**BIO·RAD** The Discovery Series™

# Multi-User License Installation

This document provides information needed to install and to operate The Discovery Series™ multi-user licensing capability. This document is for individuals who serve as network administrators for the installation, maintenance, and support of the multi-user licensing functions.

## What is supplied

### Required

- A HASP4 Net20 hardware security key, code EYYCY.

  Hereafter described as NetHASP.

  Note: A NetHASP is supplied with the first purchase of a Discovery Series Multi-user License product. A NetHASP is not included with any Discovery Series Add License products (see the **License Upgrades** section of this document for further information).

- NetHASP License Manager

  An application that communicates between the Discovery Series applications and the NetHASP. *lmsetup.exe* contains both the NetHASP License Manager and the HASP Device Driver.

- The HASP Device Driver

  An interface between the NetHASP License Manager and the NetHASP key.

### Optional

- NetHASP Monitor Utility

  An application that shows which workstations are logged in to a NetHASP License Manager on a network.

- AKS Diagnostics Utility

  An application that checks the functionality of the HASP Device Driver.

  This utility is installed by either the Quantity One or the PDQuest installer. It is placed in the Program Files\Bio-Rad\The Discovery Series\HASP\AKS Diag folder.

- *Nethasp.ini*

  A configuration file that enables you to change default settings on client workstations running the Discovery Series applications.

- *Nhsrv.ini*

  A configuration file that enables you to change default settings for the NetHASP License Manager.

## NetHASP License Manager

The NetHASP License Manager is an application that communicates with the Discovery Series software and the NetHASP hardware security key, functioning as a link between the two.  To set up a NetHASP system, select any workstation in the network, install the NetHASP License Manager, connect a NetHASP key to that station, and start the NetHASP License Manager.  The License Manager computer is responsible for providing licenses to client computers so that they may simultaneously use the Discovery Series software applications.  Each software application in the Discovery Series (i.e. Quantity One or PDQuest) requires a separate license.  Once multi-user license authorization information is obtained from Bio-Rad, the NetHASP License Manager is updated with a specific number of licenses for each Discovery Series application.

If a user starts a Discovery Series application that is configured for multi-user licensing and if there are no licenses available, then an error message is displayed at that user's workstation.

The NetHASP License Manager installer that is provided as part of the Discovery Series Multi-user License products is for use with Windows 2000, Windows XP, Mac OS 9.2.2, or Mac OS X 10.2.6 operating systems.  Note that network licenses server must be installed on a Windows operating system, while clients can reside on either Windows or Macintosh systems.

## How NetHASP Works

When the Discovery Series software application is activated from a network workstation, it accesses the NetHASP License Manager and requests permission to run by performing a NetHASP login.  The NetHASP License Manager then checks that the correct NetHASP is connected and accesses the NetHASP memory to verify that:

- The Discovery Series application is licensed to run

- The number of stations allowed to run the Discovery Series software at the same time has not been exceeded.

If all results produced by the checks are positive, the NetHASP License Manager grants the Discovery Series application permission to run, and updates the NetHASP log table.  Otherwise, the NetHASP License Manager returns an error code.

When a user exits the application, the license that he or she was using is made available to any other potential user on the network.


## Installing the NetHASP License Manager

### Hardware and Software Requirements

The supported NetHASP License Manager configuration is for a PC using a Win32 operating system (Windows 2000 or Windows XP) with the TCP/IP network protocol installed.

Note: The default port setting for the License Manager is 475. Contact Bio-Rad Technical Support for information on how to change the port number if this conflicts with the existing network configuration.

### Select a host computer for the NetHASP License Manager.

The host computer must be operational whenever a user on the network wants to run The Discovery Series software using a multi-user license. Restarting the NetHASP License Manager may temporarily disrupt users of the software, so a frequently used workstation is not a good choice for installation of the NetHASP License Manager.

In any computer network, there are usually some machines that are in continuous operation because they provide some kind of shared resource. This kind of machine is a good choice for the NetHASP License Manager.

Note: The individual performing the installation must have Administrator privileges on the selected computer.

### Installing the License Manager

Insert The Discovery Series CD-ROM into the CD-ROM drive on the computer you have selected to run the NetHASP License Manager. The installation wizard will start automatically. Click **Explore CD**. Navigate to the Network License folder on the CD-ROM and locate the *lmsetup.exe* file in the Server for Win32 folder. Double-click this file to start the NetHASP License Manager installer.

Click **Next** to continue.

Select Service and click **Next**.

Click Next to accept the default install location, or to select a different location, click **Browse**.

To install the NetHASP device driver software by click **Yes**.

You will be asked to start the service. Click **No**.

Click **Finish** to complete the installation.

Plug the NetHASP key into an available USB port.

If a red NetHASP icon does not appear in the system tray, then start the License Manager by going to Adminstrative Tools and selecting Services. Highlight HASP Loader and click START.

### Configuring the NetHASP License Manager Protocols

On the computer running the NetHASP License Manager, when a user logs on or off the LAN, the "NetHASP License Manager for Win32" status window displays. This status window can also be displayed by double-clicking the red NetHASP icon located in the system tray, or by right-clicking the NetHASP icon and selecting "Show." This is only a status window; closing the status window does not cause the NetHASP License Manager to stop functioning.

