

# Generic Deskey Network Server Manual

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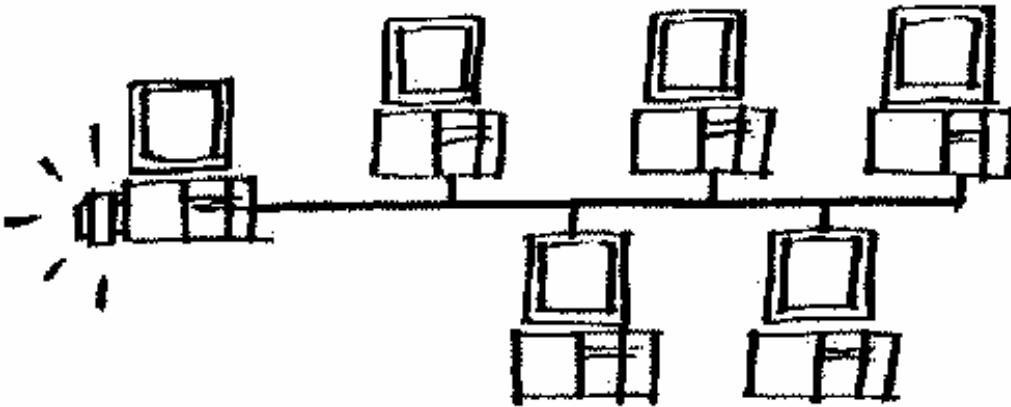
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## Getting Started...

# Network Romlock Installation Guide



PD-000-300

Applied Cytometry Systems  
Sheffield, UK



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## 1.0 DESkey Network Romlock - Introduction

- This manual deals with the installation of the Network Romlock option for enabling access to ACS application software
- If you have a network or IT manager for your network site, you must consult them before proceeding with a DESkey network server installation.
- The Network Server CD has been checked with one of the latest versions of commercial virus checking software, however, the network or IT manager must be made aware of your wish or intention to install the network server romlock system and they must be allowed to do any further checks required of your network site before allowing the CD to be accessed via your system.
- Using the DESkey Network Server romlock system means that anyone, with appropriate network permissions, can access the application software anywhere on the same network. The maximum number of concurrent users logged-in at any one time will not be allowed to exceed the number of licences "purchased" for use on the site where the particular romlock is supplied. The maximum number of concurrent users is programmed into the DESkey romlock hardware. The romlock can be updated remotely upon request for more concurrent users. To purchase more licences, please contact your Applied Cytometry Systems representative or the distributor who furnished your original copy. Appendix C explains the process in more detail. Once again, consult your network or IT manager before attempting a licence upgrade.
- The Network Server DESkey Romlock must be plugged into the parallel port of a network "Host PC" and the PC must be switched on and logged into the network at all times during which other Software users wish to log-in and use the DESkey romlock licenced software.
- The host server requires installation and configuration of the "DESkey Romlock Network Server" system supplied on the DESkey Network Server CD. All the client PC system(s) use updated common drivers also supplied on the DESkey Network CD supplied with the network romlock. The very latest drivers can always be downloaded from the DESkey manufacturers web site at: [www.des.co.uk](http://www.des.co.uk). The drivers required from this site are for DK2 model and you should use the driver which is listed for your current operating system.
- The Client and Server drivers should always be the same version number, use of mismatched versions may cause the Server / Client connections to fail.

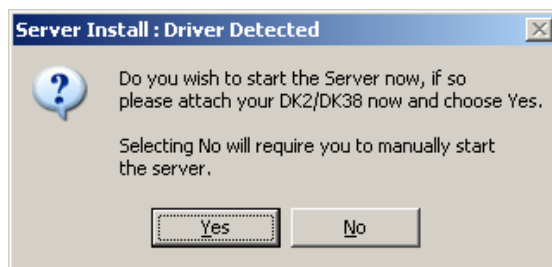
## 2.0 DESnet Server Installation

The Host PC has to have the DESkey Network server romlock plugged into its parallel port and has to have the DESnet server service and drivers running. If there are previous versions of DESkey drivers loaded on the host or your target PC's, it is recommended that the Windows **Add / Remove Programs** facility is utilized to remove registered DESkey components.

### To Install DESnet Server Onto A Host PC:

- 1) Insert the DESkey "DESnet Network Server" CD-Rom into the CD-Rom drive.
- 2) Use explorer or browse the CD via the <Start/Run> command and <Browse> to locate the <DK2 Network Server> folder on the Expo32Deskey CD rom. Run the dnsrv32.exe file.
- 3) The <DK2 Network Server> dialog will be shown after a short while with some introductory information. Click <Next> to proceed
- 4) The <Choose Destination Location> dialog will be shown next, it is advised that you accept the destination offered, but you can change the destination folder if you wish. Click <Next> to proceed.
- 5) You will then be asked if you wish to start the Server now, you should ensure the network romlock is attached to the PC and select <Yes> to continue.

← --- Formatted: Bullets and Numbering



- 6) Select <Finish> to complete installation.

Note: If you are installing on a Windows 98 PC you will need to reboot the PC to start the DESnet server software.

