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User's Guide

# DK2 Dongles







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## Typographical Conventions

Formatting convention	Information
1. Numbered bullet list 2. Etc.	Step-by-step procedures to be followed; or a list of features or set of alternative options.
<b>Special Bold</b>	Items to select: edit fields; radio or tick box buttons; drop-down or pop-up list items etc.
<i>Emphasis</i>	Emphasising the importance of a point; or variable expression such as parameters.
<b>CAPITALS</b>	Keys on the keyboard e.g. <b>SHIFT</b> , <b>CTRL</b> , or <b>ALT</b> .
<b>KEY+KEY</b>	Key combinations: press and hold one key and then another e.g. <b>CTRL+P</b> or <b>ALT+F4</b> .
Monospaced text	Text to be entered from the keyboard; folder paths or filenames, system commands. e.g. "C:\Program Files\" or "type IPCONFIG in command window".

## Spelling conventions

In this document and the software to which it refers, British English & American English spellings of licence/license are used interchangeably.



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## CHAPTER 1

# Introduction to DK2 Dongles

All Starfish Technologies products use hardware dongles to protect the software and provide a method of application licensing. Sometimes this simply means an individual dongle attached to your local machine. Alternatively, in a large multi-user environment, we offer a server-based solution, whereby one centrally accessed dongle is used to control software licensing throughout the network.

Dongles are provided by DESkey and are unique to each specific product; you cannot buy additional licence dongles from DESkey. Driver updates, however, are available direct from the manufacturer. The latest drivers that are available at time of product release are provided by Starfish. More recent updates become available from time to time and these can be downloaded as required from the DESkey website <http://www.deskey.co.uk>. You are of course welcome to contact Starfish Technologies to confirm compatibility before installing updates.

When any Starfish software starts up, it checks for the presence of an appropriate dongle loaded with appropriate licences for the product being started - this could be held either in 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: if the licence key is no longer present, the application will bring up a warning message and the subsequent behaviour of the software varies according to the particular product.

When a Starfish application is closed, the licence usage is released back to the system.

