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User's Guide

# DK2 Overview

1.0.5





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## CHAPTER 1

# Introduction

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## Typographical Conventions

Before you start using this guide, it is important to understand the terms and typographical conventions used in the documentation.

The following kinds of formatting in the text identify special information.

Formatting convention	Type of Information
<b>1</b> Numbered bullet list	Step-by-step procedures. You can follow these instructions to complete a specific task.
<b>Special Bold</b>	Items you must select, such as edit fields on a form, radio or tick box buttons, or items in a list.
<i>Emphasis</i>	Use to emphasise the importance of a point or for variable expressions such as parameters.
<b>CAPITALS</b>	Names of keys on the keyboard. for example, SHIFT, CTRL, or ALT.
<b>KEY+KEY</b>	Key combinations for which the user must press and hold down one key and then press another, for example, CTRL+P, or ALT+F4.
<b>MENU ACTION OR OPTION</b>	Items in a pop-up or drop-down menu that you must either click or select to enable/disable. e.g. <b>FILE&gt;PRINT</b>
Monospaced text	Text that needs to be entered from the keyboard, folder paths or filenames, system commands. e.g. "C:\Program Files\" or type <b>IPCONFIG</b> in the command window.

Specific terminology:

The terms **Caption** and **Subtitle** are generally regarded as interchangeable and do not refer to any one format unless specifically stated. The same principle applies to **Caption File** and **Subtitle File**.

## CHAPTER 2

# DK2 Dongles

All Starfish Technologies products use hardware dongles to protect the software and provide a method of application licensing. As a general rule, the software requires one dongle per machine; however, in a large user environment this requires a large investment in dongles. Subsequently we are now offering a server-based solution in these circumstances, whereby one centrally accessed dongle controls software licensing throughout the network.

These keys provided by DESkey are unique to your specific product, you cannot buy additional licence dongles from DESkey. However, driver updates are available direct from the manufacturer. Starfish provide the latest drivers available at time of product release, however updates may become available from time to time. These can be downloaded from the *DESkey website* <http://www.deskey.co.uk/> although it is suggested that you contact Starfish if you are unsure of compatibility before installing updates.

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## How The DK2 Licences Are Checked

When any Starfish software starts up, it checks to see if it has an appropriate licence stored in the dongle. This licence can be held within a locally attached dongle, or obtained from a central network licence server.

Starfish applications also check for licence availability on a regular basis whilst the software is running, and if the licence key is no longer present the application will bring up a warning message. The action the software takes after that depends upon individual products. When the user closes the Starfish application, the licence usage is released back to the system.

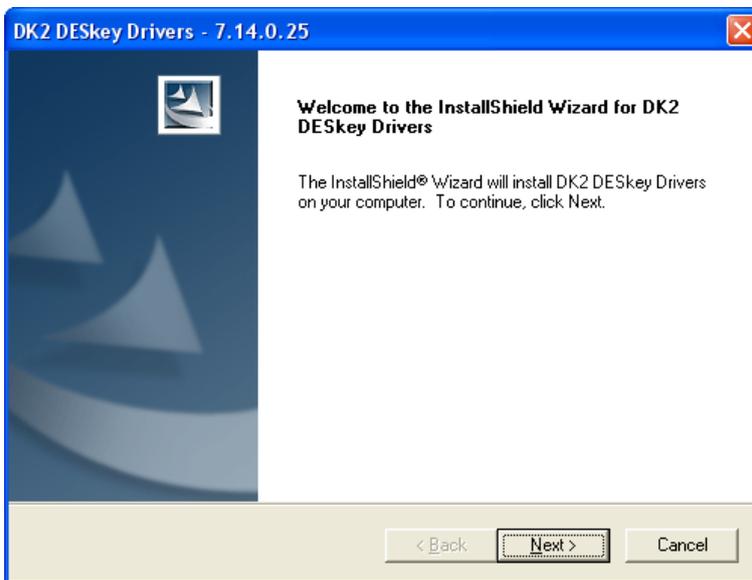
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## DK2 Client Installation

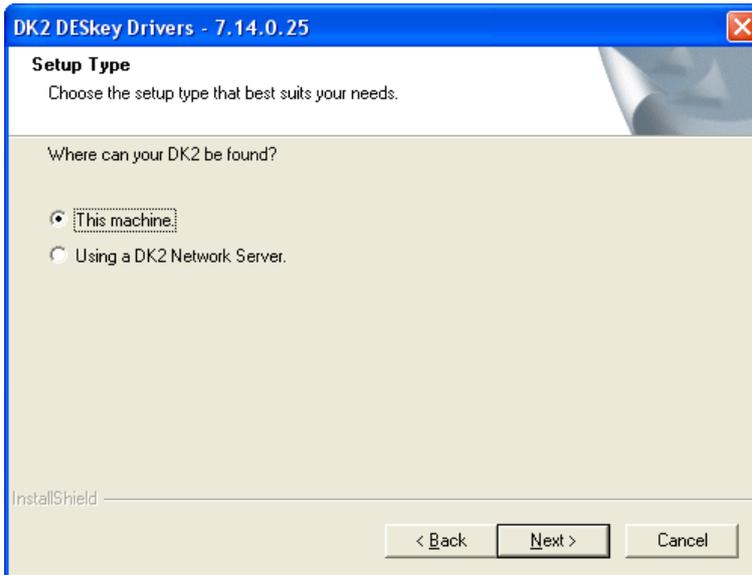
The new DK2 client can be used for both local dongle access as well as sending requests to a central server for networked dongling solutions. The installer asks which method is required during installation, however this can be configured subsequently if any of the parameters are unknown at the time of installation.

Under normal circumstances, the Starfish application installer will launch the DK2 drivers automatically unless you specifically disable this. However there may be times when it is necessary to manually install these drivers or to update them. The following procedures are identical except for the very last stage. When launched by the Starfish installer you are not prompted by the DK2 installer to reboot your PC, but rather the Starfish application installer does this after it has performed the rest of its operations. If however you launch the DK2 installer separately, you may be required to reboot at the end of the installation.