### NOTE:

*The Network Server romlock can function as both a "local" access device and a "Network Server" device. If the "local" user wishes to use the EXPO32 application when the Network Server application is running, then the user must first set preferences to access "Network Device" in the DK2 control panel. See section 3.0 for details on how to do this.*

## Verifying server installation

Select <Start / Programs / DK2 Network Server / DK2 Network Server Monitor

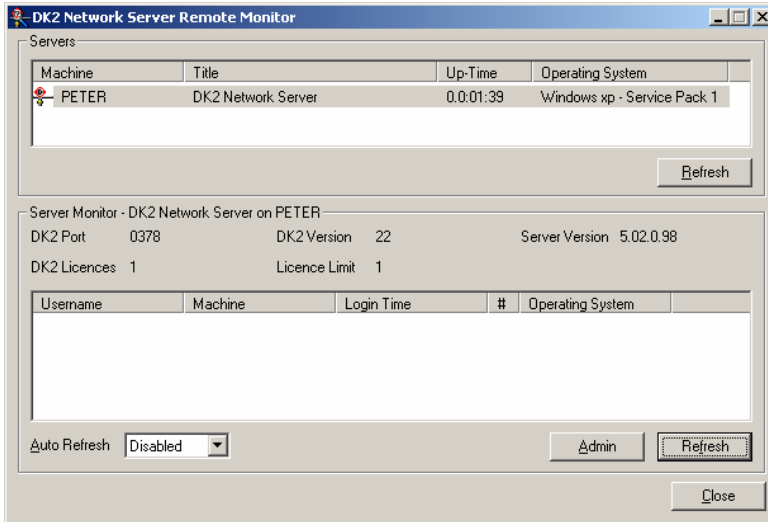


Figure 1

Verify the Server “Machine Name” is listed. If your server is not listed you may need to start or restart the service.

To restart the service select <Start / Settings / Control Panel > and run the deskey item – Select the Networking tab, here the DK2 Network Server Control button allows you to stop and start the service. This display should normally show “Service Running”.

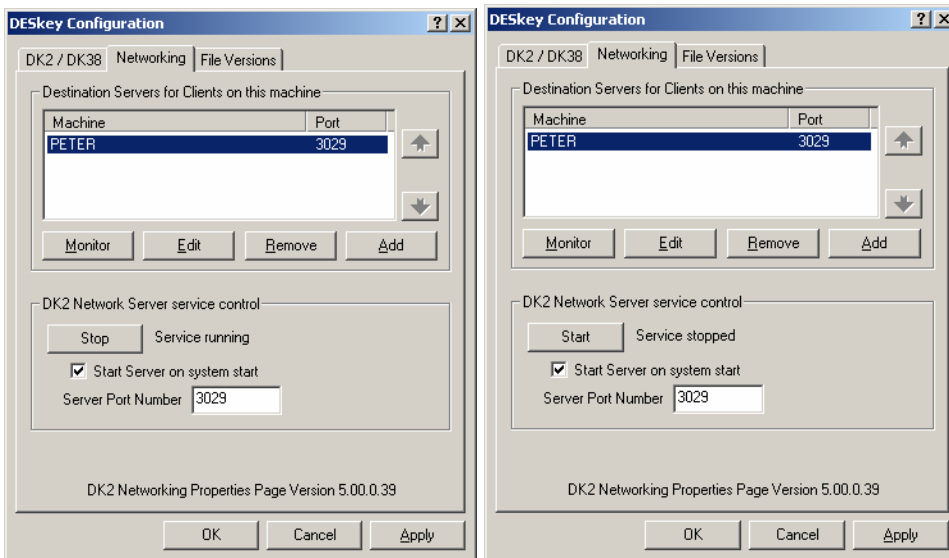


Figure 2

The File Versions tab should display version 5.05.075 or higher as displayed below. The DK2 Driver version and the DK2 Network Server version number should be the same unless advised otherwise. Use of mismatched driver versions may cause you DK2 Network server to fail.

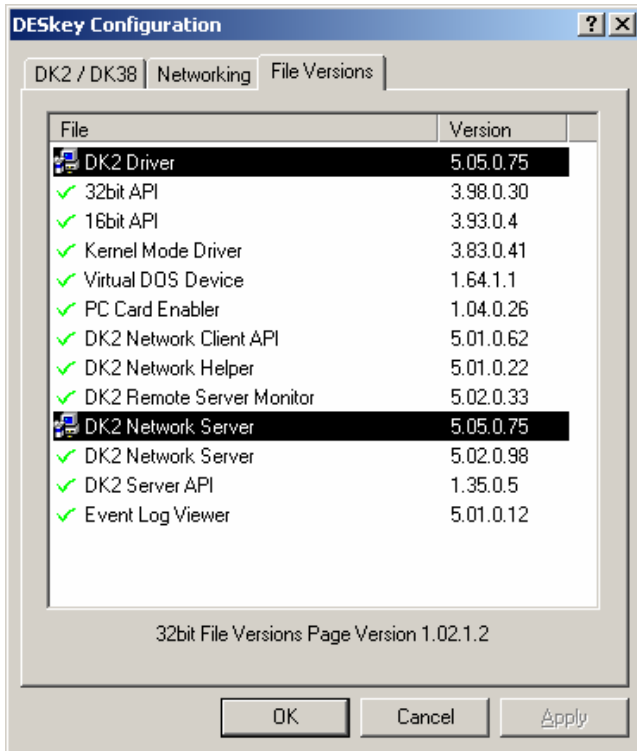


Figure 3

### 3.0 DK2 Client PC Driver Setup

Now the DK2 Network Server is running, the DK2 driver has to be updated on each client PC running software that is required to use the DK2 Network Server access method.

- 1) Ensure your application software is installed first on each PC. If the application software is not installed, install it now before proceeding with the DESkey driver installation.
- 2) Check Start/Settings/Control Panel/Deskey to view the DESkey configuration dialog to see which DESkey driver is installed. To do this, view the <File Versions> tab. The DK2 driver version must be 5.05.75 or later.

