



eLux RP administrator's guide

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1. Introduction

1.1. eLux

This guide supports the system administrator in installing procedure, maintenance and use of thin clients or PCs equipped with the thin client operating system eLux™ RP. Hereinafter eLux™ RP is mentioned as "eLux".

This guide assumes knowledge of:

- Installation, operation and maintenance of computer networks and peripherals
- Knowledge in the operating systems of the server in use

1.2. Shortcuts

Shortcut	Function
STRG + ALT + ↓	Shift between applications in use to the left.
STRG + ALT + ↑	Shift between applications in use to the right.
STRG + ALT + ←	Shift between different desktops to the left.
STRG + ALT + →	Shift between different desktops to the right.
STRG + WIN	Opens the start menu.
WIN + ALT + i	Opens the device information.
STRG + ALT + Pos1/Home	Unbans the client, the user obtain total access in order to use a particular client.
STRG + ALT + END	Bans the client. If an access authority is activated for unbanning the client an user password must be entered first.
STRG + ALT + F-keys	Shifts between different shells. Function has to be activated via the keyboard preferences. The following shells are available: F1: eLux desktop F2: first XDMCP session F3: second XDMCP session F4: message shell
ALT + letter	In the system control with the use of ALT + the use of the underlined letters you can switch between registers. ALT + S opens the register setup.

2. Installation

2.1. Kinds of installations

eLux can be installed directly on the flash memory of a thin client or on a hard disc. The installation procedure (recovery) can be executed via different procedures:

- directly from USB flash drive (so called "eLux Live Stick". This image is available on www.mylux.com)
- via PXE boot

The different recovery procedures can be found in detail in our Recovery Paper and as well in the Scout Enterprise Administrator's Guide.

2.2. First boot procedure

The first boot procedure for a thin client with default settings (upon delivery, after a factory reset or after a Recovery Installation) processes:

1. Scan BIOS
2. Make a DHCP server request
3. Boot eLux
4. The device is automatically entered in Scout Enterprise and configured.
Requirement: Either the DHCP server has special options set for the Scout server - or - the hostname "ScoutSrv" has been set to the Scout Enterprise Server IP address on the DNS server. Please find detailed information concerning this process in the Scout Enterprise administrators guide. If the hostname "ScoutSrv" cannot be resolved, this step is skipped. The [first configuration wizard](#) appears and will lead you through the first configuration.

2.3. First configuration

Standardized during first boot procedure a wizard appears which smoothly supports the first configuration process. You have the option to integrate the device into the management software solution Scout Enterprise or to configure eLux manually, which means directly on the thin client. If an DHCP server was contacted, the IP address appears on the top. Otherwise a standard value appears.

1. The first installation wizard appears with a greeting. Choose the language of the keyboard.
2. Confirm with **Next**.
3. If you want to manage the device via Scout Enterprise select **Yes**. **Or:** If you do not want to manage the thin client via Scout Enterprise but configure it manually select **No**.
4. Confirm with **Next**.
5. Enter the IP address or the name of the Scout Manager. Inputs into the information field are optionally.
6. Confirm with **Next**.
7. Select the destination organization of the device based in the Scout Enterprise server. Lost & Found is defined as standard group.
8. Confirm with **Next**.
9. Check now a summary of the information entered.
10. Confirm with **Finish**.

Now 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 detailed information concerning Scout Enterprise, please read the Scout Enterprise Administrator's Guide.

2.4. First steps

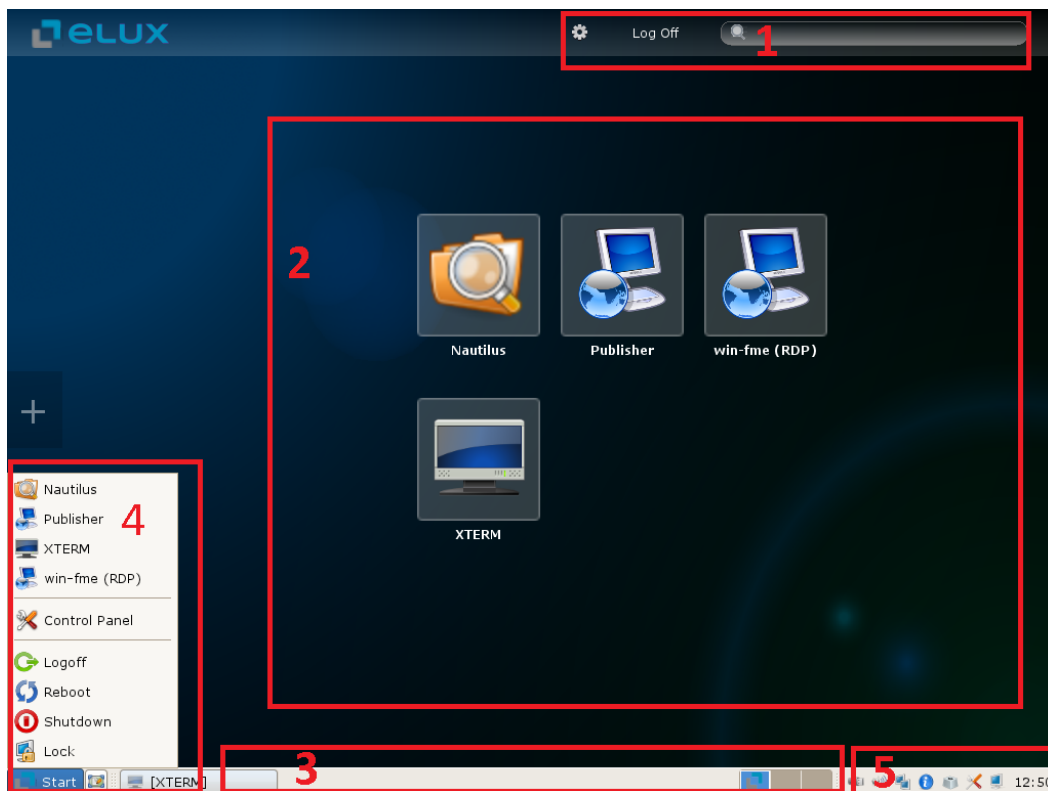
Benefiting from an easy initial operation you only need to define a new application and connect with this application.

3. Desktop

3.1. General

The eLux Modern User Interface of eLux RP consists of the following components:

1. Multifunction bar
2. Modern User Interface with integrated „eLux App Selector“
3. Task list
4. Start menu
5. Systray



3.2. Multifunction bar

The upper multifunction bar offers the following functionalities:

Function	Explanation
Wheel	Opens the control panel

Function	Explanation
Sign out	Signs out the user
Search	Enables searching for particular applications

3.3. eLux Modern User Interface and eLux App Selector

3.3.1. General

The eLux Modern User Interface demonstrates the main desktop. You can start applications directly from the eLux Modern User Interface. The eLux App Selector allows you to place icons of particular applications directly onto the eLux Modern User Interface.

3.3.2. Adding applications to the eLux Modern User Interface



1. Click at the symbol +.(centrally) at the left side of the monitor.
2. Choose either local applications or all applications and those applications will be shown as a list.
3. Click at the particular application you like to add to the eLux Modern User Interface.
4. The marked application gets a green check mark and will be shown at eLux Modern User Interface.
5. Click at the symbol +, for masking out the eLux App Selector.

3.3.3. Masking out applications 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** for masking out the icon from your desktop. However, these particular defined and from the eLux Modern User Interface masked out application, still remains in the eLux control panel.

3.4. Taskbar, start menu and systray

3.4.1. General

Within the taskbar the start menu is located. The systray contains the following icons:

- connected USB mass storage devices
- information of devices

- mouse / keyboard
- screen settings
- network profile
- sound level
- control panel
- timezone

3.4.2. Blending in and masking out the systray

For blending and /or masking out the systray you have to modify the justifications in the tab [desktop > advanced](#).

3.4.3. Removing USB mass storage devices securely



Attention

USB mass storage devices must be removed securely, otherwise complete data stored on this particular USB memory stick is deleted.

1. Right click onto the USB device icon in the systray.
2. Choose **remove safely**.



3.4.4. Device information

This tab shows information about the MAC address, IP address name and serial number of the particular device in use.

In the fields: Info1, Info2, Info3 data can be entered and/or deleted for example buildings, room numbers or telephone numbers.

This information can also be sent to Scout Enterprise provided that the option “client info” in the “desktop tools” software package is enabled. For detailed information please read the ELIAS Short Guide.

