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Exemplary approach of HARDLOCK driver installation for USB dongles under Windows 2000 / Windows XP:

- 1) Make sure that you have the needed administration rights for installing the driver
- 2) Install the Aladdin HARDLOCK driver which can be found on the current installation disk
- 3) Plug the USB dongle into a free USB port of your computer
- 4) The operating system will recognize the connected dongle as new hardware
- 5) The red LED of the USB dongle should glow permanently after successful recognition

It is possible that despite proper installation of the HARDLOCK driver the dongle won't be recognized by the program. In this case you can give the driver a hint where to look for the dongle.

For this purpose open „Start / Settings / Control Panel / System“ and insert under „Advanced / Environment Variables“ in the lower region of the dialog window the following new system variables:

Variable: HL\_SEARCH  
Value: 378p, usb, IP

This entry causes the driver to look first at the parallel port and second at the USB ports for a local dongle. If no valid dongle is found the driver will search the local network for a potentially existent server dongle.


To ease the search for a server dongle you can insert another system variable:

Variable: HLS\_IPADDR  
Value: 192.168.0.123, fileserver

Set the value either to (fixed) IP addresses or (when using dynamic IP addresses per DHCP) to the names of the computers where a server dongle can be found.

So if you just want to use a local dongle at the USB port of your computer the following entry should be enough:

Variable: HL\_SEARCH  
Value: usb

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If the USB dongle still won't be recognized by the program you should try another free USB port, preferably one that is located on the mainboard of your computer and not on a intermediary external USB hub.

Unfortunately there are some cases when using Windows XP with installed Service Pack 2 where the above mentioned environment variables proved counterproductive and more than ever prevented the recognition of the USB dongle. In this case you should delete the system variables HL\_SEARCH and HLS\_IPADDR.

If both a local USB dongle and a server dongle should be used it is advisable to first try it without any additional environment variables. In case that the local USB dongle is recognized but the server dongle is not you should add the environment variable HLS\_IPADDR.


If you experience connection problems with a server dongle you should check the general network configuration first:

- 1) Is the network cable connected to your computer? (When using WLAN: is the wireless connection to the access point or WLAN router established?)
- 2) Can you access shared folders in your local network, e. g. network drives of a file server?
- 3) Is the client computer in the same subnet as the computer with the server dongle? For this please check the IP addresses of both computers (start the command prompt and run "ipconfig /all"). If the first three blocks of the IP addresses are identical, the computers are in the same subnet (example: client IP address 192.168.0.15, HARDLOCK server IP address 192.168.0.2).
- 4) Is the communication between the two computers working? For this please send a ping to the IP address of the opposing computer in each case. In the upper example you'd have to enter "ping 192.168.0.2" at the command prompt of the client and "ping 192.168.0.15" at the command prompt of the HARDLOCK server.

If both computers can ping each other your network connection should be okay.

However, there is a possibility that the communication is obstructed by firewalls. Therefore please check on both computers (client and HARDLOCK server) if a software firewall (Windows Firewall of Windows XP with SP2 or another personal firewall) is installed and activated for the local area network.

In this case you have to open the corresponding ports in the firewall or deactivate the firewall completely if necessary. Usually the port 3047 is used

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with the protocols UDP and TCP for the communication with a HARDLOCK server.

Apparently the problem with the Windows Firewall appears particularly when File and Printer Sharing is not activated on the computers. Thus an activation of File and Printer Sharing might be worth a try before manually tuning or even deactivating the firewall.

For further error analysis it is helpful to install the Aladdin AKS Monitor utility. The installer aksmon32.exe can be found in the directory support\hardlock\HLSERVER of the CadnaA Installation-CD.

After starting Aladdin AKS Monitor you see a tree view in the left part of the window. In the category HL-Server you should find the name of the computer with the server dongle. If this computer is selected, more information about its installed HARDLOCK server and connected server dongles as well as network statistics are shown in the right part of the window.

When AKS Monitor is started on the server itself, the computer name of the server with the addendum "(local)" should definitely appear in the category HL-Server. If this server name also appears in AKS Monitor started on the client, the communication should work.

When using a server dongle it can occur that CadnaA calculates normally on a client but suddenly an error message from the copy protection appears and interrupts the calculation.


The reason for it is mostly a too short timeout of the HARDLOCK server. When CadnaA is working hard on a calculation the time intervals between the dongle checks on the server may be very long. If this interval is too long (timeout) the server deactivates the process.

The timeout value can be changed on the server with the command "hls32cmd timeout <min>" where <min> is the number of minutes. The default value is 15 minutes.

The needed program hls32cmd.exe can be downloaded as a ZIP file from our webpage under the following URL:

<http://download.datakustik.de/download/hls32cmd.zip>

Please copy the decompressed file on the HARDLOCK server and enter the command on the command prompt.

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The optimal setting of the timeout depends on the computer as well as on the network. Try to gradually increase the value to e. g. 60, 90 or 120 minutes until the problems disappear. If even this is not enough the timeout can be deactivated completely with the command "hls32cmd timeout 0".

The downside of a high timeout value is that the available licenses are longer blocked if CadnaA is not terminated in the normal way. If the timeout is deactivated you have to manually free the blocked licenses with the utility Aladdin AKS Monitor.

Finally, a few words about the usage of a CALC dongle. Since the CALC license is not a complete workstation license, you will get an error message on a client computer if you attempt to start CadnaA normally.

For working with a CALC license it is necessary to start CadnaA in batch mode, for example by using the shortcut "CadnaA Batch" in the start menu.

Alternatively you can make a copy of the normal shortcut "CadnaA" in the start menu or on the desktop and change the target so that after the call of the executable cna32.exe the addendum " /batch=1" (without the quotation marks) is attached. When using the default installation directory the target of the shortcut should afterwards look like this:

C:\Programme\DataKustik\CadnaA\cna32.exe /batch=1

In case CadnaA was installed in another directory it might be necessary to put the target without the addendum in quotation marks if there are blanks in the path. The corresponding call would look like this:

"C:\Program Files\DataKustik\CadnaA\cna32.exe" /batch=1