



# eLux<sup>®</sup> NG and eLux<sup>®</sup> *RL* Image Administration Service (ELIAS)

Version 6.2

Administrator's Guide  
Build Nr: 10

UniCon Software GmbH

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# 1 Before You Begin

## 1.1 Who Should Use This Manual

This manual is for system administrators responsible for installing, configuring and using the eLux Image Administration Service (ELIAS) to create image definition files for Thin Clients running Embedded Linux eLux® NG or eLux® RL. This manual assumes knowledge of:

- operation of network and asynchronous communication hardware, including serial ports
- the operating system (OS) on the client computer.

## 1.2 About This Guide

Starting with installing the image definition file editor ELIAS, this documentation presents step-by-step directions on how to perform a firmware update. For convenience, the manual is divided into the following sections:

Chapter	Description
1 Before You Begin	Manual conventions, overview of ELIAS functions and features
2 Installing ELIAS and Container	System requirements and detailed instructions on how to install ELIAS and the software container
3 Introducing the ELIAS Interface	An overview of the ELIAS main screen
4 Defining an Image Definition File	How to use the program ELIAS to create an image definition file
5 Working with Containers	How to use the program ELIAS to create and modify a container
6 Advanced Features	Useful macros, updating from USB stick or CD-ROM, overview of the eLux Builder Kit for creating own firmware
7 Security	How to manage certificates and check the validity of packages
8 Commands	A reference of ELIAS menu commands and keyboard shortcuts

### 1.2.1 Commonly-Used Abbreviations

The following are terms that appear in the manual:

Abbreviation	Description
FTP	File Transfer Protocol
IP	Internet Protocol
TCP	Transmission Control Protocol

## 1.3 Finding More Information

This manual contains conceptual information, and installation and configuration instructions for the program ELIAS. Additional information is available from the following sources:

- The *eLux NG and eLux RL Administrator's Guides* for information on the Thin Client software eLux NG, which uses the image definition files ELIAS generates
- The *Scout Enterprise Administrator's Guide* for using the Scout Enterprise software tool to manage Thin Clients running eLux NG and eLux RL.

This guide as well as other ELIAS documentation is available in Adobe PDF format. It can be found in the following locations:

- The documentation folder on your eLux CD-ROM
- The product documentation library at [www.myelux.com](http://www.myelux.com).

## 1.4 Overview

### 1.4.1 What is ELIAS?

The eLux Image Administration Service, or **ELIAS**, allows you to easily manage the firmware on a Thin Client running eLux NG or eLux *RL*. Each Thin Client comes with a default image (recovery.idf) that contains the operating system, software and applications. If you wish to change the firmware, you need to create a new image definition file. Using ELIAS, in a new image definition file (\*.idf) you select exactly those software packages you want installed on the Thin Client. These packages are then saved on the flash memory of the Thin Client. The administrator can use ELIAS to custom-make the image to satisfy end-user requirements.

### 1.4.2 ELIAS Features

ELIAS offers the following features:

- User-friendly graphical interface that allows you to create software images by a mouseclick
- Easy management of device firmware using the “container method”
- Ability to activate/deactivate software components to optimize your use of available resources
- Image size bar to avoid exceeding flash size
- Automatic proofing of software dependencies
- Easy import feature to add the latest versions of software
- Easy export feature that exports a package along with its software dependency information
- Digital signatures to ensure the installed packages are genuine

## 1.5 Understanding a Firmware Update

When your Thin Client is delivered, it already contains an operating system and basic software: Citrix® ICA® client, RDP client, browser, emulations, desktop tools, etc. This allows you to begin using your device immediately.

To modify the firmware (“firmware” = software saved to the flash card), you must perform a so-called “firmware update”.

A firmware update has the following steps:

1. **Installing** the required programs and files: The program ELIAS on a computer running Microsoft® Windows®, and the Container containing software on a so-called “update server” (FTP or HTTP server)
2. **Defining** the firmware you want to install on the Thin Client in a so-called “image definition file” (IDF) and saving the IDF to the Container on the update server
3. **Configuring** the Thin Client with update server’s parameters
4. **Initiating** the update, either locally or using the management tool Scout Enterprise.

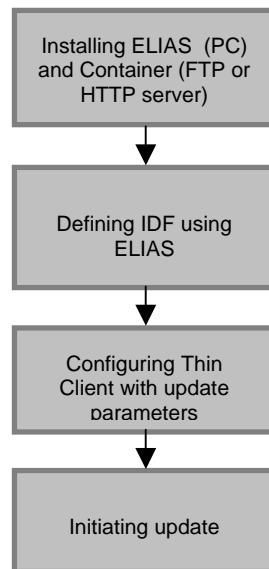


Figure 1: Workflow firmware update

You must create the IDF in advance and transfer the finished IDF to the Thin Client. It is not possible to change the firmware online.

How to install the ELIAS software and define an image definition file is described in the following chapters. For information on firmware parameters and how to initiate an update, please see the *eLux NG / eLux RL Administrator's Guides* or the *Scout Enterprise Administrator's Guide*.

The graphics below clarify the interdependencies and the workflow.

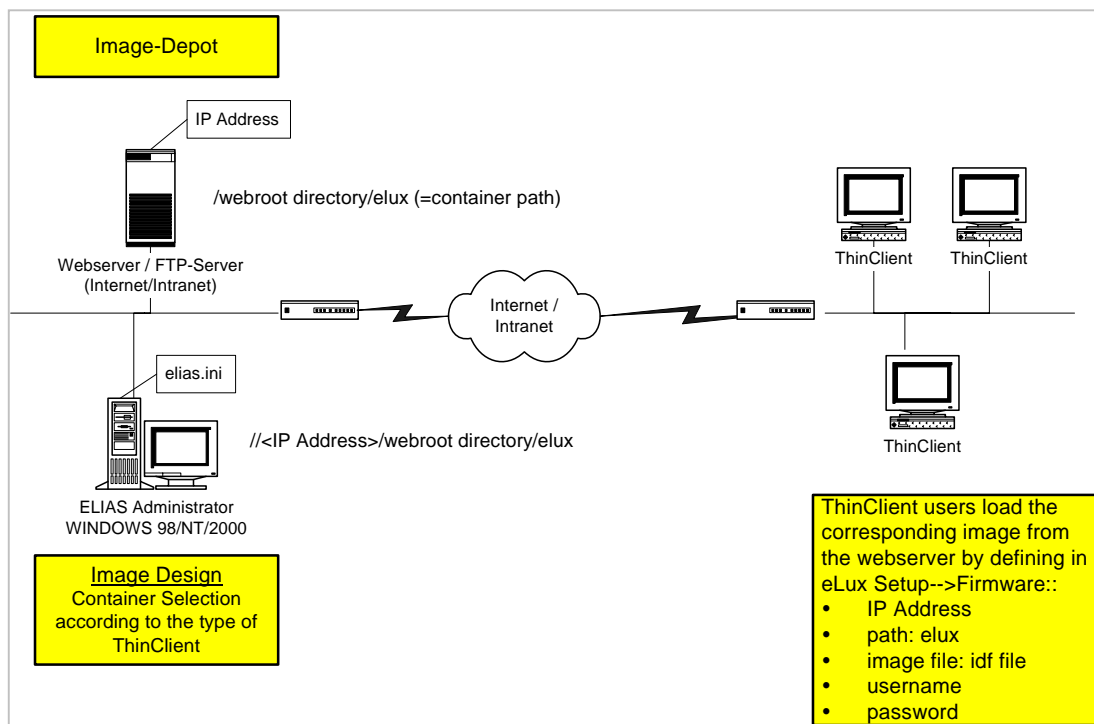


Figure 2: The image definition file concept

## 1.6 ELIAS Terminology

This chapter defines terms that are used in this manual. Please read the following before continuing.

### EPMs and FPMs

In server-based computing, client software installed on a device is used to connect to server software. Examples of client software are an ICA client, RDP client, etc. eLux is module-based. In ELIAS, a client program (module) that has been bundled for eLux NG or eLux *RL* use is called a **package**.

All packages saved to the flash card of a device are called **firmware**.

When updating the firmware saved to a device, you add or delete individual packages. This is less time consuming than updating all firmware saved to the device every time you update.

These software packages are divided into **eLux Package Modules** (short "EPM") and **Feature Package Modules** (short "FPM"). An EPM (upper-level package) contains one or more FPMs (lower-level package).

### Container

A **container** is a directory containing the firmware packages for a specific hardware. It contains the file "container.ini" which is a text file with important ID information. Each Thin Client model has its own container. For example, a Thin Client with an Intel processor has a different container than one from National Semiconductor. The container is installed on an FTP or HTTP server using the Scout setup, or by hand by downloading individual files from [www.mylux.com](http://www.mylux.com). Please use the default container installation names.

**Note:** With eLux *RL* there is only **one** Container for all hardware platforms.

### Image Definition File

The **image definition file** (short "image" or IDF) defines which firmware packages are to be installed on a device. The IDF is edited using ELIAS .

Every IDF must contain a base operating system (OS). Further, you can mix and match packages to customize the firmware installed on the device to exactly suit your company's needs. If your device came with software already installed, you can add desired packages or delete unwanted packages from the pre-installed image.

## 2 Installing ELIAS and Container

This chapter contains the introductory information you need to get ELIAS running.

