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Driver Installation Guide
for FlexNet ID Dongles

Legal Information

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1

FlexNet ID Dongles

FlexNet ID Dongle

This manual describes how to install the drivers required on systems where FlexNet ID dongles are used to anchor license rights to a machine.

Table 1-1 • Chapter topics and contents

Topic	Content
FlexNet ID Dongles	Provides an overview of this manual and includes details of new features in this release.
Introduction	An introduction to FlexNet ID dongles.
Installing Dongle Drivers on Windows	Instructions for installing the dongle drivers on Windows platforms.
Installing Dongle Drivers on Mac	Instructions for installing the dongle drivers on Mac.
Installing Dongle Drivers on Linux	Instructions for installing the dongle drivers on UNIX platforms.
Testing the Dongle Driver Installation	How to test that a dongle driver is installed correctly.
FlexNet ID Dongle FAQ and Troubleshooting	Provides few FAQs and troubleshooting scenarios.

2

Introduction

About FlexID Dongles

A FlexNet ID dongle is a hardware device which locks FlexNet license rights to the machine to which the dongle is attached. Each FlexNet ID dongle contains a unique identity. This identity is used to provide a hostid. (This hostid type is referred as a *FLEXID*) The `FLEXID` can be used to lock license rights to either a server or an end-user machine.

FlexNet dongles are normally used with license rights that are held in license files, and this document assumes that this is the case in all examples.

For the FlexNet dongle to communicate with the computer it is attached to, the appropriate drivers must be installed on the computer. Drivers are specific to a given platform and operating-system version. Therefore, you might need to download and provide updated drivers for existing products when new operating-system versions are released. The latest drivers are packaged with the current release version of the FlexNet Publisher Licensing toolkits and are also available from specific download Flexera Software sites.

You must always install the drivers for the FlexNet ID dongles using the files provided by Flexera Software. Do not install drivers from any other source (for example, from an automatic search and download).

Purpose of This Guide

This document describes how to install the FlexNet dongle drivers and test their operation:

- Installing Dongle Drivers on Windows
- Installing Dongle Drivers on Mac
- Installing Dongle Drivers on Linux
- Testing the Dongle Driver Installation

Further information on using FlexNet dongles is provided in the documentation supplied with your Licensing toolkit. Depending on the version of the toolkit you are using, information about FlexNet dongles is provided in the following FlexNet Publisher documents:

- *Programming Reference for License File-based Licensing*
- *C/C++ Function Reference*

The HostID keywords are:

- FLEXID – The license server does not check for virtualization when attempting to extract the FLEXID. Normally it means a physical machine, but could also mean a virtual machine where the hypervisor supports USB pass-through. For VMWare USB dongle pass-through support, refer http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=1021345

Supported FlexNet ID Dongles

The following table lists the FlexNet ID dongles, the platforms on which they can be used, the hostid keywords, and the name of the driver installation files.

Table 2-1 • FlexNet ID Dongles: Platform Support

Operating System	Manufacturer and Device and Hostid Keyword	Driver Installation File
Mac OS X 32-bit and 64-bit (x86 and x64 hardware) • 10.6 • 10.7 • 10.8	SafeNet(FLEXID=9): • HASP 4 M1 and HASP HL Pro USB memory keys • HASP HL Drive	`FLEXID9_OSX_V6_62.dmg`
Mac OS X 32-bit and 64-bit (x86 and x64 hardware) • 10.6 • 10.7 • 10.8	Wibu Systems AG WibuKey (FLEXID=10)	`FLEXID10_OSX_6.11.500.dmg`

Table 2-1 • FlexNet ID Dongles: Platform Support

Operating System	Manufacturer and Device and Hostid Keyword	Driver Installation File

Microsoft Windows 32-bit and 64-bit
(x86 and x64 hardware)
• Server 2008, 2008 R2, and 2012
• Vista
• Windows 7 and 8
	SafeNet (FLEXID=9):
	• HASP 4 M1 and HASP HL Pro USB memory keys
	• HASP HL Drive
		32 bit:
		`FLEXID9_Windows_v6_63_i686.zip`
		64-bit:
		`FLEXID9_Windows_v6_63_x64.zip`

Note • *FLEXID 9 dongles on all Windows platforms use the SRM driver (version 7.0).*		

Microsoft Windows 32-bit and 64-bit
(x86 and x64 hardware)
• Server 2008 and 2012
• Vista
• Windows 7 and 8
	Wibu Systems AG
	WibuKey (FLEXID=10)
		32 bit:
		`FLEXID10_Windows_v6_11_i686.zip`
		64-bit:
		`FLEXID10_Windows_v6_11_x64.zip`

RedHat and SUSE Linux 32-bit and 64-bit (x86 and x64 hardware) • RedHat 5.8 and 6.2 • Up to SUSE 12.1	SafeNet (FLEXID=9): • HASP 4 M1 and HASP HL Pro USB memory keys • HASP HL Drive	**32 bit:** `aksusbd-redhat-suse-2.4.1.tar.gz` **64 bit:** `aksusbd-redhat-suse-2.4.1.tar.gz`

Red Hat and SUSE Linux 32-bit and 64-bit
(x86 and x64 hardware)
• RedHat EL 4.*x*, 5*x*, 6.*x*
• SUSE 9.*x*, 10.*x*, 11.*x*
	Wibu Systems AG
	WibuKey (FLEXID=10)
		32 bit:
		`WkRt-Lin-6.11.1057-500.i386.rpm`
		64-bit:
		`WkRt-Lin64-6.11.1057-500.x86_64.rpm`

Note • *Up to three WibuKey dongles per machine are supported.*		

Mapping of Previous Installers to Current Installer

Use the following table as a reference for mapping FLEXID dongle installers.