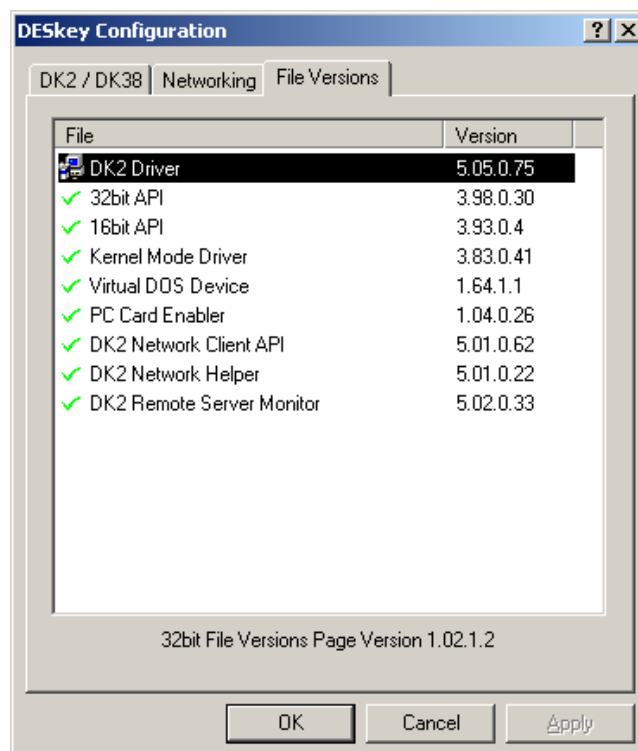


Figure 4

- 3) If a version earlier than 5.05.75 is installed, please remove the driver first by using <Start/Settings/Control Panel/Add/Remove Programs> and locate the DESkey driver. Double click to remove the driver.
- 4) Now install the DESkey network Driver: place the DK2 Network Server CD in the Client PC and choose <Start/Run> then <Browse> to locate the file "dk2wn32.exe" in the Deskey CD <DK2 Drivers> folder.

- 5) Double click the file “dk2wn32.exe” and select OK to Run, this is a self extracting driver install package. Follow the simple on-screen instructions.
- 6) The <Dk2 Drivers> dialog will be shown after a short while with some introductory information. Click <Next> to proceed.
- 7) The <Choose Dk2 Client Type> dialog (Figure 5) will be then be shown.

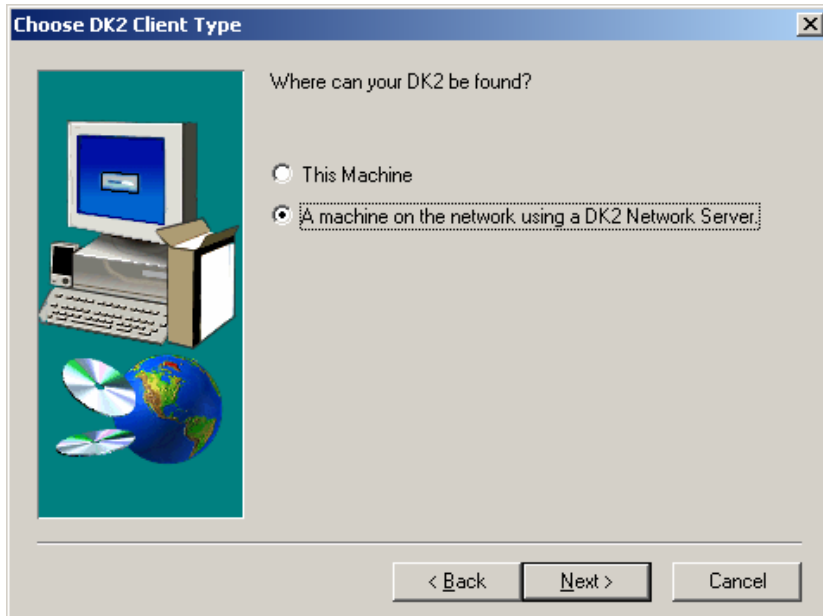


Figure 5

Select the **<A machine on the network using a DK2 Network Server>** option and Click <Next> to proceed.

- 8) The < Network Configuration > dialog will be shown next. The PC on which the Network Server Romlock is installed must be added to the “Destination Servers” list. Select <Add> to add the Server PC.

