

FlexNet Publisher 2024 R1 (11.19.6) Release Notes

March 2024
Revision 01

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Introduction

This Release Notes document summarizes the enhancements and updates delivered with FlexNet Publisher 2024 R1 (11.19.6) in March 2024. The document includes the following information:

- [Enhancements](#)
- [Security Updates](#)
- [Dongle Updates](#)
- [Platform Updates](#)
- [Toolkit Updates](#)
- [Resolved Issues](#)
- [Known Issues](#)
- [System Requirements](#)
- [Deprecated Features and Commands](#)
- [Legal Information](#)

Enhancements

This release includes the following enhancements:

- [Introduced Secured Communication Between Utilities and Vendor Daemon](#)
- [Introduced macOS 14 Support](#)

Introduced Secured Communication Between Utilities and Vendor Daemon

FlexNet Publisher has introduced Encrypted Communication (Ecomms) between the FlexNet Publisher secure utilities and vendor daemon. This enhancement allows producers to build a FlexNet Publisher kit with the required FlexNet Publisher secure utilities (lmutil-based utilities), which enables an end user receive and utilize the required FlexNet Publisher secure utilities for secured communication with a vendor daemon.

For a secured communication, a FlexNet Publisher secure utility initially required to get the vendor daemon's secured port via the lmgrd. All data exchange between a FlexNet Publisher secure utility and a vendor daemon occurs in an encrypted form as soon as a secured connection has been generated.

For detailed information, refer to the *Secure Communication* chapter in the *FlexNet Publisher 2024 R1 Programming Reference for License File-Based Licensing*.



Note - This enhancement is supported only on the Windows and Linux platforms.

(FNP-30738)

Introduced macOS 14 Support

FlexNet Publisher has introduced macOS 14 platform support, which enables you to build FlexNet Publisher kits on the macOS 14 platform.

(FNP-30815)

Security Updates

This release includes the following security updates:

- [Third-Party Library Updates](#)

Third-Party Library Updates

OpenSSL

OpenSSL has been upgraded from version 3.0.9 to version 3.0.13.

(FNP-30858)

Apache httpd

Apache httpd has been upgraded from version 2.4.57 to version 2.4.58.

(FNP-30861)

Dongle Updates

There is no dongle driver upgrade in this release.

Platform Updates

This section lists platform updates for the following releases:

- [11.19.6 Updates](#)
- [11.19.5 Updates](#)
- [11.19.4 Updates](#)
- [11.19.3 Updates](#)

11.19.6 Updates

Updates have been made in the following areas for FlexNet Publisher 11.19.6:

- [Integrated Products and Tested Versions](#)
- [macOS](#)

- Linux OS
- HP-UX
- AIX
- Solaris
- Oracle

Integrated Products and Tested Versions

The following table lists the integrated products and tested versions for this release:

Product	Tested Version
FlexNet Operations	FlexNet Operations 2022.05 (22.5.0)
FlexNet Manager for Engineering Applications	FlexNet Manager for Engineering Applications 2023 R2 (15.16.0)
FlexNet Operations Cloud	FlexNet Operations Cloud 2024.03 (24.3.35)

macOS

End of Support macOS 11

FlexNet Publisher no longer supports the macOS 11 platform from FlexNet Publisher release R1, 2024, onwards.

Support for macOS 14

FlexNet Publisher supports the macOS 14 platform from FlexNet Publisher release R1, 2024, onwards.

Linux OS

End of Support RHEL 7

FlexNet Publisher will not support the RHEL 7 platform from FlexNet Publisher release R2, 2024, onwards.

End of Life SUSE Linux 15 SP1

FlexNet Publisher no longer supports the SUSE Linux 15 SP1 platform from FlexNet Publisher release R1, 2024, onwards.

HP-UX

End of Support HP-UX

FlexNet Publisher will not support the HP-UX platform from FlexNet Publisher release R2, 2024, onwards.

AIX

End of Life AIX 7.1

FlexNet Publisher no longer supports the AIX 7.1 platform from FlexNet Publisher release R1, 2024, onwards.

End of Support AIX

FlexNet Publisher will not support the AIX platform from FlexNet Publisher release R2, 2025, onwards.

Solaris

End of Support Solaris 10

FlexNet Publisher no longer supports the Solaris 10 platform from FlexNet Publisher release R1, 2024, onwards.

Oracle

End of Support Oracle Java 11

FlexNet Publisher no longer supports the Oracle Java 11 platform from FlexNet Publisher release R1, 2024, onwards.

11.19.5 Updates

Updates have been made in the following areas for FlexNet Publisher 11.19.5:

- [Integrated Products and Tested Versions](#)
- [macOS](#)
- [Linux OS](#)
- [AIX](#)
- [Solaris](#)
- [Oracle](#)

Integrated Products and Tested Versions

The following table lists the integrated products and tested versions for this release.

Product	Tested Version
FlexNet Operations	FlexNet Operations 2022.05 (22.5.0)
FlexNet Manager for Engineering Applications	FlexNet Manager for Engineering Applications 2022 R2 (15.14.0)
FlexNet Operations Cloud	FlexNet Operations Cloud 2023.11 (23.11.152)

macOS

End of Life macOS 11

FlexNet Publisher will not support the macOS 11 platform from FlexNet Publisher release R1, 2024, onwards.

Support for macOS 13

FlexNet Publisher supports the macOS 13 platform from FlexNet Publisher release R3, 2023, onwards.

Linux OS

End of Life SUSE Linux 12 SP4

FlexNet Publisher no longer supports the SUSE Linux 12 SP4 platform from FlexNet Publisher release R3, 2023, onwards.

End of Life SUSE Linux 15 SP1

FlexNet Publisher will not support the SUSE Linux 15 SP1 platform from FlexNet Publisher release R1, 2024, onwards.

Support for SUSE Linux 15 SP5

FlexNet Publisher supports the SUSE Linux 15 SP5 platform from FlexNet Publisher release R3, 2023, onwards.

AIX

End of Life AIX 7.1

FlexNet Publisher will not support the AIX 7.1 platform from FlexNet Publisher release R1, 2024, onwards.

Solaris

End of Life Solaris 10

FlexNet Publisher will not support the Solaris 10 platform from FlexNet Publisher release R1, 2024, onwards.

Oracle

End of Support Oracle Java 11

FlexNet Publisher will not support the Oracle Java 11 platform from FlexNet Publisher release R1, 2024, onwards.

Support for Oracle Java 21

FlexNet Publisher supports the Oracle Java 21 platform from FlexNet Publisher release R3, 2023, onwards.

11.19.4 Updates

Updates have been made in the following areas for FlexNet Publisher 11.19.4:

- [Integrated Products and Tested Versions](#)
- [macOS](#)
- [Linux OS](#)
- [Solaris](#)
- [HP-UX](#)

Integrated Products and Tested Versions

The following table lists the integrated products and tested versions for this release.

Product	Tested Version
FlexNet Operations	FlexNet Operations 2022.05 (22.5.0)
FlexNet Manager for Engineering Applications	FlexNet Manager for Engineering Applications 2022 R2 (15.14.0)
FlexNet Operations Cloud	FlexNet Operations Cloud 2023.05 (23.5.34)

macOS

Support for macOS 13

FlexNet Publisher supports the macOS 13 platform from FlexNet Publisher release R2, 2023, onwards.

