



**LISTSERV Maestro Admin Tech Doc 1**

# **Configuration Files**

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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 1 of the collection of admin tech docs and explains the topic "Configuration Files".

Last updated for LISTSERV Maestro 11.0-4 on May 3, 2023. The information in this document also applies to later LISTSERV Maestro versions, unless a newer version of the document supersedes it.

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# 1 Introduction to LISTSERV Maestro INI-Files

The following rules apply to the INI-files "lui.ini", "hub.ini" and "tracker.ini" which are the configuration files for the Maestro User Interface, Administration Hub and Maestro Tracker components, respectively (the "my.ini" configuration file of the internal MySQL database follows different rules, since it is a third party product, please see the MySQL documentation for details). The rules also apply to the "tomcat.ini" and "backupRestore.ini" INI-files.

All INI-files are text files that are assumed to be encoded in ISO-8859-1 [Latin 1 – Western European]).

In the files, every parameter occupies one line. Each line must be terminated by a line terminator (LF, CR, or CRLF). All lines in the file are processed.

A line that contains only whitespace or whose first non-whitespace character is an ASCII "#" or "!" is regarded a comment, and its content is ignored.

Every line other than a blank line or a comment line describes one parameter (except if a line ends with a backslash "\", then the following line, if it exists, is treated as a continuation line, as described below).

A parameter always consists of a key and a value. Keys and values are separated by whitespace or "=" or ":". Any whitespace around the separation character is also ignored.

All remaining characters on the line become part of the associated value. Some characters which otherwise have special meanings, need to be escaped with a backslash: The ASCII escape sequences "\t" (TAB), "\n" (LF), "\r" (CR), "\\" (backslash), "\"" (quotation mark), "'" (apostrophe), " " (space), and "\uXXXX" (where "XXXX" is the Unicode-value of the required character, expressed in hexadecimal format) are recognized and converted to single characters.

In case the last character on the line is a "\", then the next line is treated as a continuation of the current line; the "\" and line terminator are simply discarded, and any leading whitespace characters on the continuation line are also discarded and are not part of the parameter value.

The order of the lines and the comments in the file are preserved between sessions, e.g. when the file is written by the application or component, to store settings that have changed during runtime, then the comments and the order of the lines will not be changed. Exception: Comment lines that start with two ASCII "##" characters are not preserved, but are removed as soon as the file is stored again.

## Examples:

Each of the following four lines specifies the key "MyKey" and the associated value "MyValue":

```
MyKey = MyValue
    MyKey:MyValue
MyKey      :MyValue
MyKey MyValue
```

The following three lines specify a single parameter:

```
trees          cedar, oak, maple, \
                redwood, spruce, \
                beech, aspen
```

The key is "trees" and the associated value is:

"cedar, oak, maple, redwood, spruce, beech, aspen"

Note that a space appears before each “\” so that a space will appear after each comma in the final result; the “\”, the line terminator, and leading whitespace on the continuation line are merely discarded and are not replaced by one or more other characters.

As a last example, the line:

```
cars
```

specifies that the key is "cars" and the associated value is the empty string.

## 2 Tomcat INI-File Entries

The following table shows all possible entries of the “tomcat.ini” file for Tomcat. For any entry which is missing in the INI-file, the corresponding default value is assumed.

### Basic Configuration:

Entry Key	Description
AdditionalHost.N	Defines an additional host, to be used for added custom content. See “LMA Admin Tech Doc 12 - Adding Content to the Tomcat Server” for details. Default: By default there are no additional hosts.
BindAddress	Defines the local IP-addresses and ports that the server shall bind to, i.e. the server will accept connections only if directed to one of these IP addresses, in combination with the correct port. See also “LMA Admin Tech Doc 6 – IP Addresses and Ports”. Default: By default the server binds to <b>all</b> addresses of the local computer (i.e. accepts connections on all these addresses), on the default port that is specified by the <code>Port</code> setting (see below).
MaxPostSize	Defines the maximum size (in bytes) that the server will accept in a POST request (i.e. the maximum size of bytes that can be “uploaded” to the server). The limit can be disabled by setting it to a value less than or equal to 0. Default: -1 (i.e. the limit is disabled by default)
Port	Defines the HTTP port used to accept client connections. Default: 80
ShutdownPort	Defines the port used to listen for shutdown requests. Default: 8007
Restrict.CONTEXT.N	Defines a restriction for which IP-addresses are allowed to access a certain context on the server. See “LMA Admin Tech Doc 8 – Restricting Access” for details. Default: By default there are no IP-address restrictions.
<i>HTTPS-related entries (see “LMA Admin Tech Doc 9 – Securing Access with HTTPS” for details):</i>	
SecurePort	Defines the HTTPS port used to accept client connections. Default: 443
SecureServer	Defines if the server is supposed to be secure ( <code>true</code> ) or not ( <code>false</code> ) or defines a list of specific IP-addresses that are to be secure. A secure server uses the HTTPS-protocol, a not-secure server uses the normal HTTP-protocol. Default: <code>false</code>