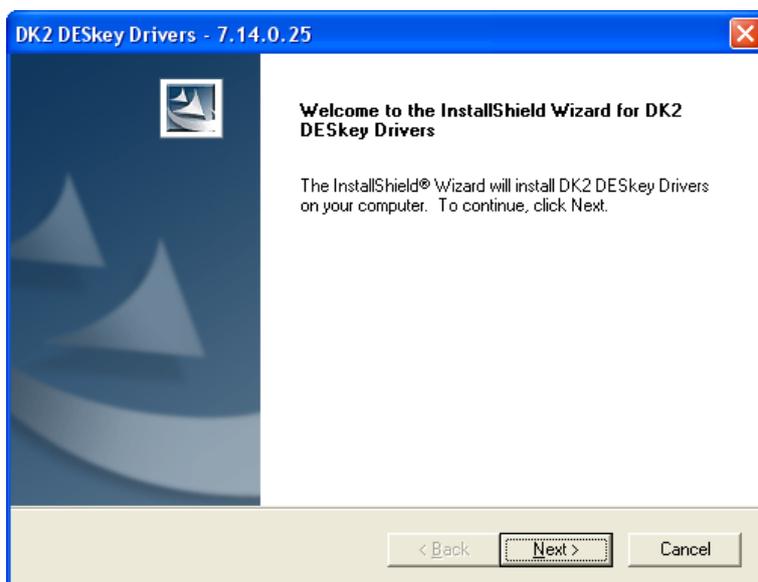
## CHAPTER 2

# DK2 Client Installation

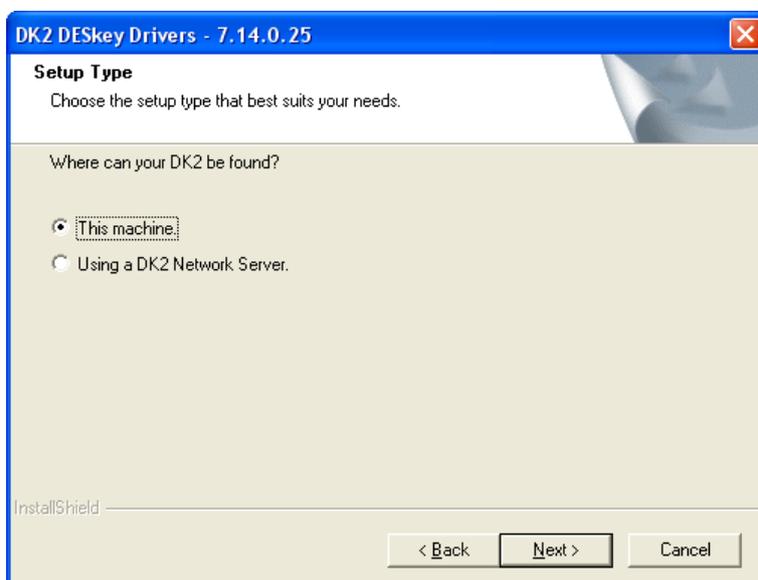
The DK2 Client can be used for local dongle access or for sending requests to a central server for networked dongling solutions. The installer requests to know which method is required during installation, but this can also be configured subsequently if any of the parameters are unknown at the time of installation.

Under normal circumstances, the Starfish application installer will launch the DK2 Drivers automatically unless you specifically disable this. There may be times when it is necessary to install these drivers manually or to update them. The procedures are identical except for the very last stage: if the Starfish application installer is used to launch the dongle, you are not prompted by the DK2 installer to reboot your PC because the Starfish application installer does this automatically, after it has performed the rest of its operations; however, if 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 **Next** to move to the **Setup Type** screen.

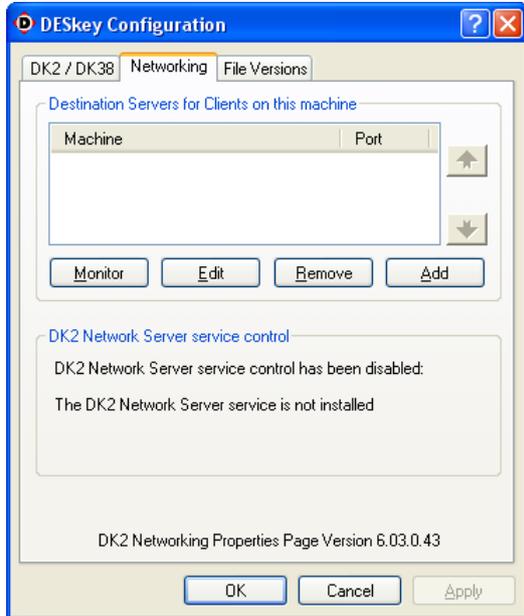


If you are using a local dongle, or if you intend using a network dongle solution but have not got the relevant information to hand, select **This Machine** and click on **Next** to continue.

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.

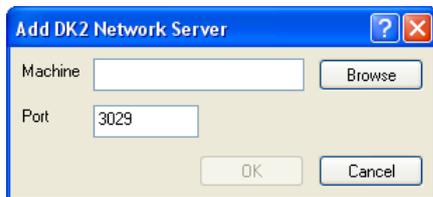
For *local* installation, that is all that is necessary.

However, if you choose the **Using a DK2 Network Server** option, the installer will copy the appropriate files to the PC and present you with the following screen:



Again, if you do not know the exact network server configuration, just click on **OK** to finish the installation and configure the system at a later time, without committing to any given settings at this stage.

On the other hand, if you *do* know the server hosting the Network Dongle server, click on **Add**, which brings up the screen below:



You can enter the name of the server directly in the **Machine** field. Alternatively, use the **Browse...** button to show the list of active machines on the network and select the appropriate server. The **Port** number here (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, leave it as it is.