Support for macOS 12.5

FlexNet Publisher supports the macOS 12.5 platform from FlexNet Publisher release R2, 2023, onwards.

Linux OS

End of Life Ubuntu 18.04

FlexNet Publisher no longer supports the the Ubuntu 18.04 platform from FlexNet Publisher release R2, 2023, onwards.

End of Life SUSE Linux 12 SP4

FlexNet Publisher will not support the SUSE Linux 12 SP4 platform from FlexNet Publisher release R3, 2023, onwards.

Solaris

End of Life Solaris 10

FlexNet Publisher will not support the Solaris 10 platform from FlexNet Publisher release R1, 2024, onwards.

HP-UX

End of Life HP-UX

FlexNet Publisher will not support the HP-UX platform from FlexNet Publisher release R2, 2024, onwards.

11.19.3 Updates

Updates have been made in the following areas for FlexNet Publisher 11.19.3:

- [Integrated Products and Tested Versions](#)
- [Windows OS](#)
- [macOS](#)
- [Linux OS](#)

- [Future of FlexNet Publisher Support for the Windows 32-Bit Kit](#)
- [Hypervisor](#)

Integrated Products and Tested Versions

The following table lists the integrated products and tested versions for this release.

Product	Tested Version
FlexNet Operations	FlexNet Operations 2022.05 (22.5.0)
FlexNet Manager for Engineering Applications	FlexNet Manager for Engineering Applications 2022 R2 (15.14.0)
FlexNet Operations Cloud	FlexNet Operations Cloud 2023.01 (23.1.32)

Windows OS

End of Support Windows 7 ESU

FlexNet Publisher no longer supports the Windows 7 ESU platform from FlexNet Publisher release R1, 2023, onwards.

macOS

Support for macOS 12.5

FlexNet Publisher will support the macOS 12.5 platform from FlexNet Publisher release R2, 2023, onwards.

End of Life macOS 10.15

FlexNet Publisher no longer supports the macOS 10.15 platform from FlexNet Publisher release R1, 2023, onwards.

Linux OS

End of Support Ubuntu 18.04

FlexNet Publisher will not support the Ubuntu 18.04 platform from FlexNet Publisher release R2, 2023, onwards.

End of Life SUSE Linux 15

FlexNet Publisher no longer supports the SUSE Linux 15 platform from FlexNet Publisher release R1, 2023, onwards.

Future of FlexNet Publisher Support for the Windows 32-Bit Kit

Previously, Revenera announced that support for the FlexNet Publisher Windows 32-Bit kit would end with the 2023 R3 release. After getting feedback from several producers, Revenera decided to continue supporting the 32-bit Windows platform as long as Microsoft is supporting it. If anything changes, Revenera reserves the right to revisit this decision, and give advance notice.



Note ▪ The following details our support for the FlexNet Publisher Windows 32-bit kit:

- The FlexNet Publisher Windows 32-bit kit will be supported as long as it is supported by Microsoft.
- The FlexNet Publisher 32-bit source code is built using Visual Studio 2023. .
- Customers can use the 32-bit FlexNet Publisher SDKs and build their project or solution on Visual Studio 2013, Visual Studio 2015, Visual Studio 2017, Visual Studio 2019, or Visual Studio 2022.



Note ▪ FlexNet Publisher no longer supported the 32-bit Windows Lmadmin from FlexNet Publisher release R2, 2022, onwards.

Hypervisor

Support for Nutanix AHV

In this release, FlexNet Publisher supports the Nutanix AHV.



Note ▪ The following details of support for the Nutanix AHV:

- Guest operating systems supported are Windows and Linux.
- Supported hostids are VMID and ETHERNET.
- No support for GenerationID.

Toolkit Updates

This release includes the following toolkit update:

AIX 32-bit

The AIX 32-bit toolkit is not included in FlexNet Publisher release R1, 2024.



Note ▪ The AIX 64-bit toolkit and AIX Imadmin toolkit are accessible through the Product and License Centre.

Resolved Issues

This release of the FlexNet Publisher Licensing Toolkit resolves the following issues. (Numbers in parentheses indicate the Revenera issue reference number as well as the Salesforce reference number, if applicable.)

- [Resolved lmadmin, lmgrd, Vendor daemon, and Utility Issues](#)
- [Resolved General Issues](#)

Resolved lmadmin, lmgrd, Vendor daemon, and Utility Issues

The following issues related to lmadmin, lmgrd, the vendor daemon, and utilities were addressed in this release:

- [Resolved lmadmin, lmgrd, and Vendor Daemon Vulnerability](#)
- [Resolved Borrowed License Return Failure Issue](#)
- [Vendor Daemon Built With 11.19.4.1 Kit Crashed](#)
- [lmadmin Installation Issue on macOS ARM and Intel](#)

Resolved lmadmin, lmgrd, and Vendor Daemon Vulnerability

A potential external reported a vulnerability in all FlexNet Publisher versions prior to 2024 R1 (11.19.6.0) release. This vulnerability might allow the local privilege escalation due to an uncontrolled search path element.

This vulnerability will be resolved by updating the FlexNet Publisher lmadmin.exe and FlexNet Publisher to 2024 R1 (11.19.6.0) version.



Note - Consider the following pertaining to the vulnerability affects:

- Producers utilizing the lmadmin.exe prior to 2024 R1 (11.19.6.0) version are affected by this vulnerability.
- Producers utilizing the vendor daemon with enabled Secure Comms functionality prior to the 2024 R1 (11.19.6.0) version are affected by this vulnerability.
- Producers utilizing the vendor daemon without enabled Secure Comms functionality are not affected by this vulnerability.

(FNP-30727, FNP-31255)

Resolved Borrowed License Return Failure Issue

Starting the lmgrd server with the -local option resulted in a failure to early return a borrowed license to a certificate licensing server. This issue has been fixed.

(Case 02807378, FNP-30661)

Vendor Daemon Built With 11.19.4.1 Kit Crashed

A vendor daemon built with the FlexNet Publisher 11.19.4.1 kit was crashed due to the licensing load and combined usage of both the LM_A_LINGER attribute and TIMEOUTALL option. This issue has been fixed.



Note - This vendor daemon crash issue observed on both the Windows and Linux operating system.

(Case 02783092, FNP-30034)

Imadmin Installation Issue on macOS ARM and Intel

Imadmin installation failure was observed on the MAC_ARM and MAC_INTEL platforms. This issue has been fixed.



Note - The following are the 11.19.6 Imadmin installer limitations on the macOS platform:

- During installation, the **Overwrite Existing File?** dialog box appears for some files. The user must choose **Yes to All** (one of the dialog box's option) for the successful installation.
- Some of the subdirectories are remain existed even after running the uninstaller. For successful uninstallation, those sub-directories must be manually deleted.

(FNP-30765, FNP-29444)

Resolved General Issues

The following general issues were resolved in this release:

- [HASP4 Dongle Detection Issue](#)
- [Resolved LM_A_PHYSICAL_ETHERNETID and ls_allow_physical_ethernetid_only Functionality Issue](#)
- [DLL Hijacking Issue Due to Vendor Daemons Creation](#)

HASP4 Dongle Detection Issue

A customer's application was failed to recognize the HASP4 dongle. This issue has been fixed.