## Limiting Who Can Use the NetHASP License Manager

The NetHASP License Manager can be configured to give licenses to users only on specific networks or specific computers. This is useful if you find that an unauthorized person is using a license from your NetHASP License Manager.

The configuration file named *nhsrv.ini* is used to specify the range of stations the NetHASP License Manager will serve. The *nhsrv.ini* file is located on The Discovery Series CD-ROM. The file is found in the "Server for Win32" folder within the Network License Folder.

If you choose to limit user access to the NetHASP License Manager, copy the *nhsrv.ini* file from the Discovery Series CD-ROM to the C:\Program Files\Aladdin\NetHASP folder, or its equivalent location if the default installation location was not used. Using Windows Explorer, navigate to the *nhsrv.ini* file, right-click on the file, select PROPERTIES, and deselect the "read-only" checkbox. Use the Windows Notepad to edit the *nhsrv.ini* file and then save the file to the C:\Program Files\Aladdin\NetHASP LM folder or to its equivalent.

[NH_SERVER]

NH_IP_LIMIT=<ipaddr> [,<ipaddr....]

Where <ipaddr> can receive values in the following formats:

For example:

10.1.2.3   -- the NetHASP NetHASP License Manager will serve only the workstation with the
             specified IP address

10.1.2.*   -- the NetHASP License Manager will serve only workstations that match
             the specified IP address mask (i.e., 10.1.2.0 through 10.1.2.255)

10.1.*.*   -- the NetHASP License Manager will serve only workstations that match
             the specified IP address mask (i.e., 10.1.0.0 through 10.1.255.255)

10.1.2.3-5 -- the NetHASP License Manager will serve only workstations
             with IP addresses 10.1.1.3, 10.1.1.4, 10.1.1.5

## Activating the Multi-user License

To activate the Discovery Series multi-user license, one client workstation must first be configured for multi-user licensing of the Discovery Series application to be licensed (e.g. Quantity One).

**!!! IMPORTANT: Do not use the computer to which you have connected the NetHASP key for this license activation procedure !!!**

Review the instructions for installing The Discovery Series software on the Installation Guide or in the Release Notes located on the CD.

Once you have installed The Discovery Series application, open the application. If the Software License screen does not display, click Register in the Help menu. Then click Enter Password. In the Enter Password dialog box, click Enable Network License then click Done. You must close the application for it to reflect the changes.

When you restart the application, the Software License screen will appear. If the NetHASP License Manager is operational and if Enable Network License is checked, the Software License screen will reflect the fact that you received a **30-day temporary license** ("Your license will expire on _____").

NOTE: If the Software License screen offers you a Free Trial, the network Hardware Security Key has NOT BEEN FOUND on the network, and your client computer is attempting to create a local, non-network license.

To confirm that you are using a server license and not a local license, click on the Registration Form button in the Software License screen and look at the System ID type in the bottom corner of the Registration Form. If the type is Server, proceed. If the type is Local, the computer is using a local, non-network license. Review the instructions above.

## Registering Your Network Software and Obtaining an Authorization Password

Unlike single-user licenses, Network Licenses can only be registered with Bio-Rad via e-mail submission.

1- Click on the Registration Form button. Fill out the information in the Registration Form.

2- Print out the Registration Form for reference by clicking on Print.

3- Submit an e-mail request for a Network License Password.

   a-  The subject header should include "Request for Network Password Authorization".

   b-  The first part of the message body text should state;

"I am requesting a Network License Password Authorization for Quantity One Software and /or PDQuest software" (as applies).

c- The second part of the message body text should state;

" My registration information is..." and should include ALL OF THE INFORMATION THAT IS FOUND ON THE PRINTED REGISTRATION FORM, **INCLUDING THE 8-character SYSTEM ID.**

d- The second part of the message body text should state;

" My purchase confirmation information is..." and should include;

- The catalog number purchased
- The purchase order number
- The Bio-Rad order number

4- Send your request for a Network License Password to Bio-Rad at

LSG.Software.Registration@Bio-Rad.com

Two or three days after you submit the Registration Form via Internet (potentially longer for non-US customers) you will receive a network license password via an e-mail reply message. To activate your full Network License password, start the Discovery Series software application from any Remote Client computer, reopen the Software License screen in the software (go to the Help menu and select Register) and click on the Enter Password button. Type the password into the field and click on "OK". \

**!!! Critical Step- DO NOT enter the Network Password from the License Manager computer !!!**

After your full license is activated, the Software License screen will reflect the fact that you have a full license and will display the software version limit for this license and the number of simultaneous users allowed.

## Configuring Client Computers

After you have activated the non-temporary network license from one client computer, you are ready to configure the other client computers to use the network license.

Review the instructions for installing The Discovery Series software on the Installation Guide or in the Release Notes located on the CD.

Once you have installed The Discovery Series application, open the application. If the Software License screen does not display, click Register in the Help menu. Then click Enter Password. In the Enter Password dialog box, click Enable Network License then click Done. You must close the application for it to reflect the changes. When you restart the application, it searches for the NetHASP key. If the application cannot find the NetHASP key, the application notifies youand continues in Basic mode.

