



Pre-Installation Notes & Checklist for LISTSERV[®] Maestro

Intended Audience and Background:

This document is intended for prospective customers, existing customers, and staff of L-Soft.

This document and the **LISTSERV Maestro Recommended Architectures** document (available from L-Soft, upon request) are considered **required reading** for anyone installing LISTSERV Maestro.

Reading of this document **must be completed** prior to beginning any installation of LISTSERV Maestro.

This document assumes familiarity with the general architecture of the LISTSERV Maestro product, its components (HUB, LUI, TRK), and its underlying L-Soft technologies (LISTSERV, LSMTP).

Introductory product information is available from L-Soft's Web site at <http://www.lsoft.com/>

Detailed information is available in these recommended references:

- **Administrator's Guide [to] LISTSERV Maestro**

http://www.lsoft.com/manuals/Maestro/Maestro_Admin/index.htm

Downloadable installation guides for Windows and Linux are found here:

<http://www.lsoft.com/info/default.asp?item=manuals>

- **Site Manager's Operations Manual for LISTSERV**

<http://www.lsoft.com/manuals/1.8e/sitemgr/sitemgr.html>

Viewable LISTSERV installation guides for Windows, VM, UNIX and OpenVMS are at

<http://www.lsoft.com/info/default.asp?item=manuals>

- **Developer's Guide for LISTSERV**

Section 4 ("DBMS and mail-merge support"):

http://www.lsoft.com/manuals/1.8e/developer/developer.html#_Toc10449865

Architectural Notes

Please note: These points assume a careful and thorough **required reading** of the **LISTSERV Maestro Recommended Architectures** document, available from L-Soft upon request.

1. A complete LISTSERV Maestro installation consists of up to six (6) major components, the first five (5) of which are supplied by L-Soft:

- (1) LISTSERV Maestro HUB (Administration)
- (2) LISTSERV Maestro LUI (User Interface)
- (3) LISTSERV Maestro TRK (Tracker)
- (4) LISTSERV (Mailing assembly, and optionally, list management)
- (5) LSMTP (Mailing delivery)
- (6) Database *

* Regarding item (6): LISTSERV Maestro installs with a built-in size-limited MySQL database, which is suitable for small volume, low frequency evaluation and testing only. For production use, the provided MySQL database must be reconfigured, or preferably, an external SQL database (such as Oracle, DB2, or Microsoft SQL Server) must be used.

2. For best performance, two of the six components – LISTSERV Maestro TRK (Tracker) and LSMTP (Mailing delivery) – must be as “close” to the Internet as possible, preferably outside any firewall, or minimally in a network DMZ. TRK receives inbound tracking information from LISTSERV Maestro mailing recipients, and LSMTP delivers all of LISTSERV Maestro’s outbound mailings and receives inbound bounce errors and non-delivery notifications (which are delivered to LISTSERV for processing).

3. LISTSERV Maestro is accessed through a Web interface that is served solely by the Java-based Tomcat Application Server (included in, and installed as part of, LISTSERV Maestro). LISTSERV Maestro’s Web interface is a mandatory feature; LISTSERV Maestro cannot be accessed without it. LISTSERV itself also has the option of a Web interface, which must be served by a separate, external Web server on the machine hosting LISTSERV. Apache (on Linux, UNIX, or Windows) and Microsoft’s Internet Information Server (IIS) are common choices for serving LISTSERV’s Web interface.

If all LISTSERV Maestro mailings will be sent to recipients uploaded from CSV files or pulled from a database, and no traditional LISTSERV lists will be used for those or other purposes, it is not necessary to enable LISTSERV’s own Web interface. However, if traditional LISTSERV lists are to be used for any reason, enabling LISTSERV’s Web interface (after installing and configuring a separate Web server on LISTSERV’s host machine) is strongly recommended.