(Cases 02632408, 02722330, 02595046; FNP-27288)

Resolved LM_A_PHYSICAL_ETHERNETID and ls_allow_physical_ethernetid_only Functionality Issue

For kits v11.18.3 and above, following functionalities of the LM_A_PHYSICAL_ETHERNETID API attribute and ls_allow_physical_ethernetid_only vendor variable were observed:

- If the LM_A_PHYSICAL_ETHERNETID API attribute was set to 1 (True), the lc_hostid function returned only Ethernet hostids belonging to physical devices excluding only the removable adapters like USB Ethernet adapters.

- If the `LM_A_PHYSICAL_ETHERNETID` API attribute was set to 0 (False), the `lc_hostid` function returned the Ethernet hostids belonging to physical devices excluding only the removable adapters like USB Ethernet adapters and Ethernet hostids belonging to virtual adapters (such as those installed by VPN software).
- If the `ls_allow_physical_ethernetid_only` vendor variable was set to 1, then the vendor daemon authenticated only those licenses that uses Ethernet hostids belonging to physical devices excluding only the removable adapters like USB Ethernet adapters.
- If the `ls_allow_physical_ethernetid_only` vendor variable was set to 0, then the vendor daemon authenticated only those licenses that uses Ethernet hostids belonging to physical devices excluding only the removable adapters like USB Ethernet adapters and Ethernet hostids belonging to virtual adapters.

These functionality issues have been resolved for all v11.19.6 kits with a workaround in which the new valid values -1 and -2 has been introduced for both `LM_A_PHYSICAL_ETHERNETID` API attribute and `ls_allow_physical_ethernetid_only` vendor variable as:

- If the `LM_A_PHYSICAL_ETHERNETID` API attribute is set to -1, then the API attribute behaviour with a v11.19.6 kit will be same as with a pre-v11.18.3 kit on the attribute value of 1 (true) in which the `lc_hostid` API function returns only Ethernet hostids belonging to physical devices including the removable adapters like USB Ethernet adapters.
- If the `LM_A_PHYSICAL_ETHERNETID` API attribute is set to -2, then the API attribute behaviour with a v11.19.6 kit will be same as with a pre-v11.18.3 kit on the attribute value of 0 (false) in which `lc_hostid` API function returns Ethernet hostids belonging to physical devices including both the removable adapters like USB Ethernet adapters and Ethernet hostids belonging to virtual adapter (such as those installed by VPN software).
- If the `ls_allow_physical_ethernetid_only` vendor variable is set to -1, then the variable behaviour with a v11.19.6 kit will be same as with a pre-v11.18.3 kit on the variable value of 1 in which the vendor daemon authenticates only those licenses that uses Ethernet hostids belonging to physical devices including the removable adapters like USB Ethernet adapters.
- If the `ls_allow_physical_ethernetid_only` vendor variable is set to -2, then the variable behaviour with a v11.19.6 kit will be same as with a pre-v11.18.3 kit on the variable value of 0 in which the vendor daemon authenticates those licenses that uses Ethernet hostids belonging to physical devices including the removable adapters like USB Ethernet adapters and Ethernet hostids belonging to virtual adapters.

(Case 02800947, FNP-30397)

DLL Hijacking Issue Due to Vendor Daemons Creation

A customer named—Intel Corporation reported a vulnerability issue or DLL hijacking, caused due to vendor daemons generated with FlexNet Publisher licensing toolkit (flexlm). This issue has been fixed.

(Cases 02742189, 02834465; FNP-28510)

Known Issues

This release includes known issues in the following categories:

- [Known General Issues](#)

- [Known Dongle Issues](#)
- [Known Imadmin Issues](#)
- [Known Issues Specific to License File-Based Licensing](#)
- [Known Issues Specific to Secured Communication](#)

Known General Issues

Build Failure on Solaris

When building a kit on the Solaris platform, a build failure is observed with the following error:

```
<cc -g -I../machind -I. -DFD_LIMIT_CHECK -DFLEX_INET6 -g -xO3 -xarch=generic64 -xldscope=hidden
-DOS_SOLARIS -DECMC_DISABLE_FAKE_TPM=1 -DLM_INTERNAL -DFLEXLM_KITBUILD -DFLEX_STATIC -
DSUNOS5 -DSUNOS10 -DSUN64 -DPLATFORM_X64_SUN -DNO_ACTIVATION_SUPPORT -
xarch=generic64 -B eliminate -z text -z defs -z verbose -z nocompstrtab -o qavend1 lsvendor.o
lm_new.o \

liblmgr_as.a liblmgr_s.a liblmgr_tr1.a libcrvs.a libsb.a ./activation/lib/libnoact.a -lsocket
-lnsl -lrt -ldl -lpthread
gstrip qavend1
sh: gstrip: not found
*** Error code 127
make: Fatal error: Command failed for target `qavend1'
```

This issue can be resolved by replacing the "STRIP = gstrip" with "STRIP = strip" in the makefile/makefile.act.

(FNP-30781)

Multiple Packages Consumption After Server Restart

Restarting the server following the components checked out in linger with the LM_A_LINGER attribute leads to multiple packages consumption.

(FNP-30842)

License File Information on Imgrd Port

When a secure utility communicates with a license server, the Wireshark tool captures the license file information on the Imgrd port.

(FNP-31334)

Secure Utility Failure to Return Proper Error

A secure utility is failed to return the proper error code on communication with the SSL certificate disabled license server.

(FNP-31337)

Detection Failure for HOSTID_CONTAINER_ID on Docker Container

There is a failure to detect the HOSTID_CONTAINER_ID on docker containers that run using a **private** control group name space mode, which is the default docker containers' mode on cgroup v2 control group version from Dockers 20.10. The cgroup v2 is the default control group version for the Ubuntu 21.10. For a workaround, run the docker container with the `--cgroupns host` option.

(Case 02825716, FNP-30907)

Vendor Daemon Crash Due to LM_A_MULTIPLE_CHECKOUT_DATA Usage

A vendor daemon's multiple crash are observed when a FlexEnabled application (Imflex) with the LM_A_MULTIPLE_CHECKOUT_DATA API attribute attempts to reconnect to the licensing server.

(FNP-31403, FNP-31404, FNP-31405)

Known Dongle Issues

Backward Compatibility Issue Due to the New Signer

As the SafeNet dongle drivers and its DLL are upgraded to version 8.53 and 8.5 respectively, and also the Wibu dongle drivers are upgraded to version 6.60, the dll signature issuer name is changed from "Symantec" to "DigiCert" on Windows. The same is fixed in FlexNet Publisher's code to handle the new signer. Due to this change, backward compatibility is not possible. If you install latest drivers, old clients will not be able to retrieve the dongle ID.

(FNP-26594, FNP-28216)

Flexid10 Dongle Driver Issue

FLEXID10 dongles may not work correctly with the latest v6.50 driver on VMware hypervisors. This issue has been identified on both Windows and Linux platforms with a dongle connected using a USB passthrough on VMware ESXi and on VMware Workstation. The problem has been reported to Wibu. As a temporary workaround, use the previous version v6.32 driver on VMware hypervisors.

