Moving LISTSERV Maestro

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This document is a LISTSERV Maestro Admin Tech Doc. Each admin tech doc documents a certain facet of the LISTSERV Maestro administration on a technical level. This document is number 4 of the collection of admin tech docs and explains the topic “Moving LISTSERV Maestro”.

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1 Moving a LISTSERV Maestro Instance

The scenario of “moving a LISTSERV Maestro instance” covers a number of sub-cases, which are all handled in more or less the same way. Examples for these sub-cases are:

- All LISTSERV Maestro components are installed on the same server. This server is now getting old, and to preempt a system failure, it is to be replaced with a new server. Or the LISTSERV Maestro usage has increased and the old server shall be replaced with a more powerful server. In this case, the whole LISTSERV Maestro instance is to be moved to the new server, which may or may not have a different hostname than the old server.

- All LISTSERV Maestro components are installed on the same server. The LISTSERV Maestro usage has increased, and it has become desirable to split the system into two servers: One with LUI/HUB, the other with TRK. In this case, only the LUI/HUB components are to be moved to the new server, which obviously will have a different hostname than the old server, where the TRK component remains.

- LISTSERV Maestro is installed on two servers: LUI/HUB are on one server, TRK is on another server. The LUI/HUB server needs to be replaced, maybe because it is getting old, or maybe because a more powerful server is needed. In this case, only the LUI/HUB components are to be moved to the new server, which may or may not have a different hostname than the old LUI/HUB server. The TRK component remains on the same separate server as before.

- LISTSERV Maestro was installed on a certain set of servers, but this installation broke down (for whatever reason) and a backup has to be restored. However, the configuration of the new LISTSERV Maestro installation differs from the original installation. Maybe the component distribution over several servers is now different, or some or all of the servers have different host names.

All these cases (and other similar ones) are more or less handled in the same way:

1. Trigger a backup.
2. Wait until the backup finishes and verify that it was complete and successful.
3. Copy the three backup ZIP-files (one each for LUI, HUB and TRK) to a safe location from where you can later get them to restore the backup.

(Obviously these first steps can be skipped if you want to restore an existing backup, for example if the original installation broke down, and you now have to recover from a backup by installing LISTSERV Maestro from scratch, only you are forced to re-install in a different configuration than the original LISTSERV Maestro.)

4. Install your LISTSERV Maestro components as required.

Depending on your needs, this may require that you install LISTSERV Maestro, or some of its components, on a new server (or even several servers), and/or that you uninstall existing components on old servers. At the end, you should have one instance of each of the three components, each installed on the desired server.

Note: If you move a component from one server to another, take care to copy all related files that are not part of the backup, before you uninstall the component on the old server. For example the component’s existing log files, or additional web content that you put into the “webapps” folder.
5. Restore the backup into the new LISTSERV Maestro installation. See “LMA Admin Tech Doc 2 – Backups” for details.

**Important:** It is necessary that you always completely restore the backup of all three components, even if you only moved some of the components to a new server.

In many cases, one or several of the components will end up on a server that has a different hostname than the old server on which it was originally located, when the backup was stored. In such a case, you have to deal with some special issues. See the following subsection “2 Dealing with Hostname Changes during a Backup Restore” for details.

**Important:** Moving the TRK component to a server with a different hostname is usually **not a good idea** and should be avoided, unless absolutely necessary.

The reason for this is the following: When LISTSERV Maestro sends out e-mails with tracked links, then the URLs of these tracked links point back to the server where the TRK component is running, using the server's hostname. But if the hostname of the TRK server is changed, then all the already delivered e-mails still contain tracking links that point to the old hostname. Only now there is no TRK component with that hostname anymore. This has an effect both on the recipients of the already delivered messages and on the LISTSERV Maestro user who owns the mail jobs for these messages:

- **Negative effect for the recipients:** All tracked links in all e-mails that were delivered before the server was moved cease to function. If a recipient clicks one of these links, then instead of seeing the intended target page, he will see a "server not found" message (or similar).

- **Negative effect for the LISTSERV Maestro user:** Since the tracked links cease to function, no tracking events for these links will reach TRK. So all mail jobs that were delivered before the server was moved will no longer receive any new tracking events. Their tracking data will appear "frozen" in the state that it had at the moment the server was moved.

Mail jobs which are delivered after the server was moved are not affected by this.

Therefore, unless the negative effects described above are acceptable in your situation, you should never move TRK to a server with a new name. If you have to move to a new server, then consider if it is not possible to also "move" the hostname from the old server to the new server. I.e. assign a new hostname to the old server and assign the old hostname to the new server (possibly as an alias, if the new server already had a different hostname before).

**2 Dealing with Hostname Changes during a Backup Restore**

In some situations, a backup needs to be restored on a server that has a different hostname than the server that initially stored the backup.

For example if the old server broke down and the backup is restored in a fresh LISTSERV Maestro installation on a new server that has a different hostname. Or if previously all components were on the same server, but now the backup is restored in such a way, that some components remain on the old server, but the other components are on a new server, with a new hostname.

