

L-Soft Sweden AB



Linux and Solaris Installation Guide

LISTSERV[®] Maestro, Version 1.2

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Build 3 Release

This document describes the installation of the “**Version 1.2 Build 3**” release of LISERV[®] Maestro for Linux and the Solaris[®] Operating Environment[®].

The information furnished in this document is meant as an introduction to installing and administering a LISERV Maestro installation. For further in-depth information that may be helpful before initiating an installation, please see the LISERV Maestro Administrator’s Manual available at <http://www.lsoft.com/manuals.html>.

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URL: <http://www.lsoft.com/manuals.html>

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1 Understanding LISTSERV Maestro

LISTSERV® Maestro consists of three components:

- The **Maestro User Interface** component is the actual user interface. It is used by individuals who prepare a mail job for sending and then send the job. It is also used by those who access, view, and download the collected tracking data.
- The **Maestro Tracker** component is the component that collects the tracking events that are generated by recipients of mail that was sent with the Maestro User Interface component.
- The **Administration Hub** component is a central component that stores registry and account information. It is accessed both by the Maestro User Interface and by Maestro Tracker to validate login information. It also has its own administrator user interface

In addition to LISTSERV Maestro's three components, LISTSERV Maestro also relies on the existence of two additional L-Soft external components:

- An installation of **LISTSERV 1.8e, build date 20 August 2003** (or later)
- An installation of **LSMTP 1.1b** (or later)

These two components must be configured to work together.

Note: This installation manual only describes the installation of LISTSERV Maestro's three main components. The LISTSERV and LSMTP external components come with their own installation packages, and their own installation, administration, and user manuals. These external components must be installed separately.

LISTSERV Maestro also requires a separate external (to LISTSERV Maestro) database to store its own internal data. This database is referred to as the "system database". Please see the LISTSERV Administration Manual, Section 4 The System Database, for information on configuring an external system database. LISTSERV Maestro can connect to several database management systems (DBMS) to use as an external system database.

Supported database management systems are:

- Oracle® 8i and 9i (and compatible versions)
- IBM DB2® V7.2 (and compatible versions)
- MySQL™ 3.23.42 (and compatible versions)
- Microsoft® SQL Server 7.0 and 2000

Optionally, LISTSERV Maestro can use other databases to select recipient lists from database tables. This database is referred to as a "user database". A user database does not need to be configured for installation. See the LISTSERV Administration Manual, Section 5 Defining External Database Connections, for information on configuring an external user database.

The three LISTSERV Maestro components, the two external components, and the database may be installed on any combination of hosts, from one single host shared by all components to six dedicated hosts, one for each component.

When installing the components on their hosts, the following restrictions must be met:

- All hosts that contain any of the three LISTSERV Maestro components must be interconnected with a network in a way that the components can communicate using TCP/IP ports. In addition, the host where the Maestro User Interface component is installed must be interconnected with the LISTSERV host and the host of the optional database(s) in the same way.
- The host where the Maestro Tracker component is installed must have a registered DNS host name and the HTTP port (standard is port 80) on that host must be available to external users from the Internet.
- For standard installations, the host(s) where the Maestro User Interface and/or the Administration Hub components are installed must be accessible on the HTTP port for all intended users of the Maestro User Interface and/or the Administration Hub interface. If there are only internal users, then the host(s) may be protected by a firewall with only internal network names. However, if external users also must access the Maestro User Interface and/or the Administration Hub, then the host(s) needs to have registered DNS host name(s), and the HTTP port(s) must be available to external users from the Internet, even through a firewall.
- For standard installations, the three LISTSERV Maestro components all require use of the HTTP port. On a host where any of these three components is installed, there may not be any other software running that also requires use of the same HTTP port (such as a Web server, for example).

The three LISTSERV Maestro components themselves may share one host. The standard port for HTTP is port 80. However, a different port may be configured as the HTTP port during setup or at a later time (see the LISTSERV Maestro Administrator's Manual for details about how to change the port after the initial installation).

- There may be other restrictions applying to the LISTSERV and/or LSMTP hosts, depending on their setup requirements. See the LISTSERV and LSMTP manuals.

Remember, that if any of the components share a host, then all restrictions from all components on that host apply.

