



# FlexNet Publisher 2016 (11.14.0) Release Notes\_Rev01

24-May-2016

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# New Features

FlexNet Publisher 2016 (11.14.0) includes the new features and enhancements in the following sections:

- [Partial Available Checkout](#)
- [Server shortcodes](#)
- [Borrow enhancements](#)
- [Linux Imadmin Active Directory integration support](#)
- [Visual Studio 2015 support](#)
- [Cloud support](#)
- [Determining if a trial ASR has previously been loaded](#)
- [-2 -p -local option enhancement](#)

## Partial Available Checkout

The **lc\_checkout** API now supports a new checkout option flag - LM\_CO\_AVAIL\_NOWAIT. When checking out a count  $x > 1$  of a feature from the license server, if only partial count  $y < x$  can be satisfied from the license pool selected by the server, then count  $y$  is returned to the client. The new *nCOAvailLastLicCount* member of the CONFIG returned by a subsequent call to **lc\_auth\_data** will contain the value  $y$ .

This is in contrast with the pre-existing LM\_CO\_NOWAIT flag behavior: if the entire count request cannot be satisfied from the selected license pool, a LM\_MAXUSERS error is returned to the client.

If LM\_MAXUSERS is received from a LM\_CO\_AVAIL\_NOWAIT checkout request, then all matching license pools on the server have been exhausted of all count for the requested feature. Hence a simple way for a client to obtain the requested license count for a feature served in multiple pools is to call LM\_CO\_AVAIL\_NOWAIT checkout in a loop until all the requested count is obtained or until LM\_MAXUSERS error is received. For complete documentation refer to "*FlexNet Publisher 2016 Programming Reference Guide and Functional Reference C/C++ Guide*".

## Server shortcodes

Previously only client-side shortcode activations were supported. Now, activating licenses to server-side trusted storage using shortcodes is supported. This feature, like server-side local trials, requires activation utilities to be prepped with a trusted configuration, as server-side ASRs are not generated with trusted configuration sections. Shortcode ASRs now specify two UMNs (previously one) and support the sending of variable-length portions of each UMN, up to the full-length UMN. A consequence is that previous FNP clients will not support new shortcode ASRs.

FlexNet Operations 2016 R2:

- Supports server shortcodes

- Supports generation of new and legacy versions of shortcode ASRs
- Will allow a trusted configuration (also known as Transaction Keys) to be downloaded for use in prepping activation utilities.
- Generates ASRs for server shortcodes. These ASRs have the following limitations (workaround is to manually change the ASR and re-sign with producer's xmlsign utility)
  - Activation/concurrent/hybrid count always set to 1
  - Return count key missing (implies count of 1)
  - Transfer count (aka hop count - the number of times an activated license can be transferred between license servers) key missing (implies count of 1).

Refer to *Getting Started Trusted Storage Guide* and *Programming Reference for Trusted Storage guide* for information of functionality and examples.

## Borrow enhancements

Imborrow utility now supports specifying the version of a borrowed feature to return. A new option `-bv` to specify the feature version is introduced, some examples of borrow return are:

**Table 1** • Example of borrow return with and without version

Imborrow return	Imborrow return with version
<code>lmborrow -return f1</code> (Here all the versions of the feature f1 will be returned)	<code>lmborrow -return f1 -bv 1.0</code> (Here feature f1 version1.0 will be returned)
<code>lmborrow -return -vendor demo f1</code> (Here all the versions of the feature f1 served by vendor demo will be returned)	<code>lmborrow -return -vendor demo f1 -bv 1.0</code> (Here feature f1 1.0 served by vendor demo will be returned)

lmborrow utility now allows specification of username, hostname and display name.

New Borrow usage is:

```
lmborrow -return [-c licfile] [-d display_name] [-u username] [-h hostname] [-f qdn] [-vendor name] feature [-bv version]
```

(FNP-11158)

# Linux Imadmin Active Directory integration support

The Active Directory support by FlexNet Publisher Imadmin on Windows platform is now extended to Linux Imadmin. The license administrator can create user-accounts as an Imadmin domain-administrator type or domain-user type user for Active Directory authentication. The License Administrator can then login to the Imadmin user interface using the just-added Active Directory user ID (and its associated password) (FNP-10509). For more information, refer to *License Administrator guide*.

## Limitations

- For the LDAP protocol communication between Linux Imadmin and the Active Directory server, only simple LDAP authentication (called LDAP binding) is being used, which passes the user name and password in clear text over the network (FNP-14550).
- Connection to only one fixed Active Directory server is supported.
- Domain groups can't be added (unlike Windows), only domain users are used.

# Visual Studio 2015 support

Requires linking in new *libredir\_std.lib* from compiling new kit-supplied source file *lm\_redir\_std.c* - as shown in kit `makefile` and `makefile.act`.

# Cloud support

Both certificate and trusted storage licensing models are now supported on Microsoft Azure, Amazon EC2 and Google Compute. Certificate license servers should use VM\_UUID HostID in these environments.

Azure detection from Linux requires installation of the Linux licensing service - because a root-privilege operation is required in the detection. Installing the licensing service for certificate-only applications is performed by running `install_fnp.sh --cert`.

## Limitations:

Support for cloud marketplace use cases is excluded.

Since OpenStack environments support the Amazon EC2 metadata interface, OpenStack is detected as EC2. But note that:

- This is not tested by Flexera.
- Some implementations of the EC2 metadata interface in OpenStack do not scale well with a high volume of metadata requests.

# Determining if a trial ASR has previously been loaded

Previously, FlexNet Publisher did not offer the ability to check if a trial had already been loaded, other than by attempting to load the ASR and receiving the `LM_TS_ASR_LOAD_ONCE` error. It can be confusing for an end-user if the producer application offers a trial ASR and then tells the end-user that the trial ASR has already been consumed. It is better not to offer the trial ASR.

Consequently, `flxActCommonLicSpcCheckASR` and `flxActCommonLicSpcCheckASRFromBuffer` activation APIs have been added, and their use is demonstrated in the `appactutil` utility by means of the new `localcheck` option, an example of which is given (assuming `30day_acct.asr` was loaded on 04 March 2016):

```
appactutil -localcheck ..\examples\ezcalc\30day_acct\30day_acct.asr
Checking ASR ..\examples\ezcalc\30day_acct\30day_acct.asr.
The ASR's trial (Id 3) was started on (ymd)2016/03/04 UTC (Coordinated Universal Time).
The fulfillment record created when the ASR was loaded exists.
```

For more details see header `FlxActCommon.h` file and for details on sample source files see `appactutil.c` and `serveractutil.c` on how to use the functions.

## -2 -p -local option enhancement

In order to prevent privileged user impersonation exploits, best practice is now to combine `lmgd` option **-local** with **-2 -p**. To facilitate use of **-local** in 3-server, `lmdown` is now supported from any node of a triad started with `-local`.

# Resolved Issues

This release of the FlexNet Publisher Licensing Toolkit resolves the following issues. (Numbers in parentheses indicate the Flexera Software issue reference number.)

## General Issues

### Overdraft usage-reporting updates

Previously in FlexNet Publisher 2015 (11.13.1.1), an overdraft usage reporting white paper and Windows-based example archives were made available for the first time. The overdraft usage reporting example is based on the new vendor daemon callbacks for OVERDRAFT licenses, as described in the 11.13.1.1 release notes.

In FlexNet Publisher 2016 (11.14.0) some improvements in the supplied makefile (makefile.ou) are delivered in `fnpoverdraftusagei86_n3-11.14.0.zip` and `fnpoverdraftusage-x64_n6-11.14.0.zip` example archives. These improvements mean the updated example archives must be used with the 11.14.0 FlexNet Publisher kits, which have matching changes in the kit-provided makefiles (FNP-11537). The overdraft usage reporting white paper (FNP\_WP Overdraft Reporting.pdf) has been updated to reflect the minor changes that result when building the example.

### Imgrd instability under high volume of connections

In the event that Imgrd encountered a connection with a file descriptor number greater than the maximum that can be accommodated in an `fd_set` buffer, an Imgrd core dump previously occurred. The `LM_SERVER_HIGHEST_FD` environment variable can be set by the license administrator (on the server) to limit the maximum file descriptor number that can be assigned to a Imgrd connection. From 11.13.1.3, `LM_SERVER_HIGHEST_FD` defaults to the maximum supported file descriptor number - 1024 on Linux, 4096 on Windows. Windows has a higher maximum because file descriptor numbers are allocated to Windows sockets in multiples of 4.

Now, when a client connects using a file descriptor  $> LM\_SERVER\_HIGHEST\_FD$ , it will receive an error such as `-16 (LM_CANTREAD)` or `-95 (LM_NOT_THIS_HOST)` and the message “**warning: Maximum connections to the server has reached. Please disconnect some clients from the server**” will be written to the server log (FNP-11133).

In some cases, the Imgrd process may be overwhelmed by client connections before the file descriptor allocation is exceeded: symptoms of this occurring are when clients receive `-15 (LM_CANTCONNECT)` errors and an accumulation of sockets on the server in `ESTABLISHED` or `CLOSE_WAIT` states while client volume is high. This is an indication that the server hardware resources are not handling the client load: in such cases one option to reduce load on the server is to decrease the `LM_SERVER_HIGHEST_FD` value (FNP-13992).

### IPv6 address displayed by Imadmin and Imhostid

In some cases the (site-local) IPv6 address was not displayed by Imadmin or with Imhostid **-internet v6**. This is now resolved (FNP-11330).

