

Migrating from Scout eL Server to Scout NG Server and eLux 1.x to eLux NG

HOW-TO GUIDE

This document provides the step-by-step instructions for updating from Scout eL Server to Scout NG Server on the same computer. In addition, it describes how to update from eLux 1.x to eLux NG using:

- firmware update
- network recovery or
- CD-ROM recovery

Licensing eLux NG and Scout NG is also discussed.

If you want to upgrade to Scout NG Server by replacing the computer running Scout eL Server with a new computer, you must first complete a server transfer to the destination computer and then upgrade to Scout NG Server. Documentation for completing a Scout eL Server Transfer is available at www.mylux.com.

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1. Terms and Definitions

Please familiarize yourself with the following terms.

- **Update** The process of updating to a new product. References to an update in this document refer to installing Scout NG Server on a computer running Scout eL Server and then transferring data and settings from Scout eL Server to Scout NG Server; or, the process of updating terminals running eLux 1.x to eLux NG.
- **Upgrade** The process of upgrading an eLux NG license to eLux NG + Scout (built-in).
- **Source server** The existing server. References to the source server in this document refer to Scout eL Server.
- **Destination server** The server which you are installing. References to destination server in this document refer to the Scout NG Server.
- **Destination group** When entering devices in Scout NG using DHCP options, devices can be assigned a group ID. The devices will automatically be entered in this group. This is referred to as the destination group.

2. Licenses

When you update from eLux 1.x to eLux NG, initially the terminal will be unlicensed. This is because eLux NG is a new product with a whole new range of features. You will need an update license.

To manage Thin Clients using Scout eL Server, you need a Scout eL management license. To manage Thin Clients using Scout NG, you need a Scout NG management license.

Verify that you have the correct type and number of eLux NG and Scout NG licenses before continuing.

License overview

- **Scout NG** To manage clients running eLux NG, if you did not previously use the Scout NG Server. Package size: 250 and 1000 licenses.
- **Update Scout eL → Scout NG**
If you previously used Scout eL, existing eL licenses can be updated in fixed package sizes of 250 and 1000. You must have at least 250 or 1,000 activated Scout eL licenses in your database to be able to enter the update license.
Update eLux 1.x → eLux NG To update eLux 1.x clients to eLux NG. You order the number of licenses you need and receive one license key for the desired amount.
Free Updating to eLux NG and Scout NG is free for eLux 1.x clients bought after 1.10.2003. Procedure: Logon www.mylux.com, under Service → Product Activation Center → click eLux NG Update. You receive the update license for a device after entering the serial number and the host ID. This license is not to be activated and must be entered locally on the client. The free update for Scout eL is also available here.
- **Update eLux 1.x → eLux NG+Scout (built-in)**
For < 250 clients, this license is for
 - updating the desired number of clients from eLux 1.x to eLux NG,
 - updating from Scout eL to Scout NG using the built-in Scout NG management license.
- **Upgrade eLux NG → eLux NG+Scout (built-in)**
For < 250 clients, this license is for upgrading from clients with eLux NG to eLux NG+Scout. The clients can then be managed by the Scout NG management system. Meaningful when the clients are already licenses for eLux NG.

Example

Say you have an installation with 324 Thin Clients running eLux 1.x. Your Scout eL Server contains 1 Scout eL management license for 250 devices, 1 Scout eL management license for 50 devices, and 3 Scout eL management licenses for 10 devices for a total of 330 management licenses. This leaves you with 6 unused management licenses, as Scout eL licenses could only be bought in packs.

BEFORE (eL / 1.1 NETWORK)			AFTER (NG NETWORK)		
Qty	License	Package Size	Qty	License	Package Size
1x	Scout eL	250	1x	Upd Scout eL > NG	250
1x	Scout eL	50	250x	Upd eLux 1.x > NG	1
3x	Scout eL	10	74x	Upd eLux 1.x > NG + Sct	1
324x	eLux 1.x				

After the migration to NG, you have 324 devices to manage and 330 Scout eL licenses in your database. You buy 1 Scout NG update license for 250 devices. This leaves 74 devices over without a management license.