Table 2-2 • Mapping of Previous FlexNet ID Dongle Installers to Current

Operating System	FLEXID Type	Installer Change	Installer With FlexNet Publisher 11.12.0	Installer With FlexNet Publisher 11.12.1	Installer With FlexNet Publisher 11.13.0 and later
Mac OS X 32-bit and 64-bit	FLEXID9	Yes	`FLEXID9_OSX_V6_40.dmg`	`FLEXID9_OSX_V6_60.dmg`	`FLEXID9_OSX_V6.62.dmg`
Mac OS X 32-bit and 64-bit	FLEXID10	No	`FLEXID10_OSX_6.0.501.dmg`	`FLEXID10_OSX_6.11.500.dmg`	`FLEXID10_OSX_6.11.500.dmg`
Microsoft Windows 32-bit	FLEXID9	No	`FLEXID9_Windows_v6_51_i686.zip`	`FLEXID9_Windows_v6_60_i686.zip`	`FLEXID9_Windows_v6_63_i686`
Microsoft Windows 64-bit	FLEXID9	No	`FLEXID9_Windows_v6_51_x64.zip`	`FLEXID9_Windows_v6_60_x64.zip`	`FLEXID9_Windows_v6_63_x64`
Microsoft Windows 32-bit	FLEXID10	Yes	`FLEXID10_Windows_v6_11_i686.zip`	`FLEXID10_Windows_v6_11_i686.zip`	`FLEXID10_Windows_v6_11_i686`
Microsoft Windows 64-bit	FLEXID10	Yes	`FLEXID10_Windows_v6_11_x64.zip`	`FLEXID10_Windows_v6_11_x64.zip`	`FLEXID10_Windows_v6_11_x64`
RedHat and SUSE Linux 32-bit	FLEXID9	yes	`aksusbd-redhat-suse-6.50.rpm`	aksusbd-redhat-suse-2.2.1.tar.gz	aksusbd-redhatsuse-2.4.1.tar.gz
RedHat and SUSE Linux 64-bit	FLEXID9	yes	`aksusbd-redhat-suse-6.50.rpm`	aksusbd-redhat-suse-2.2.1.tar.gz	aksusbd-redhatsuse-2.4.1.tar.gz
RedHat and SUSE Linux 32-bit	FLEXID10	yes	`WkRt-Lin-6.0.501-1.i386.rpm`	`WkRt-Lin-6.11.1057-500.i386.rpm`	`WkRt-Lin-6.11.1057-500.i386.rpm`
RedHat and SUSE Linux 64-bit	FLEXID10	Yes	`WkRt-Lin64-6.0.501-1.x86_64.rpm`	`WkRt-Lin64-6.11.1057-500.x86_64.rpm`	`WkRt-Lin64-6.11.1057-500x86_64.rpm`

Multiple Dongle Support

Multiple dongles supported across platforms for 11.13.0 release. The following table indicates whether a platform supports single or multiple dongles.

Table 2-3 • Multiple Dongle support

Dongle Provider	Platforms	Support Information in 11.12.0	Support Information in 11.12.1	Support Information in 11.13.0
FLEXID10	Windows 32 and 64 bit	Multiple	Multiple	Multiple
	Linux 32 and 64 bit	Multiple	Multiple	Multiple
	MAC 32 and 64 bit	Multiple	Multiple	Multiple
FLEXID 9	Windows 32 bit	Multiple (one HASP4 + multiple HASP HL)	Multiple (one HASP4 + multiple HASP HL)	Multiple (one HASP4 + multiple HASP HL)
	Windows 64 bit	Multiple (one HASP4 + multiple HASP HL)	Multiple (one HASP4 + multiple HASP HL)	Multiple (one HASP4 + multiple HASP HL)
	Linux 32 bit	Multiple (multiple HASP4 + multiple HASP HL)	Multiple (one HASP4 + multiple HASP HL)	Multiple (one HASP4 + multiple HASP HL)
	Linux 64 bit	Single (HASP4 or HASP HL)	Multiple (one HASP4 or multiple HASP HL)	Multiple (one HASP4 or multiple HASP HL)
	Mac 32 bit	Multiple (multiple HASP + multiple HASP HL)	Multiple (one HASP + multiple HASP HL)	Multiple (one HASP + multiple HASP HL)
	Mac 64 bit	Single (Hasp4 or HASP HL)	Multiple (one Hasp4 or multiple HASP HL)	Multiple (one Hasp4 or multiple HASP HL)

Dongle Installers and Shared object

We are now dynamically linking to SafeNet shared objects on OS X and Linux, and the installation consequences are discussed in the table that follows:.

