



Requirements for Rosetta Installation

Version 8.x

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1

Overview

This document describes the requirements for the installation and use of Rosetta. Before purchasing and installing the hardware and operating system, you must receive confirmation from Ex Libris regarding the hardware and operating system requirements. Note that these requirements may change as a result of Ex Libris' development needs.

To request a Rosetta installation at your site, complete the *Request for Rosetta Installation* form and send it to your Ex Libris representative.

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Server Hardware and Software Requirements

This section includes:

- [Server Requirements](#) on page 7
- [File System and Disk Space Requirements](#) on page 8
- [Storage Requirements](#) on page 11
- [Character Set](#) on page 11
- [Backup and Recovery Media and Procedures](#) on page 11

Server Requirements

Install Rosetta and the Oracle database on dedicated servers with the specifications listed in the table below.

IMPORTANT:

All the Rosetta application servers that you are using must be dedicated to Rosetta only. If you are using a separate Oracle database server, this server may be shared.

Table 1. Specification Per Server

Specification	Description
Operating system/platform	Linux: Red Hat Enterprise Linux 7.5: 3.10.0-862.11.6.el7.x86_64 or later
CPUs *	Minimum of 8
RAM *	Minimum of 24GB

Table 1. Specification Per Server

Specification	Description
Media for data exchange	<ul style="list-style-type: none"> ■ FTP and an Internet connection (see Communication Requirements on page 17) ■ CD-ROM drive for data and software exchange (in case FTP is temporarily unavailable, or if Ex Libris has approved work without an Internet connection)
Database **	<p>Oracle 64-bit</p> <hr/> <p>NOTE: The installation of the database in Oracle Real Cluster configuration is supported.</p> <hr/>
Additional server software	<ul style="list-style-type: none"> ■ C-shell package (csh or tcsh), as part of the operating system ■ Linux platform GCC, as part of the operating system ■ Oracle RDBMS add-on software **

* Consult with the Ex Libris Sizing Manager

** Installed by Ex Libris to ensure full compatibility with Rosetta

NOTE:

If you are configuring two or more servers, contact your Ex Libris representative to discuss the exact production server specifications required, including the required number of CPUs and RAM. The production server specifications are dependent on the database size and the number of concurrent users.

For detailed operating system requirements, refer to the *Operating System Requirements for Red Hat Enterprise Linux* document.

NOTE:

For each of the operating system versions, Ex Libris recommends that you install the latest operating system update level.

File System and Disk Space Requirements

Each physical disk that will be used by Ex Libris should be mounted on a separate file system. The names of the file systems should be /exlibris, /exlibris1, /exlibris2, and so forth.

A file system named `/exlibris`, with a minimum size of 50 GB, is mandatory. It will be used exclusively for all software and configuration tables and files that will be installed by Ex Libris. Mount the `/exlibris` file system directly on the server.

NOTE:

The `/exlibris` file system cannot be a soft or symbolic link to any alternatively named file system.

The Rosetta database files can be placed in any of the file systems (`/exlibris`, `/exlibris1`, and so forth). The Oracle software installation and database creation is performed by Ex Libris staff as a part of the Rosetta installation process.

Table 2 lists the minimal disk space requirements for running and maintaining Rosetta software and data.

Table 2. Disk Space Requirements

Software and Data	Minimum Size *	File System	Server
Rosetta and Oracle software	50 GB	<code>/exlibris</code>	All servers
Oracle DB size *	At least 200 GB	<code>/exlibris</code> or <code>/exlibris1</code> , <code>/exlibris2</code> , <code>/exlibris3</code>	Oracle server
RAM *	At least 16 GB		All servers
Swap space *	At least 16 GB		All servers
<code>/tmp</code> *	At least 2 GB		All servers

* Consult with the Ex Libris Sizing Manager

When Rosetta is installed on more than one server, NFS shared disks are required. **Table 3** lists the partitions that must be mounted on each server, as well as recommended mount point names.