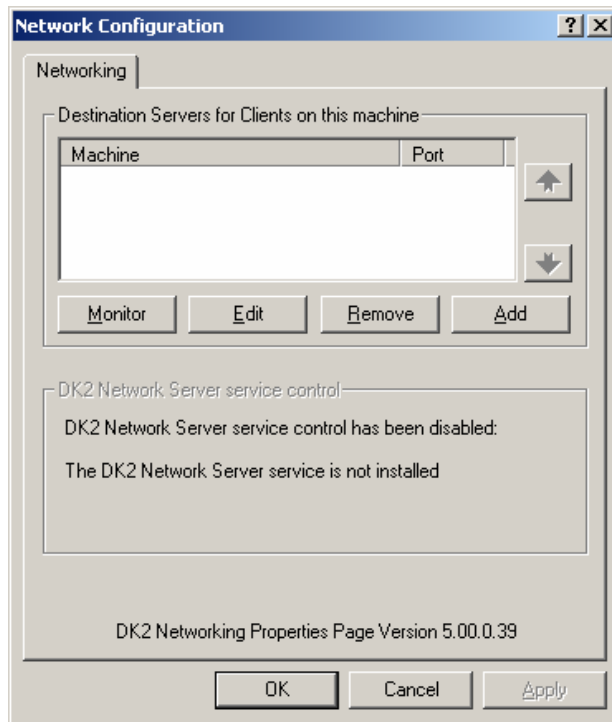


Figure 6

- 9) The <Add DK2 Network Server> dialog will appear

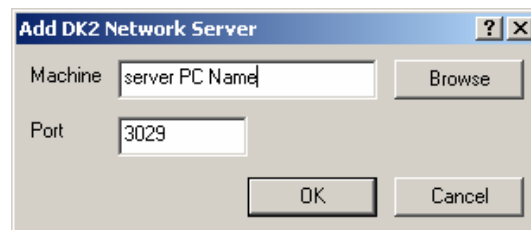


Figure 7

Use the Browse button to locate the server PC, or type in the name of the server PC. Using the Browse button will ensure the Host computer software is correctly installed and help prevent mistyping of the server name. Click <OK> when the server name has been added.

The DK2 server Port used defaults to Port 3029. Please consult your network administrator before changing this value

- 10) Click <Finish> to complete installation.
- 11) Run your application software and it should be authorised to run via the remote DESkey Network Server romlock.
- 12) For further information regarding DESkey Control panel functions, please refer to Appendix B

Appendix A

## **APPENDIX**

The Appendix Sections A, B and C are included by kind permission of Data Encryption Systems Ltd (DES).

### **CONTENTS**

Appendix A: "Network Server Configuration"

Appendix B: "Control Panel Configuration"

Appendix C: "Sever Licence Upgrade"

## APPENDIX A



### DESnet Server Configuration

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# SERVER USAGE

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This chapter explains how to use the DK2 Network Server Software including use of the DK2 Network Server Remote Monitor to configure and administer the DK2 Network Server service.

## Overview

The DK2 Network Server runs as a service on the machine to which a network compatible DK2 is attached, and provides the communications interface between the remote client applications and the DK2. This enables a single DK2 to service a network of workstations, which would otherwise require separate keys on each machine.

The default model for software licensing with the DK2 Network Server is done on a process basis. This is where every process accessing the DK2 Network Server will require a user licence. This means if multiple copies of protected software are run on any one machine then they will each require a user licence.

It is possible to license software in alternative ways, such as on a workstation basis where a single licence can be shared among any applications running on the same workstation or within the same Terminal Server session. If you have an alternative licensing requirement, please contact the Sales Department.

## The 32 Bit DK2 Network Server Service

Once installed, the server service and client access to the server can be controlled via the DESkey control panel. The DESkey control panel can be accessed by opening the Windows Control Panel and double clicking the DESkey icon.



DESkey

Figure 4 - 1

The Networking page (Figure 4 - 2) can be used on the server machine to start and stop the DESnet Server Service and to specify which servers the client application should access for licensing.

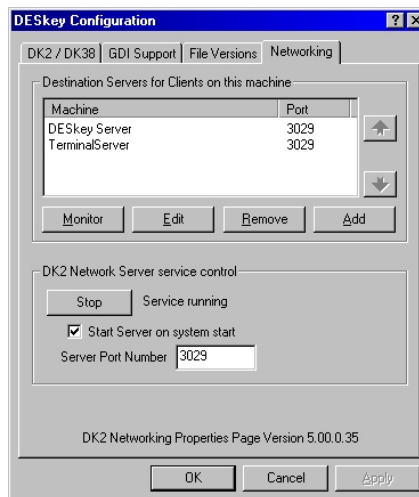


Figure 4 - 2

### Destination Servers

A list of machines that have a DK2 installed on them can be added on this page. This list can contain a single entry to indicate a single DK2 Network Server or can contain multiple entries if multiple DK2 Network Servers exist on the network.

The list can be propagated by clicking the 'Add' button and either:

- Browsing for the machine
- Entering the network name
- Entering the network IP address

The order in which the entries are shown is also the order in which they are searched with the first item (top most) being searched first. The search order can be changed at any time by selecting an entry and clicking the up or down arrows to promote or demote the machine.

The 'Remove' button will remove the selected machine from the list. This will mean that it will not be checked when attempting to locate a licence and also the DK2 Network Server may not be monitored.

The 'Edit' button allows the TCP/IP port of the selected Server to be specified. The default port is 3029 but any other port can be chosen if necessary. This setting should not normally need to be changed unless network restrictions make the default port unusable.

*NB: The same port as the destination server is using must be chosen otherwise protected software will be unable to login.*

The 'Monitor' button will launch the remote monitoring tool, the DK2 Network Server Remote Monitor (Figure 4 - 3). This utility allows the server to be administered without needing access to the machine running the software. As the DK2 Network Server runs as a service and not an application, remote monitor must be used to view and control connected users and modify server settings.

### **DK2 Network Server Service Control**

If a DK2 Network Server Service has been installed on this machine, the service can started and stopped here. This negates the need to start or stop the service from the service control manager.

An option to start the service as soon as Windows starts is also available. The default after installing the software is to automatically start the service. Under Windows 9x/ME the PC must be rebooted after an install to initially start the server. Under

Windows NT/2000 it can be started automatically and there should be no need to reboot.

## The DK2 Network Server Remote Monitor

The DK2 Network Server Remote Monitor can be used to monitor any of the servers listed in the Networking section of the DESkey Control Panel.

