

Version 1

Administrator's Guide

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Unicon Software GmbH

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Table of Contents

1	Bef	ore you be	gin	6
	1.1	About this	guide	6
	1.2	eLux® in th	ne World Wide Web	6
2	Inst	tallation		7
			Procedure	
			guration	
			guidado:	
_		-		
3			top user interface	
			on bar	
	3.2		ern User Interface and eLux App Selector	11
		3.2.1 3.2.2	Adding applications to the eLux Modern User Interface	
	2.2	_	- Start Menu and Systray	
	ა.ა	3.3.1	USB Device Information	
		3.3.2	Info Control	
		3.3.3	Mouse/Keyboard settings	
		3.3.4	Screen Control settings	
	3.4	Control Pa	anel	16
4	Set	up		17
	4.1	General		18
		4.1.1	Checking license information	
		4.1.2	Entering a new license	
	4.2	Network		19
		4.2.1	Connecting to LAN or WLAN	
	4.3	Desktop		21
		4.3.1	Configuring desktop	
		4.3.2	Advanced Desktop Settings	
		4.3.3	Setting date and time manual	22
		4.3.4	Setting time zone	
		4.3.5	Synchronizing date and time using a time server	
	4.4	Screen		
		4.4.1	Changing basic settings of the screen	
		4.4.2 4.4.3	Configuring the screen saver Configuring a font server	
	4.5			
	4.5		yboard	
		4.5.1 4.5.2	Configuring the mouse Configuring the keyboard	
		4.5.3	Advanced mouse settings	
	4.6	Firmware.		27
		4.6.1	Updating the system	27
		4.6.2	Checking for updates and updating automatically	27
		4.6.3	Resetting client / Factory reset	27
	4.7	Security		28
		4.7.1	Local Security	
		4.7.2	User Authorization	
		4.7.3	Mirroring	29

		4 7 4	11 M - 2 - 1 1	00
		4.7.4	User Variables	
			1	
	4.9		Connection a naturally drive	
		4.9.1 4.9.2	Connecting a network drive Setting the browser home directory	
	<i>4</i> 10			
	7.10	4.10.1	Adding a new printer	
		4.10.2	TCP direct print	
		4.10.3	ThinPrint	
	4.11		OOM	
		4.11.1	COM port settings	
	4.12	2 Diagnosis 4.12.1	Chart win a toot	
		4.12.1 4.12.2	Start ping test	
5	Def	ining appli	cations	41
	5.1	Configurin	g a local application or session client	41
	5.2	Standard of	options	41
	5.3	ICA-Termi	nal Session and Windows Application	43
	0.0	5.3.1	Configuring a remote desktop session via ICA	
		5.3.2	Configuring a Microsoft Windows Application	
		5.3.3 5.3.4	Advanced Citrix ICA Settings	
	- A		7,	
	5.4	5.4.1	ote Desktop and RDP Windows Application Configuring a remote desktop session via RDP	49 50
		5.4.2	Configuring a connection to a Microsoft Windows application via RDP	50
		5.4.3	Advanced RDP settings	
		5.4.4 5.4.5	Command RDESKTOPInvisible RDP application	
			• •	
	5.5	5.5.1	Configuring the Browser	
	- 0			
	5.6	Emulation 5.6.1	Configuring an X11 session	55 55
	<i>5</i> 7			
	5.7	5.7.1	Entering a command	
		5.7.2	File Manager	
	5.8	PN-Agent		59
		5.8.1	Configuring Program Neighborhood Agent settings on the Thin Client	
		5.8.2	Advanced PN-Agent settings	61
	5.9		sktop	
		5.9.1 5.9.2	Configuring Virtual Desktop at the Thin Client	
		0.0.2	Travarious Collings for the Virtual Booklop	00
6	App	olications		64
	6.1	Starting ar	Application	64
	6.2	Quitting ar	Application	64
	6.3	Starting or	quitting more than one Application	64
_		•		
7			<i>!</i>	
	7.1	Console sy	witch	65

	7.2 Time Server	
	7.2.1 Windows-Time Server	65
	7.2.2 Unix-Time Server	65
	7.3 Dynamic Host Configuration Protocol (DHCP)	
	7.3.1 Adding a hostname by using DHCP	66
8	Troubleshooting	67
	8.1 Troubleshooting for printing	67
	8.2 Factory Reset	67
	8.3 Client Password	68
	8.4 LocalLogin	68
	8.5 Connecting Keyboards and Mouses to USB 3.0 Ports	68
	8.6 Safe Boot	68
9	List of Figures	69

1 Before you begin

This manual is for system administrators responsible for installing, configuring, deploying and maintaining Thin Clients and PCs with the operating system **eLux** *RP*. Below mentioned as "eLux".

This manual assumes knowledge of:

- Installation, operation and maintenance of network and asynchronous communication hardware
- The operating system (OS) on the servers

eLux *RP* is an embedded operating system based on Linux. However, no significant knowledge of Linux is needed for either the administrator or the end user.

For obtaining a short overview of eLux please log in at our technical portal myelux.com and click on "News" to read the latest information of eLux, additionally you can read News from our annual archive.

1.1 About this guide

This guide describes the basic structure of eLux and provides the steps to installation and configuration of an eLux client

Further information can be found:

- 1. In other guides for eLux
- In the <u>Scout Enterprise Administrator's Guide</u> for managing the eLux clients centrally, including the instructions to the <u>eLux Image Administration Service</u> (ELIAS).

1.2 eLux in the World Wide Web

Unicon offers detailed technical support on www.myelux.com.

In the download areas > eLux Software Packages you find:

- all available software packages
- the latest updates and hotfixes
- the supported eLux RP clients (please note respective minimum system requirements in the case of a migration process, when scrolling slowly over the "M")

2 Installation

eLux can be installed on the Compact Flash of a Thin Client or on a hard disk.

The installation (recovery) can be performed in different ways:

- from USB-Stick ("eLux RP Live Stick" Image on www.myelux.com)
- via PXE-Boot

These recovery procedures are described in detail in our <u>Recovery Paper</u> on (<u>www.myelux.com</u>) and in our <u>Scout Enterprise Administrator's Guide</u>.

2.1 First Boot Procedure

This is the boot procedure for a Thin Client *with default settings* (upon delivery, after a factory reset, or after a Recovery Installation):

- 1. Scan BIOS
- 2. Make a DHCP server request
- 3. Boot eLux®
- 4. The device is automatically entered in *Scout Enterprise* and configured. Requirement: The hostname "ScoutSrv" has been set to the *Scout Enterprise* Server IP address on the DNS server.
 - If the hostname "ScoutSrv" cannot be resolved, this step is skipped.
- 5. First Contact: A Wizard appears, helping the user through the initial configuration.

2.2 First Configuration

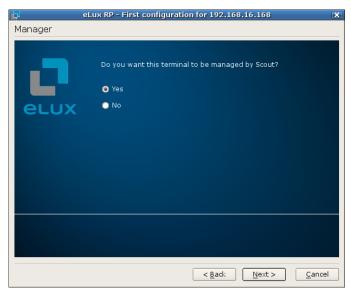
By default, the first time the Thin Client successfully boots, a Wizard appears to help you through the configuration process.

You have the choice between entering the device in the management software Scout Enterprise or configuring it manually.

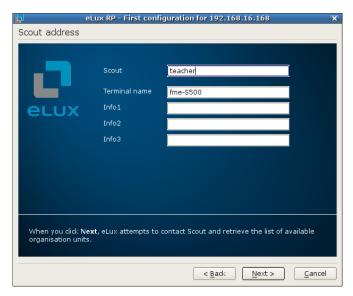
If a DHCP server was contacted, the IP address is displayed at the top. Otherwise, a default value is displayed.



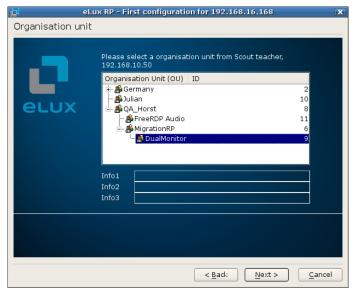
1. Choose the language of your keyboard. Confirm with Next.



- 2. If the device is to be managed and the IP address of the Scout Enterprise server is known, select **Yes**.
 - **Or:** If the Thin Client will not be managed, you can still configure the device manually. Select **No.**
- 3. Confirm with Next.

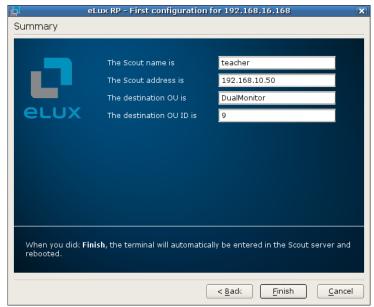


- 4. Enter the IP addresses or name of the Scout Managers. Entering information in the information fields is optional.
- 5. Confirm with Next.



- 6. Select the destination group of the device on the Scout Enterprise server. Default I Lost&Found.
- 7. Confirm with **Next**.

You get a summary of all entered information.



8. Confirm with Finish.

When you click **Next**, the device is registered in the Scout Enterprise Server, entered in the destination organization unit, and restarted. Upon boot, it contacts Scout Enterprise and downloads its configuration and application definitions. In addition, you can configure Scout Enterprise to automatically update the software.

If a profile for this device already exists in Scout Enterprise, the device will not change Groups. Rather, its status in Scout Enterprise will be updated and it will receive the configuration of the existing profile.

For more information on the management software Scout Enterprise, see the *Scout Enterprise Administrator's Guide*.

2.3 First steps

For a "quick" start you only have to define a new application and connect to it.