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

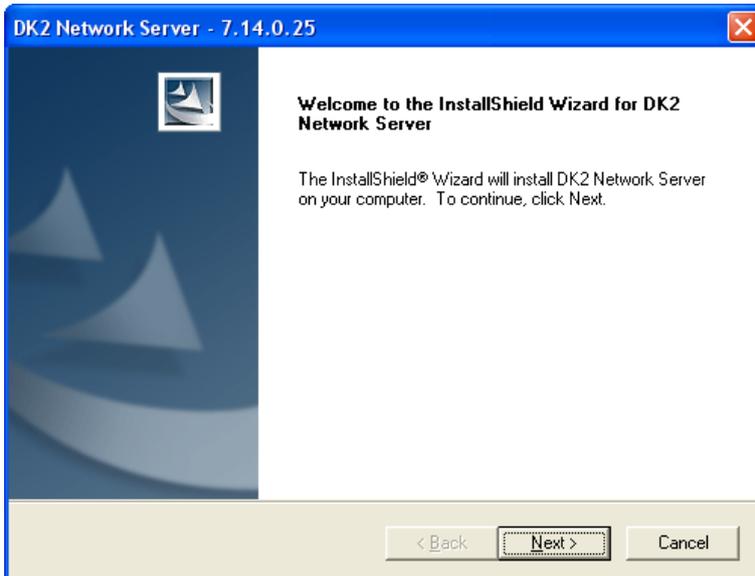
If connecting to a central licence server from a different network via a router or VPN circuit, enter the IP address of the DK2 licence server instead of the machine name: this is because name/IP resolution is not always reliable when using these network connection methods.

## CHAPTER 3

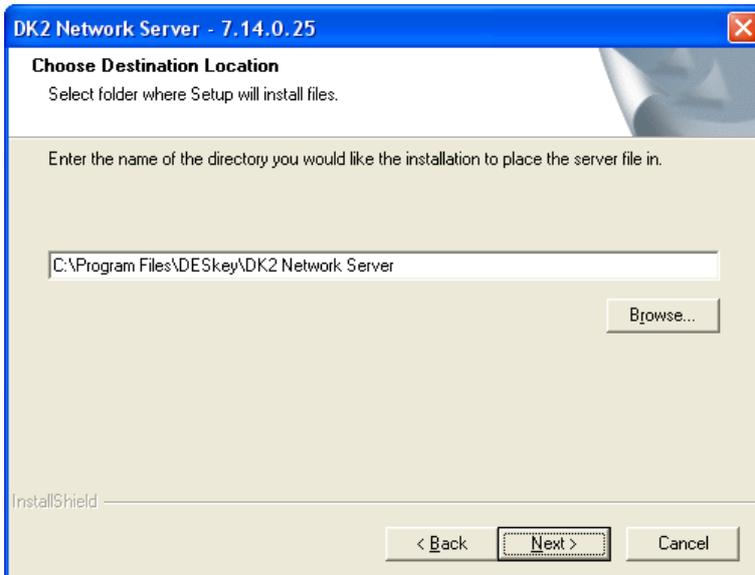
# DK2 Network Server Installation

The Network Server driver is a superset of the client-only driver. It will therefore ask to remove any "client only" driver that 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:



Normally, it is advisable to accept the default offered. If you need to change it for any reason, you can type the location directly or use the **Browse...** button to find the desired location.

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

The installer will then 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 rebooted, you must configure the server. See *Network Licence Server Configuration* (on page 11).

