



# HYCU for Google Cloud Functions

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R-Cloud Module Guide

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# About the module

The R-Cloud (formerly HYCU Protégé) module for Google Cloud Functions allows you to protect the functions in your Google Cloud projects.

## Prerequisites

Before you add the module to R-Cloud as a source, the prerequisites described in this section must be fulfilled.

## Authentication service account permissions


The authentication service account that you set while adding the SaaS module as a source in R-Cloud must be granted the minimum permissions set within the Google Cloud projects that contain the services or jobs that you plan to protect, or on the locations where the new services or jobs are going to be created.

The following permissions must be included:

- `cloudfunctions.functions.create`
- `cloudfunctions.functions.delete`
- `cloudfunctions.functions.get`
- `cloudfunctions.functions.getIamPolicy`
- `cloudfunctions.functions.list`
- `cloudfunctions.functions.setIamPolicy`
- `resourcemanager.projects.get`
- `storage.buckets.get`
- `storage.buckets.delete`
- `storage.objects.get`
- `storage.objects.list`
- `storage.objects.create`
- `storage.objects.delete`

Instead of granting the individual permissions, you can also assign the following roles to the authentication service account:

- Cloud Functions Admin
- Storage Admin

 **Note** Assigning roles might grant permissions that exceed the required minimum permissions set for the service accounts.

## Limitations

- Certain configurable metadata (for example, logs, triggers, and destinations) cannot be backed up. For the full list of configurable metadata that is protected, see [Protecting data](#).
- The Gen1 Cloud Functions are currently not supported.
- You cannot assign a policy that has Snapshot specified as the backup target type to this type of SaaS application.

## Protecting data

R-Cloud starts protecting your functions after you add the module as a source to R-Cloud and assign a policy to the related SaaS application.

For details on how to add the module as a source, see *HYCU R-Cloud Help*.

The following configurable metadata is protected:

- Build
- Runtime
- Entry point
- Source bucket
- Source object
- Source generation
- Service
- Timeout
- Max instance count
- Ingress settings

- Service configuration URI
- Available memory
- All traffic on latest revision
- Revision
- Max instance request concurrency
- Available CPU
- State
- Environment
- URL

## Backing up data

The only resource type that can be backed up is Cloud Function. No sub-resource types are supported.

The files generated during every backup are:

- `function-source.zip`: the source code
- `metadata.json`: the function system specifications and permissions

The APIs called to create a backup in Google Cloud are:

- Cloud Functions API: function source and configuration retrieval
- Cloud Storage: storing the backups and transferring the files between the sources and targets

For details on how to configure the backup for the SaaS application data, see *HYCU R-Cloud Help*.

## Restoring data

R-Cloud supports the following restore options:

- Restore scenarios:
  - Restore Functions
- Restore options:
  - Destination Project

- Overwrite Existing Functions (in-place restore)
- Restore Permissions
- Function Prefix

For details on how to restore the SaaS application data, see *HYCU R-Cloud Help*.

# Provide feedback

For any suggestions and comments regarding this product or its documentation, send us an e-mail to:

[info@hycu.com](mailto:info@hycu.com)

We will be glad to hear from you!