3.4.5. Mouse and 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. The following settings can be carried out:

- double click speed
- acceleration
- left- or right-handed mouse
- delay (keyboard)
- speed (keyboard)

3.4.6. Screen control settings

Connected screens will be identified automatically and changes will be applied without the need of a reboot.

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

With the aid of the tab **Resolution** you can justify the resolution as well as rotation of your monitor image. Already connected monitors can be disconnected by removing the tick in the checkbox.

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

3.5. Control panel

After boot process, the eLux control panel appears by default. The standard language is English (US). Any other language setting besides German is also demonstrated in English. However, it is important to modify in the desktop configurations your country language, due to this modification local defined applications can be executed correctly.

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

In the delivery status the tabs: **Application** and **Configurations** are empty. The tab **Setup** contains a standard configuration.

The eLux control panel works mouse based. However, you can operate the desktop by using the keyboard, particularly press **ALT + <underlined letter>**.

For example press **ALT + S** for getting directly in the setup menu.

The control panel can be closed by using **ESC**

A few characteristics regarding the eLux desktop:

- You can create for all active applications a desktop icon. Those icons will be simultaneously archived in the start menu and they can be activated via the start push button.
- Via using "drag&drop" you can move files for example from an USB flash drive directly onto the desktop, providing that this desktop is writable. Further information can be read here [Setup > Desktop](#).

4. Setup

4.1. Introduction

In the tab setup the following registers exist. By using the symbol ► you can show further registers:

- General
- Network
- Desktop
- Screen
- Mouse/Keyboard
- Firmware
- Security
- Multimedia
- Drives (provided support of the drive is installed)
- Printer (provided printer support is installed)
- Hardware
- VPN (provided a VPN client is installed)
- Diagnosis

The following chapters describe sequentially the settings of the setup modifications of eLux.

Some changes require a reboot of eLux or a reboot of the terminal. In this case after clicking at **Apply** the message appears that the modifications made demand a reboot. Confirm the question regarding a reboot either with **Yes** or **No**.

4.2. General

4.2.1. General

The tab General provides you with the following information:

- MAC address
- host id of the terminal
- eLux license
- eLux version
- information concerning the hardware in use for example CPU-clock, size of RAM, serial number and BIOS version.

Below the information stated above, you find in list format the installed software packages (including version number) and the name of the installed image.

4.2.2. Checking license information

- Double click on **Subscription** for checking the validity .
A window opens and shows the current status of the license.

4.2.3. Entering a new license


1. Double click on **License**.
2. Enter now the license base key
3. Confirm with **OK**.

4.3. Network

4.3.1. General

Depending on the hardware types in use the tab network contains the following sub tabs:

- LAN
- Wireless LAN
- G3/UMTS

The systray icon  shows further information concerning the existing network connectivity.

4.3.2. Connecting to LAN or WLAN

1. Start Scout Enterprise > **Right click on device or OU > Setup > Network**.
Choose in the corresponding register, which kind of connecting you want to establish.
2. Click **Add**.
3. Enter in the register **IP** all information concerning the particular IP address, e.g. whether IP address shall be dynamic or static.
4. Right click on device or OU > **Setup > Network > Wireless LAN > Add**.
5. Enter in the register **Medium** information about SSID, timeout, channel, and the method of encryption.



Note

Due to security reasons the encryption methods: *None* or *WEP* are not supported any more. This affects especially the current operating systems eLux RP and eLux RT.

6. Activate the checkbox **Connect automatically** of the WLAN connection which be active automatically.



Note

If the checkbox **Connect automatically** is not activated, there is no automatically use of any WLAN connection.
In this case you have to activate the WLAN connection manually on the client in the systray.

7. In the tab **Advanced** you can choose further safety options regarding DHCP or IEEE 802.
Additional information regarding DHCP can be found [here](#).
8. Click **OK** to save the settings.
In order to adjust advanced WLAN settings by using the configuration file: *wpa.conf* read [here](#).

4.3.3. 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 host name of the particular thin client in the field: **hostname** and click **Apply**.

4.4. Desktop

4.4.1. General

Adapt in this tab the design of eLux desktop surface and execute modifications concerning calendar date and time zone.

4.4.2. Configuring desktop

1. Choose from the drop down menu the preferred application for starting the applications.
The eLux user interface will be shown in German, if you select German. If you select another language it will appear in English.



Note

The applications chosen must be compatible with the selected language in order to work properly.

- Click at the button **background color** for selecting the desired background color.
- Choose a Hotkey in order to change between tasks within one desktop.
To cause no problems with the shortcut ALT+TAB (switching between tasks in Windows) the shortcut ALT+CTRL+↑ is activated by default.

4.4.3. Advanced desktop settings

- Click at **Advanced**
- The following settings are provided:

Setting	Explanation
Interactive Desktop	Selects which desktop icons appear onto the desktop
Classic Desktop	Masks out the eLux Modern User Interface
Desktop writable	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.

- Confirm the settings by clicking **OK**.

4.4.4. Adjusting calendar date and time zone manually

- Adjust the calendar date and the time zone via the corresponding fields.
- Confirm with: **Synchronize**.

4.4.5. Configuring time zone

- Choose the desired time zone using the drop down list.

4.4.6. Synchronizing calendar date and time zone via a time server

This chapter explains how you set up a connection to a time server. Additional information regarding time servers can be found in the chapter [time server](#).

- Type the address of the desired time server in the field.
- Confirm time leveling with: **Synchronize**.
eLux connects to the time server and synchronizes date and time.

4.5. Screen

4.5.1. General

In this tab you can modify the configurations of the screen, the screen saver as well as modifications regarding special energy saving functions.

4.5.2. Configuring basic settings of the screen

1. Set color depth using the dropdown list.



Attention

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 **power safe** after the desired time for switching into the power save mode.

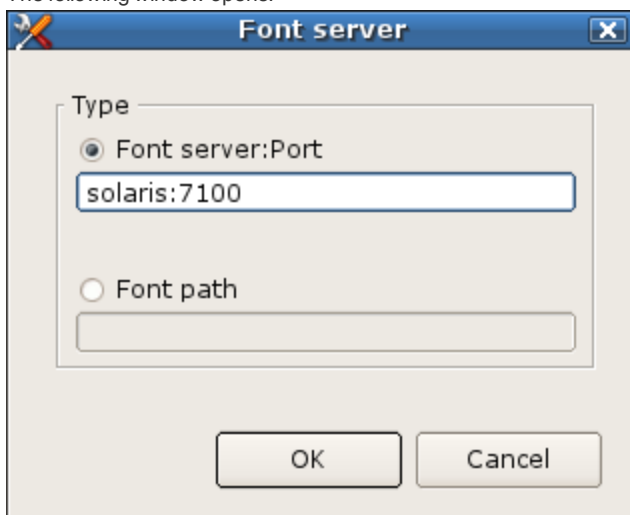
4.5.3. Configuring a screen saver

1. Modify via the checkbox if a screen saver should be activated or not.
2. Type in the field the desired time for switching into the power save mode, screen saver activation.
3. Modify via the checkbox to add a keyword for unlocking the screen.
4. Click at **Settings**, for choosing and configure the screen saver.
An additional window will open. The settings vary depending on the screen saver you choose.
5. Confirm with **OK**.

4.5.4. Configuring a font server

A font server offers the opportunity to manage different fonts. Fonts are archived on the server and can be requested by a client as needed.

1. Click at **Advanced**
2. Click at **New**, **Edit** or **Delete**, for configuring a new font server or for progressing / deleting the existing font server.
The following window opens:



3. Click at font server: Port and enter IP address (or name) of the font server and the number of the port, separated by a colon.
For example: `:<number of the port>`
192.168.10.23:7100
4. **Or:** Click at font path and type in the path where the fonts are.
5. For example: `</smb/g/fonts>`

4.6. Mouse / keyboard

4.6.1. General

In this tab you can define the desired settings concerning mouse and keyboard.

4.6.2. Configuring mouse settings

1. Define the type of the mouse by using the drop down menu.
2. Define the double click tempo and acceleration by using the controller.

4.6.3. Configuring the keyboard

1. Define the desired language by using the drop down menu.
2. The type of the keyboard will be recognized automatically. No further setting is needed.
3. Choose period of delay and the tempo by using the controller.
Delay controls the time period how long a key needs to be pressed to retype a letter, tempo controls how fast the letter will be retyped.

