RLEC 4.4 Release Notes (December 2016)

If you are upgrading from a previous version, make sure to review the upgrade instructions before beginning the upgrade process.

You can upgrade to this version from any 4.3 version. If you have a version older than 4.3 you must first upgrade to 4.3 and only then upgrade to this version.

New features

- Databases can now be configured to have multiple proxies for improved performance. Note that when you upgrade the cluster to this version and then upgrade existing databases, the databases will be updated to use the Single proxy policy and Dense shard placement policy. For additional details, refer to Multiple active proxies.

- Support for Redis version 3.2 added. When you install or upgrade the cluster the new default version for Redis databases will be 3.2 and when you upgrade the databases they will be updated to this version. If you would like to change the default version to Redis 3.0, refer to the instruction in the Upgrading databases If you would like to upgrade existing databases to the latest 3.0 minor version, refer to the Known Issues section below.

- The cluster can now be configured to support both private and public IPs to connect to database endpoints through both public and private networks. For additional details, refer to Private and Public Endpoints.

- `rladmin status` command output has been enhanced to include an indication on which node rladmin is running by adding the ‘*’ sign next to the node entry, and to show the host name of the machine the node is running on.

- Users can now be assigned security roles to control what level of the databases or cluster the users can view and/or edit.

Changes

- As result of adding the support for multiple proxies for a database, the following changes have been made:
  - When you upgrade the cluster to this version and then upgrade existing databases, the databases will be updated to use the Single proxy policy and Dense shard placement policy.
  - `rladmin status` command output has been updated.
  - `failover [db <db:id | name>] endpoint <id1 .. idN>` and `migrate [db <db:id | name> | node <origin node:id>] endpoint <id> target_node <id>` commands are no longer relevant for databases using the single | all-master-shards | all-nodes proxy policy. Instead proxies can be bound or unbounded to databases as needed.
  - New `rladmin` commands were added, such as `bind` and `placement`.

- RLEC has been updated to remove the need to use `sudo` in runtime. You still need to be root or use `sudo` when initially installing RLEC.

- You no longer need to be root or use `sudo` to run the `rladmin` command, now it is preferred to be a non-privileged user that is member of the `redislabs` group to run the command.

- All cluster services are now run using the supervisor mechanism. As a result starting, stopping and restarting RLEC services should be done using `supervisorctl` command from the OS CLI.

- Linux OS `vm.swappiness` is now advised to be set to zero, for more information see Disabling Swap in Linux.

Important fixed issues since 4.3.0
- RLEC-7542 - Add ability to create and manage role based user security
- RLEC-8283 - The cluster recovery process does not work properly when the cluster that needs to be recovered does not have a node with ID 1.
- RLEC-8284 - Add functionality to rladmin to mark a node as a quorum only node
- RLEC-8498 - Backup fails under rare conditions
- RLEC-8579 - rladmin supports uppercase for external_addr value
- RLEC-8656 - Fixed conflict with SELinux
- RLEC-8687 - Fixed issue where strong password requirements were not honored correctly.
- RLEC-8694 - DMC failed while creating DB with 75 (150 replicated) shards
- RLEC-8700 - Fixed issue with network split scenario
- RLEC-8833 - Fixed issue where in some cases endpoint were not getting new IPs after node replacement.
- RLEC-9069 - Fixed issue related to RHEL 7 and IPv6.
- RLEC-9156 - Fixed issue causing a full resync of data when a source or destination failure occurred.
- RLEC-9173 - Issue with writing data after master and slave failed
- RLEC-9235 - Issue with SSL connection error and self signed certificates
- RLEC-9491 - Fixed alerting issue due to incorrect measurement
- RLEC-9534 - Fixed issue with node remove command after RLEC uninstalled
- RLEC-9658 - Failed to import backup file from FTP server.
- RLEC-9737 - Fixed issue with backup process to use ephemeral storage when needed
- RLEC-9761 - UI had incorrect value increments
- RLEC-9827 - Server with a high number of cores and running RHEL can have issues running systune.sh
- RLEC-9853 - Fixed issues with logrotate on RHEL 7.1 so it runs as non-privileged user
- RLEC-9858 - If proxy crashed, in some cases this would prevent completion of redis failover process
- RLEC-9893 - DB recovery process doesn't recognize original rack name when in uppercase
- RLEC-9905 - x.509 certificate signed by custom CA cannot be loaded in UI
- RLEC-9925 - master endpoint and shards goes down if co-hosted with master of the cluster and the node goes down (single proxy policy)
- RLEC-9926 - Master shard could remain down if on the same node as the master of the cluster and the entire node goes down
- RLEC-10340 - Fixed a typo that crashed rladmin status output in some cases