When the setup application starts you are initially presented with the screen shown below



Click on **Next** to move to the **Setup Type** screen

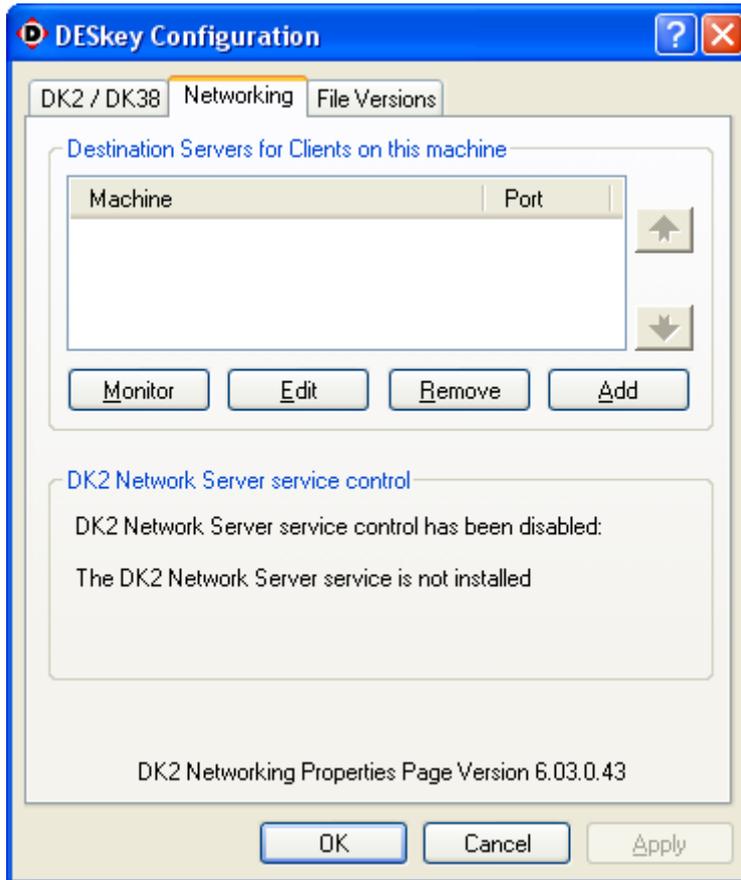


If you are using a local dongle, or if you intend using a network dongle solution but have not got the relevant information to hand then select This Machine and click on **Next** to continue with the installation.

If you have selected the **This Machine** option, the installer will copy the appropriate files to the PC and either hand control back to the Starfish installer or prompt you to reboot the PC.

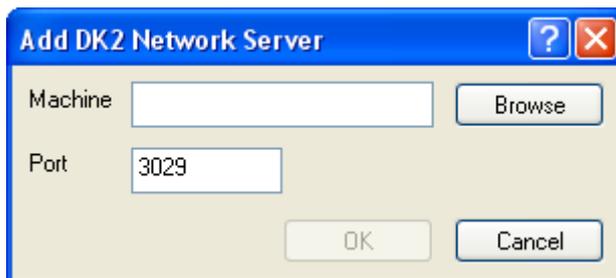
For local installation that is all that is necessary.

If however you choose the **Using a DK2 Network Server option**, then after the installer has copied the appropriate files to the PC, you will be presented with the following screen.



Again, if you do not know the exact network server configuration, you can just click on **OK** to finish the installation and configure the system at a later time. This means you have not committed yourself to any given settings.

If you do know the server that hosts the **Network Dongle server**, then you can click on **Add**. This gives the dialog box shown below.



You can either enter the name of the server directly or if alternatively you can use the **Browse** function to show the list of active machines on the network, and select the appropriate server via this method.

The **Port** number used (3029) is the default setting and must be the same as that used on the server itself. Unless there is a critical reason to change this, keep with the default of 3029.

Once this information has been entered, click on **OK** to add the server. Now click **OK** again to finish the installation.

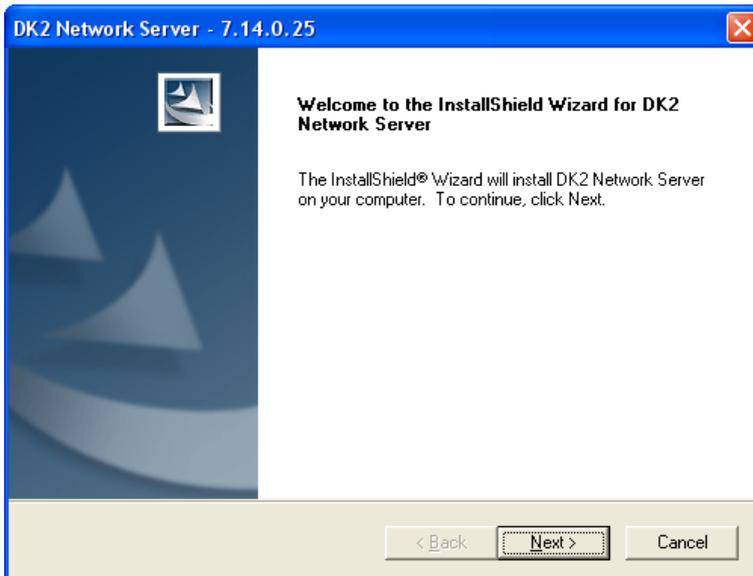
If you connecting to a central licence server from a different network via a router or via VPN circuit, then you are advised to enter the IP address of the DK2 licence server instead of the machine name. This is because name to IP resolution is not always perfect when using these network connection methods.

## DK2 Network Server Installation

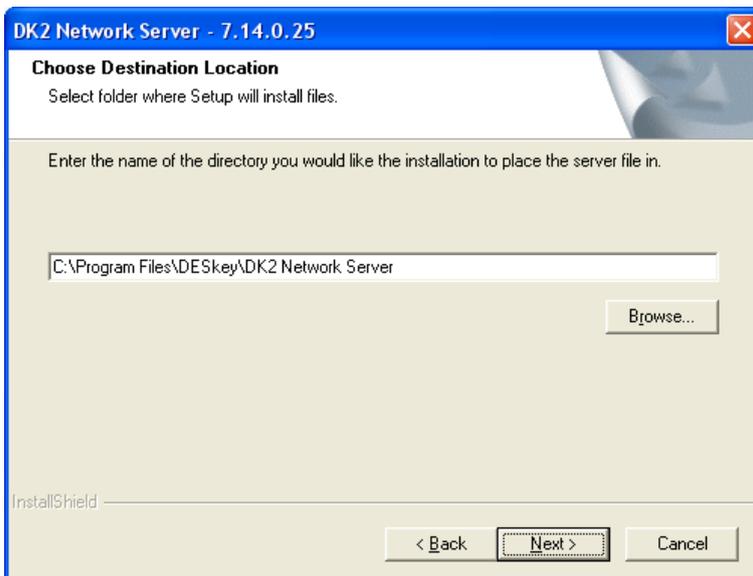
*Unless your system requires the network distribution of client licences from a central point, do NOT install the DK2 server.*

Please note that the Network Server driver is a superset of the client-only driver. It will therefore ask to remove any 'client only' driver it finds on the system and usually requires a system reboot.