Section	Description
2.1 System Requirements	Hardware, operating system and access permissions needed to run ELIAS
2.2 Installation Procedure	Step-by-step instructions on using the InstallShield Wizard tool to install ELIAS
2.3 Modify, Repair, Remove	How to update to a newer version or remove ELIAS

### 2.1 System Requirements

ELIAS has the following minimum system requirements:

- System: 64-MB main memory
- Microsoft Windows 2000 and the Windows 2000 family  
Windows XP Professional  
Windows Server 2003 Standard Edition
- A mounted network drive connection from the PC to the FTP or HTTP server
- Network authorization

You must have administrator's authorization for the PC and be connected to a TCP/IP network.

The container has the following requirements:

- FTP or HTTP server with write access, installed locally or available on a network drive
- Space requirements vary depending on the Thin Client hardware platform. Minimum for all containers at the time of publishing: 700 MB

### 2.2 Installation Procedure

Installation is performed using the Scout setup program, which is available on the eLux NG CD-ROM or can be downloaded from the Web site [www.myelux.com](http://www.myelux.com).

You have two installation options:

- **Typical** Installs Scout Server, Scout Console, ELIAS , Container and Recovery
- **Custom** Installs ELIAS and Container only

Only ELIAS and Container are needed for the container method.

To begin the installation procedure, log on to your PC as administrator. If you are using a terminal server, please run the setup program from the applet **Add/Remove programs** in the Control Panel.

Choose the language you want for the installation procedure. This will also be the default language of the ELIAS screen elements.

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

Typical installation procedure:

To install Scout Server, Scout Console, ELIAS , Container and Recovery

1. At the welcome screen, click **Next**.
2. Read the license agreement and accept to continue.
3. Click **Typical**. You can also set the installation directory (by default, c:\Program Files\UniCon\scoutng).



4. Choose the type of server that will be used to access your container.
5. 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.

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

Custom installation procedure:

To install ELIAS and Container

1. At the welcome screen, click **Next**.
2. Read the license agreement and accept to continue.
3. Click **Custom**. You can also set the installation directory (by default, c:\Program Files\UniCon\scoutng).
4. Select Elias and Container. 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.

All required files are installed during the installation procedure, greatly easing the workload for the administrator.

### 2.2.1 Default Container Directories

By default, the container is installed in the FTP or HTTP server root directory under:

...\eluxng\UC\_INTEL\_P3  
 ...\eluxng\UC\_GEODE\_P1  
 ...\eluxng\UC\_TRANSMETA  
 ...\eluxng\UC\_VIA or  
 ...\eluxng\UC\_PC

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**Note:** With eLux<sup>®</sup> *RL* there is only **one** container for all hardware platforms.

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### 2.3 Modify, Repair, Remove

After installation, you can run the setup program at any time to change the components that are installed, or update or remove ELIAS.

**Modify:** Add or remove single program components. The old setup program will be used.

**Repair:** Update the software. A new version of the software is required.

**Remove:** Removes all program files, except those that are automatically generated.

### 2.4 Starting ELIAS

There are two ways to open ELIAS :

- Scout Enterprise  
     In Scout, go to **View** menu > **Elias**.
- Windows  
     From the Windows menu, go to **Start** menu > **Programs** > **Scout Enterprise** > **ELIAS**.

### 3 Introducing the ELIAS Interface

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This chapter contains an overview of the ELIAS main screen.

Section	Description
3.1 ELIAS Main Screen	An overview of the ELIAS main screen
3.2 Title Bar	A description of the title bar
3.3 Main Menus	A description of the main menus
3.4 Toolbar	A description of the toolbar
3.5 Container Window	An overview of the container window
3.6 Image Window	An overview of the image window
3.7 Package Information Area	An overview of the package information area
3.8 Icons Display Security Status	An overview of the icons
3.9 Image Size Bar	An overview of the image size bar

### 3.1 ELIAS Main Screen

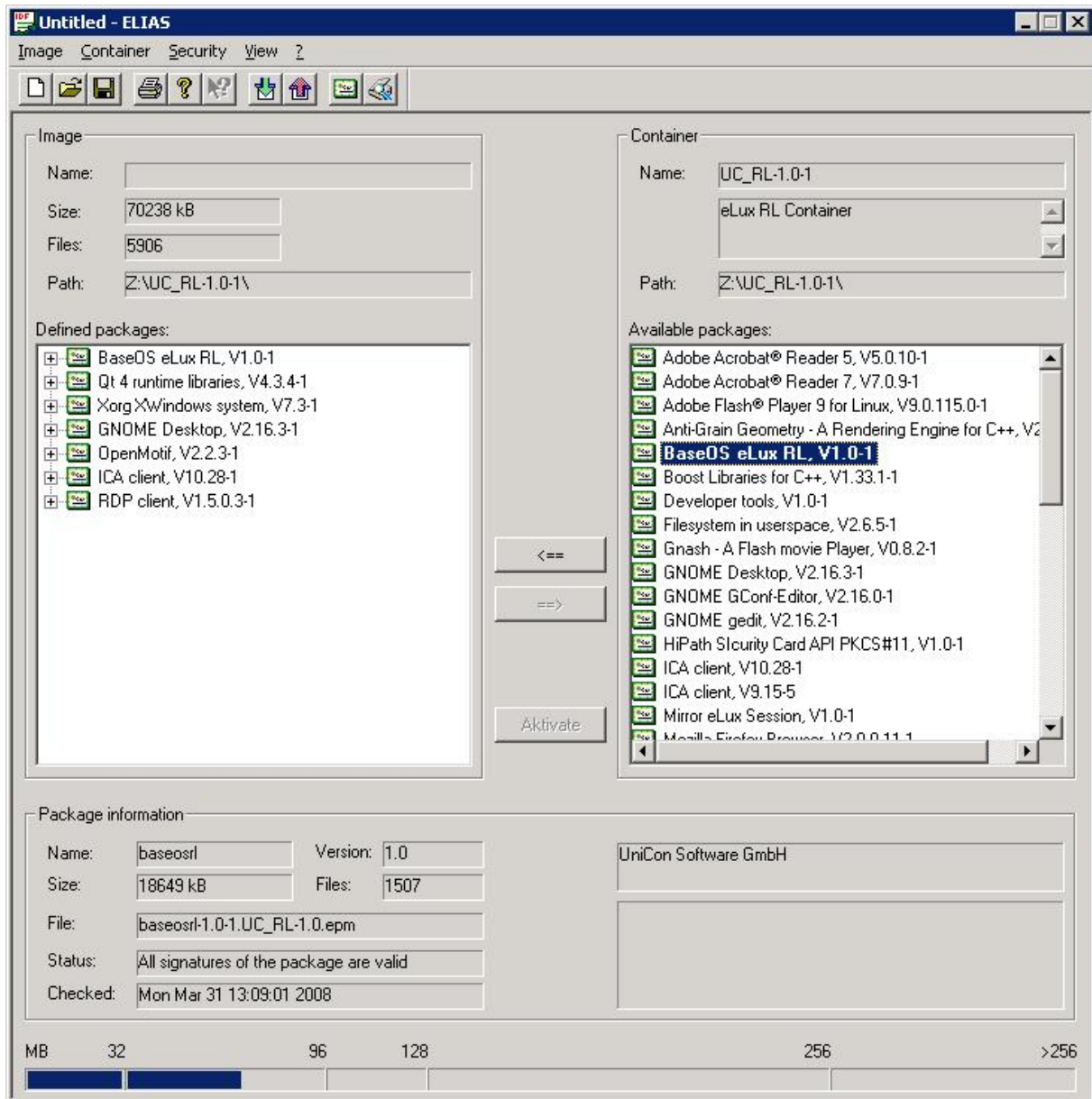


Figure 3: ELIAS main screen

The ELIAS main window has several components, which are described in this chapter:

- Title bar
- Main menus
- Toobar
- Container window
- Image window
- Package Information Area
- Icons
- Image Size Bar

### 3.2 Title Bar

The title bar at the top of the screen lists the currently opened image definition file.

### 3.3 Main Menus

The menu bar contains a number of menus that tell ELIAS what to do. Each menu contains a list of commands and the equivalent keyboard shortcuts, if available.

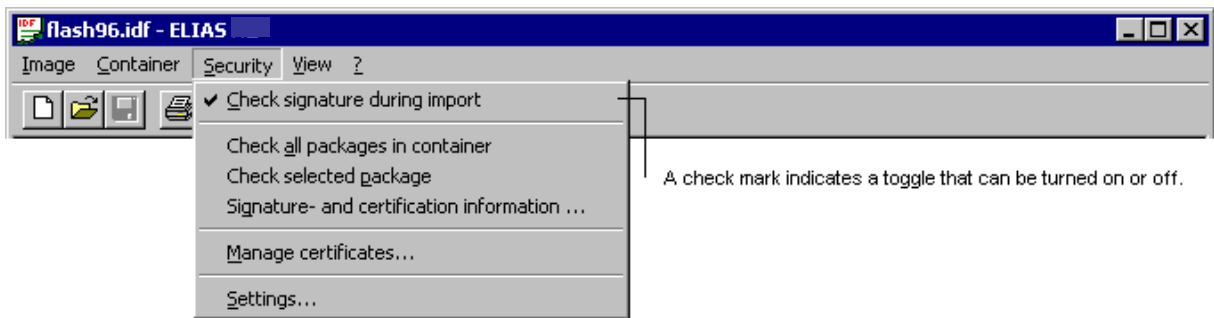


Figure 4: Main menus

Some of the options carry out commands immediately, and others display a window so that you can enter additional information. If an option is followed by "...", it will display a window. Otherwise, the command is carried out immediately.