3 eLux RP desktop user interface

The eLux user interface consists of the following components:

- 1.) Multifunction bar
- 2.) Modern User Interface with eLux App Selector
- 3.) Task list
- 4.) Start button
- 5.) Systray

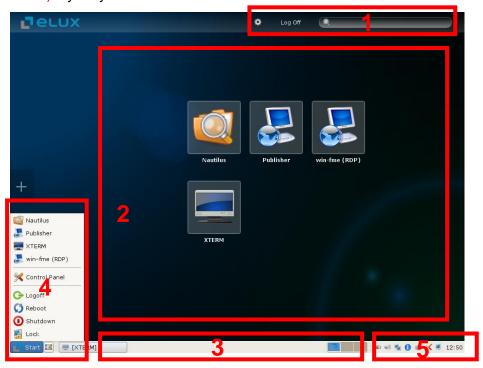


Illustration 1: eLux Desktop > Overview

3.1 Multifunction bar

The upper multifunction bar offers the following functionalities:

Function	Explanation
Wheel	Opens the control panel
Sign out	Signs the user out
Search	Search for applications

3.2 eLux Modern User Interface and eLux App Selector

The eLux Modern User Interface is the desktop for the user, where he can start apps immediately. App Selector allows you to add applications to the eLux Modern User Interface.

3.2.1 Adding applications to the eLux Modern User Interface

1. Click at the symbol + (centrically) at the left side of the monitor.



- 2. Choose either **local applications** or **all applications**. The applications are shown as a list.
- 3. Click at the particular application you like to add to the desktop.

 The marked application gets a green check mark and will be shown at the desktop.

3.2.2 Masking out an application from the eLux Modern User Interface

- 1. Place the mouse cursor exactly on the left upper edge of the desktop icon which you like to mask out. Now an "X" appears within the left upper edge of the selected icon.
- 2. Click the "X" to mask out the icon from your desktop. However, the particular defined application remains in the eLux control panel.



3.3 Task bar – Start Menu and Systray

The task bar contains the start menu, displays open applications and the systray icons allow to view and/or modify settings very quickly. The icons are:

- USB Device Info
- Info Control
- Mouse/Keyboard
- Screen Control
- Network Connections
- Volume Control
- Control Panel
- Time

Requirements: Enable the check boxes in the area "systray" in the Setup tab Desktop > Advanced. The start menu, the systray icons as well as the control panel can be closed by the ESC key.

3.3.1 USB Device Information

When inserting an USB device the USB icon appears in the systray of the taskbar.

Right click this item to display the USB device info:



Illustration 2: Systray > USB Device Info

To enable an USB memory sticks for RDP or ICA applications, set the mount points corresponding to this device info (see the section "Advanced RDP settings" and "Citrix Receiver").

3.3.2 Info Control

The Info Control displays the device information.

Data can be entered – or modified – in the fields Info1, Info2, Info3.

This information can be sent to Scout provided that the option "client info" in the "desktop tools" software package (see Scout Enterprise Administrator's Guide, chapter ELIAS) is enabled.



The Info Control can also be opened by the shortcut <Windows key> + Alt + i.

3.3.3 Mouse/Keyboard settings

The Mouse/Keyboard icon in the Systray shows the settings as defined in the Setup. Modifications conducted in this tab creating an immediate effect. Thus, no additional confirmation is needed.



Illustration 3: Systray > Mouse/Keyboard

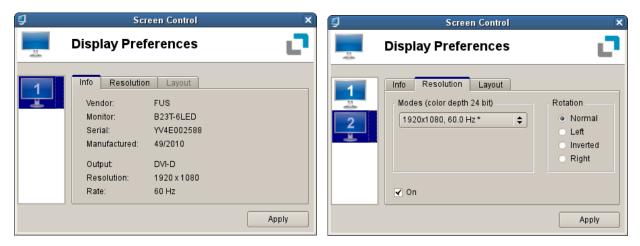
3.3.4 Screen Control settings

The number of monitors is detected automatically as long as they are switched on and connected.

The tab **Info** displays relevant monitor information.

The tab **Resolution** allows changing the resolution and the rotation of the picture. Connected monitors can be deactivated by confirming **On**. Changes are applied immediately after clicking Apply.

The tab **Layout** allows changing the screen position in multi monitor configurations. You can also set the primary monitor here.



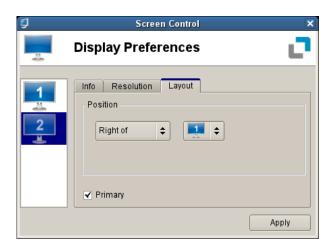


Illustration 4: Systray > Screen Control

3.4 Control Panel

After bootup, the eLux control panel appears by default. The main window is referred to as the eLux control panel If not in English, screen elements can only be displayed in German. For all other desktop languages, the screen elements appear in the default language, English (US). However, the desktop language setting is required for local applications to run correctly.

The control panel contains three tabs: **Applications**, **Configuration** and **Setup**.

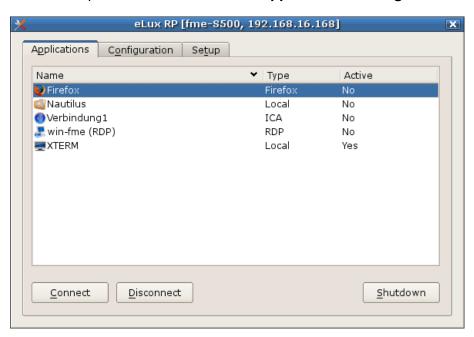


Illustration 5: Control Panel

4 Setup

Setup contains the following tabs. Click the symbol ▶ to display more tabs:

- General
- Network
- Desktop
- Screen
- Mouse/Keyboard
- Firmware
- Security
- Multimedia
- Drives (if drive support has been installed)
- Printer (if printer support has been installed)
- Hardware
- VPN (if VPN Client installed)
- Diagnostics

Setup provides all parameters.

All modifications have to be confirmed or not confirmed by the button **Apply** or **Reset**.

- Click **Reset** to cancel the modifications just entered.
- Click **Apply** for modifications to take effect.

Some modifications will request a restart of the desktop or of the client. In this case a message will appear after having saved the modifications by clicking **Apply: "The changes require a new start of the user interface? Continue?"**

Confirm with Yes or No.

The following chapters provide a detailed description of the parameter settings in the SETUP tabs in the order displayed.

4.1 General

The tab General gives information about MAC address, host ID of the terminal, eLux licence, eLux version and hardware information like clock rate of the CPU, RAM size, serial number and BIOS version.

In the list below you can find the installed software packages (including version number) and the name of the installed image.

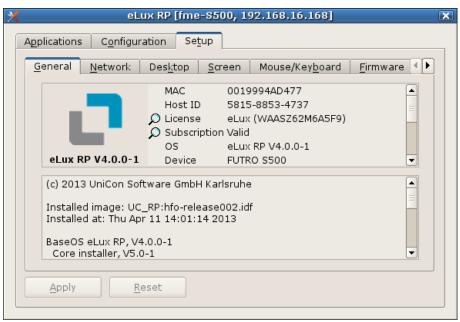


Illustration 6: Setup > General

4.1.1 Checking license information

1. Double click on Subscription for checking validity

A window opens and shows the current status of the licence.

4.1.2 Entering a new license

1. Double click on license

The following window will open:



- 2. Enter a new product key into the field..
- 3. Confirm with OK.

4.2 Network

Depending on the hardware configuration the tab Network can take the following sub-tabs:

- LAN
- Wireless LAN
- G3/UMTS

Das Systray-Icon offers additional information about the network connection.

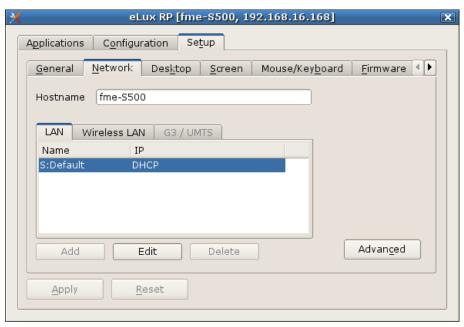


Illustration 7: Setup > Network

4.2.1 Connecting to LAN or WLAN

- 1. Choose in the register, which kind of connecting you want to establish.
- 2. Click Add.

The following window shows:



3. In the register IP enter all data concerning the IP address, e.g. whether IP adress shall be dynamic or static.

- 4. In the register Medium enter the speed the Thin Client you want to grant. If you want to establish a WLAN connection, you have to enter the channel, method of encryption.
- 5. In the tab **advanced** you can choose safety options like DHCP or IEEE 802. Additional information to DHCP can be found at page 66. Additional information to IEEE 802 you find in the user's guide for Scout Enterprise.
- 6. Click **Ok** to save the connection.

4.3 Desktop

In this tab you can customize the look of eLux and change date or time zone

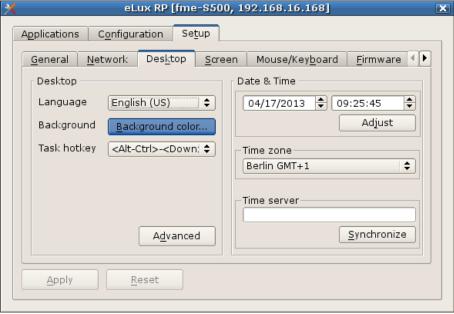


Illustration 8: Setup > Desktop

4.3.1 Configuring desktop

1. Choose in the dropdown menu the preferred application to start applications.

Note: The applications must be compatible with the selected language to work properly.

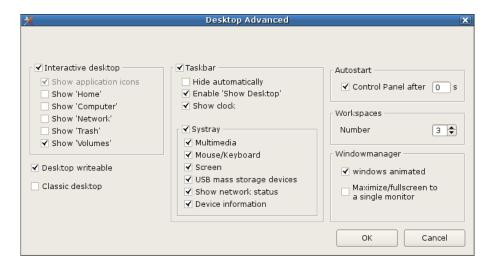
2. Click on the button Background-Color to select the background-color.

A window will open where you can make changes.