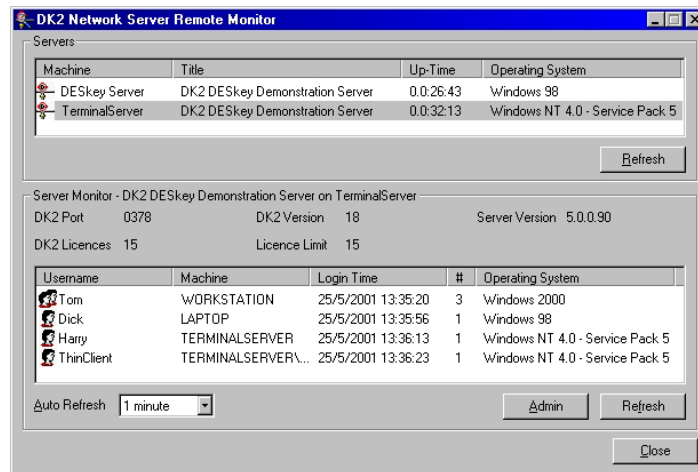




Figure 4 - 3

When launched, the monitor will query each machine listed in the control panel and retrieve information on any servers running. The basic information includes the parallel port I/O address of the DK2 being used, the version of the DK2 and of the server software and the DK2 licence information. Additionally, a list of users currently logged in will be displayed.

The icon associated with each user will be one of the following:

 Indicates the client is accessing the server with a workstation license. The fourth column indicates the total number of active connections.

 Indicates the client is accessing

the server with a process license.

The two Refresh buttons control the refreshing of the two screens listing the servers and users of the selected server. The Auto Refresh option will control how often the user list is updated but the server list will require manually refreshing to update the list.

The 'Admin' button will launch the administration window (Figure 4 - 4) and allow server settings to be modified. The server password is required to administer the server. By default, this value is "deskey" but can be set to any value required from the administration window or can be set by the supplier of the software prior to installation. When upgrading a server installation (i.e. reinstalling software for a particular DK2), previous settings, including the server administration password, will be maintained.

## Administration - General Settings

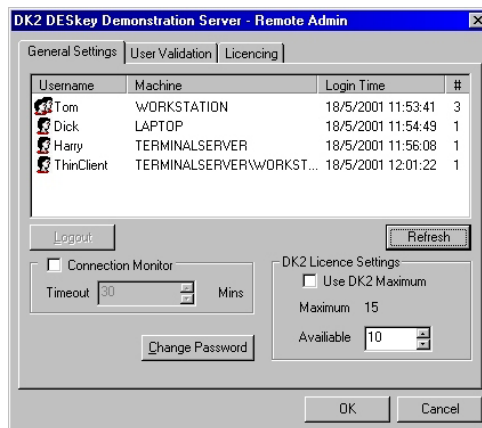


Figure 2 - 4

On the General page the following server properties can be modified:

### Connection Monitor

This value specifies the maximum length of idle time the server will expect from any user. If the user has not accessed the server in this

period they will be automatically logged off from the server without warning, even if the protected software is still running.

### **DK2 Licence Settings**

This value allows a user definable limit to be placed on the number of available users licences in the DK2 Network Server. This limit can be configured to a maximum of the licence count in the DESkey or 255, whichever is less.

### **Logout**

If a user is selected, the option to force their logout from the server is available. The user will not be warned when they are logged out from the server. This can be used in place of the connection monitor to be more selective when removing users.

### **Refresh**

This will refresh the monitor window with the latest information from the server.

## Administration - User Validation

The DK2 Server Monitor is also used to configure the User Validation of the DESkey Network Server. When used, only users entering the correct username and password will be granted access.

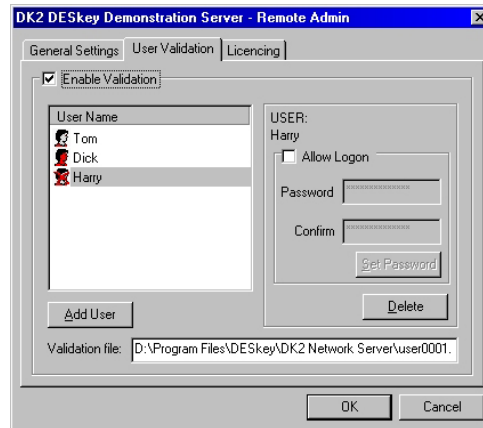


Figure 4 - 5

Once added, options allow users to be either disabled or deleted. A user can be disabled by unchecking the 'Allow Logon' box. A user can be deleted by selecting the 'Delete' button. Any changes made to the user validation options will not be applied to the server until the 'OK' button has been clicked. Disabling is different from deleting in that the user may be restored at a later date and any options will be retained.

The validation file is stored on the machine currently being monitored, (not necessarily the local machine.) Prior knowledge of the directory structure on the remote machine is required if the locations of the file is changed from the default directory.

The users login password can be changed at any time by entering the new password into both the 'Password' and 'Confirm' boxes and by clicking 'Set Password'.

If enabled, any user trying to access the server will be prompted to enter his or her username and password as shown in Figure 4 - 6.

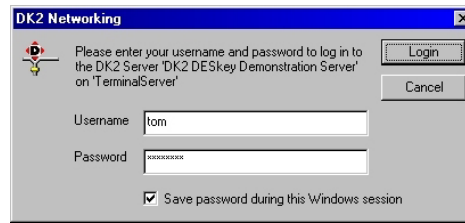


Figure 4 - 6

The "Save password during this Windows session" option will enable the username and password to be cached so that future attempts to log in to the DK2 Network Server, during the same Windows session, will not require the user to enter the username and password.

## Administration - Licensing

The number of concurrent users that can access the DK2 Network Server is controlled by the licence count within the DESkey. The maximum limit of the DK2 Network Server is 255 users. If present, the DK2 Network Server software will ignore any extra licences over the 255 limit.

