



Operating System Upgrade

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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.