### 3.4 Toolbar

The toolbar gives you one-click access to commonly used commands.



Figure 5: Toolbar

This button	Does the same as this
New	<b>Image</b> menu > <b>New</b> (see “4.1 Defining a New Image”)
Open	<b>Image</b> menu > <b>Open</b> (see “4.2 Opening an Image”)
Save	<b>Image</b> menu > <b>Save</b> (see “4.5 Saving the Image”)
Print	<b>Image</b> menu > <b>Print</b> (see “4.7 Printing the Image Definition File”)
Help	<b>Help</b> menu > <b>Help</b> (see “8.1.5 Help Menu”)
Import package	<b>Container</b> menu > <b>Import package</b> (see “5.3 Importing Packages into a Container”)
Export package	<b>Container</b> menu > <b>Export package</b> (see “5.4 Creating a New Container Using the Export Function”)
Manage certificates	<b>Security</b> menu > <b>Manage certificates</b> (see “7.2 Managing Certificates”)
Check container signatures	<b>Security</b> menu > <b>Check all packages in container</b> (see “7.3.4 Checking Signatures of All Packages in a Container”)

Table 1: Toolbar buttons

### 3.5 Container Window

A container is a directory containing the firmware packages for a specific hardware. It contains the file “container.ini” which is a text file with important ID information. Each Thin Client model has its own container. For example, a Thin Client with an Intel processor has a different container than one from National Semiconductor. The container is installed on an FTP or HTTP server using the Scout setup, or by hand by downloading individual files from [www.myelux.com](http://www.myelux.com). Please use the default container installation names (see “2.2.1 Default Container Directories”).

The Container window contains a list of the packages that make up the content of the container. The upper-level packages are eLux Package Modules (EPMs), the lower-level packages are Feature Package Modules (FPMs). An EPM (upper-level package) contains one or more FPMs (lower-level package).

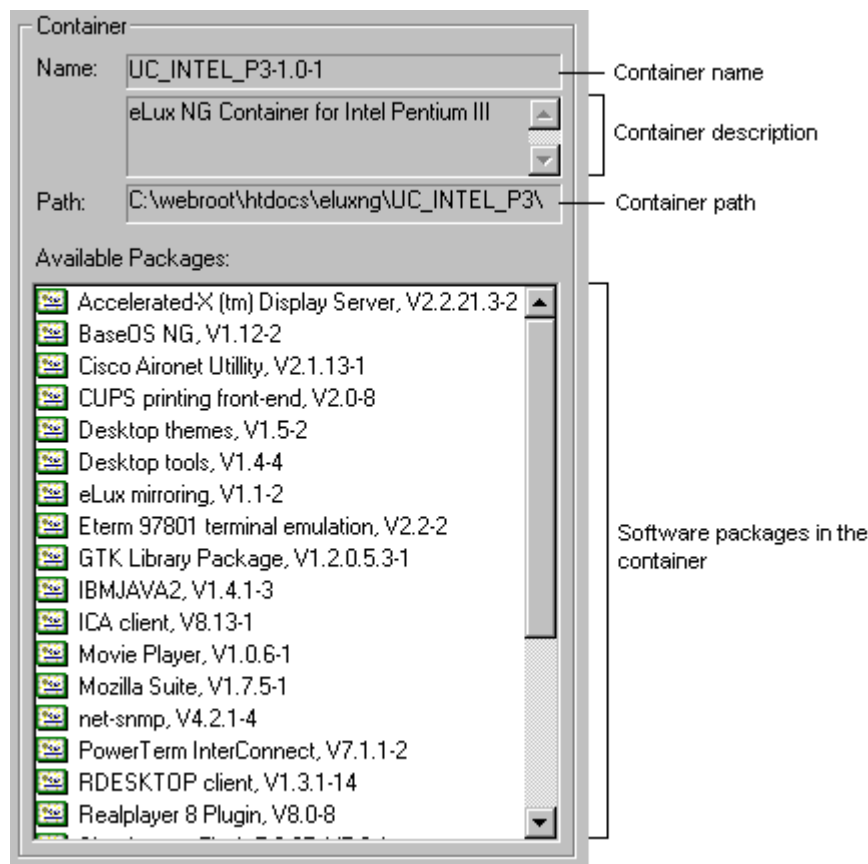


Figure 6: Container window

Once you have selected a container (see “5.1 Opening a Container”), the following information is displayed in the Container window (right-hand side):

- **Container name** The name of the container. If you used default container names when installing, the container name is identical to the container ID.
- **Container description** By default, the description lists the hardware platform (Intel, Via, Geode, etc.) the container may be used for. However, the description is merely a line in the container.ini file that can be changed to the text you want. This is useful to document a container that you created on your own for a specific purpose, for example, for updating from a USB stick, for a specific department in your company, for a specific hardware, etc. For information on how to change the container description, see “5.5 Changing the Container Description.”
- **Container path** The path of the container directory. This should be identical to the image definition file path.
- **Available software packages** The software packages in the container. The upper-level packages are eLux Package Modules (EPMs), the lower-level packages are Feature Package Modules (FPMs). In the Container window, only the EPMs (upper-level packages) are displayed. The EPMs

can be added to or deleted from the image definition file. For more information, see “4.3 Adding Packages to an Image.”

### 3.6 Image Window

An image definition file (IDF) is a text file. It is a collection of links that describes the packages that are to be installed on the flash card. The IDF must be saved to the container directory.

The Image window contains a two-tier structured hierarchical list of the packages that make up the content of the image definition file. If you are familiar with Windows Explorer, you'll find it easy to manage the structure. The upper-level packages are eLux Package Modules (EPMs), the lower-level packages are Feature Package Modules (FPMs). An EPM (upper-level package) contains one or more FPMs (lower-level package).

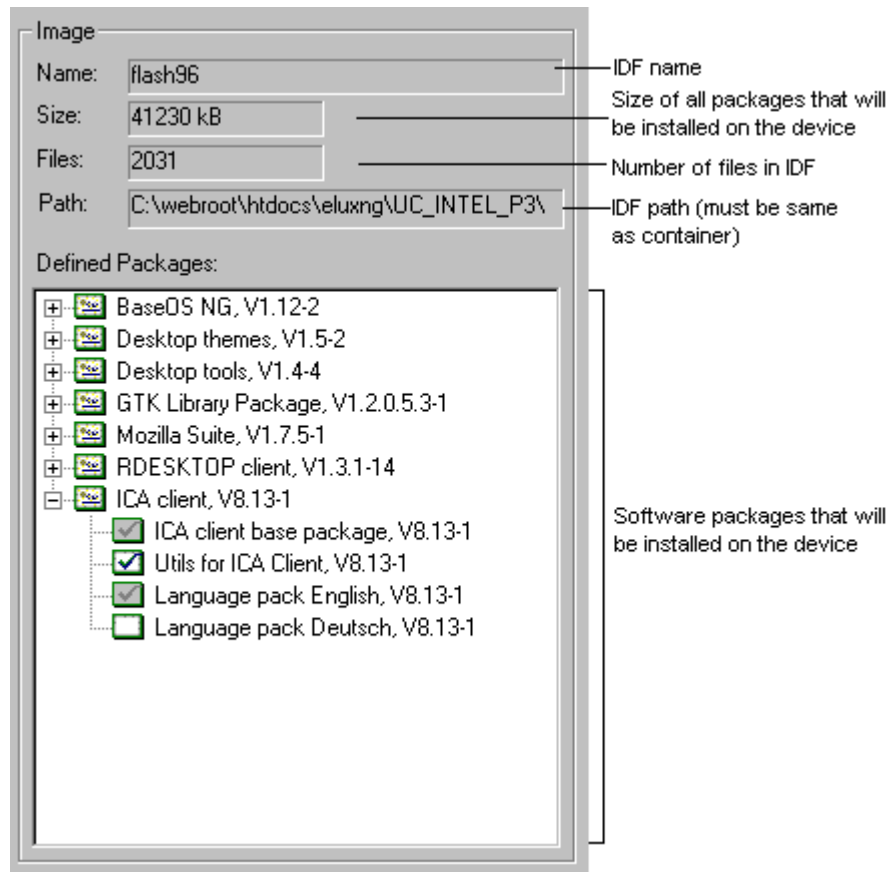


Figure 7: Image window

Once you have created an image definition file (see “4 Defining an Image Definition File”), the following information is displayed in the Image window (left-hand side):

- **IDF name** The file name.
- **IDF size** The size of the image that will be installed on the device.
- **Number of files in IDF** The number of files in the IDF.
- **IDF path** The path of the IDF. This should be identical to the container path.
- **Defined packages** The software packages (EPMs and FPMs) in the IDF. The FPMs can be activated or deactivated. For more information, see “4.3 Adding Packages to an Image.”