4.6.4. Advanced mouse and keyboard settings

1. Click at **Advanced**.
The available settings in detail:

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	This option switches the functionality of the mouse keys.
Dead keys	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	This option activates the NUMLOCK keys during booting process. These keys also enable you to enter figures via the number pad on your keyboards.
Console switch enabled	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. Find detailed information see shortcuts .

2. Click **OK** for closing the window and confirming the modifications chosen.
The modifications selected will be active after the next system start.

4.7. Firmware

4.7.1. General

In this tab you can change the settings concerning the firmware, update the system or you can set the thin client back to factory settings.

4.7.2. Updating the system

1. Type in the fields the protocol, server name, paths, and the IDF. The eLux packages must be located in the same register as the IDF files. For further information concerning IDF files and updating the system please read our [ELIAS](#) manual.
2. Choose **Update**, for updating the system
3. If the IDF file contains changed software packages you can click at **details** for getting an overview of the changes executed.
4. Choose **Yes** or **No** the update will be executed or not or maybe interrupted.

4.7.3. Checking for updates and updating automatically

- Tick the corresponding checkbox if checking for the latest updates is desired automatically

When switching on the thin client	thin client checks during switching on if latest updates are available
User has to confirm	Is the checkbox not activated, the thin client updates automatically
When switching off the thin client	thin client checks during switching off if latest updates are available

4.7.4. Resetting the thin client - factory reset



Attention

If you like to set back the thin client to factory settings - all data located on the thin client's flash card will be deleted. Therefore, make sure before starting the resetting process that all data is saved.

Setting back a thin client to factory reset is an important function for example concerning error fixings. If eLux is configured locally on the thin client there might be an error in the configuration process occurred, thus this can be sometimes difficult for an administrator to find out. The particular thin client can be set back to factory reset. This process means that the configuration of firmware as well as special modifications and all local generated applications will be deleted. Licenses and management modifications remaining unaffected.

1. Choose **Reset**
2. Thin client will be set to factory settings. After the resetting process the thin client will be rebooted. If modifications in the management software are saved, the thin client connects automatically to the Scout server and will be automatically identified in the earlier Organization Unit provided with all the configurations and applications assigned before the resetting process.

4.8. Security

4.8.1. General

In this tab you can edit the user authorization, access authorization, Scout Enterprise settings as well as the mirroring settings.

4.8.2. Local Security

Allowing remote connections to X11 clients

Due to the activation of X11 applications which are hosted on remote servers, these applications can be shown in eLux.

- Choose **Allow remote X11 clients**.

Changing user authorizations

1. Click **Edit**.
2. Enter your password into the fields above.
3. For activation or deactivation of the fields desired use double click or the combination of cursor and blank key.

4.8.3. Access authorization

Possibilities of 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, however not supported any more

- Click **Edit** to modify the authorization method.

Lightweight Directory Access Protocol (LDAP)

1. Click at **Edit**.
The following values must be provided in the case of authentication through a LDAP server:

Setting	Explanation
Server	Represents the address of the LDAP server. Here a list of servers can be quoted, separated through space characters. In the case that the server is not in the same directory located as the thin client, please enter the complete and qualified name of the domain. The so called: FQDN, which means "fully qualified domain name".

Setting	Explanation
Search base	This value represents from which system point on the directory tree has to search for the users. For example, „o=<Company>,l=<your city>,c=<your country>“. Please ask your LDAP server administrator concerning this parameter.
Version	Version of the LDAP server which should be used.

2. Confirm with **OK**.

Active Directory Server (ADS)

The directory service of Windows 2000 is the so called: Active Directory. The structure of this service is now modified. There is no longer a PDC or DCS available. In Windows 2000 the role of PDC and BDCs is abandoned for the benefit of a Peer-model. All of the domain controller (DC) in a Windows 2000 forest have equal rights.



Note

We recommend you to set a Windows time server machine. In the case that time setting of the system is running differently the domain controller and the client in combination are both not able to successfully proceed with Active Directory requests.

1. Click at **Edit**.
For authorization of a LDAP server the following values must be provided:

Setting	Explanation
Server	Represents the address of the LDAP server. Here a list of servers can be quoted, separated through space characters. In the case that the server is not in the same directory located as the thin client, please enter the complete and qualified name of the domain. The so called: FQDN, which means "fully qualified domain name".
Search base	This value represents from which system point on the directory tree has to search for the users. For example: „dc=IhreDomain,dc=de“.

2. Click at **Find Values**.
The thin client will search for the server and automatically fill in the **Search base** field. When rebooting the thin client a user name and password will be requested.
3. Confirm with **OK**.

4.8.4. User Variables

Application Possibilities for user variables

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

Configuration (Applications)

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

Setup Tab (Setup)

Field	Function	User Variable
Drives	User name	\$ELUXUSER
	Password	\$ELUXPASSWORD
	Directory, Server, Share	Every \$ELUX-Variable
	Browser home directory	Every \$ELUX-Variable
Screen	Screen saver password	\$ELUXPASSWORD

Configuration Tab (Configuration)

Field	Function	User Variable
ICA/RDP	Server	Every \$ELUX-Variable
	User name	\$ELUXUSER
	Password	\$ELUXPASSWORD
	Domain	\$ELUXDOMAIN
Browser	Proxy, Proxy-Port	Every \$ELUX-Variable
Tarantella	Server	Every \$ELUX-Variable
Local customized commands	Parameter	Every \$ELUX-Variable
	Application possibility: Programs that can be executed by using the command line. For example: <pre>rdesktop -u \$ELUXUSER -p \$ELUXPASSWORD <machine></pre>	

Setting new user variables

For using User Variables you have to activate the FPM „**LDAP search module**” (usersearchldap) in the EPM **User authorization modules** (userauth). By default these settings are not activated.

Predefined User Variables are: \$ELUXUSER, \$ELUXDOMAIN and \$ELUXPASSWORD.

1. Choose via the drop down menu a type of access authorization.
2. Click **Edit**.
3. Choose **User Variables**.
4. Fill in the following fields:

Setting	Explanation
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.

5. Click at **Test**.
Now the thin client attempts to retrieve from the authorization server the value for the attribute you already entered.
6. Click at **OK** in the window **User Variables** and **Apply** in the field **Security**.

4.8.5. Turning on or off mirroring directly on the client

1. Choose **Activate**, for starting mirroring process
2. Choose **Advanced**.
In detail, choose from the following mirroring options:

Setting	Explanation
Read access only	Only reading access allowed
Confirmation required	For enabling mirroring the user has to confirm the mirroring process.

Setting	Explanation
Encrypted data transfer	Data will be only sent via encrypted connection.
Mirroring only allowed via Scout Enterprise	Mirroring is allowed by using one Scout server.
Transferring mirroring information	Protocols the mirroring process.
Password	Enter a mirroring password of at least six characters. This password will be asked before starting every mirroring procedure.



Note

During a mirroring session, a message box appears on the remote machine, making it impossible to “secretly” mirroring an user. The user can end a mirroring session at any time. In addition, you can set a mirroring password and protocol the mirroring by using “Transfer mirror information”.

3. Click at **Apply**.

4.8.6. Scout Enterprise settings

General

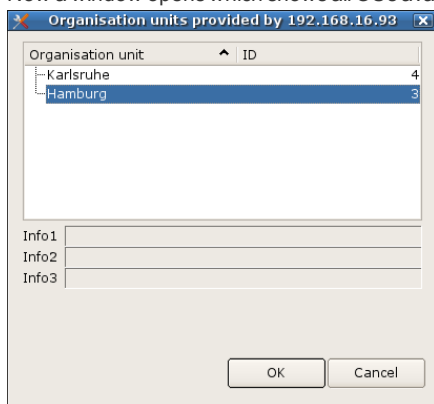
You can add a thin client via eLux to the Scout server. This procedure is the so-called Reverse Discovery.

Executing the Reverse discovery

A reverse discovery is similar to a client discovery, except that management information entry takes place at the Thin Client

1. Choose in the eLux control panel **Setup > Security**.
2. Enter in the field Scout the name or the IP address of the Scout server.
3. Click at...

Now a window opens which shows all OUs available of this server.



4. Choose the desired OU.
5. Confirm with **Edit**.
The devices has to be rebooted.
6. Confirm the window by clicking **OK**.
Now the thin client reboots and will be directly assigned to the corresponding OU.

Separation from Scout Enterprise

- Click at **Delete**.



Attention

The device will be set back to initial state. All settings and data will be deleted.