You buy 250 eLux 1.x > NG update licenses and 74 eLux NG + Scout update licenses.

The benefit is that you no longer have to buy a fixed amount of Scout NG management licenses. In addition, the built-in license “migrates” with the device should you choose to enter it in a different server. In our example, all licenses are to be entered in Scout NG. The eLux NG update licenses will be distributed automatically, reducing administrator effort.

3. Migrating to Scout NG

The following describes the Scout NG installation procedure with recovery components. Please install it on the same computer running Scout eL. Please do not remove the Scout eL Server or delete licenses.

Requirements

- **Scout NG setup program** The Scout NG setup program is available on the eLux NG CD-ROM, which is available from your supplier or can be downloaded from the Web site www.mylux.com ("eLux NG software and tools").
- A running **Scout eL Server**. You must have administrator rights on this computer.
- **System requirements** Scout NG Server requires a computer running Windows 2000 workstation (or higher), Window XP Professional or Windows 2003 Server.
- **FTP or HTTP server** In addition, you require file access to the root directory and at least 380 MB free disk space. Here is where the NG containers (containing eLux NG software packages) will be installed.

Installation

Important Select the Scout eL installation path when installing Scout NG. This will automatically load the Scout eL Server configuration and licenses into Scout NG Server.

To begin the installation procedure, log on to your PC as administrator and insert the eLux NG CD into the CD-ROM drive of your computer. (If you have deactivated the autorun function of CD-ROMs, on the CD-ROM go to **windows** > eluxng.exe). Alternatively, if you downloaded the Scout NG software, start the Scout NG setup program.

Choose the language you want for the installation procedure.

A setup wizard is provided to guide you through the installation process.

1. At the welcome screen, click **Next**.
2. Read the license agreement and accept to continue.
3. Click **Custom** to install the recovery components. Set the installation directory to the installation directory of the source server.
4. Select "Scout NG Console", "Scout NG Server", "ELIAS", "Container" (select the hardware platform). "Recovery" is only necessary if you are migrating to eLux NG via network recovery. Click **Next**.
5. Choose the type of server that will be used to access your container.
6. Enter the path of the FTP or HTTP server root directory (either locally or on a network drive) and the fully qualified URL to access the server (format: [ftp/http]://<host>). In addition, for FTP enter the logon information ("anonymous" FTP is supported). Examples:
HTTP server root directory \\server1\inetpub\wwwroot\
URL http://work.domain.com

FTP server root directory c:\Program Files\inetpub\ftproot
FTP ftp://ftp.domain.com
User name anonymous
Password eluxng@domain.com

The setup program then attempts to verify the values you entered. Note: This may result in a delay – please do not click during this time.

If there are problems contacting the server, an error message appears and you are prompted to change your parameters.

7. If the server was successfully reached, a summary of the components to be installed is displayed. Click **Next** to start copying files.

When you select the “Recovery” component during the Scout NG installation, the required files and programs for a Recovery Installation are automatically installed on your system, including a TFTP server, which will be installed as a service (installation directory: ...<Scout NG installation directory>/tftpd). Please do not have another TFTP server running on the same machine when you install.

In addition, the container(s) will be installed on the FTP or HTTP server (installation directory: ...<server root directory>/eluxng/<container name>). For the recovery described in the second part of this paper, the containers must have the default pathnames.

Entering licenses

After you have installed Scout NG Server, enter the update licenses:

1. Open an administrator session to the destination server.
2. Enter the Scout NG management licenses. They can be used immediately. Please activate them within the activation period.
3. Enter the eLux NG licenses. They cannot be used until they are activated.

Activation is performed in the License Activation Center on the Web site www.mylux.com. The procedure is described in the *Scout NG Administrator's Guide* if you have never activated licenses before.

