WirelessProfessional WLZent04

Operating instructions

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WirelessProfessional WLZent04

Installation instructions

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1 General information

These operating instructions are intended for the following target group: Qualified electrician in accordance with DIN VDE 0105 and authorised specialist personnel. It explains how to use the monitoring system safely and correctly. The general safety regulations and local accident prevention regulations applicable to the area of use, as well as instructions and safety information, must be observed. The operating instructions, in particular the chapter on safety, must be read in full before starting any work on the system.

These operating instructions have been compiled in accordance with the applicable regulations. These operating instructions must be kept nearby at all times and freely accessible to all persons working on and with the system.

In addition, all laws, standards and guidelines of the respective country in which the system is installed and operated must be observed.

The manufacturer accepts no warranty or liability for damage or consequential damage arising from:

- improper use
- Unauthorised or improper modification of the system's connections, settings or programming
- Failure to comply with regulations and rules of conduct for safe operation

Packaging materials are not rubbish, but recyclable materials that should be reused or recycled.

Batteries and electronic components contain substances that can cause damage to health and the environment if not disposed of properly. National guidelines and regulations for the proper disposal of used batteries and electronic components must be observed!

2 Introduction

The WirelessProfessional WLZent04 is an industrial PC with touch display, integrated power supply and WirelessProfessional USB coordinator, as well as USB and network sockets. A Linux operating system, remote access software and WirelessProfessional software are installed on the industrial PC.

The WirelessProfessional WLZent04 is intended for use as a central testing device in the WirelessProfessional system. The touch display allows operation directly on the device. The WLZent04 meets the requirements for an automatic testing system in accordance with EN 62034.

Note: The operating instructions for the WLZENT04 and the WirelessProfessional software are stored on the device under **/media/rp/WLPROSAFE/manual** and can be accessed via the file explorer.

Alternatively, the manual can be downloaded as a PDF file from the WLZENT04 product page on the manufacturer's website https://www.rp-group.com/en.

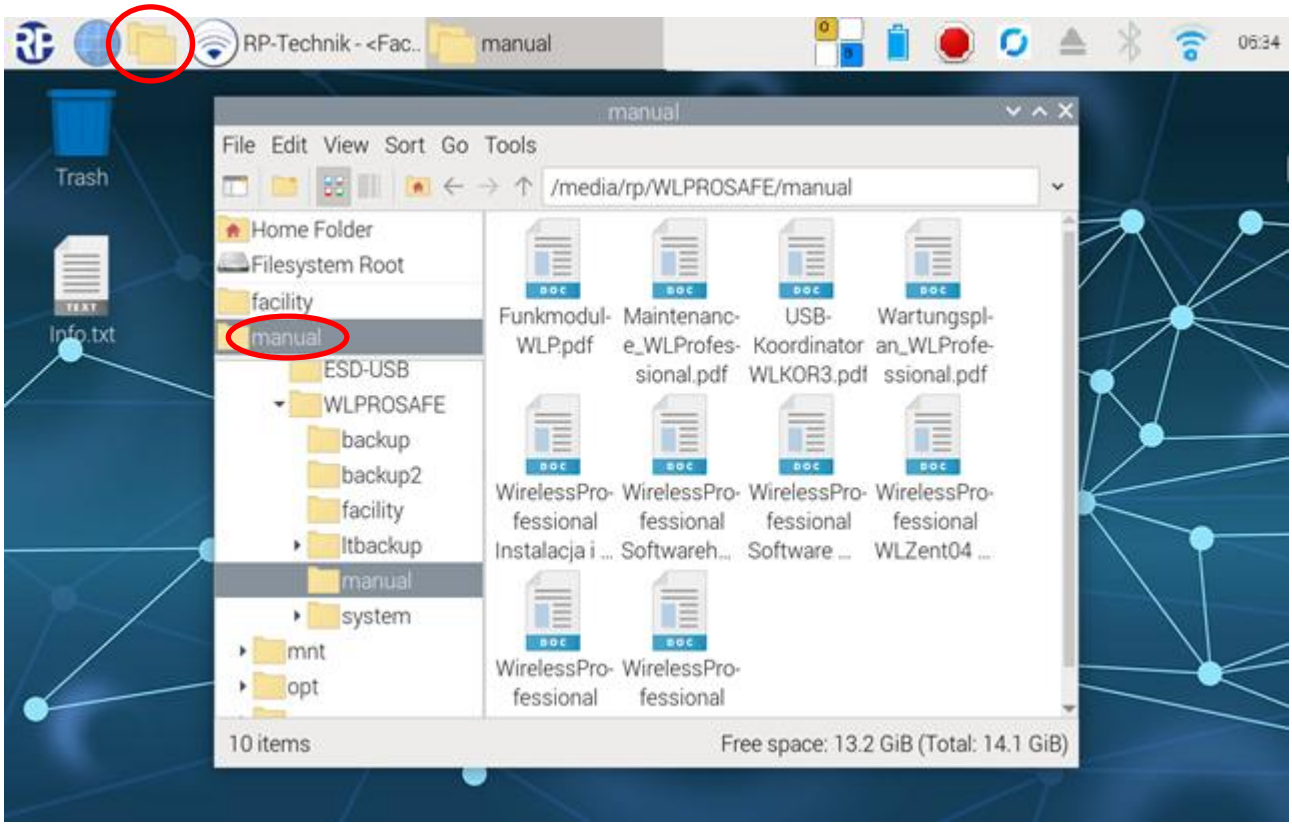


Figure 1 Location of the operating instructions

3 Technical data

Processor chipset	ARM Cortex-A76 Quad
Processor clock speed	2.4 GHz
Working memory	4GB SDRAM
LAN	Gigabit Ethernet
Power consumption	max. 17W, PF 0.52
Degree of protection	Protection class 1
Dimensions	H 217.02 mm x W 287.04 mm x D 67 mm incl. wall bracket
Type of installation	Wall mounting
Ambient temperature	15°C to 30°C
Weight	Max. 1.8 kg (with optional UPS unit)

4 Structure

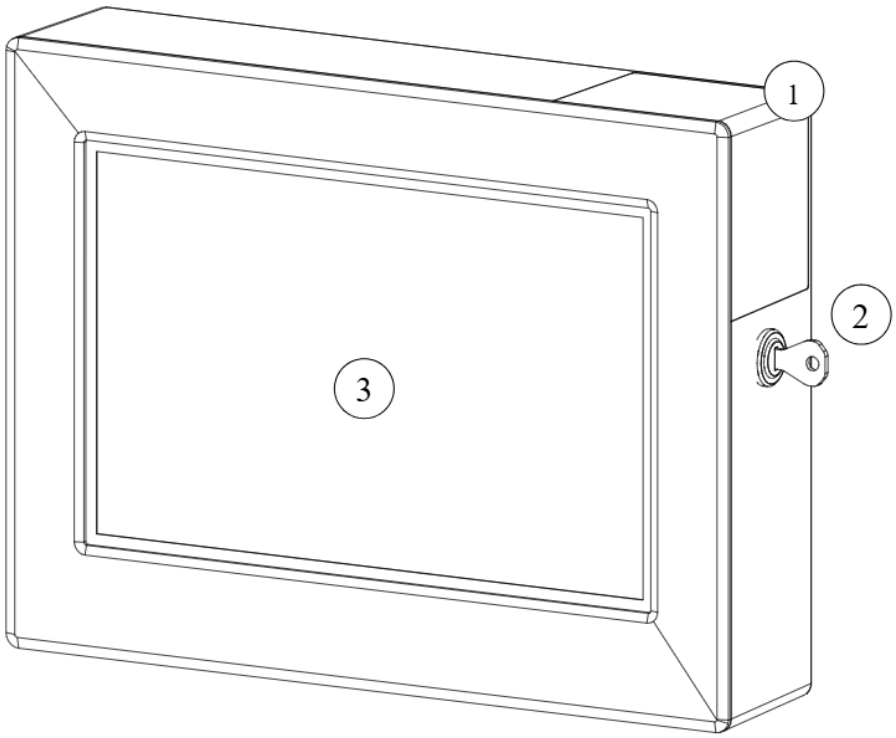


Figure 2 WLZent04 view from right

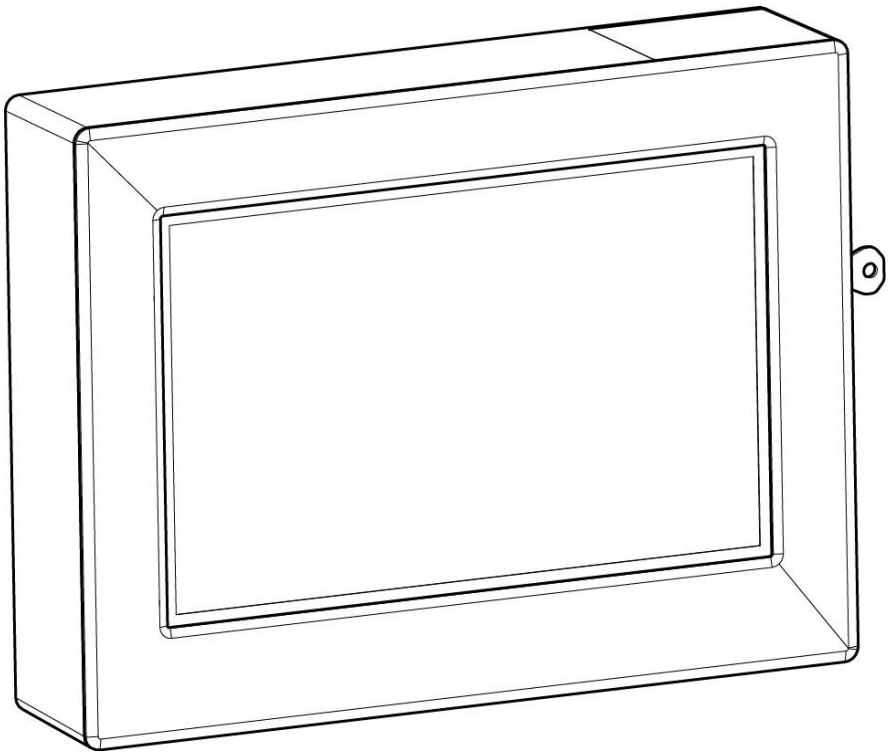


Figure 3 WLZent04 view from left

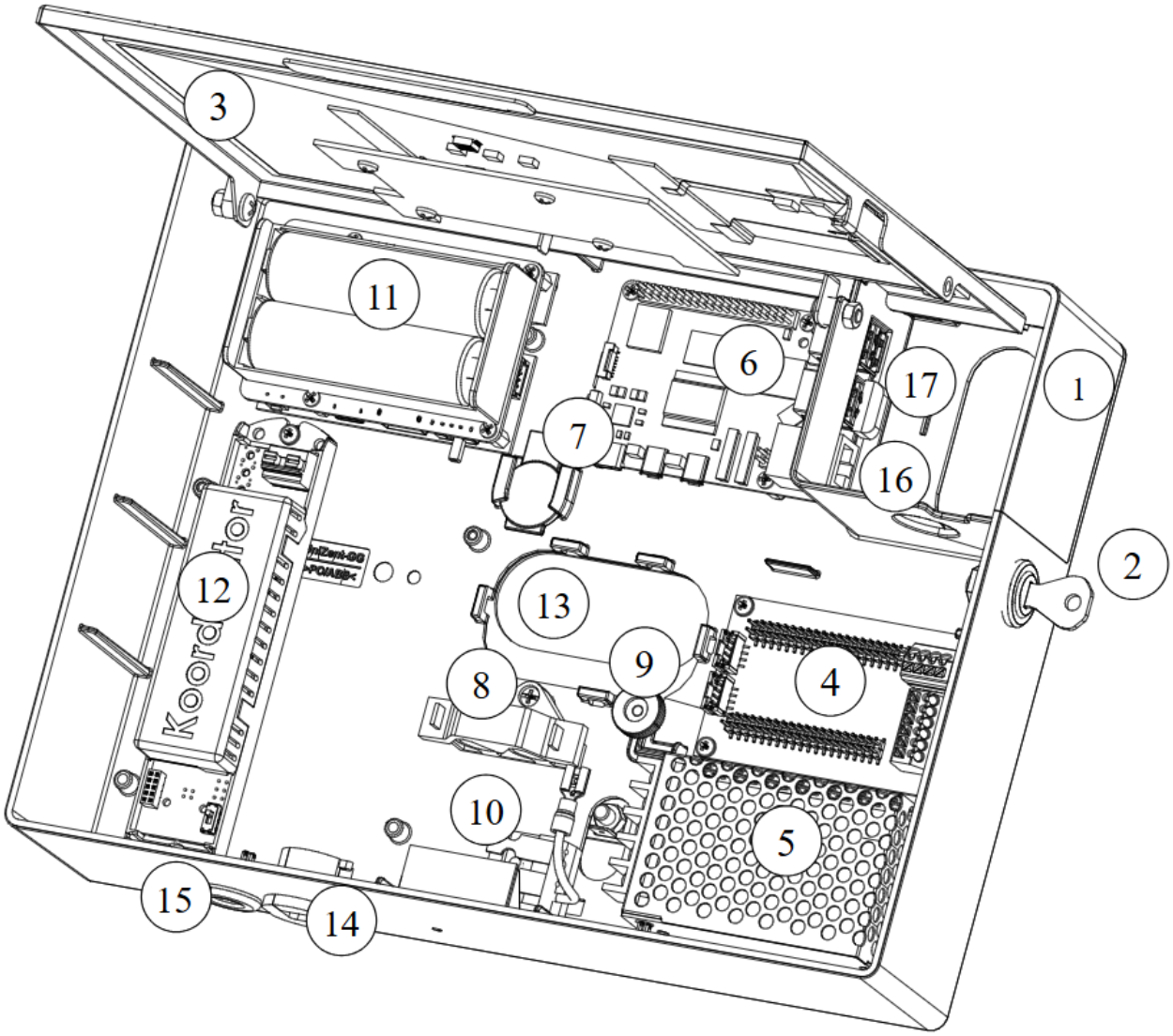


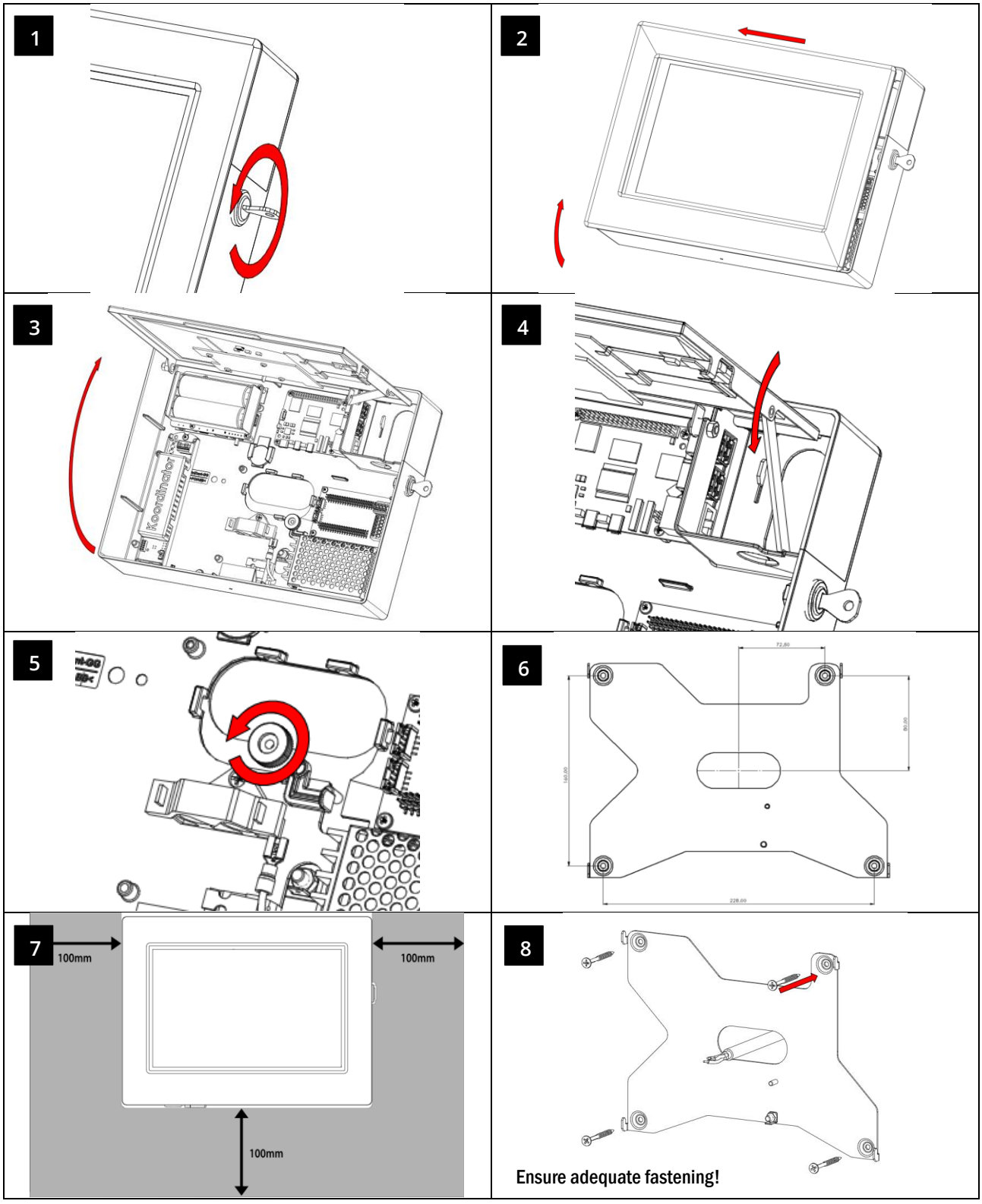
Figure 4 WLZent04, internal structure

1	Protective cover	10	Mains connection terminal
2	Housing lock	11	optional UPS unit
3	Touch display	12	Wireless coordinator
4	Distribution PCB	13	Rear cable entry
5	Power supply unit	14	Optional side cable entry (power supply)
6	Processor board with active cooling	15	Optional side cable entry (fault signal contact)
7	RTC battery	16	Network socket
8	Internal strain relief	17	USB port (3x free, 1x internal backup USB stick)
9	Knurled nut with locking bracket		

Important: The internal backup USB stick (17, see Figure 4 WLZent04, internal structure) may only be removed when the WLZent04 is powered down. The WLZent04 function is not available without a backup USB stick.

