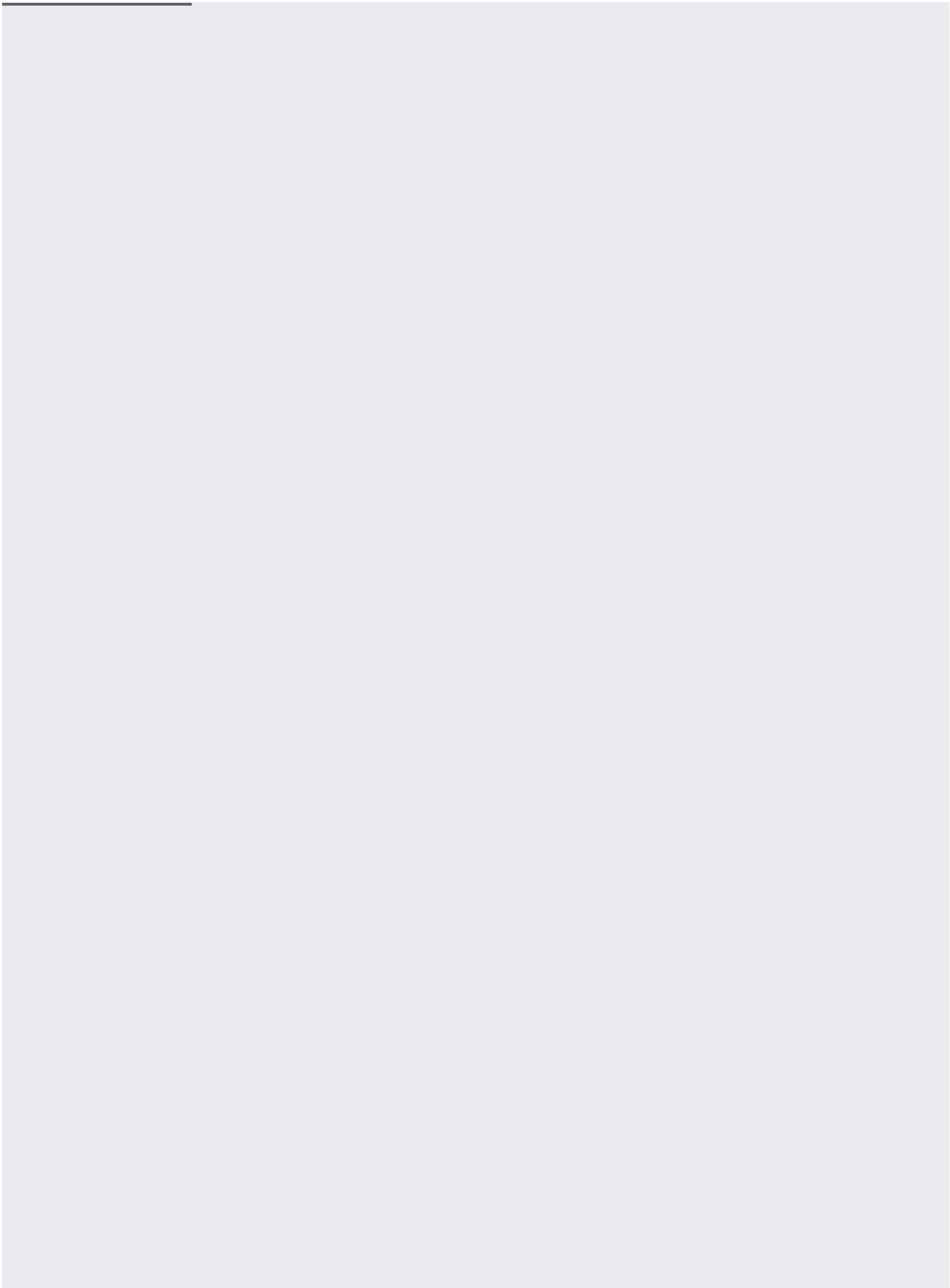




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To list the notification configurations associated with a particular bucket:

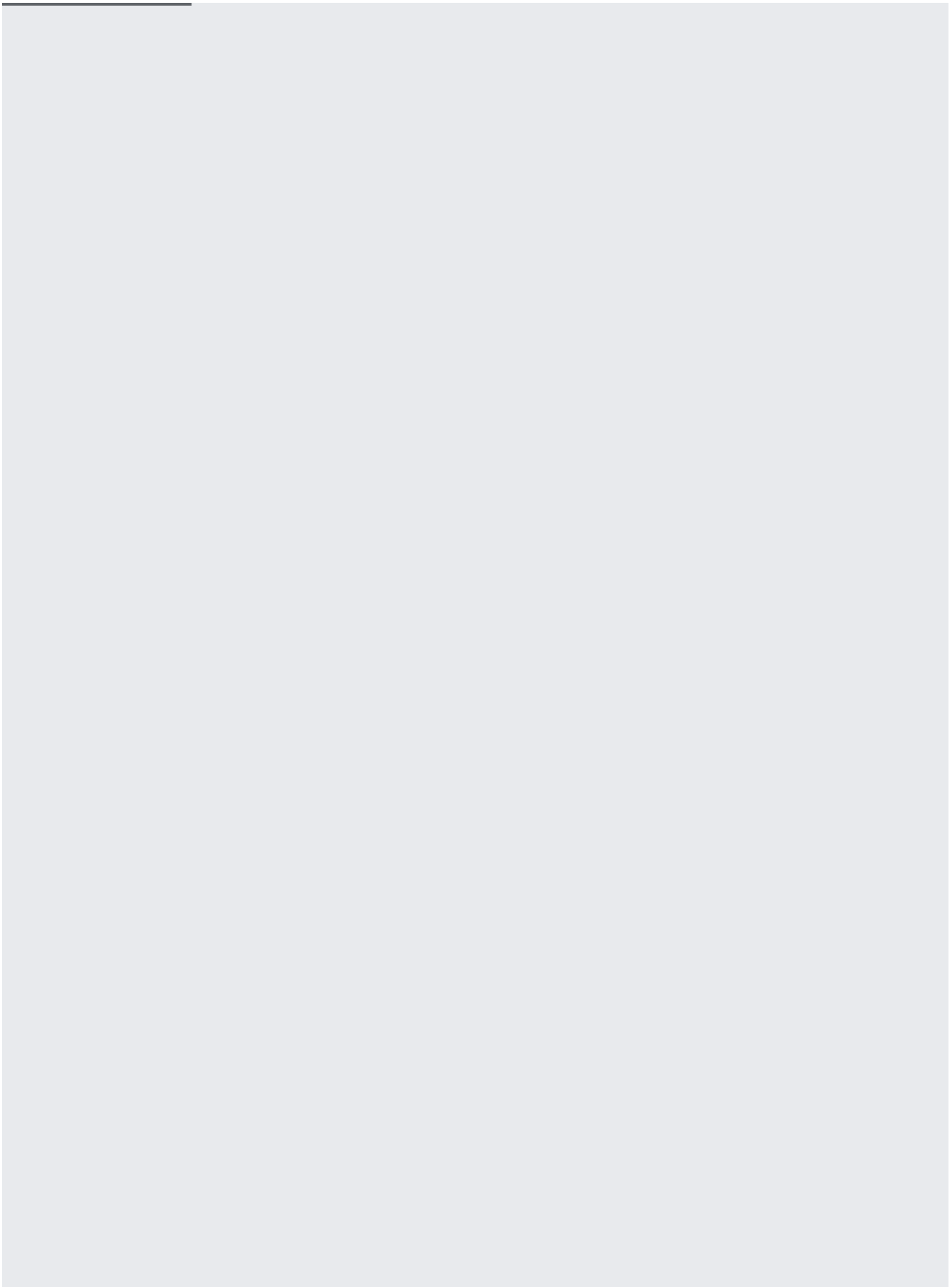


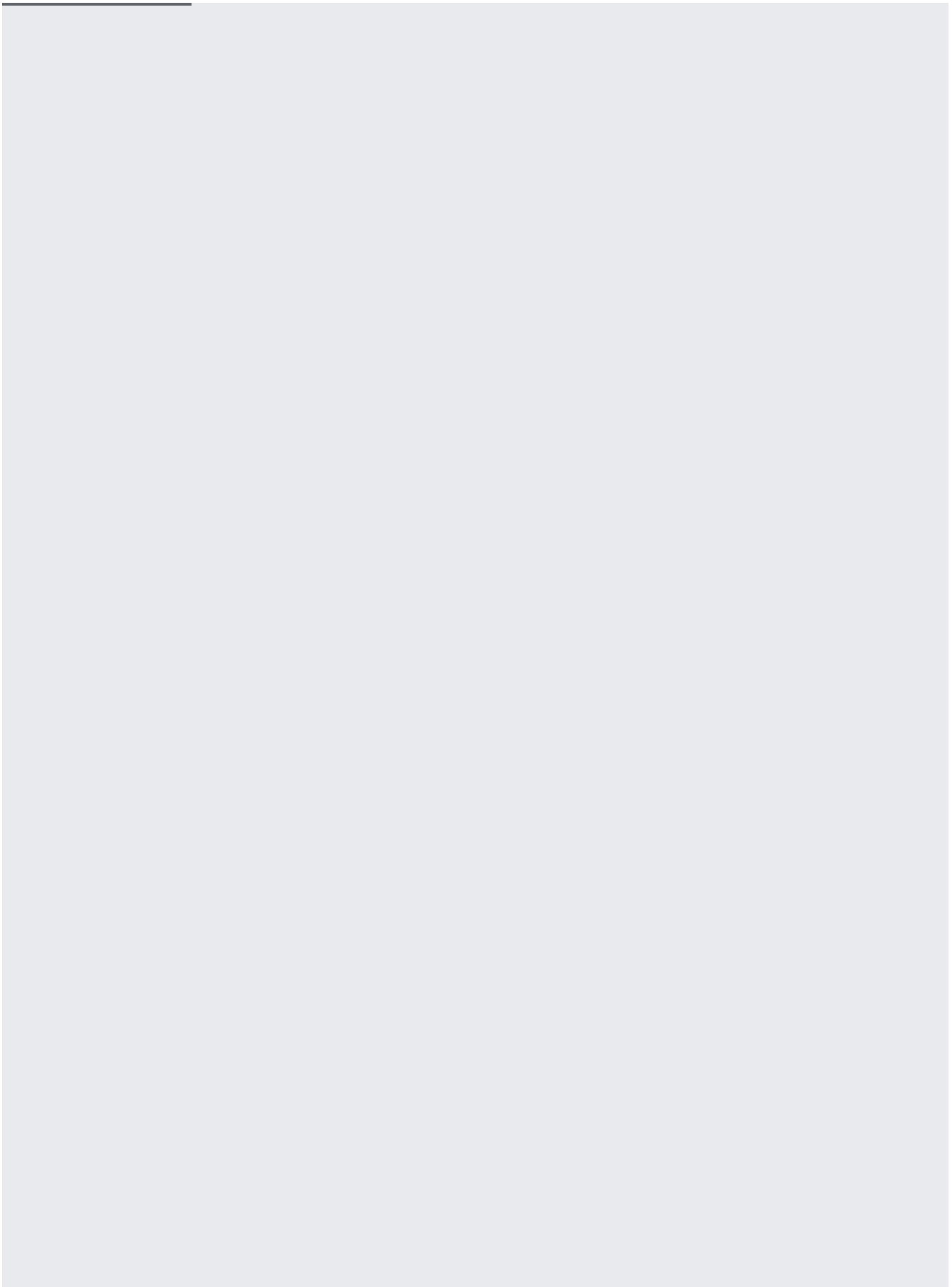




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To remove an existing notification configuration from your bucket:





- Learn more about [Pub/Sub Notifications for Cloud Storage](/storage/docs/pubsub-notifications) (/storage/docs/pubsub-notifications).
- [Create a subscription in Pub/Sub](/pubsub/docs/admin#manage_subs) (/pubsub/docs/admin#manage\_subs) to view notifications sent by Cloud Storage.
- See a [Python example app of polling for notifications on GitHub](https://github.com/GoogleCloudPlatform/python-docs-samples/blob/master/storage/cloud-client/notification_polling.py) (https://github.com/GoogleCloudPlatform/python-docs-samples/blob/master/storage/cloud-client/notification\_polling.py)  
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- [Create a photo album that uses Pub/Sub Notifications for Cloud Storage](/community/tutorials/use-cloud-pubsub-cloud-storage-app-engine) (/community/tutorials/use-cloud-pubsub-cloud-storage-app-engine).
- Learn how to [Use Pub/Sub for Long-running Tasks](/solutions/using-cloud-pub-sub-long-running-tasks) (/solutions/using-cloud-pub-sub-long-running-tasks).