



Operating System Upgrade

CONFIDENTIAL INFORMATION

The information herein is the property of Ex Libris Ltd. or its affiliates and any misuse or abuse will result in economic loss. DO NOT COPY UNLESS YOU HAVE BEEN GIVEN SPECIFIC WRITTEN AUTHORIZATION FROM EX LIBRIS LTD.

This document is provided for limited and restricted purposes in accordance with a binding contract with Ex Libris Ltd. or an affiliate. The information herein includes trade secrets and is confidential

DISCLAIMER

The information in this document will be subject to periodic change and updating. Please confirm that you have the most current documentation. There are no warranties of any kind, express or implied, provided in this documentation, other than those expressly agreed upon in the applicable Ex Libris contract. This information is provided AS IS. Unless otherwise agreed, Ex Libris shall not be liable for any damages for use of this document, including, without limitation, consequential, punitive, indirect or direct damages.

Any references in this document to third-party material (including third-party Web sites) are provided for convenience only and do not in any manner serve as an endorsement of that third-party material or those Web sites. The third-party materials are not part of the materials for this Ex Libris product and Ex Libris has no liability for such materials.

TRADEMARKS

"Ex Libris," the Ex Libris Bridge to Knowledge, Primo, Aleph, Voyager, SFX, MetaLib, Verde, DigiTool, Rosetta, bX, URM, Alma, and other marks are trademarks or registered trademarks of Ex Libris Ltd. or its affiliates.

The absence of a name or logo in this list does not constitute a waiver of any and all intellectual property rights that Ex Libris Ltd. or its affiliates have established in any of its products, features, or service names or logos.

Trademarks of various third-party products, which may include the following, are referenced in this documentation. Ex Libris does not claim any rights in these trademarks. Use of these marks does not imply endorsement by Ex Libris of these third-party products, or endorsement by these third parties of Ex Libris products.

Oracle is a registered trademark of Oracle Corporation.

UNIX is a registered trademark in the United States and other countries, licensed exclusively through X/Open Company Ltd.

Microsoft, the Microsoft logo, MS, MS-DOS, Microsoft PowerPoint, Visual Basic, Visual C++, Win32, Microsoft Windows, the Windows logo, Microsoft Notepad, Microsoft Windows Explorer, Microsoft Internet Explorer, and Windows NT are registered trademarks and ActiveX is a trademark of the Microsoft Corporation in the United States and/or other countries.

Unicode and the Unicode logo are registered trademarks of Unicode, Inc.

Google is a registered trademark of Google, Inc.

Copyright Ex Libris Limited, 2016. All rights reserved.

Document released: November 2016

Web address: <http://www.exlibrisgroup.com>

Table of Contents

1	Overview	4
2	Pre-Upgrade Tasks	4
3	Upgrade	5

1

Overview

This document details the procedure required to upgrade the operating system of a server with an Ex Libris application installed. This document is relevant for cases that according to the product matrix, the OS upgrade does not require a database (DB) upgrade or an application upgrade.

If a DB/application upgrade is needed, it should be done by the Ex Libris installation team.

Note: The upgrade process requires both the application and root (or sudo as root) users. The customer's system administrator should perform operations requiring root permissions.

Pre-Upgrade Tasks

Implement the following steps before performing the upgrade:

- 1 Site staff should schedule a date for the OS upgrade for when Ex Libris staff can be available for possible support.
- 2 Prior to the upgrade, make a full cold backup of the DB and application software. Site staff should back up and save the following directories (on an external device):

`/exlibris/*`

In the event that the DB files are saved on file systems other than `/exlibris`, back up all other DB files, as well.

Note: Run the full cold backup process only when all applications and databases are down. Once the backups are created, all backup files must be saved on an external device.

- 3 Copy the Ex Libris entries from `/etc/sysctl.conf` from the old server to the new server.
- 4 Copy the file `/etc/security/limits.d/exlibris` from the old server to the new server.
- 5 For an OS re-installation instead of an OS upgrade, site staff need to back up the:
 - `/var/spool/cron` file

- /etc/security/limits.d/exlibris file

6 Back up Ex Libris group and users from the following system files:

```
/etc/passwd  
/etc/group  
/etc/hosts  
/etc/init.d/Exlibris
```

Note: Root permissions are necessary for saving these files.

The following is an example for extracting the needed data:

```
/etc/shadow  
take only exlibris relevant groups+users (dba,exlibris,sfx groups)  
cat /etc/group | egrep 'dba|exlibris|sfx' > group.backup;  
awk -F: '{print $3}' group.backup | while read group; do  
    grep "^[^:]*:[^:]*:[^:]*:$group:" /etc/passwd;  
done > passwd.backup;  
awk -F: '{print $1}' passwd.backup | while read user; do  
    grep "^$user:" /etc/shadow;  
done > shadow.backup
```

7 Save all links from /etc/rc* to /etc/init.d/exlibris found using the following command:

```
ls -l /etc/rc*/* | grep exlibris
```

8 For applications with an Oracle DB, save the oratab file:

- For SUN:
/var/opt/oracle/oratab
- For Linux:
/etc/oratab

Upgrade

For the upgrade, Ex Libris recommends that a new machine is installed with the existing name+IP. Then the old machine's disks are attached to the new machine and the relevant OS backups are restored there (users, cron jobs, startup scripts, oratab).

Upon the completion of the upgrade, site staff should verify that all relevant packages and executables exist in the upgraded operating system by running the relevant kit pre-checks.

For legacy products (Aleph, MetaLib, and DTL), after the upgrade, the Ex Libris installation team should reinstall the Cobol license.