Table 3. Partitions

Use	Minimum Size *	Accessed By	Mount Point
Deposit storage *	At least 50 GB	Deposit and Staging servers	/deposit_storage
Staging storage *	At least 50 GB	Staging and Permanent servers	/operational_storage
Permanent storage *	At least 50 GB	Permanent and Staging servers	/permanent_storage
Operational Shared *	At least 50 GB	All Staging servers	/operational_shared

* Consult with the Ex Libris Sizing Manager

NOTE:

The above information is meant to provide general guidelines for determining the minimal disk space requirements. The exact disk space required should be determined in conjunction with your Ex Libris representative.

The above disk space requirements enable support of the following:

- Reorganization of the database (as part of the periodic maintenance of the database) with minimal downtime

The above disk space requirements do not include:

- System disk requirements for operating system overhead
- Disk space needed for running Oracle in archive-log mode (see **Backup and Recovery Media and Procedures** on page 11)
- Disk space requirements for backup at large sites (see **Backup and Recovery Media and Procedures** on page 11)
- Any type of data redundancy, such as RAID 1, RAID 5 or RAID 0/1 solutions
- Rosetta upgrade requirements

NOTE:

To upgrade during the post-STP stage, allocate twice the amount of disk space for the upgrade as you have available for the current version and database.

Storage Requirements

The following are the storage requirements for Rosetta:

- Storage used for application and database (`/exlibris`)
 - Supports any protocol (local file system, FCP, iSCSI, etc.)
 - Minimum performance recommendations:
 - Physical disks at least 75MB/Secs transfer rate
 - Dedicated NIC for storage (1Gb minimum)
 - Minimum 1500 IOP/Sec with response time ≤ 8 milliseconds (database only)
- Storage for repositories (operational and permanent)

Supports the following protocols:

 - NFS
 - CDMI
 - S3
 - Any POSIX-compliant
 - Others, via custom plugin/adaptor

NOTE:

The above information is meant to provide general guidelines for determining the minimal performance requirements. The exact transfer rate and IOP/Sec number required should be determined in conjunction with your Ex Libris representative.

Character Set

Ex Libris uses the UTF8 character set for all its products.

Backup and Recovery Media and Procedures

Backup and recovery procedures and their selected media are the customer's responsibility.

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Workstation Hardware and Software Requirements

This section includes:

- **Staff PC Configuration** on page 13
- **Unicode Font** on page 15

Rosetta supports all the leading browsers: Chrome, Firefox, Internet Explorer, and Safari (for end-users only). There is an ongoing process of monitoring new browser versions and checking their compatibility with Rosetta.

Staff PC Configuration

All staff Web-based workstations should be able to run the minimum supported version of an approved browser as listed below on a Windows operating system. Hardware requirements are minimal and are based only on the need to run the browsers in a given operating system.

Browser Certification

Ex Libris' browser certification is based on industry usage statistics. The following table describes the certified browsers:

Table 4. Browser Certification

Browser	Description
Microsoft® Internet Explorer®	Ex Libris makes every effort to test and certify the two most recent browser versions for Microsoft® Internet Explorer® when its industry usage is over 20% (according to industry usage statistics) of all versions of this browser and as long as these versions are still supported by Microsoft®.

Table 4. Browser Certification

Browser	Description
Mozilla® Firefox®	Ex Libris makes every effort to test and certify the most recent stable version of Firefox® on an on-going basis.
Google Chrome™	As with Firefox, Ex Libris makes every effort to test and certify the most recent stable version of Chrome™ on an on-going basis. NOTE: Google Chrome™ applies updates automatically.
Apple® Safari®	For end-user interface only, Ex Libris makes every effort to test and certify the most recent stable version of Safari® on Mac® an on-going basis.

Discontinued Browser Version Support

Ex Libris supports the current browser version and one previous version. When beginning to support a new browser version, Ex Libris stops supporting the oldest supported version. In addition, Ex Libris may discontinue supporting a certain browser version based on its industry usage. Issues reported that are specific to a browser version that has been discontinued are not actively investigated or corrected.