5 Assembly instructions

The WirelessProfessional WLZent04 is a device designed for wall mounting.
For ergonomic reasons, installation at a height of 1.40 m (± 0.20 m) is recommended (centre of screen).



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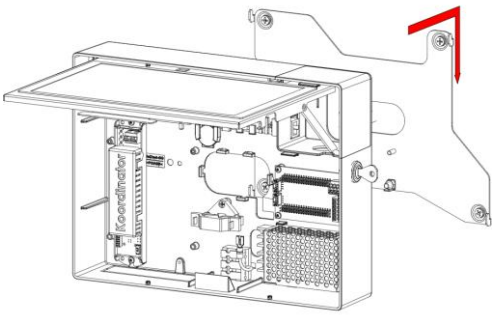

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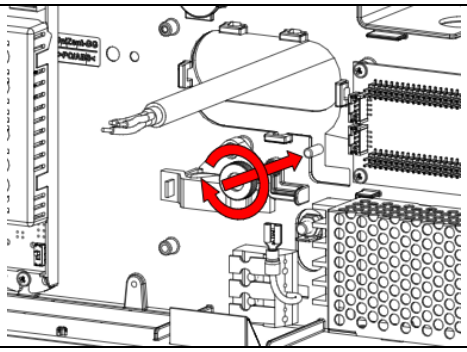

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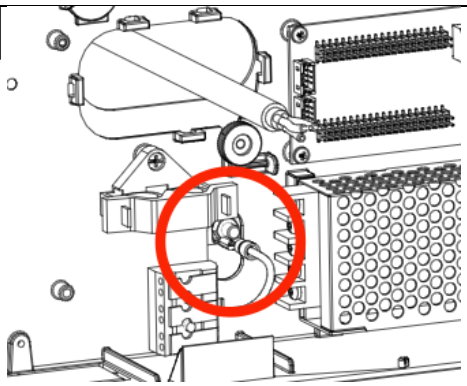

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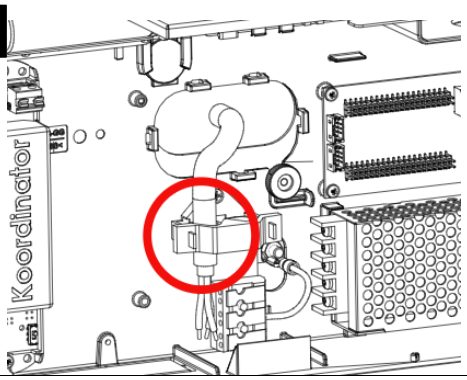

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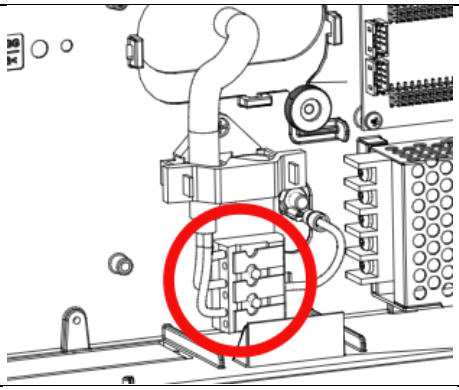

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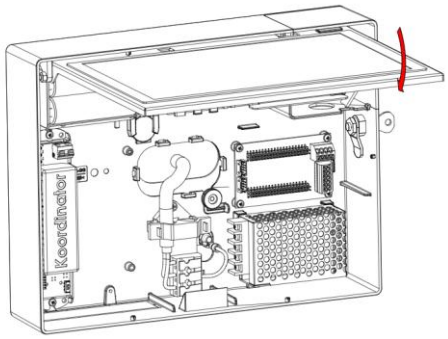

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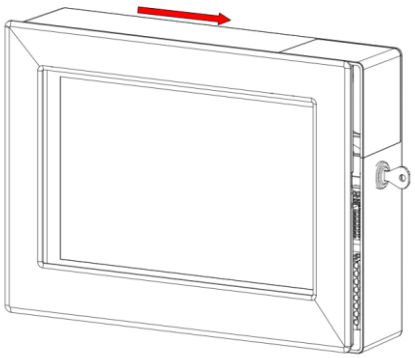

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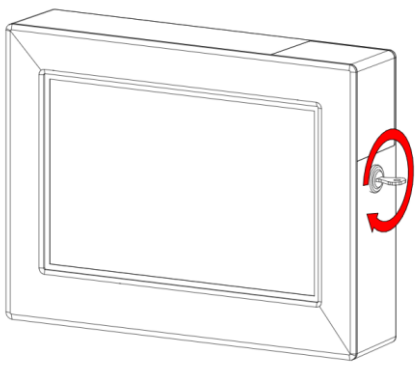


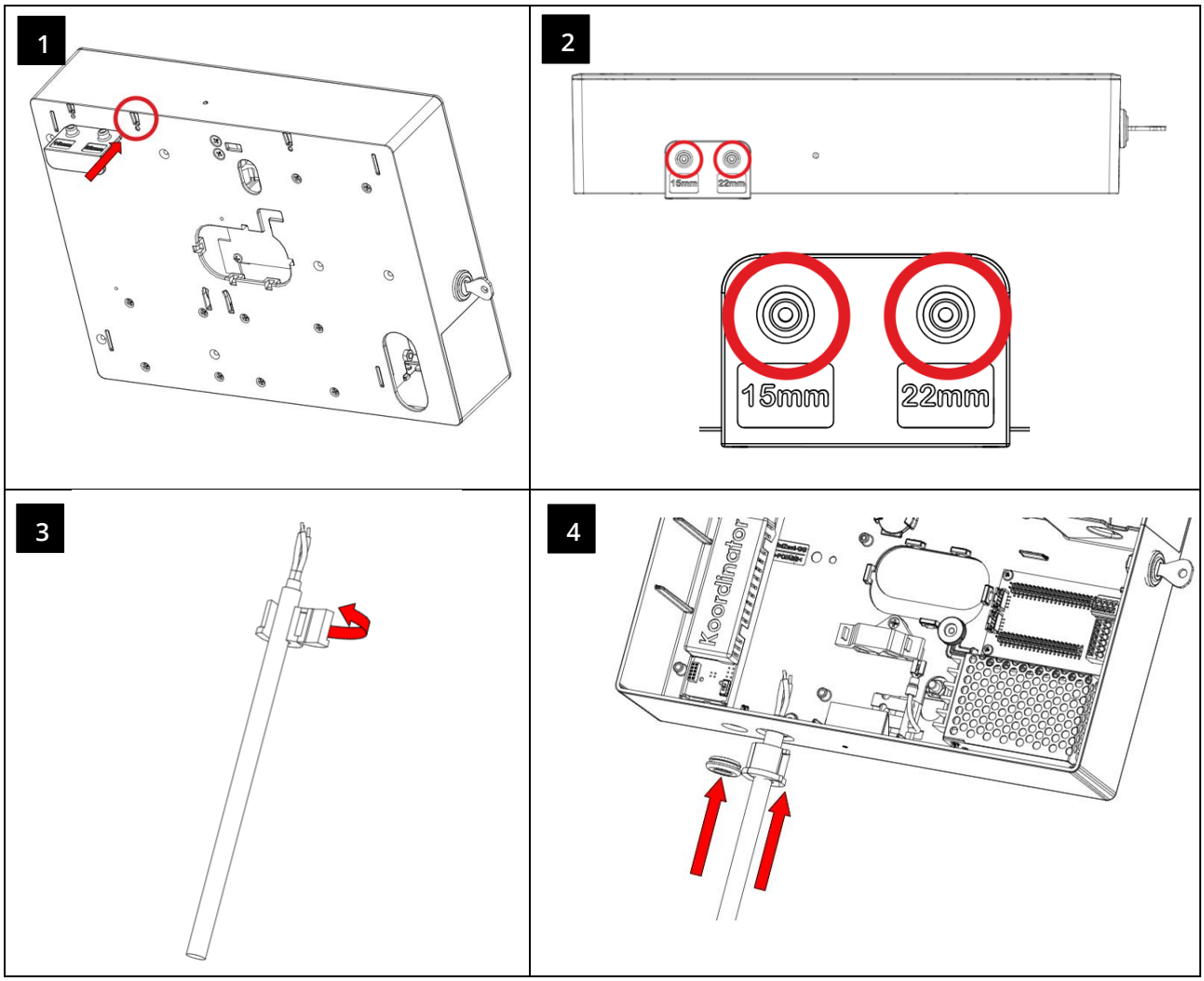
Once installation is complete, remove the protective film from the display.

For optional lateral power supply connection or for a fault signal contact, one hole must be drilled in the underside of the housing. To do this, place the marking template supplied and mark the centre point of the hole. The template is then removed and the marked centre point is drilled out with a drill.

The hole for the fault indicator contact is located on the left side of the marking template and requires a **15 mm** hole.

The hole for the power supply is located on the right-hand side of the marking template and requires a **22 mm** hole.

Note: The supplied cable entry with strain relief must be used.



6 Commissioning

6.1 First switch-on

The WirelessProfessional WLZent04 can be connected directly to the sub-distribution board using a permanently installed 3-core connection cable or to a power socket using the mains connection cable supplied To do this, feed the cable into the housing and through the existing strain relief (8, see Figure 4 WLZent04, internal structure) to the 3-pole terminal (10, see Figure 4 WLZent04, internal structure). After connecting the cable, close the strain relief.

As soon as power is supplied to the WLZent04, the WirelessProfessional WLZent04 boots up and starts the WirelessProfessional software automatically.

If the device has an integrated UPS unit (11, see Figure 4 WLZent04, internal structure), slide the toggle switch to the left to the “ON” position.

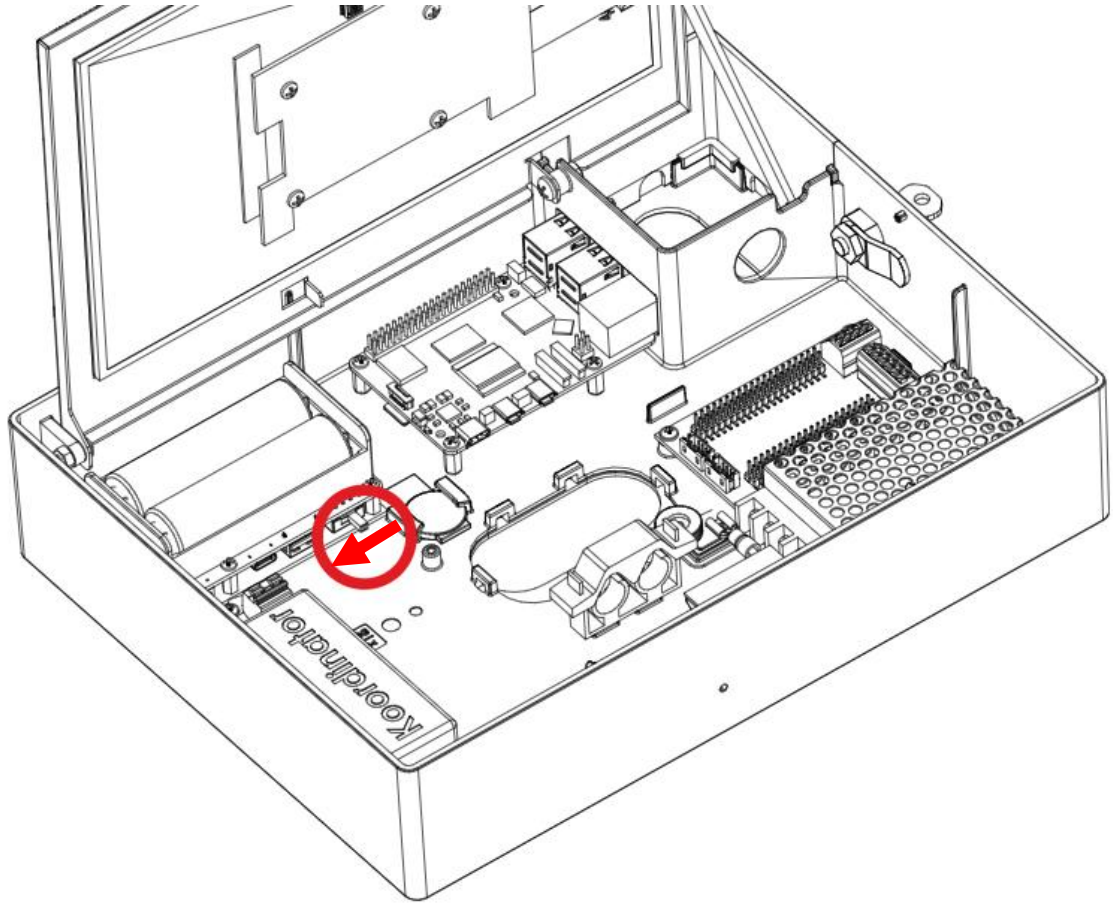


Figure 5 Position of the slide switch on the UPS unit

The device is now ready for operation, and the WirelessProfessional software interface is displayed in maximised window view on the touch display.

