Application Note
No. 7

Product: OPC Server, PROFIBUS Configurators, FDT/DTMs

Keywords: Hardware key (dongle) license

Problems:

1. The License Manager fails to detect the hardware dongle (Aladdin Hardlock Key) license.
2. Applications covered by the hardware key license indicate a demo version on startup of the computer. This behavior may also occur sporadically.
Solutions:

Problem 1: The License Manager fails to detect the hardware key license

Step 1: Check hardware key in Control Panel
Step 2: Check hardware key functionality with Aladdin Diagnostix

Step 1: Check hardware key in Control Panel

The hardware key should be listed under “USB Controllers” in Control Panel.
- Aladdin Hardlock Key
- Aladdin USB Key
If it is not listed, try the following:

- Reinstall the latest Aladdin driver and restart the system.
  - Rules out problems caused by an old driver or damaged driver installation

- Try a different USB port.
  - Rules out a defective USB port

- Try the hardware key on a different computer.
  - Rules out problems caused by drivers / operating system / hardware

- If the hardware key is still not detected, it might be defective.

**Step 2: Check hardware key functionality with Aladdin Diagnostix**

Diagnostix Tool for Aladdin hardlock keys:

Install and start the application, then click “Create Report”. The report will be saved to C:\Program Files\aladdin\diagnostix\report.html
The report will look something like this:

Aladdin DiagnostiX

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System Info

- Date / Time: 08/06/08 13:47:08
- MachineName: WFT
- OS Version: Windows XP 5.1 Build 2600 (Service Pack 2)
- Parallel Ports: Port 0x0378, int 0x07 (7)

Drivers and Services

Aladdin DRM Drivers

- AKSHASP.SYS: 4.11
- AKSUSB.SYS: 3.12
- AKSCLASS.SYS: 1.13
- HARDLOCK.SYS: 3.41
- API Version: 3.87
- HLVDD.DLL: 2.21

Known USB Devices

- Hardlock: \?\usb#hardlock#6&1c6fee42&0&00#{e89a0541-bdf1-11d7-b483-00c0dfee4d8c}

Universal Serial Bus (USB):

- Aladdin USB Key
  - Provider: Aladdin Knowledge Systems
  - InfPath: oem9.inf [aksusb]
  - Driver Date: 11-17-2006
- Aladdin Hardlock Key
  - Provider: Aladdin Knowledge Systems
  - InfPath: oem8.inf [akshasp]
  - Driver Date: 11-17-2006

Hardlock Checks

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If an error with the error message "Terminal Server detected" is listed under Hardlock Checks, the hardware key is blocked by the driver because a terminal server (or similar) has been found.
This can have different reasons:

1. Windows has not been integrated in a domain and "Use Fast User Switching" is enabled in user accounts. As Aladdin specifically requires the hardware key to be blocked in that case, you will need to disable "Use Fast User Switching."

Select the option “Change the way users log on or off".
In the upcoming dialog disable the option “Use Fast User Switching.”

2. The hardware key is also blocked in the case of remote access to the computer (remote desktop).
Problem 2: Applications indicate a demo version on startup of the computer

Applications covered by the hardware key license indicate a demo version after you start up the computer. This behavior may also occur sporadically.

Cause:
The control server requests the license once during startup. If the USB key cannot yet be accessed at this point in time (driver not started yet), no license is detected.

Verifying the problem:
Stop/start the control server after starting up the computer.
If it works then => problem is caused by start order of services.

Possible solution:
Force an earlier start of the hardlock driver. To do this, make the following settings in the Control Panel:

Select Computer Management -> Device Manager:
Choose “Show Hidden Devices”: 

Displays legacy devices and devices that are no longer installed.
Expand the “Non-Plug and Play Drivers” and double-click “Hardlock”:

On the Driver tab, change the Startup Type setting from “Automatic” to “System” and click OK.
Experienced users can also set the corresponding registry keys directly.

Go to HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\hardlock in the registry and set the value for the "Start" key to "1" (SERVICE_SYSTEM_START). The hardlock will then be loaded earlier.

**Attention:** Incorrect settings in the registry can render your operating system useless! Editing the registry is for experienced users only!