Table 2-4 • Installers and shared objects

Platform	version	Installers	DLL or Shared Objects packaged	Manually copy the shared object to system folder
Windows 32bit	7.1	FLEXID9_Windows_v6_63_i686.zip	Yes- haspsrm_win32.dll hasp_rt.exe (copy the hasp_rt.exe to the same folder of FNP protected application.)	Yes-(C:\Windows\System32 on machine with 32-bit OS) (C:\Windows\SysWOW64 on machine with 64-bit OS)
Windows 64bit	7.1t	FLEXID9_Windows_v6_63_x64.zip	Yes-haspsrm_win64.dll hasp_rt.exe (copy the hasp_rt.exe to the same folder of FNP protected application.)	Yes-(C:\Windows\System32)
Linux 32bit	7.1	aksusbd-redhat-suse-2.4.1.tar.gz	Yes-libhasp_linux_i686.so	Yes-(/usr/lib/)
Linux 64bit	7.1	aksusbd-redhat-suse-2.4.1.tar.gz	Yes-libhasp_linux_x86_64.so	Yes-(/usr/lib/)
Universal Mac	7.1	FLEXID9_OSX_V6.62.dmg	Yes-hasp_darwin.dylib	Yes-(/usr/lib/)
Windows 32bit	6.11	FLEXID10_Windows_v6_11_i686.zip	No-WkWin32.dll	No-(C:\Windows\System32)
Windows 64bit	6.11	FLEXID10_Windows_v6_11_x64.zip	No-WkWin64.dll	No-(C:\Windows\System32)
Linux 32bit	6.11	WkRt-Lin-6.11.1057-500.i386.rpm	No-libwklin.so	No-(/usr/lib/)
Linux 64bit	6.11	WkRt-Lin64-6.11.1057-500.x86_64.rpm	No-libwklin64.so	No-(/usr/lib/)
Universal Mac	6.11	FLEXID10_OSX_6.11.500.dmg	No-libwkextmac.dylib	No-(/usr/lib/)

The dongle dlls can be used in two ways:

1. You can manually copy the dlls to system32/sysWOW64 folders.
2. Or you can set the newly introduced environment variable **FLEXID_LIBRARY_PATH** to specify the location of the dongle library path.

When **FLEXID_LIBRARY_PATH** environment variable is not set the default location for the dongle library would be:

- c:\windows\system32
- c:\windows\sysWOW64
- /usr/lib

On windows, we support ";" (Semicolon) and "," (comma) as a separator.

Note • *If the **FLEXID_LIBRARY_PATH** exceeds 255 characters one of the following error message is displayed:*

- *The "FLEXID_LIBRARY_PATH" path for Wibu exceeded the max limit of 255 characters!*
- *The "FLEXID_LIBRARY_PATH" path for Aladdin exceeded the max limit of 255 characters!*

For example: `FLEXID_LIBRARY_PATH =C:\flexlm\test1,C:\temp\flexlm\v11.12.1.2;C:\fnp\v11.13.0.0`

On Linux, we support ":" (Colon) and "," (Comma) as separator.

For example: `FLEXID_LIBRARY_PATH =/var/tmp,/usr/lib:/home/user/demo,.:/tmp`

3

Installing Dongle Drivers on Windows

Where To Start

If you are installing FlexNet ID dongle drivers for the first time on a machine, use the instructions in Install or Remove Current Dongle Drivers.

If you are replacing older drivers (previous to FlexNet Publisher 11.11.1) with the current versions, best practice is first to remove the older drivers as described in Remove Pre-11.11.1 Dongle Drivers; then install the new drivers as described in Install or Remove Current Dongle Drivers.

If you have installed a current driver and want to remove it, follow the instructions in Install or Remove Current Dongle Drivers.

Remove Pre-11.11.1 Dongle Drivers

For instructions to remove FlexNet ID dongle drivers installed previous to FlexNet Publisher 11.11.1, select the specific pre-11.11.1 installer used to install the drivers:

- Uninstall Using FLEXID_Dongle_Driver_Installer.exe
- Uninstall Using FLEXIDInstaller.exe

Caution • *If any of the dongle drivers were updated by Windows Update, remove them using only tools provided by the dongle manufacturer. See the dongle manufacturer's Web site for details.*

Uninstall Using FLEXID_Dongle_Driver_Installer.exe

Task: ***To remove (uninstall) dongle drivers installed with the FLEXID_Dongle_Driver_Installer.exe***

1. At a command prompt from the directory where the driver installer resides, run the following command:

   `FLEXID_Dongle_Driver_Installer.exe /remove`

2. Select the dongle drivers to uninstall, and click **Next**.

Note • *You have the option to use the command line to uninstall these drivers. You must do so in silent mode (for example,* `FLEXID_Dongle_Driver_Installer.exe /s /remove`*).*

Uninstall Using FLEXIDInstaller.exe

Use the following method to remove dongle drivers installed by `FLEXIDInstaller.exe`.

Task: ***To remove dongle drivers installed by FLEXIDInstaller.exe***

Access **Add or Remove Programs** (or the appropriate tool) from your Windows Control Panel, select the dongle drivers to remove, and click **Uninstall**.

Install or Remove Current Dongle Drivers

Cautions

Do the following:

- Install the driver file before plugging the dongle in to your machine. Plugging in the dongle before installing the driver can cause an automatic search for driver files. The driver files found by an automatic search might not be compatible with FlexNet ID dongle.
- Use the methods described in this section to install the current versions of the dongle drivers. Do not allow Windows Update to install these drivers. Such an update can lead to unpredictable behavior of the dongles with FlexNet Licensing software.
- When using the command line (instead of the user interface) to install or remove a driver, you must use the silent mode.

Obtain the FLEXID Dongle-Driver Installer

Task: ***To obtain the FLEXID dongle-driver installer***

1. Locate the `.zip` file for the appropriate Windows dongle-driver installer within your FlexNet Publisher licensing toolkit; or download the installer from the FlexNet Publisher download site. (For example, publishers download from the Flexera Software Product and License Center: https://flexerasoftware.flexnetoperations.com. End-users should contact Flexera Software for the appropriate download site.)

   For a list of available dongle-driver installers, see Chapter 2, "Introduction."

2. Decompress the file.

Install or Remove FLEXID9 Drivers

The following procedures install or remove FLEXID9 (SafeNet) 32-bit or 64-bit dongle drivers.

