Operating System Requirements for the Oracle Solaris Platform

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Operating System Requirements

This section provides operating system requirements for installing Ex Libris applications on the Sun Solaris operating system.

This section includes:

- **Operating System** on page **5**
- **Operating System Packages** on page **6**
- **Required Executable Files** on page **8**
- **Native C Compiler** on page **8**
- **Additional Software** on page **9**
- **Windows Manager** on page **9**

Operating System

Solaris 10 is the required operating system.

Supported architecture: 64 bits x86 processors and SPARC processors.

For each of the following operating system versions, Ex Libris recommends that you install the latest OS patch cluster recommended for this operating system.

The mandatory OS level for the Oracle 12c installation is Solaris 10 (64-bit) update 11 or later update.

The following table shows the current OS version certifications for each Ex Libris application.

Table 1. OS Version Certifications for Ex Libris Applications

Application	Solaris 10 SPARC	Solaris 10 x86 64	Solaris 11 SPARC	Solaris 11 x86 64
ALEPH 20.x	x			
Aleph 21	x	x		

Table 1. OS Version Certifications for Ex Libris Applications

Application	Solaris 10 SPARC	Solaris 10 x86 64	Solaris 11 SPARC	Solaris 11 x86 64
Aleph 22, 23	x	x	x	x
ARC 2.0	x			
ARC 3.0	x			
ARC 4.x	x		x	
DigiTool 3.x	x			
MetaLib 4.x	x		x	
Rosetta 5.x		x		x
SFX 4.0	x	x	x	x
Verde 2.0	x			
Voyager 9	x			
Voyager 10	x			

Operating System Packages

The following operating system packages must be installed:

SUNWarc

SUNWbinutils

SUNWbtool

SUNWcsl

SUNWdtrc

SUNWeu8os

SUNWgcc

SUNWgccruntime

SUNWhea

SUNWi15cs

SUNWi1cs

SUNWi1of

SUNWlibC

SUNWlibm

SUNWlibms

SUNWmfrun

SUNWsprot

SUNWtcsh

SUNWtoo

SUNWxwfnt

Solaris 10 (SPARC 64-Bit) Patches for Oracle 10.2

127127-11 or later

Solaris 10 (x86-64) Patches for Oracle 10.2

118345-03 or later (SunOS 5.10_x86: ld Patch)

119961-01 or later (SunOS 5.10_x86, x64, Patch for assembler)

Solaris 10 (SPARC 64-Bit) Patches for Oracle 11.1

127111-02 or later (SunOS 5.10: libc patch)

137111-04 or later (SunOS 5.10: kernel patch)

117837-05 or later (C++ compiler optimizer patch)

117846-08 or later (C++ compiler Optimization patch)

118682-01 or later

Solaris 10 (SPARC 64-Bit) Patches for Oracle 11.2

120753-06 or later (SunOS 5.10: Microtasking libraries (libmtsk) patch)

139574-03 or later

119963-14 or later (SunOS 5.10: Shared library patch for C++)

124861-15 or later (SunOS 5.10 Compiler Common patch for Sun C C++ (optional))

Solaris 10 (x86-64) Patches for Oracle 11.2

120754-06 or late (SunOS 5.10_x86 libmtsk)

119961-05 or later (SunOS 5.10_x86: Assembler)

119964-14 or later (SunOS 5.10_x86 Shared library patch for C++_x86)

137104-02 or later

139575-03 or later

139556-08 or later

Solaris 10 Required Patches for Oracle 12c

147440-25147441-25

Solaris 11 (SPARC 64-bit or x86-64)

For Solaris 11 only Oracle 11.2.0.3 (and later) is certified.

The same packages (or equivalent) as Solaris 10 are required.

In addition, the following packages (or later versions) are required for Oracle Database 11g Release 2 (11.2) for Oracle Solaris 11:

- `pkg://solaris/developer/build/make`
- `pkg://solaris/developer/assembler`
- `pkg://solaris/system/dtrace`
- `pkg://solaris/developer/assembler`
- `pkg://solaris/developer/build/make`
- `pkg://solaris/system/xopen/xcu4` (if not already installed as part of standard Oracle Solaris 11 installation)
- `pkg://solaris/x11/diagnostic/x11-info-clients`
- `pkg://solaris/compress/unzip`

Install XCU4 Utilities.

NOTE:
From Solaris 11, the SUNW prefix for package names is no longer used. With the introduction of IPS, all software packages are renamed. For more information, refer to Oracle Solaris 10 SVR4 and IPS Package Comparison.