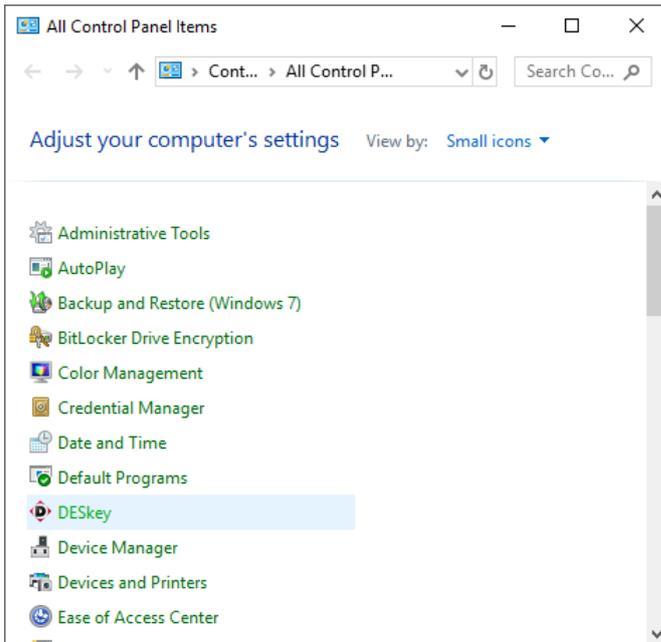
## CHAPTER 4

# DK2 Configuration

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## Launching The Applet

The **DESkey** tool can be found in the operating system **Control Panel**, which can be found via the **Start** menu.

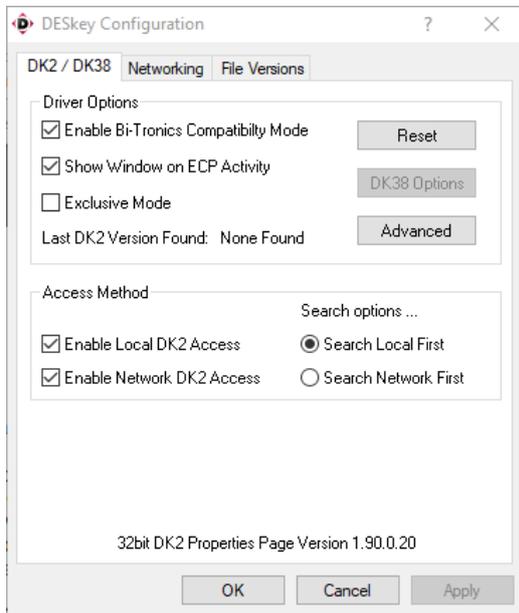


Double click the **DESkey** icon to launch the applet. You may then need to click "Yes" on a security confirmation message before the applet window appears. Check the task bar for the security warning shield if nothing appears to be happening on your screen!

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## Setting Client To Use A Local Licence Dongle

If your system uses a local dongle (as opposed to a centrally located DK2 licence dongle), 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 go to on the **DK2/DK38** tab.



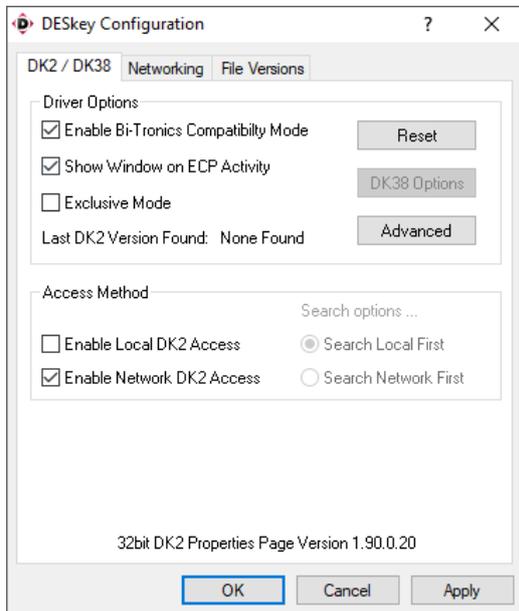
To enable *local only* licence validation, ensure that only the **Enable Local DK2 Access** check box is ticked, as shown above.