Important • *FLEXID command-line options are case-sensitive.*

Install FLEXID9 Drivers

Use either procedure to install a 32-bit or a 64-bit FLEXID9 driver. One procedure invokes a user interface for the installation process; the other performs a silent installation via the command line.

Task: ***To install the driver using the supplied user-interface***

At a command prompt from the directory where the dongle-driver installer resides, enter the following:

```
haspdinst.exe -i
```

Task: ***To install the driver silently using the command line***

At a command prompt from the directory where the dongle-driver installer resides, enter the following:

```
haspdinst.exe -i -nomsg
```

Important • *The new Safenet external license manager (**hasp_rt.exe**) is now required to be placed in the same folder of FNP dongle protected applications (including lmhostid, vendor daemon, lmtools and lmadmin). If **hasp_rt.exe** does not exist in the same folder, an unexpected Safenet error dialog, referring to the SafeNet '`hasp_c1eanup`' API may appear when FLEXID9 Safenet runtime driver is not installed on the machine, but, the dynamic library (`haspsrm_*.d11`) is copied to `system32/syswow64` folder. Refer to Dongle Installers and Shared object.*

Remove FLEXID9 Drivers

Use either procedure to remove a 32-bit or a 64-bit FLEXID9 driver. One procedure invokes a user interface for the removal process; the other performs a silent removal via the command line.

Task: ***To remove the driver using the supplied user-interface***

At a command prompt from the directory where the dongle-driver installer resides, enter the following:

```
haspdinst.exe -r
```

Task: ***To remove the driver silently using the command line***

At a command prompt from the directory where the dongle-driver installer resides, enter the following:

```
haspdinst.exe -r -nomsg
```

View Other Options

Use the following command to view additional options for the FLEXID9 driver installation or removal.

Task: ***To view other options for FLEXID9 driver installation or removal***

At a command prompt from the directory where the driver installer resides, enter the following:

```
haspdinst.exe -?
```

Install or Remove FLEXID10 Drivers

The following procedures install or remove FLEXID10 (Wibu) 32-bit or 64-bit dongle drivers.

Important • *FLEXID command-line options are case-sensitive.*

Install FLEXID10 Drivers

Separate commands are used to install the 32-bit and the 64-bit versions of the FLEXID10 driver. You can invoke a user interface for the installation process or perform a silent installation via the command line.

Task: ***To install the driver using the supplied user-interface***

1. Update the parameters in setup.ini:

```
ForceOverrite=0
Gui=1
ErrorMessages=1
```

2. At a command prompt from the directory where the dongle-driver installer resides, enter the appropriate command.
   - For a 32-bit driver:

     `SETUP32.exe`

   - For a 64-bit driver:

     `SETUP64.exe`

3. Double click the `SETUP32.exe or SETUP64.exe.`
4. Click “Next”, starts the copy and setup process. Click “Next” through the wizard, and then click Finish.
5. Reboot the machine.

Note • *Failure to reboot once you install the driver can cause problems with the driver working properly.*

Task: ***To install the driver silently using the command line***

1. Update the parameters in setup.ini file:

```
ForceOverrite=1
Gui=0
ErrorMessages=0
```

2. At a command prompt from the directory where the dongle-driver installer resides, enter the appropriate command.
   - For a 32-bit driver:

     `SETUP32.exe /RS:{00060000-0000-1004-8002-0000C06B5161}`

   - For a 64-bit driver:

     `SETUP64.exe /RS:{00060000-0000-1004-8002-0000C06B5161}`

3. Reboot the machine.

Note • *Failure to reboot once you install the driver can cause problems with the driver working properly.*

Remove FLEXID10 Drivers

Separate commands are used to remove the 32-bit and the 64-bit versions of the FLEXID10 driver. You can invoke a user interface for the removal process or perform a silent removal via the command line.

Task: ***To remove the driver using the supplied user-interface***

Access **Add or Remove Programs** (or the appropriate tool) from your Windows Control Panel, select WibuKey and click **Uninstall**.

Reboot the machine.

Task: ***To remove the driver silently using the command line***

1. Unplug the FLEXID10 dongle from the machine.
2. Update the following parameters in setup.ini file:

```
ForceOverrite=1
Gui=0
ErrorMessages=0
```

3. At a command prompt from the directory where the dongle-driver installer resides, enter the appropriate command.
   - For a 32-bit driver:

     ```
     SETUP32.exe /R
     ```

   - For a 64-bit driver:

     ```
     SETUP64.exe /R
     ```

4. Reboot the machine.

Disable Network Monitor and Network Server

Task: ***To disable Network Monitor and Network Server in setup installer***

1. Comment the following lines in setup.ini file:

```
; core tool files
;wksvw32.exe=1,wksvw32.ex_
;wksvmon.exe=1,wksvmon.ex_
```

4

Installing Dongle Drivers on Mac

This chapter describes how to use the FlexNet dongle driver installers for Mac OS X.

Install or Remove FLEXID9 Drivers

Use the following procedures to install or remove the driver for the FLEXID9 (SafeNet) dongle.

Important • *FLEXID command-line options are case-sensitive.*

Install FLEXID9 Drivers

Use either procedure to install a FLEXID9 driver. One procedure invokes a user interface for the installation process; the other performs a silent installation via the command line.

Note • *Best practice is to install the driver using the user-interface method.*

Task: ***To install the driver using the supplied user interface***

1. Locate the installer file `FLEXID9_OSX_V6_62.dmg` within your FlexNet Publisher licensing toolkit; or download the installer from a designated FlexNet Publisher download site. (For example, publishers download from the Flexera Software Product and License Center: https://flexerasoftware.flexnetoperations.com. End-users should contact Flexera Software for the appropriate download site.)
2. Double-click the file, and follow the on-screen instructions in the installer to complete the installation.