This completes the Scout NG Server migration. The following sections describe how to migrate to eLux NG. Choose ONE of the following methods: firmware update, network recovery or CD recovery.

4. Migrating to eLux NG via Firmware Update

After you have updated from Scout eL Server to Scout NG Server, you can update the Thin Client software from eLux 1.1 to eLux NG using a firmware update. To use this procedure, you must have eLux 1.1 installed (if you are using 1.0, either update to 1.1 first, or perform the network or CD recovery described in this paper). eLux NG 1.7 is the last version that supports migration. To install eLux NG 1.10 or higher, first update to eLux NG 1.7 and then from 1.7 to the higher version.

Requirements

- Thin Client with eLux 1.1. The clients must be managed by Scout NG.
- A running Scout NG Server (version 5.2.4 or higher) with ELIAS NG (version 5.2.3 or higher)
- Local-Area Network connection
- eLux 1.1 container
- eLux NG container. Must contain BaseOS 1.2-2 to BaseOS 1.9.2. Migration not supported by BaseOS 1.9.3 and higher.
- FTP or HTTP server. You require access to the server where the 1.1 container **and** NG container are installed. It can, but does not have to be, the same machine.

eLux NG Migration Installer

This section assumes you are familiar with working with image definition files (IDFs) using the software ELIAS NG. ELIAS NG is not described in this paper. For information on how to use ELIAS NG, please see the *Scout NG Administrator's Guide*.

To prepare the eLux 1.1 IDF for migration:

1. Log on to the Web site www.mylux.com. Under **Download** click **eLux software packages**. This opens the **Available containers** page. In the "eLux 1.1" area select your hardware platform (Futro B100 or Futro D100) and click the link under "Hotfix packages." This will redirect you to the hotfix page.
2. Download the package **eLuxNG Migration installer**. It will be in *.tgz format. This package enables you to install eLux NG via firmware update and the existing network setup (otherwise you will have to perform a recovery). Save it to your PC.
3. Quit the Internet. Unzip the file you just downloaded.
4. Start ELIAS NG.
5. Open the eLux 1.1 container for your hardware.
6. Import the unzipped package using the command **Container > Import package**.
7. In ELIAS NG open the IDF currently installed on the thin client and add the package "eLux NG Migration installer". You may have to remove packages to keep the IDF from exceeding the flash size.
8. Save the new image.

eLux NG container settings

The eLux NG Migration Installer causes the Thin Client to retrieve an NG IDF over the network from the update server (FTP or HTTP server) and install it on the device.

Normally, the update server parameters are set during Scout NG installation. If you used default settings, no further configuration is required. Go to the next section.

If you are using a different update server, or if your container path has changed since installation, or if you wish to specify the NG IDF to install, you will have to reconfigure the parameters. The procedure is described below.

1. Log on as administrator to the Scout NG Server.
2. Select **Recovery settings** from the **Options** menu.
3. Enter the update server protocol:
 - **HTTP** if the update server is an HTTP server. Enter the proxy IP address or name, and the proxy port number, if used (optional).
 - **FTP** if the update server is an FTP server. We recommend you access the FTP server using a user account. However, "anonymous" FTP is supported.

Enter the remaining update server settings:

- **Server** Enter the IP address or name of the update server.
- **Username** and **password**. If no username or password is defined for the server, enter `elux` as the password and username. Do not leave blank.

- **Path** Enter the following: `eluxng/__CONTAINER__`

The text "`__CONTAINER__`" is a macro in eLux NG. During the update procedure, the device's hardware type will automatically be detected and the macro text "`__CONTAINER__`" will be replaced with the correct container name.

- **Image file** Enter the following: `recovery__SIZE__.idf`

The text "`__SIZE__`" is a macro. During the update procedure, the device's flash size will automatically be detected and the correct recovery IDF will be installed. Alternatively, you can enter the name of the NG IDF you wish to install. Note that in this case the NG IDF may not exceed the flash size of the device.

