



REDDOXX Cluster Installation Guide

1. Overview	2
2. Prerequisites	2
3. Limitations and Warnings	2
4. Preparations.....	3
5. Setting up cluster operations	3
6. Release cluster operations.....	4
7. Release cluster operations on failure	4
8. Licenses in cluster operations	4
9. Recreate cluster operations after hardware failure.....	4

1. Overview

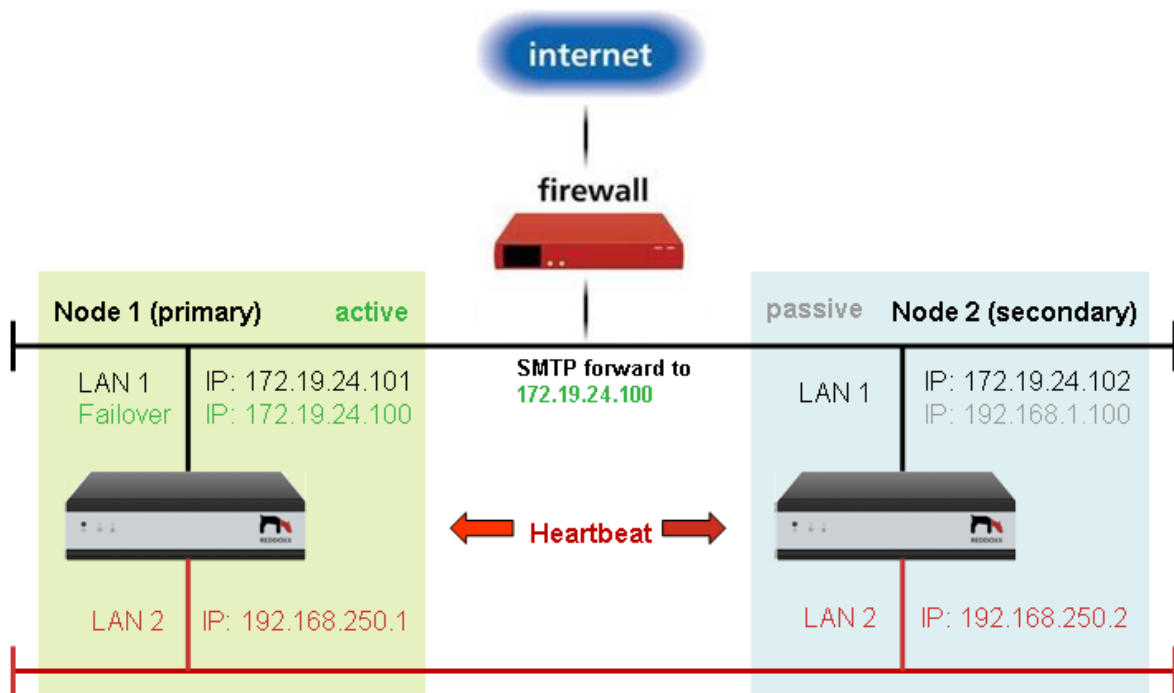


Illustration: Cluster functional diagram

2. Prerequisites

- 2 REDDOXX appliances of the same product family (BASIC ENTRY, SMB, MEDIUM or ENTERPRISE)
- 1 Ethernet cross cable
- 1 CLUSTER license fitting to the product family (Cluster operation license)
- 1 CLUSTER Subscription license fitting to the product family (Cluster maintenance license)
- The Cluster Manager in the Admin console needs access to the appliance via TCP-Port 4011.

3. Limitations and Warnings

- On virtual appliances a cluster cannot be setup within the test period without licenses.
- A virtual appliance must have a regular license before setting up a cluster.
- Cluster operations does not work in bridge mode.



- In a network segment only one REDDOXX Cluster may exist.

4. Preparations

1. Both appliances requires a full configured network.

Note: HOSTNAME and IP addresses cannot be changed while cluster is running!