When the setup application starts you are initially presented with the screen shown below



Click on **Next** to move to the **Choose Destination Location** screen



We recommended that you accept the default offered.

If you do need to change it for any reason, you can type the location directly or use the browse facility to point to the desired location.

Click on **Next** to continue with the installation.

The installer will copy the appropriate files to the PC and either hand control back to the Starfish installer (if launched from there) or prompt you to reboot the PC.

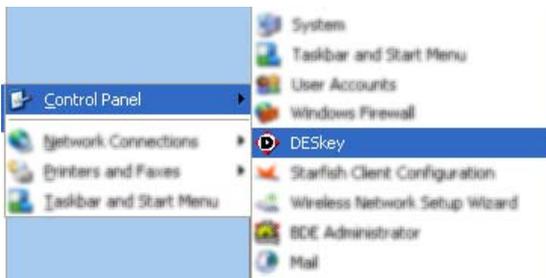
When the PC has been rebooted, you must *configure the server* (see "Network Licence Server Configuration" on page 12).

The PC used as the DK2 network server should have a static IP address, not a DHCP assigned address.

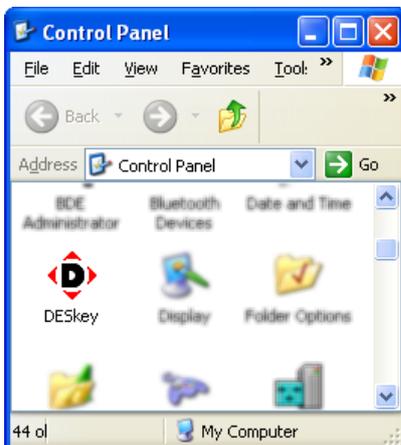
## DK2 configuration

### Launching The Applet

The **DESkey** tool can be found in the operating system **Control Panel**, double click the icon to launch the applet. **Control Panel** can be found from the  menu. Depending on how you have configured your operating system display settings, and also upon which operating system you are using, the **Control Panel** may open a separate window, or it may open a side menu from the  menu.

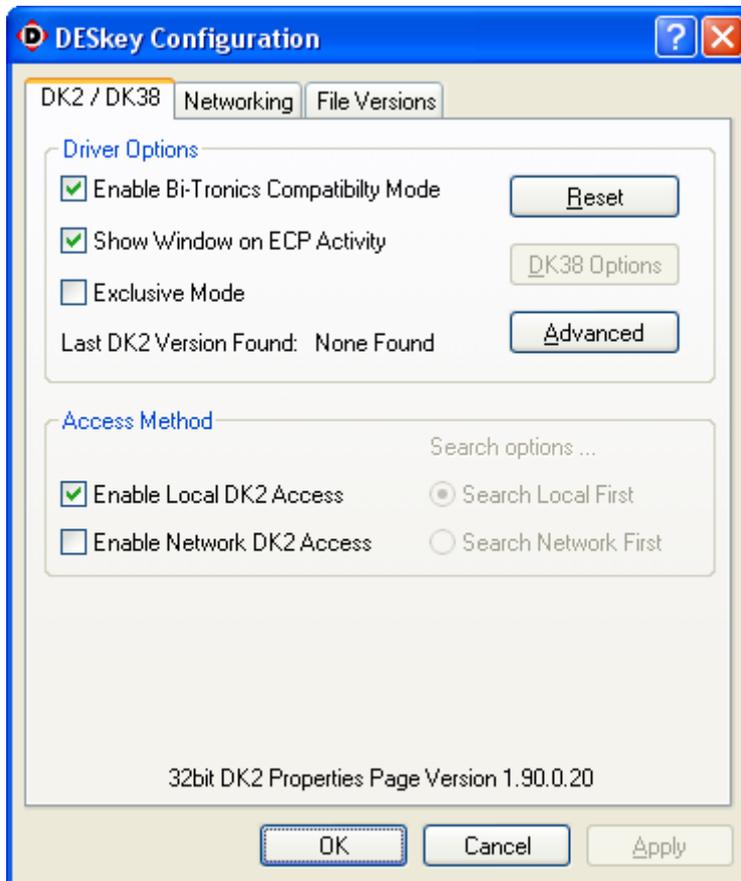


or



## Setting Client To Use A Local Licence Dongle

If your system uses a local dongle as opposed to a centrally located DK2 licence dongle approach, you must set the client PC to look at the local port. To enable this method of obtaining a licence key, select **DESkey** from the Windows **Control Panel** and click on the **DK2/DK38** tab. You will be presented with a dialogue box similar to below.

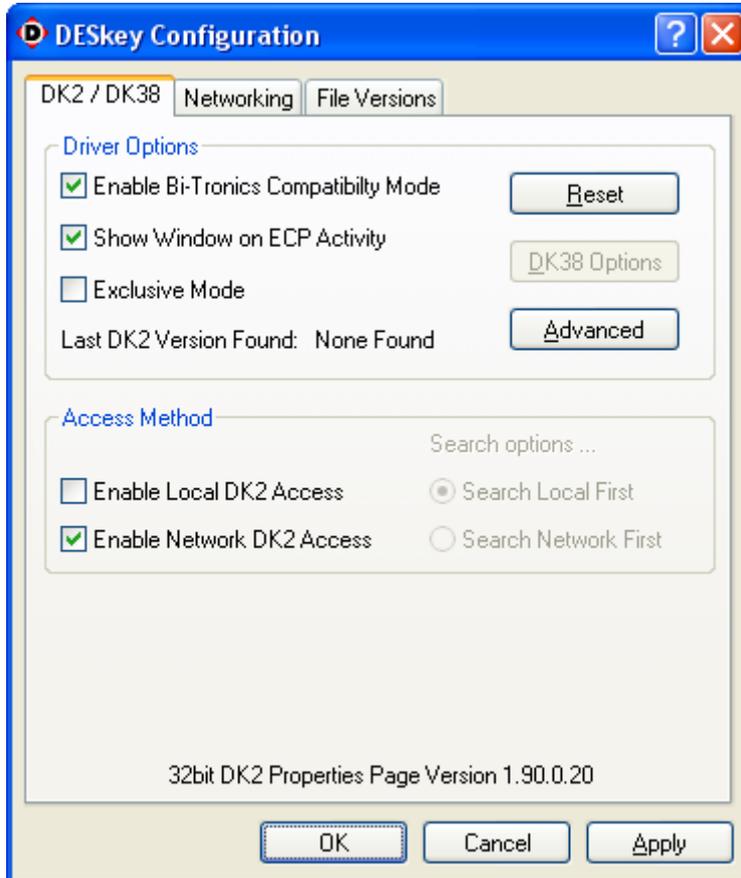


To enable *local only* licence validation, ensure that only the **Enable Local DK2 Access** check-box is ticked as shown above.