(FNP-17284, FNP-16819)

Wibu Dongle Driver Issue

An error occurs on SUSE 11 SP4 Linux machine while installing a new Wibu dongle driver (V6.50). The problem has been reported to Wibu. As a temporary workaround, use the previous version v6.40 driver.

(FNP-20298)

Dongles in macOS

Dongle drivers are not supported on the macOS platform for FlexNet Publisher release R1, 2023.

(FNP-24876, FNP-24877)

SafeNet Dongle Drivers Support in Linux 32-bit Platform

In FlexNet Publisher release, R1, 2023, the SafeNet dongle drivers with version 8.43 only support the Linux 32-bit platform. The SafeNet Dongle drivers will not support the Linux 32-bit platform from FlexNet Publisher release, R3, 2023, onwards.

(FNP-28443)

Known Imadmin Issues

Imadmin Silent Installer not Displaying Required Error Message

When a non-root user attempts to install Imadmin in the default location, the installer may hang.

(FNP-6942)

Unable to Start Imadmin Services Using CLI in Windows Server 2022

The Imadmin services created on Windows 2022 machine is unable to start using command prompt.

(FNP-26481)

Imadmin Login Error Observed in Windows Server 2022

While logging in to Imadmin in Windows Server 2022 the error "Old password is incorrect" is seen.

(FNP-26482)

Imadmin Failed to Run Without libcrypt

In RHEL9 32-bit, the libcrypt library is not offered as part of the supported distribution. Components in FlexNet Publisher, such as Imadmin require the libcrypt library. If this is not present, Imadmin will fail to run with a No such file or directory error.

As a workaround, Install the 32-bit libcrypt explicitly on RHEL9.

(Cases 02737901, 02753124, 02795350, 02800462; FNP-28345, FNP-30376)

Vendor Daemon Failed to Appear Due to an older Imadmin or FlexEnabled App

Vendor Daemon failed to appear, when an earlier version of Imadmin was used for importing the installation files or an earlier version of FlexEnabled app was used. As a workaround, specify a soft link to the native loader. The following symlinks have been verified on RHEL9:

32-bit Linux

```
sudo bash -c "if [ ! -e /lib/ld-lsb.so.3 ]; then ln -s ld-linux.so.2 /lib/ldlsb.so.3; fi"
```

64-bit Linux

```
sudo bash -c "if [ ! -e /lib64/ld-lsb-x86-64.so.3 ]; then ln -s ld-linux-x86-64.so.2 /lib64/ld-lsb-x86-64.so.3; fi"
```

From 11.19.5 onwards, the `install_fnp.sh` script will not issue a warning if LSB is not detected on the host. Additionally, this script does not support a new `-nolsb` parameter, which sets up the above symlinks.

(Cases 02737901, 02753124, 02795350, 02800462; FNP-28345, FNP-30554)

Known Issues Specific to License File-Based Licensing

Imdiag Displaying Incorrect Output when Multiple Vendors are Served by a Single License Server Manager

If multiple vendor daemons are served by a single license server manager (such as `lmgrd`), `lmdiag` shows an incorrect error message “No such feature exists” for features that are served by one of the valid daemons.

(Case 01202287; FNP-19617)

"MAX_CONNECTIONS" Option File Keyword

If a software publisher upgrades only `lmgrd` and vendor daemon to version 11.16.3 or above, but not the client, the error code that would be received by an older version (version < 11.16.3) client, when `MAX_CONNECTIONS` limit is exceeded is as follows:

“LM_BADCOMMAND” Error code: “-140” - “A bad command was found in a message”.

(FNP-20537)

Known Issues Specific to Secured Communication

The following issues observed when secure communication has been enabled in between FlexEnabled client and vendor daemon. These issues will be resolved in the future releases of FlexNet Publisher.

- On Windows, the triad configuration with secure communication enabled goes down, if any one of the servers in triad is shutdown/restarted.
(FNP-26640)
- When multiple vendors run with secure communication enabled under one `lmgrd`, the secure checkout is possible only for last secured vendor daemon.
(FNP-26989)

System Requirements

The System Requirements include the following:

- [Tested Platforms](#)
- [System Requirements for lmadmin](#)

Tested Platforms

The following sections describe the platforms tested with the FlexNet Publisher 2024 R1 (11.19.6) Licensing Toolkits.

- [C/C++ Toolkits](#)
- [Java Toolkits](#)
- [Detailed Platform Information](#)
- [Toolkits That Support Prepped Trusted Configuration](#)
- [Virtualization](#)
- [Tested Cloud Environments](#)

A list of supported platforms can be found here:

<https://docs.revenera.com/eol/>

C/C++ Toolkits

The following platforms are tested. See the [Detailed Platform Information](#) section for more information about each platform.

Table 1 ▪ Tested Platforms—C/C++ Toolkits

Platform Type	Hardware Type	Operating System
HP-UX 64-bit	Intel Itanium	HP-UX B.11.31 U ia64
Linux 32-bit	x64	RHEL 8 and 9
Linux 64-bit	x64	RHEL 8 and 9 SLES 15 SP3, SLES 15 SP4, and SLES 15 SP5 Ubuntu 20.4 and Ubuntu 22.4
Linux 64-bit	ARMv8-A (AArch64)	RHEL 8 SLES 15
macOS/OS X 64-bit	x64	macOS 12.X macOS 13.X macOS 14.X
macOS ARM 64-bit	ARM-64	macOS 12.X macOS 13.X macOS 14.X

Table 1 ▪ Tested Platforms—C/C++ Toolkits

Platform Type	Hardware Type	Operating System
Microsoft Windows 32-bit	x64	Windows Server 2019
		Windows Server 2022
		Windows 10
		Windows 11
Microsoft Windows 64-bit	x64	Windows 10
		Windows 11
		Windows Server 2019
		Windows Server 2022
		It is a best practice to run license servers on a server-based OS.
Solaris 32-bit	SPARC 32-bit	Solaris 11
	x86	
Solaris 64-bit	SPARC 64-bit	Solaris 11
	x86-x64	

Java Toolkits

The following platforms have been tested. See [Java Standard Edition](#) in [Detailed Platform Information](#) for more information about this platform.

Table 2 ▪ Tested Platforms—Java Toolkits

Platform Type	Hardware Type	Version
Oracle Java Development Kit	• Solaris SPARC 32-bit	JDK17
	• Solaris SPARC 64-bit	JDK 21
	• Windows x86	
	• Windows x64	
	• Linux x86	
	• Linux x64	
	• macOS x64	

Detailed Platform Information

The following sections list the operating systems and their associated hardware platforms tested with FlexNet Publisher 2024 R1 (11.19.6). Each platform entry contains the following information:

- **Platform name**—The name that identifies this platform when used with the PLATFORMS keyword in a license file.
- **Package identifier**—The name of the toolkit package on Revenera's download site.
- **Tested compiler**—The compiler and version with which this package was tested. Choose a compiler for your development and build environment that is compatible with the one listed.
- **Notes**—Additional platform-specific notes that are useful for developing your FlexEnabled product.
- **Security functionality**—Denotes the level of security functionality your toolkit supports. This information is useful when you implement trusted storage-based licensing in your product. See *Programming Reference for Trusted Storage-Based Licensing* for details.