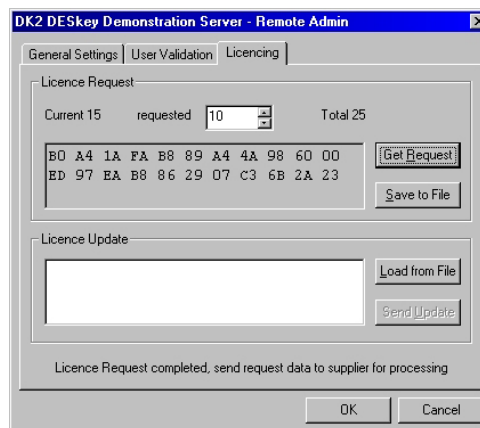


Figure 4 - 7

In order to update the licence count in the DESkey a licence request must be generated. This can be done using the Remote

## Appendix A

Admin tool by clicking the "Get Request" button. This will generate a request which can be used by the licence issue application.

Once the request has been processed, a licence update command will be sent which can be applied to the key using the same tool. Enter the licence update and click "Send Update". There should be no need to restart the server unless a problem is encountered during the update phase.

This process should not affect any currently logged in users as both request and update are designed to work whilst the server is in use.

## CONTROL PANEL CONFIGURATION

### THE DESKEY CONFIGURATION PANEL

The “DESkey Configuration” panel (see Figure ) provides a useful means of setting up the driver defaults and access priorities and may be accessed by clicking on the “DESkey” icon in the system Control Panel.



The installation programs will automatically configure the DK2 driver for optimal performance. If you are experiencing difficulty you should verify that these settings are correct.

## DK2 ACCESS CONFIGURATION

### Access Settings

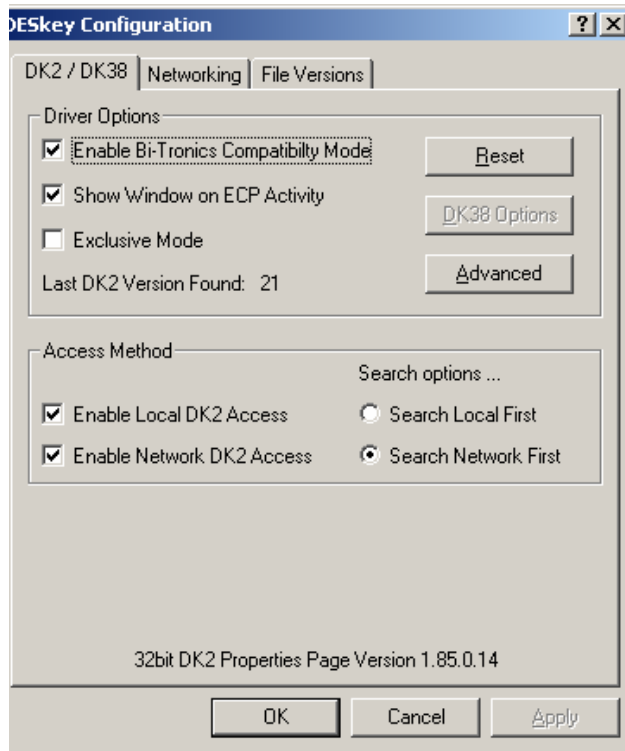


Figure 8

#### Bi-tronics Compatibility Mode

If the DK2 is connected to a port which supports the “Bi-Tronics” mode then this option must be checked to prevent problems with printing through the romlock.

#### Show Window on ECP Activity

Select whether to show a message window indicating activity on an ECP parallel port.

If there is activity on an ECP port the DK2 cannot be accessed and the driver will temporarily wait until the port becomes free. During this period the software accessing the DK2 will not function. The message window indicates that the software has halted and allows the DK2 access to be cancelled. **Warning:** Cancelling may cause the software to fail.

### **Exclusive Mode**

The “Exclusive Mode” option is only available under Windows NT and will disable system multitasking during all communications with the DK2 driver.

The performance of background applications can be affected so only select this option if you are experiencing device conflicts.

### **Reset**

This button will Reset all the driver delays to zero so that they will all be recalculated during the next time a search for the dongle is performed.

### **DK2 Access Method**

These options control where the driver will search for the DK2. If both Local and Network Access are enabled then the Search Options will control the search order.

## Network Properties

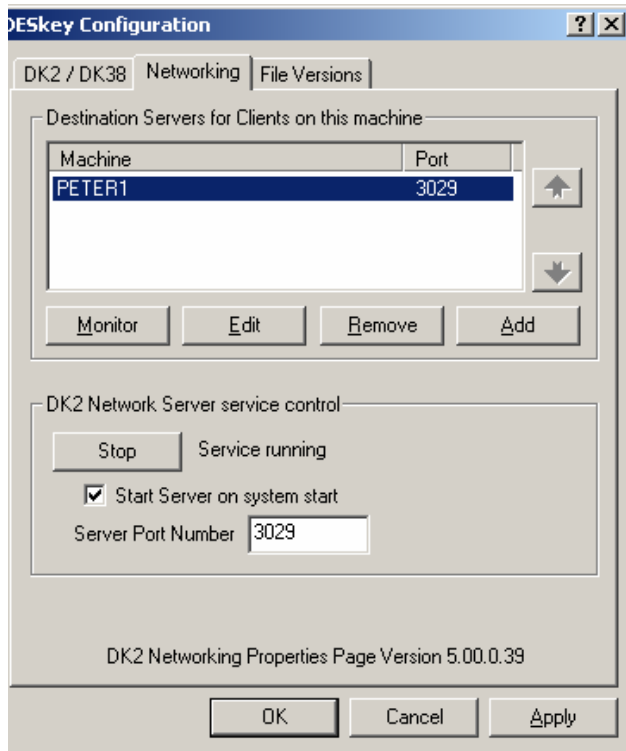


Figure 9

This list shows the available Network Servers available to access the Network DK2.