After the installation, all LISTSERV Maestro application files will reside in a folder called "Application Server". If components are installed on separate servers, each server will have an "Application Server" folder, but it will only contain those sub-folders and files necessary for the component(s) installed on that server.

2 Required Resources

This manual assumes that you have access to the install file of **LISTSERV Maestro 1.2-3**:

```
LISTSERVMaestro1.2-3-[platform].tar.gz
```

Note: Replace the text `[platform]` in the file name listed above with the actual installation platform.

LISTSERV[®] Maestro is supported on the following Linux and UNIX[™] platforms:

- Linux – comparable to SuSE Linux 8.0 (kernel version 2.4.18 or later)
- Solaris[®] 8
- Solaris[®] 9

For the installation, you will need to have access to the following:

- **Logon access with root privileges** to the computer(s) where the LISTSERV Maestro components will be installed.
- **The host name and TCPGUI-port number of the LISTSERV installation** that you will be using for LISTSERV Maestro.
- **A LISTSERV account and password** that is registered as a postmaster or is configured as a “DIST_ALLOWED_USER” within the LISTSERV installation that you will be using for LISTSERV Maestro.

3 Performing the Installation

There are some pre-installation and post-installation tasks associated with installing LISTSERV Maestro.

3.1 Installing *LISTSERV Maestro*

Section 3.1.2 is for a fresh installation of LISTSERV[®] Maestro. If you are upgrading an existing installation of an older version, see section 3.1.3. If you are reconfiguring the components of an existing installation, see section 3.1.4.

3.1.1 Pre-Installation Tasks

Pre-installation tasks must be completed before initiating the installation process to ensure a successful outcome.

3.1.1.1 Create LISTSERV Maestro Owner

On Linux (and other UNIX[™] variants) server applications normally are started as background daemon processes by the user “root” upon system startup. Although being started by the user “root”, server applications usually are not owned by “root”, due to security considerations. Such

a typical separation of program ownership by a normal user on one hand, and daemon process startup by the user “root” on the other hand, is also supported and recommended for LISTSERV Maestro.

For the remainder of this document the program owner of LISTSERV Maestro will be called “maestro”. This owner can have any desired name; use your operating system administration tools to create this user.

3.1.1.2 Verify that GNU tar is available

The installation of LISTSERV Maestro requires that the tape archival tool `tar` is present on all hosts where LISTSERV Maestro components shall be installed. For a successful installation, the GNU version of `tar` is required. To find out whether the currently available `tar` is sufficient to install LISTSERV Maestro, issue the following command while being logged in as the LISTSERV[®] Maestro owner:

```
maestro@host:> tar -version
tar (GNU tar) 1.13.19
Copyright 2001 Free Software Foundation, Inc.
This program comes with NO WARRANTY, to the extent permitted by
law.
You may redistribute it under the terms of the GNU General Public
License;
see the file named COPYING for details.
Written by John Gilmore and Jay Fenlason.
```

If the version output does not contain the text “GNU tar” or reports an error, then you need to obtain a compatible version.

For all supported Linux platforms, the distribution normally contains the GNU version of `tar` and it is therefore not necessary to obtain a compatible version.

For Solaris[®], pre-compiled binary versions can be downloaded from <http://www.sunfreeware.com>. As of writing this document, the downloaded file for Solaris[®] 9 is named `tar-1.13.19-sol9-sparc-local.gz` and the file for Solaris[®] 8 is named `tar-1.13.19-sol8-sparc-local.gz`.

Download the correct file for your platform, log in as `root` and unzip the file using `gunzip`. The resulting unpacked binary package can be added with the `pkgadd` command.

Typically, the package will be placed in `/usr/local/bin` (i.e. the original version of `tar` will still be available in `/usr/bin` or a similar folder.)

If for some reason the binary file can not be downloaded or installed, you may instead download the source distribution of `tar` instead. The site <http://www.sunfreeware.com> also offers the source distribution. Download and unpack the source distribution, then issue the following commands while being logged in as `root`:

```
root@host:> tar xf tar-1.3.tar ; cd tar-1.13
root@host:> ./configure && make && make install
```

This sequence of commands first unpacks the unzipped sources and then compiles and installs the binary version. It creates a binary version that is compatible with your operating system platform. If the compilation fails for some reason, then this indicates an incomplete operating system installation (*i.e.* with missing or invalid C-Compiler `cc` or `gcc`). In this case, see your operating system documentation for details about how to install and/or configure the C-Compiler.