## Hostname-resolution related performance and NAT-translation improvements for FlexNet Publisher clients

From FlexNet Publisher 11.12.0, FlexNet Publisher clients have by default resolved their own hostname against a DNS server to both IPv4 and IPv6 address, and send these IP addresses to the license server as part of the checkout request. This behavior can be disabled by setting the environment variable `FNP_IP_ENV=1` on the client system, whereupon the client's IP address will instead be obtained from the socket connection at the license server. There are two scenarios where `FNP_IP_ENV=1` is desirable:

- If the license server wishes to use a NAT-translated IP address for the client
- if the resolution of a client's hostname (by the client) is slow, this can degrade checkout performance.

FlexNet Publisher clients now have '`FNP_IP_ENV=1`' behavior by default. Setting `FNP_IP_ENV=0` will cause clients to resolve their own hostname against a DNS server to both IPv4 and IPv6 address.

From FlexNet Publisher 11.14.0, two new values for this environment variable are supported: `FNP_IP_ENV=4` will cause the client to resolve its own hostname only to IPv4 address and cause it to send its IPv4 address (but not IPv6) to the license server in the checkout request; whereas `FNP_IP_ENV=6` will cause the client to send (only) its IPv6 address to the server.

Finally, on OS X, an improvement has been made in the performance of a client's resolution of its own hostname in '`.local`' domains. (FNP-11458 and FNP-11309).

## Client side Memory leak

A memory leaked occurred when `LM_A_LICENSE_DEFAULT` was set more than once in a client instance. (FNP-11357).

## Client crash with empty `LM_LICENSE_FILE`

The client application built with FlexNet Publisher used to crash when `LM_LICENSE_FILE` contained an empty string (FNP-11173).

## `LM_A_VD_GENERIC_INFO` return value

Previously, due to a change the `LM_A_VD_GENERIC_INFO` returned a null pointer instead of returning correct server and feature information, This issue has now been resolved (FNP-11106).

## Vendor daemon crash

The vendor Daemon crashed when the license file contained '`Á`' and report log is enabled (FNP-11107).

## Slower checkout due to multiple DNS lookups

Some scenarios where multiple DNS lookups were inappropriately occurring, have been optimized (FNP-10340).

## Appropriate error codes when a feature is expired or not present.

Previously a -18 (`LM_NOSERVSUPP`) error was inappropriately received by the client for expired or unserved features. Now the following (pre-existing) error codes are received by the client.

Feature not served : -5 (`LM_NOFEATURE`)



Feature expired -10 (LM\_LONGGONE)  
Feature start date in future: -31 (LM\_TOOEARLY)

Additionally the server log will now indicate NOFEATURE or LONGGONE or TOOEARLY errors to match those sent to the client.

It should be noted that -18 (LM\_NOSERVSUPP) remains a catch-all error that may be returned for cases where features are not available for reasons that do not fit into the above categories.(FNP-14446, FNP-10606)

## Imadmin and Imgrd Issues

### Creating Imadmin service

The Imadmin installer on Windows will now create the Imadmin Service appropriately even if the service-name contains white-spaces like in “My LAdmin Service” (FNP-7369).

### Imadmin folder update

Packaging of license folder that consists of third party libraries has now been removed from the Imadmin toolkit. All the third party license information can be obtained from *FNP-Licensing-11.14.0-ThirdPartyOpenSource.pdf* document (FNP-13624).

### Minimizing Microsoft Attack Surface Analyser errors with customized Imadmin installations on Windows

A new Imadmin command line parameter **cacheDir** is introduced to define the destination directory for cache files (FNP-11411). This is intended to be used with the pre-existing **configDir**, **logDir**, and **uploadDir** parameters so that custom Windows Imadmin installers can specify these runtime folders in a ProgramData location. These runtime folders are by default created as sub folders of the location where Imadmin.exe is installed. Since applications are typically installed in a Windows Program Files location, this can lead to User-modify privilege being enabled on ProgramFiles sub folders (Imadmin runs with Local User privilege when running as a service), which is a security issue detected by Microsoft Attack Surface Analyser. By moving these runtime folders to a ProgramData location, Windows best-practice is followed, which removes Microsoft Attack Surface Analyser errors such as “The folder 'C:\Program Files (x86)\Imadmin' contains folders with ACLs that allow tampering by multiple non-administrator accounts” (FNP-9695).

### Imadmin installer import files issue

Importing files from previous installation option in Imadmin installer throws an error “**couldn't copy vendor daemon. <pathToPreviousInstallation>**” due to vendor daemon path non availability. The vendor daemon path is now updated in server.xml file and no error is seen during import installation (FNP-11005).

## SSL server vulnerability

The cipher suites configured for Imadmin allowed man-in-the-middle attack, that is certain cipher suites that do not require server authentication were supported by https client. Now by disabling the NULL Authentication ciphers, the client always authenticates the server certificate, this in turn provides the security against man-in-the-middle attack (FNP-10962).

## SSL protocols supported in Imadmin

Imadmin now supports “TLSv1 and TLSv2 “SSL protocols (FNP-10961).

## The Imadmin binary will now run using OpenSSL shared or dynamic libraries on all platforms (except for AIX)

Earlier, the Imadmin binary used to be linked statically against OpenSSL libraries. This has been changed now to link the Imadmin binary dynamically against OpenSSL shared or dynamic libraries on all Imadmin-supported platforms (except AIX). This optionally allows for faster upgrade by customers to a newer letter release of OpenSSL 1.0.1. The version of OpenSSL deployed with Imadmin is 1.0.1j (FNP-10829).

## Imadmin username characters length is 64

Imadmin GUI and Imadmin user related command line options will now accept usernames up to 64 characters (max 16 for domain, max 47 for username and one for the backslash (\) character) (FNP-10528).

## Imgrd license server as a Windows service failed to start

In FlexNet Publisher 2015 (11.13.1), a change was made to run Windows license server services with LocalService privilege instead of LocalSystem privilege, following the least-privilege security best practice.

One inappropriate consequence is that a Imgrd Windows service, as installed by installs.exe or Imtools.exe, may not start. This is because a LocalService service does not by default have sufficient privilege to write the server debug log to (a subdirectory of) Windows Program Files or Users directories.

Flexera therefore recommends following Windows best-practice for writing application data by specifying debug log and report log locations within a subfolder of %SystemDrive%\ProgramData\. LocalService services do by default have sufficient privilege to write to ProgramData (sub)directories (FNP-11460).

## Buffer overrun vulnerability in Imgrd and vendor daemon

Please refer to the following customer article for details:

[https://flexeracommunity.force.com/customer/articles/en\\_US/ISSUE/Two-security-vulnerabilities-remediated-in-FlexNet-Publisher/](https://flexeracommunity.force.com/customer/articles/en_US/ISSUE/Two-security-vulnerabilities-remediated-in-FlexNet-Publisher/)

Flexera Software recommends producers take this opportunity to upgrade their license servers to FlexNet Publisher 2016 (11.14.0), where the vulnerability has been addressed (FNP-11444).

# Dongle Updates

## Windows Driver update

FLEXID9 dongle drivers are upgraded from v6\_65 to v7.41 on windows platform only. No other dongle driver updates are delivered in this release (FNP-11381). This includes updates of the SafeNet haspsrm\*.dll and hasp\_rt.exe components.

# Platform Specific Issues

## SHA256 now used in certificate signatures on Windows

Windows binaries (including lmadm.exe) signed with the Flexera Software LLC certificate now use a SHA256 digest, previously SHA1 (FNP-11607).

## On Windows and Linux

From 11.13.1.3, the install\_fnp.sh script issues a warning if LSB is not detected on the host. Additionally, this script supports a new -nolsb parameter, which sets up the symlinks from the LSB loader to the native loader, allowing components such as lmgd to run (FNP-11592).

## Preptool failure on OS X

When using WxWidgets on OS X, a “Negative extent overlap encountered” preptool failure could occur when prepping the producer's application. This has now been resolved (FNP-11567).

## Java exception on using native hostids

Previously, In a Java application when the client with a native hostid tries to get the feature details of the uncounted licenses the application exits with an exception, this issue is now resolved and no exception is seen when you try to get the feature details of uncounted licenses (FNP-11220).

## Installs.exe failure on Windows 10

Earlier, Installs.exe sometimes failed with error STATUS\_STACK\_BUFFER\_OVERRUN (0xc0000409) on Windows 10 Pro. This issue has been fixed (FNP-11201).

## Windows QEMU detection limitation

Some Windows 10 guests running on QEMU hypervisors failed to detect a virtual environment is now working fine. (FNP-11386).

## FLEXLM\_TIMEOUT environment variable changes (Windows Only)

FLEXLM\_TIMEOUT is a Windows-only environment variable, which sets the timeout value (in microseconds) a FlexEnabled client application uses when attempting to connect to a license server. Previously, the default value was 100000 (0.1 seconds). Now, the default value is 3000000 (3 seconds), with minimum value 200000 (0.2 seconds) and maximum 20000000 (20 seconds). This change resolves

an issue where timeout errors could inappropriately occur because of network latency between the client and the server (FNP-11480). Note that the time to report a failure when attempting to connect to an invalid host from a Windows client is also governed by the FLEXLM\_TIMEOUT value (FNP-11480).

## Issues Specific to License-Based Licensing

### Reserved package components issue

Previously, package reservations were getting removed with active components being checked out, this issue occurred when a queuing functionality for package components with SUITE\_RESERVED. This behavior is addressed and the package reservation are removed only if all the components are checked in (FNP-11293).

### LM\_A\_INTERNET\_OVERRIDE issue

Earlier, when the attribute LM\_A\_INTERNET\_OVERRIDE was set in client application, the client was able to checkout an extra license. Now LM\_A\_INTERNET\_OVERRIDE restricts the user from performing an extra checkout (FNP-11091).

### lmstat displayed incorrect count of reserved licenses

Previously, when a lmread occurred after reserving licenses, lmstat sometimes displayed incorrect count of reserved licenses of a particular component (FNP-10964). lmstat sometimes displayed incorrect count of licenses when upgrade line in license file and RESERVE keyword in option file is used (FNP-10954 and FNP-9183).