KeystoreFile or KeystoreFile-IP_ADDRESS	Only used if "SecureServer=true" or if "SecureServer" defines a list of secured IP-addresses. Defines the name of the keystore-file which contains the server certificate to be used for the HTTPS protocol. The file must exist and must contain a usable server certificate. The given filename must include the full absolute path to the file (on Windows including the drive letter). Default: none
KeystorePassword or KeystorePassword-IP_ADDRESS	Only used if "SecureServer=true" or if "SecureServer" defines a list of secured IP-addresses. Defines the password used to access the keystore-file as defined by the matching "KeystoreFile" entry. Default: none

### Advanced Configuration:

Entry Key	Description
AcceptCount	Defines the maximum queue length for incoming connection requests when all possible request processing threads are in use. Any requests received when the queue is full will be refused. Default: 100
AJPConnector	Adds a special Tomcat connector for the AJP protocol, which is necessary to access LISTSERV Maestro through an IIS instance. See "LMA Admin Tech Doc 14 – Sharing a Server with IIS" for details. Default: do not configure an AJP connector.
AllowTrace	Defines if the TRACE HTTP method is enabled (true) or not (false). Default: false
ConnectionLinger	Defines the number of milliseconds during which the sockets used by the server will linger when they are closed. Socket linger can be disabled by setting this entry to "-1". Default: -1 (socket linger is disabled by default)
ConnectionTimeout	Defines the number of milliseconds the server will wait, after accepting a connection, for the request URI line to be presented. Default: 60000
DefaultContext	Defines which context is the default context. See "LMA Admin Tech Doc 12 – Adding Content to the Tomcat Server" for details. Default: no default context used

MaxKeepAliveRequests	<p>Defines the maximum number of HTTP requests which can be pipelined until the connection is closed by the server. Setting this entry to “1” will disable HTTP/1.0 keep-alive as well as HTTP/1.1 keep-alive and pipelining. Setting this entry to “-1” will allow an unlimited amount of pipelined or keep-alive HTTP requests.</p> <p>Default: 100</p>
MaxThreads	<p>Defines the maximum number of request processing threads to be created by this server, i.e. the maximum number of simultaneous requests that can be handled.</p> <p>Default: 200</p>
MinSpareThreads	<p>Defines the number of request processing threads that will be created when the server is first started. The server will also make sure that it has the specified number of idle processing threads available. This entry should be set to a value smaller than that for the entry “MaxThreads”.</p> <p>Default: 10</p>
SubscriberPagesAllowedFrameAncestors	<p>Defines a list of allowed frame ancestors for the <code>frame-ancestors</code> value of the <code>Content-Security-Policy</code> HTTP header included with subscriber pages. See “LMA Admin Tech Doc 8 – Restricting Access” for details.</p> <p>Default: <i>none</i></p>
ViewInBrowserAllowedFrameAncestors	<p>Defines a list of allowed frame ancestors for the <code>frame-ancestors</code> value of the <code>Content-Security-Policy</code> HTTP header included with view-in-browser pages. See “LMA Admin Tech Doc 8 – Restricting Access” for details.</p> <p>Default: <i>none</i></p>
<i>SSL-related entries (see “LMA Admin Tech Doc 9 – Securing Access with HTTPS” for details):</i>	
CertificateAlias or CertificateAlias-IP_ADDRESS	<p>Only used if “SecureServer=true” or if “SecureServer” defines a list of secured IP-addresses.</p> <p>Defines the alias (in the keystore) of the server certificate that is to be used.</p> <p>Default: <i>none</i> (the first applicable certificate that is found in the keystore will be used)</p>
HSTSEnabled	<p>Only used if “SecureServer=true” or if “SecureServer” defines a mixed mode.</p> <p>Defines if HSTS is to be enabled. If enabled, a HSTS header field will be included in all HTTPS responses.</p> <p>Default: <i>false</i></p>