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

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## Setting Client To Use A Networked Licence Server

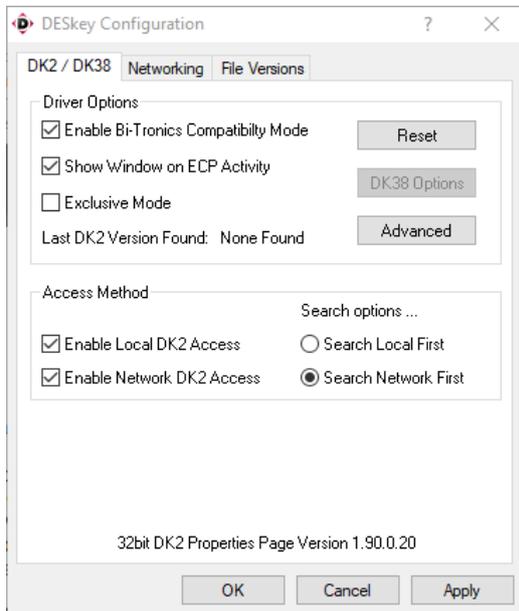
If your system uses a centrally located DK2 licence dongle (as opposed to one dongle per machine), you must set the client PC to look across the network to a central licence server. To enable this method of obtaining a licence key, select **DESkey** from the Windows **Control Panel** and go to the **DK2/DK38** tab.



To enable *network only* licence validation, ensure that only the **Enable Network DK2 Access** check box is ticked, as shown above. Then you need to configure the location of the central licence server (see **Network Licence Server Configuration** (on page 11)).

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

If your system needs to work with *either* a local dongle or a centrally located network dongle, 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 go to the **DK2/DK38** tab.

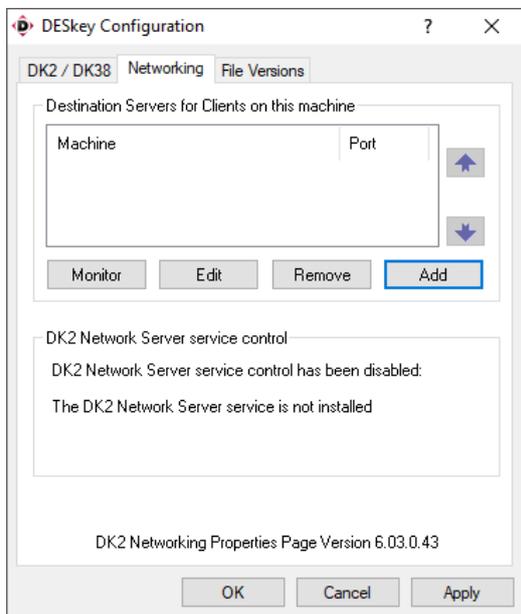


To enable the system to choose either local or network licence validation automatically, ensure that both the **Enable Network DK2 Access** and **Enable Local DK2 Access** check boxes are ticked, as shown above. You also need to select the licence search order using the **Search options...** radio buttons (in the example shown, the selection is to search the network first).

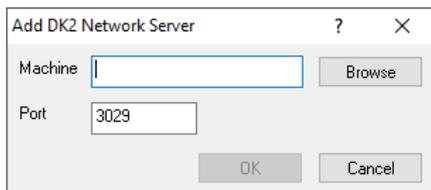
Then you need to configure the location of the central licence server (see **Network Licence Server Configuration** (on page 11)).

## Adding A Central DK2 Licence Server

If your system uses a centrally located DK2 licence dongle (as opposed to one dongle per machine), 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 go to the **Networking** tab.