In these situations, you have to deal with the following special cases during the restoration of the backup.

**Note:** This does not apply if you simply restore a backup into exactly the same LISTSERV Maestro installation that originally stored the backup. But if you restore the backup into a new configuration, or on a server with a new hostname, then one, or several, of the cases below may apply.
2.1 HUB Hostname Changed

If the HUB hostname has changed, then during the last step of the backup restore procedure (when LISTSERV Maestro is started), you may receive startup errors in the LUI and/or TRK components because these components cannot find the HUB on its new host. To fix this problem, do the following:

- If TRK did not start because it could not find the HUB:
  
  On the server where the TRK component is installed, edit the file
  
  `[maestro_install_folder]/trk/tracker.ini`
  
  and correct the entry “RegistryHubHost”. This entry must point to the new hostname of the server where the HUB component is now running (add the entry if it is not already present).

- If LUI did not start because it could not find the HUB:
  
  On the server where the LUI component is installed, edit the file
  
  `[maestro_install_folder]/lui/lui.ini`
  
  and correct the entry “RegistryHubHost”. This entry must point to the new hostname of the server where the HUB component is now running (add the entry if it is not already present).

Also, if LUI could not find the HUB during startup, then the actual backup restoration has only been partially completed. The files and folders have already been restored, but the content of the system database has not yet been restored. You need to restore it manually, as follows:

Take the backup ZIP-file for the LUI component and unzip it into a temporary folder on the server where the LUI component is installed. The temp folder should be outside of the LISTSERV Maestro install folder, but make sure that the user account that is used to run LISTSERV Maestro has read access on this folder.

Now edit the same “lui.ini” file as above and add an entry like this:

```
RestoreBackup=path_to_temp_folder
```

where you replace “path_to_temp_folder” with the path name that leads to the temp folder into which you unzipped the backup ZIP-file.

The path can either be an absolute path or it can be a relative path. A relative path is interpreted as relative to the location of the “lui.ini” that contains the entry. Also on Windows, remember that in the pathname, you cannot use the normal single backslash “\”. Instead, either use double backslashes “\\” or a single forward slash “/”.

Then restart LISTSERV Maestro.

If you added the “RestoreBackup” entry to the “lui.ini” in the step above, then during the restart, the system database will now be restored. Once the startup is complete, you can then delete the temporary folder into which you unzipped the LUI backup ZIP-file.

In addition, the access URL for the HUB is now most likely incorrect, as it still contains the old hostname. To fix it, wait until LISTSERV Maestro has restarted. Then login to the HUB with the following URL (where you replace the hostname and http-port accordingly):

```
http://HOSTNAME_OF_HUB_SERVER/hub/?loginOverride
```
Then check the “HUB Access URL for Users”. Make sure that this URL uses the correct new hostname of the server where the HUB component is installed.

You can find this URL on the following pages:

- **Global Settings** → **Maestro User Interface** → **Default URL Settings**
- **Accounts and Identities Overview** → Select a non-group account or a group → User Account or Group → **URL Settings**

### 2.2 LUI Hostname Changed

If the LUI hostname has changed, then the access URLs for LUI and the subscriber pages are now most likely incorrect as they still contain the old hostname. To fix this, wait until LISTSERV Maestro is running (after the backup restore). Then login to the HUB with the following URL (where you replace the hostname and http-port accordingly):

```
http://HOSTNAME_OF_HUB_SERVER/hub/?loginOverride
```

Then check the “LUI Access URL for Users”, “LUI Access URL for Admin” and “URL for Recipients, Subscribers and Others”. Make sure that all these URLs use the correct new hostname of the server where the LUI component is installed.

You can find these URLs on the following pages:

- **Global Settings** → **Maestro User Interface** → **Default URL Settings**
- **Accounts and Identities Overview** → Select a non-group account or a group → User Account or Group → **URL Settings**

### 2.3 TRK Hostname Changed

If the TRK hostname has changed, then after LISTSERV Maestro has started, and the backup has been restored, LUI will most likely not be able to connect to TRK to transfer the tracking events. To fix this problem, do the following:

- If LUI fails to open a tracking event transfer connection to TRK:

  On the server where the LUI component is installed, edit the file

  ```
  [maestro_install_folder]/lui/lui.ini
  ```

  and correct the entry “TrackerHost”. This entry must point to the new hostname of the server where the TRK component is now running (add the entry if it is not already present).

Then restart LISTSERV Maestro.

In addition, the tracking URL is now most likely incorrect, as it still contains the old hostname. To fix it, wait until LISTSERV Maestro has restarted. Then login to the HUB with the following URL (where you replace the hostname and http-port accordingly):

```
http://HOSTNAME_OF_HUB_SERVER/hub/?loginOverride
```
Then check the “Tracking URL”. Make sure that this URL uses the correct new hostname of the server where the TRK component is installed.

You can find this URL on the following pages:

- Global Settings ➔ Maestro User Interface ➔ Default URL Settings
- Accounts and Identities Overview ➔ Select a non-group account or a group ➔ User Account or Group ➔ URL Settings