HSTSMaxAge	Only used if HSTSEnabled is set to "true". Defines the "max-age" value for the HSTS header field (in seconds). Default: 31536000 (=1 year)
HSTSIncludeSubDomains	Only used if HSTSEnabled is set to "true". Defines if the "includeSubDomains" property shall be set in the HSTS header field. Default: false
HSTSPreload	Only used if HSTSEnabled is set to "true". Defines if the "preload" property shall be set in the HSTS header field. Default: false
HttpToHttpsAutoRedirect	Only used if "SecureServer=true" or if "SecureServer" defines a mixed mode. Defines additional HTTP listening addresses/ports for automatic redirect to HTTPS. Default: <i>no redirect</i>
KeystoreType	Only used if "SecureServer=true" or if "SecureServer" defines a mixed mode. Defines the type of the keystore-file. Possible types are "JKS" or "PKCS12". Usually you should use keystore files of the "JKS" type. Default: JKS
Secure-IP_ADDRESS	Used for the automatic certificate management feature (for Let's Encrypt certificates). See LMA Admin Tech Doc 9 for details. Default: <i>none</i>
SSLCiphers	Only used if "SecureServer=true" or if "SecureServer" defines a mixed mode. Defines the SSL/TLS encryption ciphers that LISTSERV Maestro is allowed to use. As the value, specify a comma separated list of the allowed cipher names and/or aliases. Default: DefaultStrong,DefaultStandard
SSLMinimumTLSVersion	Only used if "SecureServer=true" or if "SecureServer" defines a mixed mode. Defines the minimum TLS (or SSL) protocol version that a client must use to be allowed to connect via HTTPS. Default: TLSv1.2

### 3 Maestro User Interface (LUI) INI-File Entries

The following table shows all possible entries of the “lui.ini” file for the Maestro User Interface component. For any entry which is missing in the INI-file, the corresponding default value is assumed.

Entry Key	Description
AccessURLBehindProxy	Defines the protocol, host and port that is used by an upstream proxy to access LUI, if the actual users do not access LUI directly but through this proxy. See “LMA Admin Tech Doc 7 – Installing Behind a Firewall or Proxy” for details. Default: <i>none</i>
AddJobIdToAllMessages	Defines if the LISTSERV Maestro job-ID should be included in the message-ID of all outgoing mails or not. Set either to “true” or “false”. Default: <i>false</i>
AllowCharsetChoice	Defines if the user is allowed to change the content charset on a job-by-job basis, or if he has to accept the default charset (see “DefaultMailCharset”). Default: <i>true</i>
AllowISO-i-Mails	Defines if in outgoing mails the special bi-directional charsets “ISO-8859-6-i” and “ISO-8859-8-i” shall be used instead of their “normal” ISO-8859 counterparts. Default: <i>true</i>
AllowUserAuthenticationWithAdminPassword	Defines if the “Login as This Account” feature that is available in the HUB is enabled or disabled for the admin. Default: <i>false</i>
BounceRemoveWakeupInterval	Defines how often the system looks for bounces and removes bounced addresses from the datasets. Specified as a number, which defines the wakeup interval in hours. Default: <i>1</i>
ChangeLogPeriod	Defines the time period after which the change log is rolled over and a new change log file is started ( <i>daily, weekly, monthly or yearly</i> ). See “LMA Admin Tech Doc 18 – Subscriber Activity Changelogs” for details. Default: <i>weekly</i> (Or whatever period is defined in the deprecated ChangeLog entry, if present.)