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

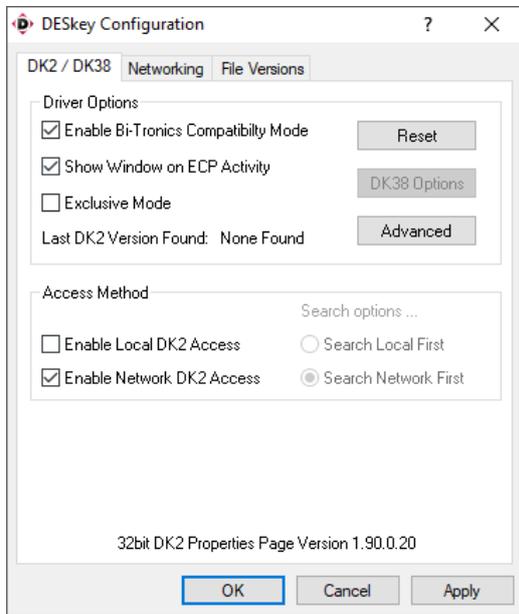


In the **Machine** field, either type directly the name of the central licence server, or use the **Browse** facility to locate the server on your network. It is advisable to leave the **Port** setting at its default value of **3029**, unless this conflicts with other software you may have on your system, in which case it 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/IP resolution is not always perfect when using these network connection methods.

## Network Licence Server Configuration

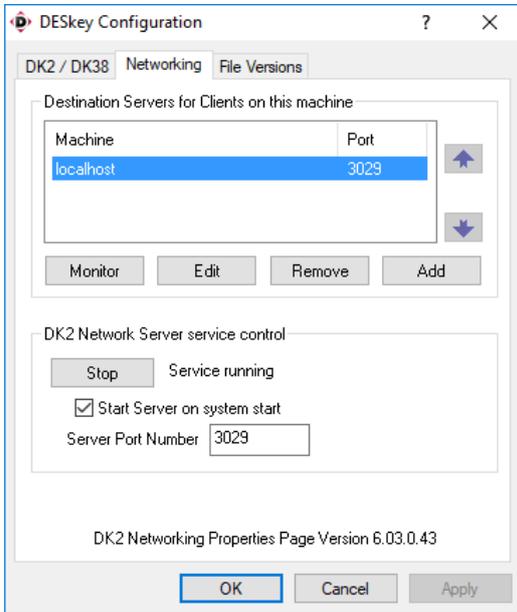
When you set your machine to be a central licence server, the **Access Method** for the licence key should be set as shown below. To access this menu, select **DESkey** from the Windows **Control Panel** and go to the **DK2/DK38** tab.



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.

## Controlling The Network Server Service

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

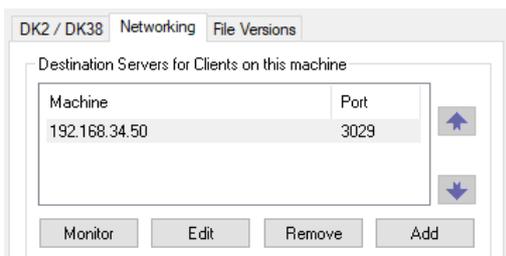


This panel is very similar to the standard client DK2 driver, with the exception that there is a control button to **Stop/Start** the DK2 licence server service, and you can select **Start Server on system start** should you want the service to start automatically during system boot-up.

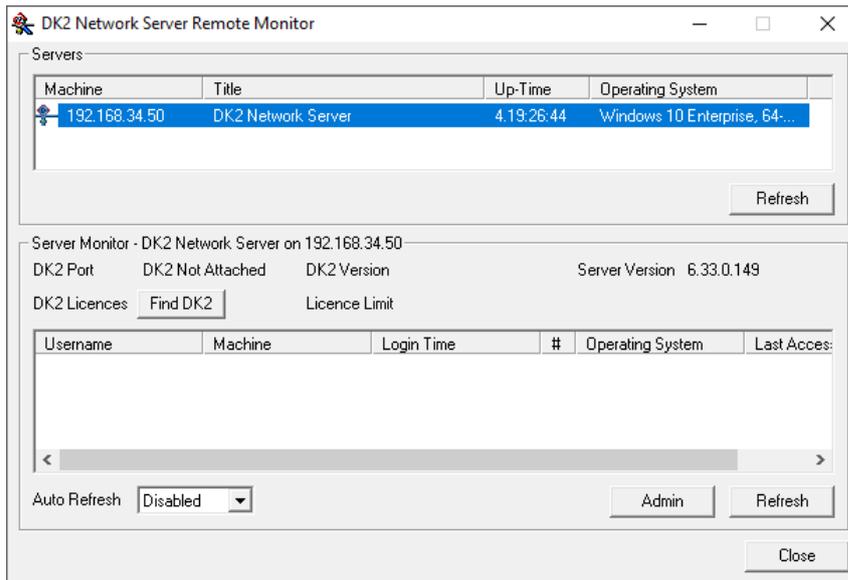
You can also set the **Port Number** used for the server, though it is advisable to leave this as it is, unless it conflicts with other software on your system. You must ensure, however, that all clients that access this server (to obtain licences) use an identical port number as the main server.