3. Choose a Hotkey to change between tasks in one desktop.

4.3.2 Advanced Desktop Settings

Click on Advanced
 The following window shows:



2. The following settings can be changed:

Setting	Explanation
Theme	Changes Theme
Interactive Desktop	Selects desktop icons at the desktop.
Desktop writeable	Selects whether or not users are allowed to add Icons to the desktop.
Taskbar	Selects which information is shown at the Taskbar
Systray	Selects which information is shown at the Systray
Autostart	Selects whether or not control panel starts when system boots.
Workspaces	Sets number of workspaces.
Windowmanager	If animated windows is ticked the window content will be shown when moving the window.
	By activating the option maximize/full screen to a single monitor in case of dual monitor operation it is possible to configure applications to show full screen on one explicitly defined monitor only.

3. Confirm the settings and click **OK**.

4.3.3 Setting date and time manual

- 1. Set time and date using the fields
- 2. Confirm with Adjust.

4.3.4 Setting time zone

1. Choose your time zone using the dropdown list.

4.3.5 Synchronizing date and time using a time server

- 1. Type the address of the desired time server in the field.
- 2. Confirm with Syncronize.

eLux will connect to the server and synchronize date and time.

For additional information regarding time servers see p. 65.

4.4 Screen

In this tab settings for the screen, power save and the screen saver can be modified.

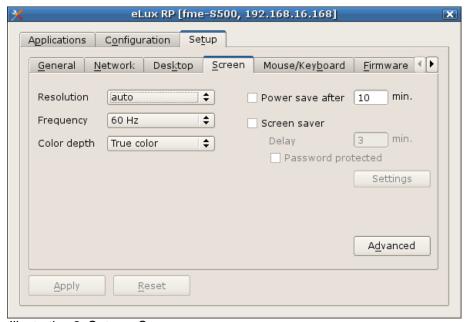


Illustration 9: Setup > Screen

4.4.1 Changing basic settings of the screen

- 1. Set color depth using the dropdown list.
 - Note: Change resolution by using the systray icon because it shows all available screen resolutions.
- 2. Tick the Checkbox if power save mode shall be activated.
- 3. Type in the field the desired time for switching into the power save mode.

4.4.2 Configuring the screen saver

- 1. Set the time when the screen saver shall start using the field.
- 2. Use the checkbox to add a keyword for unlocking the screen.
- 3. Click at settings to choose and configure a screen saver.
 - An additional window will open. The settings vary depending on the screen saver you choose.
- 4. Confirm with OK.

4.4.3 Configuring a font server

A font server is used to manage fonts.

1. Click **Advanced**.

The following window will open:



2. Click at New, Edit or Delete to add, edit or delete a font server.

The following window will open:



3. Click at **Font server:Port** and enter IP adress (or name) of the font server and the number of the port, separated by a colon.

Example: :<number of port>

office:7100

Or: Click at Font path and type in the path where the fonts are.

Example: /smb/g/fonts

- 4. Confirm with OK.
- 5. Tick the checkbox for prepending **user font path** to search for fonts in the network The font server is connected and fonts will be loaded from the server.

4.5 Mouse/Keyboard

In this tab you can change settings for mouse and keyboard

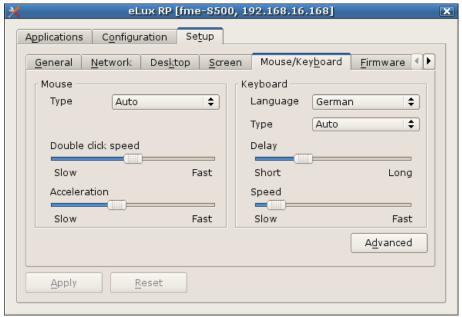


Illustration 10: Setup > Mouse/Keyboard

4.5.1 Configuring the mouse

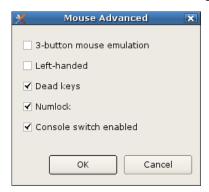
- 1. Set the type of the mouse using the dropdown menu.
- 2. Set double click speed and acceleration using the controller.

4.5.2 Configuring the keyboard

- 1. Set the language using the dropdown menu.
- 2. The type of the keyboard will be recognized automatically. No further setting is needed.
- Choose delay and speed using the controller.Delay controls how long a key needs to be pressed to retype a letter, speed controls how fast the letter will be retyped.

4.5.3 Advanced mouse settings

1. Click **Advanced**. The following window will open:



The settings:

Function	Explanation
3-button mouse emulation	In general, eLux is used with a three button mouse. However, it is possible to achieve the same functionality with a two button mouse. In this case, the third button is simulated by clicking the left and right mouse buttons at the same time. Select to activate this feature.
Left-handed	Select to switch the mouse buttons.
Dead keys	"Dead keys" make it possible to enter accented combination characters. A dead key combination means that you press two keys one after the other (press the first key and release it, then press the second key and release it) in order to form a single character. In general, you press a key for the accent you want (nothing happens), then a key for the letter to apply the accent to (the accented combination character appears). For example, pressing "`" on the U.S. international keyboard produces nothing, but subsequently typing "e" produces "è". Other keyboard layouts may produce accented characters in other ways (on the French keyboard there is a key that produces "è" directly). By default, dead keys are active. If you use an application that is incompatible with dead keys, click to deselect. Note: Some hardware platforms do not offer this option. In this case, it is not possible to deactivate dead keys.
Numlock	Select to activate the NUM key when the Thin Client boots. This allows to enter numbers using the NUM-block
Console switch enabled	This allows switching between consoles, "virtual screens" on the Thin Client using hotkeys (Ctrl + Alt + F-Keys). If disabled, console 1, the eLux desktop, is on top. Additional information to the consoles can be found at page 65.

2. Click \mathbf{OK} to close the window and Confirm changes.

All changes will be active after restarting the system.

4.6 Firmware

In this tab you can change settings concerning the firmware and update the system.

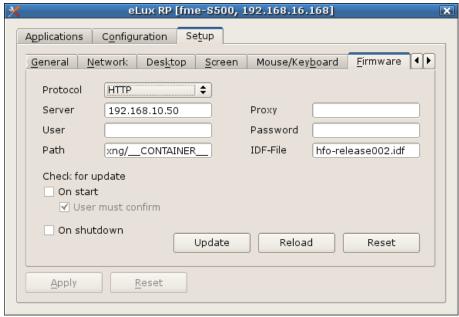


Illustration 11: Setup > Firmware

4.6.1 Updating the system

1. Type in the fields the protocol, server name, paths, and the IDF.

In the register **Firmware** a new IDF can be added.

The eLux packages have to be in the same directory as the IDF.

Additional information to IDF you find in the user's guide for Scout Enterprise.

- 2. Tick **Update** to update the system.
- 3. If an update is available, confirm the update installation with **Yes**. The Thin Client will be updated and restarted.

4.6.2 Checking for updates and updating automatically

 Tick the checkboxes for managing that Thin Client shall check for latest updates. Choose from two options to update the Thin Client: on start or on shutdown to activate the desired update process via ticking the respective checkbox.

4.6.3 Resetting client / Factory reset

- 1. Choose **Reset** to execute a factory reset. You will be prompted for a confirmation.
- 2. Choose Yes.
- 3. Thin Client will be set to factory settings.

4.7 Security

This tab allows defining of Local security, User authorization, Scout settings and Mirror server settings.

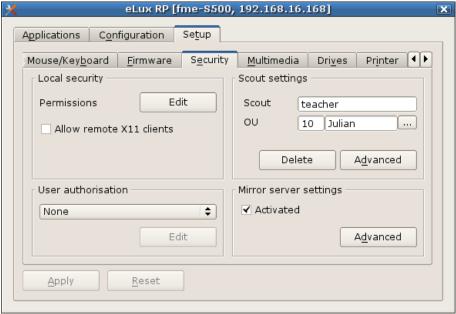


Illustration 12: Setup > Security

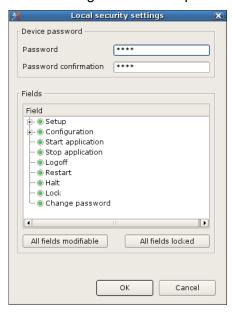
4.7.1 Local Security

4.7.1.1 Allowing connections to X11 clients

When activated, X11 applications that are hosted at remote servers can be shown in eLux.

- 1. Select Allow remote X11 Clients.
- 4.7.1.2 Changing Permissions
 - 1. Click Edit.

The following window will open:



- 2. Type your password in the fields on top.
- 3. Activate or deactivate he fields by clicking on them or via cursor keys and space.

4.7.2 User Authorization

The possibilities for authorization are as follows:

• none: disables user authorization

LDAP: for a Lightweight Directory Access Protocol Server
 ADS: for an Active Directory® Server (Windows® 2000)

if this method is chosen, you can define whether the client data are

stored on a server.

• SmartCard (Smarty): Way of authorization, but not supported any more.

Click **Edit** to change the method of user authorization.

4.7.2.1 Lightweight Directory Access Protocol

- LDAP is a TCP/IP based protocol that defines a standard method for accessing directory services.
- For authorization using an LDAP server, enter the following parameters:
- Server: Enter the IP address/name of the LDAP server. Multiple servers can be
 entered, separated with a blank. If the server is in a different subnet than the Thin
 Client, use the fully qualified domain name.
 Server:

Search Base: The search base indicates where in the hierarchy to begin the search. The branch point to use as a starting point when searching for a user, for example, o=<company>,l=<your city>,c=<your country>. See your LDAP server administrator for this parameter.

Version: the LDAP version to use.

• Note: The LDAP password can be changed via Shutdown > Change password.

4.7.2.2 Active Directory Server

For authorization using Active Directory, enter the following parameters:

Server: Enter the IP address/name of the domain controller. Multiple servers can be entered, separated with a blank. If the server is in a different subnet than the Thin Client, use the fully qualified domain name (FQDN).

Search Base: The search base indicates where in the domain tree (directory tree) to begin the search. The branch point to use as a starting point when searching for a user, for example, ou=users,dc=mydomain,dc=com".