4.9. Multimedia

In tab you can modify the sound settings of your thin client:

- The controllers **Total**, **PCM** and **Microphone** adjust the sound level for playback and recording respectively.
- For the microphone, the switch **Mute** (default: ON) controls if the recorded sound is played back on the audio out port. You should keep this switch activated in order to avoid noise. When the mic is muted and you use a headset then the recorded sound on the headphone will not be played back at the same time but it will still be recorded.
- To switch off the microphone recording you must move the Microphone slider down to 0.
- When the **system beep** is activated the system ensures an acoustically sound as a response signal while switching off the thin client.
- If an **audio in XDMCP** is activated sound can be rendered in a session by using a x-server.

4.10. Drives

4.10.1. General

In this tab you define the connections to drives and there is also the possibility given to indicate a drive where browser data can be saved.

4.10.2. Establishing a network drive

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

Information	Explanation
Directory	Name of the directory. eLux automatically adds '/smb/'. The data is local at the directory '/smb/<Name of directory>' available.
Server	Name of the server
Share	Enter the name of the windows drive share.
User name and password	Enter the user name and the corresponding password which you also use for signing in to the server.
Active Directory Authorization	Tick the checkbox, whether you like to log in via Active Directory. In this case the fields user name and password will be deactivated.

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

4.10.3. Defining the browser home directory

Here you can identify the so-called browser home directory. The demonstration of the browser home directory enables that browser settings will be saved on a mapped network drive and it also enables that these settings are still available after a reboot. In the case there is no browser home directory defined, all settings will be lost after a reboot procedure.

4.11. Printer

4.11.1. General

In this tab you can modify the printer settings.

4.11.2. Adding a new printer

1. Click at **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 via 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 as well as the printer queue.
7. Click **OK** and afterwards click at **Apply** in the tab.

4.11.3. Using TCP direct print

In TCP direct print, data is 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.

- Enter at the print server the IP address of the particular thin client, printers name and the port number

4.11.4. 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.


Using this software, please follow these steps:

1. Install ThinPrint client on the terminal
2. Connect the printer you like to use
3. Define this printer in: **Setup > Printer > New**.
4. Activate the checkbox: **thinprint**.
Optionally enter a class name of maximum 7 characters.

Additionally,, the ThinPrint server must be configured. However, this is not subject of this manual, please find detailed ThinPrint® documentation on www.thinprint.com.

4.12. Hardware

4.12.1. General

In this tab you can enable or disable USB mass storage devices, configure smartcard readers or COM ports. By clicking the symbol  you can see in the systray all available USB mass storage devices and you can also remove these devices securely with the aid of the systray.

4.12.2. USB mass storage devices and card readers

The checkbox **USB mass storage devices** defines whether or not an USB mass storage devices can be connected. The checkbox **inform user** defines whether a pop-up window appears in the event of connection an USB mass storage device. Via the dropdown list you can choose if a card reader should be activated.

4.12.3. COM port settings

1. Click the bottom **COM port settings**, for opening the window and changing the COM port settings.
2. Carry out the modifications desired.
3. Confirm with **OK**.

4.13. VPN

4.13.1. Supported VPN Clients

The following VPN Clients are supported:

- VPNC VPN Client

4.13.2. Establishing a VPN connection

1. Select the tab **VPN**.
2. Choose which client you want to use.
3. Click **Edit**.
The file `vpnc.conf` opens for configuration in the texteditor 'gedit'.
(If gedit is not installed, 'vi' will be opened instead.)

```

vpnc.conf (/setup/elux/.vpnc) - gedit
File Edit View Search Tools Documents Help
New Open Save Print... Undo Redo Cut Copy Paste Find Replace
vpnc.conf x
IPSec gateway 192.168.1.2
IPSec ID groupname
IPSec secret grouppassword
Xauth username user
Xauth password test
DPD idle timeout (our side) 0
Enable Single DES
  
```

4. Activate the checkbox **Auto connect**.
5. Apply with **OK**.

4.14. Diagnostics

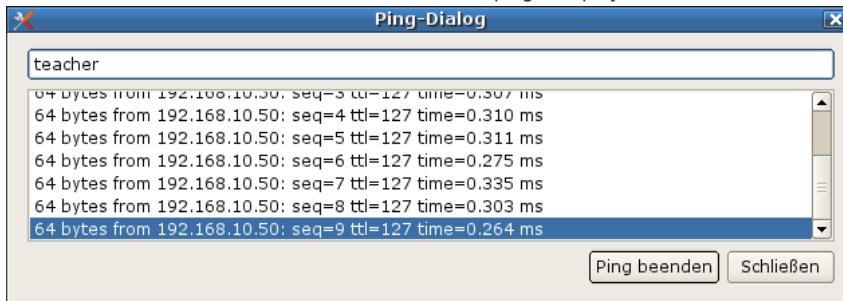
4.14.1. General

This tab is for diagnosis. Choose from the options for diagnosis:

- Enhanced logging: on/off
- Additional diagnostics (Creating of screen shots and diagnosis files)
- Send files to FTP server, Scout Enterprise or save them on a disk.
- ping test

4.14.2. Starting ping test

1. Click at ping test.
The window: **Ping-Dialog** opens.
2. Type the name of the server you want to connect with into the upper field.
3. Select **Start Ping**.
A connection to the server will be established and the ping is displayed in the window.



4. Click **Stop Ping** for finishing the ping test.

4.14.3. Starting diagnostics

1. Select if advanced logging should be activated or deactivated.
Advanced logging is well suited for error searching.
2. Activate the checkbox for archiving an additional screenshot.
3. Activate the checkbox: **User file**, if you like adding an additional file
4. Choose from the drop down menu where the diagnostics file should be stated.

Choose from the following options:

Function	Explanation
Disk	files are archived on local data medium
FTP server	files are archived on an FTP server
Scout	files are archived in the folder of Scout Enterprise user-files\documents\UniCon\Scout\Console\Diag
Display	Opens a window in eLux, with the aid of this window the diagnostic files can be shown.

5. Click at **Apply**.

5. Application definition

5.1. General

5.1.1. General

eLux offers two kinds of applications to choose from:

- remote (server based)
- 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 www.mylux.com.

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.

5.1.2. Adding applications

1. Click at **New**.
2. Activate the corresponding register for the application you like to define.
3. In the case that the application you like to use does not appear, the particular software packages which is needed for the use of this application is not yet installed on the thin client. Please ask your eLux - or network administrator for help.
4. Configure the desired applications, you can find details in the following table.
The following settings are always the same when defining applications:

Setting	Explanation
Application restart	The application starts automatically
Start automatically after	The application starts after the time period quoted
Desktop icon	You can define for every application a desktop icon

5. Click **Apply** and **Finish**.

5.1.3. Editing applications

1. Mark the particular application which you like to edit.
2. Click at **Edit**.

5.1.4. Deleting applications

1. Mark the particular application which you like to delete.
Or: With the use of STRG + mark various applications to start them simultaneously.

2. Click at **Delete**.
3. Confirm with **Yes**.
The application is now deleted.

5.2. ICA

5.2.1. General

Via an independent Computing Architecture (ICA®) a connection to a Windows terminal server running with Citrix XenApp software is possible. You can access all Windows applications residing on the terminal server.

During connection to a XenApp server you can choose from two possibilities for the configuration process: Windows desktop session or a Windows application. Additionally we provide you with some information concerning the Citrix Receiver. With the aid of the Citrix Receiver advanced ICA client settings can be executed.

5.2.2. Configuring a Windows desktop session

1. Click at the tab **PN-Agent**.
2. Fill in the fields as follows:

Setting	Explanation
Name	Enter an appropriate name for this application
Published application	Deactivate the checkbox
Server	IP address or name of the server
Application	Leave this field in blank
Working directory	Leave this field in blank
Logon data	Enables automatically logon on the terminal server (user, password, domain)
Passthrough-logon	During activation of this option the values: \$ELUXUSER \$ELUXPASSWORD and \$ELUXDOMAIN will be sent directly to the client.
Kerberos authorization	The client uses the logon data which were created due to the ADS authorization received Kerberos ticket.
Smartcard authorization	Uses a smartcard for authorization.