DefaultCustomizationLanguage	<p>Defines the language that is to be used for the membership area subscriber pages of all datasets which do not have their own membership area language defined. The language must be specified using its corresponding two-letter ISO language code (in lower case), as defined by the alpha-2 code of ISO-639-1.</p> <p>(see <a href="http://www.loc.gov/standards/iso639-2/englangn.html">http://www.loc.gov/standards/iso639-2/englangn.html</a>)</p> <p>Default: "English (Default)"</p>
DefaultMailCharset	<p>Defines the charset that is to be used as the charset of the content for newly created jobs which are not copies of existing jobs. May or may not be changed by user (see "AllowCharsetChoice").</p> <p>Default: ISO-8859-1</p>
DisableSpamCheck	<p>Defines if the built-in spam check feature shall be disabled. By default, spam checking is enabled, if the connected LISTSERV instance supports spam checks.</p> <p>Default: false</p>
DistributeBaseTimeout	<p>Defines the default timeout for socket connections to LISTSERV, in minutes. Any value less than 1 will be treated as 1, i.e. 1min is the minimum possible timeout.</p> <p>Default: 30</p>
DistributeChunkSize	<p>Defines if distribute chunking shall be performed, and with which chunk size. A chunk size of zero or less means that no distribute chunking will be performed. A positive non-zero chunk size means, that chunking will be performed with chunks of the given size, but with a minimum size of 10000, i.e. any positive chunk size less than 10000 will be treated as if 10000 had been specified.</p> <p>Default: 100000</p>
ExpiredConfirmCleanupInterval	<p>Determines how often the system looks for and cleans out expired unconfirmed subscriptions to subscriber datasets and lists, i.e. subscriptions which were not confirmed during the given expiration interval (see INI-file parameter <code>OptInConfirmationExpiration</code>). Specified as a number, which defines the cleanup interval in hours.</p> <p>Default: 1</p>

ExternalProfileEditConfirmExpiration	The expiration time of unconfirmed external changes to membership area and list subscription profiles, i.e. the maximum amount of time after the user has supplied the changed values on the external profile edit page, during which the user must confirm the changes, otherwise the changes expire (are removed from the temporal storage area). Specified as a number, which defines the expiration time in hours. Default: 96
HostName	The host name of the local machine that is to be used whenever a name is required to identify the local host (and no other INI-parameter overrides this for a specific purpose). Default: normal host name (canonical host name) of the server running the Maestro User Interface.
HubRMIPort	Internal communication port (RMI-Port) of the Administration Hub server. Default: 1099
LDAP PagingDisabled	Defines if paging of LDAP query results is disabled (when reading recipients data or importing subscribers). WARNING: If disabled, the whole query result will be loaded into memory. Only disable paging, if you can make sure that query results will not be too large, or otherwise they may cause an out of memory error. Default: false
LogFolder	Defines the folder under which the Maestro User Interface component stores the log files. Default: The "/lui/logs" subfolder of the installation folder.
LoginPageBackgroundImage	Defines the background image that is shown on the login page. Can either point to the public URL of the desired image, or to an empty value (=no background image) or if left out completely, LISTERV Maestro shows its default background images. Default: Show the LISTERV Maestro default images.
MaxDaysToWaitForBounce	Defines the maximum number of days that the system waits for a potential bounce. Once this interval has elapsed, a delivery to a given address is considered successful and older bounce statistics data for this address is ignored. Default: 14

MaxFreeSpaceForLimitedPLOs	<p>Defines the maximum size that large object files are allowed to use up on disk. Specified as a number, which defines the maximum size as a percentage of the currently remaining free disk space. Must be a number in the range 1-90 and must be specified as a bare number, without a %-sign. The default of “25” means, that each large object file can use up at most 25% of the currently remaining free disk space.</p> <p>Default: 25</p>
MinHoursBetweenTwoBouncesToSameAddress	<p>Defines the minimum number of hours that the system expects to elapse between two bounces for the same address in order to actually count the two bounces separately. If two bounces for the same address occur successively in a time shorter than this interval, they are counted as only one bounce.</p> <p>Default: 12</p>
NoBackgroundDistribute	<p>Set to <code>true</code> to <b>not</b> use the BACKGROUND distribute feature of LISTSERV. Ignored if the LISTSERV in question does not support BACKGROUND distribute anyway. This is an advanced setting for special purposes. Only set to <code>true</code> if you know what you are doing and/or have consulted with L-Soft support.</p> <p>Default: <code>false</code></p>
NotificationMailRetryDeliveryInterval	<p>Defines the interval to retry delivery of a notification mail (for example a subscribe confirmation) that could not be sent for some reason. Specified as a number, which defines the interval in hours.</p> <p>Default: 1</p>
OptInConfirmExpiration	<p>The expiration time of unconfirmed subscriptions to subscriber datasets and lists, i.e. the maximum amount of time after the initial subscription, during which the subscriber must confirm the subscription (“double opt-in”), otherwise the subscription expires (is removed). Specified as a number, which defines the expiration time in hours.</p> <p>Default: 48</p>
RegistryHubHost	<p>Host name of the server with the Administration Hub component.</p> <p>Default: <code>localhost</code></p>
RemoteAdminPassword	<p>Password for remote log file access. See “LMA Admin Tech Doc 15 – Remote Log Access”.</p> <p>Default: <code>none</code> (no remote log file access allowed)</p>