If LISTSERV (and thus its Web interface and supporting Web server) is hosted on the same machine as LISTSERV Maestro HUB, LUI, or TRK (and thus the Tomcat Application Server), a potential conflict will exist between the two Web servers for use of the default HTTP port (port 80). Only one Web server can use an HTTP port; individual HTTP ports cannot be shared among multiple Web servers. The most common solution is to assign the Web interface that is used less, to an alternative HTTP port (often port 8080), leaving the most common HTTP port (port 80) for the most used Web interface.



Architectural Decisions

Please note: The following choice should be guided by a careful and thorough **required reading** of the **LISTSERV Maestro Recommended Architecture** document, available from L-Soft upon request.

Choose one of five (all choices assume database on separate, unlisted machine inside firewall):

- ☐ One (1) machine hosting all components;
 - Machine is outside firewall or in DMZ.
 - **Note:** Acceptable only for very limited testing (less than 100,000 messages) due to component competition for resources.
 - LISTSERV Maestro Small (S) license (limited to 5,000 messages per day)
- ☐ Two (2) machines: HUB + LUI + LISTSERV on #1; LSMTP + TRK on #2;
 - Machine #1 is inside firewall; #2 is outside firewall or in DMZ.
 - LISTSERV Maestro Medium (M) license (limited to 20,000 msgs/day)
- ☐ Three (3) machines: HUB + LUI on #1; LISTSERV + LSMTP on #2; TRK on #3;
 - Machine #1 is inside firewall; #2 & #3 are outside firewall or in DMZ.
 - LISTSERV Maestro Large (L) license (limited to 100,00 msgs/day)
- ☐ Five (5) machines: HUB + LUI on #1; LISTSERV on #2; LSMTP on #3; TRK on #4; #5 is a dedicated RAM-caching Domain Name System (DNS) servers for the Local Area Network (LAN) segment hosting all five (5) machines;
 - Machine #1 is inside firewall; #2, #3, #4 and #5 are outside firewall or in DMZ.
 - LISTSERV Maestro Extra Large (XL) license (unlimited; up to 3 million msgs/day)
- ☐ Six (6) machines: HUB + LUI on #1; LISTSERV (Sending) on #2; TRK on #3; LISTSERV (Bounce processing) on #4; LSMTP on #5; #6 is a dedicated RAM-caching Domain Name System (DNS) server for the Local Area Network (LAN) segment hosting all six (6) machines;
 - Machine #1 is inside firewall; #2, #3, #4, #5 and #6 are outside firewall or in DMZ.
 - LISTSERV Maestro Extra, Extra Large (XXL) license (unlimited; 3 million or more msgs/day)

Special considerations for extreme volumes: Additional machines *may* be necessary and/or desirable for LSMTP, LISTSERV (Bounce processing), and/or RAM-caching DNS.



Hardware

Please note: Hardware choices should be based on anticipated volume and frequency of mailings, and guided by the **LISTSERV Maestro Recommended Architecture** document, available from L-Soft upon request.

For any and all computers hosting **LISTSERV Maestro**, **LISTSERV**, and **LSMTP**:

- ☐ Adequate CPU (minimum generally 1 GHz or faster)
- ☐ Adequate RAM (minimum 512 MB; recommend 1 GB)
- ☐ Adequate *available* disk space (recommend 18 GB) with RAID 1 or 5

In addition, for any computer hosting **LSMTP**:

- ☐ RAID controller with 64 MB or 128 MB RAM cache with battery backup. RAM cache must be configured for 'write-back.'

Operating System

Please note: The **LISTSERV Maestro** components (HUB, LUI, and TRK), **LISTSERV**, and **LSMTP** are **not** required to use the same Operating System **if** they are hosted on separate servers.