### 3.7 Package Information Area

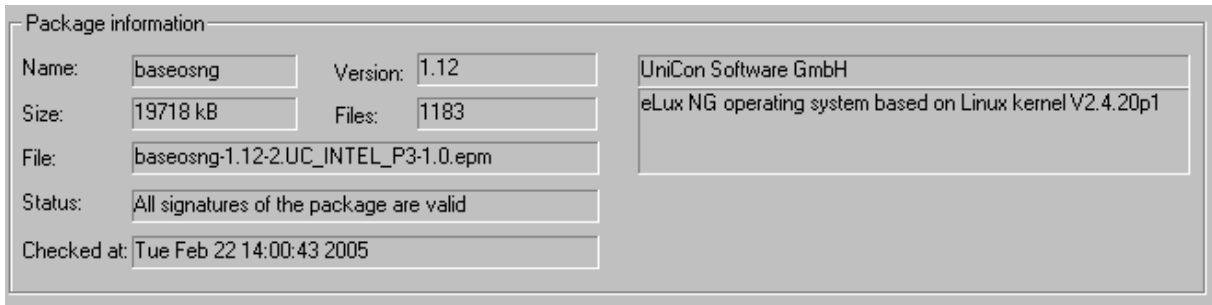


Figure 8: Package information area

When you select a software package (EPM or FPM), the following information is displayed in the package information area (at the bottom of the screen):

- Package name
- Package version number
- Package size
- Number of files in package
- Signature status
- Date the signature was last checked
- Software producer
- Package description

### 3.8 Icons Display Security Status

In ELIAS , software packages (eLux Package Modules [EPMs] and Feature Package Modules [FPMs]) are represented by icons.

The software packages are represented by different icons:



EPM: The upper-level packages (EPMs) are represented by certificate icons






FPM: (Image window only) The lower-level packages (FPMs) are represented by check boxes

The color represents the security state of the EPM or FPM:

- Green                      Signature is valid
- Yellow                     Signature has not yet been checked
- Red                         Signature is invalid or there was an error during the signature check (missing certificate, issuer not yet trusted, etc.)

For an FPM, the box content represents the selection state (Image window only):

-  Grey                      Required package. Cannot be selected or deselected.
-  Check                     Package is selected. Will be installed on the device.
-  Empty                    Package is not selected. Either will not be installed on the device or if already installed will be removed during the next update.



### 3.9 Image Size Bar

The bar at the bottom of the ELIAS screen shows an estimate of the image definition file size.

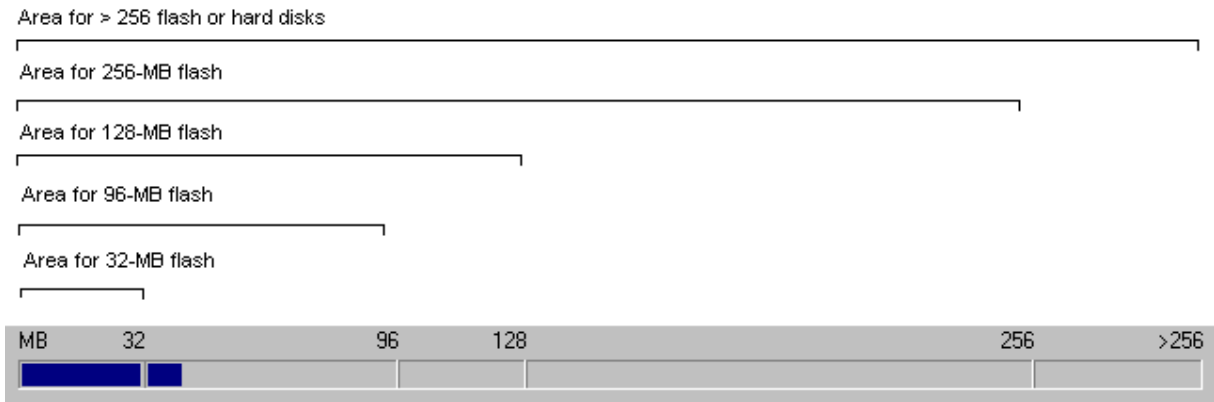


Figure 9: Image size bar

## 4 Defining an Image Definition File

This chapter contains detailed information on using ELIAS to create an image definition file. Defining an image definition file consists of selecting packages from the container, transferring them to the Image window, and selecting/deselecting individual Feature Package Modules.

Section	Description
4.1 Defining a New Image	How to define a new image definition file
4.2 Opening an Image	How to open an existing image definition file
4.3 Adding Packages to an Image	How to activate and deactivate software components
4.4 Package Dependencies	How ELIAS accounts for package dependencies
4.5 Saving the Image	Rules for saving an image definition file to the container directory
4.6 Size Constraint	How to avoid exceeding available flash memory size
4.7 Printing the Image Definition File	How to print a hardcopy of the image definition file contents

## 4.1 Defining a New Image

To define a new image, in the **Image** menu select **New**.

## 4.2 Opening an Image

To modify an existing image, in the **Image** menu select **Open** and browse for the desired IDF.

---

**Tip** The default recovery images are automatically installed in the container. You can use these as a template. Open and save under a new name (always keep a copy of the original for backup purposes). For a list of default container directories, see “2.2.1 Default Container Directories.”

---

## 4.3 Adding Packages to an Image

To add packages to an image, do the following:

1. Open a container (see “5.1 Opening a Container”).
2. Select a package in the container window and click the left arrow. The package appears in the image window.

ELIAS tests your selection for incompatibilities and will warn you if two packages conflict. In addition, if a package you select is dependent on another package, you will be prompted with a message and requested to select the other package first. This insures that there are no software incompatibilities in the finished IDF.

Tip: Select a package in the image window and click the right arrow to remove the package.

3. Every EPM contains one or more Feature Package Modules (FPMs). In the image window, click on the + in front of an icon to expand the software package and display the FPMs contained in this EPM. The FPM icons may be grey, check mark or empty:

Grey:	Mandatory feature which cannot be deactivated
Check mark:	Optional feature which has been activated
Empty:	Optional feature which has been deactivated

---

**Tip** For a description of icons and their meanings, see “3.8 Icons Display Security Status.”

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4. Activate or deactivate a feature by selecting it and pressing the space bar. You can also use the context menu by clicking with the right mouse button.

---

**Tip** The packages required by a specific feature are listed in the chapter for that feature in the *eLux NG Administrator’s Guide* and *Scout Enterprise Administrator’s Guide*.

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### Additional information

- When you add packages to an IDF, ELIAS tests for software incompatibilities. It cannot, however, check for hardware incompatibilities! This is left up to the administrator.
- The first package that must be selected is the base OS. This is the core of the IDF.
- Next, select software required in your server-based computing network: Citrix® ICA®, RDP, browser, emulation, SAP.
- Further software is included to eLux NG or eLux RL users at no additional charge: desktop tools, VNC server, mirroring software, FreeS/WAN VPN.
- Other software must be licensed: X32/52 and X97 emulations, third-party software, etc.

Due to the fact that the software is hardware dependent, you may not have the software listed above in your container. In addition, the above list is not all-inclusive. Currently available packages can be downloaded from [www.myelux.com](http://www.myelux.com).

## 4.4 Package Dependencies

Some packages are dependent on others. For example, all packages require a base operating system (base OS), so the first package you must select is the base OS. ELIAS automatically checks for dependencies when you select a package. For example, if you try to install a browser before installing an operating system, you get the following error message:

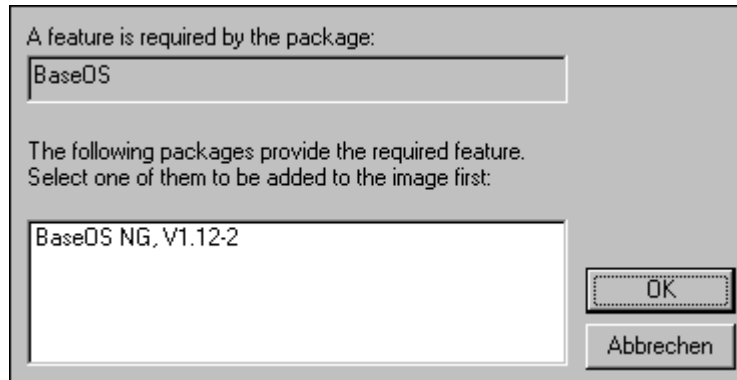


Figure 10: ELIAS error message

## 4.5 Saving the Image

To save your image definition file, from the **Image** menu click **Save**.

Follow the following rules when saving an image definition file:

- Save the image definition file to the container directory.  
For a list of default container directories, see “2.2.1 Default Container Directories.”
- The name must not contain a blank.
- Use a transparent naming scheme for the image definition file. Recommended is a name that will remind you in the future of the firmware it contains and the size, for example, “sap128.idf” for a 128-MB large image with the SAP client.
- If you save your files using the pre-set text “small” (32 MB), “medium” (96 MB), “large” (128 MB) or “XXL” (250 MB or higher), you can take advantage of the built-in macro. See “6.1 SIZE Macro” for more information.

## 4.6 Size Constraint

During the image definition process there is no total size restraint. The total image size can exceed the actual flash memory size, allowing you to experiment with different software combinations, activating or deactivating software components until you have met your requirements. However, the final image cannot exceed the total flash size. Please be aware of this when saving your files.