3. Click at **Apply** and **Finish**.

5.2.3. Configuring a Windows application

1. Proceed like creating a Windows desktops session
2. Change the following data:

Setting	Explanation
Application	Name of the Windows application including the corresponding paths. For example: c:\Programme\Microsoft Office\Office\EXCEL.EXE
Working directory	(optionally) Working directory in the Windows application

3. Click **Apply** and **Finish**.

5.2.4. Advanced Citrix ICA sessions

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

- Client drive mapping
- Client printer mapping
- COM port mapping
- Low bandwidth requirements
- Citrix ICA Client hotkeys

- Seamless-Windows support
- Program Neighborhood Agent
- 128-Bit-SSL-support

Please note that some of these features are server-specific.

by clicking the **Advanced** in an ICA application definition the Citrix Receiver opens and enables executing further settings. The Citrix Receiver is special Software provided by the company Citrix Systems Inc. and offers a different look than the eLux control panel does.

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.



Note

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`. You can check the file wfclient.ini also via the tab **Diagnostics > ICA files**

For further information on configuring the Citrix ICA Client, such as drive mapping, COM port mapping and server location, please consult the Citrix online documentation on www.support.citrix.com.

5.2.5. Via Citrix Receiver activation of 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.

Via ICA application definition:

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

1. Use the same approach like the configuration process of a published Windows application.
However, make sure that the name of the application is the same like the name of the application which is published on the server.
2. Activate the checkbox **Published application**.

Via Citrix Receiver:

Alternatively according to the above mentioned version you can also search for available and published applications in the Citrix Receiver. After finishing this search the parameters will be automatically transferred in eLux.

1. Choose the tab **ICA**.
2. Enter the name of the particular application.
3. Click at **Advanced**.
Now the dialog opens: **Citrix Receiver**.
4. Choose the session which you like to configure.
5. Click at **Connections > Properties > Network**.
6. Activate the checkbox **Published Application**. Type in 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 application appears, check the browser protocol.

7. Click at **OK** in the properties dialog box.
8. Exit the Citrix Receiver to return to the eLux ICA application definition. The published application parameters are automatically entered into the eLux ICA application definition.
9. Click at **Apply** and **OK**.

5.3. RDP

5.3.1. General

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 equipped with the free software "rdesktop." For further information please visit www.rdesktop.org or www.freerdp.com.

Choose from two possibilities for the configuration process: Windows Desktop or individual application

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

5.3.2. Configuring RDP applications

1. Proceed as described in the Windows desktop session.
2. Change the following information:

Setting	Explanation
Application	Enter the name of the Windows application including the paths. System variables are allowed: For example: c:\Program Files\Microsoft Office\Office\EXCEL.EXE %SystemRoot%\system32\notepad.exe
Working Directory	(optional) Enter the working directory of the Windows application.

3. Click at **Apply** and **Finish**.

5.3.3. Advanced RDP settings

The tab local resources offers additionally the settings for the terminal server support regarding RDP 5.2 or higher.



Note

This register is only visible if you have installed the native RDP 5.2 client version 1.3.1 or higher ("rdesktop52"). Moreover, those settings have no effect if in the register **Advanced** the protocol is upgraded to "RDP V4". For executing this setting it is necessary to use a server which is able to support RDP 5.2 or higher.

1. Click at **Advanced**.
2. Choose RDP connection
3. Choose in the tab **local resources** from the following settings:

Setting	Explanation
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 \\tsclient\b="" access="" allow="" cd-rom.<="" dir="" example,="" letter>for="" td="" the="" to="" would="" you=""> </drive>
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.

- 4.

5. Choose in the tab **Advanced** from the following options:

Setting	Explanation
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 that the 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

6. Confirm **OK**.

5.3.4. Calling up a RDP client via console

The possibility is given calling up a native RDP client within a local shell.

For getting further call parameters for rdesktop enter in a local shell the following command: `rdesktop -h` analogous to FreeRDP enter the following command: `xfreerdp -h`). Now you are able to define in the tab **local > User** a session using additional rdesktop parameters.

5.3.5. Configuring an invisible RDP application

- An RDP application which has to be invisible for the user must be defined by entering `RDP_TEMPLATE` (in capital letters) in the field **Name** located in the tab **RDP**.

5.3.6. Configuring RemoteFX

Microsoft® RemoteFX™ is a new feature that is included in Windows Server 2008 R2 with Service Pack 1 (SP1). RemoteFX delivers a rich user experience for Virtual Desktop Infrastructure (VDI) by providing a 3D virtual adapter, intelligent codecs, and the ability to redirect USB devices in virtual machines.

1. Click at **Advanced** located in the application properties of a RDP application.
2. Choose **Advanced**.
3. Set Bandwidth to **<LAN>**.
4. Reboot the thin client. Now the bandwidth option of the rdp connection defined is activated.



Note

RemoteFX will only work correctly if the server supports RemoteFX. There are no possibilities to setup RemoteFX specific configuration values directly on the thin client. This option will be provided by the server.

5.4. Browser

5.4.1. General

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

5.4.2. Configuring the browser

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

Setting	Explanation
Name	Enter a name for this application, such as "Firefox"
Home Page	By clicking Home this website appears
Start Page	This website opens immediately after starting the browser
Proxy type	No proxy: if you do not use a proxy server Manual (Proxy:Port): if you use a proxy server. Use the format: <Proxy server IP address or domain name>:<port number> Auto (URL): If you use an automatic proxy configuration file (*.pac). For example: <code>http://www.domain.com/autoproxy.pac</code>
Browser type	A selection of browsers will only be stated if the software for several browsers has been installed.

3. Click at **Apply** and **Finish**.



Note

By default, all browser files (cache, history, bookmarks, etc.) are saved temporarily 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 also [Setup > Drives](#).

5.4.3. Configuring Kiosk mode

Kiosk starts the browser in fullscreen. The user cannot open more tabs and cannot exit the browser. Therefore Kiosk mode is a good opportunity when the user should only see one website and not open more programs at the thin client. For good use of this function you should deactivate all other functions of the thin client, e.g. rebooting and opening the starter. You can find more information about this in the chapter [security](#).

1. Click **Advanced**.
2. Activate the checkbox **Kiosk**.
3. Activate the checkboxes Navigation bar, Address bar, Print button, if you want to show them to the user. This functionality works only with Firefox 3.6x.
4. Apply with **OK** and **Apply**.
The next time you start the browser it will open in Kiosk mode.

5.5. Emulation

5.5.1. General

The X11 server is developed by The XFree86 Project, Inc and its contributors. This particular X11 server is already included in the base OS. No additional software needs to be installed. For further information please visit: <http://www.xfree86.org/>.

5.5.2. Configuring the X11 session

1. Click at the tab **Emulation**.
2. Choose from the list **X11** and **Emulation type**.

- Fill in the fields as follows:

Setting	Explanation
Name	Enter an appropriate name for this application, such as "X11". Do not use blank characters in the name.
Server address	Enter the IP address or the IP name of the UNIX server.
User name	Enter the name of the user which is also registered name on the UNIX system.
Application	Enter the application name with its complete path.
Using SSH	If selected, the X11 session is started via the Secure Shell (SSH) protocol. Only the public key authorization is permitted.

- Click at **Apply**.

5.6. Local

5.6.1. General

Defining local commands is special – it allows you defining particular applications which can be called with the aid of a shell. For this knowledge about commands that the average user may not have.

It is important that the user is authorized starting particular applications. All commands are carried out by the UNIX user "eLux" (UID = 65534).

Error messages will not be demonstrated. If the entered command does not demonstrate a x-capable application during execution process you also won't see anything concerning a possible error.

For this reason we recommend you executing the command first of all within a x Term session for testing purposes and for preventing possible errors.

5.6.2. Configuring local applications

- Click at the register **Local**.
- Fill in the fields as follows:

Setting	Explanation
Name	Enter an appropriate name for example „shell”
Application	Application type
Parameter	Enter the corresponding parameters which are responsible for a correct start of the particular applications. If the command is user-defined please enter the complete command. For example: <code>wget [-O <output file>] <URL></code> This command entitles the use of data located on a FTS server. Please note that only data can be saved on the local directory: <code>/setup/public und /setup/local/<Application></code> . Furthermore, the memory capacity is limited.
Hidden (only with application type "User" possible)	Application is not demonstrated in the register Application . The option Start automatically or Application restart for the correct execution of the command.

- Click at **Apply** and **Finish**.

5.7. PN-Agent

5.7.1. General

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`, which is 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 regularly.

The file config.xml should only be edited with the aid of the PN agent management tool. Detailed information regarding the editing of the config.xml via a web interface can be found in the [Citrix edocs](#).