For **LISTSERV Maestro** components: Administration (HUB), User Interface (LUI), and Tracking (TRK):

Supported Operating Systems:

- ☐ Windows Workstation versions: XP Professional, 2000 Professional, NT 4.0 Workstation
- ☐ Windows Server Versions: 2000 Server / Advanced Server, NT 4.0 Server
- ☐ Linux Versions: 2.4.2-2 and later

Supported (in any combination) for:

- ☐ HUB & LUI: Any of the above.
- ☐ TRK: For evaluation / testing purposes, any of the above. For production purposes, **only** the Windows *Server* (**not** the Windows *Workstation*) versions, and Linux versions.



For **LISTSERV**:

Choose one of twelve:

- ☐ AIX (PowerPC)
- ☐ BSDi
- ☐ FreeBSD
- ☐ HP-UX
- ☐ Irix
- ☐ Linux (Intel) 2.4.2-2 and later
- ☐ Linux S/390
- ☐ OpenVMS
- ☐ Solaris (Intel)
- ☐ Solaris (SPARC) 5.7 / Solaris 7 and later
- ☐ Tru64 (a/k/a OSF/1, Digital UNIX)
- ☐ Windows 2000 Server / Advanced Server, Windows XP Professional [**not** XP / XP Home Edition], or Windows NT 4.0 (Service Pack 6)

LISTSERV on VM is **not** supported for use with LISTSERV Maestro.

Virus protection is available for LISTSERV on Windows and Linux using F-Secure Anti-Virus (FSAV) (<http://www.lsoft.com/products/default.asp?item=secured-by-FS>).

Virus protection is available for LISTSERV on other platforms using F-Secure Anti-Virus Station (AVS) (<http://www.lsoft.com/products/default.asp?item=avs>).

For **LSMTP**:

- ☐ Windows 2000 Server / Advanced Server or Windows XP Professional [**not** XP / XP Home Edition] or Windows NT 4.0 (Service Pack 6)



Operating System Access & Other Software

For **LISTSERV Maestro**, **LISTSERV**, and **LSMTP**:

- ☐ System account and password with full administrative privileges (Administrator on Windows, root on UNIX) on computer(s) hosting L-Soft software, directly from the computer console or remotely through use of a mutually satisfactory remote access tool, such as Windows Terminal Services, Virtual Network Computing (VNC), Symantec pcAnywhere, etc.
- ☐ ASCII text editing software (NotePad / WordPad on Windows, pico / vi / emacs on UNIX)

L-Soft Software & Licenses

For **LISTSERV Maestro**:

- ☐ Latest software downloaded from <ftp://ftp.lsoft.com/LISTSERV-Maestro/>

For **LISTSERV**:

- ☐ Latest **Classic** or High Performance Option (**HPO**) software downloaded from <ftp://ftp.lsoft.com/LISTSERV/> (LISTSERV **Lite** is not supported by LISTSERV Maestro.)
- ☐ License Activation Key (LAK) for **LISTSERV** from L-Soft Sales, which includes:
REL=1.8e [or later]
SCOPE=MAESTRO
- ☐ License Activation Key (LAK) for Maintenance, bearing an expiration date *after* the release date of the LISTSERV Maestro version being used. (If this is not present, LISTSERV Maestro will run only in Evaluation mode. Exceptions are temporary licenses with a valid expiration date, which assume Maintenance.)
- ☐ License Activation Key (LAK) for F-Secure, if virus protection is desired.

For **LSMTP**:

- ☐ Latest **Classic** software downloaded from <ftp://ftp.lsoft.com/LSMTP/> (LSMTP **Lite** is not supported by LISTSERV Maestro.)
- ☐ License Activation Key (LAK) for **LSMTP** from L-Soft Sales, which includes:
REL=1.1b [or later]

Please note: If an external database will be used, a Java Database Connectivity (JDBC) license must be obtained *from the database vendor* (rather than L-Soft). Please refer to section 9.6 ("Installing JDBC-Drivers for Different Databases") of the **Administrators Guide [to] LISTSERV Maestro** at

http://www.lsoft.com/manuals/Maestro/Maestro_Admin/section_09/page_05.htm



LISTSERV Access & Information

For **LISTSERV Maestro**:

E-mail address with associated LISTSERV password, to authorize LISTSERV Maestro's use of LISTSERV*

☐ Record e-mail address here: _____

☐ Record e-mail address' LISTSERV password here: _____

* This address will be defined in LISTSERV's site configuration as the value of
DIST_ALLOWED_USER=

Fully Qualified Domain Name (FQDN) of LISTSERV server to be used with LISTSERV Maestro

☐ Record FQDN here: _____

☐ Record FQDN's static IP address here: _____

Fully Qualified Domain Name (FQDN) of the servers hosting LISTSERV Maestro's HUB, LUI, and TRK components, for communication with each other [port: 1099]

☐ Record HUB FQDN here: _____

☐ Record LUI FQDN here: _____

☐ Record TRK FQDN here: _____

If LISTSERV's Web interface is enabled *and* is hosted on the *same* computer as one or more LISTSERV Maestro components, identification of Web server and HTTP port being used, to avoid potential HTTP port conflict with LISTSERV Maestro

☐ Record LISTSERV's HTTP server type here: _____

☐ Record LISTSERV's HTTP port here: _____

☐ Record LISTSERV Maestro's HTTP server here: Tomcat Application Server

☐ Record LISTSERV Maestro's HTTP port here: _____



For **LISTSERV**:

Existing e-mail address with associated LISTSERV password, already defined as POSTMASTER=
[only if LISTSERV is already installed]

☐ Record e-mail address here: _____

☐ Record e-mail address' LISTSERV password here: _____

E-mail addresses to be defined as POSTMASTER=

☐ Record e-mail address here: _____

☐ Record additional here: _____ Hide / Quiet?
_____ Hide / Quiet?

Fully Qualified Domain Name (FQDN) of LSMTP server(s) to be defined as SMTP_FORWARD= and
SMTP_FORWARD_n= servers

☐ Record LSMTP FQDN here: _____

For **LSMTP**:

Internet Protocol (IP) address of the LISTSERV server(s) authorized to send their outbound e-mail
through LSMTP as a RelayMailer=

☐ Record RelayMailer IPs here: _____



Networking & Firewall Access

- ☐ General domain name for site*: _____
This address will be defined in LISTSERV's site configuration as a value of MYDOMAIN=, and in LSMTP's configuration as the value of LocalDomain=

- ☐ For any and all computers hosting **LISTSERV Maestro**, **LISTSERV**, and **LSMTP**:
(Static Internet Protocol (IP) address)

Record IP addresses here:

External IP

Internal IP

LISTSERV Maestro HUB: ____ . ____ . ____ . ____ ____ . ____ . ____ . ____

LISTSERV Maestro LUI: ____ . ____ . ____ . ____ ____ . ____ . ____ . ____

LISTSERV Maestro TRK: ____ . ____ . ____ . ____ ____ . ____ . ____ . ____
[must have external, public IP]

LISTSERV: ____ . ____ . ____ . ____ ____ . ____ . ____ . ____
[must have external, public IP]

LSMTP: ____ . ____ . ____ . ____ ____ . ____ . ____ . ____
[must have external, public IP]

- ☐ Fully Qualified Domain Name (FQDN). Record FQDNs here:

LISTSERV Maestro HUB: _____

LISTSERV Maestro LUI: _____

LISTSERV Maestro TRK: _____

LISTSERV: _____

LSMTP: _____

- ☐ Domain Name System (DNS) Address (A) record
- ☐ Operating system configured to access reliable Domain Name System (DNS) server(s)

For **LISTSERV Maestro**:

- ☐ Access (through firewalls, if present) for these components to these ports:

HUB:

- Access to its Web interface (HTTP/HTTPS): port 80 / 447 (or alternative)
Note: Rule out possible Web server conflicts!
- Internal communication with LUI and TRK: port 1099
- Shutdown of the application server: port 8007

LUI:

- Access to its Web interface (HTTP/HTTPS): port 80 / 447 (or alternative)
Note: Rule out possible Web server conflicts!
- Internal communication with HUB: port 1099
- Internal database connection: port varies according to database used (3306 is default for MySQL)
- Internal communication of tracking data from TRK: port 7000
(In releases 1.1 and later, LUI initiates connection)
- Shutdown of the application server: port 8007

TRK:

- Collection of incoming tracking data (HTTP): port 80 [or alternative]
Note: Rule out possible Web server conflicts!
- Internal communication with HUB: port 1099
- Internal communication of tracking data to LUI: port 7000
(In release 1.0, TRK initiated connection)
- Shutdown of the application server: port 8007

- ☐ Adequate *available* bandwidth for TRK receipt of returning tracking data from mailing recipient "open-ups" and "click-throughs"

For **LISTSERV**:

- ☐ Access (through firewalls, if present) to these ports:
- Access to its Web interface (HTTP): port 80 (or alternative) [only if LISTSERV's Web interface is enabled] **Note:** Rule out possible Web server conflicts!
 - Internal communication from LISTSERV Maestro LUI (TCPGUI): port 2306
 - Communication with external database(s): port varies by database
 - Access to mail (SMTP): port 25

For **LSMTP**:

- ☐ Domain Name System (DNS) Pointer (PTR) record
- ☐ Access (through firewalls, if present – strongly recommended against) to these ports:
- ☐ Access to Domain Name System (DNS) server(s): port 53
- ☐ Access to mail (SMTP): port 25
- ☐ Direct access to a caching Domain Name System (DNS) server is **strongly recommended**
(Microsoft's DNS server has been found to be inadequate to this task. A caching DNS server, such as BIND, is recommended.)
- ☐ Adequate *available* bandwidth for outbound mail delivery ("Adequacy" of bandwidth will depend on mailing volume and frequency, as well as delivery speed requirements and expectations.)

Web Access

Browsers supported for accessing **LISTSERV Maestro** and **LISTSERV**:

- ☐ **LISTSERV [Release 1.8e]:**
 - Microsoft Internet Explorer (MSIE) 4.0 and later compatible versions
 - Netscape 4.0 and later compatible versions
- ☐ **LISTSERV Maestro:**
 - Releases 1.0 & 1.1:
 - Microsoft Internet Explorer (MSIE) 5.0 and later compatible versions
 - Release 1.2:
 - Microsoft Internet Explorer (MSIE) 5.5 and later compatible versions
 - Netscape 7.0 and later compatible versions
 - Mozilla 1.0.0 and later compatible versions

Databases

For **LISTSERV Maestro** and **LISTSERV**:

☐ Database supported?

- Microsoft SQL Server 7.0 and 2000 or compatible later version
- Oracle 8i Enterprise / Standard Edition Release 3 (8.1.7) or compatible later version
- DB2 Universal Database V7.2 or compatible later version
- MySQL 3.23.42 or compatible later version

Note to L-Soft staff. Refer to *Table of LISTSERV Operating Systems Supported by LISTSERV Maestro* : <http://private.lsoft.com/dev/products/maestro-OS-support-table.html>

☐ Database prepared?

Section 9.1 ("Preparing the Database") of the **Administrators Guide [to] LISTSERV Maestro**, accessible online at:
http://www.lsoft.com/manuals/Maestro/Maestro_Admin/section_09/page_01.htm#Toc9659488

☐ Database plugin registered?

Sections 9.5 ("Registering a Database Plugin") and 9.6 ("Installing JDBC-Drivers for Different Databases") of the **Administrators Guide [to] LISTSERV Maestro**, accessible online at:
http://www.lsoft.com/manuals/Maestro/Maestro_Admin/section_09/page_04.htm

Continued at:

http://www.lsoft.com/manuals/Maestro/Maestro_Admin/section_09/page_05.htm

☐ Database user ID and password, for use within **LISTSERV Maestro** and **LISTSERV**

Record DB user ID here: _____

Record DB password here: _____