## Monitoring The Network Server

The network server can be monitored via the **Networking** tab (select **DESkey** from the Windows **Control Panel** and click on **Networking** tab). Click to select the **Machine** (i.e. server) you wish to configure - there is usually only one.



Then click on the **Monitor** button to bring up the **DK2 Network Server Remote Monitor** screen shown here.



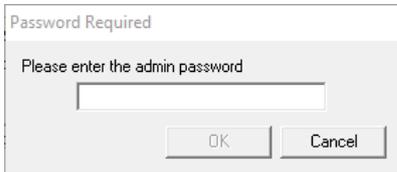
Select the server from the list in the top panel. This list can be refreshed at any time by clicking the **Refresh** button. The current number of licences in use (*DK2 Licences*) and the maximum available (*Licence Limit*) will be displayed. The list gives information pertaining to the current user(s) and the names of any corresponding machine(s) that are using licences from the server. It also shows the login time of the user(s) and the operating system of the machine with which they are connecting to the server.

This list is not automatically updated. Click on **Refresh** or enable the **Auto Refresh** function to see any changes in licence usage.

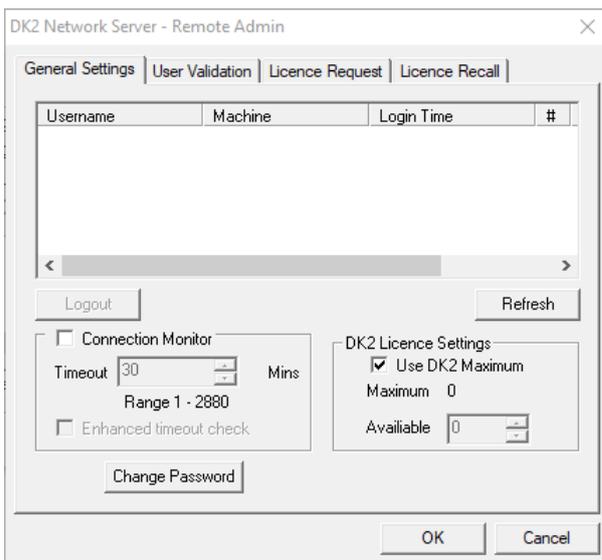
If a user's machine has failed to release a licence, you can forcibly terminate a licence usage by clicking on the **Admin** button. This may be the case when a machine still shows a licence usage even though it is no longer powered up, or not running any Starfish software. See *Freeing up unreleased licences* (on page 14) for more details.

## Freeing up Unreleased Licences

From the **DK2 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.



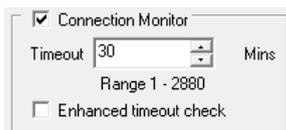
The default password is `deskey` although you can change this if you wish using the **Change Password** button on the screen which is revealed subsequently, shown below.



To terminate a licence usage, click to select the user/machine that you wish to control. Then click on the enabled **Logout** button. An additional confirmation dialog box will appear - click **YES** to force the logout or click **NO** to cancel the instruction. Please note that when you confirm the logout, the user will *not* receive notification of the logout event.

## Releasing Licences Automatically

If you regularly experience problems with unreleased licences, it is possible to set the system to trawl for unreleased licence connections automatically. To enable this, ensure the **Connection Monitor** tick box is enabled.

