HYCU for Google AlloyDB

R–Cloud Module Guide

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About the module

With the R-Cloud (formerly HYCU Protégé) module for Google AlloyDB, you can back up your SaaS application data securely and efficiently.

Prerequisites

Accessing AlloyDB

To access the AlloyDB database service, the module requires an access token. The access token must be provided by the client with each request. Otherwise, the request will fail reporting the HTTP error `400 - Bad Request`.

Permissions

Your authentication IAM service account must be granted the following permissions within the Google Cloud projects containing the AlloyDB clusters or on the locations where the new clusters are going to be created:

- `alloydb.backups.create`
- `alloydb.backups.delete`
- `alloydb.backups.get`
- `alloydb.backups.list`
- `alloydb.backups.update`
- `alloydb.clusters.create`
- `alloydb.clusters.delete`
- `alloydb.clusters.generateClientCertificate`
- `alloydb.clusters.get`
- `alloydb.clusters.list`
- `alloydb.clusters.update`
- `alloydb.instances.connect`
- `alloydb.instances.create`
- `alloydb.instances.delete`

- `alloydb.instances.failover`

- `alloydb.instances.get`

- `alloydb.instances.injectFault`

- `alloydb.instances.list`

- `alloydb.instances.restart`

- `alloydb.instances.update`

- `alloydb.locations.get`

- `alloydb.locations.list`

- `alloydb.operations.cancel`

- `alloydb.operations.delete`

- `alloydb.operations.get`

- `alloydb.operations.list`

- `alloydb.supportedDatabaseFlags.get`

- `alloydb.supportedDatabaseFlags.list`

- `alloydb.users.create`

- `alloydb.users.delete`

- `alloydb.users.get`

- `alloydb.users.list`

- `alloydb.users.login`

- `alloydb.users.update`

- `compute.networks.list`

- `monitoring.timeSeries.list`

- `resourcemanager.projects.list`

Instead of granting the fine-grained permissions, you can assign your service account the following predefined IAM roles:

- `Cloud AlloyDB Admin`

- `Compute Network Viewer`

- `Monitoring Viewer`

- `Service Account Token Creator`

Limitations

When adding the module and while protecting the related SaaS application, the following limitations apply:

- Restoring to a different location or region is not possible.
- Using the customer-managed encryption key (CMEK) with the cluster encryption option is not supported.

Protecting data

R-Cloud starts protecting your Google AlloyDB databases 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*.

📄Note R-Cloud module for AlloyDB backs up the data using snapshots that are stored in the dedicated Google Cloud storage. Therefore, you cannot select a staging target when adding AlloyDB as a source in R-Cloud.

Backup

After configuring Google AlloyDB as a source in R-Cloud, the primary clusters (root resources) can be backed up.

⚠Caution In your Google Cloud console, the AlloyDB backups created by R-Cloud are listed among the manually created backups that you trigger directly from Google Cloud console. Never delete any backups created by R-Cloud. Deleting them would result in data loss.

The backed up AlloyDB instances created by R-Cloud use the following naming format: `<instance_name>-hycu-backup-yyyymmdd-hhmmss`.

Restore

R-Cloud allows restoring the primary clusters using the following restore options:

- In-place restore. If a cluster with the same name already exists, the cluster will be removed and replaced by the restored cluster.

- Cluster name. During the restore, the module will generate a new name for the cluster. The cluster name can be changed using the following naming convention:

  - The maximum length is 55 characters.

  - The first letter must be lower case.

  - Only the lower-case letters, digits and single dashes can be used.

  - The last letter must be a lower-case letter or a digit.

- Project. The list of the active projects.

- Network. The available VPC networks with private services access configuration that reside in the same Google Cloud project as the Google AlloyDB cluster.

- Recover the cluster instances. If the primary instance and the read pool instances exist, enabling this option will restore them.

- Recover the secondary cluster. Enabling this option will restore the secondary cluster and the secondary instance.

ⓘ **Important** If you select the restore option In-place restore, the options cluster name, project, and network will not be available. For the restore, the plugin will use the original VPC network, which may not exist at the time of the restore.

For the restore procedure details, see Google AlloyDB documentation.

Provide feedback

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

info@hycu.com

We will be glad to hear from you!