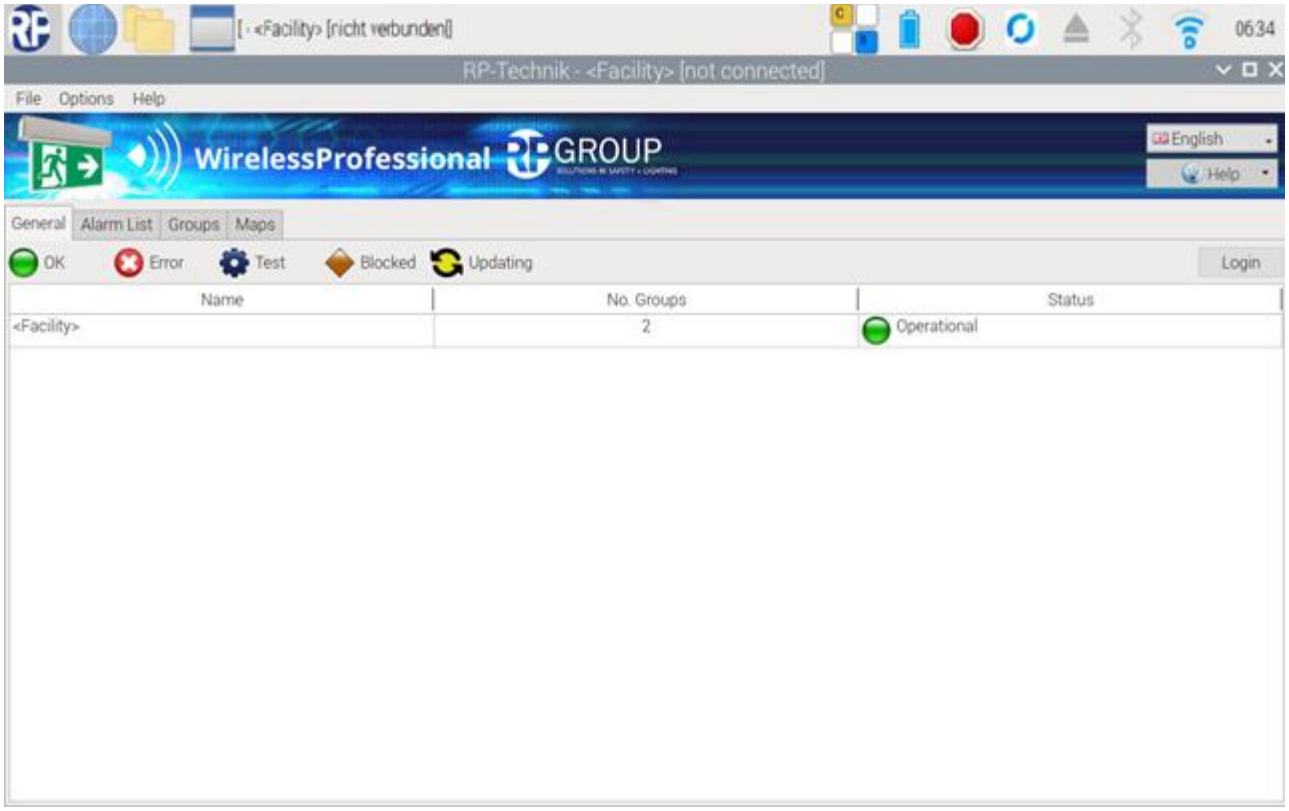


Figure 6 WirelessProfessional Software

The WirelessProfessional software must be commissioned in accordance with the software manual.

The software manual is available at **/media/rp/WLPROSAFE/manual,** see Figure 1 Location of the operating instructions

Note: An externally connected keyboard is recommended for commissioning the WirelessProfessional software.

Important: After commissioning, it is recommended to perform a manual backup to an external storage medium (see chapter 16.2 Manual backup).

6.2 System behaviour in the event of a power failure

6.2.1 Without integrated UPS unit

This version of the WirelessProfessional WLZent04 does not have a battery that maintains operation in the event of a power failure. The WirelessProfessional WLZent04 will therefore be switched off. The monitoring function, control options and automatic checks will then be unavailable for the duration of the power failure.

6.2.2 With integrated UPS unit (optional accessory)

This version of the WirelessProfessional WLZent04 has an integrated battery, which allows it to continue operating for a limited time in the event of a power failure. The WLZent04 shuts down automatically when the battery capacity is exhausted.

Note: The UPS unit can supply the WLZent04 with power for up to 60 minutes in the event of a power failure.

6.3 System behaviour when the mains power returns

When the network is restored, the WirelessProfessional WLZent04 boots up and the WirelessProfessional software starts automatically. It is not necessary to start the WirelessProfessional WLZent04 manually.

6.4 Restart

If it is necessary to restart the WirelessProfessional WLZent04, this can be triggered either via software or hardware.

6.4.1 Software restart

The operating system of the WirelessProfessional WLZent04 can be restarted via the graphical user interface. To restart, select *Start menu -> System tools -> Restart*.

Figure 7 Start menu -> System tools -> Restart

If the start menu is not displayed, the WirelessProfessional software is running in full-screen mode. Use the Alt + Enter key combination or the help menu in the top right-hand corner to switch between full-screen mode and window mode in the WirelessProfessional software.

Important: A password is required to exit full-screen mode. The installer password for the WirelessProfessional software must be entered.

6.4.2 Hardware restart

If a restart via the operating system is not possible, a hard reset is also an option. The hard reset is performed by pressing and holding the reset button until the green LED next to the reset button changes to red (see Figure 8 and Figure 9 below). Release the reset button and press it again briefly. The LED should change from red back to green. The reset button is not accessible when the housing is closed. The housing must be opened in order to press the reset button.

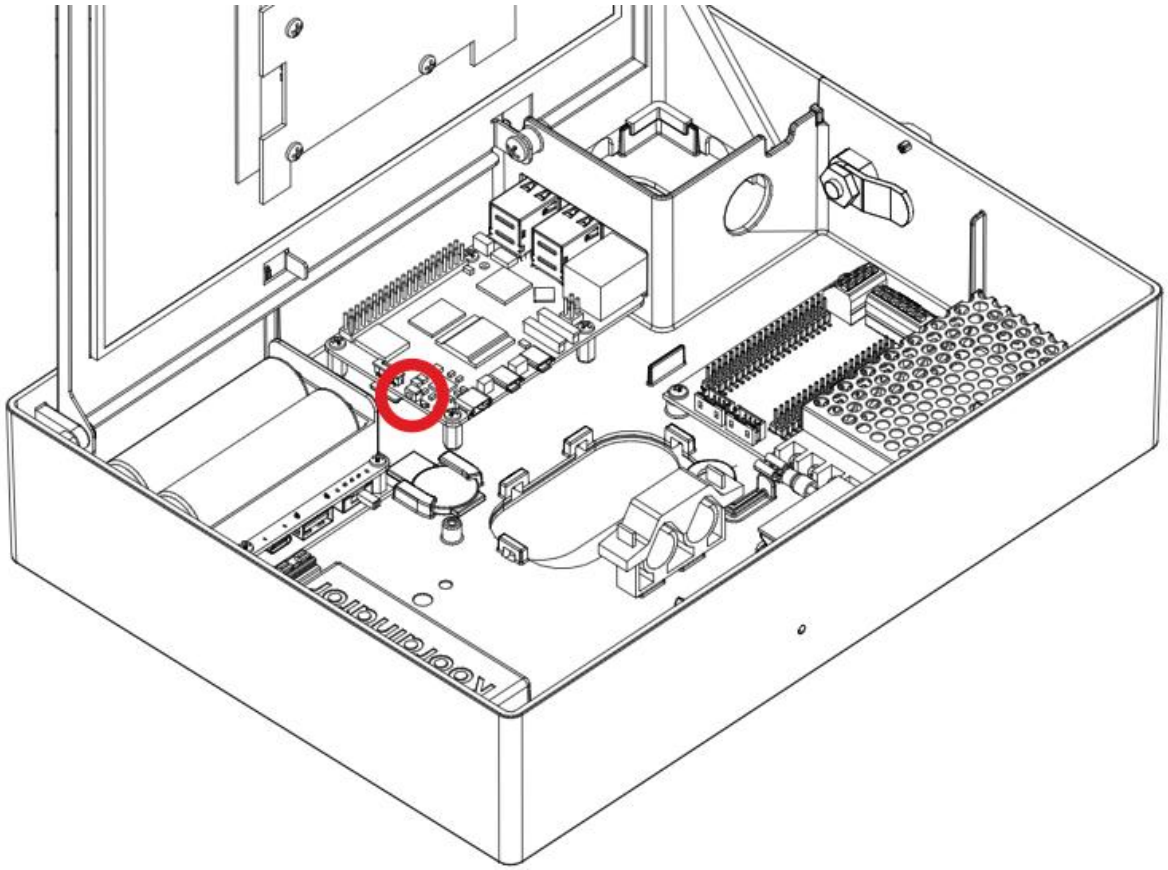


Figure 8 Position of the Hard-Reset button

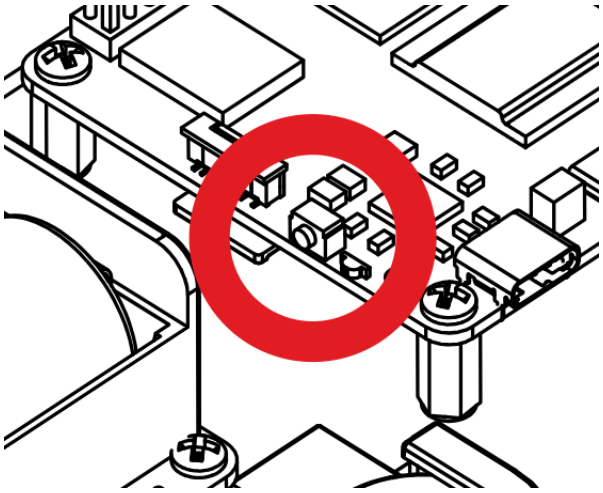


Figure 9 Hard-Reset button

6.5 Shutdown

To prevent data loss when switching off the WirelessProfessional WLZent04, the operating system must be shut down properly. The device is shut down via the Start menu entry *Start menu->System tools->Shut down*. This closes the WirelessProfessional software and transfers the latest data to the internal backup USB stick.

Figure 10 Start menu -> System tools -> Shut down

If the device has an integrated UPS unit (11, see Figure 4 WLZent04, internal structure), open the WLZENT04 housing and move the slide switch to the "OFF" position on the right.

The WirelessProfessional WLZent04 can be disconnected from the power supply 5 seconds after the red LED on the WLZent04 processor board (6, see Figure 4 WLZent04, internal structure) has appeared. The processor board can only be seen when the WLZENT04 housing is open.

6.6 Logout

The Start menu item Start menu-> Log off provides another option for shutting down or restarting WLZent04.

Figure 11 Start menu -> Logout

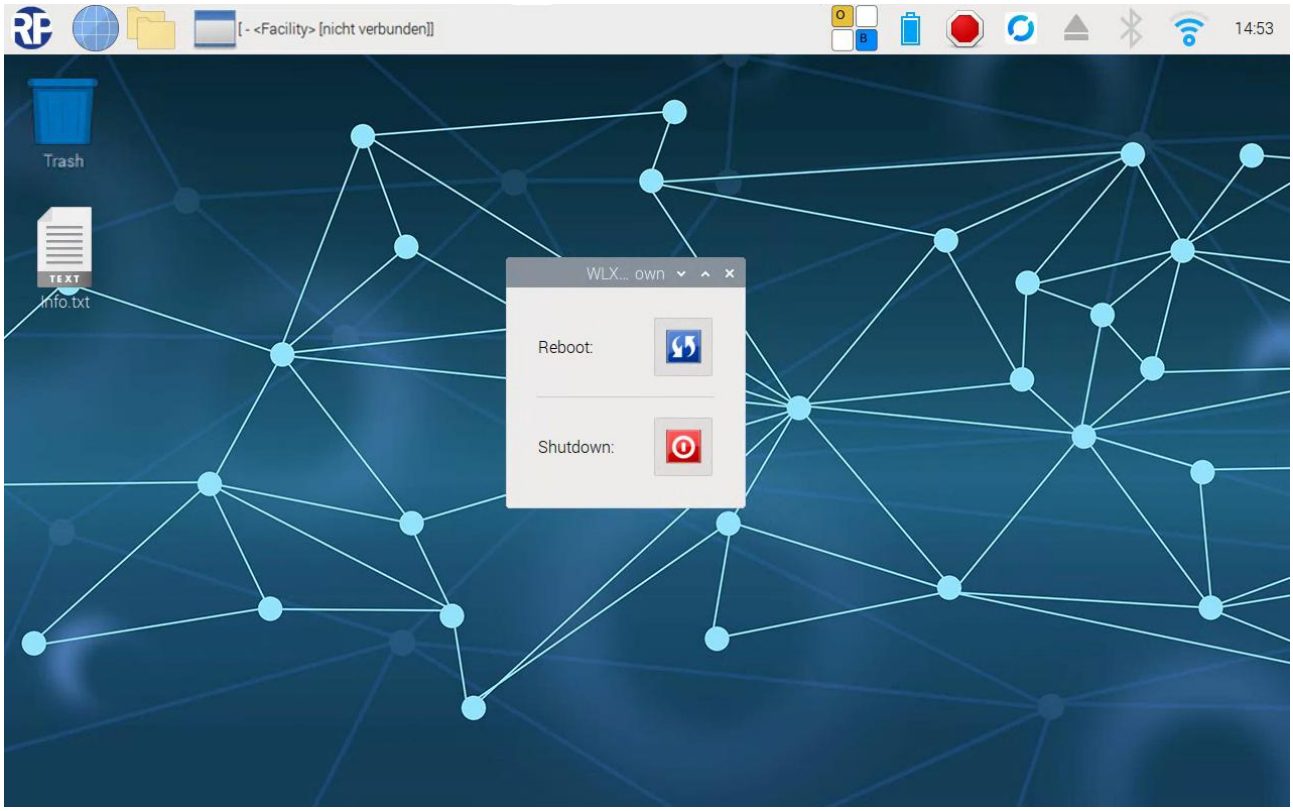


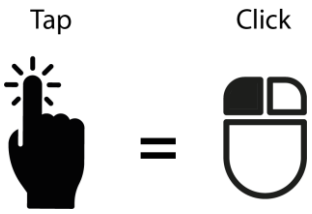
Figure 12 Reebot Shutdown

7 Operation

The WirelessProfessional WLZent04 has a touch display and canbe operated with your finger or a suitable stylus. An on-screen keyboard is available for text input. Operation via a mouse or keyboard connected via USB is also possible.

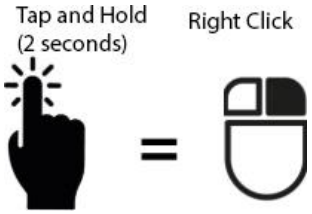
7.1 Touch operation

Tapping the touch display corresponds to a left click with a conventional mouse. Desktop icons are simply tapped to launch the programs behind them. No double-clicking is necessary in the operating system.



Dragging your finger from one point to another will mark an area. This is equivalent to the selection function on a conventional mouse.

To perform a right-click, tap the touch screen with 1 finger and hold for at least 2 seconds. If a context menu is available for the icon or area, it will open as soon as your finger is removed.



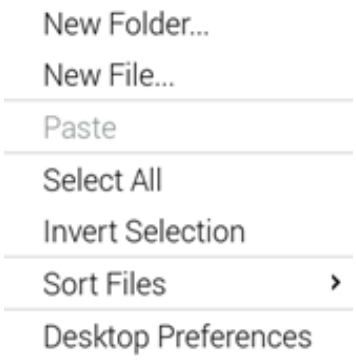
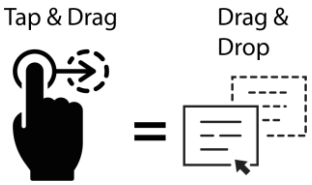


Figure 13 Context menu after right-clicking on the desktop

To use the drag and drop function, first tap on an object, then tap and drag it to move it.



7.2 On-screen keyboard

The on-screen keyboard can be accessed via the icon in the taskbar. Tapping the icon opens a context menu in which you must select 'Show Onboard' to display the keyboard. The keyboard corresponds to the layout of the operating system's language settings and does not have a numeric keypad in the initial view.

If a window with an input field is opened in the WirelessProfessional software, e.g. for entering a password, or if you click in a text field, the on-screen keyboard opens automatically. When the window with the input field is closed again, the on-screen keyboard also closes automatically. Some maximised windows, such as the WirelessProfessional software or the web browser, are minimised when the on-screen keyboard is opened. Some windows are behind the keyboard and must be moved in order to see the input field.

Note: The on-screen keyboard does not open automatically in the Linux operating system when you tap or click on a text field, such as a password entry field.

Figure 14 On-screen keyboard

The '123' button can be used to switch the view, displaying function keys. Tapping the 'ABC' area again switches back to the previous view.

