Administration

This section covers everything you need to know to run your Redis Enterprise Software deployment.

### Planning your Cluster Deployment

The information in the section discusses important topics you need to know about when planning your Redis Enterprise Software cluster for a production deployment. Active-Active Geo-Distributed Redis In Redis Enterprise, active-active geo-distribution is based on CRDT technology. The Redis Enterprise implementation of CRDT is called an Active-Active database (formerly known as CRDB). With Active-Active databases, applications can read and write to the same data set from different geographical locations seamlessly and with latency less than one millisecond (ms), without changing the way the application connects to the database.

### Setting up a New Cluster

A Redis Enterprise Software cluster typically consists of several nodes. For production deployments, we recommend an uneven number of nodes, with a minimum of three. Note: In a cluster that consists of only one node, some features and capabilities are not enabled, such as database replication that provides high availability. To set up a new cluster, you must first install the Redis Enterprise Software package and then set up the cluster as described below.

### Adding a Cluster Node

When you install Redis Enterprise Software (RS) on the first node of a cluster, you create the new cluster. After you install the first node, you can add more nodes to the cluster. Note: Before you add a node to the cluster: The clocks on all nodes must always be synchronized. If the clock in the node you are trying to join to the cluster is not synchronized with the nodes already in the cluster, the action fails and an error message is shown indicating that you must synchronize the clocks first.

### Creating a Redis Enterprise Software Database

You can create Redis databases that are are clustered and distributed across a single Redis Enterprise Software (RS) cluster. These databases can use Redis Enterprise features like: Redis on Flash High availability Data persistence Redis modules You can create databases according to the number of shards in your subscription and the memory available on the machine. Note: For databases with Active-Active replication for geo-distributed locations, create an Active-Active database.

### Cluster Maintenance

Note: In addition to using the RS admin console to manage the cluster, you can also do cluster operations with the cluster REST API.

To access the cluster REST API documentation, either:

- Open the HTML files in the RS software package:
  1. Download the RS software package.
  2. Unarchive the package.
  3. Unarchive the rlec_docs.tar.gz package.
  4. Open the rlec_docs/html/index.html file in a web browser.
- Open the HTML files in an installed RS node:
  1. Connect to the terminal of an RS node.
  2. Change directory to the Redis Enterprise Software installation directory, for example /opt.
  3. Copy the rlec_rest_api.tar.gz package to a host with a web browser and unarchive it.
  4. Open the rlec_docs/html/index.html file in a web browser.
This section has all you need to know to maintain a Redis Enterprise Software (RS) cluster. Cluster Name, Email Service, Time Zone, and License. You can view and set various cluster settings in the Settings > General page. Entering a cluster key. After purchasing a cluster key and if your account has the “Admin” role, you can enter the key in the Cluster Key field, either during initial cluster creation or at any time afterward.

**Database Maintenance**

This section helps you maintain your Redis Enterprise Software databases. Database Security. Your data is critical to your business and securing it is one of your top priorities. Here’s where to learn how to secure access to your data and secure your data in transit. Causal Consistency in an Active-Active Database. When you enable Causal Consistency in Active-Active databases, the order of operations on a specific key are maintained across all Active-Active database instances.

**Monitoring with Metrics and Alerts**

You can use the metrics that measure the performance of your Redis Enterprise Software (RS) clusters, nodes, databases and shards to keep an eye on the performance of your databases. In the RS admin console, you can see the real-time metrics and you can configure alerts that send notifications based on alert parameters. You can also access the metrics and configure alerts through the REST API so that you can integrate the RS metrics into your monitoring environment, for example using Prometheus and Grafana.

**Import and exporting data**

This section explains how you can: Import data into your Redis Enterprise Software database Export from your database to another data store Flush your data out of your database Import data into a database. You can import export or backup files of a specific Redis Enterprise Software database to restore data. You can either import from a single file or from multiple files, such as when you want to import from a backup of a clustered database.

**Logging and Audit Events**

Management actions performed with Redis Enterprise are audited in order to fulfill two major objectives: To make sure that system management tasks are appropriately performed and/or monitored by the Administrators To facilitate compliance with regulatory standards. In order to fulfill both objectives, the audit records contain the following information: Who performed the action? What exactly was the performed action? When was the action performed? Did the action succeed or not?

**Troubleshooting**

This section includes various troubleshooting tips and tricks for Redis Enterprise Software. Topics: Creating a Support Package. If you encounter any issues that you are not able to resolve yourself and need to contact Redis support for assistance, you can create a support package that gathers all essential information to help us debug your issues. Note: The process of creating the support package can take several minutes and generates load on the system.

**Redis Enterprise Software product lifecycle**

Redis Enterprise Software product lifecycle fully reflects our subscription agreement. However, for any discrepancy between the two policies, the subscription agreement prevails. Redis Enterprise modules follow the modules lifecycle. Release numbers. Redis uses a four-place numbering scheme to designate released versions of its products. The format is “Major1.Major2.Minor-Build”. Major sections of the version number represents fundamental changes and additions in capabilities to Redis Enterprise Software. The Major1 and Major2 part of the version number are incremented based on the size and scale of the changes in each release.

**User password rotation**

Redis Enterprise Software lets you implement password rotation policies using its API. You can add a new password for a database user without immediately invalidating the old one (which might cause authentication errors in production). Note: Password rotation does not work for the default user. Add additional users to enable password rotation. For user access to the Redis Enterprise Software admin console, you can set a password expiration policy to prompt the user to change their password.