Click **Find values**. The Thin Client will search for the server and automatically fill in the Search base field. When starting the client a user name and password will be requested.

Required Software

User authorization: "User authorization modules" (file name: "userauth") EPM.

To test user variables: "LDAP search module" (file name: "usersearchldap") FPM in "User authorization

modules" EPM. By default, it is not activated.

For a description of EPMs and FPMs, see the *ELIAS Administrator's Guide*.

4.7.3 Mirroring

Mirroring is the term used to describe the process of monitoring a user's session remotely and, optionally, participating in the session using your own keyboard and mouse. The option Mirroring offers a variety of uses, including troubleshooting, training and presentations.

Mirroring of a thin client requires a VNC Viewer on server-side to start the mirroring session, and a VNC server on the target client, in this case the eLux software package "mirror". If this software package has not been installed, the mirror settings are disabled.

Scout Enterprise includes a VNC viewer, therefore a client can be mirrored by right mouse click if the mirroring function has been activated on the eLux client.

⇒ Enabling/disabling mirroringFrom the Setup tab, click the Security sub tab.

- Select the Activated check box to allow mirroring and click **Advanced**.
- 3. :Options
 - Read only access: Gives other machines view rights only.
 - Confirmation necessary: The user must confirm a mirroring session before it can start.
 - Encrypt mirror session
 - Allow from Scout only
 - Transfer mirror information
 - Password: (optional) Set the password that must be entered to start a mirroring session.
- 4. Click **OK** to confirm.

During the mirroring session, the keyboard mapping of the local system has precedence.

Security concerns

During a mirroring session, a message box appears on the remote machine, making it impossible to "secretly" mirror a user. The user can end a mirroring session at any time. In addition, you can set a mirroring password and protocol the mirroring using "Transfer mirror information". Nonetheless, if security is a concern, you can deactivate mirroring entirely by deselecting the **Activated** check box in the **Security** sub tab > "Mirror server settings".

4.7.4 User Variables

Software Requirements

To test user variables: "LDAP search module" (file name: "usersearchldap") FPM in "User authorization modules" EPM. By default, it is not activated.

User variables are variables whose values are read from the authorization server when the Thin Client makes its authorization call. The variables can be used in certain fields in the eLux control panel.

Preset variables are \$ELUXUSER, \$ELUXDOMAIN and \$ELUXPASSWORD. They are automatically set when the Thin Client starts. When using LDAP or Active Directory Server as the authorization server, it is also possible to define your own user variables.



⇒ To set user variables

- 1. In the **Authorisation settings** dialog box for ADS or LDAP click on **Add**. The **User variable** dialog box appears.
 - **Local variable**: Enter a name for the variable. The name must begin with the prefix "ELUX" without the initial "\$".

End with the "#" character to transfer more than one value, for example, ELUXMAIL#=mailLocalAddress. If more than one mail account address resides on the server, they will be transferred using the nomenclature ELUXMAIL_1, ELUXMAIL_2, etc. In this case, the variable ELUXMAIL_0 contains the number of mail addresses that were read.

- **LDAP variable**: Enter the name of the attribute that the LDAP or Active Directory should assign the variable. As an example, the LDAP/Active Directory schema can contain the attribute "displayName". If you assign this attribute to the variable ELUXFULLNAME, it will be assigned the value of this attribute during the next user authorization call.
- 2. **Test**: The Thin Client attempts to retrieve the value for the attribute you entered from the authorization server.
- 3. Click **OK** in the **User variable** dialog box and **Apply** in the **Security** tab.

User variables can be entered in the eLux Security tab just like normal parameters. Enter each variable with the "\$" character as prefix. For example, in an ICA application definition enter \$ELUXUSER as the username. This variable will be replaced with the given username when the application is called.

4.7.4.1 Application Possibilities for User Variables

When user authorization is active, user variables can be used in the following fields in the eLux control panel.

Applications

Applications Tab

Field	Function	User Variable
Shut down > Lock	Manual activation of the screen saver lock	Preset with the value of \$ELUXPASSWORD

Setup Tab

Setup

Sub tab	Field	User Variable
Drives	Username	\$ELUXUSER,
	Password	\$ELUXPASSWORD,
	Directory, Server, Share	Every \$ELUX variable
	Browser home directory	Every \$ELUX variable
Screen	Screen saver password	\$ELUXPASSWORD

Configuration Tab

Configuration

Sub tab	Field	User Variable
ICA/RDP	Server	Every \$ELUX variable
	User	\$ELUXUSER
	Password	\$ELUXPASSWORD
	Domain	\$ELUXDOMAIN
Browser	Proxy, Proxy port	Every \$ELUX variable
Tarantella	Server	Every \$ELUX variable

Local > Customized Commands

Application possibility: Programs that can be executed using the command line.

Example: rdesktop -u \$ELUXUSER -p

\$ELUXPASSWORD < machine>

Parameter Every \$ELUX variable

4.8 Multimedia

In this tab you can modify the sound settings

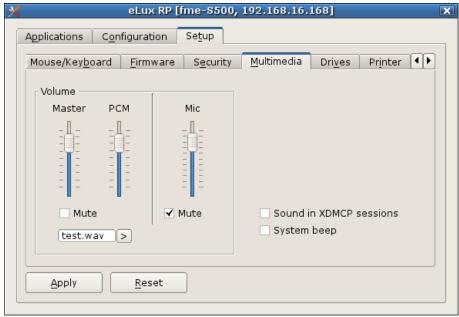


Illustration 13: Setup > Multimedia

- To adjust the volume from the Multimedia tab move the sliders for Master, PCM and Mic up or down.
- To disable the local microphone click the option **Mute**.
- If System beep is enabled the system beeps as a feedback to the user in case of pushing the power-off key at the Thin Client.

4.9 Drives

In this tab you manage connections to network drives and set a network drive for the home directory of the browser to keep bookmarks and other browser files.

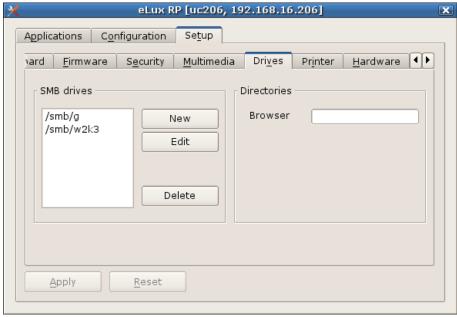


Illustration 14: Setup > Drives

4.9.1 Connecting a network drive

- 1. Click New.
- 2. Type the following information into the fields::

Information	Explanation
Directory	Name of the directory.
	eLux .automatically adds '/smb/. The data is local under the
	directory '/smb/ <name directory="" of=""> available.</name>
Server	Name of the server
Share	Enter the name of the Windows drive share.
User name and	User name and password that are used to sign in to the
password	server.



3. Click **Ok** and **Apply** in the tab.

4.9.2 Setting the browser home directory

In the browser home directory can be set. This option allows Firefox to store settings at a network drive and as well the opportunity to have exactly these settings available after a restart.

Note: If there is no browser home directory set, the settings will be lost after rebooting.

4.10 Printer

In this tab you can modify the printer settings.

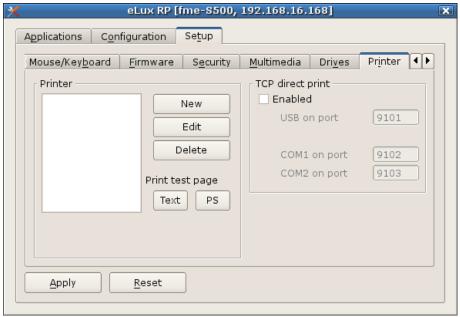


Illustration 15: Setup > Printer

4.10.1 Adding a new printer

- 1. Click New.
- 2. Type a name for the printer.
- 3. Choose the connection type between printer and Thin Client.
- 4. Choose whether or not a filter shall be used.
- 5. If you want to print using a Linux Shell, choose **text**, if not, choose **none**.
- 6. If you want to connect to a network printer, type the address of the printer and the printer queue.
- 7. Click **Ok** and **Apply** in the tab.

4.10.2 TCP direct print

In TCP direct print, data are sent directly to the printer. There is no spooling of print jobs on the Thin Client and the data are not modified before printing. The flow is controlled by TCP/IP.

Enable the option TCP Direct Print in the Printer tab.

At the print server the IP address of the Thin Client, printer name and port number must be entered.

The Thin Client can resolve the host name of the machine initiating the print job. If you don't have a domain name service (DNS), enter the host name and the IP address in the local file "hosts" (**Set up > Net w or k >Advanced**).

4.10.3 ThinPrint

ThinPrint[®] software from ThinPrint GmbH in Germany allows optimized printing in network across various platforms. Components include the ThinPrint server and ThinPrint client. The server component processes print data for the target printer and sends it in compressed form to the client. The client receives print jobs from the server, decompresses them and sends them to the selected printer. ThinPrint Server and Client are connected via TCP/IP. ThinPrint is a print protocol. Unlike TCP direct, LPR or CUPS, with ThinPrint the bandwidth can be specified, meaning it is a viable option for networks with small bandwidth.

To use this software, on the Thin Client you must install the ThinPrint client software, attach a local printer and define the printer in the eLux **Setup > Printer > New**. You need only enable the check box "thinprint", and optionally enter a class name with max 7 characters.

In addition, the ThinPrint-Server must be configured. However, this is not subject of this manual, please consult the ThinPrint Documentation on www.thinprint.com for detailed information.

4.11 Hardware

In this tab you can enable or disable USB mass storage devices, configure Smartcard readers and COM ports. You can see connected USB mass storage devices using the systray icon and remove them safely.