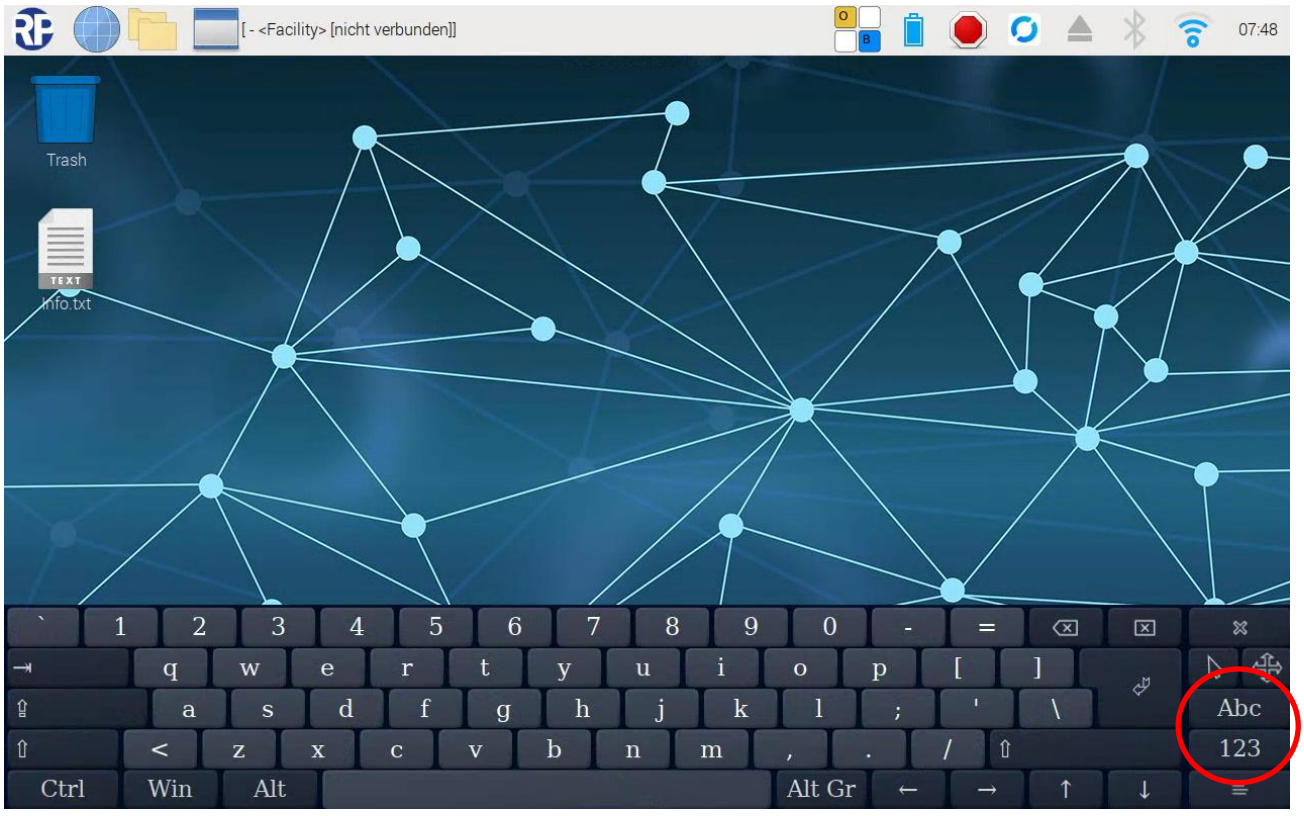


Figure 15 On-screen keyboard function keys

Note: An externally connected keyboard is recommended for commissioning the WirelessProfessional software.

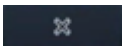
The control cross button located above the 'Abc' button is used to move the keyboard around on the screen. This may be necessary if text input fields are obscured by the keyboard. The button marked 'x'  above the control cross button closes the on-screen keyboard.

Figure 16 On-screen keyboard Function keys

The on-screen keyboard can also be closed using the icon in the taskbar. Tapping the icon opens a context menu in which you must select 'Hide Onboard' to close the keyboard.

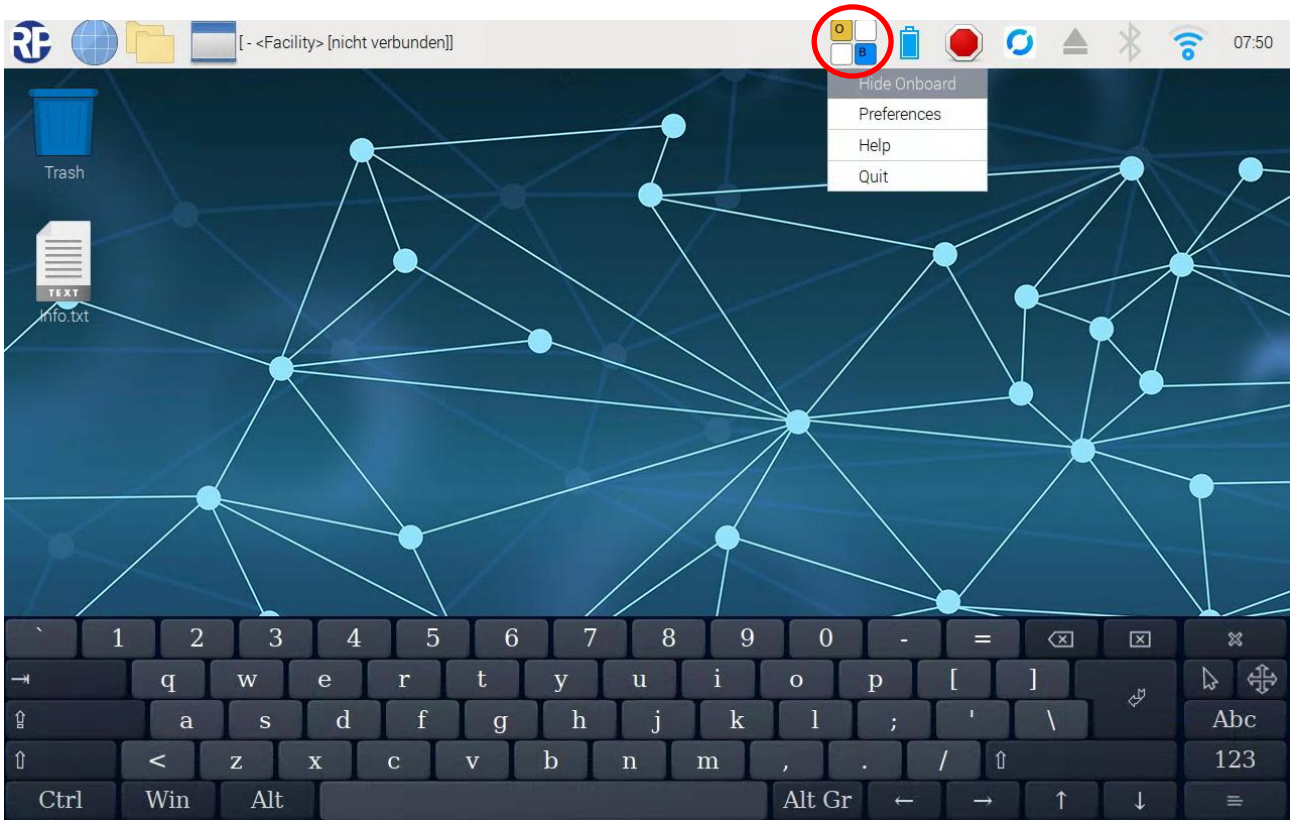


Figure 17 Close on-screen keyboard

Note: An externally connected keyboard is recommended for setting up the WirelessProfessional software.

7.3 Using a USB memory stick on the WLZent04

USB sticks, USB card readers or input devices formatted in FAT format can be used on the USB-port. Building plans can be transferred to WLZent04 in this way, or manual data backups can be performed.

Ejecting via software must be performed using a taskbar icon ( ).

Important: External USB sticks should always be ejected (deactivated) by the software first and only then removed, as otherwise data loss may occur.

7.3.1 Connecting a USB memory stick

Inserting an external USB stick opens the removable media window. Tapping or clicking the "OK" button opens the file explorer.

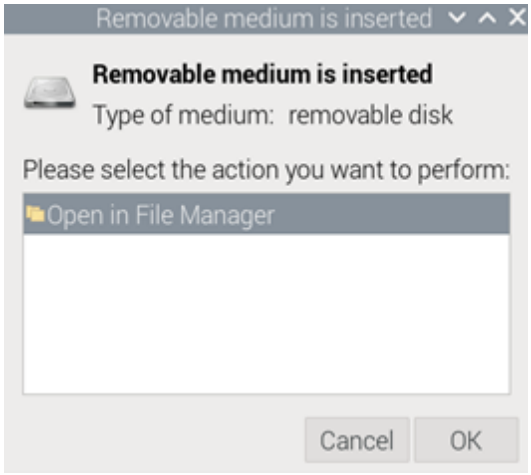


Figure 18 Confirming storage medium

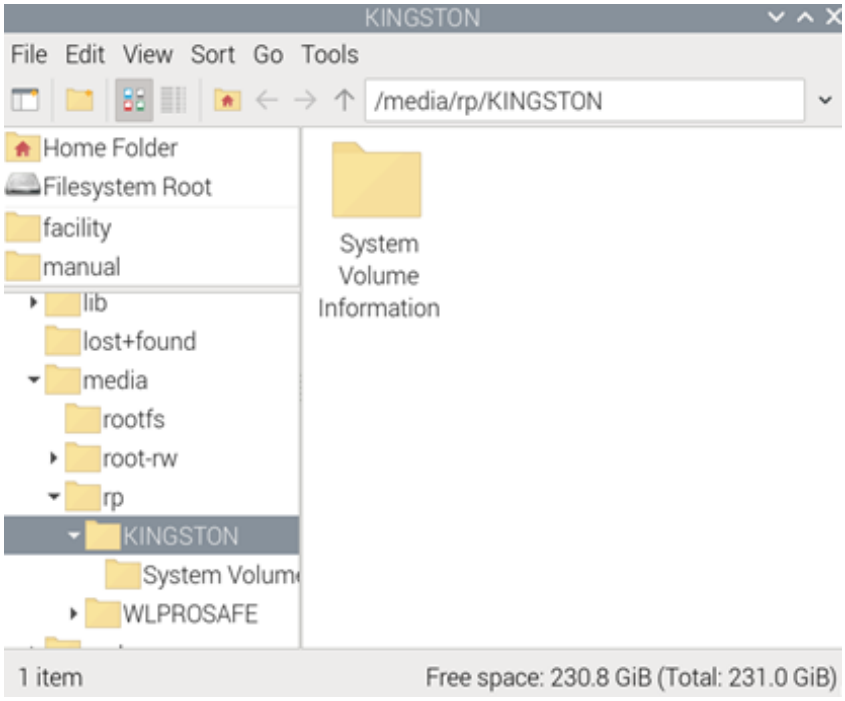


Figure 19 Storage medium File Explorer view

7.3.2 Storing building plans on WLZent04

The “Facility” folder in the WirelessProfessional WLZent04 storage system is intended for storing building plans. The “Facility” folder is located on the internal backup USB stick and can be accessed via **/media/rp/WLPROSAFE/facility**.

Building plans can be copied directly to WLZent04 from a connected USB storage device into the “Facility” folder. Storing building plans outside the designated storage location may impair the functionality of the WirelessProfessional WLZent04, as this unnecessarily occupies working memory. This can result in the WirelessProfessional software lacking the necessary working resources.

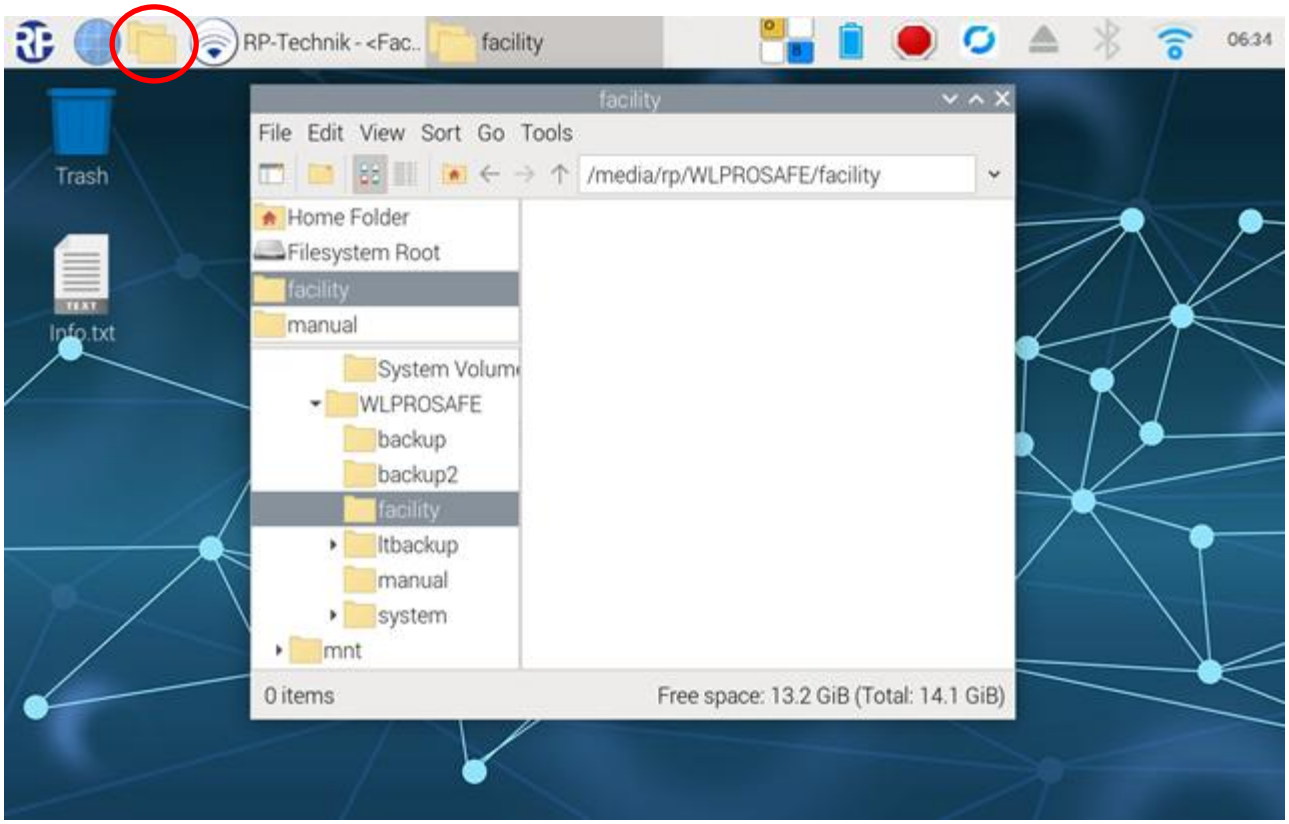


Figure 20 Storage location for building plans

7.3.3 Ejecting the USB stick via the taskbar icon

Clicking opens a context menu. To eject the external USB stick, click on the eject symbol .

Figure 21 Ejecting storage medium

7.4 Meaning of the LED signals in the housing

There is a signal LED on the processor board with active cooling (6, (see Figure 4 WLZent04, internal structure).

Colour	State	Meaning
Green	On	The WLZent04 processor board is powered up and actively operating
Red	On	The WLZent04 processor board is powered up and has been shut down

There is a signal LED on the optional UPS unit (11, see Figure 4 WLZent04, internal structure).

Colour	State	Meaning
light blue	On	UPS is charging or discharging
light blue	Off	UPS is fully charged or deeply discharged

There are 3 signal LEDs on the coordinator (12, see Figure 4 WLZent04, internal structure).

Colour	State	Meaning
Green	Flashing	The WirelessProfessional software is not running
Green	On	The WirelessProfessional software has been launched and is communicating with the device
Blue	Flashing	Radio traffic display

8 Tamper-proof operating system

The WirelessProfessional WLZent04 is equipped with an operating system that is set to read-only mode by default.

Important: This means that any changes made to the operating system will be lost after a restart.

In order to make permanent changes to the operating system, the operating system must first be set to read-write mode. (see chapter 9 MaintenanceMode)

To indicate which mode is currently being used by the operating system, different icons are displayed in the taskbar at the top of the screen.