This setting is the default configuration that is installed along with your Starfish Technologies product.

## Setting Client To Use A Networked Licence Server

If your system uses a centrally located DK2 licence dongle as opposed to one dongle per machine approach, you must set the client PC to look across the network to a central licence server. To enable this method of obtaining a licence key, select **DESkey** from the Windows **Control Panel** and click on the **DK2/DK38** tab. You will be presented with a dialogue box similar to below.

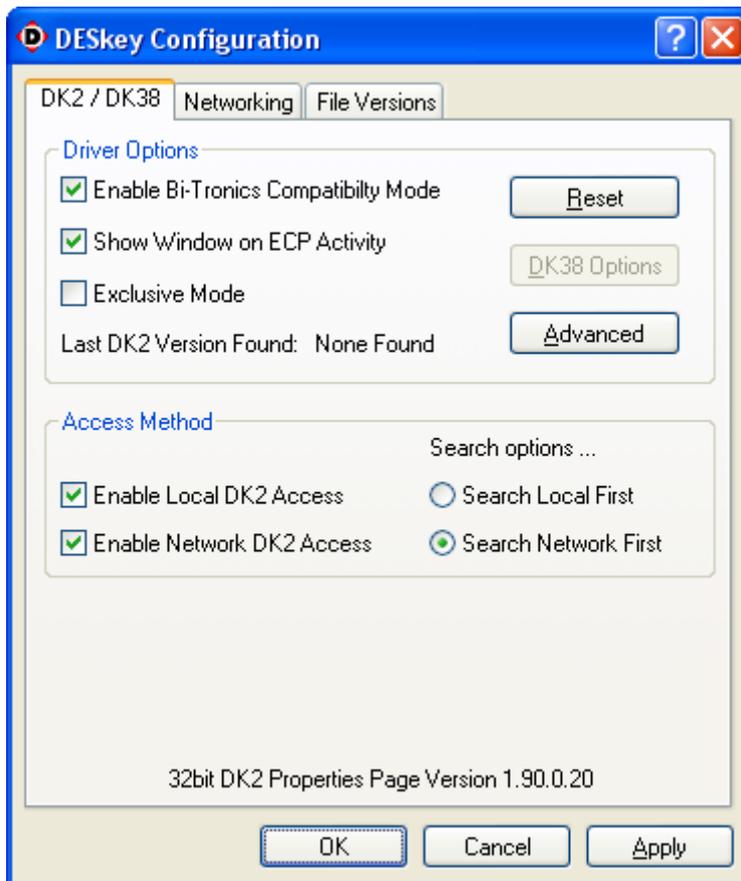


To enable *network only* licence validation, ensure that only the **Enable Network DK2 Access** check-box is ticked as shown above.

You must now configure the location of the **central licence server** (see "Adding A Central DK2 Licence Server" on page 11).

## Setting Client To Use Either A Networked Licence Server Or Local Licence Dongle

If your system needs to work with either licence method, you must set the client PC to automatically search for licences both locally and across the network to a central licence server. To enable this method of obtaining a licence key, select **DESkey** from the Windows **control panel** and click on the **DK2/DK38** tab. You will be presented with a dialogue box similar to below.

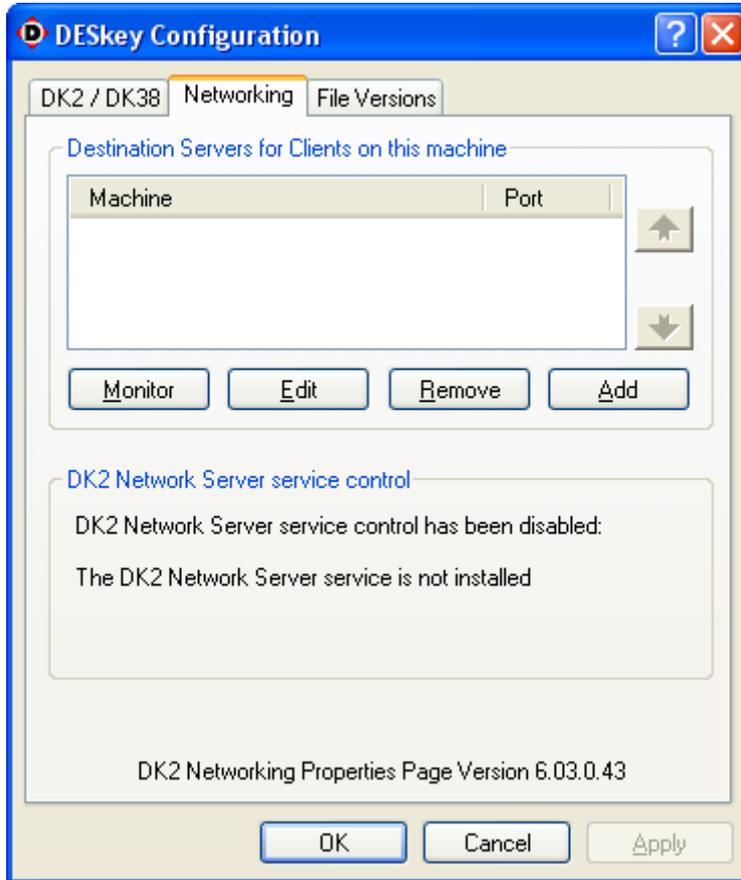


To enable the system to choose either local or network licence validation automatically, ensure that both the **Enable Network DK2 Access** and **Enable Local DK2 Access** check-boxes are ticked as shown above. The licence search order can be selected using the **Search options...** selection.

