

**RELAIS ILL V2008
TECHNICAL REQUIREMENTS**
Revised March 26, 2008

We recommend that Relais ILL be installed on a workstation with the following hardware. Note that increasing/decreasing this hardware will improve/degrade performance.

Relais ILL V2008 Application Station

This machine will host the Relais ILL applications and Microsoft SQL Server Desktop Engine (MSDE) database. An MSDE run time license is included with Relais ILL. Oracle or SQL Server can also be used as the database, but is not included with the product release, since client side expertise is required.

DBMS	MS SQL Server (6.5 through 2005) / ORACLE (7 through 10g) / Microsoft SQL Server Desktop Engine (MSDE)	
Operating System	2000/2003***	
	Recommended *	Minimum **
CPU	1GHz	500MHz
RAM	512MB	128MB
HDD	25GB	5GB

Relais ILL V2008 Web Server

This machine will host the Relais Access web pages (separate optional package) and store the posted PDF documents.

If you are running Relais Access or using Delivery Email - Post to Web, see below.

Operating System	2000 / 2003/ UNIX / LINUX (see Note 5 below)	
	Recommended *	Minimum **
CPU	1GHz	500MHz
RAM	256MB	128MB
HDD	50GB	25GB

Web Browser Compatibility

Relais Access Web Forms	IE6	IE7	*Firefox 1.5+2	Netscape 8+9	Opera 8.5
	Yes	Yes	Yes	Yes	Yes

Secure Post to Web with...	IE6	IE7	*Firefox 1.5+2	Netscape 8+9
Adobe Reader 5	Yes	No	Yes	Yes
Adobe Reader 6	Yes	No	Yes	Yes
Adobe Reader 7	Yes	Yes	Yes	Yes
Adobe Reader 8	Yes	Yes	Yes	Yes

*There have been some issues with Firefox and the new security. The reasons are undetermined as of yet.

Notes

1. Oracle or SQL Server can be used as the database, but neither is included with the product release.
2. If a server class machine is not used to run the applications, the machine should be dedicated to Relais ILL.
3. If the applications and web server are installed on an existing server class machine then it does not have to be dedicated to Relais ILL.
4. The application, web and database server (if using SQL Server or Oracle) can exist on the same machine, but in this case use the application PC recommendations for Relais Enterprise.
5. UNIX\LINUX can **only** be used as an operating system for the database or web server when using an Oracle database.

Staff Workstation and Scanning Workstation

Operating System	2000/XP ***	
	Recommended *	Minimum **
CPU	1GHz	500MHz
RAM	256MB	128MB
HDD	5GB	5GB

Scanners

If a scanner is not purchased from Relais International, make sure there is a TWAIN or Kofax compatible driver available for the scanner. In the case of a TWAIN driver, the Relais scanning software opens the scanner's driver interface.

General Notes

* Recommended is approximately 250,000 requests per year

** Minimum is approximately 50,000 requests per year

*** 2000 --> Windows 2000 SP4

XP --> Windows XP SP2

2003 --> Windows 2003 SP1

1. Relais International does not supply or license any operating systems.
2. Relais International does not supply or license Oracle or SQL Server.
3. Relais International will supply a run time license for Microsoft SQL Server Desktop Engine (MSDE) if appropriate.
4. Some predefined reports are provided. Knowledge of Crystal Reports (or equivalent) is required for customers to create and generate additional statistical reports.
5. Knowledge of Crystal Reports is required for customers who may wish to change the format, layout etc of reports embedded in Relais, e.g., pick slips and cover sheets. Alternatively a quote for making such changes can be provided by Relais International.
6. Relais ILL System Administrators require a working knowledge of the following:
 - Oracle or SQL Server administration (if not using MSDE).
 - TCP/IP Networking.
 - Windows Server.
 - IIS/Apache/Tomcat (if implementing Relais Access or Delivery Email Post to Web).
 - Java (if customizing Relais Access).
7. Adobe: Relais is able to convert TIF images to PDF, for use with Post to Web. However, Adobe is required in order to insert Coverpages into existing PDFs. Third party PDF makers cannot be used with Relais.

Relais ILL (& Relais Access if used) Firewall Usage

It is recommended that Relais ILL be installed behind a hardware firewall or NAT capable router.

Ensure the following TCP/IP ports are allowed through the firewall.

Port	Description
21	Used by <u>Relais Access</u> for patrons to retrieve Post to Web documents (when posted to an FTP server).
25	Used by many <u>Relais applications</u> to send out email messages via SMTP. For example ILL Message Handler and Delivery Email as well as sending various notices and message re errors to the administrator.
80	Used by <u>Relais Access</u> , for example, for patrons to enter requests into Relais or to retrieve Post to Web documents when posted to an HTTP server.
110	Used by <u>ILL Message Handler</u> to access the POP3 mailboxes used for receiving GSM and ISO ILL requests and messages.
419 422	Used by <u>Delivery FTP</u> to send requests to your local Ariel Store & Forward Server.
1611	Used by <u>ILL Message Handler</u> to send and receive ISO ILL requests via TCP/IP.
210 2200 7090	Used by <u>Search applications</u> when connecting to a Z39.50 server. Each library system typically uses a different port number, so verify with your local catalog system administrator. These are examples of commonly used ports for Z39.50.
1433	HOSTED customer only. Used for the hosted database you must allow out.

- Hosted customers need only open Ports 419, 422, 1433, 210, 220 & 7090.

Relais File Permissions once you have installed the Workstations

Once the installation is complete, ensure the appropriate file permissions are set for the following directories and files. To do so, right mouse click on each directory or file listed and select Properties. Verify the attributes, generally found in the Security tab.

All Relais directories except Reports	Read Write
Reports directory	Read
In the Relais root directory:	
*.exe	Read Execute
relais.ini	Read Write
*.cfg	
*.txt	

Once your initial configuration is done and depending on local security requirements, the file permissions for some of these directories and folders may be modified.

Security in Relais

- Software security is provided by the Windows network on which Relais is running.
- Relais applications are secured through Windows file sharing and possibly your own VPN.
- The Relais database can be secured if you provide the secure ODBC connection.
- Security for web components (i.e. HTTP, FTP, SMTP, POP) are managed by the web server (i.e. Windows, Linux/UNIX).
- Hardware security is provided by your own switches, routers, firewalls, etc. on which the Relais system is running.

Access Control and User Validation in Relais

- Relais staff using the Windows applications are managed by the Windows network at the user and machine level.
- Relais also maintains its own internal staff user accounts for use at the request processing level.
- The Relais database user is managed by the database server (i.e. Oracle, SQL Server).
- The Relais web users are validated by their username and password for their Relais account.
- Relais machines may also be managed by the client's network hardware.

Data Integrity and Backup

- Data integrity in the Relais system is only as reliable as the network on which Relais is running.
- The Relais application data can be backed up using your own in-house backup procedures.
- Relais database information can be backed up through the use of the database server's own backup function.
- The Relais system also provides an application used for archiving database information to a secondary database.