Mode	Taskbar icon	Meaning
Read-Only		Changes to the operating system will be lost when restarting
Read-Write		Changes to the operating system are permanent

Note: Only one of the two icons is displayed at any given time.

Figure 22 Taskbar in Read-Only mode

Figure 23 Taskbar in Read-Write mode

Note: Switching between read-write and read-only modes ensures the operational and tamper-proof security of the system.

9 MaintenanceMode

In MaintenanceMode, permanent settings can be made to the operating system, such as permanently connecting to a Wi-Fi network.

Important: MaintenanceMode should only be used by trained personnel. Incorrect operation in maintenance mode may result in the WirelessProfessional WLZent04 becoming inoperable.

9.1 Starting MaintenanceMode

MaintenanceMode is started via *Start menu->System tools->MaintenanceMode*.

Note: Before switching to MaintenanceMode, the data in the WirelessProfessional software must be saved by clicking the "Save system" button or by exiting the WirelessProfessional software.

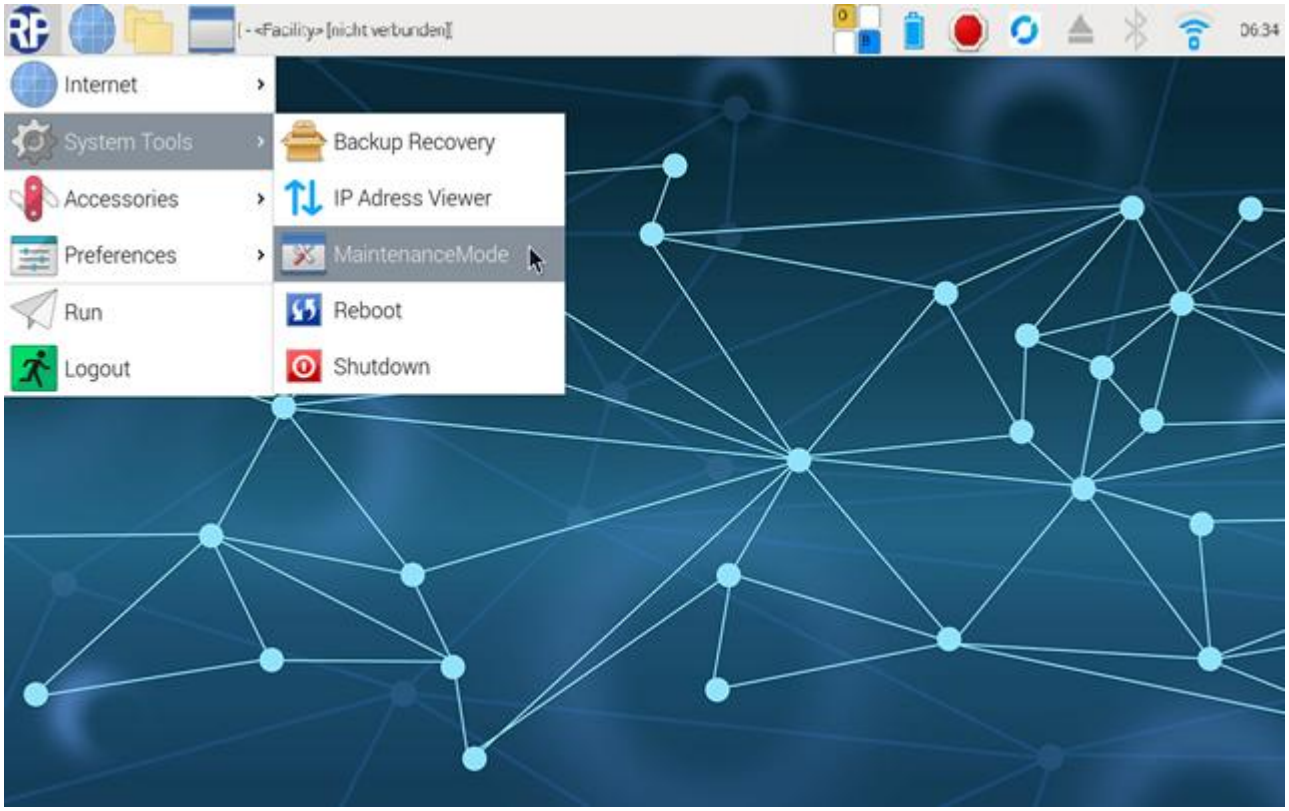


Figure 24 Start menu -> System tools -> MaintenanceMode

After selecting the menu item, an “Info” window opens. By tapping or clicking on the “OK” button, the device switches to maintenance mode.

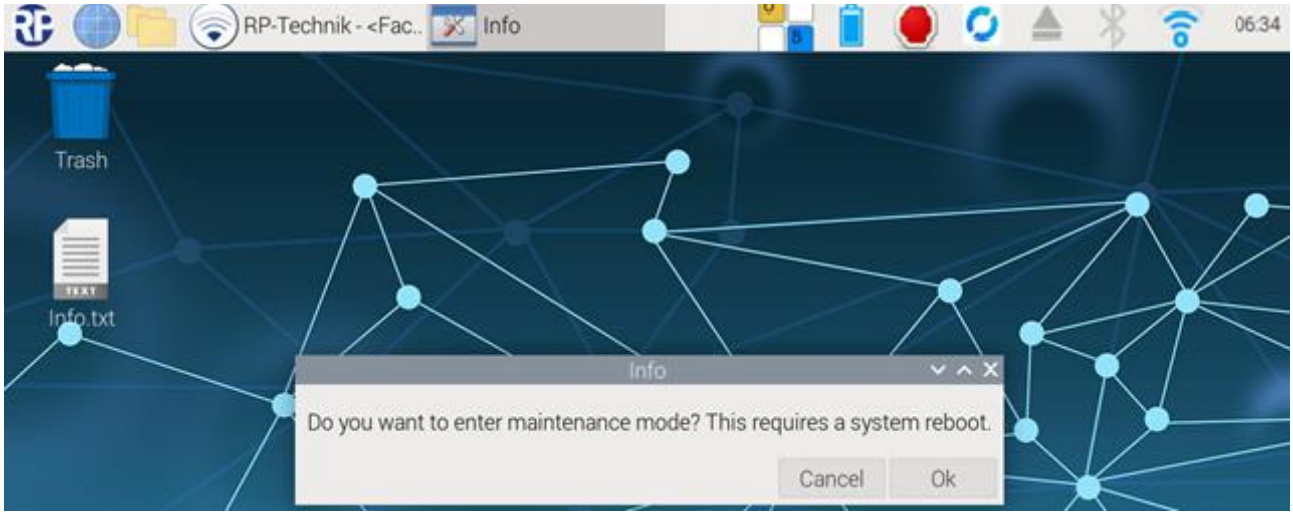


Figure 25 Confirming MaintenanceMode change

It takes approximately 15 seconds for the WLZent04 to begin restarting. The configuration is saved during this process. A remote connection may be lost in the process. Once the WLZent04 has restarted, the WLZent04 operating system is now in Read-Write mode. (see chapter 8 Tamper-proof operating system).

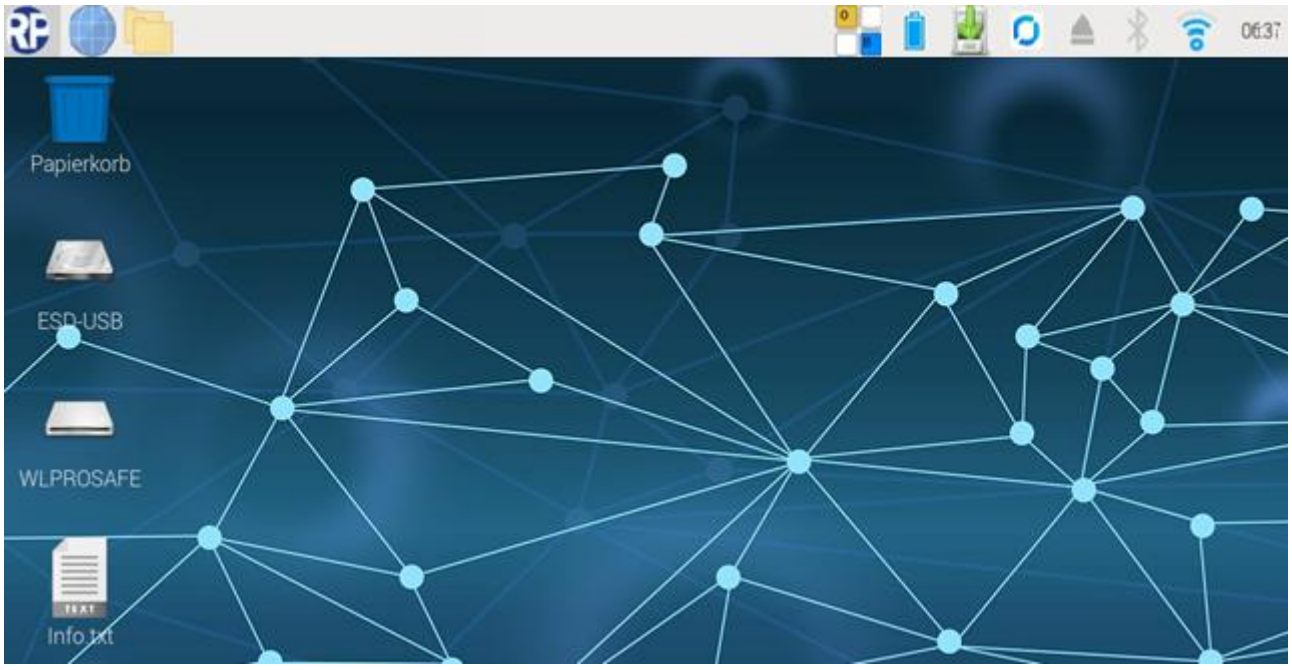


Figure 26 Desktop in MaintenanceMode

Note: The WirelessProfessional software does not start in MaintenanceMode.

9.2 Exiting MaintenanceMode

MaintenanceMode can only be exited via *Start Menu->System Tools->ExitMaintenanceMode*. If a restart is performed as described in section 6.4 or a shutdown as described in section 6.5 , the WirelessProfessional WLZent04 will restart in MaintenanceMode.

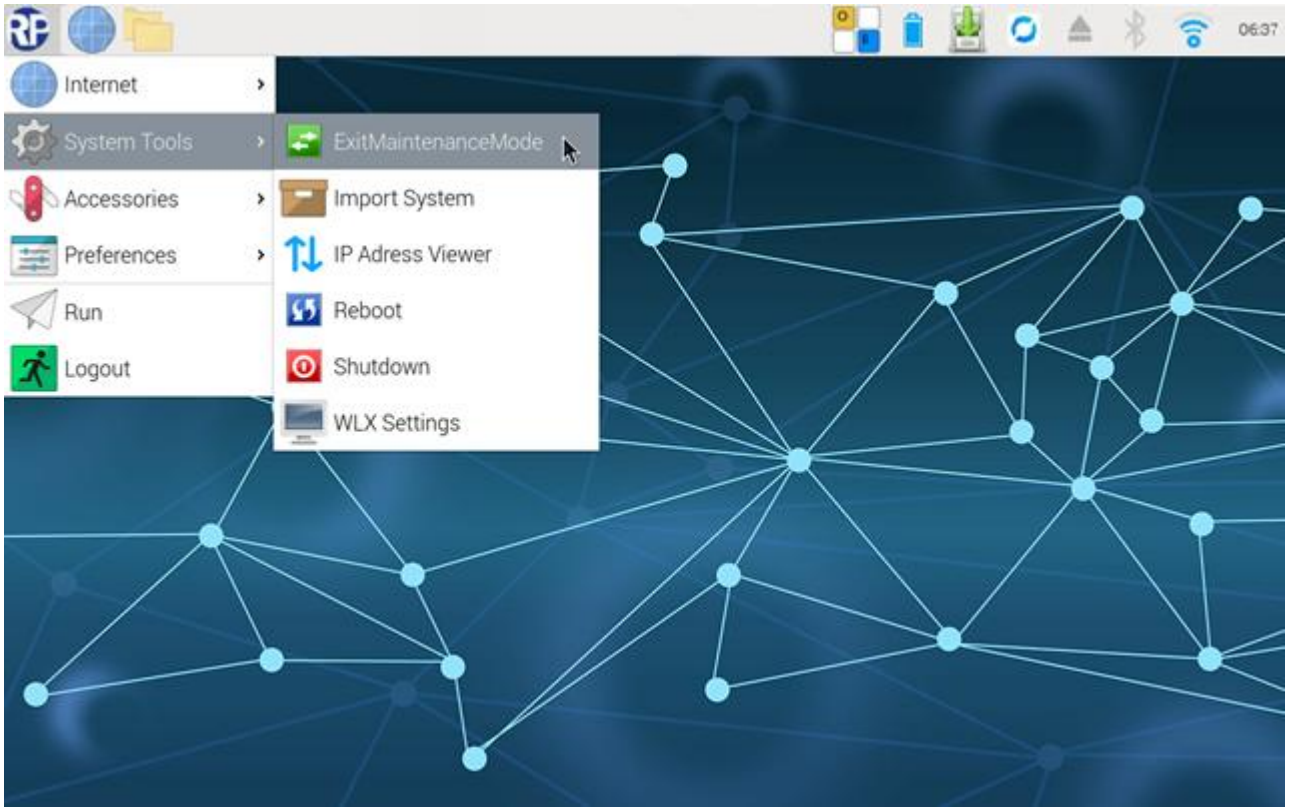


Figure 27 Start menu -> System tools -> ExitMaintenanceMode

After clicking the button, it takes approximately 20 to 30 seconds for WLZent04 to restart. Afterwards, the WLZent04 is back in Read-Only mode and the WirelessProfessional software is restarted.

10 Setting the date and time

When delivered, the date and time are set to the time zone “Berlin, Paris, etc... (GMT+2)” if the delivery address is within Germany. If the delivery address for the device is outside Germany, the device will be set to the time zone of the country of delivery. The real-time clock with battery backup keeps the clock running even in the event of a power failure or if the WLZent04 is switched off.

Manual adjustment of the date and time is not provided for.

Note: If the time or date displayed by the WLZent04 differs from the actual time, the WLZent04 must be connected to the Internet. Once the Internet connection has been established, it takes approximately 1 minute for the WLZent04 to automatically retrieve the date and time from the time server on the Internet.

Note: An exhausted RTC battery can be recognised by the fact that, after restarting the WLZent04 in WirelessProfessional Logfile, a modification of the time is documented after starting the application. In this case, the RTC battery of the WLZent04 must be replaced. The steps for replacing the battery can be found in the maintenance schedule. This is stored as a PDF document in the folder **/media/rp/WLPROSAFE/manual/Wartungsplan_WLProfessional.pdf**.
After replacing the RTC battery in the WLZent04, the WLZent04 must be connected to the internet so that the internal clock can be reset correctly.

11 Adjusting backlighting

The brightness of the touch display backlight is set to 60% of the maximum brightness in the factory default setting. If necessary, the brightness of the backlight can be increased or decreased.

To adjust the backlight brightness, select *Start Menu->Accessories->Brightness*.

