



Create a Redis Enterprise Software database

Redis Enterprise Software lets you create databases and distribute them across a cluster of nodes. These databases can use Redis Enterprise features like:

- [Redis on Flash](#)
- [High availability](#)
- [Data persistence](#)
- [Redis modules](#)



Note: For databases with Active-Active replication for geo-distributed locations, [create an Active-Active database](#).

Create a database

To create a new database:

1. In your web browser, open the admin console of the cluster that you want to connect to in order to create the database .

By default, the address is: `https://<RS_address>:8443`


2. In **databases**, click .


If you do not have any databases on the node, you are prompted to create a database.

3. Click **Next** to create a single-region, in-memory database.

If your cluster supports [Redis on Flash \(RoF\)](#), in **Runs on** you can select **Flash** so that your database uses Flash memory.

create new database


redis database


memcached database

Runs on

RAM

Deployment

Single Region

Next

4. Enter the mandatory details of the new database :

- **Name** - The database name requirements are:
 - Maximum of 63 characters
 - Only letter, number or hyphen (-) characters
 - Starts with a letter; ends with a letter or digit.



Note: The database name is not case-sensitive

- **Memory limit** - The [database memory limits](#) includes all database replicas and shards, including replica shards in database replication and database shards in database clustering. If the total size of the database in the cluster reaches the memory limit, then the data eviction policy for the database is enforced.



Note: If you create a Redis on Flash or a Memcached Flash database, you also have to set the RAM-to-Flash ratio for this database. Minimum RAM portion is 10%, and maximum RAM portion is 50%.

5. Configure the database options that you want for the database:

- **Replication** - We recommend that you use intra-cluster replication to create replica shards for each database for high-availability of your data.

If the cluster is configured to support [rack-zone awareness](#), you can also enable rack-zone awareness for the database.



- **Redis Modules** - When you create a new in-memory database, you can enable multiple Redis modules to the database. For RoF databases, you can add modules that support RoF.



Note:

Modules can be add to database only when creating a new database.
You can't add a module to an existing database.

To add a module to the database:

1. In the Redis Modules field, click .
2. Select the module that you want to add.
3. If you want the module to use a custom configuration, click **Add configuration** and enter the optional custom configuration.
4. Click .

- **Data persistence** - To protect against loss of data stored in RAM, you can enable data persistence and select to store a copy of the data on disk with snapshots or Append Only File.
- **Default database access** - When you configure a password for your database, all connections to the database must authenticate with the [AUTH command](#). If you also configure an access control list, connections can specify other users for authentication, and requests are allowed according to the Redis ACLs specified for that user.

Note that creating a database without further ACLs (see below) contains a *default* user with full access to the database which in turn requires the definition a password for security reasons.




Note: If you are creating a Memcached database, enter a username and password for SASL Authentication.

6. Configure the database advanced options that you want for the database:

- **Access Control List** - You can specify the [user roles](#) that have access to the database and the [Redis ACLs](#) that apply to those connections.

To define an access control list:

1. In the Access control list section of the database configuration, click .
2. Select the [role](#) that you want to have access to the database.
3. Select the [ACL](#) that you want the role to have in the database.
4. Click **Save** to save the ACL.
5. Click **Update** to save the changes to the database.

- **Endpoint port number** - You can define the port number that clients use to connect to the database, or a port is randomly selected.



Note: You cannot change the [port number](#) after the database is created.

- **Database clustering** - You can either:
 - Enable [database clustering](#) and select the number of shards that you want to have in the database. When database clustering is enabled, databases are subject to limitations on [Multi-key commands](#). You can increase the number of shards in the database at any time.

You can accept the [standard hashing policy](#) or define a [custom hashing policy](#) to define where keys are located in the clustered database.

- Clear the **Database clustering** option to use only one shard so that you can use [Multi-key commands](#) without the limitations.
- **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.



Note: You must use a client that supports the OSS cluster API to connect to a database that has the OSS cluster API enabled.

- **Data eviction policy** - By default, when the total size of the database reaches its memory limit the database evicts keys according to the least recently used keys out of all keys with an “expire” field set in order to make room for new keys. You can select a different data eviction policy.
- **Replica Of** - You can make this database a repository for keys from other databases.
- **TLS** - You can require TLS encryption and authentication for all communications, TLS encryption and authentication for Replica Of communication only, and TLS authentication for clients.
- **Periodic backup** - You can configure periodic backups of the database, including the interval and backup location parameters.
- **Alerts** - You can select alerts to show in the database status and configure their thresholds. You can also select to send the alerts by email to [relevant users](#).

1. Click **Activate**.
2. If you did not specify a port number for the database, note the port number shown in the Endpoint field of the database **configuration**.

cluster nodes databases settings log

database

db

metrics slowlog configuration

Activated on	5/15/2019 9:44:04 AM
Last changed	5/15/2019 9:44:04 AM
Protocol	Redis
Runs on	RAM
Endpoint ⓘ Get Replica of source URL	redis-16997.cluster1.local:16997 / 172.17.0.1:16997

1. [Test your connectivity](/rs/databases/connect/test-client-connectivity/).