After having obtained GNU `tar`, make sure that GNU `tar` precedes the original version of `tar` in the LISTSERV Maestro owner's `PATH` environment variable by either editing the LISTSERV Maestro owner's `.profile` file or by manually adjusting the `PATH` variable each time you log in as the LISTSERV Maestro.

3.1.2 Fresh Installation of LISTSERV Maestro 1.2-3

On each host where you want to install any of the LISTSERV Maestro components, log in as `root`, change to a suitable temporary folder and unpack the file "LISTSERVMaestro1.2-3-[platform].tar.gz" as follows:

```
maestro@host:> tar xvfz LISTSERVMaestro1.2-3-[platform].tar.gz
```

This unpacks the deployment files to the current working folder.

Note: Replace the text `[platform]` in the file names listed above with the actual installation platform.

Among other files, the shell script `install.sh` will be unpacked. Run this script to start the actual installation:

```
maestro@host:> ./install.sh
```

The script will guide you through the installation.

3.1.3 Upgrading an Existing LISTSERV Maestro Installation to 1.2-3

To upgrade an existing installation of LISTSERV Maestro to the current version 1.2-3, do so here:

If the existing version is already an earlier 1.2 build, do not use the installation procedure described in this document. Instead, simply apply "Patch 4 for 1.2-2", which will update your current version to 1.2-3 (the patch is available from the same location where you obtained the 1.2-3 installation package).

If the existing version is a 1.1 build or earlier, you can upgrade to 1.2-3 by using the 1.2-3 installation package: Log in as `root`, run the setup script `install.sh` on all hosts that will be upgraded and supply the same installation target folder that was used when the existing installation was created. By inspecting the installation target folder, the script will detect the existing version and will automatically perform the required steps.

The setup script will automatically recognize the old installation and will give you the choice of either removing the previous installation or upgrading the existing installation to the current version of LISTSERV Maestro 1.2-3. If you choose to remove, no instance of LISTSERV Maestro will be left on the host. You can then restart the setup to do a fresh installation, as described in the previous section.

If you choose to upgrade, then setup will upgrade only the components that are already installed. You will not be able to add components to the installation during this step. However, after the upgrade is complete, you may then restart the script to add or remove components, as described in the following chapter.

Upgrade Note: If you upgrade components on a server where the HTTP-access port is not the standard port 80, then the optional “`CompileAll`” command, which is used to pre-compile the user interface pages before first use, will not work correctly (see section about “Page Compilation” for details). In that case, you need to edit the files “`hub.host`” and/or “`lui.host`” in “`[target_folder]/commands/compile`”. These files specify the HTTP server contexts where the Administration Hub and the Maestro User Interface are reachable. If those components listen on a non-default HTTP port, this non-default port needs to be specified correctly in the given URL (for example: “`http://yourhost.domain.com:8888/lui`”), otherwise the “`CompileAll`” command will report errors.



Caution: Upgrading an installation is an invasive process during which files of the current installation are replaced, removed or modified and new files are added. Since any such operation may potentially abort unexpectedly (power outage, disk/computer crash, other error), there is a potential for an unexpected and incomplete termination of the upgrade process that would leave the data in a partially upgraded state, from which no consistent state could be recovered. It is therefore strongly recommended that you make a backup copy of the original installation folder before you run the upgrade.

3.1.4 Modifying an Existing Installation of 1.2-3

During the initial installation of LISTSERV Maestro, the components are installed on a certain combination of servers (for example all on the same single server, or all on dedicated servers, or in any combination). At a later time, this installation of the components on different servers may be changed, according to your needs. For example, if initially you installed all components on a single server, and then higher traffic requires you to “move” the Maestro Tracker component to a dedicated server, you would need to modify the existing installation.

When modifying an existing installation, you should always remember that the whole LISTSERV Maestro application, even if distributed on several servers, needs to be seen as one “unit” – data integrity between the components of the unit must always be maintained.