### Package lines having same component names had an issue during upgrade

In the prior release, when we upgrade two different packages having same component names in a license file, the license server displayed an error "Prior INCREMENT line for UPGRADE (xyz:5.0->5.0201) has no licenses". This issue is now fixed (FNP-10618).

### Client reconnect after hibernate is successful

Earlier the network adapter on the VMware workstation gets disabled after hibernate thus causing a failure in client reconnect to license server. Now the heartbeat reconnect function is working as expected on a VM even after hibernate (FNP-9387).

### lmutil enhancement

lmutil is enhanced to display the vendor\_string and platforms information (lmstat and lmdiag) (FNP-2210).

#### lmstat

```
Users of f1: (Total of 4 licenses issued; Total of 0 licenses in use)
```

```
platforms: i86_lsb i86_n vendor_string:abcd
```

#### lmdiag

-----  
License file: counted.lic  
-----

"f1" v1.0, vendor: qavend1, expiry: 1-jan-0

License server: BLR-P7109555

floating license starts: 1-jan-1990, no expiration date

platforms: i86\_lsb i86\_n vendor\_string: abcd

This license can be checked out

### **Three-server failover issue**

In FlexNet Publisher 11.13.0 release, on failover a client that uses license files instead of the recommended port@host for license server paths experienced a heartbeat failure. This client-side issue is now resolved (FNP-11174).

## Issues Specific to Trusted-Storage-Based Licensing

### **Inappropriate "Updating DACL Failed" Imtools message**

A license server serving trusted storage features requires start permission for the FlexNet Licensing Service, which Imtools attempts to introduce by modifying the FlexNet Licensing Service permissions when installing the license server as a service. The "Updating DACL Failed" message can occur if the FlexNet Licensing Service is not present when this attempt is made.

Previously, this message was inappropriately displayed when the license server does not use trusted storage. Now, an attempt to update FlexNet Licensing Service permissions is made only if the new "Trusted Storage in Use" checkbox is checked (FNP-11430).

### **Reported buffer overrun in FlexNet Publisher Windows activation library (libFNP.dll)**

Buffer overrun issues in deployed libFNP.dll libraries were analyzed through a crash dump obtained from a producer's Windows Error Reporting (WER) account. The buffer overrun was traced to inappropriate usage of a sscanf function, which has now been replaced (FNP-11004).

### **Feature name based diagnostic was unstable**

In case of served trusted storage licenses, FEATURE name based license diagnostic did not return any information, because of not reading the trusted storage. FEATURE name based license diagnostic works fine for "specified" certificate based and trusted storage based features (FNP-10853).

## **Imremove crashed during trusted storage license reclaim**

Previously the Imremove utility crashed when reclaiming borrowed trusted storage licenses. This occurred only when using a license file with no features to locate the server instead of port@host. While the crash has been fixed, the bug remains that Imremove will still not succeed in reclaiming a trusted storage license (giving a -205 error) unless a dummy feature exists in the license file. (FNP-10568)

## **A new attribute to support trusted storage based checkouts**

LM\_A\_TS\_ONLY attribute helps in client and server side checkout for trusted storage based licensed only. When this attribute is set, the client will not be allowed to checkout features from certificate. Valid licenses are the one that must always originate from trusted storage. (FNP-4095)

## **INCLUDE or EXCLUDE of hybrid licenses**

Previously, trusted storage hybrid licenses could not be effectively restricted through the options file. An example of 11.14.0 behavior is:

If served-trusted storage has a fulfillment record ENTLID12 containing two hybrid features, F1 and F2, then the following options file allows John's client application to concurrently check out F1 or F2, or John's client activation utility to activate-borrow the fulfillment

```
INCLUDE F1 USER John
```

```
INCLUDE F2 USER John
```

```
INCLUDE_ENTITLEMENT ENTLID12 USER John (FNP-10907)
```

# Platform Notes

## 11.14.0 Updates

### Windows

- Windows 10 has been tested in this release.
- The Microsoft Edge browser has been tested with Imadmin
- The Visual Studio 2015 compiler is supported.
- Publishers who build with VS2015 and the Windows 10 Software Development Kit (even after linking statically) may have to redistribute the universal CRT (api-ms-win-crt-stdio-l1-1-0.dll) - [refer to this KB article](#)

## Integrated Products and tested versions

**Table 2** • Integrated products and its tested versions.

Product	Tested Version
FlexNet Operations	FlexNet Operations 2016 (16.11.0)
FlexNet Manager for Engineering Applications	FlexNet Manager for Engineering Applications (15.5.0.7)
FlexNet Operations Cloud	FlexNet Operations Cloud (June 2015)

## 11.13.1 Updates

### Windows

- Windows 10 Technical Preview has been tested in this release.
- The Microsoft Edge browser (technical preview) has been sanity tested with Imadmin
- The Visual Studio 2015 compiler is not supported. It will fail to build kit makefiles, and there is no workaround. Visual Studio 2015 compatibility will be delivered in a future release (FNP-10512).

- Any application that is prepped (that loads libFNP.dll) may crash when performing cleanup or shutdown operations if run under Windows Application Verifier. This applies to both prepped clients and a prepped vendor daemon on shutdown (FNP-10728).

## Linux

- SUSE Enterprise Linux 12 is now supported.
- We test and support recent versions of SUSE Enterprise Linux and Red Hat Enterprise Linux (refer C/C++ Toolkits for specific versions). We do not test other Linux distributions, but would consider as minimum requirements for potential FlexNet Publisher compatibility on a Linux distribution the following: LSB 4.0 compliance and GLIBC-2.4 and Kernel 2.6.16.
- Red Hat Enterprise Linux 7, for the first time in RHEL releases, defaults to the XFS file-system instead of the historical 'ext' file system family. Producers' FlexNet Publisher 32-bit Linux processes may exhibit instability when interacting with an XFS file system, especially when more than  $2^{32}$  inodes are present. Flexera recommends avoiding running 32-bit FlexNet Publisher applications which interact with XFS file systems. (FNP-10269)

## LSB 4.0 Compliance Issues

### SUSE Enterprise Linux 12 and LSB

On some recent Linux updates, such as SUSE Enterprise Linux 12, the LSB component is not offered as part of the supported distribution. Components in FlexNet Publisher, such as lmgrd, require the LSB-loader. If this is not present, lmgrd will fail to run with a 'file not found' error (FNP-11338, FNP-11353).

From 11.13.1.3, the install\_fnp.sh script will issue a warning if LSB is not detected on the host. Additionally, this script supports a new **-nolsb** parameter, which sets up the symlinks from the LSB loader to the native loader, allowing components such as lmgrd to run (FNP-11338).

## LSB 4.0 Compliance Notes for FlexNet Publisher Libraries

Publishers who wish to obtain LSB compliance for applications which have dependencies on FlexNet Publisher static and dynamic libraries should note that all FlexNet Publisher static libraries are LSB compliant except for liblmgr\_dongle.a. Applications that need to be fully LSB compliant should link against the stub versions of the dongle library (FNP-9293, FNP-9021).

### General LSB 4.0 compliance notes

This release of FlexNet Publisher has the following Linux Standard Base (LSB) compliance limitations:

- LSB checks are limited to those performed by running the LSB appchecker.
- FlexNet Publisher is not validated against the ABI specified by any LSB version (FNP-9024)
- lmutil links in the non-LSB compliant liblmgr\_dongle.a



- The updated Wibu dongle libraries delivered in FlexNet Publisher 11.13.1 are not LSB compliant. Therefore, Linux applications which use the FLEXID10 hostid may not be compatible with Linux distributions not tested by Flexera (FNP-11044)
- LSB 4.0 appchecker issues

The following are the errors generated by the LSB 4.0 appchecker against 11.13.1 i86\_lsb GA kit

**Table 3** • LSB 4.0 appchecker errors:

Component	LSB 4 Failure or Warning
install_fnp.sh	'chattr', 'rpm', 'which' & 'lsmod' are not included in LSB 4.0
ladmin-i86_lsb-11_13_0_0.bin (ladmin installer)	'isNumeric' and 'uncompress' are not included in LSB 4.0
multiple	Warning: the following interfaces are deprecated in LSB 4.0: gethostbyaddr; gethostbyname; gethostbyname_r; and strerror_r (FNP-9498).