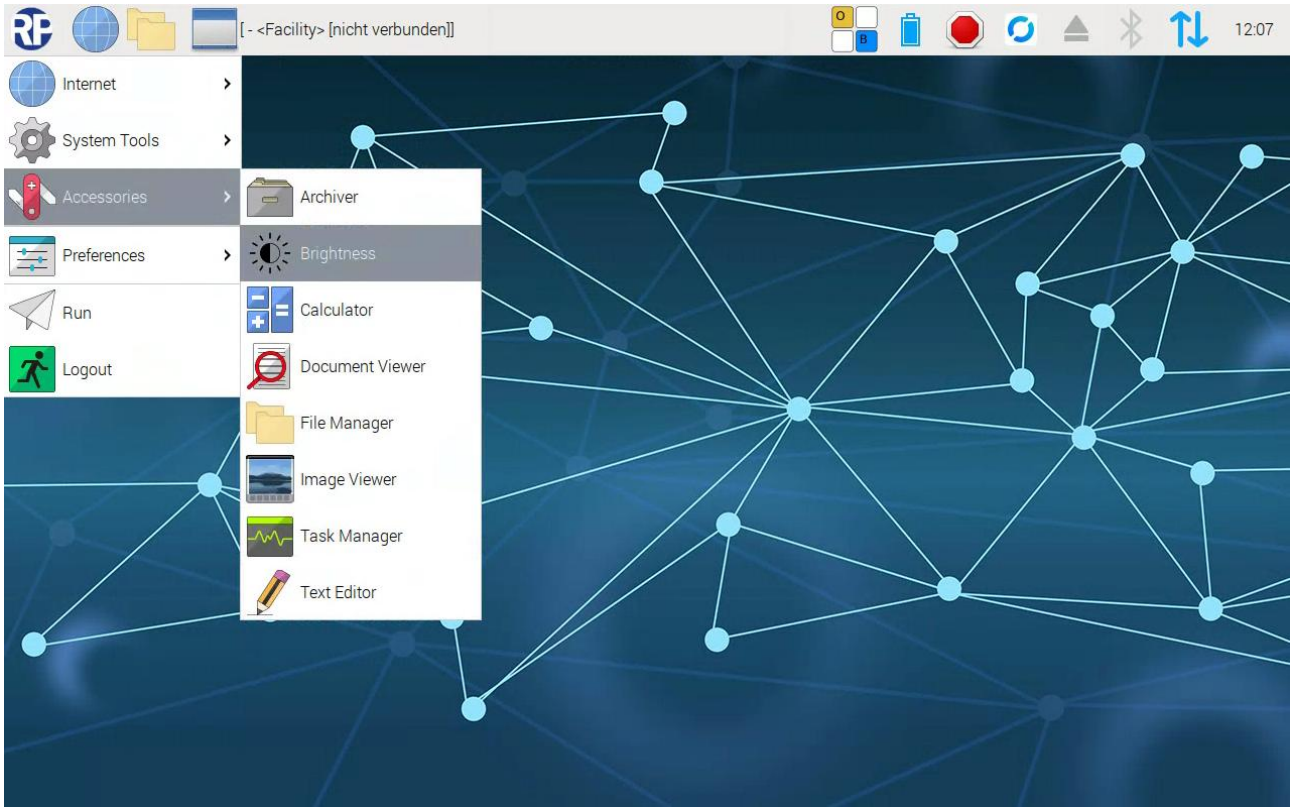


Figure 28 Start menu -> Accessories -> Screen brightness

The “brightness” window opens.

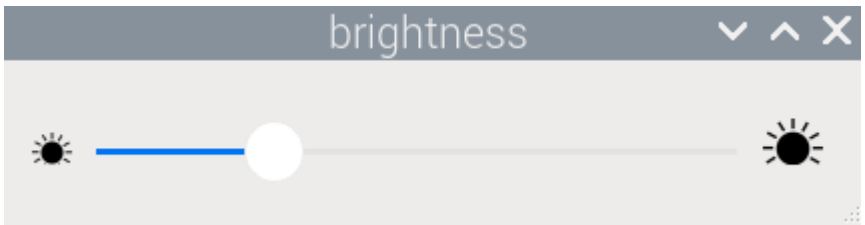


Figure 29 Screen "brightness"

The brightness can be adjusted using the slider. To do this, tap or click on the slider and hold it down so that the slider can be moved. The “brightness” window is closed using the ‘X’ in the top right-hand corner.

12 WLX Settings Tool

The WLX Settings Tool allows settings to be adjusted for some components. It is only available in Maintenance Mode and can be accessed via *Start Menu->System Tools->WLX Settings*.

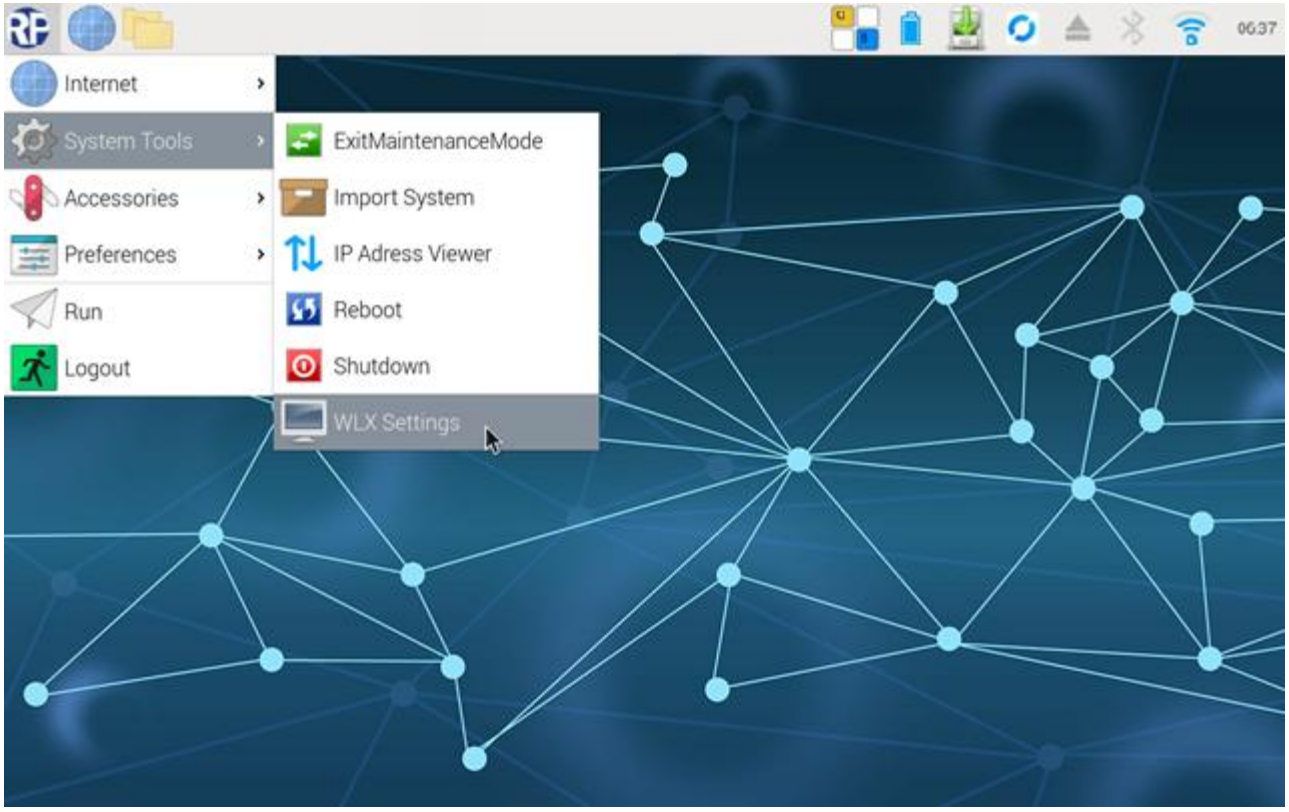


Figure 30 Start menu -> System tools -> WLX settings

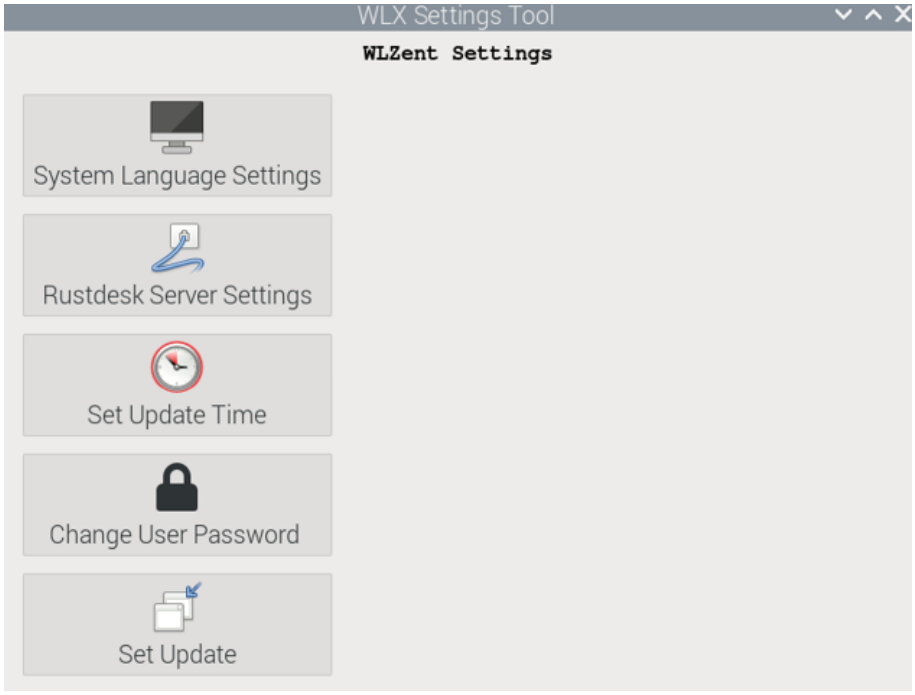


Figure 31 WLX Settings Tool

12.1 System Language Settings

This menu item allows you to switch the language of the Linux operating system between German and English.

Figure 32 WLX Settings Tool: Language setting

The language can be changed using the “Change” button. The currently selected language is displayed above the “OK” button. This is set for the OS when the “OK” button is pressed. The WLX Settings Tool can be closed by clicking on the “X” in the top right-hand corner. The selected language will be adopted for the OS as soon as a restart is performed.

Figure 33 WLX Settings Tool: Language setting applied

12.2 Rustdesk Server Settings

This menu item allows the desired Rustdesk ID server and key to be entered.

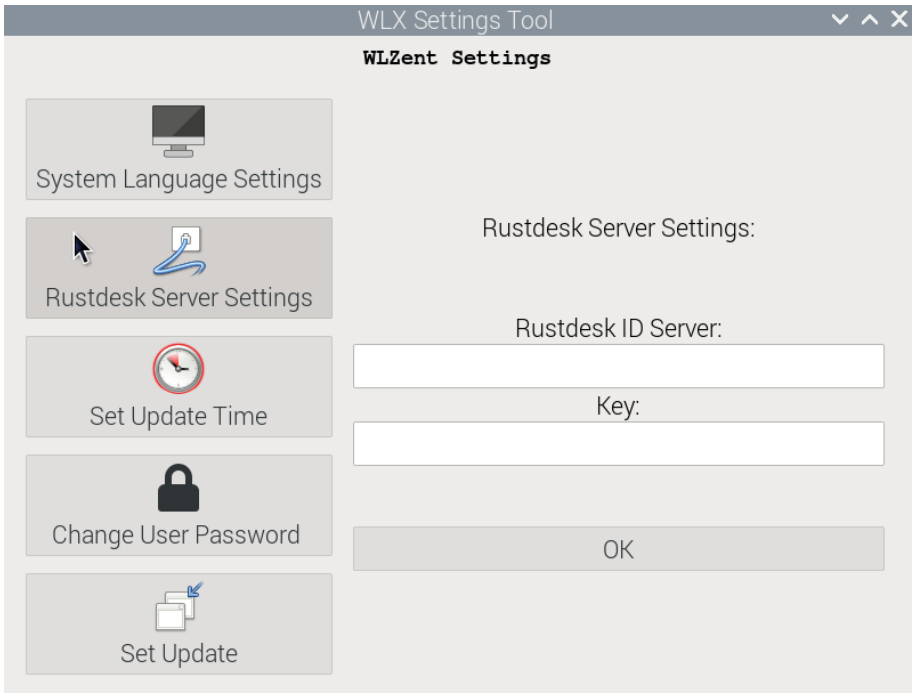


Figure 34 WLX Settings Tool: Settings for the Rustdesk server

After entering the information, tap or click the “OK” button. The entry is accepted after approx. 10 seconds and the WLX Settings Tool can be closed by clicking on the “X” in the top right-hand corner.

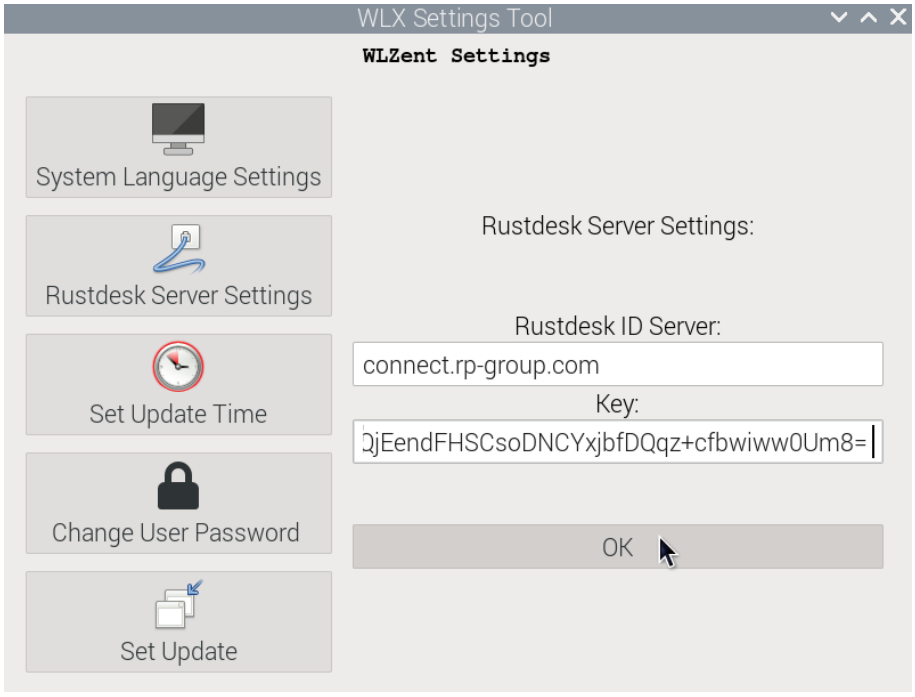


Figure 35 WLX Settings Tool: Applying settings for the Rustdesk server

12.3 Set Update Time

This menu item can be used to set the date and time at which updates are checked for.

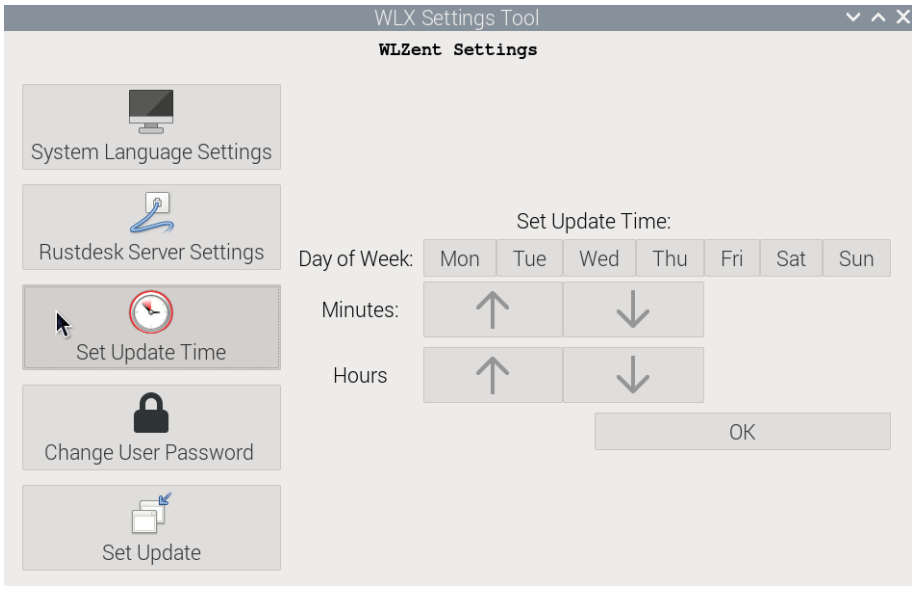


Figure 36 WLX Settings Tool: Setting for checking for updates

"Day of Week" determines the day on which updates are checked for. Use the arrow keys to select 00, 15, 30 or 45 for "Minutes". For "Hours", it can be set from 0 to 23. The set time is applied to the OS when the "OK" button is pressed. The WLX Settings Tool can be closed by clicking on the "X" in the top right-hand corner.