Therefore, you cannot simply uninstall a component on one server and then freshly install it on the other server, because the newly installed version of that component would not contain the data that the uninstalled version had.

Instead, please follow the steps described in the “Moving Components” section of the LISTSERV Maestro Administration Manual, when modifying an installation.

Note: When modifying an existing installation, you might need to re-adjust configuration file parameter values as described in the following section, depending on the previously installed components and on which components you add or remove on each server.

3.1.5 Post-Installation Tasks

Complete the post-installation tasks after the installation script has completed to ensure that LISTSERV Maestro can be started successfully.

3.1.5.1 Prepare Configuration Files

After the initial installation, some manual changes of a few configuration files are necessary before LISTSERV Maestro can be started for the first time.

Assuming that all components are installed on the same host, the following configuration files need to be edited (replace “[target_folder]” with the actual folder specified during installation):

[target_folder]/conf/server.xml (always present)

[target_folder]/lui/lui.ini (only present if the Maestro User Interface is installed)

[target_folder]/hub/hub.ini (only present if the Administration Hub is installed)

[target_folder]/trk/tracker.ini (only present if Maestro Tracker is installed)

If you installed any of the components on a separate server, then you need to edit the respective file on the host where the corresponding component was installed.

The following list describes the necessary configuration file changes:

- **HTTP-Connection port** - If LISTSERV Maestro will listen on a HTTP port different from 80, this custom port has to be configured by editing the file `server.xml`. See the LISTSERV Maestro Administrator’s Manual for details on how to change the HTTP port in the file `server.xml`. If you install components on separate servers, then you need to do this change in the `server.xml` file of all servers that are supposed to listen on a non-standard HTTP port (and in this case, the components may even listen on different ports).

Additionally, if you plan to use the `CompileAll` command described below, you need to adjust the files `hub.host` and/or `lui.host`, located in the `commands/compile` subfolder of your installation folder. These files specify the HTTP server contexts where the Administration Hub and the Maestro User Interface are reachable. If those components listen on a non-default HTTP port, this non-default port needs to be specified correctly in the

given URL (for example: “http://yourhost.domain.com:8888/lui”), otherwise the `CompileAll` command will report errors.

- **Administration Hub host** - In the files `lui.ini` and `tracker.ini`, specify the hostname of the server where the Administration Hub component was installed as the value of the parameter `RegistryHubHost`.
- **Administration Hub HTTP-connection port** - This change is only necessary if the Administration Hub is running on a host where the HTTP port was configured to be different from 80. In the file `lui.ini`, specify the HTTP port used by the server where the Administration Hub component was installed as the value of the parameter `HubHTTPPort`.
- **Maestro Tracker host** - In the file `lui.ini`, specify the hostname of the server where the Tracker component was installed as the value of the parameter `TrackerHost`.

Note: All changes must be performed even if several or all of the components reside on the same host.

3.1.5.2 Prepare the Maestro User Interface System Database

Before the Maestro User Interface component of LISTSERV Maestro can be started successfully, the system database has to be configured. On non-Windows platforms, the Maestro User Interface needs an external (to LISTSERV Maestro) database, either on the same host or accessed remotely. If the custom database connection is not configured properly, LISTSERV Maestro will report an error message during startup and the Maestro User Interface will not be usable. However, the Administration Hub will be accessible, so that you can enter it to configure the database connection as required.

See the LISTSERV Maestro Administrator’s Manual, Section 4 The System Database, and Section 5 Defining External Database Connections, for details on how to configure the Maestro User Interface to connect to an external system database.

When LISTSERV Maestro is started up for the first time with a successful database connection, a pre-configured backup will be imported automatically into that database, to create sample jobs, reports and event data.