### Monitor

Opens the DK2 Server Monitor utility described in Appendix A

### Edit

Allows the modification of the Port used by the DK2 Server, Port 3029 is the default value and should only be changed in consultation with your network administrator.

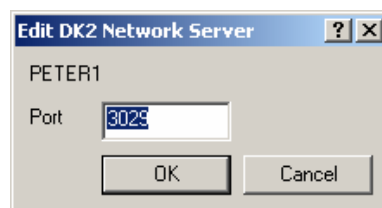


Figure 10

**Remove**

**Add**

Allows the addition of a new DK2 Network server to the list of available servers. Enter the machine name or browse to available DK2 server PCs

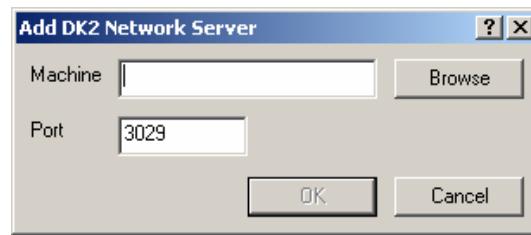


Figure 11

**DK2 Network Server service control**

Displays the current status of the DK2 Server service, the service must be running for the server to function. If a problem occurs with the server, Stopping then Starting the service may solve the problem.

**Driver File Versions**

The Driver File Versions window (Figure 12) provides information about the installed drivers. If a "green tick" appears beside the file name then the version number is correct.

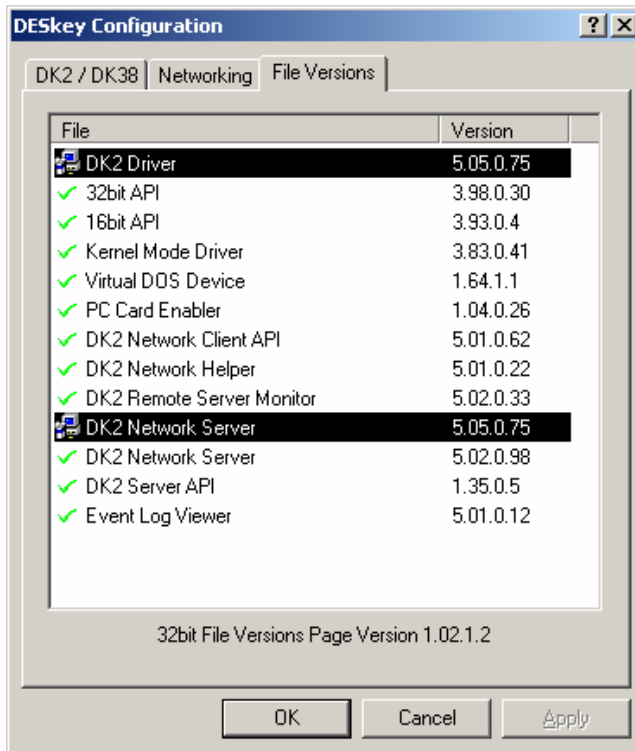


Figure 12

The Driver File Versions window provides information about the installed drivers. If a “green tick” appears beside the file name then the version number is correct. If a “red cross” appears beside the file name then the version number is incorrect and should be updated either from the DESkey web site at:

<http://www.des.co.uk/>

or by contacting DESkey Technical Support staff who will be pleased to advise you on upgrading your system.

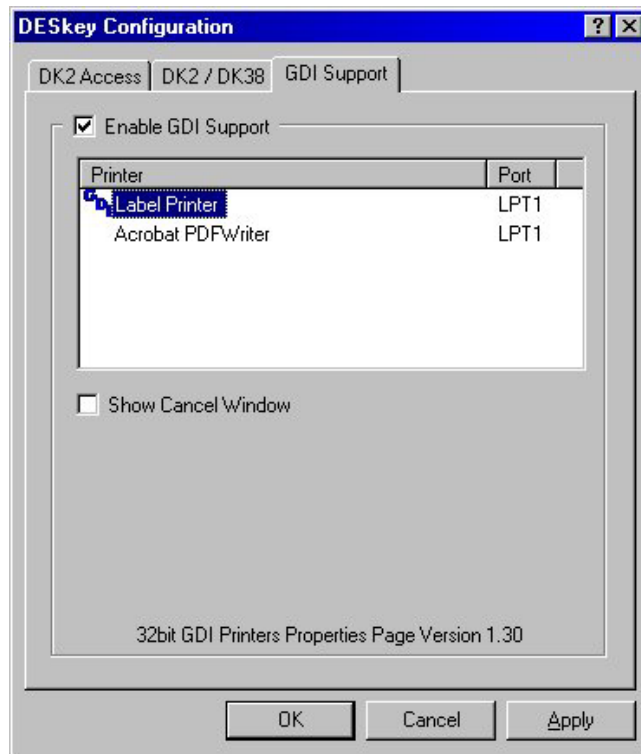


Figure 13

**Enable GDI Support - Windows 95/98 only**

GDI Support is only necessary for printers which require a constant stream of data. The dongle will wait until after the printer has stopped printing before it does anything. GDI support is no longer supported by Microsoft and is only included here for compatibility with older systems.

Check to enable GDI support for all compatible DESkey drivers then Double-click the printer(s) in this printer window to enable or disable GDI support.