## Integrated Products and tested versions

**Table 4** • Integrated products and its tested versions.

Product	Tested Version
FlexNet Operations	FlexNet Operations 2014 (12.11.0)
FlexNet Manager for Engineering Applications	FlexNet Manager for Engineering Applications (15.5.0.7)
FlexNet Operations Cloud	FlexNet Operations Cloud (June 2015)
License Generator Toolkit	License Generating Toolkit (11.10.0)

# 11.13.0 updates

## Windows

Windows 10 Technical Preview (OS Version: 6.4.9841 N/A Build 9841) has been tested in this release (see known issues section)

## Discontinuation of platforms

The following legacy platforms are no longer available:

- Linux PowerPC (ppc\_lsb and ppc64\_lsb)
- Linux Itanium (it64\_re4)
- Windows Itanium (it64\_n)
- Irix (sgi64\_u6)

## Discontinuation of IPv4-limited kits

FlexNet Publisher's dual-stack kits are now fully functional for mixed IPv4 and IPv6 environments. Therefore, kits which are restricted to IPv4 functionality are no longer available

# System Requirements

## Supported Platforms

The following sections describe the platforms supported by the FlexNet Publisher Licensing toolkits:

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

For the updated list of supported platform: <http://www.flexerasoftware.com/support/additional-support/end-of-life/flexnet-publisher.html>

# C/C++ Toolkits

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

**Table 5 • C/C++ Toolkit Platform Support**

Platform Type	Hardware Type	Operating System
AIX 32-bit	PowerPC	AIX 6.1 ML 006 AIX 7.1 ML 000
AIX 64-bit	PowerPC	AIX 6.1 ML 006 AIX 7.1 ML 000
HP-UX 64-bit	Intel Itanium	HP-UX B.11.31ia64
Linux 32-bit	x86	Certified with the following: RedHat Enterprise Linux 6, 7 SUSE Linux Enterprise 10, 11 and 12 Refer to the <a href="#">LSB 4.0 Compliance Issues</a> section for a list of LSB3.0 and LSB4.0 non-compliance issues.
Linux 64-bit	x86-64	Certified with the following: RedHat Enterprise Linux 6, 7 SUSE Linux Enterprise 10, 11 and 12 Refer to the <a href="#">LSB 4.0 Compliance Issues</a> section for LSB compliance notes.
Apple OS X 32-bit and 64-bit	x86 x64	Apple OSX 10.11 Apple OSX 10.10 Apple OSX 10.9 Apple OS X 10.8 Apple OS X 10.7

Platform Type	Hardware Type	Operating System
Microsoft Windows 32-bit	x86	Windows 10 Windows Server 2008, including SP1 and SP2 Windows 8 Windows 8.1 Windows 7, including SP1 Windows Server 2012 R2 Windows Server 2012 It is a best practice to run license servers on a server based OS.
Microsoft Windows 64-bit	x64	Windows 10 Windows Server 2008, including SP1, SP2, and R2 Windows 8 Windows 8.1 Windows 7, including SP1 Windows Server 2012 R2 Windows Server 2012 It is a best practice to run license servers on a server based OS.
Solaris 32-bit	SPARC 32-bit	Solaris 10 and 11
Solaris 32-bit	x86	Solaris 10 and 11
Solaris 64-bit	SPARC 64-bit	Solaris 10 and 11
Solaris 64-bit	x86-x64	Solaris 10 and 11

# Java Toolkits

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

**Table 6** • Java Toolkit Platform Support

Platform Type	Hardware Type	Version
<b>Oracle Java Development Kit</b>	<ul style="list-style-type: none"><li>• Solaris SPARC 32-bit</li><li>• Solaris SPARC 64-bit</li><li>• Solaris x86</li><li>• Solaris x64</li><li>• Windows x86</li><li>• Windows x64</li><li>• Linux x86</li><li>• Linux x64</li></ul>	Java Standard Edition 1.6, 1.7 and 1.8

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# Detailed Platform Information

The following sections list the operating systems and their associated hardware platforms supported by FlexNet Publisher. 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 Flexera Software’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 *Trusted Storage-based Licensing Programming Reference* for complete details.
- Click a link to access platform details:

<a href="#">AIX 32-bit</a>	<a href="#">Linux 32-bit</a>	<a href="#">Solaris 32-bit</a>
<a href="#">AIX 64-bit</a>	<a href="#">Linux 64-bit</a>	<a href="#">Solaris 64-bit</a>
<a href="#">Apple OS 32-bit and 64-bit</a>	<a href="#">Microsoft Windows 32-bit</a>	<a href="#">HP-UX 64-bit</a>
<a href="#">Java Standard Edition</a>	<a href="#">Microsoft Windows 64-bit</a>	

## AIX 32-bit

The following lists information about FlexNet Publisher support for AIX 32-bit machines:

<b>Platform Name</b>	ppc_u
<b>Package Identifier</b>	ppc_u5 (on PowerPC™)
<b>Tested Compiler</b>	PowerPC cc (IBM XLC) 9.0(AIX 6.1) and 11.1 (AIX 7.1)
<b>Notes</b>	<ul style="list-style-type: none"><li>• Tmadmin is supported in this toolkit.</li><li>• Short code transactions are not supported.</li><li>• Prepped Trusted Configuration is not supported.</li><li>• The AIX FlexNet Publisher client libraries are PIC by default; therefore, only one version of these libraries is provided in the toolkit.</li><li>• Java SDK is not supported.</li></ul>
<b>Toolkit Functionality</b>	Licensing based on license files or trusted storage.
<b>Security Functionality</b>	No support for tamper-resistant applications. The toolkit is labeled as <i>notr</i> .



## AIX 64-bit

The following lists information about FlexNet Publisher support for AIX 64-bit machines:

<b>Platform Name</b>	rs64_u
<b>Package Identifier</b>	rs64_u5 (on PowerPC™)
<b>Tested Compiler</b>	PowerPC cc (IBM XLC) 9.0 (AIX 6.1) and 11.1 (AIX 7.1)
<b>Notes</b>	<ul style="list-style-type: none"><li>• 1madmi n is supported using its 32-bit binary. (No 1madmi n 64-bit binary is available.)</li><li>• Short code transactions are not supported.</li><li>• Prepped Trusted Configuration is not supported.</li><li>• You must use ar -X64 and strip -X64 on this platform.</li><li>• The AIX FlexNet Publisher client libraries are PIC by default; therefore only one version of these libraries is provided in the toolkit.</li><li>• Java SDK is not supported.</li></ul>
<b>Toolkit Functionality</b>	Licensing based on license files or trusted storage.
<b>Security Functionality</b>	No support for tamper-resistant applications. The toolkit is labeled as <i>notr</i> .

## HP-UX 64-bit

The following lists information about FlexNet Publisher support for HP-UX 64-bit machines:

<b>Platform Name</b>	<ul style="list-style-type: none"><li>• it64_hp (on Intel® Itanium®)</li></ul>
<b>Package Identifier</b>	<ul style="list-style-type: none"><li>• it64_hp11i (on Intel Itanium)</li></ul>
<b>Tested Compiler</b>	<ul style="list-style-type: none"><li>• Intel Itanium HP C/aC++ B3910B A.06.20</li></ul>
<b>Notes</b>	<ul style="list-style-type: none"><li>• <code>lmadmin</code> is not supported in this toolkit.</li><li>• Short code transactions are not supported.</li><li>• Prepped Trusted Configuration is not supported.</li><li>• On Intel Itanium, use <code>lmhostid</code> utility to determine the <code>hostid</code>. This returns the machine identification and is equivalent to the identification returned by the <code>HP_UX</code> command <code>getconf CS_PARTITION_IDENT</code>. For example:  <pre>&gt;lmhostid &gt;The FlexNet Licensing host ID of this machine is "ID_STRING=9c788319-db72-d411-af62-0060b05e4c05"</pre> Older methods of obtaining the <code>hostid</code> that return the Ethernet address are still supported, but may fail on some systems. The older methods include:  <pre>&gt;uname -i (returns decimal hostid) &gt;lmhostid -long (returns hexadecimal hostid)</pre></li><li>• Multi-threaded licensing libraries are available on Intel Itanium.</li></ul>
<b>Toolkit Functionality</b>	Licensing based on license files.
<b>Security Functionality</b>	No support for tamper-resistant applications. The toolkit is labeled as <i>notr</i> .

## Java Standard Edition

The following lists information about FlexNet Publisher support for Java Standard Edition machines:

<b>Platform Name</b>	java
<b>Package Identifier</b>	Not applicable
<b>Tested Compiler</b>	JDK 1.6, 1.7, and 1.8
<b>Notes</b>	<ul style="list-style-type: none"><li>• Implements the FlexNet Licensing for Java client library only.</li><li>• Requires a C development environment.</li><li>• Requires tamper-resistant licenses (TRL) to be enabled</li></ul>
<b>Toolkit Functionality</b>	Licensing based on license files or trusted storage.
<b>Security Functionality</b>	No support for tamper-resistant applications. The toolkit is labeled as <i>notr</i> .

## Linux 32-bit

The following lists information about FlexNet Publisher support for Linux 32-bit machines:

<b>Platform Name</b>	i86_lsb (on x86)
<b>Package Identifier</b>	i86_lsb (on x86)
<b>Tested Compiler</b>	For x86: <ul style="list-style-type: none"><li>• gcc 4.4.4 (RHEL 6.0)</li><li>• gcc 4.8.2 and gcc 4.8.3 (RHEL 7)</li><li>• gcc 4.1.2 (SUSE 10)</li><li>• gcc 4.3.4 (SUSE 11)</li><li>• gcc 4.8.3 (SUSE 12)</li></ul>
<b>Notes</b>	<ul style="list-style-type: none"><li>• 1madm:n is supported on x86 only.</li><li>• Multiple Ethernet hostids are supported.</li><li>• Short code transactions are supported (RHEL x86 only).</li><li>• Prepped Trusted Configuration is supported.</li><li>• Supported virtual machine platforms include: VMware ESXi 5.5, 6.0 VMware Workstation 11 and 12 Microsoft Windows 8.1 Hyper-V Microsoft Windows Server 2012 Hyper-V Citrix XenServer 6.2 and 6.5 QEMU-KVM (Host OS: CentOS 7.1)<ul style="list-style-type: none"><li>• Hypervisor: qemu-kvm-1.5.3-86</li><li>• Hypervisor Services: libvirt-daemon-kvm-1.2.8-16</li><li>• Virtual Machine Manager: vmm v1.1.0</li></ul>Parallels Desktop 10.0 for MAC 10.3.0 (29277)</li></ul>
<b>Toolkit Functionality</b>	Licensing based on license files or trusted storage.
<b>Security Functionality</b>	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .

## Linux 64-bit

The following lists information about FlexNet Publisher support for Linux 64-bit machines:

<b>Platform Name</b>	x64_1sb (on x64)
<b>Package Identifier</b>	x64_1sb (on x64)
<b>Tested Compiler</b>	For x64: <ul style="list-style-type: none"><li>• gcc 4.4.4 (RHEL 6.0)</li><li>• gcc 4.8.3 and gcc 4.8.5 (RHEL 7)</li><li>• gcc 4.1.2 (SUSE 10)</li><li>• gcc 4.3.4 (SUSE 11)</li><li>• gcc 4.8.3 (SUSE 12)</li></ul>
<b>Toolkit Functionality</b>	Licensing based on license files or trusted storage.
<b>Security Functionality</b>	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .
<b>Notes</b>	<ul style="list-style-type: none"><li>• For the x64_1sb toolkit, 1madmi n is supported using its 32-bit binary. (No 1madmi n 64-bit binary is available.)</li><li>• As a requirement, manually install the Linux 32-bit libraries on RHEL 6.0 (64-bit) or RHEL 7.0(64-bit). (They are not automatically installed with the operating system.) Certain FlexNet Publisher components, such as 1madmi n, require these libraries. Refer to the RedHat Enterprise Linux documentation for details.</li><li>• Multiple Ethernet hostids are supported.</li><li>• Short code transactions are supported.</li><li>• Prepped Trusted Configuration is supported (x64_1sb only).</li><li>• Supported virtual machine platforms include:<ul style="list-style-type: none"><li>VMware ESXi 5.5, 6.0</li><li>VMware Workstation 11 and 12</li><li>Microsoft Windows 8.1 Hyper-V</li><li>Microsoft Windows Server 2012 Hyper-V</li><li>Citrix XenServer 6.2 and 6.5</li><li>QEMU-KVM (Host OS: CentOS 7.1)<ul style="list-style-type: none"><li>• Hypervisor: qemu-kvm-1.5.3-86</li><li>• Hypervisor Services: libvirt-daemon-kvm-1.2.8-16</li><li>• Virtual Machine Manager: vmm v1.1.0</li></ul></li><li>Parallels Desktop 10.0 for MAC 10.3.0 (29277)</li></ul></li></ul>

<b>Toolkit Functionality</b>	Licensing based on license files or trusted storage.
<b>Security Functionality</b>	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .

## Apple OS 32-bit and 64-bit

The following lists information about FlexNet Publisher support for Apple OS 32- and 64-bit machines:

<b>Platform Name</b>	<ul style="list-style-type: none"><li>• x86 - i86_mac</li><li>• x64 - x64_mac</li></ul>
<b>Package Identifier</b>	universal_mac10 (on x86 and x64) universal_mac10_applelibcpp
<b>Tested Compiler</b>	<ul style="list-style-type: none"><li>• Xcode 7.0.1</li><li>• Xcode 6.0.1</li><li>• Xcode 5.1.1</li><li>• Xcode 4.6</li><li>• gcc 4.0.1</li><li>• gcc 4.2.1</li><li>• llvm-gcc-4.2</li><li>• llvm-g++-4.2</li><li>• clang-425.0.28</li><li>• clang-163.7.1</li><li>• For 10.9 apple LLVM version 5.0 (clang-500.2.79) (based on LLVM 3.3svn)</li><li>• Apple LLVM version 7.0.0 (clang-700.0.72)</li></ul>
<b>Notes</b>	<ul style="list-style-type: none"><li>• 1madmin runs under both the x86 and the x64 Apple architectures using its 32-bit binary. (No 1madmin 64-bit binary is available.)</li><li>• Multiple Ethernet hostids are not supported.</li><li>• Short code transactions are supported.</li><li>• Prepped Trusted Configuration is supported.</li><li>• For building requirements, see <a href="#">Requirements for Building the Apple OS X Licensing Toolkit</a></li></ul>
<b>Toolkit Functionality</b>	Licensing based on license files or trusted storage.
<b>Security Functionality</b>	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .

## Requirements for Building the Apple OS X Licensing Toolkit

The following lists the special requirements for building the FlexNet Publisher Licensing toolkit on specific Apple OS X platforms.

### Building on OS X 10.7 or 10.8 or 10.9 or 10.10 or 10.11

When building the Licensing toolkit, use the appropriate Apple development environment:

- For OS X 10.7, use XCode 4.1.x.
- For OS X 10.8, use XCode 4.6.x.
- For OS X 10.9, use Xcode 5.0.2
- For OS X 10.10, use Xcode 6.0.1
- For OS X 10.11, use Xcode 7.0.1

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):

- 32-bit Intel—Runs on OS X 10.7 or later on Intel platforms
- 64-bit Intel—Runs on OS X 10.7 or later on Intel 64-bit platforms

### Apple SDKs Required

The SDK appropriate to the Apple OS X version must be available on the machine where you are building the Licensing toolkit:

- For OS X 10.7, `/Developer/SDKs/MacOSX10.7.sdk`
- For OS X 10.8, `/Volumes/Xcode/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX10.8.sdk` (or use `xcode-select --print-path` to obtain the correct path)
- For OS X 10.9, use `xcode-select --print-path` to obtain the correct path and choose 10.8 or 10.9 SDK path
- For OS X 10.10, use `xcode-select --print-path` to obtain the correct path and choose 10.8 or 10.9 or 10.10 SDK path
- For OS X 10.11, use `xcode-select --print-path` to obtain the correct path and choose 10.11 SDK path



## Microsoft Windows 32-bit

The following lists information about FlexNet Publisher support for Microsoft Windows 32-bit machines:

<b>Platform Name</b>	i86_n
<b>Package Identifier</b>	i86_n3
<b>Tested Compiler</b>	<ul style="list-style-type: none"><li>• Visual Studio 2015</li><li>• Visual Studio 2013</li><li>• Visual Studio 2012</li><li>• Visual Studio 2010 Professional Edition</li></ul>
<b>Notes</b>	<ul style="list-style-type: none"><li>• Tmadmi n is supported in this toolkit.</li><li>• Multiple Ethernet hostids are supported.</li><li>• Short code transactions are supported.</li><li>• Prepped Trusted Configuration is supported.</li><li>• Supported virtual machine platforms include: VMware Workstation 11 and 12 VMware ESXi 5.5, 6.0 Microsoft Windows Server 2012 Hyper-V Microsoft Windows 8.1 Hyper-V Citrix XenServer 6.2 and 6.5 QEMU-KVM (Host OS: CentOS 7.1)<ul style="list-style-type: none"><li>• Hypervisor: qemu-kvm-1.5.3-86</li><li>• Hypervisor Services: libvirt-daemon-kvm-1.2.8-16</li><li>• Virtual Machine Manager: vmm v1.1.0</li></ul>Parallels Desktop 10 for MAC v10.3.0 (29277)</li></ul>
<b>Toolkit Functionality</b>	Licensing based on license files or trusted storage.
<b>Security Functionality</b>	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .

## Microsoft Windows 64-bit

The following lists information about FlexNet Publisher support for Microsoft Windows 64-bit machines:

<b>Platform Name</b>	x64_n
<b>Package Identifier</b>	x64_n6
<b>Tested Compiler</b>	<ul style="list-style-type: none"><li>• Visual Studio 2015</li><li>• Visual Studio 2013</li><li>• Visual Studio 2012</li><li>• Visual Studio 2010 Professional Edition</li></ul>
<b>Notes</b>	<ul style="list-style-type: none"><li>• 1madmi n is supported using its 32-bit binary. (No 1madmi n 64-bit binary is available.)</li><li>• Multiple Ethernet hostids are supported.</li><li>• Short code transactions are supported.</li><li>• Prepped Trusted Configuration is supported.</li><li>• The 1mtools utility cannot interact with the license server manager (1mgrd) when 1mgrd is run as a service.</li><li>• Supported virtual machine platforms include:<ul style="list-style-type: none"><li>VMware Workstation 11 and 12</li><li>VMware ESXi 5.5, 6.0</li><li>Microsoft Windows Server 2012</li><li>Microsoft Windows 8.1 Hyper-V</li><li>Citrix XenServer 6.2 and 6.5</li><li>QEMU-KVM (Host OS: CentOS 7.1)<ul style="list-style-type: none"><li>• Hypervisor: qemu-kvm-1.5.3-86</li><li>• Hypervisor Services: libvirt-daemon-kvm-1.2.8-16</li><li>• Virtual Machine Manager: vmm v1.1.0</li></ul></li><li>Parallels Desktop 10 for MAC v10.3.0 (29277)</li></ul></li></ul>
<b>Toolkit Functionality</b>	Licensing based on license files or trusted storage.
<b>Security Functionality</b>	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .

## Solaris 32-bit

The following lists information about FlexNet Publisher support for Solaris 32-bit machines:

<b>Platform Name</b>	<ul style="list-style-type: none"><li>• x86_sol (on x86)</li><li>• sun4_u (on SPARC 32-bit)</li></ul>
<b>Package Identifier</b>	<ul style="list-style-type: none"><li>• x86_sol9 (on x86)</li><li>• sun4_u9 (on SPARC 32-bit)</li></ul>
<b>Tested Compiler</b>	For x86: <ul style="list-style-type: none"><li>• cc (Sun C) 5.8</li><li>• cc (Sun C) 5.12</li></ul> For SPARC 32-bit: <ul style="list-style-type: none"><li>• cc (Sun C) 5.8</li><li>• cc (Sun C) 5.12</li></ul>
<b>Notes</b>	<ul style="list-style-type: none"><li>• Tmadmi n is supported in this toolkit.</li><li>• Synchronous I/O multiplexing, via select, is supported for up to 65,535 file descriptors.</li><li>• The number of system semaphore arrays can become exhausted.</li><li>• Shared objects might not run when compiled with gcc on SPARC 32-bit.</li><li>• Multiple Ethernet hostids are not supported.</li><li>• Short code transactions are not supported.</li><li>• Prepped Trusted Configuration is supported.</li></ul>
<b>Toolkit Functionality</b>	Licensing based on license files or trusted storage.
<b>Security Functionality</b>	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .

## Solaris 64-bit

The following lists information about FlexNet Publisher support for Solaris 64-bit machines:

<b>Platform Name</b>	<ul style="list-style-type: none"><li>• x64_sun (on x64)</li><li>• sun64_u (on SPARC 64-bit)</li></ul>
<b>Package Identifier</b>	<ul style="list-style-type: none"><li>• x64_sun10 (on x64)</li><li>• sun64_u9 (on SPARC 64-bit)</li></ul>
<b>Tested Compiler</b>	For x86-64: <ul style="list-style-type: none"><li>• cc (Sun C) 5.8</li><li>• cc (Sun C) 5.10</li><li>• cc (Sun C) 5.12</li></ul> For SPARC 64-bit: <ul style="list-style-type: none"><li>• cc (Sun C) 5.8</li><li>• cc (Sun C) 5.12</li></ul>
<b>Notes</b>	<ul style="list-style-type: none"><li>• <code>lmadm</code> is supported using its 32-bit binary. (No <code>lmadm</code> 64-bit binary is available.)</li><li>• Shared objects might not run when compiled with <code>gcc</code> on SPARC 64-bit.</li><li>• Multiple Ethernet hostids are not supported.</li><li>• Short code transactions are not supported.</li><li>• Prepped Trusted Configuration is supported.</li></ul>
<b>Toolkit Functionality</b>	Licensing based on license files or trusted storage.
<b>Security Functionality</b>	Support for tamper-resistant applications. The toolkit is labeled as <i>standard</i> .

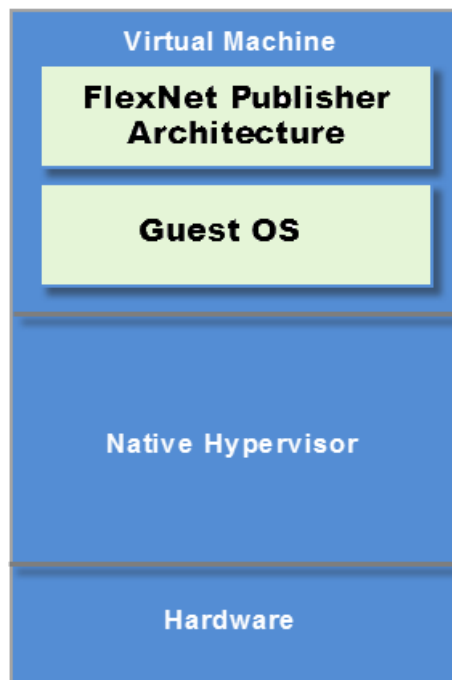
# Toolkits That Support Prepped Trusted Configuration

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

- i86\_lsb
- i86\_n3
- sun4\_u9
- sun64\_u9
- universal\_mac10
- x64\_lsb
- x64\_n6
- x64\_sun10
- x86\_sol9

## Virtualization Support

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 FlexNet Publisher supports.



Use the following table to determine the supported virtualization stacks

**Table 7** • Virtualization stack support table

FlexNet Publisher Architecture	Guest OS	Hypervisor	Host ID
i86_n, x64_n	Windows 8.1	VMware ESXi 5.5, 6.0	VM_UUID
		Citrix XenServer 6.2 and 6.5	ETHER
		VMware Workstation 11 and 12	VM_GENID
i86_n, x64_n	Windows 8.1	PARALLELS	ETHER
i86_n, x64_n	Windows 8.1	QEMU-KVM	VM_UUID
			ETHER
i86_n, x64_n	Windows 7 SP1	VMware ESXi 5.5, 6.0	VM_UUID
		Citrix XenServer 6.2 and 6.5	ETHER
		VMware Workstation 11 and 12	
		Oracle VirtualBox 4.3 QEMU-KVM	
i86_n, x64_n	Windows 7 SP1	PARALLELS	ETHER
i86_n, x64_n	Windows Server 2012	VMware ESXi 5.5, 6.0	VM_UUID
		Citrix XenServer 6.2 and 6.5	ETHER VM_GENID
i86_n, x64_n	Windows Server 2012	PARALLELS	ETHER
i86_n, x64_n	Windows Server 2012	QEMU-KVM	VM_UUID
			ETHER
i86_n, x64_n	Windows Server 2008 SP2	VMware ESXi 5.5, 6.0	VM_UUID
		Citrix XenServer 6.2	ETHER
		QEMU-KVM	
i86_n, x64_n	Windows Server 2008 SP2	PARALLELS	ETHER

FlexNet Publisher Architecture	Guest OS	Hypervisor	Host ID
i86_n, x64_n	Windows 10	VMware ESXi 5.5, 6.0	VM_GENID
		Citrix XenServer 6.2 and 6.5	ETHER
		VMware Workstation 11 and 12	
		Oracle VirtualBox 4.3 QEMU-KVM	
i86_n, x64_n	Windows 10	PARALLELS	ETHER
i86_n, x64_n	Windows 8.1	Microsoft Hyper-V from Windows 8.1	VM_GENID
	Windows 7 SP1	Microsoft Hyper-V from Windows Server 2012	ETHER
i86_n, x64_n	Windows Server 2008 SP2	Microsoft Hyper-V from Windows Server 2012	VM_GENID
	Windows Server 2012		ETHER
i86_lsb, x64_lsb	RedHat Enterprise Linux 6 SUSE Linux Enterprise 10, 11 and 12	VMware ESXi 5.5, 6.0	VM_UUID
		VMware Workstation 11 and 12	ETHER
		Citrix XenServer 6.2 and 6.5	
		QEMU-KVM	
x64_lsb	RedHat Enterprise Linux 7	VMware ESXi 5.5, 6.0	VM_UUID
		VMware Workstation 11 and 12	ETHER
		Citrix XenServer 6.2 and 6.5	
		QEMU-KVM	
i86_lsb, x64_lsb	RedHat Enterprise Linux 6 SUSE Linux Enterprise 10, 11 and 12	Microsoft Hyper-V from Windows Server 2012	ETHER
		PARALLELS	
x64_lsb	RedHat Enterprise Linux 7	Oracle VirtualBox 4.3	VM_UUID
		QEMU-KVM	ETHER

FlexNet Publisher Architecture	Guest OS	Hypervisor	Host ID
--------------------------------------	----------	------------	---------



---

**Note** • *VM\_GENID* is available from the *lc\_hostid* API, but is not available as a *HostID* keyword on the *SERVER* or *FEATURE* line

---



# Cloud Support

Use the following table to determine guest operating systems and hostids that FlexNet Publisher supports in an Amazon EC2 environment.


**Table 8** • Cloud support table..

FlexNet Publisher Architecture	Supported OS	Cloud Platform	Host ID
<b>i86_n, x64_n</b>	• Windows Server 2012 R2	Google cloud	License servers:
	• Windows Server 2012	Microsoft	VM_UUID
	• Windows Server 2008 R2 SP1	Azure	FlexEnabled clients:
	• Windows 2008 R1 SP2		ETHER
	• Windows 10		
<b>i86_n, x64_n</b>	• Windows Server 2012 R2	Amazon EC2	License servers:
	• Windows Server 2012		INTERNET (previously AMZN_EIP)
	• Windows Server 2008 R2 SP1		FlexEnabled clients:
	• Windows 2008 R1 SP2		VM_UUID (previously AMZN_IID)
	• Windows 10		
<b>i86_Isb (on x86), x64_Isb (on x64)</b>	• RedHat Enterprise Linux 6	Google cloud	License servers:
	• SUSE Linux Enterprise 10, 11, and 12	Microsoft Azure	VM_UUID FlexEnabled clients: ETHER



**Note** •

- Google Cloud has experimental support, and is detected as *GOOGLE COMPUTE*
- Google Cloud, Amazon EC2 and Microsoft Azure can all use *VM\_UUID* or *ETHER*. *VM\_UUID* is equivalent to *AMZN\_IID* on EC2, *Google Instance ID* on Google and *SMBIOS UUID* on Azure
- For Linux certificate applications, the *Linux FlexNet Licensing Service* needs to be installed for Azure detection to occur.

FlexNet Publisher Architecture	Supported OS	Cloud Platform	Host ID
<b>i86_Isb (on x86), x64_Isb (on x64)</b>	<ul style="list-style-type: none"> <li>• RedHat Enterprise Linux 6 and 7</li> <li>• SUSE Linux Enterprise 10, 11, and 12</li> </ul>	Amazon EC2	License servers: AMZN_EIP FlexEnabled clients: AMZN_IID
			 <p><b>Note</b> • <i>AMZN_IID and AMZN_EIP are deprecated, instead use VM_UUID and INTERNET</i></p>

# System Requirements for Imadmin

The following sections describe supported platforms and requirements for Imadmin:

- [Supported Platforms](#)
- [Supported Browsers](#)



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

## Supported Platforms

Imadmin can be run on the following platforms.