3.1.5.3 Prepare the LISTSERV Maestro Daemon Process

Before LISTSERV Maestro can run as a daemon process, a daemon startup script must be made available to the `init` process responsible for starting the daemons at system startup. This is done as follows:

As the user `maestro`, change to the `commands` subfolder of the LISTSERV Maestro installation folder and run the script `InstallService.sh`

```
maestro@host:> cd commands
maestro@host:> ./InstallService.sh
Preparing Application Server startup script...
Using TOMCAT_HOME: [target_folder]
Using JAVA_HOME: /usr/lib/java
maestro@host:>
```

This script prepares a special shell script named `tomcat` that is intended to be started as a daemon. You will find this script in the subfolder `install` of the `commands` folder:

```
maestro@host:> cd install
maestro@host:> ls -al tomcat
-rwxr-r-- 1 maestro users 1626 Mar 13 tomcat
maestro@host:>
```

Now, as the user `root`, copy this file to the correct location where the `init` process will find and start it. (A typical location for this is e.g. the folder `/etc/init.d`). The actual steps that are necessary to register a new daemon may differ from platform to platform, see your operating system documentation for more details.

3.2 Running LISTSERV Maestro

LISTSERV Maestro can be run either as a daemon process or as a console application. Running as a daemon process has the advantage that LISTSERV Maestro is always running in the background (it cannot be stopped accidentally by closing a window) and that LISTSERV Maestro will start automatically when the server is booted up. This should be the normal run mode for a production environment.

Running in a console window has the advantage that you can see LISTSERV Maestro's output in the window directly, and not only indirectly by looking at the log files. This run mode is normally used only when trying to diagnose problems with the server.



Important Note: If LISTSERV Maestro is configured to use the (default) HTTP port 80, then only the user “root” will be able to start LISTSERV Maestro, either at system startup or at the console, because port 80 is a privileged port that is not readily available to other users (this is true for all ports below 1024). See below for further discussions about how to use either port 80 or a non-privileged port above 1024 for HTTP access.

Therefore, if you are running LISTSERV Maestro with port 80, you will have to switch to the user “root” before starting LISTSERV Maestro at the console. And if LISTSERV Maestro was started by the user “root”, only the user “root” will be able to stop it.

3.3 Starting LISTSERV Maestro

To start LISTSERV Maestro as a console application, change to the `commands` subfolder of the installation target folder and issue the command `StartServerAsConsole.sh`:

```
root@host:> ./StartServerAsConsole.sh
```

This will start LISTSERV Maestro with all output directly visible on the console screen. If LISTSERV Maestro is already running either as a daemon or on another console, this startup will fail. The correct method to start a pre-configured LISTSERV Maestro daemon process depends on the actual operating system you are running LISTSERV Maestro on. For many UNIX™ variants, the following command, issued by the user “root”, will start the LISTSERV Maestro daemon process:

```
root@host:> /etc/init.d/tomcat start
```

3.4 Stopping LISTSERV Maestro

To stop LISTSERV Maestro, execute the `StopServer.sh` command in the `commands` subfolder of your installation target folder. The correct method to stop a pre-configured LISTSERV Maestro daemon process depends on the actual platform you are running LISTSERV Maestro on. For many Linux systems, the following command, issued by the user “root”, will stop the LISTSERV Maestro daemon process:

```
root@host:> /etc/init.d/tomcat stop
```

3.5 Running LISTSERV Maestro as Non-Root User

On Linux (and other UNIX™ variants) all ports below port 1024 are considered privileged and only the user `root` may offer services on them. Consequently, using a different user as the LISTSERV Maestro runtime owner is only possible if the default HTTP port 80 is changed to an unprivileged port above 1024. If you do not plan to change the default setup running LISTSERV® Maestro as `root` on port 80 (e.g. because the server running the application is protected by a firewall or similar techniques), then you might skip this chapter.

To run LISTSERV Maestro as a user different from `root` (for example, as the application owner `maestro`), proceed as follows:

- On every server running a LISTSERV Maestro component, configure the component to use an HTTP port above 1024. (See 3.1.5.1 above for details.)
- Edit the daemon startup script to perform a user switch to the user `maestro`. See 3.1.5.3 for details about the startup script. The prepared script contains commented startup command variants for running the application as `root` and as `maestro`.