5.7.2. Configuring PN-Agent manually on the thin client

1. Click at the register **PN-Agent**.
2. Fill in the fields as follows:

Setting	Explanation
Name	Enter an appropriate name
Server	Enter the IP address or the 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>. For example: http://server-1/Citrix/PNAgent/config.xml http://server1:81 http://server1/MyNfuse/config.xml
Logon	Enables automatically logon to the terminal server (user, password, domain).
Passthrough-logon	During activation process of this option the following values will be sent to the client: <SELUXUSER \$ELUXPASSWORD und \$ELUXDOMAIN >
Kerberos-authorization	The client uses the logon data which was received during ADS authorization of 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.

3. Click at **Apply** and **Finish**.

5.7.3. Advanced PN Agent settings

1. Click at **Advanced**.
2. Fill in the fields as follows:

Setting	Explanation
window properties	Adapt here the resolution, color depths as well as the audio output. Standard applies the settings of the server.
Automatic connection buildup	Choose from three options for using an automatic connection buildup: <ul style="list-style-type: none"> • None (this is the standard setting) • Disconnected • Active and disconnected
time-controlled log off of a PN Agent session	You can schedule logging off from a PN Agent session by a period of time predefined (in seconds), and without the need awaiting the last PN Agent application to close.
Manual log off	Choose from three options for manually logging off: <ul style="list-style-type: none"> • Log off only the server • Log off server and applications • Log off server and disconnect applications

3. Click at **OK**.

5.8. Virtual Desktop

5.8.1. General

Via the tab **Virtual Desktop** you can define Citrix connections with a Citrix XenDesktop Server as VD broker. Name, server and log on data can be modified analogous to an ICA connection.

5.8.2. Configuring a virtual desktop manually on the thin client

1. Click at the tab **Virtual Desktop**.
2. Fill in the fields as follows:

Setting	Explanation
Name	Enter an appropriate name
VD Broker	Choose the desired Broker from the list
Server	Enter the IP address (or the name) of the server
Login data	Enables automatic log in to the terminal server (user, password, domain)
Passthrough Login	Enabling this option sends the following parameters to the client: \$ELUXUSER \$ELUXPASSWORD \$ELUXDOMAIN
Protocol	Default is: RDP, PCOIP, RGS, localvm

3. Click at **Apply** and **Finish**

5.8.3. Advanced PN Agent settings

1. Click at **Advanced**.
2. Fill in the fields as follows:

Setting	Explanation
window properties	Adapt here the resolution, color depths as well as the audio output. Standard applies the settings of the server.
Automatic connection buildup	Choose from three options for using an automatic connection buildup: <ul style="list-style-type: none"> • None (this is the standard setting) • Disconnected • Active and disconnected
time-controlled log off of a PN Agent session	You can schedule logging off from a PN Agent session by a period of time predefined (in seconds), and without the need awaiting the last PN Agent application to close.
Manual log off	Choose from three options for manually logging off: <ul style="list-style-type: none"> • Log off only the server • Log off server and applications • Log off server and disconnect applications

3. Click at **OK**.

6. Applications

6.1. General

In this register you can find all applications which are available. Furthermore, the type of the application is stated as well as an information whether particular applications are active or not.

6.2. Starting an application

1. Click at the particular application which you like to start
Or: Mark with the aid of STRG + click several applications straight away for starting them simultaneously.
2. Click at **Connect**.
Or: Double-click at the application you like to start.

6.3. Disconnecting an application

1. Click at the particular application which you like to disconnect.
Or: Mark with the aid of STRG + click several applications straight away for disconnecting them simultaneously.
2. Click at **Disconnect**.

When the user turns off the device, the remote session and application is still opened on the server. If this session should completely switched off after turning off the device, either the administrator has to define a timeout on the server-side for deactivation of inactive sessions, or the administrator has to log out from the session instead of disconnecting.

7. Troubleshooting

7.1. Troubleshooting for printing

Problem	Reason	Solution
hardware problem		Make sure that the printer is switched on and ready to print also that enough paper is available. No error messages should be stated on the display of the printer.
PostScript-file – PostScript printer (Filter = „None“)	Most local applications – such as the local browser or Acrobat Reader – generate PostScript output. For checking the file format choose from the print dialog "Print to file" and save save to a network drive or to the local directory "tmp". Open the resulting *.prn file via double-click by using the local file browser or vi. If the first line starts with %! the file is PostScript.	For printing of PostScript files with the aid of PostScript printers - please set the filter to "None". In the case your printer prints a lot of ASCII text you have to use a file in PCL-format.
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 only one device is affected, make sure the thin client is working properly – try printing to other printers, accessing network drives, contacting other devices, etc. If it does not work, it is not a printer problem. If it work, see if the print job reaches the printer (most printers have a status line). If it does work, the problem is most likely the file format. (explanations see above).
Communication problem		If the printer owns an IP address, try to communicate with the printer via a local shell on protocol level. If this way is not successful and the problem occurs on several thin clients you maybe have to solve a network based problem.

Problem	Reason	Solution
Performance problem	The thin client saves printers data in the main memory temporarily. About how much capacity commands the main memory in comparison to the file which should be printed? Graphics and color enlarges the file , PostScript files are often much larger than the original file is. In the case your main memory is less big than the file you like to print for example the eLux RP administrators guide, there can be delays in the print especially if the printer is not ready for print.	Check carefully the status of the printer before starting the printing process. Set the time out to "maximum printer response".

7.2. LocalLogin

In the case you have entered faulty values in the **Authorization** you will be locked out. Regardless an administrator is able to change the settings with the help of a manually log in with the user name: **LocalLogin** and the client password: `eLux`, which is the standard password. Now, the settings in the tab **Setup > Security** have to be applied respectively.

7.3. 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 be authenticated at the Scout Enterprise server, i.e. no other Scout server could manage these particular clients. In the initial state the client password is `eLux`.

7.4. Self-administration directly on the client

The opportunity exists that locally on the thin client the administrators rights are active. Thus, all configuration settings can be modified locally on the client and are separated from the management system. However, is this setting not desired, you have to change the client password and make sure that you do not release this new created client password!

1. Press STRG + ALT + HOME/Pos1.
2. Enter the client password.
3. Now you are able to benefit from full access rights of this particular client

7.5. Connecting keyboards and mouses to USB 3.0 Ports

Keyboards and mouses which are connected to USB 3.0 ports during the recovery procedure are not functional. Connect those devices to other USB 2.0 ports. However, in the normal use case with the operating system eLux mouses and keyboards operates also on USB 3.0 ports.

7.6. Safe Boot

In the case that after configuration modification and a reboot process the display is switched off, the screen display is blurred or other errors in graphics occurred, the desired combination of resolution, frequency and color depth is probably not correctly supported by your monitor in use. In such a case please switch off the device immediately. Otherwise the screen display of your monitor can be damaged immensely. Restart the device in Safe Mode and change the faulty settings.

Proceed as follows:

1. Keep ESC key pressed, once the BIOS has been scanned.
2. Enter the client password.
(standard) password by delivery is: `eLux`
3. Change the settings according to your requirements.

Alternatively, instead of using the Safe Boot option you can execute an error finding process via the initial state of the device. In the case of setting back to initial state the thin client is in its original delivery status.



Note

Using the Safe Mode you will have no network support. When you are done with the changes, restart the terminal.

8. Appendix

8.1. 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. The system identifies automatically whether the time server is a Windows based time server or an UNIX server.

Windows time server:

You need the IP address or the name of a device equipped with Windows 2000 (or later). If you select this option the time server must to Simple Network Time Protocol as described in RFC 1305. The Windows Time Server (W32 Time), which is installed by default on computers running with Windows 2000 or later is SNTPv4 compliant. The W32 Time Server starts automatically on computers which are connected to an Active Directory Domain. The Windows NT time server does not support SNTP. For using NT you have to install third party software. In the section "UNIX" you will find detailed information.

For more information regarding SNTP or the Knowledge Base Article 224799 ("Basic Operation of the Windows Time Service"), 216734, ("How to Configure an Authoritative Time Server in Windows 2000"), you will find in the corresponding White Papers and technical information provided by [Microsoft](#).

The forerunner of SNTP is the Network Time Protocol (NTP) as described in RFC 1305. Those two protocols are inter-changeable. Alternatively you can use a NTP-compatible machine. Many UNIX servers are equipped with "xntpd" and are therefore NTP-compatible. The services has to be started. Find more detailed information concerning NTP [here](#). This services operates on port 123 and is executed with the UPD protocol.