**Table 9** • Platform Support for Imadmin

Platform Architecture	Processor Type	Operating System
<b>AIX 32-bit</b>	PowerPC	AIX 6.1, and 7.1
<b>AIX 64-bit</b>	PowerPC	AIX 6.1, and 7.1
<b>Linux 32-bit</b>	x86	Certified with the following: <ul style="list-style-type: none"><li>• RedHat Enterprise Linux 6 and 7</li><li>• SUSE Linux Enterprise 10, 11, and 12</li></ul>
<b>Linux 64-bit</b>	x86-64	Certified with the following: <ul style="list-style-type: none"><li>• RedHat Enterprise Linux 6 and 7</li><li>• SUSE Linux Enterprise 10, 11, and 12</li></ul>
<b>Microsoft Windows 32-bit</b>	x86	<ul style="list-style-type: none"><li>• Windows 8.1</li><li>• Windows 8</li><li>• Windows Server 2008 R2</li><li>• Windows Server 2012 R2</li><li>• Windows 7</li><li>• Windows 10</li></ul>

**Table 9** • Platform Support for Imadmin

Platform Architecture	Processor Type	Operating System
<b>Microsoft Windows 64-bit</b>	x64	<ul style="list-style-type: none"><li>• Windows 8.1</li><li>• Windows 8</li><li>• Windows Server 2012 R2</li><li>• Windows Server 2008 R2</li><li>• Windows 7</li><li>• Windows 10</li></ul>
<b>Apple OS 32-bit</b>	x86	Apple OS X 10.7, 10.8, 10.9, 10.10 and 10.11
<b>Apple OS 64-bit</b>	x64	Apple OS X 10.7, 10.8, 10.9, 10.10 and 10.11
<b>Solaris 32-bit</b>	<ul style="list-style-type: none"><li>• x86</li><li>• SPARC 32-bit</li></ul>	Solaris 10, and 11
<b>Solaris 64-bit</b>	<ul style="list-style-type: none"><li>• x64</li><li>• SPARC 64-bit</li></ul>	<ul style="list-style-type: none"><li>• Solaris 10 and 11 (on SPARC 64)</li><li>• Solaris 10 and 11 (on x64)</li></ul>



**Note** • For non-Windows 64-bit platforms use the 32-bit Imadmin installers provided in the Imadmin folder of the toolkits. For Windows 64-bit, use the 64-bit Windows Imadmin installer.

## Additional System Requirements

Imadmin has these additional requirements:

- Linux 32-bit libraries, required by Imadmin, are not automatically installed with RedHat Enterprise Linux 6 (64-bit). You must manually install these libraries on this operating system. Refer to the RedHat Enterprise Linux documentation for details.
- To use Imadmin on Windows platforms, the Microsoft Visual C++ 2008 Redistributable Package (x86) must be installed. You have an option to install this package during the FlexNet Publisher License Server Installer process.

## Supported Browsers

Imadmin is supported on the following Web browsers:

- On RedHat Linux, Mozilla Firefox 10, 12 and 18.x, Google Chrome 24.x
- On Windows, Microsoft Internet Explorer 11

- On Apple OS X, Apple Safari 5.0 and 5.1.7
- Microsoft Edge is supported for Windows 10

# Known Issues

## General Issues

### Partial Checkout Known Limitations

1. Not supported with MAX options keyword. Checkout denial with error LM\_MAXLIMIT or LM\_MAXLIMIT\_EXCEED would occur for COAVAIL checkouts if available license count is greater than MAX (FNP-14218).
2. LM\_CO\_AVAIL\_NOWAIT flag is not supported with DUP\_GROUP, when used error code LM\_COAVAIL\_UNSUPPORTED gets reported.
3. LM\_CO\_AVAIL\_NOWAIT checkout option flag is not supported with PACKAGE keyword, when used error code LM\_COAVAIL\_PACKAGE\_NOT\_SUPPORTED gets reported.
4. LM\_CO\_AVAIL\_NOWAIT is not supported with borrow checkout. The limitation lies when the first COAVAIL checkout does partial license consumption and the subsequent COAVAIL checkout is issued to consume rest of required licenses from server. In this case, the subsequent COAVAIL checkout yields an incorrect CONFIG type and an incorrect available license consumption count (FNP-14028).
5. LM\_CO\_AVAIL\_NOWAIT flag is supported in C clients only and not supported in Java clients.
6. The LM\_CO\_AVAIL\_NOWAIT checkout cannot be combined with checkouts made with checkout option flags other than LM\_CO\_NOWAIT in the same license job. Note that checkouts of LM\_CO\_AVAIL\_NOWAIT and LM\_CO\_NOWAIT could be made interchangeably in the same license job.

(FNP-14219)

### Inappropriate certificate borrow behavior when some features are substrings of other features

When some feature names are subsets of others, license leakage can occur. An example is:

- Borrow feature f1
- Borrow feature f12
- Return f1
- Perform checkout of f1

Correct behavior: client attempts to check out f1 from a license server, not from client-side borrow cache

Current behavior: client checks out f1 from client-side borrow cache. And f12 can subsequently also be checked out from client-side borrow cache.

- Return f12
- Perform checkout of f12
- Correct behavior: client attempts to check out f12 from a license server.
- Current behavior: client checks out f12 from client-side borrow cache.

There is no workaround apart from avoiding borrowable feature names that are substrings of other borrowable feature names (FNP-14099, FNP-14331).

## PACKAGE line displays linger state

PACKAGE shows active linger period even after a successful borrow return, if followed by a server restart. As a prerequisite, edit the license file:

```
SUITE_RESERVED in PACKAGE line and SUITE_DUP_GROUP in INCREMENT/FEATURE line.
PACKAGE pkg1 <vendor_name> <version> COMPONENT= <XXXXXX> OPTIONS = SUITE_RESERVED
SIGN=XXXX
FEATURE pkg1 <vendor_name> <version> <expiration_date> SUITE_DUP_GROUP= {U/H/D/V}
BORROW SIGN=YYYY
```

Procedure to reproduce the issue:

1. Borrow a component.
2. Do the return early.
3. Restart the server.
4. Run lmstat.exe, shows the linger period for PACKAGE.

Workaround: No effective workaround recommended yet. (FNP-14398)

## Unable to return borrowed checkout from the same user but different displays

When you do a borrow checkout with an Override option, while returning the borrowed license without specifying the version removes all the entries of the specified feature from the client side borrow cache. Hence, as a workaround it is recommended to specify the version number of the borrowed feature during early return (FNP-11836).

Example:

```
Imborrow -return [-c licfile] [-d display_name] [-u username] [-h hostname] [-fqdn] [-vendor name]
feature [-bv version]
```

## Early return borrow feature cache not being cleared

when a feature is borrowed and on early return, the entries in the server cache are not getting cleared. Due to which, on restarting the server the feature status is shown as checkout. when you return the feature it throws an -123 error. This happens only when the virtualization bits in the vendor keys are disabled. As a workaround use the vendor keys with virtualization enabled (FNP-14352).

## UMN3 and VM\_UUID not available from guests of Citrix XenServer

Citrix has issued hot fixes for the 6.1 and 6.2 releases of XenServer (XS61E046 and XS62ESP1026 respectively). Without these hot fixes Linux virtual machines running on the XenServer platform may fail to generate a VM\_UUID or UMN3 value (FNP-11036).

## Checkout performance delay on Mac OS X with '.local' domain

If port@IPv6 license path is used with '.local' domain on Mac OS X, the OS X client may experience a checkout delay of up to 20 seconds.

It is recommended to use port@hostname or port@IPv4 on Mac OS X clients (FNP-11065).

## Issue with OPTION=SUITE\_RESERVED after Imrread

If the PACKAGE line in a license file is modified to use SUITE\_RESERVED and Imrread is used to have the vendor daemon use the updated license file, then the expected behavior is that a PACKAGE components is checked out then the other PACKAGE components are not RESERVED.

As a workaround:

1. Restart the server after modifying the license file, instead of using Imrread.
2. Modify the information in the PACKAGE enabling FEATURE line such that the signature of this FEATURE line changes.

(FNP-10271)

## AMZN\_EIP HostID not functional

The AMZN\_EIP HostID, although extracted from Imhostid correctly, will always inappropriately be invalidated at runtime and cause the vendor daemon to shut down. This will be fixed in a future release (FNP-11880).

## Enterprise License Server - automatic re-read

In some circumstances it is possible that a change in Trusted Storage (e.g. activation or return) may not be actioned by the license server on automatic re-read. This includes but may not be limited to the case where two changes occur in the same interval between re-reads. This bug has been present since the introduction of ls\_ts\_update\_poll\_interval.

As a workaround perform an Imrread (manual reread) if more than one transaction (activation or return) is performed in one ls\_ts\_update\_poll\_interval period (default 10 minutes) or if you suspect that the license server is not serving licenses that you have recently activated (FNP-11058).

## appactutil sample activation application

For enterprise license server activations, if the server name is "@localhost" and no expiration is specified then a default expiration of 31-Dec-2020 is used. This will result in the activation failing if the server fulfillment expires earlier than that.

As a workaround:

Specify the port number, e.g. "27000@localhost" or,

Specify a valid expiration or,

Modify the source of the sample and rebuild the kit:

Change line 1387 of `examples/activation/appactutil.c` from

```
    if (0 == strcmp(g_pszCommServer, "@localhost"))  
to  
    if (g_bGenerateOnly)
```

(FNP-14200)

## Short codes high response signing strength option

Issues have been observed on some **Centos 6.x** machines such that when processing responses using high signing strength short code ASRs the response signature does not verify, for example:

```
Processing response: 724787-679528-246229-126106-086574-666273-988610-808806-754307-  
615118-206594-918952-021584-487642-346091-548775-833009-503936-213750  
Short code response processing failed...  
ERROR: API function failed (50058,61132,10283)  
The shortcode response signature did not verify (response entered incorrectly.or  
response is not for the pending request on this machine).  
Exit(1) error in command line.
```

At the time of writing this issue has not been fully scoped. Please contact Flexera before distributing short code ASRs with high signing strength (FNP-14533).

## Vendor Data in Short Code Responses

Although this is supported by FlexNet Publishers, users of FlexNet Operations should check for the resolution of issue FNO-19064 (custom attributes cannot be added to short code responses at fulfillment time).

## Unexpected error when processing a composite response from FlexNet Operations.

An error has been observed for transactions with Flexnet Operations versions earlier than 2016 R2 when FlexNet Operations denies a return request.

```
ERROR: API function 60041 failed, result 51412
```

Recommendations:

Check the FlexNet Operation release notes for information on the resolution of this issue.

Check the FlexNet Operation returns policy to see whether a deny is expected.