## 4.7 Printing the Image Definition File

For documentation purposes, ELIAS lets you print a list of the software packages and features in an image definition file. In the **Image** menu, **Print**, **Print Preview** and **Print Options** allow you to configure the print settings.

Figure 11 shows an example of the Print Preview command.

```

elias - Image Definition (c) UniCon Software GmbH (c) 2008
File:      Untitled
Name:
Size:      66985 kb
Author:
Created:   Mon Mar 31 13:28:42 2008
Modified:  Mon Mar 31 13:28:42 2008
Description:

Name      Version      Size (kb)
-----
baseosr1  1.0-1        18649
  minsystem  1.0-1        5486
  directfb   1.0.0-1      278
  basesystem 1.0-1        1801
  locales    1.0-1        1778
  installr1  1.0-1         4
  linuxkernel 2.6.22.18-1  1
  linuxmodules 2.6.22.18-1 1437
  eluxmgmt   1.0-1        2772
  grub       0.97-1       84
  bootsplash 1.0-1        425
  pam        0.99.8.1-1   26
  dbus       1.0.2-1      296
  hald       0.5.9-1      515
  udev       118-1        642
  ntp        4.2.4p4-1    227
  autmount   5.0.3-1      273
  timezone   1.0-1        115
  alsa       1.0.16-1     2420
  xinetd     2.3.14.0-1   68

qt4runtime 4.3.4-1      6969
  qtcore     4.3.4-1      801
  qtdialogs 4.3.4-1      3980
  qtsupport  4.3.4-1      1351
  qtnetwork  4.3.4-1      329
  qtserial  4.3.4-1      107
  qtsvg      4.3.4-1      156
  qtxml      4.3.4-1      183
  qtpluginimageformats 4.3.4-1      65
  qtpluginiconengines  4.3.4-1      17

xorg       7.3-1        23666
  xorgbin    7.3-1        1737
  xorglibs   7.3-1        3680
  mkxorgconf 7.3-1         75
  xorgmodules 7.3-1        650
  xorgcorefonts 7.3-1       5118
  xorgdrivers 7.3-1        804
  xorgdriver 7.3-1        902
  xorgatdriver 8.47.3-1    10489

gnome      2.16.3-1     13715
  gnomebin   2.16.3-1     4828
  gnomelibs  2.16.3-1     4205
  gnometheme 2.16.3-1     4140
  gnomesplash 1.0-1        204
  gnome_de   2.16.3-1     338

```

Figure 11: Print Preview of the image definition file

## 5 Working with Containers

This chapter contains information on using ELIAS to manage a container.

Section	Description
5.1 Opening a Container	How to open a container
5.2 Downloading Packages from the Internet	How to download software packages from <a href="http://www.myelux.com">www.myelux.com</a>
5.3 Importing Packages into a Container	How to import software into a container
5.4 Creating a New Container Using the Export Function	How to generate a new, customized container using the Export function
5.5 Changing the Container Description	How to change the container description
5.6 Deleting Packages from a Container	How to permanently delete packages that are no longer needed from a container

### 5.1 Opening a Container

If you used the default container directory names during installation, ELIAS will automatically open the container upon start. For a list of default installation directories, see “2.2.1 Default Container Directories.”

If you did not use default settings, you must select a container.

To select a container, in ELIAS click **Select** in the **Container** menu and browse for your container. When the container directory has been located, open the file “container.ini” it contains.

### 5.2 Downloading Packages from the Internet

New software packages can be downloaded from the Internet. You must complete a free one-time registration.

#### ⇒ To download software packages from the Internet

1. Go to the Web site [www.myelux.com](http://www.myelux.com).
2. In the navigation links on the left-hand side, click “Login.”
3. If you have not yet registered, click “Registration” and follow the instructions. You will receive your login and password in one to three days. Otherwise enter your login information and click “Submit.”
4. The main page is displayed with a “Download” and “Service” area. Click “eLux software packages.” This opens the “Available containers” page.
5. Under “eLux NG”, locate your hardware platform and click on the link in the column under “Released packages.”
6. The container page lists the container ID and the hardware platform. As containers are hardware specific, please verify that you have selected the correct container. Other important information that is displayed is the the release date and the last time the software was updated, the version of Scout and ELIAS that should be used, and the supplier. In addition, you can view a list of supported hardware components.
7. Locate the individual package to download (the product name is listed in the right-hand column list) and save it to a directory on the machine with the container.  
Warning: Do not save it directly to the container.
8. When the transfer is complete, follow the instructions for importing packages into a container in “5.3 Importing Packages into a Container.”

### 5.3 Importing Packages into a Container

A container is a collection of software packages. The administrator chooses a subset of this pool of packages to install on the Thin Client when defining an IDF.

In normal use, it is not necessary to change the packages in a container. Packages that are not needed have no effect.

However, at times it is necessary to update the container when:

- New client software is available (Citrix® ICA®, RDP, emulation, etc.)
- A new base OS is released (eLux)
- A software bug is fixed

#### ⇒ To import an individual package in a container

1. Follow the instructions for logging on to [www.myelux.com](http://www.myelux.com) in "5.2 Downloading Packages from the Internet."
2. When transfer is complete, run ELIAS . Select your container (**Container > Select**).
3. In the **Container** menu, select **Import package**. Browse for the \*.zip file you just downloaded. When you have located it, click **Open**.

The Import Package function allows you to either import a new software package into a container or overwrite existing packages. The features and software dependencies of every software package remain intact.

---

**Warning** To insure error-free functionality, packages should only be imported into a container using the ELIAS Import function! If you copy packages directly into a container directory not using ELIAS , essential software dependencies and components will be lost.

---

### 5.4 Creating a New Container Using the Export Function

---

**Tip** You can update from a portable storage device, such as a USB stick or a CD-ROM. This is described in the *eLux NG / eLux RL Administrator's Guides* and *Scout Enterprise Administrator's Guide*. This section describes how to create a smaller container that fits on the portable storage device. See also "6.3 Updating from File."

---

You can construct a new customized container using the Export Package function. This is useful when updating from a USB device with limited memory.

1. Create a new directory. Copy the file `container.ini` from your container to this new directory.
2. Run ELIAS . Select your container (**Container > Select**).
3. In the container window, click to select a package.
4. In the **Container** menu, select **Export package**. Browse for the new directory you just created. When you have located it, click **Save**. Do not change the standard file name. The package you selected will be saved to this new directory.
5. Repeat until you are finished.

To differentiate between containers, store them in different directories and label the directories by hardware type. Please be aware that you must use standard container names to take advantage of the container macro. For more information on the container macro, see "6.2 CONTAINER Macro."

As with the Import function, all features belonging to a software package are automatically included. To insure all subcomponents are exported, please use the Export Function and not Windows Explorer.

### 5.5 Changing the Container Description

If you create a customized container, you should change the description to describe the new container.

---

#### ⇒ To change the container description

1. Start Windows Explorer and go to the container directory.
2. Open the file “container.ini” using Notepad.

You should see something similar to the following:

```
[Global]
ContainerID=UC_INTEL_P3-1.0-1
ContainerDescription=eLux NG Container for Intel Pentium III
```

3. For the “ContainerDescription” value enter a new description of your choosing and save the file.
4. The next time you open the container in ELIAS , this new container description will be displayed in the container window.

---

**Warning** Do not alter the container ID.

---

## 5.6 Deleting Packages from a Container

To remove outdated software from your container, you need to delete its package. To delete a package from a container, open the container in ELIAS (**Container > Select**). Select the software package you wish to delete and press the DEL key or click with the right mouse button > **Delete**. A confirmation dialog box appears, informing you of the software packages that will be affected. Click **Yes** to delete the package irretrievably.

---

**Warning** Package deletion is irreversible! Before deleting a package, check that the package is not used by any image definition file (\*.idf). Once you delete a package, it cannot be restored.

---

## 6 Advanced Features

This chapter contains information on advanced functionality.

Section	Description
6.1 SIZE Macro	Discussion of the macro for automatic recognition of flash size
6.2 CONTAINER Macro	Discussion of the macro for automatic recognition of device hardware
6.3 Updating from File	Overview of updating from a USB stick or CD-ROM
6.4 eLux Builder Kit	Overview of the eLux Builder Kit

### 6.1 SIZE Macro

The SIZE macro allows you to consolidate the image definition file name into one parameter. This greatly eases configuration in networks with different sized flash cards.

The device hardware is automatically detected during the recovery process. The text “\_\_SIZE\_\_” in the name of the image definition file will automatically be replaced with text corresponding to the size of the Thin Client’s flash card as follows:

Text	Flash size (MB)
“small”	32
“medium”	96
“large”	128
“xxl”	256 or greater

Table 2: SIZE macro

To use the SIZE macro, the administrator creates image definition files for the flash card sizes in the network. (The IDF size is displayed in ELIAS when the IDF is being created. The size of the IDF must equal to or less than the size of the flash card.) The naming scheme is important: It must be a root with the text listed in the table above. Format: <root><macro text>.idf

#### Example

Assume the administrator of “Company 1” wants to update all Thin Clients in a network containing devices with 32-, 96-, 128- and 256-MB sized flash cards. The administrator creates four IDFs in advance using the following naming scheme:

IDF name	IDF size (MB)
“company1small.idf”	32
“company1medium.idf”	96
“company1large.idf”	128
“company1xxl.idf”	256 or greater

Table 3: Examples of SIZE macro

and saves all four IDFs to the appropriate container.

