



Setting up the data broker to use an external HashiCorp Vault

Cloud Manager

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Setting up the data broker to use an external HashiCorp Vault

When you create a sync relationship that requires Amazon S3, Azure, or Google Cloud credentials, you need to specify those credentials through the Cloud Sync user interface or API. An alternative is to set up the data broker to access the credentials (or *secrets*) directly from an external HashiCorp Vault.

This feature is supported through the Cloud Sync API with sync relationships that require Amazon S3, Azure, or Google Cloud credentials.



Prepare the vault

Prepare the vault to supply credentials to the data broker by setting up the URLs. The URLs to the secrets in the vault must end with *Creds*.



Prepare the data broker

Prepare the data broker to fetch credentials from the external vault by modifying the local config file for the data broker.



Create a sync relationship using the API

Now that everything is set up, you can send an API call to create a sync relationship that uses your vault to get the secrets.

Preparing the vault

You'll need to provide Cloud Sync with the URL to the secrets in your vault. Prepare the vault by setting up those URLs. You need to set up URLs to the credentials for each source and target in the sync relationships that you plan to create.

The URL must be set up as follows:

`/<path>/<requestid>/<endpoint-protocol>Creds`

Path

The prefix path to the secret. This can be any value that's unique to you.

Request ID

A request ID that you need to generate. You'll need to provide the ID in one of the headers in the API POST request when you create the sync relationship.

Endpoint protocol

One of the following protocols, as defined [in the post relationship v2 documentation](#): S3, AZURE, or GCP (each must be in uppercase).

Creds

The URL must end with *Creds*.

Examples

The following examples show URLs to secrets.

Example for the full URL and path for source credentials

`http://example.vault.com:8200/my-path/all-secrets/hb312vdsr2/S3Creds`

As you can see in the example, the prefix path is */my-path/all-secrets/*, the request ID is *hb312vdsr2* and the source endpoint is S3.

Example for the full URL and path for target credentials

`http://example.vault.com:8200/my-path/all-secrets/n32hcbnejk2/AZURECreds`

The prefix path is */my-path/all-secrets/*, the request ID is *n32hcbnejk2*, and the target endpoint is Azure.

Preparing the data broker

Prepare the data broker to fetch credentials from the external vault by modifying the local config file for the data broker.

Steps

1. SSH to the data broker.
2. Edit the local.json file that resides in `/opt/netapp/databroker/config`.
3. Set enable to **true** and set the config parameter fields under *external-integrations.hashicorp* as follows:

enabled

- Valid values: true/false
- Type: Boolean
- Default value: false
- True: The data broker gets secrets from your own external HashiCorp Vault
- False: The data broker stores credentials in its local vault

url

- Type: string
- Value: The URL to your external vault

path

- Type: string
- Value: Prefix path to the secret with your credentials

Reject-unauthorized

- Determines if you want the data broker to reject unauthorized external vault
- Type: Boolean
- Default: false

auth-method

- The authentication method that the data broker should use to access credentials from the external vault
- Type: string
- Valid values: "aws-iam" / "role-app" / "gcp-iam"

role-name

- Type: string
- Your role name (in case you use aws-iam or gcp-iam)

Secretid & rootid

- Type: string (in case you use app-role)

Namespace

- Type: string
- Your namespace (X-Vault-Namespace header if needed)

Example for aws-role authentication

```
{
  "external-integrations": {
    "hashicorp": {
      "enabled": true,
      "url": "https://example.vault.com:8200",
      "path": "my-path/all-secrets",
      "reject-unauthorized": false,
      "auth-method": "aws-role",
      "aws-role": {
        "role-name": "my-role"
      }
    }
  }
}
```

Example for gcp-iam authentication

```
{
  "external-integrations": {
    "hashicorp": {
      "enabled": true,
      "url": "http://ip-10-20-30-55.ec2.internal:8200",
      "path": "v1/secret",
      "namespace": "",
      "reject-unauthorized": true,
      "auth-method": "gcp-iam",
      "aws-iam": {
        "role-name": ""
      },
      "app-role": {
        "root_id": "",
        "secret_id": ""
      },
    },
    "gcp-iam": {
      "role-name": "my-iam-role"
    }
  }
}
```

Setting up permissions when using gcp-iam authentication

If you're using the *gcp-iam* authentication method, then the data broker must have the following GCP permission:

```
- iam.serviceAccounts.signJwt
```

[Learn more about GCP permission requirements for the data broker.](#)

Creating a new sync relationship using secrets from the vault

Now that everything is set up, you can send an API call to create a sync relationship that uses your vault to get the secrets.

Post the relationship using the Cloud Sync REST API.

Headers:

Authorization: Bearer <user-token>

Content-Type: application/json

x-account-id: <accountid>

x-netapp-external-request-id-src: request ID as part of path for source credentials

x-netapp-external-request-id-trg: request ID as part of path for target credentials

Body: post relationship v2 body

- To obtain a user token and your Cloud Central account ID, [refer to this page in the documentation](#).
- To build a body for your post relationship, [refer to the relationships-v2 API call](#).

Example

Example for the POST request:

url: `https://api.cloudsync.netapp.com/api/relationships-v2`

headers:

`"x-account-id": "CS-SasdW"`

`"x-netapp-external-request-id-src": "hb312vdasr2"`

`"Content-Type": "application/json"`

`"Authorization": "Bearer eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6Ik..."`

Body:

```
{
  "dataBrokerId": "5e6e111d578dtyuu1555sa60",
  "source": {
    "protocol": "s3",
    "s3": {
      "provider": "sgws",
      "host": "1.1.1.1",
      "port": "443",
      "bucket": "my-source"
    }
  },
  "target": {
    "protocol": "s3",
    "s3": {
      "bucket": "my-target-bucket"
    }
  }
}
```

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