Cancel the composite request to re-enable the returned fulfillment (FNP-14229)



# Dongle Issues

## FLEXID10 memory leak

A cumulative memory leak on license server which is node locked to FLEXID 10 may occur on every heartbeat from the server, or at the client side on every checkout request (FNP-13944).

## FLEXID hostids for license servers in virtual machines

Flexera is aware of one customer issue with the following configuration: FLEXID9 dongle; ESXi 5.5 hypervisor (making dongle available to guest OS through USB passthrough); Linux Guest; License server running in Linux guest uses FLEXID9 SERVER-line hostid. With this configuration, this customer has seen hostid extraction from the dongle consistently fail after an extended period of use.

Flexera does not recommend using FLEXID hostid for license servers running in virtual machines. This is because

1. There are two separate third-party layers where an issue could occur: the dongle driver and the hypervisor USB-passthrough feature. Bugs in either of these layers are beyond Flexera's control for resolving timeously.
2. Using a dongle prevents automated migration of the license server to alternative hardware.

(FNP-10283)

## Error message during installation and uninstallation of Wibu driver

Unintended error or information messages are observed while installing and uninstalling the Wibu dongle driver. These messages are benign and should be ignored.

Error messages:

### Installation:

```
>> sudo rpm -ivh wkRt-Lin64-6.30.1454-500.x86_64.rpm
Preparing... ##### [100%]
1:wkRt-Lin64 ##### [100%]
```

### Uninstallation:

```
>> sudo rpm -ev wkRt-Lin64-6.30.1454-500.x86_64
Stopping wibukey wkLAN Server: (not running) [ OK ]
```

(FNP-10683)

# Imadmin or Imgrd Issues

## Imadmin Silent Installer Not Displaying Required Error Message

When a non-root user attempts to install Imadmin in the default location, the installer can hang (FNP-6942)

## Imadmin shutdown error in Mac

when you try to shut down Imadmin server using Imdown utility "Shutdown is not enabled for the client" error is displayed.

As a workaround it is recommended to use any one of the methods: (FNP-14592)

- Set FNP\_IP\_PRIORITY = 6 and execute Imdown, if this option fails then,
- Set FNP\_IP\_PRIORITY=4 and re-run Imdown

## Microsoft Edge browser support limitation on Imadmin

Microsoft Edge Browser is unable to connect to Imadmin running locally on the same Machine because of the loopback being blocked for applications running in AppContainer as they are not allowed to make connections to locally-running processes outside of their own package (FNP-10791).

## Installing Imadmin as a service on Windows with multibyte characters in the install path

Imadmin may not run correctly if installed as a service to a path with multibyte characters (FNP-11879).

## Issues in Imadmin LDAP Error messages

- In case of an invalid IP address for LDAP Connection, an error message is thrown in a code format rather than displaying in an error message format. As a workaround, goto `Imadmin/web/string/en/default.xml` and remove the trailing white space under after DOWN and before "from the below mentioned line:

```
<s id="ERROR_AD_LDAP_SERVER_DOWN ">LDAP Server is Down.</s>
```

(FNP-14380)

- In case if the ldap BaseDN value is invalid, currently a referral error is thrown in the Imadmin GUI which must be "No such user name exists in DOMAIN\USER" error (FNP-14541)

## When running Imgrd-as-a-service or Imadmin-as-a-service from a Windows 10 non-admin

This issue arises after using `Imadmin.exe -installService <service name>` and `installs.exe` or `Imtools` to configure a license server to run as a windows service on Windows 10. When attempting to start the service from a User-privilege account, a `-5 'access is denied'` error may occur. This is because the folder in which the service is installed does not have 'Local Service' privileges.

- To prevent this error, ensure all files which Imadmin (or Imgrd or the vendor daemon) update at runtime are stored in subdirectories of the windows ProgramData folder.
- For Imadmin, this can be specified with the Imadmin configDir, cacheDir, logDir and uploadDir parameters.
- For Imgrd, ensure the debug log location is specified in a subfolder of ProgramData.
- Similarly, the report log location should be specified in a subfolder of ProgramData.

(FNP-10910)



# Issues Specific to Trusted-Storage-Based Licensing

## Vendor daemon activation memory leak

In FlexNet Publisher 2014 R2 (11.13.0), a memory leak was introduced in the vendor daemon. This leak occurs only when servicing activation requests from clients, and therefore applies only to a vendor daemon serving licenses from trusted storage. Every activate & return pair of transactions would previously cause a memory creep of approximately 70 Kb (FNP-10620). Whilst this leak has been almost entirely eliminated a minor leak of approximately 0.04 Kb per activate & return pair of transactions remains (FNP-10984).

## Composite transaction returns and repairs from virtual platforms fail against FlexNet Operations

Return or repair composite transaction (as generated by appcomptranutil or servercomptranutil) made from a virtual platform may be denied, and processing of the response may additionally fail with a 51412 error.

This issue was introduced in FlexNet Operations 2014 SP2 as a consequence of deprecating virtualization transaction keys (FNO-13426), but is resolved in a FlexNet Operations 2014 SP2 Hotfix. Customers performing composite transaction returns and repairs from virtual platforms should request the FNO-15650 hotfix of FlexNet Operations 2014 SP2 (FNP-11055, FNO-15597, and FNO-15650).

## Borrow activation to a Linux client causes crash

**flxActBorrowActivate** function crashes when server Trusted Storage contains an INCREMENT line before a PACKAGE line (FNP-10437).



**Note** • only producer-customized back offices can provide licenses with this configuration.

## Unable to cancel short code request using appcomptranutil and servercomptranutil

This issue occurs only with the sample applications, the API works fine. due to which the pending short code is displayed but not cancelled and no error message is given, for example

```
kit>appcomptranutil.exe -shortcode publisher\xml\ShortCode2016High.asr -
cancelShortCodeRequest
Pending request code: 846114-318671-807560-652792-164678-134251-125696-527352
                    type: ACTIVATION
Cancel the pending request code? Enter "yes" or "no": yes
kit>
```

Here is a workaround:

1. Modify the sample source file `compTranUtilShortCodes.c` and rebuild the kit. Replace lines 150 to 180 with

```
/* Display any pending request - we do this regardless of the action specified */
```

```

bIsPendingRequest = sIsPendingRequest(pContext);
if (bIsPendingRequest)
    sPrintPendingRequest(pContext, "Pending");
/* Handle the action - Cancel is specific to short code so check that first */
if (flxCtuContextHasCommand(pContext, CMD_CANCEL_SHORTCODE))
{
    /* Cancel the request if there is one, otherwise report an error. */
    if (bIsPendingRequest)
    {
        bSuccess = sDoCancelRequest(pContext);
    }
    else
    {
        flxCtuCommandPrintError(pCommand, "no pending request to cancel\n");
        bSuccess = FLX_ACT_FALSE;
    }
}
else if (flxCtuGetFirstRequestAction(pContext, &pActionCommand))
{
    const char* pCommandName = flxCtuCommandGetName(pActionCommand);

    if (!sSetVendorData(pContext, pActionCommand))
    {
        bSuccess = FLX_ACT_FALSE;
    }
    else if (bIsPendingRequest)
    {
        /* Actions create new requests and because only one request can be pending for
a given ASR it is an error if there already is one.*/
        flxCtuCommandPrintError(pCommand,
            "there is a pending short code request for this ASR.\n"
            "To create a new request, first cancel the pending request\n"
            "using the -cs action.\n");
    }
}
}

```

2. For client TS requests only, use appactutil to cancel the request

```

kit>appactutil -shortcode publisher\xml\ShortCode2016High.asr -cancel
Successfully cancelled pending short code for publisher\xml\ShortCode2016High.asr
kit>

```

(FNP-14339)

## Java Issues

### Java client cannot checkout from three-server when SERVER line uses INTERNET HostID.

A Java client will fail to checkout a license (with a -510 error) from a three-server when the server uses *INTERNET* as HostID (FNP-11064).

## Limitation of Queuing in Java Clients

When a Java client is set to queuing with `Synch_queue` option, the clients get queued even when there are no licenses available while it waits for `SOCKET_READ_TIMEOUT` for 20 seconds. The licenses get dequeued incase there is no response from the server, then exits throwing `LM_CANTRECEIVE FlexlmException` (FNP-11414).

# Deprecated Features and Commands

## In release 11.14.0

Deprecated features and commands from FlexNet Publisher 2016 (11.14.0), (11.13.1), and (11.13.0) release are listed in the given table.

**Table 10** • List of deprecated features and commands

Deprecated Features and Commands	Comments
SIGN2 Keyword	SIGN2 keyword is deprecated and it will be supported until 2018.
License Generator toolkit	License generator Toolkit is deprecated.
PLATFORMS keyword	Platforms keyword is deprecated from FlexNet Publisher 2015 (11.13.1).
AMZN_IID and AMZN_EIP	Replaced by VM_UUID and INTERNET
HPV_UUID / VMW_UUID	Replaced by the generic VM_UUID
Lmbind & LMB_* hostids	Virtualization solutions are moving away from a widget installed on a physical machine. Lmbind is no longer packaged with FlexNet Publisher archives.  Lmbind sections have been removed from 11.13.0 documentation
VMW_*, HPV_ & PHY_* hostids	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), or PHY_ETHER (requiring a physical platform)
Non trial-id trial ASRs	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.

Deprecated Features and Commands	Comments
license keys & non-trl licensing	License keys have been documented as obsolete for several years. They are easily cracked. Flexera strongly recommends that new license files use SIGN= and trl-strength signatures.
CVD (Common Vendor Daemon)	Other than for producers who have legacy licensing applications using CVD, this feature is no longer supported. Consequently CVD sections have been removed from 11.13.0 documentation.
Decimal licenses and lc_convert API	Decimal licenses are deprecated. Consequently sections on decimal licenses and the <b>lc_convert</b> API have been removed from 11.13.0 documentation.