On each device in the **Image file** field of the **Firmware** tab, the administrator enters one parameter: company1\_\_SIZE\_\_.idf.



During the update, if a 32-MB flash card is detected, the IDF “company1small.idf” will be installed, if a 96-MB flash card is detected, the IDF “company1medium.idf” will be installed, etc. If a hard disk is detected, the IDF “company1xxl.idf” will be installed. This only works if the IDF actually exists and has the required name.

**Conclusion**

Using the SIZE macro is not mandatory. As administrator, naturally you can replace this text with the actual name of the recovery IDF. In this case, you lose the dynamic recognition of the macro.

**6.2 CONTAINER Macro**

The CONTAINER macro allows you to consolidate the image definition file path into one parameter. This greatly eases configuration in networks with more than one hardware platform.

The device’s hardware is automatically detected during the recovery process. The text “\_\_CONTAINER\_\_” in the **Path** field of the Firmware settings will automatically be replaced with the default container name for that hardware as follows:

Text	Chipset
“UC_INTEL_P3”	Intel
“UC_GEODE_P1”	Geode
“UC_TRANSMETA”	Transmeta
“UC_VIA”	Via
“UC_PC”	Pentium MMX processor or higher

Table 4: CONTAINER macro

All chipsets in the above table refer to thin clients, except “UC\_PC”, which refers to personal computers.

**A few words about eLux for PC**

**eLux for PC** is eLux software that has been adapted to run on PCs. This software enables you to transform the PC into a fully functional terminal for a server-based computing environment. This allows you to "recycle" old, worn-out computers and save money.

Test the software using the “eLux for PC Live” CD (ISO image available for download at [www.myelux.com](http://www.myelux.com) to be burned to a CD or see your distributor). This is evaluation software that boots directly from CD without installing anything on your hard disk. It is possible to use your network (Ethernet) and to set up a server connection. It is not possible to save setup data or a configuration file to the CD-ROM or elsewhere. This software is for evaluation purposes only.

After evaluating the software running from CD, if you decide you want to install it on your hard disk, click the "Install" button. Initially, the software will run in demo mode. End demo mode by purchasing a license. For purchasing information, see our list of qualified partners at [www.myelux.com](http://www.myelux.com).

Supported hardware: Pentium I-MMX and higher, min. 64 MB RAM, min. 128 MB hard disk, PCI video, PCI LAN. ISA LAN and ISA video are not supported. eLux NG for PC can only be installed on IDE or Intel 915 SATA hard disks. SCSI hard disks are not supported. There is no technical support for hardware drivers! All hardware drivers have to be verified by the evaluation CD – network, graphic, sound. If the evaluation CD runs on your PC, eLux for PC can be installed.

**Example**

Assume the administrator wants to update all Thin Clients in a network. The Thin Clients have different hardware. The administrator creates the required IDFs in advance and saves them to the appropriate containers. In the **Path** field of the **Firmware** tab, the administrator enters one parameter:  
`eluxng/ __CONTAINER__`

During the update, the container path “eluxng/UC\_INTEL\_P3” will be used if an Intel chipset is detected, the container path “eluxng/ UC\_GEODE\_P1” will be used if a Geode chipset is detected, etc.

**Conclusion**

---

For this macro to work, you must use containers with standard installation names.

Using the CONTAINER macro is not mandatory. As administrator, naturally you can replace this text with the actual name of the container. In this case, you lose the dynamic recognition of the macro.

### 6.3 Updating from File

You can perform an update locally using direct file access to a container on a USB stick or a CD-ROM.

Create an IDF as described in “4 Defining an Image Definition File” and save it to the container. Copy the entire contents of the container (including IDF) to the memory stick or CD-ROM. Note: You may have to reduce the size of the original container. This can be done either by creating a new container (see “5.4 Creating a New Container Using the Export Function”) or removing packages (see “5.6 Deleting Packages from a Container” – be sure to keep a copy of the original container for backup purposes).

This topic is beyond the scope of this manual. For more information on restrictions, firmware parameters and special considerations, see the *eLux NG / eLux RL Administrator’s Guides* or the *Scout Enterprise Administrator’s Guide*.

### 6.4 eLux Builder Kit

The eLux Builder Kit (EBK) for Linux is a development environment for skilled Linux developers or administrators to create their own software packages. The resulting packages can then be added to an IDF using ELIAS . This allows you to install your own software, such as special drivers, on the flash card.

Creating a package can be understood as a translation process in which package specifications and binary files (for example, programs, libraries) are compiled into an eLux NG package, which can then be made available on the update server.

This tool is provided free of charge. For more information, see the Web site [www.myelux.com](http://www.myelux.com).

## 7 Security

This chapter contains information on how to manage certificates and check the validity of packages. The security features described in this chapter are available starting with ELIAS version 6.0 and eLux NG version 1.14 as well as eLux *RL*.

Section	Description
7.1 Understanding	A short primer on trust hierarchies
7.2 Managing Certificates	How to work with certificates, import a new certificate and set certificate check configuration settings
7.3 Checking Package Validity	How to check the validity of package signatures and set signature check configuration settings

### 7.1 Understanding Digital Certificates

The ISO X.509 protocol defines a mechanism called a **digital certificate** that contains a user's public key and has been signed by a trusted entity called a Certificate Authority (CA).

The certificate is used to identify an EPM or FPM ("the package is signed with the certificate").

A certificate contains the following information:

- **Issuer** The organization that issued the certificate
- **Subject** The party that is identified by the certificate
- **Period of validity** The certificate's start date and expiration date
- **Public key** The subject's public key used to encrypt data
- **Issuer's signature** The CA's digital signature on the certificate used to guarantee its authenticity

The following types of digital certificates are required by ELIAS:

- **Trusted issuer**
- **Intermediate issuer**
- **Root certificate**

This identifies the CA that signed the trusted issuer certificate. The root certificate belongs to the CA. A root certificate is required to verify the authenticity of trusted issuer and intermediate issuer certificates

ELIAS ships with built-in support for the following root certificates:

- TC TrustCenter Class 3 CA

If you use a certificate signed by a different CA, you will have to import that CA's root certificate in addition to the certificate itself.

For use in security, the certificate must be valid. Certificates are valid only for a specified time period; when a certificate expires, a new one must be issued. The issuing authority can also revoke certificates. Before you trust a certificate, make sure that the certificate has not been revoked.

The list of all certificates currently entered in ELIAS is called the "trusted list." ELIAS checks the validity of the signatures of software packages against the certificates currently in its trusted list. Expired certificates are automatically marked red and can no longer be used for verification. ELIAS also provides online OCSP check capabilities to check the validity of the certificates in its trusted list.

## 7.2 Managing Certificates

This section describes how to manage the certificates in ELIAS's trusted list.

### 7.2.1 Viewing certificate information

You can use ELIAS to view the information in a certificate.

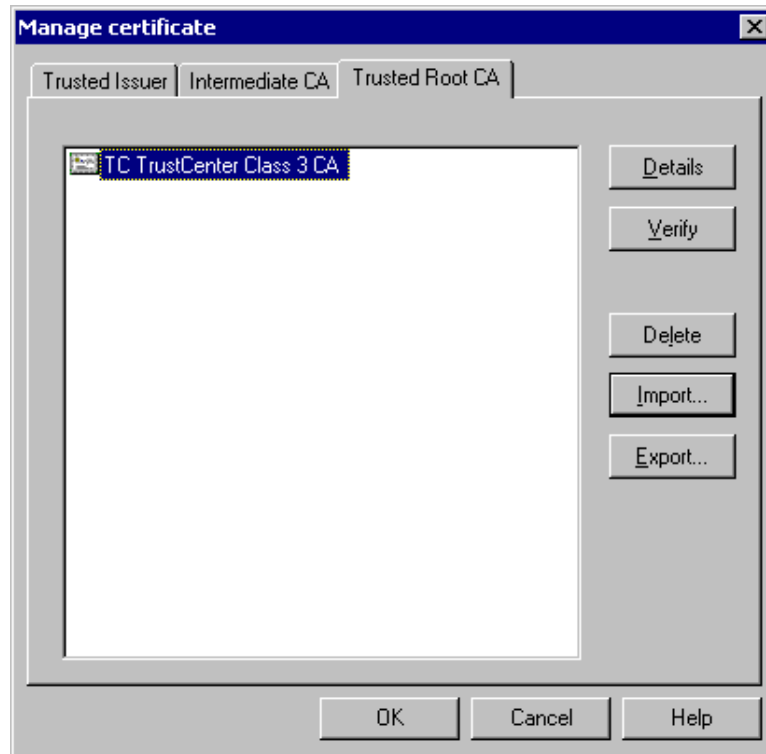


Figure 12: Manage certificate dialog box

#### ⇒ To view certificate information

1. In the **Security** menu, select **Manage certificates**. Alternatively, click on the corresponding button in the toolbar.  
The **Manage certificates** dialog box appears, displaying the list of trusted certificates.
2. Go to the desired tab.
3. Either double-click a certificate or select a certificate and click **Details**.  
The **Certificate** dialog box appears.  
**General** Displays issuer, recipient and period of validity.  
**Details** Displays certificate information.  
**Certification path** Displays the certification path. Click on the plus to expand.
4. When you are done, click **OK** to close the dialog box.