-
- As `root`, perform a recursive `chown` for the whole installation folder, setting ownership to the user `maestro`. This makes sure that any previously created application files now are owned by `maestro`.
 - Restart the daemon process.
 - (Optional). After the above steps have been completed, LISTSERV Maestro will run in a process environment that does not have `root` privileges. However, clients accessing the application via their browsers will have to use the new port in the browser address field (like “`http://host.domain.com:PORT/lui`”). If this is not desired, configure the LISTSERV Maestro server’s IP routing to forward port 80 requests to the actual HTTP access port of LISTSERV Maestro. Depending on the operating system variant that is used, the required steps for this are different. For a Linux system with kernel version 2.4 and `iptables` support enabled, a command similar to the following will enable the necessary port redirect:

```
iptables -t nat -A PREROUTING -p tcp --dport 80 -j REDIRECT --to-port [OTHER_PORT]
```

On different platforms, consult your operating system documentation for details about how to forward port 80 to an unprivileged port.

4 Accessing LISTSERV Maestro

To test the installation of LISTSERV[®] Maestro components, verify that a login screen appears when accessing the User Interface and Administration Hub. At this time, it is enough just to verify that the screens display properly. The remaining parts of this section will discuss configuring the components.

To access the Maestro User Interface, open a Web browser and access the URL:

```
http://<YOUR_MAESTRO_USER_INTERFACE_HOST>:port/lui
```

To access the Administration Hub interface, open a Web browser and access the URL:

```
http://<YOUR_ADMINISTRATION_HUB_HOST>:port/hub
```

The “`:port`” part can be left out if you have set up LISTSERV Maestro to use the standard HTTP port “80”. If you are using a different port, you need to specify that port after the colon “:”.

Depending on the operating system of the client used for the access, the following browsers are supported when accessing the Maestro User Interface or Administration Hub:

- Client with Windows: **Microsoft Internet Explorer 5.5** or later, **Netscape 7.0** or later and **Mozilla 1.0.0** or later.

-
- Client with Linux: **Netscape 7.0** or later and **Mozilla 1.0.0** or later.
Note: There are a few issues to be aware of when using Netscape or Mozilla on Linux. Please see the chapter in the User Manual about using a Linux client to access LISTSERV Maestro.

We strongly recommend that you use only Windows or Linux with the browsers and browser versions described above, to access the Maestro User Interface or the Administration Hub. Other operating systems, browsers or browser versions are not supported.

Note, that the client must not necessarily have the same operating system as the LISTSERV Maestro server, e.g. you may use a Linux client to access LISTSERV Maestro on a Windows server and vice versa.

4.1 Page Compilation

To display the pages of the user interface, LISTSERV Maestro uses a technology that compiles each page “just-in-time”, that is at the moment a user accesses a page for the first time. This means that when LISTSERV Maestro is freshly installed, all pages are still un-compiled, existing in their raw state. The moment a page is accessed for the first time, it is compiled automatically behind the scenes, and the result is displayed to the user.

Because of this, the first access to a page is usually noticeably slower (e.g. it takes longer until the page appears), because the page is compiled first. After that, any subsequent access to the same page will happen with normal speed, as it is now pre-compiled (even after a restart of the server).

4.1.1 Pre-Compiling All Pages

The slower page loading during first access after an installation can be avoided by executing the “`CompileAll`” command after the installation. This will pre-compile all pages of the application, so that page loading will happen with normal speed even during the first access of a page.

By pre-compiling all the pages the first users accessing a fresh installation will not experience a slower response time because pages have already been compiled in the background.

The command can be found in the “`commands`” subfolder of the LISTSERV Maestro installation folder (it is called “`CompileAll.sh`”). Simply execute the command.

LISTSERV Maestro must be running on that server while the command is being executed.

Note: Compilation is a processing intensive and lengthy task, which may take a considerable amount of time, during which the server will be working to capacity. Please be patient and wait until the “`Compilation complete`” message appears in the console (see below). Of course, you may also safely interrupt the command at any time, which will then leave all the remaining pages in the un-compiled state. You can then re-execute the command at a later time.

Executing the command is fully optional: If you do not execute the command, or interrupt its execution, then all pages that are not pre-compiled will simply be compiled in the background when they are accessed by a user for the first time. Also, the command needs to be executed

only once, since running it again when all pages are already pre-compiled has no additional benefit.