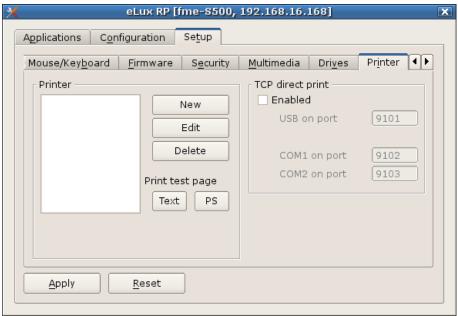


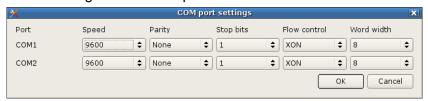
Illustration 16: Setup > Hardware

The checkbox **USB mass storage devices** defines whether or not USB mass storage devices can be connected. The checkbox defines whether or not there is a pop up window when a USB mass storage device is connected.

Via the dropdown list you can activate or deactivate a card reader.

4.11.1 COM port settings

1. Click the button **COM port settings** to open the window and change settings. The following window will open:



- Do the changes.
- 3. Click **OK** to confirm.

4.12 Diagnosis

This tab is for diagnostics. Choose out of the following tools for diagnosis:

- Enhanced logging: on/off
- Additional diagnostics (Creating of screenshots and diagnostics files)
- Send files to FTP Server, Scout or save them on disk.
- Ping Test

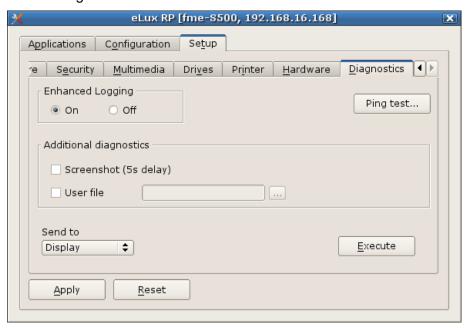


Illustration 17: Setup > Diagnosis

4.12.1 Start ping test

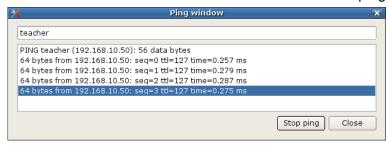
Click Ping test.

The following window shows:



- 2. Type the name of the server you want to connect with into the upper field.
- 3. Click Start ping.

A connection to the server will be established and the ping is displayed in the window.

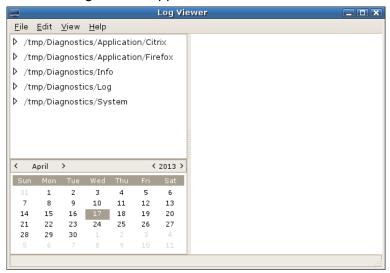


4. Click **Stop Ping** to finish the ping test.

4.12.2 Starting diagnosis

1. Click Execute.

The following window appears:



2. Choose in the window the file you want to display.

5 Defining applications

eLux offers two types of applications:

- remote
- local

The main employment area of a Thin Client is a terminal in server based computing."Remote" means the applications runs on a server, such as a Windows application or on a terminal server. Even when an application runs remotely, client-side software is still required to initiate and maintain a session.

By nature, the Thin Client has limited resources, meaning the majority of applications will be server based. However, in addition to server applications eLux also offers a variety of local applications. "Local" means the application runs locally on the Thin Client. Local applications include browser software (e.g. Firefox, local shell (XTerm)), and desktop tools (resource information, Explorer, Picture Viewer, CD player). This software is provided free of charge and can be downloaded from http://www.myelux.com or copied from the eLux® CD-ROM.

This chapter describes how to configure both local applications and session clients. In addition, further configuration may be required in the application itself. For further information on configuring session clients (such as SAPGUI or Citrix ICA), please consult the manufacturer's product documentation.

5.1 Configuring a local application or session client

- 1. From the **Configuration** tab, click **New**. This opens the **Application definition** dialog box which contains a number of sub tabs.
- 2. Click the tab for the application you want in the **Application definition** dialog box.

Note: If the application you want does not appear as a tab, the required firmware is not installed on the Thin Client. Contact your network administrator.

- 3. Configure the application (see details in the following sections)
- 4. Click **Finish** in the **Application definition** dialog box.

5.2 Standard options

These standard options are valid for all application definitions and will not be given again within the description of the configuration.

Application restart: The session will be reconnected after a user has logged off (so-called "terminal mode"). In addition, the session will be started when the terminal starts.

Start automatically: The session will be started when the terminal starts.

Desktop icon: Creates a desktop shortcut for this application on the eLux desktop Note: Not available for Program Neighborhood Agent.

Additional options are application specific.

As long as the dialog box Application Definition is open, you cannot start any applications or activate the Setup tabs.

Use the task hotkey CTRL + ALT + <cursor> to jump between open eLux dialog boxes:

- CTRL + ALT + □: Switch left between the open applications
- CTRL + ALT + □: Switch right between the open applications.

To start an application, from the **Applications** tab either double-click the application you want, or click to select the application and click **Connect.**

When the user shuts down the device, remote applications continue to run on the server. For this reason, it is important that the administrator either set a server-side time-out for logging off inactive accounts or instruct users to quit from within the session rather than click the eLux **Disconnect** button.

You can modify an existing application configuration by clicking **Edit**. Click **Delete** to remove an application configuration.

5.3 ICA-Terminal Session and Windows Application

Independent Computing Architecture ICA® is used connecting a Windows terminal server running with Citrix® XenApp software. You can access all Windows applications residing on the terminal server.

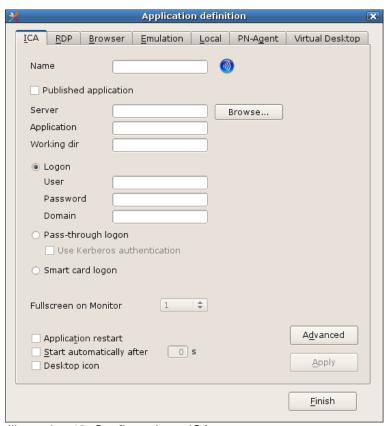


Illustration 18: Configuration > ICA

You have the following two configuration possibilities when connecting to a specific XenApp Server: remote desktop or Windows application. In addition, this chapter discusses the Citrix ICA Client for Linux, which allows you to set advanced ICA client settings.

Configuring a session to connect to a **Published application** is discussed in chapter "Accessing Citrix Published Applications".

5.3.1 Configuring a remote desktop session via ICA

In the Application Definition dialog box click the ICA tab.

Name: Enter an appropriate name for this application, such as "XenServer".

Published application: Leave deselected

Server: Enter the IP address (or name) of the server.

Application: Leave deselected **Working dir:** Leave deselected

User, Password, Domain: Optional, enter to automatically log on to the

terminal server

 Passthrough-logon: Using this option sends the following to the client \$ELUXUSER \$ELUXPASSWORD und \$ELUXDOMAIN

Kerberos-Authentification: The Client uses the login data of the Kerberosticket received at the ADS-authentifacation.

5.3.2 Configuring a Microsoft Windows Application

In the Application Definition dialog box click the ICA tab.

The parameters are the same as above with the following exceptions:

Name: Enter an appropriate name for this application, such as "MS Excel" for Microsoft Excel.

Anwendung: Name of the Windows application (for example, notepad.exe), including path, for example::

c:\Program Files\Microsoft Office\Office\EXCEL.EXE

Working dir:: (optional) Enter the working directory of the Windows application.

5.3.3 Advanced Citrix ICA Settings

Using Citrix ICA, you can access server-specific applications or published applications. Other features include:

- Client drive mapping
- Client printer mapping
- COM port mapping
- Low bandwith requirements
- Citrix ICA-Client-hotkeys
- Seamless-Windows support
- Program Neighborhood Agent
- 128-Bit-SSL-support



Illustration 19: Configuration > ICA > Advancedt

Note that some of these features are server-specific.

Configuration of advanced ICA settings is done by clicking the **Advanced** button in an ICA application definition. This opens the Citrix Receiver, which is software from Citrix and has a different look than the eLux control panel.

If you do not see a list of ICA connections, you may not be in Connection view. In the **View** menu, click **Connection View**. ICA sessions defined in eLux are automatically entered in the Citrix ICA Client. You do not have to redefine them here.

PN-Agent view is described in chapter PN-Agent.

Warning Do not define a new ICA session in the Citrix Receiver! Define new sessions in the eLux® **Configuration tab.** If you define new sessions in the Citrix Receiver, they will not be accessible via the eLux® **Applications** tab!

The configuration file for the Citrix Receiver is named "wfclient.ini" and resides on the Thin Client under: /setup/ica/wfclient.ini

This file can easily be viewed using the **Diagnostics** tab > **ICA files**.

Published applications, a feature commonly in use with Citrix server farms, are discussed in the following chapter.

For further information on configuring the Citrix ICA Client, such as drive mapping, COM port mapping and server location, please consult the Citrix documentation "Citrix Client Administrator's Guide" which you find on www.myelux.com > Manuals & Documentation.

5.3.4 Accessing Citrix Published Applications

A connection to a published application lets a user access a predefined application and its associated environment. Published applications can be run in seamless mode, where the applications appear to the Thin Client as if they were running locally, each application running in its own resizable window.

If a published application is defined as a seamless window, the eLux task bar must be enabled in the Desktop tab. Only then is it possible to maximize minimized windows again.

Published applications require server-side and client-side configuration. In this section, we will discuss client-side configuration.

5.3.4.1 Via ICA-Application Definition

You can configure a session to access a published application via the eLux control panel.

Note: The application name must correspond exactly to the name published on the server.

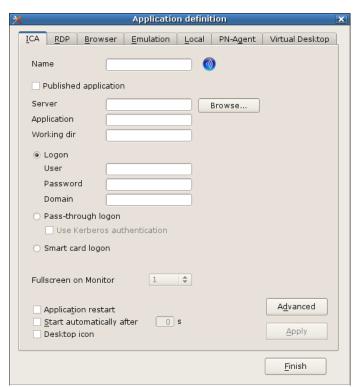


Illustration 20: Configuration > New > ICA

Name Enter an appropriate name for this application

Published application: Select

Browse: Browse for published applications or servers. The first listed address of the connection options is used as browser address.