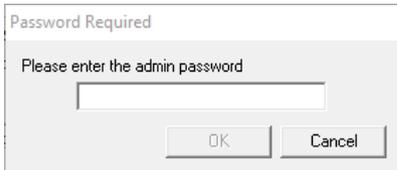


Set the **Timeout** to a value of 30 minutes or more. If an individual licence isn't re-checked by the software within this time period, the licence is automatically removed from the system and released back to the licence pool.

## Adding Extra Network Licences

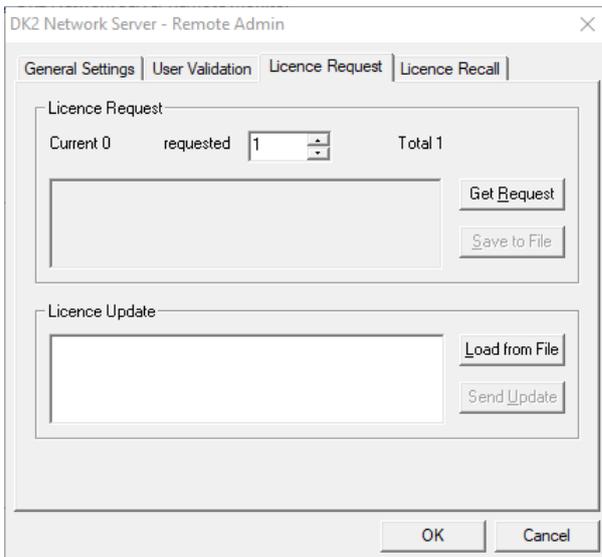
If you want to add more network licences to your system, these can be purchased from Starfish Technologies. This section describes how to generate an encrypted request, which can be sent to Starfish by email. Once agreed, Starfish will process the request and return a similarly encrypted response, as described below.

To add extra network licences, open the DESkey configuration window (via the **Control Panel**), go to the **Networking** tab and click the **Monitor** button to go to the **DK2 Network Server Remote Monitor** screen. From this screen, select 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 using the **Change Password** button on the **General Settings** tab of the **DK2 Network Server - Remote Admin** screen.

To add extra network licences, select the **Licence Request** tab on the **DK2 Network Server - Remote Admin** screen, as shown below.



## Licence Request

The top of the **Licence Request** section shows the following:

- the **Current** number of networkable licences available on your dongle;
- the **requested** number of licences (use the spinner to select additional network licences);
- the **Total** number of licences that will be available after the request has been successfully processed.

Once you have set the number of extra licences to be requested, click on **Get Request**. This will populate the field to the left with a series of hexadecimal numbers, which need to be sent to Starfish for processing.

To do this, click on **Save to File**, save the resulting `update.req` file in your chosen location and then attach this `update.req` file to your email and send to Starfish.

Starfish cannot process requests that do not include the `update.req` file.

## Licence Update

Starfish will process the `update.req` file data and send you back an `update.gen` file. Click on **Load from File** and select the `update.gen` file that you have been sent. Once the data has been added to the **Licence Update** field, click the **Send Update** button to process your requested licence update. You should now have the appropriate number of licences, as requested.

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# 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 your 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, but the port must match in the server and all clients. Therefore, whichever port you choose must be permitted through your firewall.

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# 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.

## CHAPTER 5

# DK2 Network Troubleshooting

## Teleworkers

- 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* (on page 14) for details of how to do this.
- The need to terminate licences can also arise if someone switches off their PC at the wall socket instead of closing it down or in the event of a power failure, for example.
- If using a network DK2 licence server, it is advisable to monitor the licence usage screen to review any licences that have been in use for an unusual length of time. See *Monitoring the network server* (on page 12) for details of how to do this.
- If it turns out that licences are frequently not being released back to the system in a timely fashion, you may wish to consider setting the system to automatically trawl for unreleased licences.
- You cannot mix server and client major version numbers in a networked scenario. In other words, 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.

## 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, or 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 10) for how to add servers to the client configuration.

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