



RAIDIX 4.4.4 to RAIDIX 4.7.0 Update Manual

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Introduction

Intended Audience

This manual describes the procedure of updating RAIDIX software from the version 4.4.4 to the version 4.7.0.

This manual is mandatory for use by the partners of RAIDIX LLC while performing the update of RAIDIX 4.4.4 software.

Requirements and Limitations

While performing the update, meet the following requirements and recommendations.

1. Don't make changes to the hardware including the system drive, during the update.
2. Perform the update in strict accordance with this manual and follow the sequence of the steps.
3. Don't modify any RAIDIX objects while updating.
4. Before the update in dual-controller mode, make sure that Heartbeat connection between the nodes is up and disable synchronization of caches. Enable synchronization after the update is complete.
5. Before the update, disconnect the enclosure in accordance with instructions. Connect the enclosure back to the system before applying `raidix-migrate-4.4.4-4.7.0.zip`.
6. If you use QoSmic, download and save QoSmic signatures before the update to prevent data loss. After the update is complete, add the signatures to the updated system.
7. The network IP address assigned by DHCP server will remain the same after the update. However, the DHCP flag will reset.

8. If all RAIDs in the system have 3.x topology (legacy), you can't configure plugins for LUN. Default parameters will be used. To set plugin parameters for LUNs, create at least one LUN with other topology.
9. After the update, some RAIDs might need increase of the cache size.
10. If before the update there were bonds in the system, after the update add lacking interfaces to the bonds manually.
11. Before the update, make sure all RAIDs and their related virtual IPs are active on the same node.
12. Before the update, back up the current configuration on both nodes.
13. Both nodes must be in the working condition.
14. Before updating the dual-controller mode, disable Persistent Reservation synchronization on both nodes.
15. Before updating the dual-controller mode, make sure that the system time matches on both nodes.
16. Don't dismantle the dual-controller mode (DC) without consulting the RAIDIX Support Team.
17. Take into account automatic failover after an updated node reboots automatically.
18. Make sure that the number of free drives in the system is less than the number of engaged drives (in RAIDs or SparePools). Otherwise, an outdated configuration file will be used.

System Update in the Web Interface

System Update in Single Mode

1. Select **System > Configuration Recovery**. In the **Current System Configuration** widget, click **Download Configuration File** to back up the current configuration file `current.json`.
2. Since license file will be deleted from the system drive, save it somewhere else.
3. Disconnect the enclosure in accordance with [instructions](#).
4. Perform the installation from `raidix-4.7.0.iso`.
5. Select **System > License**. Click **Add a License File** and download the valid license file.
6. Connect the enclosure back to the system.
7. Select **Monitoring > Support**. In the **Software Version** field, click **Go to the Update Service**. The update service page will open.
8. Select the archive `raidix-migrate-4.4.4-4.7.0.zip` and apply it.



Do not reboot the system in the process of the system update.

9. After the update is complete, reboot the system.

System Update in DC

1. Since license file will be deleted from the system drive, save it somewhere else.
2. Select **System > Configuration Recovery**. In the **Current System Configuration** widget, click **Download Configuration File** to back up the current configuration file `current.json`.

3. Make sure that Heartbeat connection between the nodes is up. To do so, select **System** > **Nodes** and make sure that both nodes are displayed in the tab.
4. Select **Monitoring** > **Support**. Click **Show Console**. Disable **Persistent Reservation synchronization** by using the command:

```
rdcli dc modify -pr 0
```

Repeat on the second node.

5. Disable synchronization of caches on both nodes. To do that, perform the following steps:
 - Select **Hosts & Interfaces** > **Adapters**.
 - Click **Target Synchronization**. The **Select Targets for Synchronization** window will open.
 - Memorize or write down the identifier (GUID/WWN/IQN) of the target used for caches' synchronization. Clear the checkbox next to the selected target. Make sure there is no targets selected for synchronization, and click **Select**.
 - Repeat the actions on the second node. Synchronization of the caches is disabled.
6. If you use DC in the Active-Active mode, open the **System** menu and select the **Nodes** tab. Click **Failover**. The system will switch to manual mode, and all RAIDs on the first node will become passive.
7. Select **System** > **Configuration Recovery**. In the **Current System Configuration** widget, click **Download Configuration File** to back up the current configuration file `current.json`.
8. Disconnect the enclosure from the first node in accordance with [instructions](#).
9. Perform the installation from `raidix-4.7.0.iso`.
10. Select **System** > **License**. Click **Add a License File** and download the valid license file.

11. Connect the enclosure back to the first node.
12. Select **Monitoring > Support**. In the **Software Version** field, click **Go to the Update Service**. The update service page will open.
13. Select the archive `raidix-migrate-4.4.4-4.7.0.zip` and apply it.



Do not reboot the system while updating.

14. Reboot the first node after the update is complete.
15. After the update, check the system time on the first node. To do so, open the **System** tab and move to the **Time Settings** page.
16. Move to the second node and make sure that Heartbeat connection between the nodes is up.
17. Check the system time on the second node. To do so, select **Monitoring > Support**, and click **Show Console**. Enter `date` in the console.
18. If the system time on nodes does not match, move back to the first node and click **Synchronize** in the **Time Settings** page. Make sure that time on both nodes is synchronized.
19. Select **System > Nodes**. Click **Failover**. The system will switch to manual mode, and all RAIDs on the first node will become passive.



Update the node when all RAIDs are passive on the current node.

20. Select **System > Configuration Recovery**. In the **Current System Configuration** widget, click **Download Configuration File** to back up the current configuration file `current.json`.
21. Disconnect the enclosure from the second node in accordance with [instructions](#).