For more information on macros, please see the *Scout NG Administrator's Guide*.

4. Save the Scout NG configuration.
5. Restart the devices. These settings will be converted to an environment variable and transferred to the device.

It is mandatory to restart the devices before continuing.

Warning The devices must be managed by Scout NG for the container settings to be transferred.

Initiating the Update

The procedure is initiated when you install the eLux NG Migration Installer on the device.

First, go to Setup > **Firmware** for the device(s) and deselect “Check for update on boot”.

Next, install the 1.1 IDF you created in step “eLux NG Migration Installer.” You can update an individual device or Group from the context menu (right click on the device > **Update**) or all devices from the Command Scheduler (**View** menu > **Schedule**).

If the configuration is correct, the procedure will run automatically. No further effort is required on the part of the administrator.

Diagnostics

See “Diagnosing Firmware Update,” page 10.

5. Migrating to eLux NG via Network Recovery

This section describes how to recover from eLux 1.x to NG over the network using existing network resources (DHCP server, FTP or HTTP server) and the Pre-Execution Boot Environment (PXE).

A recovery destroys all data on the flash card/hard disk and installs the eLux NG software. It is not reversible. It is the only way to install eLux NG on a Thin Client running eLux 1.0.

Requirements

- Thin Client. The BIOS of the Thin Client must support PXE.
- Local-Area Network (LAN) connection
- Boot server: DHCP server from Windows NT® 4.0 Server with Service Pack 6a, Windows 2000 or Windows Server™ 2003. The boot server must be in the same LAN segment.
- Recovery server: FTP or HTTP server
- TFTP server from Scout NG setup. This is installed by selecting the “Recovery” component during Scout NG installation.

Recovery settings

Normally, the update server parameters are set during Scout NG installation. If you used default settings, no further configuration is required. Go to the next section.

If you are using a different update server, or if your container path has changed since installation, or if you wish to specify the NG IDF to install, you will have to reconfigure the parameters. The procedure is described below.

1. Log on as administrator to the Scout NG Server.
2. Select **Recovery settings** from the **Options** menu.

3. Enter the update server protocol:

- **HTTP** if the update server is an HTTP server. Enter the proxy IP address or name, and the proxy port number, if used (optional).
- **FTP** if the update server is an FTP server. We recommend you access the FTP server using a user account. However, “anonymous” FTP is supported.

Enter the remaining update server settings:

- **Server** Enter the IP address or name of the update server.
- **Username** and **password**. If no username or password is defined for the server, enter `elux` as the password and username. Do not leave blank.
- **Path** Enter the following: `eluxng/__CONTAINER__`
The text “__CONTAINER__” is a macro in eLux NG. During the recovery procedure, the device's hardware type will automatically be detected and the macro text “__CONTAINER__” will be replaced with the correct container name.
- **Image file** Enter the following: `recovery__SIZE__.idf`
The text “__SIZE__” is a macro. During the recovery procedure, the device's flash size will automatically be detected and the correct recovery IDF will be installed. Alternatively, you can enter the name of the NG IDF you wish to install. Note that in this case the NG IDF may not exceed the flash size of the device.

For more information on macros, please see the *Scout NG Administrator's Guide*.

4. Save the Scout NG configuration.
5. Restart the devices. These settings will be converted to an environment variable and transferred to the device.

Configuring the DHCP Server for PXE

During a recovery, the Thin Client loads its boot file over the network from a boot server. The boot server is a DHCP server.

1. Log on as administrator to the computer running the DHCP server.
2. Open the DHCP manager.

Windows NT: **Start > Programs > Administration (General) > DHCP Manager**

Windows 2000: **Start > Programs > Administrative Tools > DHCP**

3. In the DHCP manager, go to the dialog box for configuring options.

Windows NT: Click to select the scope of the DHCP server you would like to configure. In the **Options** menu, select **Global** to configure the options for all scopes for that server, or **Scope** to configure the options for that scope. The **DHCP options** dialog box opens.