Click a link to access platform details:

- [Microsoft Windows 32-bit](#)
- [Microsoft Windows 64-bit](#)
- [Linux 32-bit](#)
- [Linux 64-bit](#)
- [ARMv8-A \(AArch64\)](#)
- [macOS/OS X 64-bit](#)
- [macOS ARM 64-bit](#)
- [Solaris 32-bit](#)
- [Solaris 64-bit](#)
- [AIX 32-bit](#)
- [AIX 64-bit](#)
- [Java Standard Edition](#)
- [HP-UX 64-bit](#)

Microsoft Windows 32-bit

The following table lists information about the Microsoft Windows 32-bit systems tested with the FlexNet Publisher Licensing Toolkit:

Item	Description
Platform Name	i86_n
Package Identifier	i86_n3

Item	Description
Tested Compiler	<ul style="list-style-type: none"> Visual Studio 2022 (17.8.3) Visual Studio 2019 (16.11.2) Visual Studio 2017 (15.9.47) Visual Studio 2015 Update 3* Visual Studio 2013 Update 5*
Notes	<ul style="list-style-type: none"> Multiple Ethernet hostids are supported. Short-code transactions are supported. Prepped Trusted Configuration is supported. Tested virtual machine platforms include: <ul style="list-style-type: none"> VMware Workstation 16.1.2 VMware ESXi 7 Microsoft Windows Server 2019 Hyper-V* Microsoft Windows Server 2022 Hyper-V Microsoft Windows 10 Hyper-V* Citrix XenServer 8.2 Oracle Virtual Box 7.0 Parallels Desktop 18.0.2 for macOS 12.6 everRun 7.9.1* Nutanix AHV (Version 2020.09.16 Community Edition)* QEMU-KVM (Host OS: CentOS 8) <ul style="list-style-type: none"> Hypervisor: qemu-kvm-ev-6.2.0 Hypervisor Services: libvirt-daemon-kvm-8.0.0 Virtual Machine Manager: vmm v3.2.0
Toolkit Functionality	Licensing based on license files or trusted storage.
Security Functionality	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .



Note ▪ The asterisk (*) symbol indicates the version of the Visual Studio and Hypervisor are supported but not tested in the current release.

Microsoft Windows 64-bit

The following table lists information about the Microsoft Windows 64-bit systems tested with the FlexNet Publisher Licensing Toolkit:

Item	Description
Platform Name	x64_n
Package Identifier	x64_n6
Tested Compiler	<ul style="list-style-type: none">Visual Studio 2022 (17.8.3)Visual Studio 2019 (16.11.2)Visual Studio 2017 (15.9.47)Visual Studio 2015 Update 3*Visual Studio 2013 Update 5*

Item	Description
Notes	<ul style="list-style-type: none"> ● 1madmin is supported using its 64-bit binary. While the 32-bit 1madmin binary (contained in the x86_n3 toolkit) continues to be supported on 64-bit systems, Revenera recommends using the 64-bit binary on 64-bit systems. ● Multiple Ethernet hostids are supported. ● Short-code transactions are supported. ● Prepped Trusted Configuration is supported. ● The 1mtools utility cannot interact with the license server manager (1mgrd) when 1mgrd is run as a service. ● Tested virtual machine platforms include: <ul style="list-style-type: none"> VMware Workstation 16.1.2 VMware ESXi 7 Microsoft Windows Server 2019 Hyper-V* Microsoft Windows Server 2022 Hyper-V Microsoft Windows 10 Hyper-V* Citrix XenServer 8.2 Oracle Virtual Box 7.0 Parallels Desktop 18.0.2 for macOS 12.6 everRun 7.9.1* Nutanix AHV (Version 2020.09.16 Community Edition)* QEMU-KVM (Host OS: CentOS 8) <ul style="list-style-type: none"> ● Hypervisor: qemu-kvm-ev-6.2.0 ● Hypervisor Services: libvirt-daemon-kvm-8.0.0 ● Virtual Machine Manager: vmm v3.2.0
Toolkit Functionality	Licensing based on license files or trusted storage.
Security Functionality	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .



Note - The asterisk (*) symbol indicates the version of the Visual Studio and Hypervisor are supported but not tested in the current release.

Linux 32-bit

The following table lists information about the Linux 32-bit systems tested with the FlexNet Publisher Licensing Toolkit:

Item	Description
Platform Name	i86_linux
Package Identifier	i86_linux
Tested Compiler	For x86: <ul style="list-style-type: none">● gcc 11.2.1 (RHEL 9)● gcc 8.5.0 (RHEL 8.7*)
Notes	<ul style="list-style-type: none">● Customers can use any GCC that meets FlexNet Publisher's GLIBC version requirement.● FlexNet Publisher qualifies the default GCC version that comes with the OS.● lmadm is supported using its 32-bit binary.● Multiple Ethernet hostids are supported.● Short-code transactions are supported.● Prepped Trusted Configuration is supported.● Tested virtual machine platforms include:<ul style="list-style-type: none">VMware ESXi 7VMware Workstation 16.1.2Microsoft Windows Server 2019 Hyper-V*Microsoft Windows Server 2022 Hyper-VMicrosoft Windows 10 Hyper-V*Citrix XenServer 8.2Oracle Virtual Box 7.0Parallels Desktop 18.0.2 for macOS 12.6everRun 7.9.1*Nutanix AHV (Version 2020.09.16 Community Edition)*QEMU-KVM (Host OS: CentOS 8)<ul style="list-style-type: none">● Hypervisor: qemu-kvm-ev-6.2.0● Hypervisor Services: libvirt-daemon-kvm-8.0.0● Virtual Machine Manager: vmm v3.2.0
Toolkit Functionality	Licensing based on license files or trusted storage.

Item	Description
Security Functionality	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .



Note ▪ The asterisk (*) symbol indicates the version of operating system and Hypervisor are supported but not tested in the current release.

Linux 64-bit

The following table lists information about the Linux 64-bit systems tested with the FlexNet Publisher Licensing Toolkit:

Item	Description
Platform Name	x64_linux
Package Identifier	x64_linux
Tested Compiler	<p>For x64:</p> <ul style="list-style-type: none"> ● gcc 11.2.1 (RHEL 9) ● gcc 8.5.0 (RHEL 8.9) ● gcc 8.5.0 (RHEL 8.8) ● gcc 8.5.0 (RHEL 8.6) ● gcc 8.5.0 (RHEL 8.5) ● gcc 7.5.0 (SLES 15 SP5) ● gcc 7.5.0 (SLES 15 SP4) ● gcc 11.4.0 (Ubuntu 22.04) ● gcc 9.4.0 (Ubuntu 20.04)

Item	Description
Notes	<ul style="list-style-type: none"> Customers can use any GCC that meets FlexNet Publisher's GLIBC version requirement. ladmin is supported using its 64-bit binary. Multiple Ethernet hostids are supported. Short-code transactions are supported. Prepped Trusted Configuration is supported (x64_linux only). No dongle support on SLES 15 Tested virtual machine platforms include: <ul style="list-style-type: none"> VMware ESXi 7 VMware Workstation 16.1.2 Microsoft Windows Server 2019 Hyper-V* Microsoft Windows Server 2022 Hyper-V Microsoft Windows 10 Hyper-V* Citrix XenServer 8.2 Oracle Virtual Box 7.0 Parallels Desktop 18.0.2 for macOS 12.6 everRun 7.9.1* Nutanix AHV (Version 2020.09.16 Community Edition)* QEMU-KVM (Host OS: CentOS 8) <ul style="list-style-type: none"> Hypervisor: qemu-kvm-ev-6.2.0 Hypervisor Services: libvirt-daemon-kvm-8.0.0 Virtual Machine Manager: vmm v3.2.0
Toolkit Functionality	Licensing based on license files or trusted storage.
Security Functionality	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .



Note ▪ The asterisk (*) symbol indicates the version of Hypervisor is supported but not tested in the current release.

ARMv8-A (AArch64)

The following table lists information about the ARMv8-A (AArch64) systems tested with the FlexNet Publisher Licensing Toolkit:

Item	Description
Platform Name	arm64_linux
Package Identifier	arm64_linux
Tested Compiler	<ul style="list-style-type: none">● gcc 8.5.0 (RHEL 8.7*)● gcc 7.3.1 (SLES 15)
Notes	<ul style="list-style-type: none">● Customers can use any GCC that meets FlexNet Publisher's GLIBC version requirement.● lmadm is not supported in this toolkit● No VM detection or VMID hostid support● No dongle support● No trusted storage support
Toolkit Functionality	Licensing based on license files.
Security Functionality	No support for tamper-resistant applications. The toolkit is labeled as <i>notr</i> .



Note ▪ The asterisk (*) symbol indicates that the version of operating system is supported but not tested in the current release.

macOS/OS X 64-bit

The following table lists information about the macOS/OS 64-bit system tested with the FlexNet Publisher Licensing Toolkit:

Item	Description
Platform Name	<ul style="list-style-type: none">● x64_mac
Package Identifier	<ul style="list-style-type: none">● universal2_mac11

Item	Description
Tested Compiler	<ul style="list-style-type: none"> • Xcode 12.4 • Xcode 13.0 • Xcode 14.3 • Apple clang version 14.0.3 (clang-1403.0.22.14.1) • Apple clang version 12.0.0 (clang-1200.0.32.28) • Apple clang version 11.0.0 (clang-1100.0.33.5) • Apple LLVM version 10.0.1 (clang-1001.0.46.4)
Notes	<ul style="list-style-type: none"> • Multiple Ethernet hostids are not supported. • Short-code transactions are supported. • Prepped Trusted Configuration is supported. • For building requirements, see Requirements for Building the macOS/OS X Licensing Toolkit.
Toolkit Functionality	Licensing based on license files or trusted storage.
Security Functionality	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .

Requirements for Building the macOS/OS X Licensing Toolkit

When building the FlexNet Publisher Licensing Toolkit on macOS/OS X platforms, use an appropriate Apple development environment: The supplied makefiles build a universal Licensing Toolkit that can be used to produce FlexEnabled applications of the following types (all contained within a single FAT binary):

- For macOS 12.6, use Xcode 14.1
- For macOS 13.0.1, use Xcode 14.1
- For macOS 14.2, use Xcode 15.2

Required macOS/OS X SDKs

An SDK appropriate to the macOS/OS X version must be available on the machine where you are building the Licensing Toolkit:

- For macOS 12.6, use `xcode-select --print-path` to obtain the correct path and choose an appropriate SDK path.
- For macOS 13.0.1, use `xcode-select --print-path` to obtain the correct path and choose an appropriate SDK path.
- For macOS 14.2, use `xcode-select --print-path` to obtain the correct path and choose an appropriate SDK path.

macOS ARM 64-bit

The following table lists information about the macOS ARM64-bit system tested with the FlexNet Publisher Licensing Toolkit:

Item	Description
Platform Name	<ul style="list-style-type: none">universal2_mac
Package Identifier	<ul style="list-style-type: none">universal2_mac11
Tested Compiler	<ul style="list-style-type: none">Xcode 14Apple clang version 14.0.3 (clang-1403.0.22.14.1)
Notes	<ul style="list-style-type: none">Prepped Trusted Configuration is supported.For building requirements, see Requirements for Building the macOS/OS X Licensing Toolkit.
Toolkit Functionality	Licensing based on license files or trusted storage.
Security Functionality	Support for tamper-resistant applications.

Requirements for Building the macOS ARM64 Licensing Toolkit

When building the FlexNet Publisher Licensing Toolkit on macOS ARM64 platform, use an appropriate Apple development environment:

- For macOS 12.6.5, use Xcode 12.5.1
- For macOS 13.2, use Xcode 14.3
- For macOS 14.2, use Xcode 14.3

Required macOS ARM64 SDKs

An SDK appropriate to the macOS ARM64 version must be available on the machine where you are building the Licensing Toolkit:

- For macOS 12.6.5, use `xcode-select --print-path` to obtain the correct path and choose an appropriate SDK path.
- For macOS 13.2, use `xcode-select --print-path` to obtain the correct path and choose an appropriate SDK path.
- For macOS 14.2, use `xcode-select --print-path` to obtain the correct path and choose an appropriate SDK path.

Solaris 32-bit

The following table lists information about the Solaris 32-bit systems tested with the FlexNet Publisher Licensing Toolkit:

Item	Description
Platform Name	<ul style="list-style-type: none">• x86_sol (on x86)• sun4_u (on SPARC 32-bit)
Package Identifier	<ul style="list-style-type: none">• x86_sol10 (on x86)• sun4_u10 (on SPARC 32-bit)
Tested Compiler	For x86: <ul style="list-style-type: none">• cc (Sun C) 5.11• cc (Sun C) 5.15 For SPARC 32-bit: <ul style="list-style-type: none">• cc (Sun C) 5.14• cc (Sun C) 5.15
Notes	<ul style="list-style-type: none">• lmadm is supported in this toolkit.• Synchronous I/O multiplexing, via select, is supported for up to 65,535 file descriptors.• The number of system semaphore arrays can become exhausted.• Shared objects might not run when compiled with gcc on SPARC 32-bit.• Multiple Ethernet hostids are not supported.• Prepped Trusted Configuration is supported.
Toolkit Functionality	Licensing based on license files or trusted storage.
Security Functionality	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .

Solaris 64-bit

The following table lists information about the Solaris 64-bit systems tested with the FlexNet Publisher Licensing Toolkit:

Item	Description
Platform Name	<ul style="list-style-type: none">• x64_sun (on x64)• sun64_u (on SPARC 64-bit)
Package Identifier	<ul style="list-style-type: none">• x64_sun10 (on x64)• sun64_u10 (on SPARC 64-bit)
Tested Compiler	For x64: <ul style="list-style-type: none">• cc (Sun C) 5.11• cc (Sun C) 5.15 For SPARC 64-bit: <ul style="list-style-type: none">• cc (Sun C) 5.14• cc (Sun C) 5.15
Notes	<ul style="list-style-type: none">• lmadm is supported using its 64-bit binary. While the 32-bit lmadm binary (contained in the x86_sun and sun64_u toolkits) continues to be supported on 64-bit systems, Revenera recommends using the 64-bit binary on 64-bit systems.• Shared objects might not run when compiled with gcc on SPARC 64-bit.• Multiple Ethernet hostids are not supported.• Prepped Trusted Configuration is supported.
Toolkit Functionality	Licensing based on license files or trusted storage.
Security Functionality	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .