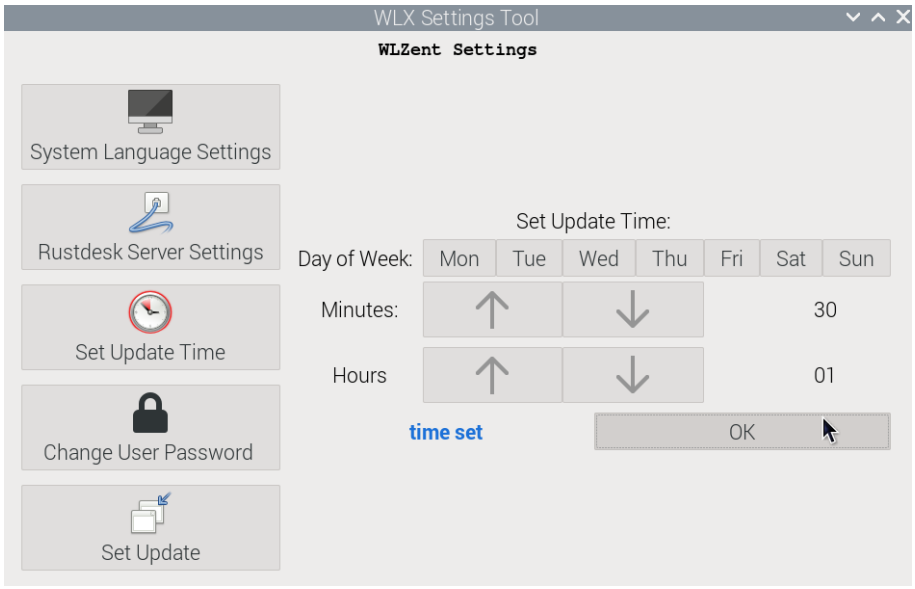


Figure 37 WLX Settings Tool: Setting for checking for updates applied

Note: The automatic download and installation of software updates require an active internet connection for the WLZENT04.

12.4 Change User Password

This menu item can be used to change the user password for WLZent04.

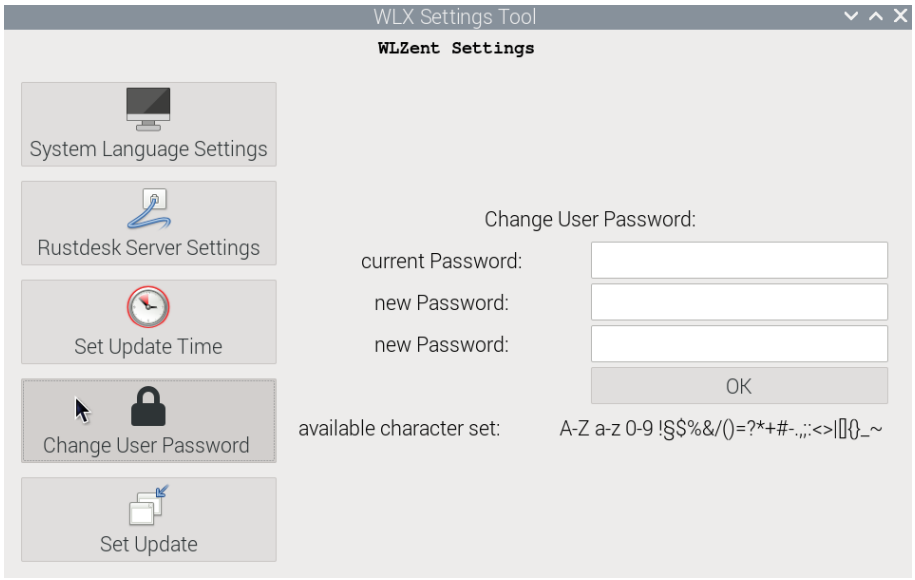


Figure 38 WLX Settings Tool: Changing user password

Enter the current password for WLZent04 in the “current Password:” text field. Enter the new password in the two text fields labelled “New password:”. The entry is accepted by clicking the “OK” button. After successful transfer, “successfully done” will be displayed in the ‘WLX Settings Tool’ window. The WLX Settings Tool can be closed by clicking on the “X” in the top right-hand corner.

Note: The password must be at least 8 characters long.

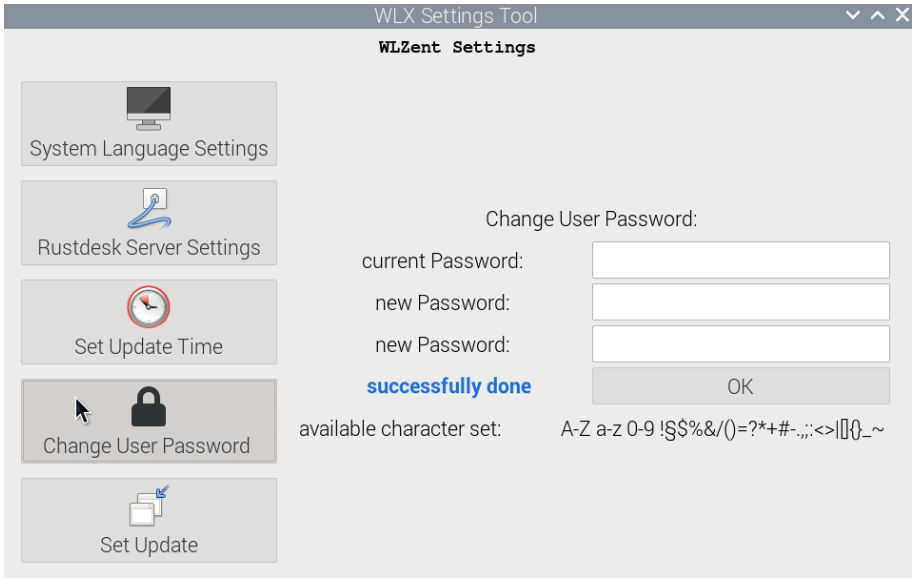


Figure 39 WLX Settings Tool: User password change completed

Important: Password changes must be documented in such a way that the password information cannot be lost.

12.5 Set Update

This menu item can be used to set whether and which updates are installed automatically. WL Pro Updates include updates for the WirelessProfessional software. OS updates include updates for the operating system.

By ticking the respective boxes, you can specify which updates are to be downloaded and installed automatically. Tap or click the “OK” button to apply the selection. Alternatively, the WLX Settings Tool can be closed by clicking the “X” in the top right-hand corner.

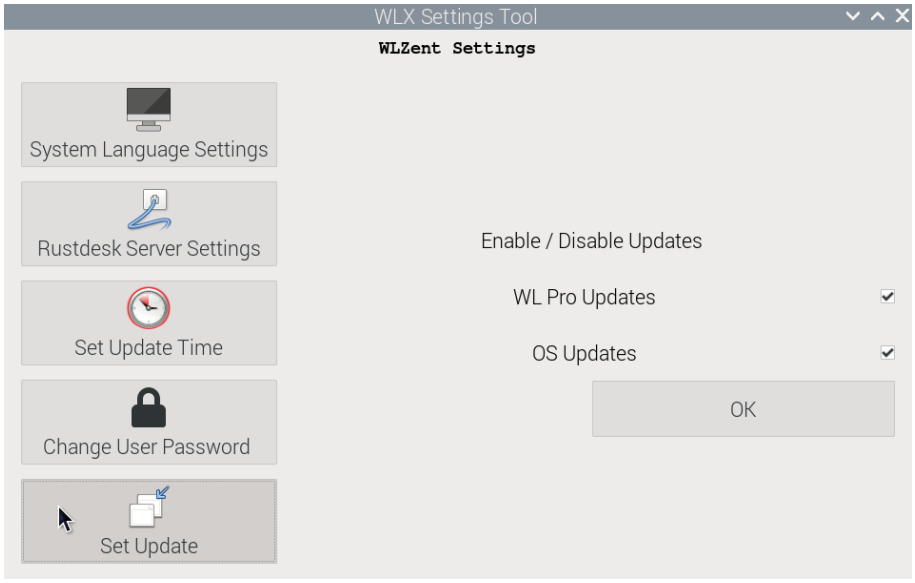


Figure 40 WLX Settings Tool: Set Update

Note: The automatic download and installation of software updates require an active internet connection for the WLZENT04.

13 Bluetooth

The WirelessProfessional WLZent04 has a Bluetooth interface that allows input devices such as keyboards to be connected wirelessly to the WLZent04. The Bluetooth interface is not activated in the delivery state.

For a permanent connection, the operating system must first be set to Read-Write mode.
(see chapter 9 MaintenanceMode)

13.1 Turning on Bluetooth

To turn on the Bluetooth interface, tap the Bluetooth icon in the taskbar. A small context menu will then appear, in which you should tap on “Turn On Bluetooth”.

Figure 41 Enabling the Bluetooth taskbar

When the Bluetooth interface is activated, the blue Bluetooth icon is displayed on the taskbar.

Figure 42 Bluetooth taskbar enabled

13.2 Disabling Bluetooth

To disable the Bluetooth interface, tap the Bluetooth icon in the taskbar. Then tap on “Turn Off Bluetooth” in the context menu that appears.

Figure 43 Disabling the Bluetooth taskbar

If the Bluetooth interface is disabled, the Bluetooth symbol is displayed again as in Figure 41 Enabling the Bluetooth taskbar.

13.3 Pairing a device via Bluetooth

To pair a Bluetooth device with the WirelessProfessional WLZent04, tap the Bluetooth icon on the taskbar. Next, tap on “Add Device...” in the context menu.

The “Add New Device” window opens and displays all devices within range and in pairing mode.

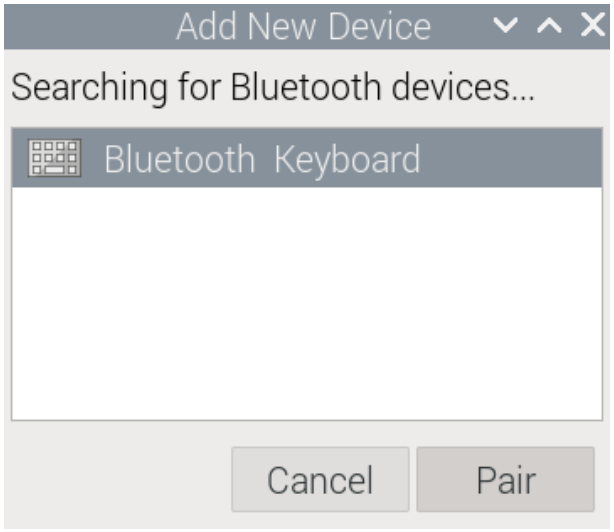


Figure 44 Bluetooth keyboard within range

In the following example, a Bluetooth keyboard is within range. Tap the desired device and then the “Pair” button to pair the device. You must type in the code displayed on the keyboard and then confirm it by pressing Enter on the keyboard.

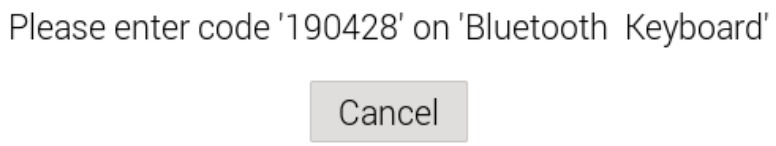


Figure 45 Verification Code

When the devices are successfully paired, this will be indicated.

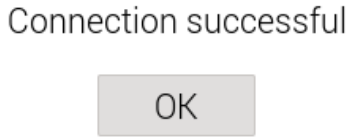


Figure 46 Pairing successful

When you tap the Bluetooth icon in the taskbar, the paired device is listed in the context menu.

Figure 47 WLZent04 with paired Bluetooth device

13.4 Disconnecting a paired device

To disconnect a device paired with the WirelessProfessional WLZent04 via Bluetooth, tap the Bluetooth icon on the taskbar. Tap on the corresponding Bluetooth device in the context menu. Another context menu will then appear.

Figure 48 Disconnecting/removing Bluetooth device

The “Disconnect...” button disconnects the Bluetooth device from the WLZent04. However, the WLZent04 retains the connection information so that the device can be reconnected without entering pairing mode.

The “Remove...” button disconnects the Bluetooth device from the WLZent04 and deletes the connection data. If the device is to be reconnected, it must be paired again.

14 Network configuration

The WirelessProfessional WLZent04 has an externally accessible RJ-45 socket (LAN connection) (15, see Figure 4 WLZent04, internal structure) and a WLAN interface, which can be used to connect the WirelessProfessional WLZent04 to a network.

Note: If both the Ethernet socket and the WLAN interface are used, Internet access for the WLZent04 must be provided via the Ethernet socket.

14.1 Connecting to a cable network

The WirelessProfessional WLZent04 is set to DHPC in its factory default state. As soon as a cable from a network that has a DHCP server is plugged in, the WLZent04 automatically receives an IP address.

Important: Operation of the WLZent04 in a network without a central management component, such as a router, is not supported.

When a connection has been established, this is indicated in the taskbar by the “Up/down arrow” icon.

Figure 49 Taskbar with Ethernet connected

If there is no connection to a cable network, the “Up/down arrow” icon is displayed with a red cross.

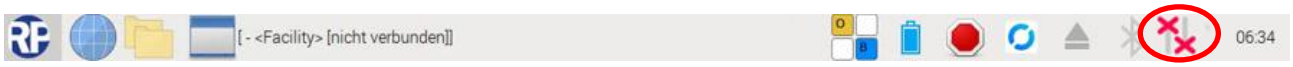


Figure 50 Taskbar with Ethernet not connected

Note: If the WLZent04 is connected to a Wi-Fi network at the same time, the arrow symbol will not be displayed.

14.1.1 Static IP address

To assign a static IP address, right-click on the *network icon -> Advanced Options -> Edit Connections to access the settings*.

Important: If a static IP address is to be assigned permanently, the operating system must first switch to Read-Write mode. (see chapter 9 MaintenanceMode)

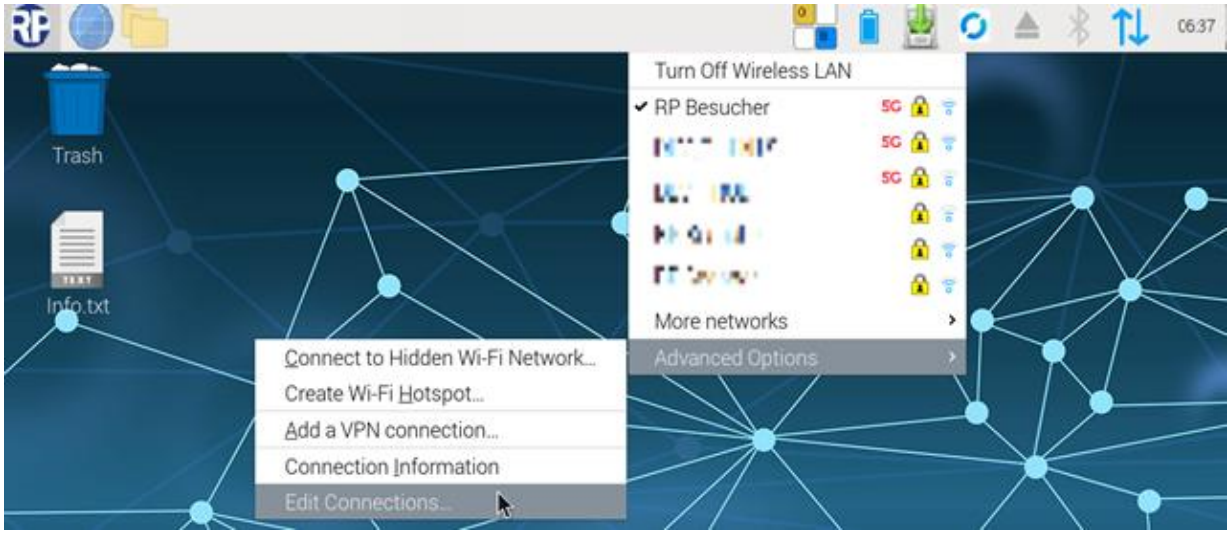


Figure 51 Editing connections

This will open the "Network Connections" window. The "Wired connection" is selected by clicking on it, and the settings can then be opened using the button with the gear icon.