Windows 2000: Click to select either the server options, scope options or a reservation. In the **Action** menu select **Configure**. In the **Options** dialog box go to the **General** tab.
(Alternatively: **Advanced** tab > select **DHCP Standard options** from the **Vendor class** drop-down list.)

4. The following options are standard and should already be configured. If not, please add:

003 Router:	Enter one or more router IP addresses
006 DNS Servers:	Enter the DNS server IP address
015 Domain Name:	Enter the DNS domain name

The following two options are PXE specific and must be configured:

066 Boot Server Host Name:	Enter the IP address of the TFTP server
067 Bootfile Name:	Enter <code>pxelinux.0</code>

This completes the DHCP server configuration. The PXE settings can remain on the DHCP server without affecting normal network operation. If the parameters do not change, they only have to be configured once.

DHCP Options (optional)

You can configure DHCP server so that Thin Clients will automatically be entered in Scout NG Server after the recovery.

This method is supported by most DHCP servers, including older versions. It uses the standard options 222 and 223. If options 222 and 223 are unavailable, you cannot use this method.

1. Open the DHCP Manager (**Start > Programs > Administration (General) > DHCP Manager**).
2. Click to select your DHCP server. In the **Action** menu select **Set Predefined Options**.
3. Select **DHCP Standard options** from the "Option class" drop-down menu. Click **Add**. The **Option Type** dialog box appears.
 - **Name** Enter "Scout NG Server"
 - **Data type** Select "Character string"
 - **Code** Enter "222"
 - **Description** Enter the "Name/IP address of Scout NG Server"Click **OK** and **Add** to enter a second option (optional):
 - **Name** Enter "Scout NG group ID"
 - **Data type** Select "Long"
 - **Code** Enter "223"
 - **Description** Enter the "Device group ID on the Scout NG Server"Note: **Array** should not be selected.
Click **OK**.
4. In the DHCP manager, click to select either the server options, scope options or reservations. In the **Action** menu select **Configure**. In the **Options** dialog box go to the **General** tab. (Alternatively: **Advanced** tab > select **DHCP Standard options** from the **Vendor class** drop-down list.) Configure the two options:
 - **222** Enter the IP address/name of the Scout NG server
 - **223** Enter the Scout NG ID number of the destination group

Initiating the recovery

A recovery is initiated on the client. The method used to initiate a recovery depends on your hardware platform. The device BIOS must support PXE.

Some – but not all – hardware platforms require you to first set remote boot to PXE in the Thin Client's BIOS (1) and then call PXE from the boot menu (2).

Other hardware platforms offer a simpler possibility: You initiate a recovery simply by pressing a function key upon boot (in most cases, F1).

See the documentation included with your Thin Client to see what situation applies to you.

(1) To configure the protocol on the Thin Client:

1. Upon boot, press the function key that opens BIOS for your hardware platform. See the documentation that was included with the Thin Client if you are unsure (in most cases, F2).
2. Set "LAN remote boot" to PXE.
3. Save your settings and exit BIOS.

(2) To select the protocol from the Thin Client boot menu:

1. Upon boot, press the function key that opens the boot menu for your hardware platform. See the documentation that was included with the Thin Client if you are unsure (in most cases, F12).
2. Select PXE and press ENTER.

3. A message appears, allowing you to cancel the procedure. To proceed, press one of the following keys (keyboard layout is English):
 - **A** Installs eLux NG for the detected hardware using the corresponding container:

Futro B 100	UC_GEODE_P1
Futro B 200	UC_VIA
Futro C and D	UC_INTEL_P3
Futro S	UC_TRANSMETA

Platform detection is only available for thin clients from Fujitsu Siemens Computers. For devices from other manufacturers, this option will not be displayed.
 - **B** Installs eLux NG for PC.
4. The recovery starts. Do not turn off the Thin Client off during a recovery!
5. After a successful boot, a "Success" message appears and the Thin Client restarts.