Required Executable Files

The following executable files must be present in the `/usr/ccs/bin` directory:

`make, ar, ld, nm.`

Native C Compiler

Requires Sun Studio C/C++ Compiler Collection version 11 or later. Ex Libris recommends that you install the latest version of these compiling environments.

Additional Software

tcsh SHELL (package SFWtcsh)

top processes (package SFWtop)

bash SHELL (package SUNWbash)

Windows Manager

The installation of the Oracle Server online install modes requires X-Windows. Use any Sun-supported X-Windows server. For example: dtwm.

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Performing a System Requirements Verification

The commands listed in this chapter are intended to help you perform the necessary system requirements verification. Depending on the test results, the Installation Team can determine whether the system is ready for an installation of the application.

This section includes:

- **Operating System Information** on page **11**
- **Determining RAM** on page **11**
- **Determining Swap Space** on page **12**
- **Determining System Executable Files** on page **12**
- **Determining Configured Disk Space** on page **12**

Operating System Information

To determine your current operating system information, enter the following command:

```
/bin/uname -a
```

Determining RAM

To determine the amount of random-access memory (RAM) installed on your system, enter the following command:

```
/usr/sbin/prtconf | grep size
```

Determining Swap Space

To determine the bytes of swap space currently configured on your system, enter the following command:

```
/usr/sbin/swap -a
```

Determining System Executable Files

To determine whether you are using the correct system executable files, enter the following command:

```
/usr/bin/which make
```

Determining Configured Disk Space

To determine how much disk space is currently configured on your system, enter the following command:

```
/bin/df -k
```

Determining the Root User's PATH Setting

To determine that the C compiler executable file is included in the PATH setting of the root user, as user `root`, enter the following command:

```
/usr/bin/which cc
```

The SPARCworks C compiler executable file is usually located in:

`/opt/SUNWspro/bin`

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NFS Mount Options for Ex Libris Products

This section includes:

- **Overview** on page **13**
- **Oracle Mount Options** on page **13**
- **Additional Mount Options for Ex Libris Software** on page **14**

Overview

To install Ex Libris products with NFS mounts under Unix/Linux OS requires you to use the correct mount options.

Using the correct mount option is also mandatory for Oracle database files. If the correct option is not used, Oracle fails to mount the database files located on the NFS mounts.

Note that the requirements are different for software mounts and for Oracle data files. Using the Oracle database mount options on a software disk may work, but performance may be affected.

Oracle Mount Options

The Oracle requirements for NFS mounts may change periodically and can be checked in Oracle support note 359515.1.

The following table related to the Oracle software and database files for Oracle versions 10.2 to 11.1.

In the table below:

- Binaries is the shared mount points where the Oracle Home and CRS_HOME are installed.
- Datafiles includes online logs, control files, and data files.

The following table is for a single instance installation.

Table 2. Mount Options

Operating System	Mount Options for Binaries	Mount Options for Oracle Datafiles
Sun Solaris (8, 9, 10)	rw,bg,hard,rsize=32768,wsize=32768,vers=3,nointr,proto=tcp,suid	rw,bg,hard,rsize=32768,wsize=32768,vers=3,[forcedirectio or llock],nointr,proto=tcp,suid
AIX (5L)	rw,bg,hard,rsize=32768,wsize=32768,vers=3,intr,timeo=600,proto=tcp	rw,bg,hard,rsize=32768,wsize=32768,vers=3,cio,intr,timeo=600,proto=tcp
Linux x86	rw,bg,hard,rsize=32768,wsize=32768,vers=3,nointr,timeo=600,tcp	rw,bg,hard,rsize=32768,wsize=32768,vers=3,nointr,timeo=600,tcp,actimeo=0
Linux x86_64	rw,bg,hard,rsize=32768,wsize=32768,vers=3,nointr,timeo=600,tcp	rw,bg,hard,rsize=32768,wsize=32768,vers=3,nointr,timeo=600,tcp,actimeo=0

In addition to the Oracle requirements, the nolock option is required in Linux and the llock option is required in Solaris to prevent locked issues that might cause database file locks and severe performance issues.

Additional Mount Options for Ex Libris Software

For most purposes, Ex Libris products work with the same mount options as the Oracle binaries. Note the following:

- The nolock (Linux) llock (Solaris) options are required to prevent file locks and severe performance issues.
- Do not use the `noac` options in a shared installations.
- Make sure that `actimeo` is larger than 0, but under 60 to prevent `jobd/batchd` sync issues.

NOTE:
For mixed environments (binaries and database files on the same mount) Oracle recommends the use of Oracle DNFS - see Oracle document ID 762374.