



Requirements for Verde Installation

Version 2.0

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Table of Contents

	Updates to This Guide	5
Chapter 1	Overview	7
Chapter 2	Server Hardware and Software Requirements	9
	Server Requirements	9
	<i>Operating System/Platform for Verde</i>	9
	File System and Disk Space.....	10
	Media for Data Exchange	12
	Backup and Recovery Media and Procedures.....	12
	Additional Server Software.....	12
Chapter 3	Client Hardware and Software Requirements.....	13
	Staff PC Configuration.....	13
	<i>Display</i>	14
	<i>Miscellaneous</i>	14
	Unicode Font	14
Chapter 4	Communication Requirements	15
	Server Access.....	15
	Ports and Activity Type.....	15
Chapter 5	Requirements for Ex Libris Installation.....	17
	Server Access.....	17
	Root Access.....	17
	List of Operations that Should Be Available for sudo.....	18
	Additional Requirements	18
Chapter 6	Responsibilities Checklist	19

Requirements for Verde Installation

Updates to This Guide

The following updates have been made to this guide since the last version was released on March 22, 2009:

- The server Linux operating system requirements were changed. For details, see [Operating System/Platform for Verde](#) on page [9](#).
- The server swap space requirements were changed. For details, see [Table 1](#) on page [10](#).
- The client system requirements were changed. For details, see the note below [Table 1](#) on page [13](#).

Requirements for Verde Installation

1

Overview

This document describes the requirements for the installation and use of Verde. 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 Verde 2.0 installation at your site, complete the *Request for Verde 2.0 Installation* form and send it to your Ex Libris representative.

Requirements for Verde Installation

2

Server Hardware and Software Requirements

This section includes:

- [Server Requirements](#) on page 9
- [File System and Disk Space](#) on page 10
- [Media for Data Exchange](#) on page 12
- [Backup and Recovery Media and Procedures](#) on page 12
- [Additional Server Software](#) on page 12

Server Requirements

Verde and the Oracle database should be installed on a dedicated server.

NOTE:

If you want to install Verde or your Oracle database on your ALEPH or MetaLib/SFX server, you must contact your Ex Libris representative.

Operating System/Platform for Verde

CAUTION:

Refer first to *Operating System Requirements for Red Hat Enterprise Linux* and *Operating System Requirements for the Sun Platform* for basic and detailed requirements, and then refer to the additional specific Verde requirements below.

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

- Sun — Solaris 9 and 10, based on SPARC processors
- Linux — Red Hat Enterprise Linux AS/ES 5.2 or later, 64-bit

NOTE:

RH 6 is not supported.

The minimum requirement for Verde installation (up to 10 Web users, 1 Verde instance) is 2 CPU and 6 GB RAM.

For the exact production server specifications, including the required number of CPUs and required RAM as a function of the database size and the number of concurrent users, contact your Ex Libris representative.

File System and Disk Space

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 55 GB, is mandatory. It will be used exclusively for all software and configuration tables and files that will be installed by Ex Libris.

NOTE:

For disk space requirements for upgrades, see the note on page 12.

Temporary and scratch files can be installed on `/exlibris`, or on `/exlibris1`, `/exlibris2`, and so forth. The total size of temporary and scratch files is 16 GB.

Disk space should not be composed of many small disks.

Table 1 lists the minimal disk space requirements for running and maintaining Verde software and data.

Table 1. Disk Space Requirements

Usage	Size	File System
Verde and Oracle software	7 GB	<code>/exlibris</code>
Oracle DB	26 GB	<code>/exlibris</code>
Disk space for each local instance (there is at least one local instance)	5 GB DB space	<code>/exlibris</code>

Table 1. Disk Space Requirements

Usage	Size	File System
Temporary and scratch files	12 GB for system temporary and scratch files + 4 GB for temporary and scratch files for all local instances	/exlibris or /exlibris1, /exlibris2 /exlibris3...
RAM	At least 6 GB	
Swap space	At least the size of the RAM (that is, 6 GB)	
/tmp	At least 26 GB	

The above information is meant to provide general guidelines for determining the minimal disk space requirements. The exact disk space required will be determined in conjunction with your Ex Libris representative. Any deviation from the above guidelines must be confirmed by Ex Libris.