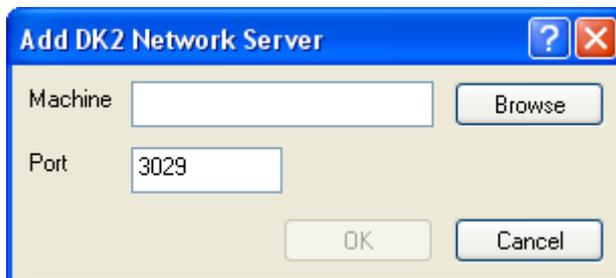
You must now configure the location of the central licence server.

## Adding A Central DK2 Licence Server

If your system uses a centrally located DK2 licence dongle as opposed to one dongle per machine approach, you must set the client PC to look across the network to a central licence server. In order to do this, select **DESkey** from the Windows **control panel** and click on the **Networking** tab. You will be presented with a dialogue box similar to below (server already shown as added in this example).



To add a new or additional server, click on the **Add** button and you will be presented with a dialogue box similar to below.

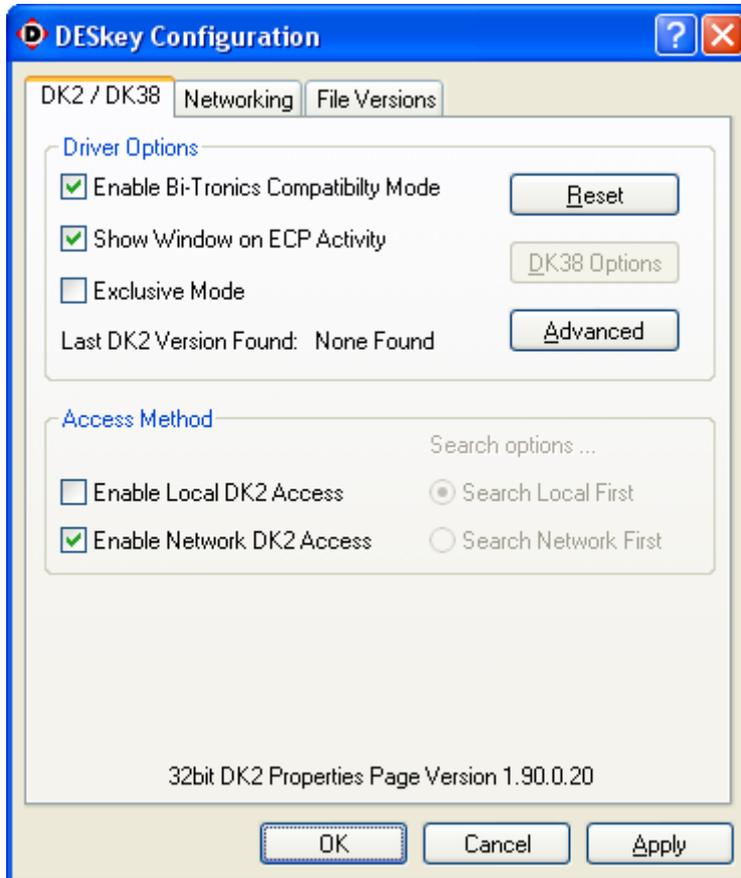


In the edit field marked **Machine**, either type directly the name of the central licence server, or use the **Browse** facility to locate the server on your network. It is advisable to leave the **Port** setting at its default value of **3029**, however should this conflict with other software you may have on your system this may be changed. However it must always reflect the port number used by the central licence server.

If you connecting to a central licence server from a different network via a router or via VPN circuit, then you are advised to enter the IP address of the DK2 licence server instead of the machine name. This is because name to IP resolution is not always perfect when using these network connection methods.

## Network Licence Server Configuration

When you set your machine to be a central licence server, the **Access Method** for the licence key should be set as shown below. To access this menu, select **DESkey** from the Windows **Control Panel** and click on the **DK2/DK38** tab.

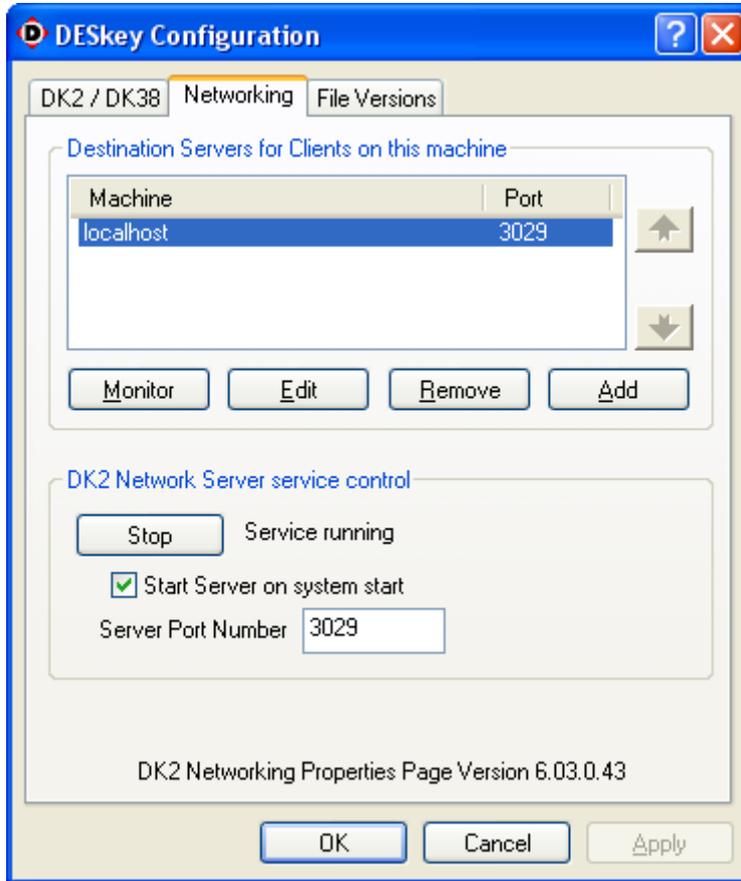


This setting only allows network licence servers to be utilised for local applications. The installer for *Network Server* does NOT normally configure these options for you, so you should uncheck **Enable Local DK2 Access**. If **Enable Local DK2 Access** is enabled on a network server PC, you may find that a local application starts before the DK2 server service does, thus blocking the server service from having access to the DK2.

The PC used as the DK2 network server should have a static IP address, not a DHCP assigned address.