RestoreBackup	Path name of the folder containing the backup that shall be restored during the next startup. Note: This key will be automatically removed from the INI-file during the next startup. Note: This key is only required to restore old-style backups that were created by LMA 5.0-24 or older. See “LMA Admin Tech Doc 2 – Backups”. Default: <i>none</i>
RMIPort	Internal communication port (RMI-Port) of the Maestro User Interface server. Default: 1099
TrackerHost	Host name of the server with the Maestro Tracker component. Default: localhost
TrackerRMIPort	Internal communication port (RMI-Port) of the Maestro Tracker server. Default: 1099
TrackingStatisticsJobsBatchSize	Determines how many jobs are processed in one step during execution of the default report “Reports > Tracking Statistics”. During execution of this report, temporary space in your system database is allocated. Configure this to a lower value if your database is short on temporary space and you have many jobs with a large amount of tracking events each. No restart is required when changing the value. Default: 1000
UnsubscribedCleanupInterval	Determines how often the system looks for and cleans out subscribers of LISTSERV lists (that are used to back advanced subscriber lists) which have unsubscribed via e-mail (i.e. not via the LISTSERV Maestro web interface). Specified as a number that defines the cleanup interval length in minutes. Default: 10
UpdateAfterEmailAndWACHangesInterval	Determines how often the system checks if subscribers have been added to a LISTSERV list or if subscription addresses have been changed in a LISTSERV list that is coupled with a LISTSERV Maestro Subscriber List. Specified as a number that defines the check interval in minutes. Default: 5

## 4 Administration Hub (HUB) INI-File Entries

The following table shows all possible entries of the “hub.ini” file for the Administration Hub component. For any entry which is missing in the INI-file, the corresponding default value is assumed.

Entry Key	Description
HostName	The host name of the local machine that is to be used whenever a name is required to identify the local host (and no other INI-parameter overrides this for a specific purpose). Default: normal host name (canonical host name) of the server running the Administration Hub.
LogFolder	Defines the folder under which the Maestro Administration Hub component stores its log files. Default: The “/hub/logs” subfolder of the installation folder.
RemoteAdminPassword	Password for remote log file access. See “LMA Admin Tech Doc 15 – Remote Log Access”. Default: <i>none</i> (no remote log file access allowed)
RMIPort	Internal communication port (RMI-Port) of the Administration Hub server. Default: 1099

## 5 Maestro Tracker (TRK) INI-File Entries

The following table shows all possible entries of the “`tracker.ini`” file for the Maestro Tracker component. For any entry which is missing in the INI-file, the corresponding default value is assumed.

Entry Key	Description
<code>ActionTrackingCookiesForRootPath</code>	Defines if action tracking cookies are set for the Tracker specific path “ <code>/trk</code> ” (if set to “ <code>false</code> ”) or to the unspecific root path “ <code>/</code> ” (if set to “ <code>true</code> ”). Default: <code>false</code>
<code>DoNotTrack.N</code>	Defines if certain tracking events, from certain IP-addresses, are to be ignored by Tracker. See “LMA Admin Tech Doc 8 – Restricting Access” for details. Default: By default, no tracking events are ignored.
<code>HostName</code>	The host name of the local machine that is to be used whenever a name is required to identify the local host (and no other INI-parameter overrides this for a specific purpose). Default: normal host name (canonical host name) of the server running Maestro Tracker.
<code>HubRMIPort</code>	Internal communication port (RMI-Port) of the Administration Hub server. Default: <code>1099</code>
<code>LogFolder</code>	Defines the folder under which the Maestro Tracker component stores the log files. Default: The “ <code>/trk/logs</code> ” subfolder of the installation folder.
<code>RegistryHubHost</code>	Host name of the server with the Administration Hub component. Default: <code>localhost</code>
<code>RemoteAdminPassword</code>	Password for remote log file access. See “LMA Admin Tech Doc 15 – Remote Log Access”. Default: <code>none</code> (no remote log file access allowed)
<code>RMIPort</code>	Internal communication port (RMI-Port) of the Maestro Tracker server. Default: <code>1099</code>