**Show Cancel Window - Windows 95/98 only**

Check to enable the 'Cancel Window'.

When accessing a DESkey device with GDI support enabled, and this option checked, a Cancel dialogue is displayed if either of the selected printer ports are active. Clicking Cancel in the GDI Cancel window will cause the DESkey command to fail.

## APPENDIX C

### THE DESNET LICENCE UPDATE WIZARD

The DESnet DK2 stores a maximum user count which can be programmed with any value up to 255. This counter governs the number of users that can be logged on to a single server at any one time and can be updated "remotely" by any convenient means (as illustrated in Figure ) without loss of security.

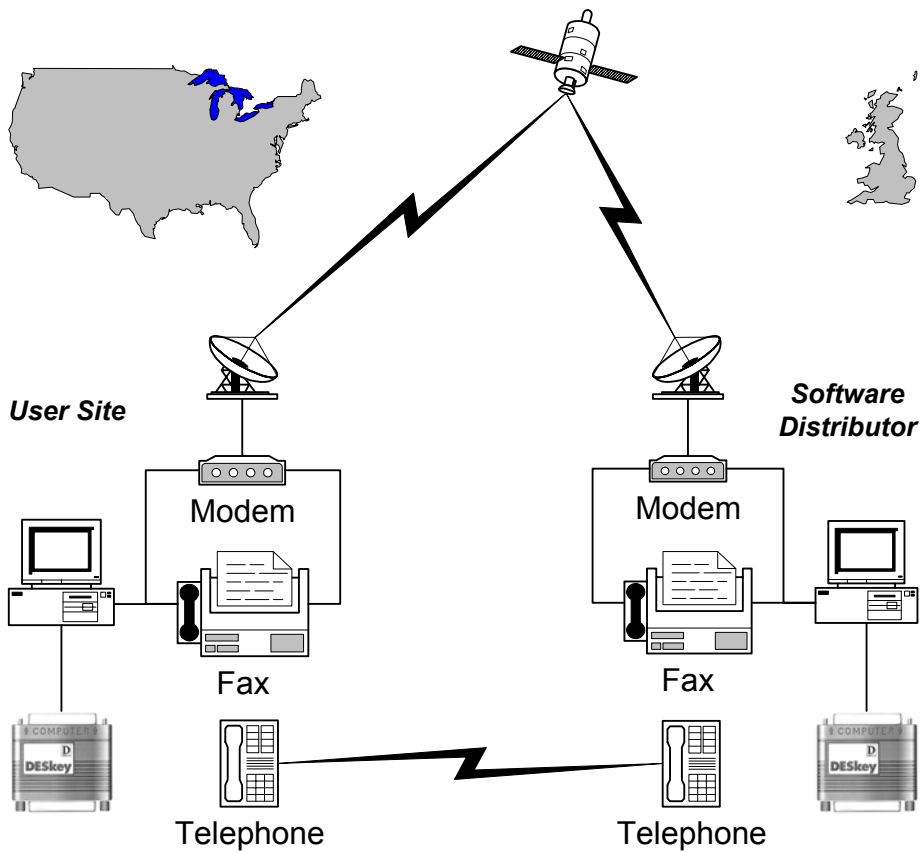


Figure 14

The Licence Update Wizard supplied with the EXPO32 DESnet server installation software provides all the functionality necessary to initiate update requests from the user site to ACS.



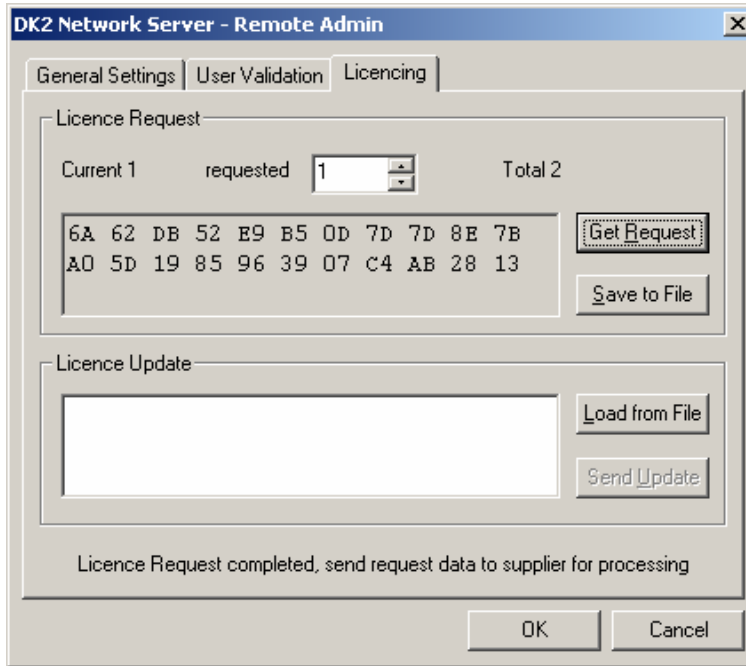


Figure 16

Now select the number of extra licences required and press the **<Get Request>** button. Then select **<Save to File>** which generates an encrypted “Licence Update Request” this file should be emailed to ACS at the following address.

Once ACS has received the user’s encrypted request data, the information is processed to generate a packet of encrypted response data. The encrypted data allows the user to update their DESkey network romlock with the additional requested licences.

**Note:** this response will only update the DESnet DK2 which generated the initial request and is valid for a single update transaction only.

The final stage of the Licence Update process is to return the “Licencing” screen above and select **<Load from File>** and select the file emailed to you by ACS.







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