Task: ***To install the driver silently using the command line***

Run the following commands in the order shown:

```
hdiutil attach FLEXID9_OSX_V6_62.dmg
cd /Volumes/Sentinel Runtime/.Packages
sudo installer -pkg "/Volumes/ Sentinel Runtime/.Packages/Sentinel Runtime.pkg" -target "/"
```

Note • *This procedure is for reference only; it might not work properly on some machines.*

After installing manually copy the *.dylib into `/usr/lib` directories. Refer to Dongle Installers and Shared object.

Remove FLEXID9 Drivers

Use either procedure to remove the FLEXID9 driver. One procedure invokes a user interface for the removal process; the other performs a silent removal via the command line.

Note • *Best practice is to remove the driver using the user-interface method.*

Task: ***To remove the driver using the supplied user interface***

1. Double-click the installer file `FLEXID9_OSX_V6_62.dmg`. Copy the files from the `FLEXID9_OSX_V6_62.dmg` to desktop
2. Run this command:

   ```
   sudo ./dunst
   ```

3. Manually delete the directories "`etc/hasplm`" and "`var/hasplm`"
4. Reboot the machine
5. Try installing the latest drivers using command:

   ```
   sudo ./dinst
   ```

Task: ***To remove the driver silently using the command line***

1. Enter the following command to list all files installed for the dongle driver:

   ```
   lsbom -fls /Volumes/Sentinel Runtime/.Packages/Sentinel Runtime.pkg/Contents/Archive.bom
   ```

2. Perform *one* of the following:
   - Manually delete each of the files that are listed after performing step 1.
   - Run this command:

```
lsbom -fls /Volumes/Sentinel Runtime/.Packages/Sentinel Runtime.pkg/Contents/Archive.bom |
(cd /; sudo xargs rm)
```

Note • *This command is for reference only. It might not work properly on some machines.*

Install or Remove the FLEXID10 Driver

Use the following procedures to install or remove the driver for the FLEXID10 (WibuKey) dongle.

Important • *FLEXID command-line options are case-sensitive.*

Install FLEXID10 Drivers

Use either procedure to install a FLEXID10 driver. One procedure invokes a user interface for the installation process; the other performs a silent installation via the command line.

Note • *Best practice is to install the driver using the user-interface method.*

Task: ***To install the driver using the supplied user interface***

1. Locate the installer file `FLEXID10_OSX_6.11.500.dmg` within your FlexNet Publisher licensing toolkit; or download the installer from a designated FlexNet Publisher download site. (For example, publishers download from the Flexera Software Product and License Center: https://flexerasoftware.flexnetoperations.com. End-users should contact Flexera Software for the appropriate download site.)
2. Double-click the file, and follow the on-screen instructions in the installer to complete the installation.

Task: ***To install the driver silently using the command line***

Run the following commands in the order shown:

```
hdiutil attach FLEXID10_OSX_6.11.500.dmg
cd /Volumes/WibuKey
sudo installer -pkg WkInstall.mpkg -target "/"
```

Note • *This procedure is for reference only; it might not work properly on some machines.*

Remove FLEXID10 Drivers

Use either procedure to remove a FLEXID10 driver. One procedure invokes a user interface for the removal process; the other performs a silent removal via the command line.

Note • *Best practice is to remove the driver using the user-interface method.*

Task: ***To remove the driver using the supplied user interface***

Double-click the installer file `FLEXID10_OSX_6.11.500.dmg`.

Task: ***To remove the driver silently using the command line***

1. Enter the following commands to list all files installed for the dongle driver:

```
lsbom -fls /Volumes/ WibuKey/packages/AxProtector.pkg/Contents/Archive.bom
lsbom -fls /Volumes/ WibuKey/packages/WkCFM9.pkg/Contents/Archive.bom
lsbom -fls /Volumes/ WibuKey/packages/WkDriver.pkg/Contents/Archive.bom
lsbom -fls /Volumes/ WibuKey/packages/WkServer.pkg/Contents/Archive.bom
```

2. Perform *one* of the following:

   - Manually delete each of the files that are listed after performing step 1.
   - Run these commands in the order shown:

```
lsbom -fls /Volumes/ WibuKey/packages/AxProtector.pkg/Contents/Archive.bom | (cd /; sudo xargs rm)
lsbom -fls /Volumes/ WibuKey/packages/WkCFM9.pkg/Contents/Archive.bom | (cd /; sudo xargs rm)
lsbom -fls /Volumes/ WibuKey/packages/WkDriver.pkg/Contents/Archive.bom | (cd /; sudo xargs rm)
lsbom -fls /Volumes/ WibuKey/packages/WkServer.pkg/Contents/Archive.bom | (cd /; sudo xargs rm)
```

Note • *This set of commands is for reference only. The commands might not work properly on some machines.*

5

Installing Dongle Drivers on Linux

This chapter describes how to use the FlexNet dongle driver installers for Linux.

Install or Remove FLEXID9 Drivers

The following procedures describe how to install or remove FLEXID9 (SafeNet) 32-bit or 64-bit dongle drivers. Before beginning the installation process, however, you must do the following:

- Ensure that you are logged on with superuser (root) privileges.
- Remove any older versions of the dongle driver. For details, see the next section.

Important • *FLEXID command-line options are case-sensitive.*

Remove Older Dongle-Driver Versions

Before installing the latest version of a FlexNet ID dongle driver, remove any dongle driver that was available with a pre-11.11.1 version of FlexNet Publisher.