Note: During cluster operations the appliances requires internet access (http)

2. Check the size of the data partitions on both appliances
 1. Log in directly to the appliance console
 2. Select „Cluster -> Show size of data partition“

Note: The data partition size of the secondary appliance must be equal or bigger than the primary appliance.

If the data partition of the primary appliance is bigger that the secondary appliance, contact the REDDOXX Support.

3. The ‚sf-admin‘ administrator’s password must be equal on both appliances.
4. You must have a time server configured on both Appliances.
5. Allow the IP addresses of both appliances on your firewall for outbound mail traffic.

5. Setting up cluster operations

1. Connect the second LAN interface (LAN2) of both appliances with a ethernet cross cable.
2. Log in to the REDDOXX admin GUI at the primary appliance.
3. Insert the cluster operation license to the other licenses.
4. Select “cluster manager” from the menu „View“.
5. Insert the IP address of the secondary appliance into the form.
6. Start cluster configuration by clicking on „Create Cluster“.
7. Insert the failover IP address. This is the common IP address which is configured at the firewall and the mail server to connect to the appliance.
8. Optional: You can change the configuration of the heartbeat network if the presettings does not fit to your network requirements.
9. Create the cluster by pressing „OK“
10. Follow the responses inside the protocol window. Wait until all actions are done.
11. Now insert the cluster subscription license.
12. Activate the SMTP Notification service (Settings) to receive an email if a node fails.

Note: The primary appliance is now fully operational. The secondary appliance is operational until the synchronization is done completely.

Installation of software updates in a cluster has to be done only at the active appliance. The update will be installed automatically on the passive node.



6. Release cluster operations

1. Select "cluster manager" from the menu „View“.
2. Press „Release Cluster“ .

Note: After the completed cluster release both appliance now have the same data set. Only use one of those appliances.

7. Release cluster operations on failure

If an appliance in a cluster is not available anymore, the cluster cannot be released in a regular way, as described before. To set the residual appliance into single operation mode, continue with following steps:

1. Log in to the appliance console (via ssh is not allowed!)
2. Select „Cluster -> Leave Cluster“
3. Reboot the appliance