For normal eLux NG operation, the BIOS settings can remain on the device.
This completes the recovery.

If you did not set DHCP options as described in step "DHCP Options (optional)" after a recovery the devices will initially not be managed. In Scout NG, perform a discovery to re-enter devices. Previously registered devices will not change groups. Rather, their status will be updated.

6. Migrating to eLux NG via CD Recovery

This section describes how to recover from eLux 1.x to NG via CD recovery.

A recovery destroys all data on the flash card/hard disk and installs the eLux NG software. It is not reversible. It is the only way to install eLux NG on a Thin Client running eLux 1.0. Note: Not available for Geode.

Requirements

- eLux NG recovery CD. This is a bootable CD available from your supplier, or the eLux NG recovery CD image can be downloaded from the Web site www.mylux.com and burned to a CD in ISO format.
- CD-ROM drive (IDE or USB)
- Thin Client: BIOS support of CD boot
- **A USB keyboard may not be used with USB CD-ROM**

Procedure

1. On the Thin Client, insert the CD.
2. A warning appears, asking if you want to perform the recovery. (Please note that recovering to eLux NG is not reversible and that the terminal will initially be unlicensed!) Click **Y** to start the recovery (or **Z** or **J**).
3. When the recovery has finished, the CD is ejected and the Thin Client reboots.

If the recovery does not start immediately, confirm that "CD-ROM drive" comes before "harddisk" in the BIOS Setup boot options and that you are using the correct CD.

This completes the eLux NG migration. The following sections provide useful troubleshooting and diagnostics information.

7. Diagnostics

Licensing eLux NG

When you update from eLux 1.x to eLux NG, initially the terminal will be unlicensed. This is because eLux NG is a new product with a whole new range of features.

An unlicensed terminal starts in test mode. You may log on to eLux NG 40 times without a license. Afterward, you must enter an update license to continue using eLux NG.

Please see section “2 Licenses.”

Diagnosing Firmware Update

Helpful Tips

- Before updating all the devices in your network, we highly recommend testing an update on a single device.
- If the update is interrupted, once you have fixed the problem it is not sufficient to continue where you left off. You must start from the beginning. Remove the eLux NG Migration Installer from the 1.1 IDF, install this image, add the eLux NG Migration installer to the 1.1 IDF, and install this image.
- When editing your IDF, please be aware that new features have been implemented in ELIAS NG. For example, due to the new dynamic partitioning feature of eLux NG (this allows you to install eLux on hard disks as well as flash cards), the total flash size is shown in the bar at the bottom of the screen and there is no warning if you exceed the actual flash size (the wrong flash size will cause the update to fail).
- You can use macros both in the firmware parameters for the new 1.1 IDF and in the ELUXNGURL for the new NG IDF. Please be aware that the macros have changed in NG, and inform yourself before using them. See the NG manuals for more information.

FAQ

Q: The procedure did not work because I forgot a step. After fixing this, can I continue where I left off?

A: No. You must start from the beginning. Remove the eLux NG Migration Installer from the 1.1 IDF, install this image, add the eLux NG Migration installer to the 1.1 IDF, and install this image.

Q: The procedure stopped and I don't know why!

A: Check the update log.

Q: The update log does not list an error.

A: The log containing the error was most likely overwritten. There is no way to retrieve this log. To prevent this, go to Setup > **Firmware** for the device and deselect “Check for update on boot”. Repeat the procedure.