Task: ***To remove an older version of the FLEXID dongle drive you are installing***

At a command prompt from the directory where the dongle-driver installer resides, enter the appropriate command:

- For a RedHat driver:

  ```
  rpm -e aksusbd-redhat
  ```

- For a SUSE driver:

  ```
  rpm -e aksusbd-suse
  ```

Install FLEXID9 Drivers

Use the following procedure to install the latest driver for a FLEXID9 dongle on Linux. The same command is used to install the driver on Linux RedHat or SUSE (32-bit or 64-bit).

Task: ***To install the FLEXID9 driver***

1. Locate the installer file `aksusbd-2.4-1.i386.rpm` within your FlexNet Publisher licensing toolkit; or download the installer from a designated FlexNet Publisher download site. (For example, publishers download from the Flexera Software Product and License Center: https://flexerasoftware.flexnetoperations.com. End-users should contact Flexera Software for the appropriate download site.).

2. At a command prompt from the directory where the dongle-driver installer resides, enter the following:

   ```
   rpm -i aksusbd-2.4-1.i386.rpm
   ```

After installing manually copy the `*.so` into `/usr/lib` directories. Refer to Dongle Installers and Shared object.

Remove FLEXID9 Drivers

Use the following procedure to remove the driver for a FLEXID9 (SafeNet) dongle on Linux.

Task: ***To remove the FLEXID9 driver***

At a command prompt from the directory where the dongle-driver installer resides, enter the following:

```
rpm -e aksusbd-2.4-1.i386
```

Install or Remove FLEXID10 Drivers

The following procedures describe how to install or remove FLEXID10 (Wibu) 32-bit or 64-bit dongle drivers.

Important • *FLEXID command-line options are case-sensitive.*

Install FLEXID10 Drivers

Use the following procedure to install the driver for a FLEXID10 (Wibu) dongle on Linux.

Task: ***To install the FLEXID10 driver***

1. Locate the appropriate installer file within your FlexNet Publisher licensing toolkit; or download the installer from a designated FlexNet Publisher download site. (For example, publishers download from the Flexera Software Product and License Center: https://flexerasoftware.flexnetoperations.com. End-users should contact Flexera Software for the appropriate download site.)
   - For a 32-bit driver:

     ```
     WkRt-Lin-6.11.1057-500.i386.rpm
     ```

   - For a 64-bit driver:

     ```
     WkRt-Lin64-6.11.1057-500.x86_64.rpm
     ```

2. At a command prompt from the directory where the dongle-driver installer resides, enter the appropriate command:
   - For the 32-bit driver:

     ```
     rpm -i WkRt-Lin-6.11.1057-500.i386.rpm
     ```

- For the 64-bit driver:

  ```
  rpm -i WkRt-Lin64-6.11.1057-500.x86_64.rpm
  ```

Note • *The Wibu installers might produce warnings on RedHat EL 4.7 x64, and SUSE9 and SUSE10 x86 platforms, depending on what operating system patches are installed. Users can ignore these warnings; the dongles operate correctly.*

Remove FLEXID10 Drivers

Use the following procedure to remove the driver for a FLEXID10 (Wibu) dongle on Linux.

Task: ***To remove the FLEXID10 driver***

At a command prompt from the directory where the dongle-driver installer resides, enter the following command:

```
WkRt-Lin64-6.11.1057-500
```

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Testing the Dongle Driver Installation

The following sections describe how to test that the dongle driver has been installed correctly:

1. Obtaining the Dongle Identity (FLEXID)—Uses the simplest method involving the dongle and `lmutil`, `lmadmin` (on 32-bit platforms), or `LMTOOLS` required.
2. Issuing a License That Uses a FlexNet ID Dongle—Requires installation of a licensed product.

Obtaining the Dongle Identity (FLEXID)

To perform this test you require:

- A dongle
- `lmutil` utility, `lmhostid`, `lmadmin`, or a copy of `LMTOOLS` (only available on Windows)

This test attempts to obtain the dongle identity from the dongle. The dongle driver is used to access the dongle and request its identity and thus this tests that the dongle driver has been correctly installed.

Task: ***To obtain dongle FLEXID***

1. On Windows systems, if you have just installed the dongle driver, ensure that you restart your system to complete the installation of the driver software. (Mac and Linux systems do not require a restart.)
2. Connect the dongle to your machine.
3. Install the `lmutil` utility, `lmadmin`, `lmhostid`, or `LMTOOLS`.
4. Follow the steps indicated by the utility you are using:
   - If using `lmadmin`:
     1. Run `lmadmin`.
     2. In a web browser, open the `lmadmin` user interface. (Default location is **`http://localhost:8090`**.)

3. Log in by entering your username and password. (Default username/password is `admin`/`admin`.)
4. Click **Administration**.
5. Click **System Information**.
6. Verify that a valid **FLEXID** is displayed (for example **9-6b3366b2**).

- If using `lmhostid`:

1. Issue the following command from a command prompt:

   ```
   lmhostid -flexid or lmhostid -flexid -long
   ```

   Note • *The command `lmhostid -flexid` is to fetch the dongle id and `lmhostid -flexid -long` command is used to get the error or log information along with the dongle id.*

2. Verify that a valid `FLEXID` is returned. Example output might be the following:

   ```
   lmhostid - Copyright <c> 1989-2013 Flexera Software LLC. All Rights Reserved.
   The FlexNet host ID of this machine is "FLEXID=9-6b3366b2"
   ```

- If using `LMTOOLS` (only available on Windows):

1. Double-click `LMTOOLS.exe`.
2. Click **System Settings**.
3. Verify that a valid **FLEXID** is displayed (for example **9-6b3366b2**).

