Cloud Build service account

Cloud Build uses a special service account to execute builds on your behalf. The email for the Cloud Build service account is `[PROJECT_NUMBER]@cloudbuild.gserviceaccount.com`. By default, Cloud Build service account has permissions for performing several tasks such as fetching code from your project's Cloud Source Repositories or writing objects to any Cloud Storage bucket owned by your project.

This page explains all the permissions that the Cloud Build service account has by default. To learn how to grant or revoke permissions to the Cloud Build service account, see Configuring access for Cloud Build service account (/cloud-build/docs/securing-builds/configure-access-for-cloud-build-service-account).

Default permissions of Cloud Build service account

When you enable the Cloud Build API for a Cloud project, the Cloud Build service account is automatically created in the project and is granted the Cloud Build Service Account role for the resources in the project. This role contains a number of permissions, such as the ability to update builds or write logs. The service account uses these permissions only as required to perform actions when executing your build. For example, the service account uses the `source.repos.get` permission to fetch code from your Cloud Source Repositories if the source code for your build is in the Cloud Source Repositories. If you don't plan to perform an action as part of the build process, we recommend that you revoke the corresponding permission from the Cloud Build service account to comply with the security principle of least privilege (/iam/docs/using-iam-securely#least_privilege).

The following table lists the permissions that the Cloud Build service account role contains and the purpose for which the Cloud Build service account uses these permissions.

Permission	Description	Purpose of the permission
`cloudbuild.builds.create`	Can create builds and triggers	Required to: • Use build triggers. • Create, list, get, or cancel builds.
`cloudbuild.builds.update`	Can update builds and triggers	

Permission	Description	Purpose of the permission
`cloudbuild.builds.list`	Can list builds and triggers	
`cloudbuild.builds.get`	Can get a build and a trigger	
`storage.buckets.create`	Can create Cloud Storage buckets	Required to: • Store and get images in Container Registry. • Store and get artifacts in Cloud Storage. • Submit builds manually via `gcloud builds submit`. • Store build logs in user-created logs bucket.
`storage.buckets.get`	Can get Cloud Storage buckets	
`storage.buckets.list`	Can list Cloud Storage buckets	
`storage.objects.list`	Can list Cloud Storage objects	
`storage.objects.update`	Can update Cloud Storage objects	
`storage.objects.create`	Can write Cloud Storage objects	
`storage.objects.delete`	Can delete Cloud Storage objects	
`storage.objects.get`	Can read Cloud Storage objects	
`artifactregistry.repositories.list`	Can list repositories in Artifact Registry	Required to store and get artifacts in Artifact Registry.
`artifactregistry.repositories.get`	Can get a repository from Artifact Registry	
`artifactregistry.repositories.downloadArtifacts`	Can download artifacts from a repository in Artifact Registry	
`artifactregistry.files.list`	Can list files in Artifact Registry	

Permission	Description	Purpose of the permission
`artifactregistry.files.get`	Can get files from Artifact Registry	
`artifactregistry.packages.list`	Can list packages in Artifact Registry	
`artifactregistry.packages.get`	Can get packages from Artifact Registry	
`artifactregistry.tags.list`	Can list tags in Artifact Registry	
`artifactregistry.tags.get`	Can get tags from Artifact Registry	
`artifactregistry.versions.list`	Can list versions in Artifact Registry	
`artifactregistry.versions.get`	Can get versions in Artifact Registry	
`logging.logEntries.create`	Can write logs	Required to create build logs in Cloud Logging.
`pubsub.topics.create`	Can create Pub/Sub topics	Required to push build updates to Pub/Sub.
`pubsub.topics.publish`	Can publish to Pub/Sub	
`resourcemanager.projects.get`	Can get project information	Required to get project information and list projects.
`resourcemanager.projects.list`	Can list projects	
`source.repos.get`	Can read source code from repositories in Cloud Source Repositories	Required to: • Use Bitbucket and Cloud Source Repositories triggers. • Pull source code from Cloud

Permission	Description	Purpose of the permission
`source.repos.list`	Can list repositories in Cloud Source Repositories	Source Repositories.

Build triggers and Cloud Build service account

Build triggers (/cloud-build/docs/automating-builds/create-manage-triggers) use Cloud Build service account to execute builds. This could provide elevated build-time permissions to users who use triggers to start a build. Keep the following security implications in mind when using build triggers:

- A user with no access to your Cloud project but with write access to the repository associated with build triggers in the project will have permissions to change the code being built.
- Additionally, if you're using GitHub pull request triggers, any user with read access to the repository can submit a pull request, which may trigger a build that includes changes to the code in the pull request. You can disable this behavior by choosing the **Comment control** option when creating a GitHub pull request trigger. Selecting this option will ensure that the build is started only if a repository owner or a collaborator comments `/gcbrun`. For information on using **Comment control** with **GitHub App triggers**, see Creating GitHub App triggers (/cloud-build/docs/automating-builds/create-github-app-triggers).

What's next

- Learn about configure access for the Cloud Build service account (/cloud-build/docs/securing-builds/configure-access-for-cloud-build-service-account).
- Learn about configure access for project members (/cloud-build/docs/securing-builds/configure-access-for-project-members).
- Learn more about Cloud Build roles and permissions (/cloud-build/docs/iam-roles-permissions).

- Learn about the permissions required to view build logs (/cloud-build/docs/securing-builds/store-view-build-logs).

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