Application: Name of the published application.

Pass-through: If enabled an ADS logon is required on the Thin Client

5.3.4.2 Via Citrix Receiver

Alternatively, you can search for available published applications in the Citrix Receiver. When you are done, the parameters will automatically be transferred to eLux.

- ⇒ To configure a published application in Citrix Receiver
- 1. In the Application Definition dialog box click the ICA tab.

Name: Enter an appropriate name for this application.

- 2. Click Advanced. The Citrix Receiver opens.
- 3. Select the session you want to configure.
- 4. Click Connections > Properties > Network.
- Select the check box **Published Application**. Type the name of the published application or select the name from the pop-up menu to the right of the **Server** field.

Note If no applications appear, check that the browser protocol is correct.

- 6. In the **Properties** dialog box, click **OK**.
- 7. Exit the **Citrix Receiver** to return to the eLux ICA application definition. The published application parameters are automatically entered in the eLux ICA application definition.
- 8. Click **Apply** and **OK**.

Additional information for **Citrix Receiver** can be found in the *Citrix Client*Administrator's Guide, at auf www.myelux.com > Manuals & Documentation > Third Party.

5.3.4.3 Via Web Interface

You can launch published applications from a local browser using the Web Interface. Required software: browser software and Citrix ICA Client version 7.x

⇒ To access a published application via local browser

1. Configure a local browser.

Name: Enter an appropriate name for this application.

Start page: Enter the URL used to access your Web Interface (ask your Citrix administrator). Common formats are:

http://<server name> or //<server name>/Citrix/Nfuse

Proxy type Choose one of the following:

No proxy: If you don't use a proxy server.

Auto (URL): If you use an automatic proxy configuration file.

Example: http://www.yourserver.com/autoproxy.pac

Browser type: Select the browser you want: Firefox (for the time being)

Kiosk mode: Leave unchecked.

- 2. Start the browser from the eLux **applications** tab. The Web Interface appears. Enter your credentials to log on.
- 3. After successful logon, a list of published applications is displayed. Click on an application to start it.

For an overview and detailed information on the **Citrix Receiver** see the Citrix documentation *Citrix Client Administrator's Guide* which you find on www.myelux.com > Manuals & Documentation > Misc.

5.3.4.4 Citrix Secure Gateway

By means of a certificate-based server authentication it can be secured that the server you are connecting to is the right one.

For details please consult the Citrix documentation *Citrix Client Administrator's Guide* which you find on www.myelux.com > Manuals & Documentation > Misc.

5.4 RDP Remote Desktop and RDP Windows Application

This connection corresponds to the ICA functionality using Microsoft Remote Desktop Protocol (RDP). It is used to connect to a Microsoft Terminal Server. The application type is a native RDP client with the free software "rdesktop." For further information see www.rdesktop.org.

There are two configuration possibilities: Windows desktop or individual application.

A remote desktop session allows you access to the desktop of a terminal server. You can run any applications available on the desktop, in any order.

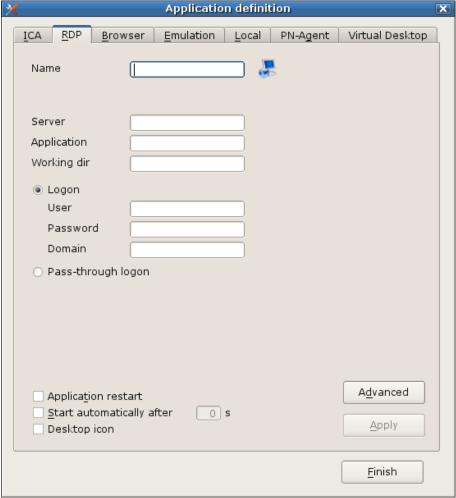


Illustration 21: Configuration > RDP

5.4.1 Configuring a remote desktop session via RDP

In the Application Definition dialog box click the RDP tab.

Name: Enter an appropriate name for this application, such as "RDP Desktop"

Server: Enter the IP address or name of the terminal server.

Application: Leave blank. **Working dir**: Leave blank.

User, Password, Domain: Enter to automatically log on to the terminal server.

Pass-through-Logon: when activated, the values

\$ELUXUSER \$ELUXPASSWORD

\$ELUXDOMAIN will be sent to the Client.

5.4.2 Configuring a connection to a Microsoft Windows application via RDP

In the Application Definition dialog box click the RDP tab.

The parameters are the same as in the last chapter with the following exceptions:

Name: Enter an appropriate name for this application, such as "MS Word" for Microsoft Word.

Application: Enter the name of the Windows application (for example, notepad.exe), including path, for example,

c:\Program Files\Microsoft Office\Office\Winword.exe

Note: System variables are allowed, for example: %SystemRoot%\system32\notepad.exe

Working dir: (optional) Enter the working directory of the Windows application. Do not end the parameter with a backslash. Note: System variables are allowed, for example: %HOMEDRIVE%%HOMEPATH%

5.4.3 Advanced RDP settings

Click on **Advanced** to display the **RDP advanced** dialog box. Here you can set the parameters for this session.

In the **Display** tab, you can set screen settings.



Illustration 22: Configuration > RDP Display

The **Local resources** tab offers additional settings for terminal servers that support RDP 5.2 or higher. **Note**: This tab is only visible if you have the native RDP client version 1.3.1 or higher installed ("rdesktop52"). In addition, these options will have no effect if you set the protocol to "RDP V4" in the **Advanced** tab. To be able to use these settings, you must be using a terminal server that supports RDP 5.2 or higher.

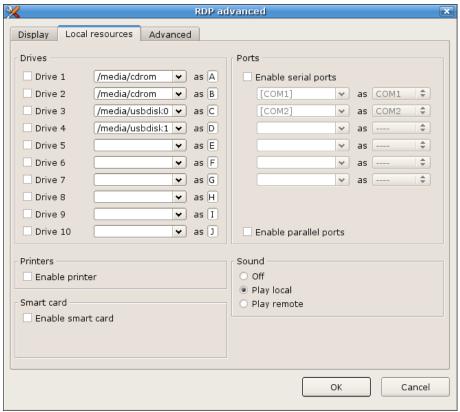


Illustration 23: Configuration > RDP > Local resources

- Drives Allows you to map local drives. To map a drive, click to select the drive. Enter the
 mount point, which is the path to access the drive locally. Enter a letter. This is the drive
 that will appear in the RDP session. You can map up to 10 local drives.
 To access the drive from the command shell, use \\tsclient\<drive letter>, for
 example, dir \\tsclient\b would allow you to access the CD-ROM.
- Printers Allows you to automatically create up to four printer definitions for this session.
 The printers must be defined in the eLux control panel > Printer tab and have a valid
 driver name as it appears on the server (capitalization is important). The first four profiles
 with drivers are used. To set a default printer, click to select the "default" check box in the
 eLux printer profile.
- **Sound** "Play local" means the sound will be played locally on the Thin Client. "Play remote" means the sound will be played remotely on the server.
- Ports Enabling the check box means the ports will be accessible from within the RDP session.
- Smart card
 Enabling the check box means that smart cards can be used for certificate-based logon.

In the **Advanced** tab you can set the following parameters:



Illustration 24: Configuration > RDP > Advanced

- Protocol Allows you to set the protocol to 4 or 5. By default, the RDP protocol type is automatically detected.
- Keyboard layout Allows you to set the keyboard layout within the RDP session. Default setting is Auto, which means the setting in the eLux control panel will be used.
 Warning: The keyboard language set in RDP advanced settings may not differ from the keyboard language set in the eLux control panel.
- Disable window manager decorations The border that appears on eLux windows will be blended out.
- **Disable encryption** Activate if your server does not accept encrypted sessions. Default is deactivated.
- Disable mouse motion events Information on mouse position will not be sent to the server continuously, but rather only upon mouse clicks. This improves performance for low-bandwidth connections. Default is deactivated.
- Bandwidth: You can select between default, Modem, Broadband, LAN

5.4.4 Command RDESKTOP

Advanced users have the possibility of calling the native RDP client from a local shell.

To see command line parameters, enter the command rdesktop -h in a shell. You can then define a session with any rdesktop parameter in the tab **Local** > **Local application** > **Customized**. See also section "Notes to Custom-defined Applications".

5.4.5 Invisible RDP application

An RDP application which is to be invisible for the users can e defined by entering RDP_TEMPLATE (capital letters) in the **Name** field.

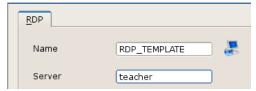


Illustration 25: Configuration > RDP > Definition of an invisible application

5.5 Browser

Mozilla Firefox is used as a browser. Additional information can be found at www.mozilla.org.

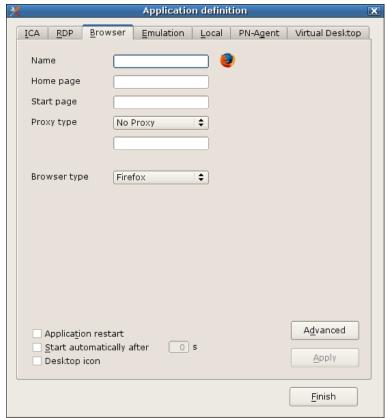


Illustration 26: Configuration > Browser

5.5.1 Configuring the Browser

- 1. Click at the tab Browser.
- 2. Fill in the fields as follows:

Name	Enter an appropriate name for this application, such as "Firefox"			
Home page	Enter a home page for the browser			
Start pagee Proxy type	Enter the first Web page to be called when the browser starts No proxy: if you do not use a proxy server			
	Manual (Proxy:Port): if you use a proxy server.Use the format:: <proxy address="" domain="" ip="" name="" or="" server="">:<port number=""></port></proxy>			
	Auto (URL): If you use an automatic proxy configuration file (*.pac). Example: http://www.domain.com/autoproxy.pac			
Browser type	A selection of browsers will only be given if the software for several browsers has been installed.			