Note • `LMTOOLS` *does not display the Wibu dongle* `FLEXID`.

Issuing a License That Uses a FlexNet ID Dongle

These instructions describe how to use the example FlexEnabled application (`lmflex`) and other example files provided in the Licensing toolkit to issue a license that uses a FlexNet ID Dongle. Instructions are provided to test the use of the dongle:

- Issuing a License on an End-User Machine
- Issuing a License on a License Server

Building the Licensing Toolkit With Dongle Support

The following instructions assume that your Licensing toolkit is built with dongle support. For example, the toolkit build command for license-file-based licensing on a Windows machine would look something like this:

```
nmake -f makefile DONGLE=1
```

See the *Development Environment Guide* for more information about toolkit build commands and options.

Issuing a License on an End-User Machine

These instructions describe how to create a license that uses a FLEXID and use the example FlexEnabled application `lmflex` to check out the license.

Task: ***To issue and use a license that uses a FlexNet ID dongle on an end-user machine***

1. Obtain the dongle identity as described in Obtaining the Dongle Identity (FLEXID).
2. Create a license file that contains a license that uses the FLEXID:
   - Within your FlexNet Publisher toolkit installation directory, open the example license file `<platform_dir>\uncounted.lic` with an editor.
   - Change the feature from **f2** to **f4**.
   - Change `HOSTID=ANY` to the dongle identity obtained in step 1, for example:

     ```
     HOSTID=FLEXID=9-6b3366b2
     ```

   - Save the file as `uncounted_FLEXID.lic`.
   - Sign the license file using `lmcrypt`. Type the following at a command prompt:

     ```
     lmcrypt uncounted_FLEXID.lic
     ```
3. Check out the license:
   - Run `lmflex`.
   - Type `f4` and press **Enter**.
   - `lmflex` reports that the license has been checked out.

Issuing a License on a License Server

These instructions describe how to create a license for a license server that uses a FLEXID. The license is for use by the example vendor daemon, `demo`. The example FlexEnabled application `lmflex` is used to check out the license.

Note • *The following procedure uses Windows-based command syntax. For UNIX platforms, apply the appropriate syntax.*

Task: ***To issue and use a license that uses a FlexNet ID dongle on a license server***

1. Obtain the dongle identity as described in Obtaining the Dongle Identity (FLEXID).
2. Create a license file that contains a license that uses the `FLEXID`:
   a. Within your FlexNet Publisher toolkit installation directory, open the example license file `<platform_dir>\counted.lic` in a text editor.
   b. Add the `Server` line with HOSTID set to the FLEXID, as in the example:

      ```
      Server this_host FLEXID=9-6b3366b2
      ```

   c. Save the file as `counted_FLEXID.lic`.
   d. Sign the license file using `lmcrypt`. Type the following at a command prompt:

      ```
      lmcrypt counted_FLEXID.lic
      ```

3. Move the license file to `<platform_dir>\lmadmin\demo`.
4. For purposes of this test, copy the vendor daemon `demo.exe` and its associated library `demo_libFNP.dll` from the `<platform>` directory to the `<platform>\lmadmin\demo` directory.

   Note • *On UNIX platforms, copy the vendor daemon* `demo` *and its associated library* `demo_libFNP.so` *from the* `<platform>` *directory to the* `<platform>/lmadmin/demo` directory. *On AIX, copy* `demo` *and* `demo_server_libFNP_notr.so`.

5. Start the license server:
   a. Import the license file by entering the following at a command prompt from `<platform_dir>\lmadmin`:

      ```
      lmadmin -import demo\counted_FLEXID.lic -force
      ```

   b. Start the license server:

      ```
      lmadmin -adminOnly no -allowRemoteStopServer yes
      ```

6. Return to the `<platform_dir>`, and run `lmflex`.
7. Type `f1` and press **Enter**.

   `lmflex` reports that the license has been checked out.

7

FlexNet ID Dongle FAQ and Troubleshooting

FAQ

FlexNet ID dongle device drivers are included with the FlexNet Licensing SDKs, which authorized customers may download from the Product and License Center at the following location:

https://flexerasoftware.flexnetoperations.com

End users of FlexEnabled products that support FlexNet ID dongles must contact their software vendor directly to download compatible dongle driver version. However, publishers can obtain the latest supported driver versions at the following location:

http://learn.flexerasoftware.com/content/ECM-Dongle-Drivers

1. Will my 11.11.1 FNP application run seamlessly side-by-side with my FNP 11.12.1 application while using the same HASP HL dongle?

   It works seamlessly. If you face any problem, please refer to troubleshooting scenarios listed below in the chapter. If you do experience an issue, and the driver version between the FNP versions is different, try using the older driver.

2. Why has Flexera moved to the SRM API?

   HASP SRM is used to support multiple dongles on Win64, and is the dongle provider's recommended API going forward.

3. Why is Flexera now installing a .dll or .so to support FLEXID9?

   We have used dynamic linking of dongle API libraries as the dongle provider's recommended method of HASP SRM implementation. This needs .dll or .so installation to the system path.

4. Why is only one ‘HASP4’ FLEXID 9 dongle supported? What do I get in exchange for this limitation?

   Hasp SRM has limited support to HASP4 keys and they are soon to be End-Of-Life. Before the SRM API was adopted in FNP 11.12, only one FLEXID9 dongle was supported in Win64. In 11.12, multiple 'HASP HL' FLEXID9 dongles are now supported on Win64. On Win32, multiple 'HASP HL' dongles are still supported, but now only one of the older HASP4 dongles is supported. So, by removing support for multiple older 'HASP4' dongles on Win32, Flexera has been able to introduce support for multiple newer 'HASP HL' dongles on Win64. To reiterate: Multiple 'HASP HL' dongles are supported on both Win32 and Win64 in FNP 11.12. For more information see Appendix 7, Listed are the possible troubleshooting scenarios:.