Browser Display Resolutions and Other Requirements

Rosetta's user interface is designed to work with the following screen resolutions and monitors:

- Minimum recommended monitor size is 17"; 19" is preferable
- Minimum required resolution is 1364x768 (1920*1050 recommended)
- For all browsers, JavaScript and cookies must be enabled

Miscellaneous

- Network Interface Card with Internet/LAN connection
- TCP/IP installed and connection to server tested
- Telnet or terminal emulator client (administrator's machine only)
- FTP (administrator's machine only)
- Mouse or roller ball, or another pointing device

Unicode Font

Rosetta works in Unicode. We recommend the installation of an appropriate Unicode font on both the PC and browser. The chosen Unicode font should include all characters that you use.

NOTE:

If you use a CJK character set, the fonts are quite heavy and the load time of pages may be slow. Therefore, if you use only Latin characters, choose a Latin Unicode font for better performance.

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Communication Requirements

This section includes:

- **Network Configuration** on page 17
- **Server Access** on page 18
- **Ports and Activity Types** on page 18

Network Configuration

The server must have a fully qualified hostname (include short hostname and domain name) that is registered in the DNS.

When performing a distributed installation, all application servers must have DNS entries.

The server name must be defined in `/etc/hosts` as follows:

- Both the fully qualified name and the short host name must be linked to a physical IP address (internal). In order to make sure the correct name is defined, use the following commands:

```
grep `eval hostname` /etc/hosts
```

This command must return a valid entry with a physical IP address.

- For SunOS, enter the following commands to find the internal IP address:

```
/usr/sbin/ifconfig -a | grep inet | grep -v 127.0.0.1 | awk  
'{print $2}'
```

- For Linux, enter the following commands to find the internal IP address:

```
/sbin/ifconfig -a | grep addr: | grep -v 127.0.0.1 | awk  
'{print $2}'
```

See the following example of `/etc/hosts` configuration:

```
# Do not remove the following line, or various programs
# that require network functionality will fail.

127.0.0.1    localhost.localdomain    localhost

10.1.222.22 ml-inst.corp.metalib.com  ml-inst
```

The first active line should be configured exactly as shown in the above example.

The second line should contain the internal IP address, followed by the fully qualified name (hostname + domain name), the short name, and any possible aliases.

Server Access

Ex Libris access to the system via the Internet is required, with a minimum bandwidth of 64 KBp.

Ex Libris staff will require access to the following:

- the Rosetta server – for the installation of the Rosetta software, setup, support, and troubleshooting during the implementation and maintenance phases
- If a firewall is installed, access must be enabled for Ex Libris Support and Implementation staff via the Ex Libris gateway IP address, 212.179.71.70. In addition, where relevant, access must be enabled for IP addresses of the local Ex Libris office or distributor (for details, refer to your local Ex Libris representative or distributor).
- At the post-installation stage, it is recommended that you permit access to <http://exlibris-public.exlibrisgroup.com/> in order to be able to access the service pack release via the **Help** menu in the Rosetta application.

Ports and Activity Types

Verify that the following ports are open and can be used by Rosetta:

Table 5. Port Requirements

Port	Server	Access
8182 (HTTP)	All	Cantaloupe Image Server
8183 (HTTPS)	All	Cantaloupe Image Server