## Controlling The Network Server Service

The network licence server can be controlled and configured to automatically start from within the Networking tab. To access this menu, select **DESkey** from the Windows **Control Panel** and click on the **Networking** tab.

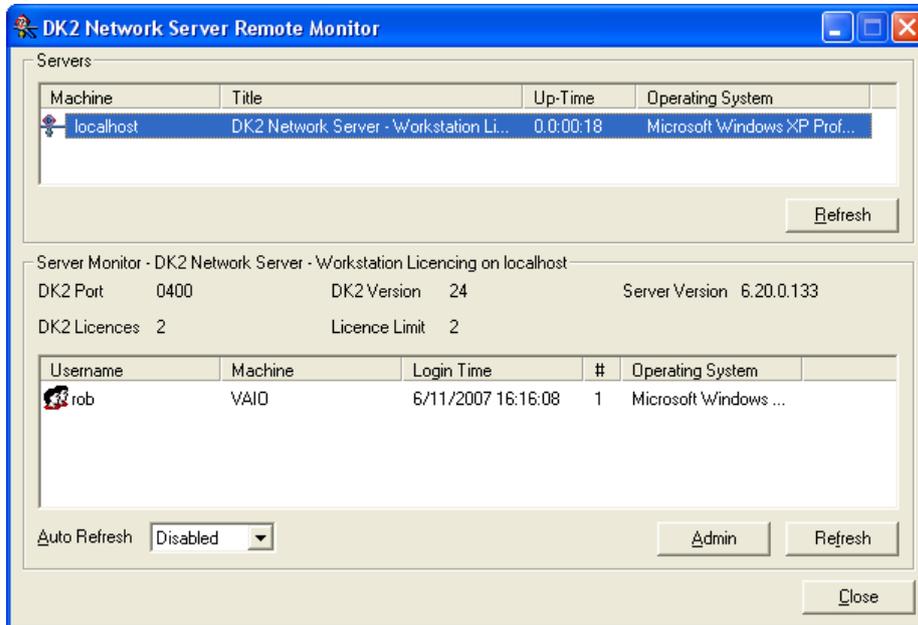


You will see that this panel is almost identical to the standard client DK2 driver with the exception that you have a control button to **Stop** and **Start** the DK2 licence server service. You can also set the **port** number used for the server (see below), and can set the service to **start automatically** during system boot-up.

It is possible to change the port number that the service uses should this conflict with other software on your system. You must ensure however that all clients that access this server (to obtain licences) use an identical port number as the main server.

## Monitoring The Network Server

To monitor and control licence usage on the server, select **DESkey** from the windows **Control Panel** and click on the **Networking** tab. Click to select the server you wish to configure (there is usually only one), and click on the **Monitor** button to give the form below.



Select the server from the list in the top panel (you can refresh the list at any time by clicking on the **Refresh** button). This will then enable the bottom pane to show the current number of licences in use (*DK2 Licences*) and the maximum available (*Licence Limit*). The list gives information appertaining to the current user(s) and their corresponding machine(s) names that are using licences from the server. It also shows the login time of the user(s) and the operating system of the machine they are connecting to the server with.

This list is not automatically updated. You will either need to click on **Refresh** or enable the **Auto Refresh** function to see any changes in licence usage.

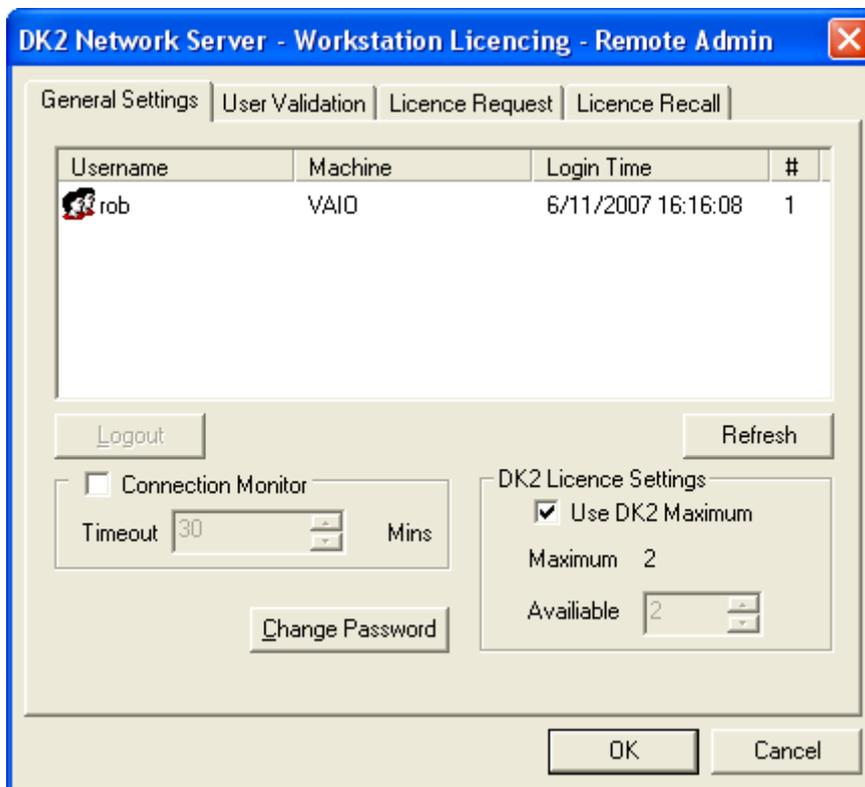
If for any reason a user's machine has failed to release a licence, you can forcibly terminate a licence usage by clicking on the **Admin** button. This can be observed when a machine still shows a licence usage even though it's not powered up, or not running any Starfish software.

## Freeing-up Unreleased Licences

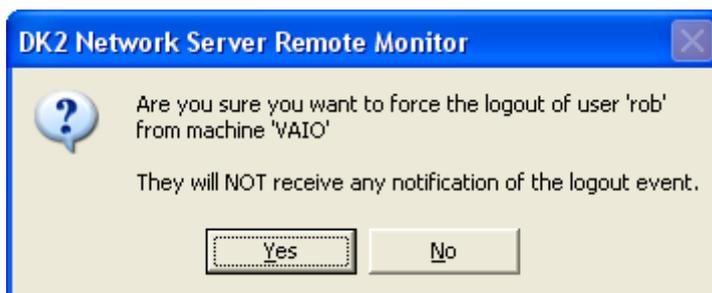
From the **Network Server Remote Monitor** screen you can forcibly terminate an unreleased licence by clicking on the **Admin** button. This initially presents you with a password dialog box.