8. Licenses in cluster operations

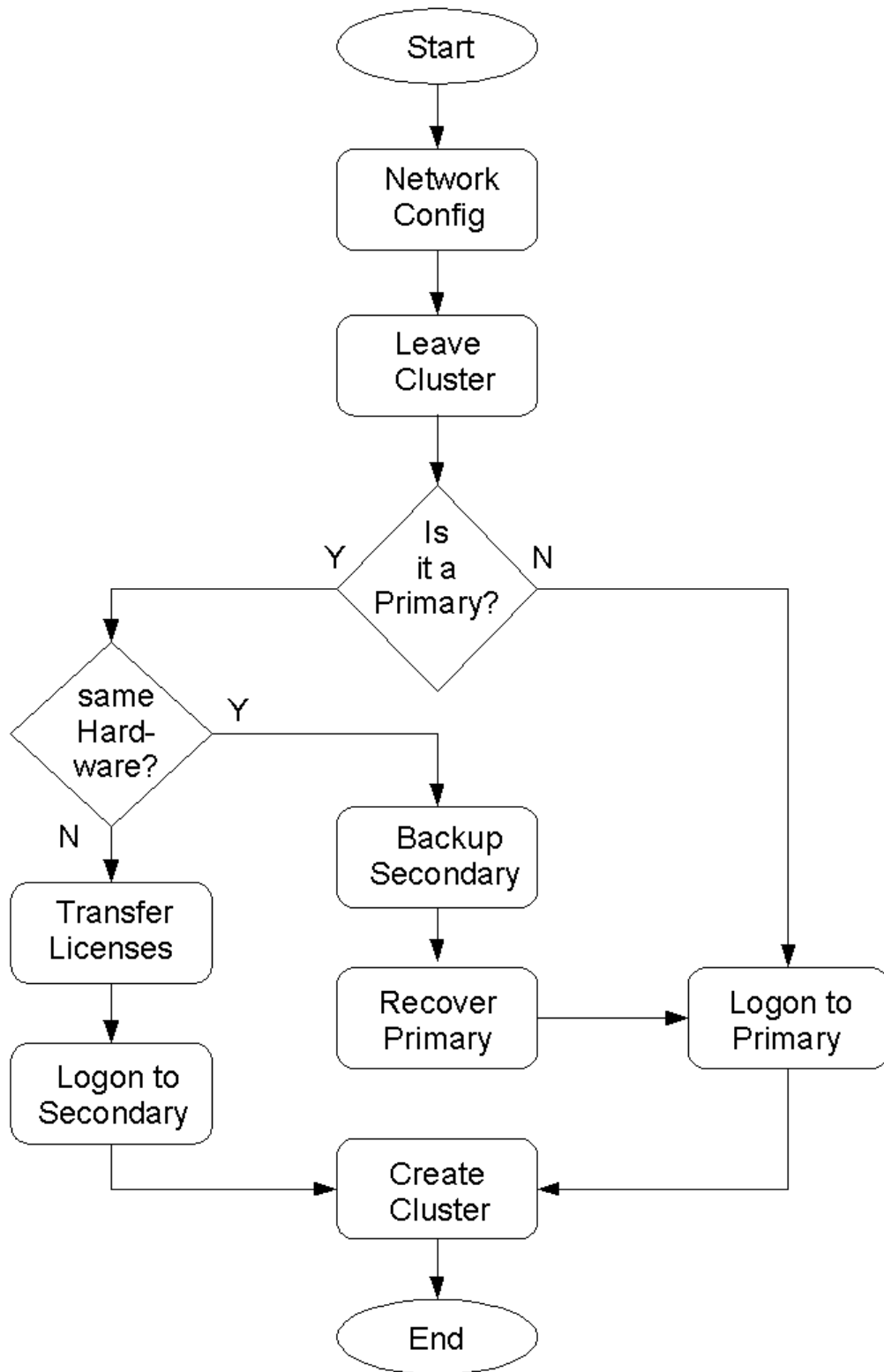
During the setup of a cluster the licenses are assigned to the primary appliance. If the cluster will be released in future, all licenses which have been assigned additionally during cluster operations are assigned to the primary appliance automatically.

Note: For cluster operations a cluster license and a cluster subscription license are required. (see also in chapter 1 prerequisites)

9. Recreate cluster operations after hardware failure

The following flow diagram will help you to recreate a cluster after a failure of an appliance. The explanation of this process you will find after the diagram.

At first clarify the hardware defect in cooperation with the REDDOXX support team, before you send back the appliance.





Start

A hardware failure occurred. You get a new appliance or you get back a repaired appliance. Or the appliance was offline disconnected from the cluster and reset to the Default Factory Settings .

Network Config

Connect the new or received appliance and configure the network settings using the appliance console.

Leave Cluster

Log on at the appliance console of your active appliance. Select "leave cluster".

Is it a Primary?

Was the broken hardware a primary node?

If not, logon on the primary appliance and create a new cluster.

If yes, follow the instructions.

Same Hardware?

Is the returned appliance the same hardware like before? (Was there only a repair, or have you received a new hardware?)

If not, the REDDOXX support must transfer your licences to the secondary node. Logon on the secondary node using the Admin-GUI and create a new cluster. By this situation the secondary appliance will become a primary. The rules of this both appliances swaps.

If yes, create an up-to-date backup from the secondary appliance and recover it on the new primary appliance. (Choose the boot menu entry APPLIANCE RECOVERY.) Logon on the primary node using the console and create a new cluster.

Note:

If the returned appliance is still the same hardware, you can let transfer the licences by the REDDOXX support team anyway. By this option you can faster recreate the cluster without using the backup-restore mechanism.