AIX 32-bit

The following table lists information about the AIX 32-bit systems tested with the FlexNet Publisher Licensing Toolkit:

Item	Description
Platform Name	ppc_u
Package Identifier	ppc_u5 (on PowerPC™)

Item	Description
Tested Compiler	PowerPC cc (IBM XLC): 13.1.3 (AIX 7.2)
Notes	<ul style="list-style-type: none"> ● lmadm is supported in this toolkit. ● The AIX FlexNet Publisher client libraries are PIC by default; therefore, only one version of these libraries is provided in the toolkit. ● Java SDK is not supported.
Toolkit Functionality	Licensing based on license files.
Security Functionality	No support for tamper-resistant applications. The toolkit is labeled as <i>notr</i> .

AIX 64-bit

The following table lists information about the AIX 64-bit systems tested with the FlexNet Publisher Licensing Toolkit:

Item	Description
Platform Name	rs64_u
Package Identifier	rs64_u5 (on PowerPC™)
Tested Compiler	PowerPC cc (IBM XLC): 13.1.3 (AIX 7.2)
Notes	<ul style="list-style-type: none"> ● lmadm is supported using its 64-bit binary. While the 32-bit lmadm binary (contained in the ppc_u toolkit) continues to be supported on 64-bit systems, Revenera recommends using the 64-bit binary on 64-bit systems. ● You must use ar -X64 and strip -X64 on this platform. ● The AIX FlexNet Publisher client libraries are PIC by default; therefore only one version of these libraries is provided in the toolkit. ● Java SDK is not supported.
Toolkit Functionality	Licensing based on license files.
Security Functionality	No support for tamper-resistant applications. The toolkit is labeled as <i>notr</i> .

Java Standard Edition

The following table lists information about the Java Standard Edition systems tested with the FlexNet Publisher Licensing Toolkit:

Item	Description
Platform Name	java
Package Identifier	Not applicable
Tested Compiler	<ul style="list-style-type: none">JDK 17 (JDK 17 is not supported on Solaris x86 and x64)OpenJDK 17 (in macOS <code>ladmin</code> installer will not work as mentioned in FNP-24247)
Notes	<ul style="list-style-type: none">Implements the FlexNet Licensing for Java client library only.Requires a C development environment.Requires tamper-resistant licenses (TRL) to be enabled.
Toolkit Functionality	Licensing based on license files or trusted storage.
Security Functionality	No support for tamper-resistant applications. The toolkit is labeled as <i>notr</i> .

HP-UX 64-bit

The following table lists information about the HP-UX 64-bit systems tested with the FlexNet Publisher Licensing Toolkit:

Item	Description
Platform Name	it64_hp (on Intel Itanium)
Package Identifier	it64_hp11i (on Intel Itanium)
Tested Compiler	Intel Itanium HP C/aC++ B3910B A.06.12

Item	Description
Notes	<ul style="list-style-type: none"> • lmadmin has not been tested in this toolkit. • On Intel Itanium, use the lmhostid utility to determine the hostid. This returns the machine identification and is equivalent to the identification returned by the HP_UX command <code>getconf CS_PARTITION_IDENT</code>. For example: <pre>>lmhostid >The FlexNet Licensing host ID of this machine is "ID_STRING=9c788319-db72-d411-af62-0060b05e4c05"</pre> Older methods of obtaining the hostid that return the Ethernet address are still supported, but may fail on some systems. The older methods include: <pre>>uname -i (returns decimal hostid) >lmhostid -long (returns hexadecimal hostid)</pre> • Multi-threaded licensing libraries are available on Intel Itanium.
Toolkit Functionality	Licensing based on license files.

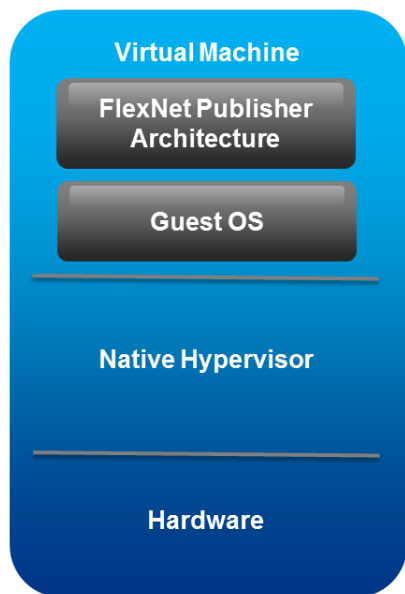
Toolkits That Support Prepped Trusted Configuration

Toolkit platforms that support prepped Trusted Configuration (and therefore server-side local trial ASRs) include the following:

- i86_linux (32-bit Linux)
- x64_linux (64-bit Linux)
- i86_n3 (32-bit Windows)
- x64_n6 (64-bit Windows)
- sun4_u10 (32-bit Solaris SPARC)
- sun64_u10 (64-bit Solaris SPARC)
- x86_sol10 (32-bit Solaris Intel)
- x64_sun10 (64-bit Solaris Intel)
- x64_mac10 (Universal macOS)
- universal2_mac11 (Universal macOS)

Virtualization

The following picture illustrates how the FlexNet licensing server or a FlexEnabled application operates within a Virtualization stack. The table below the picture lists the Virtualization stacks that have been tested with FlexNet Publisher.



Use the following table to determine the tested Virtualization stacks.

Table 3 ▪ Tested Virtualization Stacks

FlexNet Publisher Architecture	Guest OS	Hypervisor
i86_n, x64_n	Windows 10	VMware ESXi 7
		Citrix XenServer 8.2
		VMware Workstation 16.1.2
		Oracle Virtual Box 7.0
		QEMU-KVM
		PARALLELS
		everRun 7.9.1*

Table 3 ▪ Tested Virtualization Stacks

FlexNet Publisher Architecture	Guest OS	Hypervisor
i86_n, x64_n	Windows Server 2019	VMware ESXi 7
	Windows 10	Citrix XenServer 8.2 QEMU-KVM PARALLELS everRun 7.9.1*
	Windows Server 2022	VMware QEMU-KVM everRun 7.9.1* Microsoft Hyper-V from Windows Server 2022 Microsoft Hyper-V from Windows 10 Enterprise
i86_linux	RHEL 7, 8, and 9	VMware ESXi 7 VMware Workstation 16.1.2 Citrix XenServer 8.2 PARALLELS Microsoft Hyper-V from Windows 10 Enterprise Oracle Virtual Box 7.0 QEMU-KVM everRun 7.9.1*
x64_linux	RHEL 7, 8, and 9	VMware ESXi 7
	SLES 12 SP4, SLES 15 SP2, SLES 15 SP3, SLES 15 SP4, and SLES 15 SP5	VMware Workstation 16.1.2 Citrix XenServer 8.2 PARALLELS Microsoft Hyper-V from Windows Server 2022 Oracle Virtual Box 7.0 QEMU-KVM everRun 7.9.1*
x64_n6	Windows10	Nutanix AHV (Version 2020.09.16 Community Edition)*

Table 3 ▪ Tested Virtualization Stacks

FlexNet Publisher Architecture	Guest OS	Hypervisor
x64_linux, i86_linux	RHEL8.7 and SUSE15SP4	Nutanix AHV (Version 2020.09.16 Community Edition)*



Note ▪ Consider the following informations in reference to above table:

- Supported hostids in guest operating systems are *ETHER* (server and client) and, for all hypervisors other than Hyper-V, *VM_UUID* (server only). See the white paper, “Understanding Virtualization Features in FlexNet Publisher”, for more information.
- It is a best practice to run license servers on a server-based OS.
- For Windows and Linux certificate applications, the FlexNet Licensing Service needs to be installed for *VM_UUID* hostid to be extracted.
- The asterisk (*) symbol indicates the version of the Hypervisor is supported but not tested in the current release.