22. Perform the installation from `raidix-4.7.0.iso`.
23. Select **System > License**. Click **Add a License File** and download the valid license file.
24. Connect the enclosure back to the second node.
25. Select **Monitoring > Support**. In the **Software Version** field, click **Go to the Update Service**. The update service page will open.
26. Select the archive `raidix-migrate-4.4.4-4.7.0.zip` and apply it.



Do not reboot the system while updating.

27. Reboot the first node after the update is complete.
28. After the update is complete, select **System > Nodes** page. Click **Failback**.
29. Enable synchronization of caches. To do that, perform the following:
 - Select **Hosts & Interfaces > Adapters**.
 - Click **Target Synchronization**. The **Select Targets for Synchronization** window will open.
 - Select the target with the identifier (GUID/WWN/IQN) got in the step 2, and click **Select**.
 - Repeat the actions on the second node. Synchronization of the caches is disabled.
30. If necessary, select **System > Nodes** and enable the **Persistent Reservation synchronization**. Repeat on the second node.

System Update in the Command Line Interface (CLI)

System Update in Single Mode

1. Download the `/var/lib/raidix/raidixcfg.json` from the node to be updated.
2. Since license file will be deleted from the system drive, save it in other location.
3. Disconnect the enclosure in accordance with [instructions](#).
4. Perform the installation from `raidix-4.7.0.iso`.
5. Add the valid license file by using the following command

```
rdcli system license create -f|--filename <value>
```

where `<value>` stands for the license file name.

6. Connect the enclosure back to the system.
7. Copy the `raidix-migrate-4.4.4-4.7.0.zip` archive to the node and unzip it by using the following command

```
unzip raidix-migrate-4.4.4-4.7.0.zip -d ./migrate
```

8. Move to the `./migrate` directory and run the following script:

```
./install
```



Do not reboot the system while updating.

9. Reboot the system.

System Update in DC

1. Since license file will be deleted from the system drive, save it in other location.
2. Before the update, make sure that **Heartbeat** connection by performing the command

```
rdcli dc show
```

Heartbeat connection status must be **Up**.

3. Disable **Persistent Reservation synchronization** by using the command:

```
rdcli dc modify -pr 0
```

4. Disable synchronization of the caches. To do so, perform the following steps:

- Perform the command

```
rdcli dc show
```

- Memorize or write down the identifier of the target (GUID/WWN/IQN) used for synchronization.

- Perform the command

```
rdcli dc modify -t ""
```

- Repeat the actions on the second node.

5. If you use DC in the Active-Active mode, perform failover by using the following command:

```
rdcli dc failover
```



Update the node when all RAIDs are passive on the current node.

6. Download the `/var/lib/raidix/raidixcfg.json` from the first node.
7. Disconnect the enclosure from the first node in accordance with [instructions](#).
8. Perform the installation from `raidix-4.7.0.iso`.

9. Add the valid license file by using the following command

```
rdcli system license create -f|--filename <value>
```

where <value> stands for the license file name.

10. Connect the enclosure back to the first node.

11. Copy the `raidix-migrate-4.4.4-4.7.0.zip` archive to the node and unzip it by using the following command

```
unzip raidix-migrate-4.4.4-4.7.0.zip -d ./migrate
```

12. Move to the `./migrate` directory and run the following script:

```
./install
```



Do not reboot the system in the process of the system update.
Do not enable the cache synchronization until update of both nodes is complete.

13. After the update, reboot the first node.

14. Move to the second node and perform failover on the second node by using the following command:

```
rdcli dc failover
```



Update the node when all RAID's are passive on the current node.

15. Repeat the steps 5-13 on the second node.

16. Perform failback by using the following command

```
rdcli dc failback
```

17. Enable synchronization of the caches by performing the command

```
rdcli dc modify -t <target>
```

18. If necessary, enable the Persistent Reservation synchronization by using the command

```
rdcli dc modify -pr 1
```

Repeat on the second node.

Disconnecting the Enclosure

While updating the system, it is required to disconnect the enclosure from the system before the image installation in order to avoid potential data corruption during update.

Peculiarities

1. Before starting the update, it is required to disconnect all drives except the system one. Update installs on the system drive.
2. While updating the DC system, disconnect the enclosure only from the node being updated.
3. There is no need to stop the RAIDIX services or turn off the node before disconnecting the enclosure.
4. While using *Isiutil* utility if the system drive is enclosure with other drives, do not connect the system drive and other drives to the same port. By doing so, you will not install the update to the wrong drive by mistake.

Disconnecting Drives in the Enclosure or Connected with Cable

If drives are connected to the system with cable, disconnect the cables. If drives are in the enclosure, extract them.

Disconnecting Drives Using Isiutil

While working with the system, from which drives cannot be just disconnected or extracted from the enclosure (for example, Super Storage Bridge Bay (SBB) systems), use *Isiutil* utility to disconnect all drives except the system one.

To disconnect the drives by using *Isiutil*, perform the following:

1. Open the command line interface by pressing the combination of keys Ctrl+Alt+F2(F3).

2. In the command line enter the command `lsiutil`. As the utility starts, the list of ports to which the drives are connected will be displayed.
3. Enter the number of port to be disconnected.



Update can be performed if all RAIDs are **passive** on the current node.

4. To disable the connection, enter the menu option 13. The list of PHY numbers will open.
5. Enter the required Phy number or the value corresponding to selection of all Phys. To disable the connection, enter the value 0 for **Link** parameter.
6. In the updated list, the **Link** state of the selected PHY must change to **Disabled**.
7. To apply the changes, reset the port. To do so, enter the menu option 99. Selected connections will be disabled.
8. After the image is installed and the license file is downloaded, change the state of the required ports back to **Enabled**.