3. Click Apply and Finish.

Note: By default, all browser files (cache, history, bookmarks, etc.) are saved temporally to the device flash memory, which is limited. This can use up available

memory and interfere with work. To avoid this, configure the browser to save files to a network drive. See page 35.

You can make additional settings configurations in the browser itself. For further information consult the respective browser documentation at http://www.mozilla.org/.

5.6 Emulation (X11)

The X11 server developed by The XFree86 Project, Inc (http://www.xfree86.org/) and its contributors is included in the base OS. No additional software must be installed



Illustration 27: Configuration > Emulation

5.6.1 Configuring an X11 session

- 1. In the window Application Definition dialog box click the Emulation tab...
- 2. Click **X11** in the **Emulation type** list. A series of fields appears.

Name: Enter an appropriate name for this application, such as "X11

Server address: Enter an appropriate name for this application, such as "X11."

User name: Enter the username on the UNIX server

Application: Enter the application name with its complete path.

Use SSH: If selected, the X11 session is started via the Secure Shell (SSH) protocol. Only the public key authorization is permitted).

3. Click Finish.

5.7 Local

Defining local commands is special – it allows you to define applications which can be called within a shell. (Note that the average user may not have the required knowledge about commands.)

The user must be authorized to start the applications. All commands are carried out by the UNIX user "eLux® RP" (UID = 65534).

We recommend that you test whether the command works by calling it from within an XTerm session before entering it in the Application definition dialog box. This is the only way you will receive feedback via error messages. You will not receive feedback when you enter it in the Local tab, as no error messages are displayed when it is called from eLux.

If you enter a command that does not call an X-capable application, you will not see anything when it is carried out.

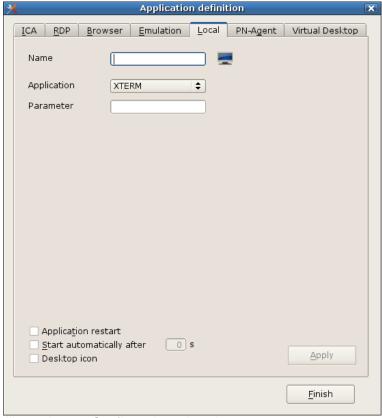


Illustration 28: Configuration > Local

5.7.1 Entering a command

1. In the **Application Definition** dialog book click the **Local** tab.

Name: Enter an appropriate name for this application.

Application: Click Customized.

Parameter: Enter the desired command, including all program parameters. See the examples below. For more information see the man pages of a Linux system.

Hidden: Does not display the application in the **Application** tab.

2. Click Apply and Finish.

If you select the option "Hidden," you must select "Start automatically" (or "Application restart") for the command to run.

Example: Retrieve any file from an FTP server automatically

Enter the following:

```
wget [-O <output file>] <URL>
```

The command

wget --help

offers all the parameters..

Files can also be retrieved from a Web server.

To see the current memory usage, enter the shell command df (=disk free) to see free disk.

Further line commands and parameters can be found in the product's online documentation or the Internet.

"Start automatically" with "Customized command

You can use the customized command features to retrieve a configuration file, as in the examples above. However, the order in which applications are started automatically (**Start automatically** check box) is not defined. If both the application and a local command to get its configuration file are set to "Start automatically," this application may be started before the configuration file arrives. If this conflict occurs upon start, restart the desktop.

5.7.2 File Manager

The eLux file manager shows files and folders stored at the Thin Client.

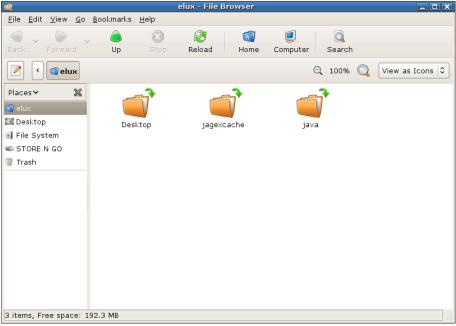


Illustration 29: File Manager

5.8 PN-Agent

The Program Neighborhood Agent enables users to connect to published resources (i.e. published applications and published content) through a server running the Web Interface. The configuration for all users is defined in the configuration file config.xml, stored on your server running the Web Interface. The default location for config.xml on a server is //Inetpub/wwwroot/Citrix/PNAgent. The PN-Agent downloads its configuration data from the server running the Web Interface when it is started, and can be configured to update settings and the user interface periodically.

Administrators should use the Web Interface to customize users' PN-Agent options, rather than editing config.xml manually. For more information about editing config.xml using the Web Interface, see the Citrix Web Interface Administrator's Guide at www.myelux.com.

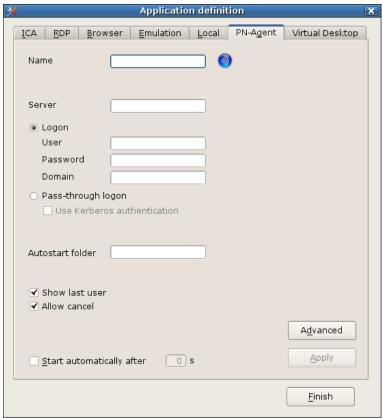


Illustration 30: Konfiguration > PN-Agent

5.8.1 Configuring Program Neighborhood Agent settings on the Thin Client

- Name: Enter an appropriate name for this application.
- Server: Enter the IP address (or name) of the server.

Alternatively, if the Citrix Web interface is not running on port 80 or if the configuration file does not have the standard path "/Citrix/PNAgent/config.xml", you can enter an URL to direct the client to the configuration file on the server. Format: http://<server>:<port> or http://<server>/<path> . Example:

```
http://server1/Citrix/PNAgent/config.xml
http://server1:81
http://server1/MyNfuse/config.xml
```

- User, Password, Domain: Enter to automatically log on to the terminal server.
- Pass through Authorization: When activated the values \$ELUXUSER \$ELUXPASSWORD and \$ELUXDOMAIN will be sent to the client.
- **Kerberos- Authorization**: The client uses the authorization data received by the Kerberos ticket.
- Autostart folder: On the server, in Program Neighborhood Agent create a folder (or subfolder) with published applications. Enter the name of the folder here. All published applications in this folder will automatically be started when the session connects
- Show last user: The user credentials (except for password) of the last logon will automatically be displayed in the XenApp logon dialog box. Note that this option has no effect if you enter user credentials for automatic logon.
- **Allow cancel:** When activated, allows the user to close the XenApp logon dialog box.
- Start automatically: Click this check box to open the session when the terminal starts.

Click Apply and Finish.

5.8.2 Advanced PN-Agent settings

Click on **Advanced** to display the **Advanced PN-Agent settings** dialog box. Here you can set the **window properties** for this application. If you click **Use default**, the settings as defined on the server will be used.

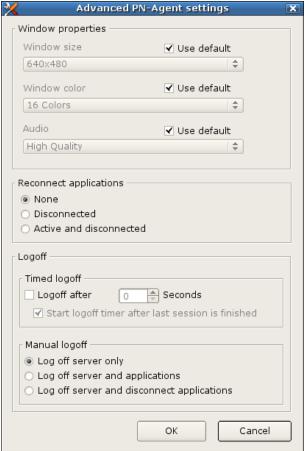


Illustration 31: Configuration > PN-Agent > Advanced

5.8.2.1 Reconnect Applications

There are 3 options to connect automatically:

- None (default)
- Disconnected
- Active and disconnected

5.8.2.2 Timed Logoff

You can schedule logging off from a PN Agent session by a given period of time (in seconds), and without having to wait for the last PN Agent application to close.

For manual logoff you have the options to define whether to log off from server only, from server and applications or logoff from server and disconnect applications.

5.8.2.3 Manual Logoff

- Log off only server
- Log off server and applications
- Log off server and disconnect applications

5.9 Virtual Desktop

Via the Tab Virtual Desktop you can define Citrix connections with a Citrix XenDesktop Server as **VD broker**.

Name, Server and logon data can be defined in the same way as for an ICA connection (see 43).

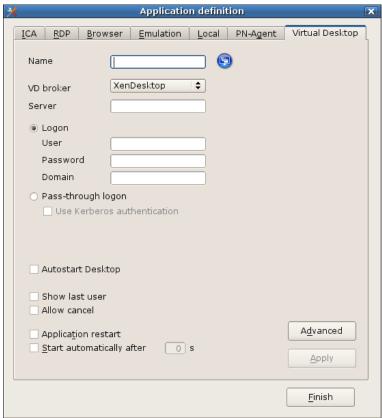


Illustration 32: Configuration > Virtual Desktop

5.9.1 Configuring Virtual Desktop at the Thin Client

1. Type in the fields the requested information:

\$ELUXDOMAIN

- Name: Enter any logical name for this application
- VD Broker: Select VMware View from the dropdown list
- Server: Enter the IP address or the name of the server
- **Login Data** enables the automatic login to the terminal server (user, password, domain)
- Passthrough Login Enabling this option sends the following parameters to the client: \$ELUXUSER \$ELUXPASSWORD
- Protocol: Preset are: RDP, PCOIP, RGS, localym
- 2. Confirm with **Apply**.

5.9.2 Advanced Settings for the Virtual Desktop

After clicking **Advanced**, you see the advanced settings for the virtual desktop. There, you can define window size, color and sound quality. Furthermore, you can define the behaviour for the timed and manual logoff.