## 7.2.2 Setting OSCP settings

An Online Certificate Status Protocol (OCSP) server is used to check the status (valid, revoked, unknown) of a certificate.

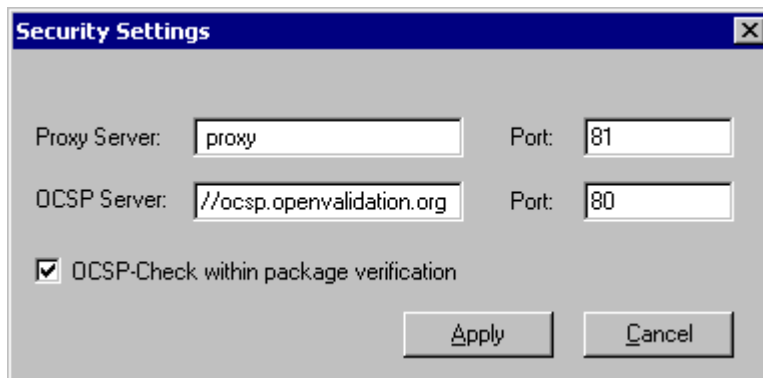


Figure 13: OSCP settings

### ⇒ To set OSCP settings

1. In the **Security** menu, select **Settings**.
2. In the **Security settings** dialog box, enter the following:
  - Proxy server** (optional) If you use a proxy server to connect to the Internet, enter the proxy server IP address (or name) and the port.
  - OCSP server** In general, the OCSP server is automatically read from the certificate. If this information is not available, you can enter a default OCSP server in URL format and the port by hand. Format: `http://<OCSP server URL>`  
Default values are `http://ocsp.openvalidation.org` and `80`.
  - OCSP check within package verification** Every time before checking a signature, the validity of the certificate will automatically be checked. For information on checking signatures, see "7.3 Checking Package Validity."
3. Click **Apply**.

## 7.2.3 Checking a certificate manually

You should periodically check the validity of certificates in the trusted list by performing an OCSP check. An Internet connection is required.

### ⇒ To check the validity of a certificate

1. Set the OCSP settings, if you have not already done so. For more information, see "7.2.2 Setting OSCP settings."
2. In the **Security** menu, select **Manage certificates**.
3. In the **Manage certificates** dialog box, go to the desired tab and click to select a certificate.
4. Click **Verify**.  
The **Online verification** dialog box appears. Verification takes place.
5. When the process is done, a status message are displayed. If verification failed, check that OCSP settings are correct (step 1).

### 7.2.4 Deleting a certificate

In ELIAS , all certificates entered in the trusted list are considered trustworthy. If a certificate is no longer trustworthy, it should be deleted.

To delete a certificate, click to select **Security > Manage certificates**. Go to the desired tab and click to select the desired certificate. Click **Delete**.

### 7.2.5 Importing a certificate

To enter a certificate in ELIAS , it must be imported. You can import a root CA, intermediate CA or trusted CA. The certificate must be in \*.cer or \*.pem format and available in the local network.

⇒ **To import a certificate in ELIAS**

1. Save the certificate to a temporary folder.
2. In ELIAS, in the **Security** menu, select **Manage certificates**.
3. In the **Manage certificates** dialog box, go to the desired tab and click **Import**.
4. Browse for the certificate.

### 7.2.6 Exporting a certificate

Use the export function to copy a certificate to another destination. A copy of the certificate remains in ELIAS .

⇒ **To export a certificate from ELIAS**

1. In the **Security** menu, select **Manage certificates**.
2. In the **Manage certificates** dialog box, go to the desired tab and click to select a certificate.
3. Click **Export**.
4. Browse for the desired directory and click **Save**.

## 7.3 Checking Package Validity

When you use firmware signed by UniCon Software GmbH, you can be sure that the firmware comes from UniCon Software and not from a suspect third-party. You can rest assured that the software you install on your devices is legitimate and not a security hazard.

This section describes how to check the signatures of firmware. By default, ELIAS comes with a preinstalled trusted certificate. For information on importing and managing certificates, see “7.2 Managing Certificates.”

### 7.3.1 Configuration settings for checking package signatures

By default, the validity of a package’s signature is checked internally against the trusted list. In addition, you can configure ELIAS to check the status of the involved certificates first (OCSP check). An Internet connection is required.

⇒ **To configure ELIAS to perform an OCSP check on package signatures**

1. In the **Security** menu, select **Settings**.
2. In the **Security settings** dialog box, enter the proxy server and a default OCSP server. For more information, see “7.2.2 Setting OSCP settings.”
3. Click to select **OCSP check within package verification**.
4. Click **Apply**.

From now on an additional OCSP check of the involved certificates will be performed online before a package signature is checked.

### 7.3.2 Checking Signatures upon Import

To automatically check the signatures of firmware (EPMs and FPMs) that are imported, click to select **Security > Check signature during import**. It is a toggle. Click to deselect to deactivate this feature.

By default, the validity of a package’s signature is checked internally. To perform an additional OCSP check, see “7.3.1 Configuration settings for checking package signatures.”

### 7.3.3 Checking Signature of a Single Package

Checks the signature of a single package. If the package is in the:

- Container window** Checks the EPM and its corresponding FPMs.
- Image window** Checks either the EPM and its corresponding FPMs or a single FPM, depending on what you select.

⇒ **To check the signatures of a selected package**

1. Click to select a package and go to **Security** menu > **Check selected package** or click with the right mouse button on a package and select **Check selected package**.
2. The signatures of all FPMs in the selected EPM are checked.
3. When the process has finished, the **Check signature** dialog box appears.

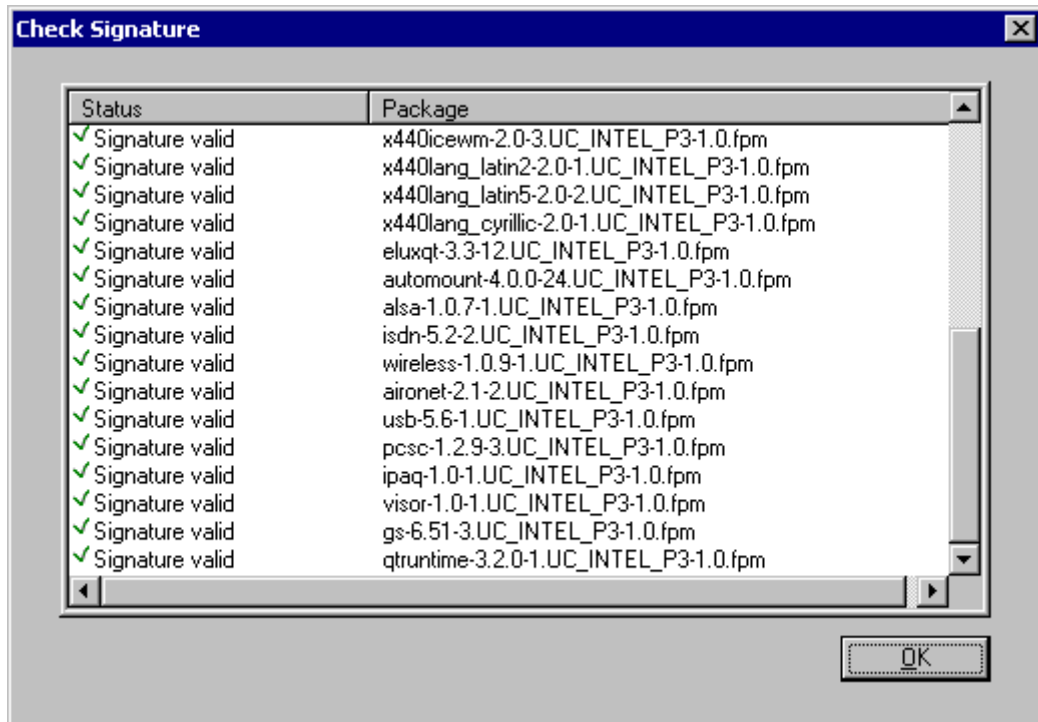


Figure 14: Checking package signature for base OS 1.12-2

- **Error** The signature is incorrect. For a list of common error messages, see “7.3.6 Troubleshooting.”
- **Signature valid** The signature is correct

This information is also displayed in the ELIAS main screen under “Package information” > “Status” when you select the package.

The validity of a package’s signature is checked using the internal list of certificates. To perform an OSCP check on the certificate list, see “7.3.1 Configuration settings for checking package signatures.”

### 7.3.4 Checking Signatures of All Packages in a Container

⇒ **To check the signatures of firmware in a container**

1. In the **Security** menu, select **Check all packages in container**. Alternatively, click on the corresponding button in the toolbar.
2. The signatures of all firmware (EPMs and FPMs) are checked.
3. When the process has finished, the **Check signature** dialog box appears.
  - **Verification failed** The signature is incorrect
  - **Signature valid** The signature is correct

**Tip** Double-click on an EPM to display the signature status of its FPMs. For a list of common error messages, see “7.3.6 Troubleshooting.”