## Using NetHASP.ini

We recommend that the configuration file, *Nethasp.ini*, be installed on each client computer. This file is not required; however, it is recommended because its use reduces the time needed for a Discovery Series application to start on a client workstation configured for multi-user licensing. If you want to use the NetHASP.ini file, copy it to the directory in which The Discovery Series application is located (default: C:\Program Files\Bio-Rad\The Discovery Series\bin).

There are three broadcast options that a client workstation can use in order to locate a NetHASP License Manager on the network, as indicated in the following table.

| UDP broadcast | NH_TCPIP = Enabled |
| | NH_TCPIP_METHOD = UDP |
| | NH_USE_BROADCAST = Enabled |
| UDP | NH_TCPIP = Enabled |
| | NH_TCPIP_METHOD = UDP |
| | NH_USE_BROADCAST = Disabled |
| TCP | NH_TCPIP = Enabled |
| | NH_TCPIP_METHOD = TCP |
| | NH_USE_BROADCAST = Disabled |

UDP broadcast is the default configuration of *nethasp.ini.*

If UDP broadcast is DISABLED, one must specify the IP address of the NetHASP License Manager. This is done by the NH_SERVER_ADDR =  parameter. A numeric IP address, a DNS alias, or a network workstation identification may follow the "=".

UDP broadcast will only work if the NetHASP License Manager and the user are on the same TCP/IP network. This will not work across routers. UDP is the easiest broadcast option to use, as there is no configuration required.

UDP will generate significantly less network traffic than other broadcast options, however UDP will not function across firewalls.  If you must traverse a firewall, select the TCP option for NH_TCPIP_METHOD instead of UDP.

## The Discovery Series Passwords

Each password issued by Bio-Rad specifies the maximum number of users that may simultaneously use the application. If this limit is exceeded, an error message is displayed informing the user that no more licenses are available.

The optional utility, NetHASP Monitor, may be installed and used to determine which users are logged on to the NetHASP License Manager.

## License Upgrades

If you find that you need to add more users to your Discovery Series multi-user license or if you wish to add another Discovery Series application to your NetHASP License Manager network, contact your Bio-Rad representative to order one of our many "Add License" products.  Please note that one NetHASP License Manager with one NetHASP key can accommodate up to twenty users for all of the Discovery Series applications on the same network.  For this reason, if you order an "Add License" product from Bio-Rad, an additional NetHASP key is not provided.

## Adding Users

Once you have completed the "Add License" product Registration Form, submit this to Bio-Rad at:  LSG.Software.Registration@Bio-Rad.com

Two or three days after you submit the Registration Form (potentially longer for non-US customers) you will receive a network license password via an e-mail reply message. To activate your full Network License password, start the Discovery Series software application from any Remote Client computer, reopen the Software License screen in the software (go to the Help

menu and select Register) and click on the Enter Password button. Type the password into the field and click on "OK".

**!!! Critical Step- DO NOT enter the Network Password from the License Manager computer !!!**

After your "Add License" is activated, the Software License screen will reflect the fact that you have a full license and will display the software version limit for this license and the number of simultaneous users allowed.

Note: The updated license information (i.e. maximum number of users) will not appear on the Software License screens of all client workstations in the NetHASP License Manager network; however, this will not restrict the maximum users from using the application on the network.

**Adding Another Discovery Series Application to an Existing NetHASP License Manager Network**

Follow the steps presented in the **Activate Multi-user License** and **Registering Your Network Software and Obtaining an Authorization Password** sections of this document for the additional Discovery Series Application.  You need not install a second NetHASP License Manager, nor do you require an additional NetHASP key to implement any additional Discovery Series application on an exiting NetHASP License Manager network.

## Troubleshooting Guide

| Problem | Message | Cause | Solution |
|---------|---------|-------|----------|
| Q1 or PDQ fails to start | "Could not find network HASP;" and "Entering Basic mode" | The LM is not operational; | Verify that the LM is started; |
|  | "Unable to use a network hardware security key as requested;" and "Entering Basic mode" | NetHASP key not installed or NetHASP device driver not installed/started; | Verify that the NetHASP key is installed and that the NetHASP device driver is installed/started; |
|  |  | IP address of client is not within range supported by LM | Verify that the required IP range is in *nhsrv.ini* |
| Q1 or PDQ does not show the NetHASP system ID; PW not OK |  | *Enable Network License* not checked in the Enter Password screen. | Select *Enable Network License* in the Enter Password screen |
| Q1 or PDQ takes a long time to start |  | Application must search the network to find an LM | Copy and modify *nethasp.ini* to suit the network environment; restart the application |
| Q1 or PDQ presents warning msg "attempting to reconnect to license server," or "hangs" upon exit | "Attempting to reconnect to license server" | The LM is not operational | Verify that the LM is started |
| DNS alias for LM not working on client |  | DNS alias is more than six characters in length | Disable NH_USE_BROADCAST; place DNS alias in NH_SERVER_ADDR instead of in NH_SERVER_NAME |