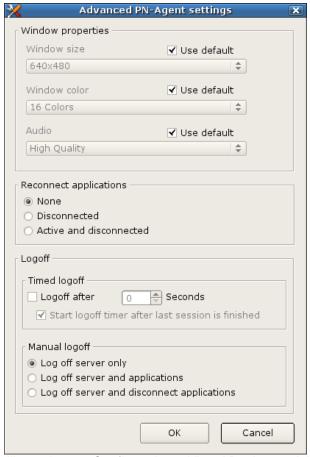


Illustration 33: Configuration > Virtual Desktop > Advanced

6 Applications

In this tab you can see all applications. Furthermore it shows the type of the application and whether or not it is active.

6.1 Starting an Application

Click **connect** to start an application or connect to a server.

6.2 Quitting an Application

Click **disconnect** to shut down an application or disconnect from a server.

6.3 Starting or quitting more than one Application

- 1. Press Ctlr and mark the applications you want to start or quit.
- 2. Click connect or disconnect.

7 Worth to know

7.1 Console switch

It is possible to switch between the various consoles using the following hotkeys.

Konsole	Hotkey
eLux Desktop	Ctrl + Alt + F1
First XDMCP session	Ctrl + Alt + F2
Second XDMCP session	Ctrl + Alt + F3
Message console	Ctrl + Alt + F4

7.2 Time Server

In addition to the time zone, the time must be set on the Thin Client for proper use. This can, of course, be done by filling in the date and time fields as described above. However, due to its better accuracy we recommend using a time server.

Synchronizing the time with the time server can be done online by clicking the button **Synchronize** in the Desktop tab. In earlier versions the synchronization was done after restart only.

Enter the IP address or the IP name of the time server.

The system detects automatically whether the time server be Windows or UNIX.

7.2.1 Windows-Time Server

Enter the IP address or name of a computer running Windows 2000 (or later).

If you select this option, the time server must conform to Simple Network Time Protocol as described in RFC 1305. The Windows Time Service (W32Time), which is installed by default on computers running Windows 2000 or later, is SNTPv4 compliant.

The W32Time service starts automatically on computers that are joined to an Active Directory domain. For computers that are not joined to a domain, you must start the time service manually.

The Windows NT time service does not support SNTP. To use NT, you must install third-party software. See the following section "Unix" for more information.

For more information on SNTP, see the Knowledge Base article 224799 ("Basic Operation of the Windows Time Service"), 216734 ("How to configure an Authoritative Time Server in Windows 2000") or the white paper "Windows Time Service"

(http://www.microsoft.com/windows2000/docs/wintimeserv.doc).

The forerunner of SNTP is Network Time Protocol as described in RFC 1305. The two protocols are inter-changeable. Thus, you can alternatively enter an NTP-compliant machine. Many UNIX servers have xntpd, which is NTP compliant. The service must be started.

For more information on NTP, see www.ntp.org.

This service operates on port 123 with the UDP protocol. IP-Adresse oder Namen eines Computers mit Windows 2000 (oder höher).

7.2.2 Unix-Time Server

Enter the IP address or name of a UNIX machine running a RFC 868 time service.

If you select this option, the time server must conform to Internet standard RFC 868 ("Time protocol"). This type of time service is a standard component on UNIX machines as an internal service of inetd. It can be activated in the file /etc/inetd.conf.

There are several products on the market that allow you to install a time server conform to RFC 868 on a Windows machine, for example, the free time server for Windows NT from Roberson Computer Consulting, Inc., available at www.rccinc.com.

The service operates on port 37 with the TCP and UDP protocols.

For more information on RFC 868, see www.fags.org.

7.3 Dynamic Host Configuration Protocol (DHCP)

A Dynamic Host Configuration Protocol (DHCP) server assigns to the client a dynamic IP address. This means that the IP address assigned to the Thin Client changes periodically (the interval is set on the DHCP server). DHCP also supports a mix of static and dynamic IP addresses. DHCP simplifies network administration because the server and not an administrator assigns IP addresses – when a new Thin Client is added to the network, it automatically receives an IP address and network settings. Due to its flexibility, most networks use DHCP.

If a server cannot be found during the timeout time, the settings of the last login will be used.

7.3.1 Adding a hostname by using DHCP

With a DHCP request it is possible to transfer the local host name to the DHCP server. The host name will then be visible at the DHCP server.

• Enter the hostname of the Thin Client in the field **Hostname** and click **Apply**.

8 Troubleshooting

8.1 Troubleshooting for printing

Printing is a complex topic beyond the scope of this manual. For help with a specific printer, we highly recommend contact the printer manufacturer directly. As a guide, below is help for some common questions:

Question	Explanation
Hardware problem	Verify that the printer is on and ready, that the paper tray is full, and that there are no error messages in the display.
PostScript file— PostScript printer (Filter = "None")	Most local applications – such as the local browser or Acrobat Reader – generate PostScript output. To print PostScript files to a PostScript printer, the filter should be set to "None."
	If your printer prints a large amount of ASCII text, your file could be PCL. To check the file format, in the print dialog select "Print to file" and save to a network drive or to the local directory "tmp". Open the resulting *.prn file using the local file browser or vi. If the first line starts with %! the file is PostScript.
PostScript-file – PCL printer (filter should be set to 'PCL2')	For this filter option to be displayed, the PCL package must be installed on the Thin Client ("PCL printer support" located in the base OS). By default, it is not installed.
Is the printing problem affecting multiple devices or just one?	If it affects only one device, make sure the Thin Client is working properly – try printing to other printers, accessing network drives, contacting other devices, etc. If it cannot, it is not a printer problem. If it can, see if the print job reaches the printer (most printers have a status line). If it does, the problem is most likely the file format. (explanations see above)
Communication Problem	If the printer has an IP address, ping it from a local shell. If you are unsuccessful, or if the problem is affecting multiple Thin Clients, it may be a network problem.
Performance Problem	If the application stops responding, or "hangs," you may have a performance problem. For example, the Thin Client buffers print data in main memory. How large is the main memory compared to the file you are trying to print? The more complex the file, the larger it will be. Graphics and color increase file size. PostScript files are often much larger than the original file. If your main memory is small, printing large files could cause a delay if the printer is not ready at the time a print task is running (see 6). Avoid this by checking the printer status in advance and by setting a "Maximum printer response" timeout.

8.2 Factory Reset

The factory reset is an important troubleshooting function.

During a factory reset the Thin Client's firmware setup as well as applications and any locally created files are being deleted. However, licenses and management settings are not deleted.

After a factory reset the client restarts. If management settings had been stored the client connects to the Scout server, is automatically entered into the organization unit

as it was before, and is assigned the configuration and the applications from this organization unit.

In particular, a factory reset is useful in case a Thin Client had been configured locally and eLux configuration errors had slipped in which the administrator might not find out quickly.

Tip: All files in the directory /setup/public are deleted during the factory reset.

8.3 Client Password

All Thin Clients managed by a Scout Enterprise server receive the same client password. It is not possible to set multiple Thin Client passwords. The password can only be modified in the base configuration. The client password is used to authenticate at the Scout Enterprise Server, i.e. no other Scout server could manage these clients.

Thin Client users can remove themselves from management by first using the hot key: CTRL+ ALT+ HOME, entering the Thin Client password in the dialog box to regain configuration rights. Afterwards, they must go to the Setup > Security tab and remove the management address in Management. Finally they have to change the password of LocalLogin (and then click Apply).

Note: If you do not want users to be able to delete the manager, do not share the client password.

8.4 LocalLogin

Help! I'm locked out!

If you activate directory services and settings are incorrect, you will be locked out. However, you can still log on to the Thin Client locally using the login name **LocalLogin** and the **Thin Client password**. You can then correct the settings by going to **Setup > Security**.

8.5 Connecting Keyboards and Mouses to USB 3.0 Ports

Keyboards and mouses do not work during the recovery mice using USB 3.0 Ports. Connect these devices at USB 2.0 ports.

8.6 Safe Boot

Once the BIOS has been scanned press the ESC key to go to the **Safe Mode**. (The TAB key has been used for this purpose up to now.) The client password is requested (value by delivery is: "elux").

Default screen settings are set to values all monitors support. If after configuring the Thin Client you have massive screen distortion, resolution, frequency and color depth are most likely set to values your monitor does not support. In this case, switch off your monitor to avoid damage. Start the Thin Client in Safe Boot mode. Safe Boot allows you to start the terminal in a mode which does not damage hardware. You can then correct screen settings.

Warning: In the Safe Mode you don't have network support. If you should have made the desired changes, please restart the terminal.

9 List of Figures

Illustration 1: eLux Desktop > Overview	
Illustration 2: Systray > USB Device Info	13
Illustration 3: Systray > Mouse/Keyboard	14
Illustration 4: Systray > Screen Control	15
Illustration 5: Control Panel	
Illustration 6: Setup > General	18
Illustration 7: Setup > Network	
Illustration 8: Setup > Desktop	21
Illustration 9: Setup > Screen	23
Illustration 10: Setup > Mouse/Keyboard	25
Illustration 11: Setup > Firmware	27
Illustration 12: Setup > Security	28
Illustration 13: Setup > Multimedia	33
Illustration 14: Setup > Drives	
Illustration 15: Setup > Printer	36
Illustration 16: Setup > Hardware	
Illustration 17: Setup > Diagnosis	
Illustration 18: Configuration > ICA	
Illustration 19: Configuration > ICA > Advancedt	
Illustration 20: Configuration > New > ICA	46
Illustration 21: Configuration > RDP	
Illustration 22: Configuration > RDP Display	
Illustration 23: Configuration > RDP > Local resources	
Illustration 24: Configuration > RDP > Advanced	
Illustration 25: Configuration > RDP > Definition of an invisible application	
Illustration 26: Configuration > Browser	
Illustration 27: Configuration > Emulation	
Illustration 28: Configuration > Local	
Illustration 29: File Manager	58
Illustration 30: Konfiguration > PN-Agent	
Illustration 31: Configuration > PN-Agent > Advanced	61
Illustration 32: Configuration > Virtual Desktop	
Illustration 33: Configuration > Virtual Desktop > Advanced	63