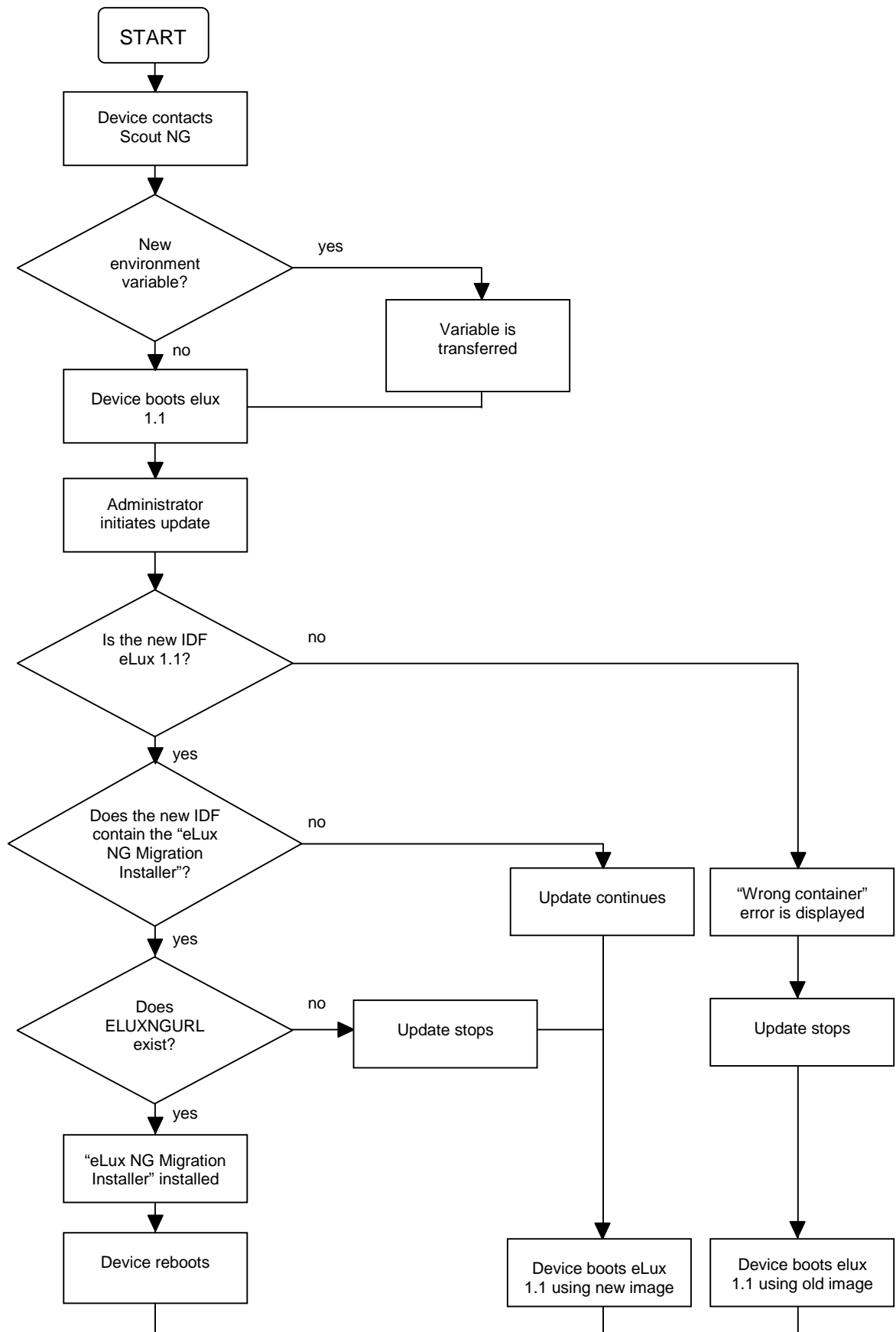
Q: When I'm done, do I have to re-enter the devices in the manager?

A: No. The manager setting on the device is not deleted.