Tested Cloud Environments

Use the following table to determine guest operating systems and hostids that have been tested with FlexNet Publisher in the specified cloud environment.

Table 4 ▪ Tested Cloud Environments

FlexNet Publisher Architecture	Tested OS	Cloud Platform	Host ID
i86_n, x64_n	• Windows Server 2022	Google Cloud	License servers:
	• Windows 10	Microsoft Azure	VM_UUID FlexEnabled clients: ETHER
i86_n, x64_n	• Windows Server 2022	Amazon EC2	License servers: VM UUID (previously AMZN_IID) AMZN_EIP FlexEnabled clients: AMZN_IID ETHER

Table 4 ▪ Tested Cloud Environments

FlexNet Publisher Architecture	Tested OS	Cloud Platform	Host ID
i86_linux, x64_linux	● RHEL 8	Google Cloud	License servers: VM_UUID FlexEnabled clients: AMZN_IID ETHER
i86_linux, x64_linux	● SUSE 15 SP5	Microsoft Azure	License servers: VM_UUID FlexEnabled clients: AMZN_IID ETHER
i86_linux, x64_linux	● RHEL 8	Amazon EC2	License servers: AMZN_EIP or VM_UUID FlexEnabled clients: AMZN_IID ETHER



Note ▪ Consider the following:

- Google Cloud, Amazon EC2 and Microsoft Azure can all use VM_UUID. VM_UUID is equivalent to AMZN_IID on EC2, Google Instance ID on Google and SMBIOS UUID on Azure
- AMZN_IID is superseded by VM_UUID for server-line hostid, but unlike VM_UUID is supported for feature-line hostid.
- For Windows and Linux certificate applications, the FlexNet Licensing Service needs to be installed for cloud hostids (VM_UUID, AMZN_EIP, AMZN_IID) to be extracted.

System Requirements for Imadmin

The following sections describe tested platforms and requirements for Imadmin:

- [Tested Platforms](#)
- [Additional System Requirements](#)
- [Tested Browsers](#)



Note ▪ *Lmadmin* installers are no longer packaged within FlexNet Publisher kit archives, and must be downloaded separately.

Tested Platforms

Lmadmin has been tested on the following platforms.

Table 5 ▪ Tested *Lmadmin* Platforms

Platform Architecture	Processor Type	Operating System
Linux 32-bit	x64	RHEL 8 and 9
Linux 64-bit	x64	RHEL 8 and 9 SLES 15 SP3 and SLES 15 SP4 Ubuntu 20.4
macOS/OS X 64-bit	x64	macOS 13.0.1
macOS ARM 64-bit	ARM-64	macOS 12.6.5
Microsoft Windows 64-bit	x64	Windows 10 Windows 11 Windows Server 2019 Windows Server 2022 It is a best practice to run license servers on a server-based OS.
Solaris 32-bit	SPARC 32-bit x86	Solaris 11
Solaris 64-bit	SPARC 64-bit x86-x64	Solaris 11



Note ▪ *The FlexNet Publisher Licensing Toolkits for 64-bit platforms supply 64-bit Lmadmin binaries. Revenera recommends their use on 64-bit platforms. Separate 32-bit Lmadmin installers and binary archives are also available and can be used on 64-bit platforms if necessary.*

Additional System Requirements

Lmadmin has these additional requirements:

- To use `lmadmin` on Windows platforms, the relevant Microsoft Visual C++ 2015-2022 Redistributable Package 14.31.31103 must be installed.
- The `lmadmin` installer requires that JRE 17 or later (for macOS/OS X: JRE 11 or later) is installed. If the JRE is not already present on the machine, it must be installed separately, because it is not bundled with the `lmadmin` installer.
- The Oracle JDK 17.0.10, Oracle JDK 21.0.2, and OpenJDK 21.0.2 are tested Java Standard Edition systems for installing the `lmadmin`.

Tested Browsers

`lmadmin` is tested on the following Web browsers:

- **Red Hat Linux**—Mozilla Firefox 46.x, Google Chrome 106.x
- **Windows**—Microsoft Edge
- **macOS/OS X**—Apple Safari 6.x and 11

Deprecated Features and Commands

The following table lists deprecated features and commands.

Table 6 ■ Deprecated Features and Commands

Deprecated Features and Commands	Comments
Console mode on <code>lmadmin</code> installation on macOS/OS X	On macOS/OS X, the <code>lmadmin</code> installer no longer supports Console mode.
Non-multithreaded libraries	<p>The following UNIX client libraries used with applications that do not use native multithreaded libraries have been deprecated:</p> <ul style="list-style-type: none"> ● <code>liblmgr_nomt_pic.a</code> ● <code>liblmgr_nomt_pic_tr1.a</code> ● <code>liblmgr_nomt.a</code> ● <code>liblmgr_nomt_tr1.a</code>
License Generator toolkit	License Generator toolkit is end-of-life. Instead, the <code>responsegen</code> shared object API has been exposed; see the example <code>.\examples\activation\responsegen\ResponseGenApi.c</code> .
AMZN_IID, HPV_UUID, VMW_UUID	Replaced by VM_UUID

Table 6 ▪ Deprecated Features and Commands

Deprecated Features and Commands	Comments
Imbind & LMB_* hostids	<p>Imbind is no longer packaged with FlexNet Publisher archives.</p> <p>Imbind sections have been removed from documentation</p>
VMW_* and HPV_* hostids	<p>It is better to have a hostid that is effective in both physical and virtual systems. As an example, we would recommend ETHER instead of VMW_ETHER (on VMware guests) or HPV_ETHER (on Hyper-V guests)</p>
Non trial-id trial ASRs	<p>ASRs which do not use a trial-id are subject to an issue where deleting trusted storage means no further (non trial-id) ASRs can be loaded. Trial-id ASRs were invented to solve this issue.</p>
License keys and default strength signatures	<p>License keys have been documented as obsolete for several years. Signatures of type LM_STRENGTH_LICENSE_KEY and LM_STRENGTH_LICENSE_DEFAULT are easily cracked. Revenera strongly recommends that new license files use TRL-strength signatures and that updated clients link with the 'trl-only' (lmgr_trl.lib) library.</p>
Decimal licenses and lc_convert API	<p>Decimal licenses are deprecated. Consequently sections on decimal licenses and the lc_convert API have been removed from documentation.</p>
Trusted Storage on AIX	<p>Trusted storage is no longer supported on AIX.</p>
Three-Server Redundancy	<p>Three-server redundancy is supported with license file-based licensing only. It is not supported with trusted storage-based licensing.</p>

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