UNIX time server:

Enter the IP address or IP name of a UNIX machine running a RFC 868 time server. If you select this option the time server must be conform to Internet Standard RFC 868 ("Time protocol). This type of time service is a standard part of a UNIX machine as part of "inetd". It can be activated in the file: "/etc/inetd.conf"

There are different products available which allow the installation of a time server according to RFC 868 on a Windows server. Also free software is available and can be applied. General information concerning RFC 868 can be found [here](#).

8.2. Port assignments

Below you find a list of TCP/IP ports for eLux and Scout Enterprise. The port numbers are fixed. Exceptions are indicated with a footnote.

eLux

Port	Type	Specification	How to deactivate	Port Type
	ESP	VPN (Cisco)	Uninstall the package Cisco Systems VPN client (cisco_vpnclient)	Incoming
	ESP	VPN (Cisco)	Uninstall the package Cisco Systems VPN Client" (cisco_vpnclient)	Outgoing
21	TCP	Update via FTP control port (dynamic data port)		Outgoing

Port	Type	Specification	How to deactivate	Port Type
22	TCP	SSH applications		Outgoing
23	TCP	3270, 5250, 97801 emulations and telnet sessions		Outgoing
37	TCP	Time Server – RFC 868	Do not configure a time server (Setup > Desktop)	Outgoing
37	UDP	Time Server – RFC 868	Do not configure a time server (Setup > Desktop)	Outgoing
53	TCP	DNS server (Windows)		Outgoing
53	UDP	DNS server		Outgoing
67	UDP	DHCP server	Configure a local IP address (Setup > Network)	Outgoing
68	UDP	DHCP client (or: BootP client)	Configure a local IP address (Setup > Network)	Incoming
69	UDP	TFTP server (only used during a recovery installation)		Outgoing
69	UDP	TFTP server (only used during a recovery installation)		Incoming
80	TCP	Updating by using HTTP (and proxy port, if used)		Outgoing
102	TCP	Emulations for BS2000 mainframes		Outgoing
111	UDP	Port mapper – drive access on NFS servers. Works with NFSD drive access (port 2049) and mountd (random)	Uninstall the FPM drive support (automount) in baseOS	Outgoing
111	TCP	Port mapper – RPC internal use only. Works with nlockd (random)	Uninstall the FPM drive support (automount) in baseOS	Incoming
139	TCP	SMB drive mapping (NetBIOS) and SMB user authentication	Uninstall the FPM drive support (automount) in baseOS and the package User authorisation modules (userauth)	Outgoing
139	UDP	SMB drive mapping (NetBIOS) and SMB user authentication	Uninstall the FPM drive support (automount) in baseOS and the package User authorisation modules (userauth)	Outgoing
161	UDP	SNMP	Uninstall the package net-snmp (snmp)	Incoming
161	UDP	SNMP	Uninstall the package net-snmp (snmp)	Outgoing
162	UDP	SNMPTRAP	Uninstall the package net-snmp (snmp)	Outgoing
177	UDP	XCMCP protocoll		Outgoing
389	TCP	LDAP user authentication		Outgoing
500	UDP	VPN (Cisco)	Uninstall the package Cisco systems VPN client (cisco_vpnclient)	Incoming

Port	Type	Specification	How to deactivate	Port Type
500	UDP	VPN (Cisco)	Uninstall the package Cisco systems VPN client (cisco_vpnclient)	Outgoing
514	TCP	Shell, X11 applications		Outgoing
515	TCP	Printing via LPD	Uninstall the package print environment (CUPS) (baseprinter)	Outgoing
515	TCP	Printing via LPD	Uninstall the package print environment (CUPS) (baseprinter)	Incoming
631	TCP	CUPS (IPP) print client	Uninstall the package "Print Environment (CUPS)" (baseprinter)	Outgoing
631	UDP	CUPS (IPP) Druckclient	Uninstall the package "Print Environment (CUPS)" (baseprinter)	Outgoing
2049	UDP	NFSD drive access NFS	Uninstall the FPM drive support (automount) in baseOS	Outgoing
5681	TCP	Scout Management port		Incoming
5900	TCP	Mirroring eLux desktop	Disable mirroring (Setup > Security) or uninstall the package mirror eLux desktop (mirror)	Incoming
5901	TCP	Mirroring first XDMCP session	Disable mirroring (Setup > Security) or uninstall the package mirror eLux desktop (mirror)	Incoming
5902	TCP	Mirroring second XDMCP session	Disable mirroring (Setup > Security) or uninstall the package mirror eLux desktop (mirror)	Incoming
6000	TCP	Remote X11 application	Deactivate checkbox Setup > Security > Allow remote X11 clients	Incoming
6001	TCP	first XDMCP session		Incoming
6002	TCP	second XDMCP session		Incoming
7100	TCP	Font server ¹		Outgoing
22123	TCP	Scout Enterprise Manager (secure)		Incoming
22123	TCP	Scout Enterprise Manager (secure)		Outgoing
7777	TCP	Scout Manager		Incoming
7777	TCP	Scout Manager		Outgoing
9100	TCP	Direct print to parallel port ²	Deactivate checkbox Setup > Printer > TCP direct print	Incoming
9101	TCP	Direct print to USB port ³	Deactivate checkbox Setup > Printer > TCP direct print	Outgoing

¹The port number can be assigned by the administrator in the eLux control panel (**Setup > Screen > Advanced**).

²The port number can be assigned by the administrator in the eLux control panel (**Setup > Printer**).

³The port number can be assigned by the administrator in the eLux control panel (**Setup > Printer**).

Scout Enterprise Server

Port	Type	Specification	How to deactivate	Port type
7779	TCP	Wake-On-LAN gateway		Outgoing
22123	TCP	Scout Enterprise Manager (secure)		Incoming
22123	TCP	Scout Enterprise Manager (secure)		Outgoing

Scout Enterprise Console

Port	Type	Specification	How to deactivate	Port type
5900	TCP	Mirroring the eLux desktop	Deactivate mirroring via the checkbox (Setup > Security) or uninstall the package mirror eLux desktop (mirror)	Outgoing
5901	TCP	Mirroring of the first XDMCP session	Deactivate mirroring via the checkbox Setup > Security) or uninstall the package mirror eLux desktop (mirror)	Outgoing
5902	TCP	Mirroring of the second XDMCP session	Deactivate mirroring via the checkbox (Setup > Security) or uninstall the package mirror eLux desktop (mirror)	Outgoing

8.3. SNMP

SNMP (Simple Network Management Protocol) is a network protocol which enables the query of status information and provides the definition of configuration parameters.

The software package snmp-5.6.1.1-2 must be installed for the configuration of SNMP .

- Download at www.mylux.com > **eLux Software Packages** > **eLux RP Container** > **Released Packages** > **Add-On** > **snmp-5.6.1.1-2**.



Note

The command line program snmpget is not integrated in the software package. For the query of SNMP status information, please use a software provided by a third party supplier.

- Choose from two methods in order to setup SNMP:
 - Transfer the configuration file snmpd.conf to /setup/snmpd.conf.

Or:

B) Use "**Advanced file entries**" in Scout Enterprise.

Example:

File: /setup/terminal.ini

Section: SNMPD

Entry: rocommunity

Value: secret



Note

If the file /setup/snmpd.conf is present then this configuration method has priority.

If this file is not present the section [snmpd] will be evaluated in the terminal.ini.

If the section [snmpd] is also not available, the read only community "public" will be created.

Then you can test by using the local shell (**XTERM**) as follows:

```
snmpget -v 2c -c public <ip-address> SNMPv2-MIB::sysName.
```

- In the section [SNMPD], you can enter more of the so called **SNMPD Configuration Directives**, for example "syscontact" or "syslocation" in order to adapt the configuration.

The Configuration Directives control:

 - the access rights to the SNMP agent.
 - the information that is supplied by the SNMP agent.
 - the active monitoring of the local system.
 - the extension of the SNMP agent's functionality.

4. For debugging purposes you can enter further commands in the section [SNMP]. These commands are the so called "**SNMP Configuration Directives**". Again using the advanced file entries, you can e.g. set the entry "doDebugging" to the value "1" in the section [SNMP] of the file "terminal.ini".

8.4. SNMPD and SNMP Configuration Directives

The following table refers to the software package snmp-5.6.1.1-2 in combination with eLux.

Further information regarding the use of SNMP can be found [here](#). Detailed information regarding SNMP commands can be found [here](#).