Table 5. Port Requirements

Port	Server	Access
1521 (TCP/IP)	Oracle	Deposit, Staging, and Permanent servers; Ex Libris Support (jdbc)
1801 (HTTP)	Deposit	Internet
1801 (HTTP)	All	Internet (for delivery of objects to the end user); Ex Libris Support
8443 (HTTPS)	All	Native SSL access
8991 (HTTP)	Deposit (PDS Port)	Internet; Deposit and Staging servers NOTE: Only relevant if PDS is in use.
5001 (HTTP)	Deposit, Staging, Permanent	Ex Libris Support, for remote Java debugging
80 (outgoing HTTP)	Staging	To http://www.exlibris-public.exlibrisgroup.com , for access to release notes and updates
21	Deposit, Staging, Permanent, Oracle	FTP connection from Ex Libris Support Outgoing access to FTP servers: <ul style="list-style-type: none"> ■ ftp.exlibrisgroup.com (USA) ■ ftp.exl.de (EU) ■ ftp.exlibris.co.il (ME) ■ ftp-apac.hosted.exlibrisgroup.com (APAC)
SFTP - 10022	Deposit, Staging, Permanent, Oracle	downloads-na.hosted.exlibrisgroup.com downloads-eu.hosted.exlibrisgroup.com downloads-ap.hosted.exlibrisgroup.com downloads-ca.hosted.exlibrisgroup.com downloads-cn.hosted.exlibrisgroup.com
22	Deposit, Staging, Permanent, Oracle	SSH connection from Ex Libris Support
25 (outgoing)	Deposit, Staging	SMTP outgoing mail (the mail daemon must be installed and tested)

Table 5. Port Requirements

Port	Server	Access
8983 (HTTP)	Index server (IDX)	Solr index standalone server (internal communication only)
5811 5821 5831	SolrCloud	SolrCloud index standalone server internal communication between ZooKeeper(s) and IDX server(s)

NOTE:

Use of other ports must be coordinated with Ex Libris.

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Requirements for Ex Libris Installation

This section includes:

- [Server Access](#) on page 21
- [Root Access](#) on page 21
- [List of Operations that Should Be Available for sudo](#) on page 22
- [Additional Requirements](#) on page 22

Server Access

In order to log on to the server, an initial `exlibris` user with permission to `su` or `sudo` is required. This user can be deleted after the installation is complete.

Root Access

Ex Libris staff require a root password to:

- create the following users:
 - `dps` with a group ID of `exlibris`
 - `oracle` with a group ID of `dba`.
- enable the users listed above to create directories and files under the file systems `/exlibris`, `/exlibris1`, `/exlibris2`, and so forth
- install Rosetta and the additional software detailed in [Server Requirements](#) on page 7
- add the automatic activation of Rosetta servers and Oracle to the machine's boot process
- reboot the server to activate new values of system parameters that were modified during the installation process, and to test the automatic activation of Rosetta and Oracle. The reboot will be coordinated with you.

List of Operations that Should Be Available for sudo

- 1 Create the following users and groups:
 - useradd
 - groupadd
 - vipw
- 2 Change the following system parameters:
 - for Linux – `/etc/rc.d/rc.local` and `/etc/security/limits.conf` files
- 3 Create directories and change permissions using the following:
 - mkdir
 - chown
- 4 In the `/etc` directory, create files necessary for the autostartup mechanism.

Additional Requirements

- `csch` must be available. Ex Libris products and the users listed in the previous sections work under `csch`.
- The system manager must be available throughout the installation. If Oracle is already installed, the DBA must also be present during installation.
- The system manager must define an alias for the hostname in `/etc/hosts`.
- All operations that need to run as root are performed by the installation scripts, so sudo rights are required for running the installation kit. sudo rights for specific commands are needed only when manual steps are needed to complete the installation steps.

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Responsibilities Checklist

The following table summarizes the requirements described in this document.

Table 6. Responsibilities Checklist

Details	Purchase and Installation Responsibility	Page
Server Hardware and Software		page 7
Server and OS	Customer	page 7
Disk space	Customer	page 8
Media for data exchange	Customer	page 8
Additional software	Customer Ex Libris	page 8
Backup and recovery media	Customer	page 11
Oracle	Ex Libris	
Workstation Hardware and Software		page 13
Staff PC and OS	Customer	page 13
Browsers	Customer	page 13
Unicode fonts	Customer	page 15
Communication Requirements		page 17
Open ports	Customer	page 18