The default password is `deskey` although you can change this if you wish (the **Change Password** button allows you to change the *Admin* password). You will then be presented with a form similar to the one shown below.



To terminate a licence usage, click to select the user/machine that you wish to control. Now click on **Logout**. This gives the safety dialog shown below.



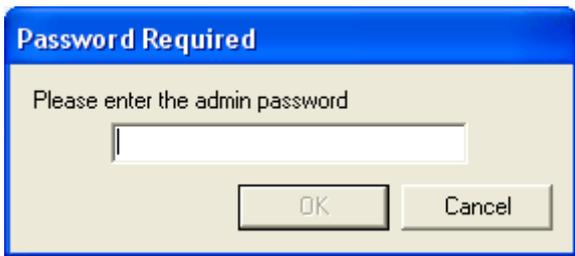
Click on **Yes** if you are sure.

It is also possible to set the system to trawl the system for unreleased licence connections automatically.

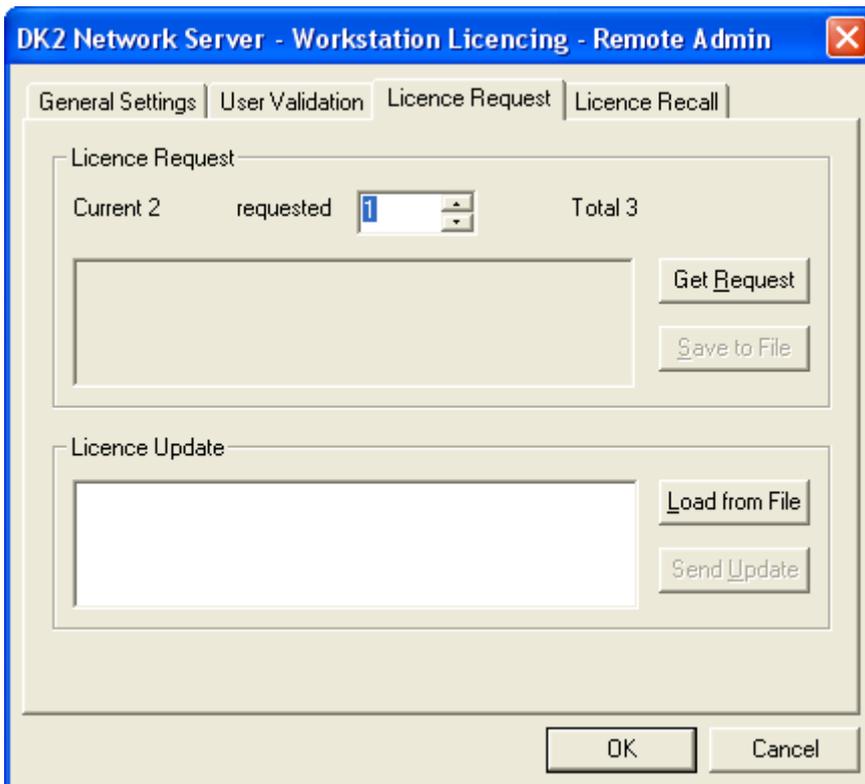
To enable this, ensure the **Connection Monitor** tick box is enabled. You should keep a timeout of 30minutes or more. If an individual licence isn't re-checked by the software within this time period, the licence is automatically removed from the system and released back to the licence pool. As Starfish software checks for DK2 licences on a regular basis, this should adequately cover most eventualities. Unless you regularly experience problems with unreleased licences, do not enable this function by default.

## Adding Extra Network Licences

From the **Network Server Remote Monitor** screen you can request and update the number of network licences you have by clicking on the **Admin** button. This initially presents you with a password dialog box.



The default password is **deskey** although you can change this if you wish (the **Change Password** button allows you to change the *Admin* password). You will then be presented with a form similar to the one shown below on which you should select the **Licence Request** tab.



The **Licence Request** tab will show you how many networkable licences you currently have on your dongle. Use the **requested** spinner to select how many extra network licences you require - the **Total** shows how many you will have after the request has been processed. Once you have set the number of extra licences require, click on **Get Request**. this will populate the area to the left with a series of hexadecimal numbers, and these need to be sent to Starfish for processing. To be sure that we receive the correct information from you, copy and paste the numbers into the main body of the email. You must also click on **Save to File** and attach the the `update.req` file you have just saved to the same email. *We will not process requests that do not include the `update.req` file.*

Starfish will process the `update.req` file data and send you back a `update.gen` file. We will also add a set of hex numbers to the body of the email. You can either paste those values into the **Licence Update** area or click **Load from File** and select the `update.gen` file we have sent you. Using the `update.gen` file is the most reliable, and is what we recommend.

Once the data has been added to the **Licence Update**, click on **Send Update** to process your requested licence update. You should now have the appropriate number of licence you requested.

## Network Firewall Settings For DK2 Client/server

If you are using a central DK2 licence server and your network employs a firewall between any client PC and the DK2 licence server PC, then you may need to configure you firewall.

The standard TCP port used by DK2 licensing services is port 3029. However, you are allowed to change this in the client and server if necessary, so you firewall should allow the same port you use in the client/server.

## Windows Firewall Settings For DK2 Client/server

If you are running firewall software on the local PC (e.g. Windows Firewall on XP), then you will need to add the relevant DK2 licence server applications to the list of applications that can access the network.

On both client and server you will need to allow the following access to the network...

`%SYSTEMROOT%\System32\DNHlp32.exe` and

`%SYSTEMROOT%\System32\dkcpanel.exe` and

`%PROGRAMFILES%\Common Files\DESkey\DNRmot32.exe`

For the server you will also need to allow the following access to the network...