Changes in 4.4.2-42:
- RLEC-11941 - Upgrade to 4.4.2-35 on RHEL6 - leash failed when python2.6 is installed
- RLEC-11994 - RLEC 4.4.2-35: the UI doesn't display the DBs with replication

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Known issues

- **Issue**: When upgrading to this version from a previous RLEC version, `rladmin status` output will show the database status as having an old version. When you upgrade the Redis database (using `rladmin upgrade db` command) the Redis version will be updated to 3.2 even if you updated the cluster's Redis default version to 3.0. **Workaround**: If you would like to cancel the old version indication in `rladmin status` without upgrading the Redis version to 3.2 you should run the `rladmin upgrade db` command with the `keep_current_version` flag which will ensure the database is upgraded to the latest 3.0 version supported by RLEC.

- **Issue**: RLEC-9200 - in a database configured with multiple proxies, if a client sends the MONITOR, CLIENT LIST or CLIENT KILL commands, only commands from clients connected from the same proxy are returned instead of all commands from all connections. **Workaround**: If you would like to get a result across all clients, you need to send the monitor command to all proxies and aggregate them.

- **Issue**: RLEC-9296 - Different actions in the cluster, like node failure or taking a node offline, might cause the Proxy policy to change Manual. **Workaround**: You can use the `rladmin bind [db <db:id | name>] endpoint <id> policy <single | all-master-shards | all-nodes>` command to set the policy back to the required policy, which will ensure all needed proxies are bounded. Note that existing client connections might disconnected as result of this process.

- **Issue**: RLEC-8787 - In some cases when using the replica-of feature, if the source database(s) are larger than the target database, the memory limit on the target database is not enforced and that used memory of the target database can go over the memory limit set. **Workaround**: You should make sure that the total memory limit of all source databases is not bigger than the memory limit of the target database.

- **Issue**: RLEC-8487 - Some Redis processes stay running after purging RLEC from the machine and causes an attempt to reinstall RLEC to fail. **Workaround**: Run the purge process for a second time and ensure that the Redis processes were removed.

- **Issue**: RLEC-8747 - When upgrading to this version, if the UI is open in the browser the UI might not work properly after the upgrade. **Workaround**: Refresh the browser and the UI will return to work properly.

- **Issue**: In the Replica Of process, if the target database does not have replication enabled and it is restarted or fails for any reason, the data on the target database might not be in sync with the source database, although the status of the Replica Of process indicates that it is. **Workaround**: You must manually stop and restart the synchronization process in order to ensure the databases are in sync.

- **Issue**: In the Replica Of process, if the source database is resharded while the Replica Of process is active, the synchronization process will fail. **Workaround**: You must manually stop and restart the synchronization process after the resharding of the source database is done.

- **Issue**: In the Replica Of process, if there is very high traffic on the database the Replica Of process might be restarted frequently due to the “slave buffer” being exceeded. In this case, you will often see the status of the Replica Of process display as “Syncing”. **Workaround**: You must manually increase the “slave buffer” size through rladmin. To find the appropriate buffer size please contact support at: support@redislabs.com.

- **Issue**: In a cluster that is configured to support rack-zone awareness, if the user forces migration of a master or slave shard through rladmin to a node on the same rack-zone as its corresponding master or slave shard, and later runs the rebalance process, the rebalance process will not migrate the shards to ensure rack-zone awareness compliance. **Workaround**: In the scenario described above, you must use rladmin to manually migrate the shard to a node on a valid rack-zone in order to ensure rack-zone awareness compliance.

- **Issue**: DNS doesn’t change after having removed the external IP address. **Workaround**: Unbind IP from affected node and then bind it back.

- **Issue**: CCS gets an error and won’t start if `/var/opt/redislabs/persist/` does not exist. **Workaround**: Make sure this directory is not deleted and continues to exist.
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