When executed, the command displays its output in a console, similar to the following:

```
Compilation started at Thu Aug 08 09:56:14 CEST 2002

http://yourhost/hub/index.jsp: success
http://yourhost/hub/JSP/applicationList.jsp: success
...etc...
http://yourhost/lui/JSP/userSettings/preferences/report/collaboration.jsp: success
http://yourhost/lui/JSP/userSettings/preferences/report/report.jsp: success

Compilation complete
All pages compiled successfully
```

The last line of the output must read “All pages compiled successfully”. If that line instead reads “There were compilation errors on N pages”, then there was a problem: If all pages failed to compile, then LISTSERV Maestro was probably not running on the server you executed the command on. If LISTSERV Maestro was actually running, or if only a few pages failed to compile, then you most probably have a corrupted installation. Try to re-install or, when in doubt, contact L-Soft support.

The “CompileAll” command only pre-compiles the pages of the local server. If both the Maestro User Interface and the Administration Hub components are installed on the server, then “CompileAll” will pre-compile the pages of both these components. If only one of the components is installed, then the command will pre-compile only the pages of that component. If necessary, the command must be run once on both servers where these components are installed.

4.2 LISTSERV Maestro Sample Account

LISTSERV Maestro is installed with a pre-defined example account. You can access this account by opening the Maestro User Interface and logging in with the user name “sample”, password “sample” (no group name). The sample account contains two example jobs in the list of delivered jobs (one plain mail and one HTML mail job), with the collected tracking data of these jobs viewable with three pre-defined tracking reports. Feel free to browse through these jobs and their tracking data and to create some “test-jobs” of your own by using the sample jobs as starting points (making copies of the sample jobs).



Important Security Note: Since the existence of this example account is well known to most users of LISTSERV Maestro, you should change the password of this account before making your Maestro User Interface accessible to the public (or you may want to simply delete the account. After deleting the account you may then log in as an Administrator to assign the sample jobs to a different account that you create yourself – please see the manual for more details).

4.3 Configuring the Administration Hub for First Use

After installation you will have to execute a few initial configuration steps in the Administration Hub before you can fully use LISTSERV Maestro. Access the Administration Hub as described above and log in with the administrator password. The default password after a fresh installation is “admin”.

Execute the following configuration steps:

1. Change the Administrator Password

It is recommended that you change the administrator password to something other than the default “admin” immediately after installation. Do not forget the password, it is not recoverable.

2. Define the System Database Connection

Before the Maestro User Interface (LUI) can be started up successfully, or if you get an error during initial start up pertaining to the database connection, you will have to configure the external system database connections. Enter the Administration Hub, click on Global Component Settings → Maestro User Interface → System Database Connection. Enter the following settings:

- Maximum number of buffered connections
- Select the option button for “The *following external database is used as the System Database.*”
- Select the database plugin for the database you are connecting to

More information is available about configuring an external system database in the LISTSERV Maestro Administrator’s Manual.

3. Define Default LISTSERV Connection

Optionally, define a default LISTSERV connection. This connection is used for all accounts that do not have their own connection parameters configured. If you have only a single LISTSERV connection that you want to share between all accounts, then it is easiest to simply configure this connection as the default connection and leave the configuration parameters of the individual accounts or groups empty (see below).

You can mix account/group settings with the default settings in any way you like. Whenever you leave a LISTSERV related entry of an account or group empty, that account or group will use the setting configured in the default connection. In that case, the corresponding setting in the default connection may not be empty.

To configure the default LISTSERV connection click on “Global Component Settings”. Then click on “Maestro User Interface” and on “Default LISTSERV Connection”.

Enter information for the following parameters:

- **LISTSERV Host:** The host name of the server running the LISTSERV component.

-
- **Host Name for Return Path/List Addresses:** If LISTSERV is known externally with a different host name than the one above, enter this external host name here (see manual or help pages for more details).
 - **LISTSERV TCPGUI Port:** The port number on the LISTSERV host, where the LISTSERV component listens for TCPGUI connections. The standard port is 2306.
 - **LISTSERV Client Address:** An e-mail address that is known to your LISTSERV instance either as a postmaster address or as an address that is listed under the LISTSERV configuration parameter “DIST_ALLOWED_USERS”, that is an address that has the `DISTRIBUTE` right. This address will be used by the Maestro User Interface when transferring a mail job to LISTSERV.