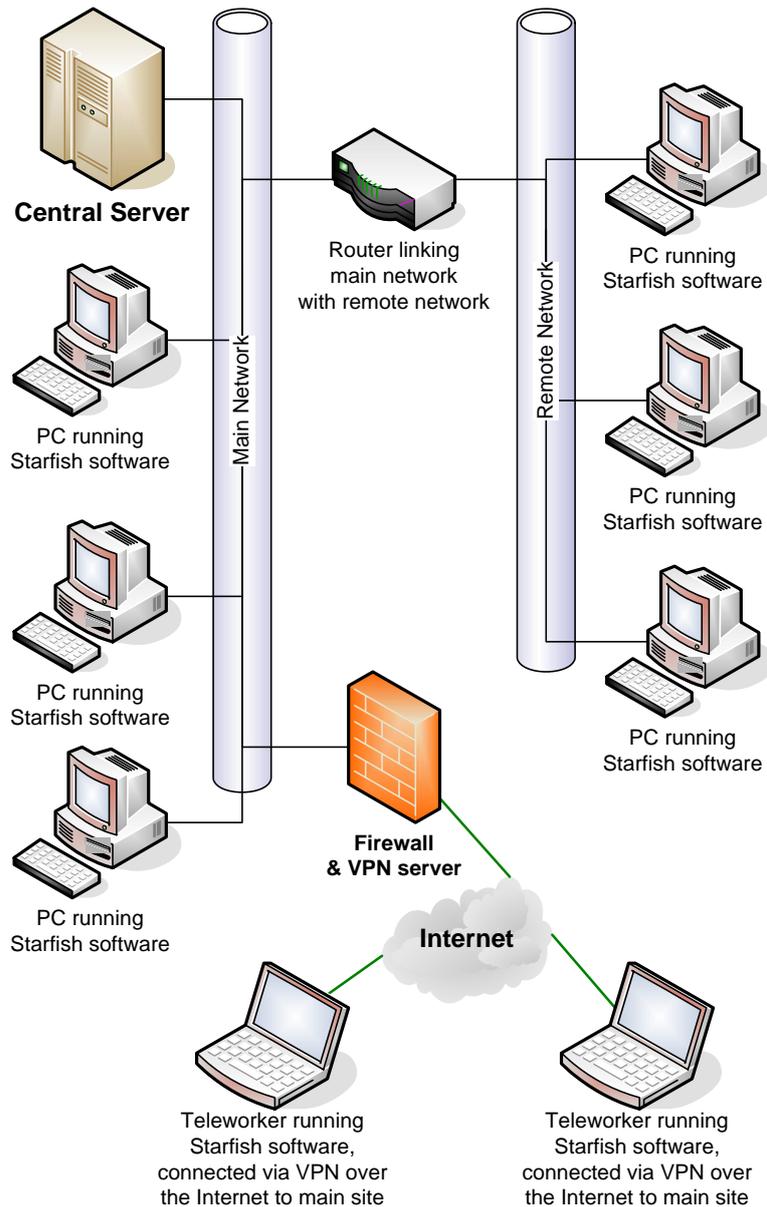
`%PROGRAMFILES%\DESkey\DK2 Network Server\DNSrv32.exe`

Finally, you need to allow the relevant application that requires a DK2 network licence to be allowed to access the network.

# Implementing DK2 Network Solutions

## Example Network Topography

This example network helps to demonstrate possible connection scenarios.



In this example, the Central Server would host the DK2 network server software, and by definition would have the network dongle attached to it. The following configuration notes should be observed:

- Local client PCs (i.e. those on the Main Network) are configured to use a DK2 network licence. In this case it is safe to use the name of the Central Server in the DK2 configuration applet.
- Remote client PCs (i.e. those on the Remote Network) are configured to use a DK2 network licence. In this case it is advisable to use the IP address of the Central Server in the DK2 configuration applet instead of the name.

- Teleworker client PCs (i.e. those connected via the Internet) are configured to use a DK2 network licence. In this case it is advisable to use the IP address of the Central Server in the DK2 configuration applet instead of the name.
- The Router linking the Main Network to the Remote Network must be configured to allow TCP communication on port 3029 (if DK2 default used) in addition to any other ports that need to be opened for the specific software in use.
- The Firewall and/or VPN server for the Teleworker clients must be configured to allow TCP communication on port 3029 (if DK2 default used) in addition to any other ports that need to be opened for the specific software in use.

## Issues To Be Aware Of

- Teleworkers need to be connected to the network that hosts the DK2 licence server before launching their application, otherwise they will not be able to obtain a licence to run the application. They must also remain connected whilst using the software, and ensure that they close the application BEFORE they disconnect from the network.
- In a network environment the client obtains a licence from the central pool, uses it for the duration, and releases it back when the application closes. This includes a teleworker type scenario.
- If the user disconnects before the application is closed the licence will not get released back to the system. The licence can be manually released by a network administrator however. See *Freeing up unreleased licences* (see "Freeing-up Unreleased Licences" on page 15) for details of how to do this.
- The need to terminate licences can also happen if someone switches off their PC at the wall socket instead of closing it down (or a power failure for example).
- If using a network DK2 licence server it is advisable to keep any eye on the licence usage screen, and check any licences that have been in use for an unusual length of time. See *Monitoring the network server* (on page 14) for details of how to do this. If this proves to cause problems on a regular basis, you may wish to consider setting the system to automatically trawl for unreleased licences.
- The PC used as the DK2 network server should have a static IP address, not a DHCP assigned address.
- You cannot mix server and client major version numbers in a networked scenario. i.e. You can only use version 7 drivers (client) with a version 7 server and vice versa - version 6 clients will not correctly communicate with a version 7 server.

## USB Dongles

With the gradual demise of parallel ports on modern PC systems, we are increasingly supplying USB versions of the DK2 dongle. Please be aware that these are physically less tolerant to knocks, often because they have been left sticking out from a USB socket mounted on the front panel of a PC. Physical damage to dongles is not covered by warranty, although we can supply replacements for a fee.

So if the end of your DK2 is a suddenly a little more flexible than you think it should be, and looks something like this, it's almost certainly broken!



## DK2 v6 And v7 Driver Compatibility

Please note that you cannot mix v6 & v7 drivers on a networked DK2 licence system. You can only use a v6 client with a v6 licence server and a v7 driver with a v7 licence server.

If you have installed a v7 driver and need to revert back to v6, then you must do the following:

- 1 Uninstall the v7 driver
- 2 Reboot the PC
- 3 Delete the DK2Win32.dll file found in your Windows\System32 folder (you need to be able to "see" hidden and system files - part of Explorer config)
- 4 Reboot the PC
- 5 Install the v6 driver

## Using More Than One DK2 Server

It is possible to use more than one central network DK2 server. This could be to give resilience to a system, to reduce network traffic between two sites, whilst maintaining flexibility.

To do this, you add additional servers to the DK2 client configuration. You can set their search order priority by moving the servers up or down the list as appropriate. See *Adding a central DK2 licence server* (on page 11) for how to add servers to the client configuration.

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