5. Do I need to upgrade any of my dongles?

   The older 'HASP4' revision of the FLEXID9 dongle is shortly to be end-of-life, and may not be supported in upcoming versions of FNP. Flexera recommends replacing these older dongles with the newer 'HASP HL' revision.

FLEXID9 Troubleshooting

This troubleshooting information provides guidance to the software publishers and their end-users to troubleshoot the FLEXID9 dongle related issues that might arise during upgrade of FNP Version 11.12 release on windows platforms.

FNP 11.12 has changed the FLEXID9 dongle implementation of HASP4 and HASP HL to HASP SRM with the primary focus on supporting multiple dongle keys and preparing for the next generation of HASP dongles.

The two types of FLEXID9 dongles which Flexera sells are:

HASP4

Figure 7-1: Hasp4

`HASP4 - HASP4 keys are longer ones – 2 inches (thin).`

HASPHL

Figure 7-2: HASPHL

- HASPHL--HASP HL keys are of three variants.
  - Short ones (< 2 inches)
  - Medium ones
  - Fat and longer ones (> 2 inches)

Multiple FLEXID 9 dongles will be supported on all platforms from FNP 11.12.1 onwards. Multiple FLEXID 9 dongles include multiple HASP HL keys and a single HASP4 key.

Task: ***Dongle driver Installation steps:***

1. Set up the run time environment.
2. Run the command line installer, haspdinst.exe available in the toolkit (For example: FLEXID9_Windows_v6_61_xxx.zip).
3. A README document provided in the toolkit contains a limitation and the action required.
4. The user space dongle dynamic libraries, say haspsrm_win32.dll and haspsrm_win64.dll for 32 and 64 bit platforms respectively, are not installed when the run-time command-line Installer for sentinel hasp (haspdinst.exe) is run. This is because these libraries are Flexera specific and therefore not included as part of the installer. These libraries are present in the toolkit platform folder and publishers should include them in their own installers when supporting FLEXID9 hostids on Windows. The relevant dll's should be copied to the folder:
   - On a 64-bit system, publishers using the x64_n6 kit should install `haspsrm_win64.dll` to `%windir%/System32`.
   - On a 64-bit system, publishers using the i86_n3 kit should install `haspsrm_win32.dll` to `%windir%/SysWOW64`.

Important • *The new Safenet external license manager (`hasp_rt.exe`) is now required to be placed in the same folder of FNP dongle protected applications (including lmhostid, vendor daemon, lmtools and lmadmin). If `hasp_rt.exe` doesn't exists in the same folder, an unexpected Safenet error dialog, referring to the SafeNet 'hasp_cleanup' API may appears when FLEXID9 Safenet runtime driver wasn't installed on the machine but the dynamic library (`haspsrm_*.dll`) was copied to `system32/Syswow64` folder.*

- On a 32-bit system, publishers should install `haspsrm_win32.dll to %windir%/System32`
- On a 64-bit linux system, publishers using the x64_lsb kit should install `libhasp_linux_x86_64.so` to `/usr/lib.`
- On a 32-bit linux system, publishers using the i86_lsb kit should install `libhasp_linux_i686.so` to `/usr/lib.`
- On a Max OS X system, publishers using the universal_mac kit should install `hasp_darwin.dylib` to `/usr/lib`.

README is provided in the toolkits on the same.

Listed are the possible troubleshooting scenarios:

1. A FLEXID9 key is no longer detected after an upgrade from earlier FNP version to 11.12.

   Check for the type of the key.

   a. If the key type is HASP4, Unplug all the keys. Plug in this HASP4 key, preferably on the first slot of the primary USB slots. lmhostid utility should list an entry(ID) for this HASP4 key now. Continue plugging in the rest of the HASP HL keys. If the HASP4 key is still not detected, then, the key could be damaged and consider replacing the dongle.

   b. If the key type is HASP HL, problem could be due to the firmware version of the key. If the firmware version is less than 3.20, key will not be detected. Upgrade the firmware of your dongle using a utility by Safenet. Firmware Upgrade utility can be downloaded from this link below and the utility can be used to determine the firmware version of the key. http://sentinelcustomer.safenet- inc.com/sentineldownloads/?s=&c=all&p=all&o=all&t=Firmware+Updates&l=all

   c. Checkout performance degradation may occur when multiple FLEXID9 keys were present on the machine. When dongle API is executed, it will communicate to each dongle and perform security check on each of them. If more dongles were discovered, it will take longer to communicate to each dongle, as a result of delay occurred. We recommend to limit the number of dongle to a reasonable count on the machine.

2. Only one FLEXID9 dongle is reported by FNP

   In order to support multiple FLEXID9 dongle. Sentinel LDK License Manager must be running on the machine. Examine the running processes on the machine and look for hasplms (Windows) or hasplmd (Linux and Mac). On windows, all running processes can be found from Windows Task Manager. On Linux and Mac, the running processes can be obtained by using "`ps –ef`" command from command shell. Ensure the latest version of FLEXID9 dongle runtime driver is installed on the machine. If there is no multiple dongle support after installing the driver, try to reboot the machine.

3. What If multiple keys were present and some are no longer detected?

   Unplug all the FLEXID9 keys. Plugin single key and see if the lmhostid utility lists an entry for the key. This way you can determine which key is not getting detected. Then, follow the step (1) above, to rectify the problem.

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