The validity of a package's signature is checked using the internal list of certificates. To perform an OCSP check on the certificate list, see "7.3.1 Configuration settings for checking package signatures."

### 7.3.5 Signature and certification information

A helpful diagnostic tool is the **Signature and certification information** dialog box. If the package is in the:

- |                         |   |
|-------------------------|---|
| <b>Container window</b> | Checks the EPM and its corresponding FPMs.  |
| <b>Image window</b>     | Checks either the EPM and its corresponding FPMs or a single FPM, depending on what you select. |

#### ⇒ To view the security status of a software package

1. Click to select a package and go to **Security** menu > **Check selected package** or click with the right mouse button on a package and select **Signature and certification information**.
2. The security status of the individual EPMs and FPMs in this package is displayed.
3. Click to select an FPM. A variety of information is displayed.
  - **Check again** The signature of the selected FPM is checked again. For information on settings, see "7.3.1 Configuration settings for checking package signatures."
  - **Details** Displays information on the certificate used in this check. Also available by double-clicking on the package. For more information on the **Certificate** dialog box, see "7.2.1 Viewing certificate information." Deactivated if no signature file is present. In this case, update the container to the latest software.

Click with the right mouse button on a package in the dialog to access these commands from the context menu.

In addition, in the ELIAS main screen, click on a package in the Image window or Container window. Its security status (including any error message) is displayed in "Package information" > "Status".



### 7.3.6 Troubleshooting

Following is a list of common error messages.

Error message	Action
[Error 21] Issuer not in the trusted list	<p>The required trusted issuer certificate is missing.</p> <p>While the check is in progress, the dialog “Should the issuer be trusted?” appears. Click <b>Yes</b>.</p> <p>Alternatively, download the required certificate from <a href="http://www.myelux.com">www.myelux.com</a> and import it to the trusted list. See “7.2.5 Importing a certificate.”</p>
[Error 22] Root certificate cannot be found	<p>The required root CA certificate is missing.</p> <p>In ELIAS, click to select the package. In the <b>Security</b> menu, select <b>Signature and certification information</b>. Double-click the package. The <b>Manage certificates</b> dialog box appears. Go to the <b>Certification path</b> tab to see which certificate is missing.</p> <p>Download the required certificate from <a href="http://www.myelux.com">www.myelux.com</a> and import it into the trusted list. See “7.2.5 Importing a certificate.”</p>
[Error 30] Certificate expired	<p>The certificate has expired.</p> <p>Download the required certificate from <a href="http://www.myelux.com">www.myelux.com</a> and import it into the trusted list. See “7.2.5 Importing a certificate.”</p>
[Error 40] Intermediate certificate cannot be found	<p>The required trusted intermediate CA certificate is missing.</p> <p>In ELIAS, click to select the package. In the <b>Security</b> menu, select <b>Signature and certification information</b>. Double-click the package. The <b>Manage certificates</b> dialog box appears. Go to the <b>Certification path</b> tab to see which certificate is missing.</p> <p>Download the required certificate from <a href="http://www.myelux.com">www.myelux.com</a> and import it into the trusted list. See “7.2.5 Importing a certificate.”</p>
[Error 43] Certificate revoked	<p>The certificate was revoked. Do not trust this issuer!</p>
[Error 103] No signature file found	<p>The signature file is missing. Download the latest version of the container or firmware packages.</p>
[Error 130] Connection failed	<p>Could not connect to the OCSP server.</p> <p>Go to the <b>Security settings</b> dialog box (<b>Security &gt; Settings</b>).</p> <ul style="list-style-type: none"> <li>• If you have an Internet connection, verify proxy settings.</li> <li>• If you do not have an Internet connection, deactivate the <b>OCSP check within package verification</b> check box.</li> </ul>

## 8 Commands

These chapters are meant as a reference guide for the various menu and keyboard commands. Cross references to more detailed information elsewhere in the manual is provided where appropriate.

Section	Description
8.1 Main Menu	Description of the main menu commands: Image, Container, Security, View, Help
8.2 Keyboard Shortcuts	Useful key combinations for often used functions

### 8.1 Main Menu

#### 8.1.1 Image Menu

##### Image > New

Opens a new image definition file.

##### Image > Open

Opens a pre-existing image definition file.

##### Image > Save, Save As

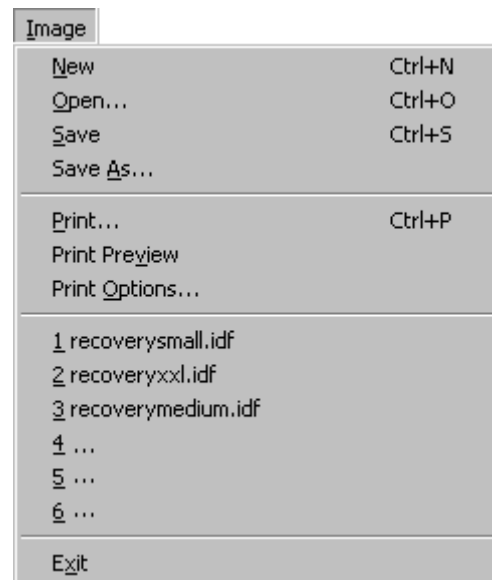
Saves the current image definition file.

##### Image > Print, Print Options

Opens the **Print Options** dialog box. It's appearance may be different depending on your operating system. Allows you to set the printer, paper and format settings.

##### Image > Print Preview

Displays a list of the software packages contained in image definition file to be printed. See section "4.7



the

Printing the Image Definition File.”

#### **Image > <image definition file>**

A list of the most recently opened image definition files for one-click access.

#### **Image > Exit**

Closes ELIAS .

### 8.1.2 Container Menu

#### **Container > Select**

Browse to select a container.

#### **Container > Import Package**

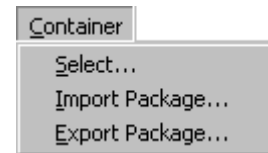
Imports a package into a pre-existing container. After receiving a new package, either from your distributor or from the Web, you must import it into a container before you can add it to an image definition file.

#### **Container > Export Package**

Export a package to another location. For example, if you receive a new version of Netscape and want to make it available to all your branch offices, export it to their container directories, which may lie on other HTTP or FTP servers.

#### **Container > <container name>**

A list of the most recently opened containers for one-click access.



### 8.1.3 Security Menu

#### **Security > Check signature during import**

When selected, signatures will automatically be checked when packages are imported.

#### **Security > Check all packages in container**

Checks the signatures of all packages in the container. See “7.3.4 Checking Signatures of All Packages in a Container.”

#### **Security > Check selected package**

Checks the signature of a selected package and its components in either the Container window or Image window. See “7.3.3 Checking Signature of a Single Package.”

#### **Security > Signature and certification information**

Displays the security status of a package and its components selected in either the Container window or Image window. See “7.3.5 Signature and certification information.”

#### **Security > Manage certificates**

Allows you to manage the certificates in ELIAS ’s trusted list.

#### **Security > Settings**

Enter configuration settings for online OCSP check.



### 8.1.4 View Menu

#### **View > Toolbar**

When selected, displays the toolbar.



The toolbar icons allow one-click access to the following commands: New, Open, Save, Print, Help, Context-Sensitive Help, Import package, Export package, Manage certificates, Check signatures of all packages in container.



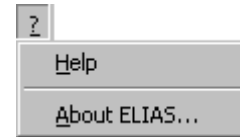
### 8.1.5 Help Menu

**Help > Help**

Opens ELIAS Help Topics. Keyboard shortcut: F1.

**Help > About ELIAS**

Displays the name and version number of the software.



### 8.1.6 Image Window

Image window context menu:

**Activate/Deactivate:** Activate or deactivate this FPM.

**Check selected package:** Checks the signature of a selected package and its components in either the Container window or Image window.

**Signature and certification information:** Displays the security status of a package and its components selected in either the Container window or Image window.

### 8.1.7 Container Window

Container window context menu:

**Check selected package:** Checks the signature of a selected package and its components in either the Container window or Image window.

**Signature and certification information:** Displays the security status of a package and its components selected in either the Container window or Image window.

**Check all packages in container:** Checks the signatures of all packages in the container

**Delete package:** Removes this package from the container.

### 8.1.8 Signature and Certification Information Dialog Box

Signature and Certification Information dialog box:

**Details:** Displays information on the certificate used in this check.

**Check package new:** The signature of the selected package is checked again.

## 8.2 Keyboard Shortcuts

Key Combination	Action
<u>General</u>	
Cursor (arrow) keys: ↑ ↓	Screen navigation
F1	Opens online help.
TAB / SHIFT-TAB	Screen navigation
<u>Container Window</u>	
CTRL + left arrow key: ←	Adds a package to the IDF.

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DEL	Deletes the selected package from a container
INSERT	Opens the Import Package dialog box.
<u>Image Window</u>	
Cursor (arrow) keys: ← →	Expands / collapses a defined upper-level eLux Package Module
CTRL + right arrow key: →	Removes a package from the image definition file.
SPACE BAR	<ol style="list-style-type: none"><li>1. Expands / collapses a defined upper-level eLux Package Module</li><li>2. Activates / deactivates a lower-level Feature Package Module</li></ol>

Further shortcut keys are adjusted to default Windows shortcut keys.

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