Use the OSS Cluster API

Redis OSS Cluster API reduces access times and latency with near-linear scalability. The Redis OSS Cluster API provides a simple mechanism for Redis clients to know the cluster topology.

Clients must first connect to the master node to get the cluster topology, and then they connect directly to the Redis proxy on each node that hosts a master shard.

Prerequisites

Before you enable Redis OSS Cluster API for a database, make sure that:

- The database uses the standard hashing policy.
- The database proxy policy is all-master-shards.
- The database proxy policy does not use node include or exclude.
- The database does not use RedisSearch.

Enable OSS Cluster API support

When you enable the Redis OSS Cluster API from the command line or RS admin console, multi-key commands are only allowed when all keys are mapped to the same slot. To verify that your database meets this requirement, make sure that the CLUSTER KEYSLOT reply is the same for all keys in the multi-key command.

Enable from the admin console

For a Redis Enterprise Software (RS) database, to enable the OSS Cluster API from the admin console:

1. Go to: databases
2. Either:
   - Click on an existing database and in configuration click Edit.
   - Click + and create database
3. Click Show advance options and select OSS Cluster API support.
   - Note: The Redis OSS Cluster API setting applies to the specified database only, not to the entire cluster.
4. Save the database:
   - For an existing database, click Update.
   - For a new database, configure the database settings and click Activate.

Enable from the command line

You can use the radmin CLI to enable OSS Cluster API for RS databases, including Active-Passive (Replica Of) databases. For Active-Active (CRDB) databases, use the crdb-cli tool.

For an RS database, to enable the OSS Cluster API from the command line:

Note: You must use a client that supports the OSS cluster API to connect to a database that has the OSS cluster API enabled.
1. To get the database ID for your database, run:

```bash
$ sudo rladmin info db | grep test
db:4 [test]:
```

In this example, the database ID is 4.

2. To enable the OSS Cluster API for the database, run:

```bash
rladmin tune db <database name or ID> oss_cluster enabled
```

**Note:** The Redis OSS Cluster API setting applies to the specified database only, not to the entire cluster.

### Enable for Active-Active databases from the command line

For a new RS Active-Active database, to enable the OSS Cluster API from the command line:

1. To create an Active-Active database with OSS Cluster API, run:

```bash
crdb-cli crdb create --name <name> --memory-size 10g --port <port> --sharding true --shards-count 2 --replication true --oss-cluster true --instance fqdn=<fqdn>,username=<username>,password=<pass> --instance fqdn=<fqdn>,username=<username>,password=<pass> --instance fqdn=<fqdn>,username=<username>,password=<pass>
```

2. To get the CRDB-GUID for your Active-Active database, run:

```bash
$ crdb-cli crdb list

<table>
<thead>
<tr>
<th>CRDB-GUID</th>
<th>NAME</th>
<th>REPL-ID</th>
<th>CLUSTER-FQDN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2d26de9a-4ed5-404d-a543-459eadf76ce2</td>
<td>Database1</td>
<td>1</td>
<td>cluster1.local</td>
</tr>
</tbody>
</table>
```

3. To enable the OSS Cluster API for the Active-Active database, run:

```bash
crdb-cli crdb update --crdb-guid <CRDB-GUID> --oss-cluster true
```

**Note:** The Redis OSS Cluster API setting applies to all of the instances of the Active-Active database.

### Turn off OSS Cluster API support

If you need to turn off OSS Cluster API support for a database, run:

- From the RS admin console:
  1. Go to: **databases**
  2. Click on the database and in **configuration** click **Edit**.
  3. Click **Show advance options** and unselect **OSS Cluster API support**.
- From the command line, run: `rladmin tune db <database name or ID> oss_cluster disable`
  - For an Active-Active database, run: `crdb-cli crdb update --crdb-guid <CRDB-GUID> --oss-cluster false`

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