The above disk space requirements include the ability to support the following activities:

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

The above disk space requirements do not include:

- System disk requirements (operating system overhead)
- Disk space needed for running Oracle in archive-log mode (see **Backup and Recovery Media and Procedures** on page 12)
- Disk space requirements for backup on large sites (see **Backup and Recovery Media and Procedures** on page 12)
- Any type of data redundancy, such as RAID 1, RAID 5 or RAID 0 solutions
- Verde upgrade requirements

NOTE:

To upgrade during the post-STP stage, you must ensure that twice the disk space of the version/database is available. For example, to upgrade an installation containing one production instance from Verde 1.1 to Verde 2.0, 90 GB is needed—45 GB for the production installation of Verde 1.1 and 45 GB for the parallel installation of Verde 2.0.

Media for Data Exchange

FTP and an Internet connection are prerequisites for Verde implementation (see [Communication Requirements](#) on page 15). You should also have a CD-ROM drive for data and software exchange with Ex Libris in case FTP is temporarily unavailable, or if Ex Libris has approved work without an Internet connection.

Backup and Recovery Media and Procedures

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

Additional Server Software

On a Linux platform, `gcc` should be installed as part of the operating system.

The Oracle add-on software is required for Verde. Ex Libris will install this additional software to ensure that Verde is fully functional.

3

Client Hardware and Software Requirements

This section includes:

- [Staff PC Configuration](#) on page 13
- [Unicode Font](#) on page 14

Staff PC Configuration

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

Table 1. Minimum System Requirements

Operating System/ Browser	Requirement
Windows 2000/XP	CPU: Pentium III, 1GHz Memory: 256 MB (recommended: 512 MB) Disk: 10 GB
Browser	Internet Explorer 6.x and 7.x; Mozilla Firefox 3.x

NOTE:

Windows ME and Mac OS X are not supported.

Display

The physical dimension of the monitor is not relevant for the actual operation of the staff clients. The critical parameter is resolution.

Minimum Recommended Configuration: 1024 x 768

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
- Mouse

Unicode Font

Verde 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.

4

Communication Requirements

This section includes:

- [Server Access](#) on page 15
- [Ports and Activity Type](#) on page 15

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 Verde server – for the installation of the Verde software, setup, support, and troubleshooting during the implementation and maintenance phases
- If a firewall is installed, ssh access must be enabled for Ex Libris Support and Implementation staff for the following IP addresses:
 - 212.179.71.70
 - 12.21.149.130

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).

Ports and Activity Type

The following ports are required:

- Telnet or SSH standard port
- FTP standard port
- HTTP port 18080 for the Verde installation during the implementation period

- Standard port for outgoing mail server; mail daemon installed and tested
- PC server port for ALEPH installation (relevant for ALEPH customers only)
- Ports necessary for the creation of a shared interface with ALEPH, SFX, or any other products with which Verde communicates. The numbers of these ports depend on local ALEPH/SFX implementation.

NOTES:

- Use of other ports must be coordinated with Ex Libris.
 - For any additional version copy (for testing or training purpose), an additional HTTP port, <copy>8080, should be opened.
-

5

Requirements for Ex Libris Installation

This section includes:

- [Server Access](#) on page 17
- [Root Access](#) on page 17
- [List of Operations that Should Be Available for sudo](#) on page 18
- [Additional Requirements](#) on page 18

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:
 - `verde` 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 Verde and the additional software listed in [Additional Server Software](#) on page 12
- add the automatic activation of Verde 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 Verde 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 Sun Solaris servers – /etc/system file
 - 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.
- 5 Ensure that Micro Focus Cobol is installed in the following directories:
 - /opt/microfocus – License Manager SW installation
 - /etc/mflmrcscript – License manager startup script

Additional Requirements

- csh must be available. Ex Libris products and the users listed in the previous sections work under csh.
- 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.

6

Responsibilities Checklist

The following table summarizes the requirements described in this document.

Table 1. Repsonsibilities Checklist

Details	Purchase and Installation Responsibility	Page
Server Hardware and Software		page 9
Server and OS	Customer	page 9
Disk space	Customer	page 10
Media for data exchange	Customer	page 12
Backup media	Customer	page 12
Additional software	Ex Libris	page 12
Oracle	Ex Libris	
Client Hardware and Software		page 13
Staff PC and OS	Customer	page 13
Browsers	Customer	page 13
Unicode fonts	Customer	page 14
Communication Requirements		page 15
Open ports	Customer	page 15