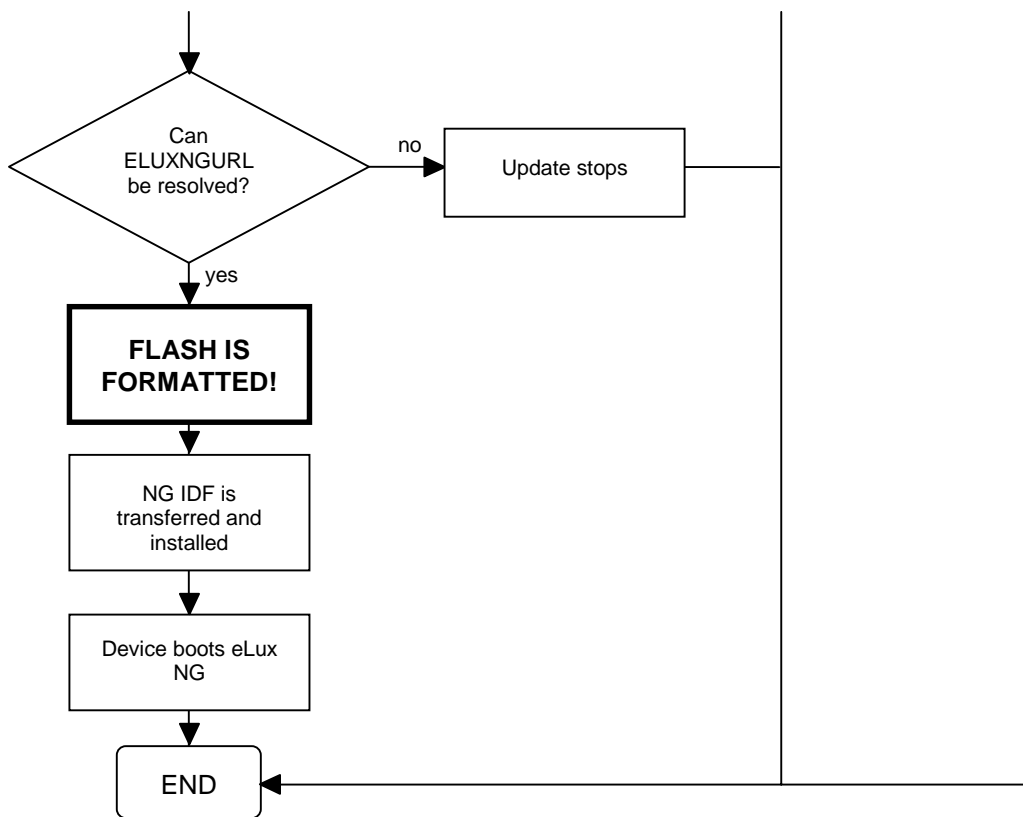
Q: The procedure was successful, but now my terminal is unlicensed!

A: See section “2 Licenses.” We recommend obtaining update licenses for eLux NG and Scout NG in advance. Please be aware that update licenses are not free.

Boot Procedure



(continued on next page)



Diagnosing Network Recovery

- Problem:** After beginning a PXE recovery, a DHCP time-out occurs and the terminal just boots.
- Solution:** The DHCP server failed to respond. Check the network connection. Check the DHCP server's log file for the client to receive an IP address. Adapt DHCP Server settings if necessary.
-
- Problem:** The terminal begins a PXE recovery, then boots normally or displays a TFTP time-out error:
TFTP open timeout
- Solution:** The TFTP server failed to respond. Check if the TFTP server is available. Check the log file of the TFTP daemon. Check the router/gateway and boot server settings for DHCP.
-
- Problem:** After beginning a PXE recovery, the following message is displayed:
TFTP Error - File not found
and the terminal just boots.
- Solution:** The TFTP server failed to send the bootfile (pxelinux.0). Check bootfile settings for your DHCP server and TFTP server log. Check access rights for the TFTP server's root directory.

During a network recovery, package installation will be displayed graphically. You can press CTRL – ALT – F4 to leave graphics mode and switch to a text screen. This is useful for troubleshooting, to view any error messages that may be displayed.

Diagnosing CD Recovery

A USB keyboard may not be used with USB CD-ROM.

You must use the "eLux NG recovery CD," which is bootable. It is available from your supplier or the CD image can be downloaded from the Web site www.myelux.com and burned to a CD in ISO format.

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