SNMPD Configuration Directives

Application	Command
authtrapenable	1 2 (1 = enable, 2 = disable)
trapsink	host [community] [port]
trap2sink	host [community] [port]
informsink	host [community] [port]
trapsess	[snmpcmdargs] host
trapcommunity	community-string
agentuser	agentuser
agentgroup	groupid
agentaddress	SNMP bind address
syslocation	location
syscontact	contact-name
syssservices	NUMBER
interface	name type speed
com2sec	name source community
group	name v1 v2c usm security
access	name context model level prefix read write notify
view	name type subtree [mask]
rwcommunity	community [default hostname network/bits] [oid]
rocommunity	community [default hostname network/bits] [oid]
rwuser	user [noauth auth priv] [oid]
rouser	user [noauth auth priv] [oid]
swap	min-avail
proc	process-name [max-num] [min-num]
procfix	process-name program [arguments...]
pass	miboid command

Application	Command
pass_persist	miboid program
disk	path [minspace minpercent%]
load	max1 [max5] [max15]
exec	[miboid] name program arguments
sh	[miboid] name program-or-script arguments
execfix	exec-or-sh-name program [arguments...]
file	file [maxsize]
dlmod	module-name module-path
proxy	[snmpcmd args] host oid [remoteoid]
createUser	username (MD5 SHA) passphrase [DES] [passphrase]
master	pecify 'agentx' for AgentX support
engineID	string
engineIDType	num
engineIDNic	string

SNMP Configuration Directives

Application	Command
doDebugging	(1 0)
debugTokens	token[,token...]
logTimestamp	(1 yes true 0 no false)
mibdirs	[mib-dirs]+mib-dirs]
mibs	[mib-tokens]+mib-tokens]
mibfile	mibfile-to-read
showMibErrors	(1 yes true 0 no false)
strictCommentTerm	(1 yes true 0 no false)
mibAllowUnderline	(1 yes true 0 no false)
mibWarningLevel	integerValue
mibReplaceWithLatest	(1 yes true 0 no false)
printNumericEnums	1 yes true 0 no false)
printNumericOids	1 yes true 0 no false)
escapeQuotes	(1 yes true 0 no false)
dontBreakdownOids	(1 yes true 0 no false)
quickPrinting	(1 yes true 0 no false)
numericTimeticks	(1 yes true 0 no false)
suffixPrinting	integerValue

Application	Command
extendedIndex	(1 yes true 0 no false)
printHexText	(1 yes true 0 no false)
dumpPacket	(1 yes true 0 no false)
reverseEncodeBER	(1 yes true 0 no false)
defaultPort	integerValue
defCommunity	string
noTokenWarnings	(1 yes true 0 no false)
noRangeCheck	(1 yes true 0 no false)
defSecurityName	string
defContext	string
defPassphrase	string
defAuthPassphrase	string
defPrivPassphrase	string
defVersion	1 2c 3
defAuthType	MD5 SHA
defPrivType	DES (currently the only possible value)
defSecurityLevel	noAuthNoPriv authNoPriv authPriv

9. Glossary

A

Active Directory

Add-on

Anwendungslizenz

Apps

ARM-Technologie

B

BOOTP

Bootstrap Protokoll Erklärung fehlt

C

Container

Für eLux NG: Ein Container ist ein Verzeichnis auf dem Updateserver, das alle Firmware-Pakete für eine spezifische Hardware enthält. Darüber hinaus ist die Datei container.ini erforderlich. Jedes Thin Client-Modell hat seinen eigenen Container. Die Verwendung der Standardnamen ermöglicht die Einsetzung des Makros CONTAINER. Das IDF muss unter diesem Verzeichnis gespeichert werden. Die Aktualisierung des Containers entsteht durch das Herunterladen neuer Pakete. Für eLux RL: Es gibt nur noch einen Container für alle Hardware-Plattformen! Julian: wird die Erklärung unnötig, wenn es nur noch einen gibt?

Corporate Design Packager

D

Device Control (Lumension)

DHCP

Dynamic Host Configuration Protokoll

DNS

Domain Name Service

E

eBK

eLux Builder Kit. Mit dem eLux Builder Kit können erfahrene Administratoren aus eigener Software ein kundenspezifisches eLux Paket generieren und in das Firmware Image integrieren.

ELIAS

eLux Image Administration Service. ELIAS ist Programm zum Erstellen und Anpassen von Imagedefinitionsdateien, zum Importieren neuer Pakete in einen Container sowie Exportieren von Paketen aus einem Container.

eLux

eLux RL

eLux RP

eLux RT

eLux RT ist die Version von eLux, die auf Prozessoren mit ARM-Technologie läuft.

EPM (eLux Package Module)

Ein eLux Package Module (EPM) ist „upper-level“ Software, die auf dem Client installiert werden kann. Jedes EPM besteht aus einem oder mehreren FPMs. Wenn Sie einen Container in ELIAS öffnen, sehen Sie im Containerbereich eine Liste der EPMs. Ein IDF wird durch Hinzufügen eines EPM zum IDF-Bereich erzeugt.

F

Firmware**Firmware Image****Firmware-Update****Fluendo****FPM**

Ein Feature Package Module (FPM) ist „second-level“ Software, d.h. eine Komponente eines EPM. Klicken Sie auf das Plus-Zeichen neben der Software im IDF-Bereich. Dann werden die im EPM enthaltenen FPMs angezeigt.

FreeRDP**FTP****FTPS****G**

GUI

Graphical User Interface

H

HDX**HTTP****HTTPS**

I

ICA

Independent Computer Architecture

Icon

Ein Icon wird ebenfalls als „Symbol“ oder als „Sinnbild“ bezeichnet. Es benennt ein Piktogramm, welches als Bestandteil einer grafischen Oberfläche einer Software oft eine Datei oder ein Verzeichnis repräsentiert, oder das auf einer Schaltfläche einen Befehl an die Software kennzeichnet.

L

Linux

M

MSN

Multiple Subscriber Number, Mehrfachrufnummer am ISDN-Geräteanschluss

MyTerm

O

OU

Organization Unit oder Organisationseinheit in der Scout Enterprise Hierarchie

P

PING

Hilfsprogramm zur Überprüfung, ob Zugriff auf eine IP-Adresse besteht oder nicht.

Powerterm

PUMA

Package Update Management Agent. PUMA ist ein online Service zur voll automatisierten Aktualisierung, der in ELIAS individuell definierten Pakete.

R

RDP

Remote Desktop Protocol

S

Scout Enterprise

Scout Enterprise ist das Management Tool für umfangreiche unternehmensweite Installationen von Thin Clients oder PCs mit dem Betriebssystem eLux® NG, eLux® RL , eLux® RP oder eLux® RT oder Windows CE, XPe/WES7. Das Programm benötigt nur wenig Platz auf einem Standard-PC oder Server. Scout Enterprise bietet das komplette Management auf vier Ebenen – Firmware, Benutzereinstellungen, Anwendungen und Onlinekommandos – und die Zuweisung zu den einzelnen Clients ist sehr komfortabel und übersichtlich. Mit der Datenbankunterstützung bietet Scout Enterprise die Standardschnittstelle für Datenhaltung, Backup und Recovery sind problemlos, Skalierbarkeit und Performance bestmöglich. Domain Benutzer können als Administratoren eingerichtet werden. Berechtigungen, wie z.B. Zugriff auf bestimmte Standorte, können individuell entsprechend den Verantwortungsbereichen zugewiesen werden.

Scout Enterprise Konsole

Scout Enterprise Konsole ist die Schnittstelle, um Änderungen im Scout Server vorzunehmen. Diese Komponente kann auf demselben System oder einem entfernten Rechner installiert werden. Aus Sicherheitsgründen sind zwei Sitzungen verfügbar: Administrator, der die Scout Konfiguration ändern kann, und Gast, der als Helpdesk fungieren und Lizenzen eingeben kann. Scout Enterprise Konsole kann auf mehreren Systemen installiert werden.

Scout Enterprise Server

Die zentrale Komponente ist eine Datenbank, die über die Informationen der aktuell verwalteten Geräte verfügt, über deren Konfiguration, zur Ausführung geplante Kommandos, Update-Historie und Lizenzen. Im Allgemeinen gibt es diese Datenbank einmal in einem Netzwerk oder einem Netzwerksegment. Der Scout Server Dienst verwendet die Datenbank und ist immer aktiv. Multi-Administratorsitzungen werden unterstützt.

SNMP

Simple Network Management Protocol

SoC-Technologie**Subscription****U**

Unified Communication**UTC**

Coordinated Universal Time

V

VDI Communicator (Avaya)

VIA

VNC

Virtual Network Computing

VoIP

X

x-86 Technologie

XDMCP

X Display Manager Control Protocol