Note: This address is only used internally for the communication between the Maestro User Interface and LISTSERV, to transfer mail jobs to LISTSERV for sending. This transfer happens in form of a so called `DISTRIBUTE` transfer, which includes an authentication of the sender of the `DISTRIBUTE` job, using the sender's e-mail address and his password (also, the e-mail address must have the associated right to send such `DISTRIBUTE` jobs, see above).

It will work sufficiently well to have only a single such LISTSERV Client Address and use it in the default LISTSERV connection parameters or even to always use the same client address in all individual user or group level connection parameters. However, configuring different addresses (each with the `DISTRIBUTE` right and with a different password) and using them for different users and groups will allow you to discern between who submitted which job when looking at the LISTSERV log files.

- **LISTSERV Client Password:** The password associated with the “LISTSERV Client Address” at your LISTSERV instance (see above). Please see the LISTSERV documentation about how to set a personal password for an e-mail address. (In short: Send a plain-text mail to “listserv@LISTSERV_HOST”, with “PW ADD your_password” in the mail body, with the address you want to associate the password with as the sender address of the mail.)

4. Define Default Tracking URL

Optionally, define a default tracking URL. This URL is used when inserting tracking information into mail sent with an account that does not have its own tracking URL configured. If you have no reason to use different tracking URLs for different accounts or groups, then it is easiest to simply configure the default tracking URL and leave the tracking URL settings of the individual accounts or groups empty (see below). If you do not configure a default tracking URL, then all accounts that do not have their individual tracking URL settings will not be able to use tracking in their mail; for those accounts the users will only be able to send untracked mail.

You can mix account/group settings with the default settings in any way you like. Whenever you leave a tracking URL related entry of an account or group empty, that account or group will use the setting configured in the default tracking URL. In that case, the corresponding setting in the default tracking URL may not be empty or otherwise that account or group will not be able to send tracked mails.

To configure the default tracking URL, click on “Global Component Settings”. Then click on “Maestro User Interface” and on “Default Tracking URL”.

Enter the following parameters:

- **Tracker Host:** Enter the host name of the server running the Maestro Tracker component. This must be a DNS-registered host name that can be used by external clients to access the server from the Internet.
- **HTTP Port:** Enter the HTTP port used by the server running the Maestro Tracker component. This must be the port that external clients from the Internet must use for HTTP connections to the server.

Note: In a proxy-environment, the “Tracker Host” and “HTTP Port” as seen by external clients may be different from what the actual Maestro Tracker component server uses internally. Please see the LISTSERV Maestro Administrator’s Manual for details about a proxy-environment or when using host name aliases.

5. Create User Accounts

This step is usually only executed after you are done testing the system with the predefined sample account (see above) and are ready to use the system with your own accounts. Create at least one user account that you can then use to access the Maestro User Interface. Click on “Administer User Accounts” and then on “Add User Account”. Then enter the account name (and optional group) and the password. Click on “OK”.

As the next step, if you do not want the account to use the default LISTSERV connection settings and/or default tracking URL settings (see above), you need to configure individual connection and tracking URL settings for the account:

- If the account is not member of a group, configure the LISTSERV connection and tracking URL settings on the configuration page for the individual account. Click on the account name in the account list, then on “Maestro User Interface” and either “LISTSERV Connection” or “Tracking URL”.
- If the account belongs to a group, then specify the LISTSERV connection and tracking URL for all accounts in the group (accounts that belong to a group always share the same LISTSERV connection and tracking URL). In the account list, click on the group name instead of the account name (appears only if the account belongs to a group), then either on “Default LISTSERV Connection” or “Tracking URL”.

Exception: The LISTSERV client address and its associated password can be different even for accounts in the same group. To set these individual settings for an account that belongs to a group, click on the account’s name in the account list and then on “Maestro User Interface” and “LISTSERV Connection”.

When configuring the LISTSERV connection for newly created user accounts please see the section “Define Default LISTSERV Connection” above for parameter descriptions. For each parameter, there may already be a default defined. If so, then the default is shown beside the edit field of the parameter. In this case, you may leave the edit field empty to accept the default.