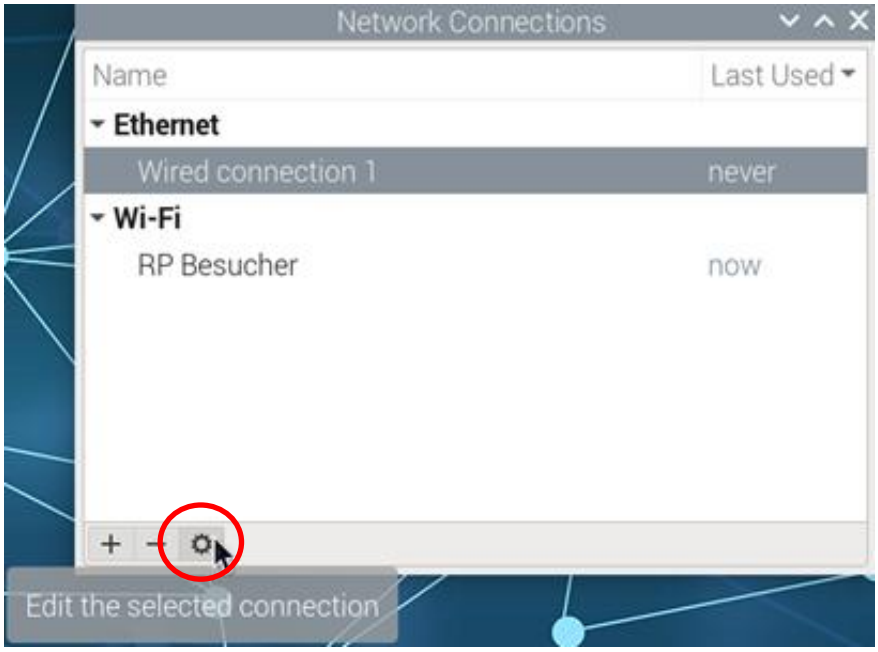


Figure 52 Editing selected connection

Note: Setting a static IP address for the WLAN interface is identical to setting one for the LAN interface; the only difference is that "Wireless network" must be selected as the interface instead of "Ethernet".

Select the desired tab (in this example, IPv4 settings) for which a static IP is to be set. Tap the “Method” drop-down box and select “Manual”.

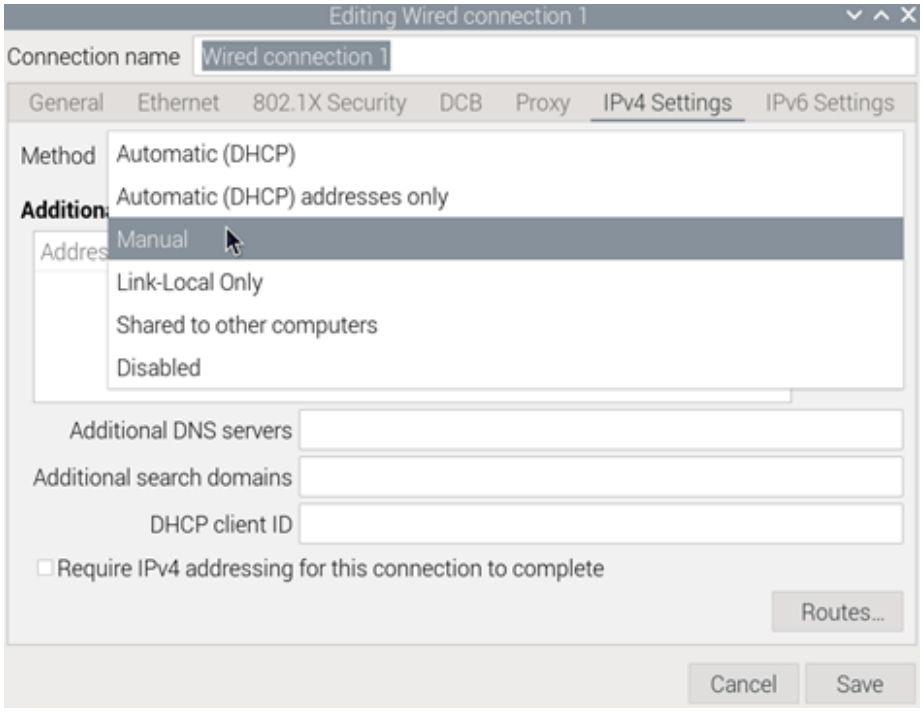


Figure 53 Network settings for wired connection

After selecting the method, tap on “Add.

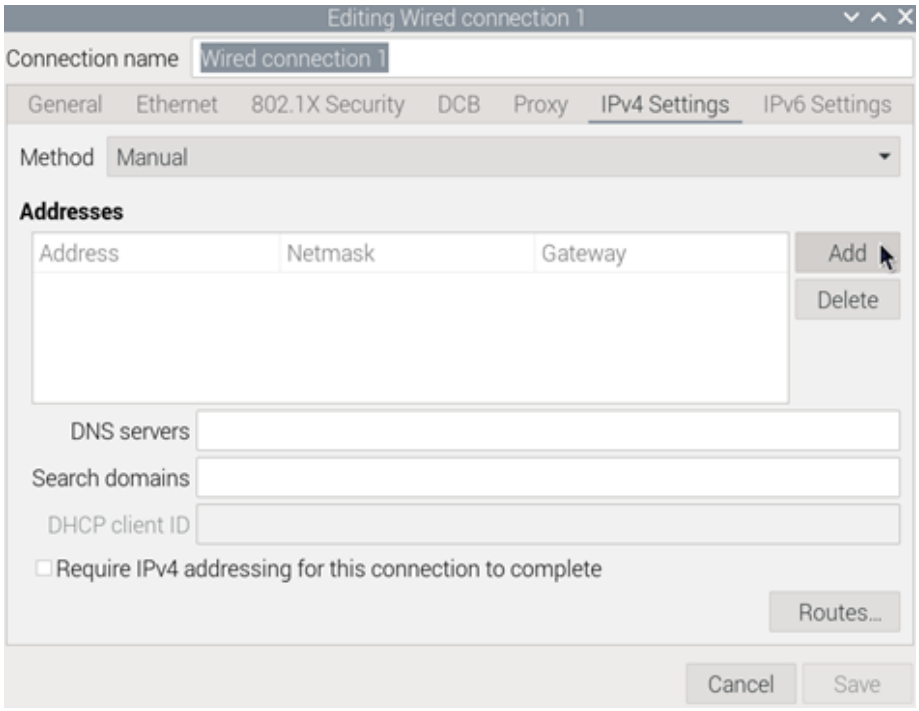


Figure 54 Adding a static IP address

The on-screen keyboard opens automatically. Once the relevant fields have been filled in, the settings are applied by clicking the "Save" button at the bottom right. Afterwards, the window can be closed using the "X" in the top right-hand corner.

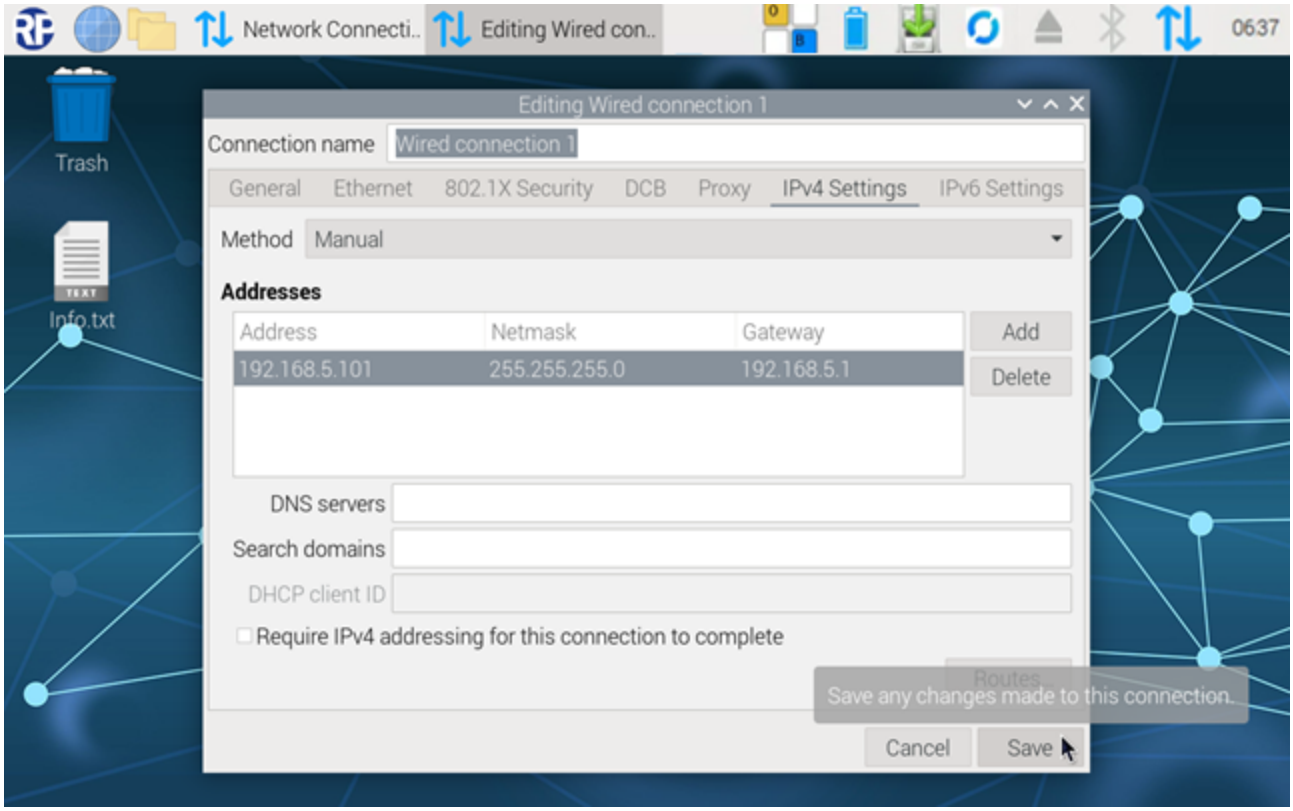


Figure 55 Entering static IP address

Field name	Meaning
Address	Desired static IP address
Network mask	Desired subnet mask
Gateway	IP address of the router/gateway

Important: Please contact your network administrator for the parameters to be set.

Note: It may happen that the static IP address is only accepted by the network adapter after disconnecting and reconnecting the network cable.

Note: If the settings were made in Maintenance Mode, exit this mode now. After restarting, the WirelessProfessional WLZent04 will automatically connect to the wireless network.

14.2 Connecting to a wireless network

The WLAN interface is activated when the WirelessProfessional WLZent04 is delivered. Wireless networks within range are displayed when you tap the arrow icon in the taskbar.

Important: If the connection data is to be stored permanently, the operating system must first switch to Read-Write mode. (see chapter 9 MaintenanceMode)

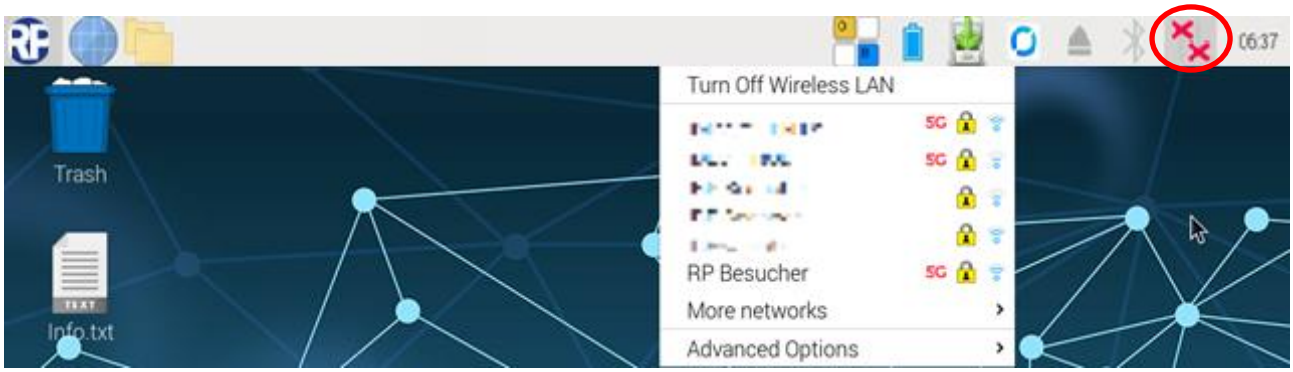


Figure 56 Available Wi-Fi networks

Tap the wireless network to which the WLZent04 is to connect. If it is an encrypted network, a window with the name of the selected wireless network in the title will open. The network key for the wireless network must be entered and confirmed by tapping "Connect".

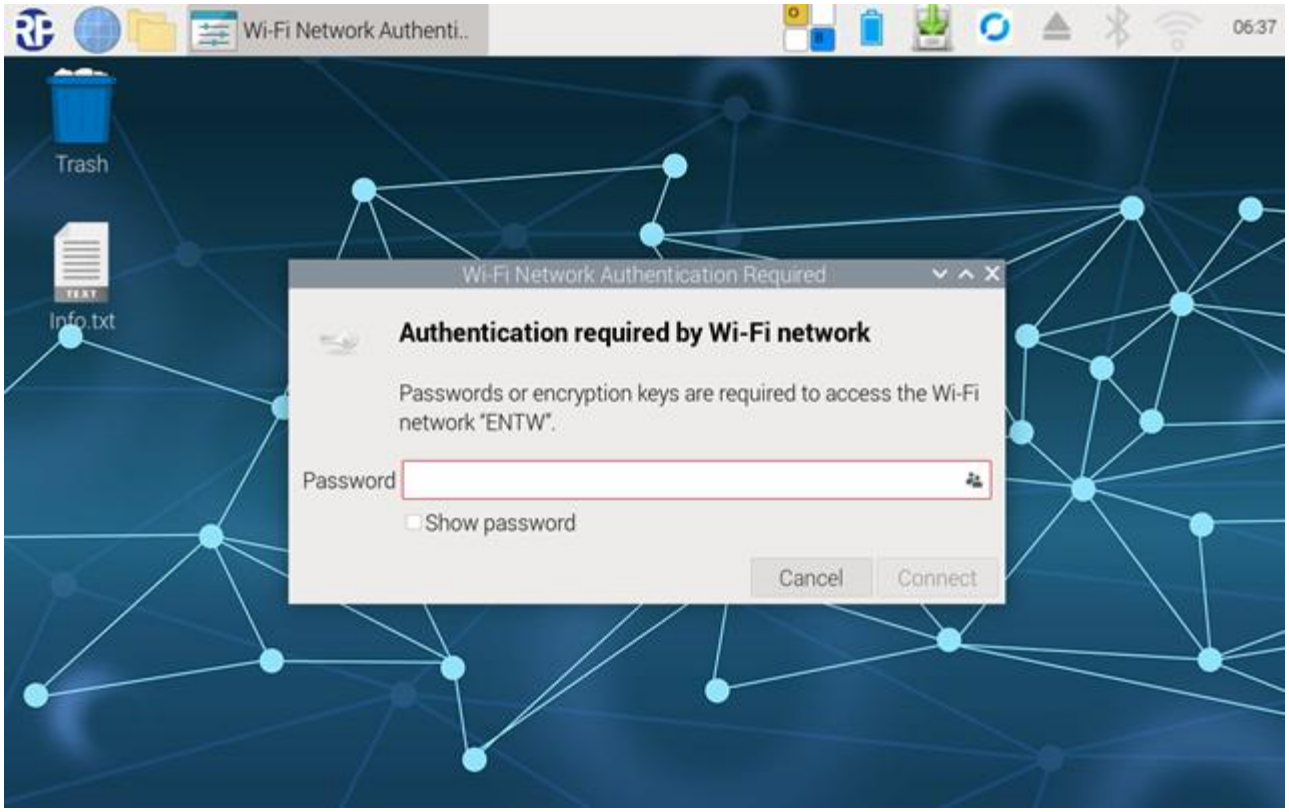


Figure 57 Entering the Wi-Fi key

Once the connection has been successfully established, the arrow icon disappears from the taskbar and is replaced by the Wi-Fi symbol. There is also a tick to the left of the connected wireless network. The WirelessProfessional WLZent04 is now connected to the wireless network.

Note: If the settings were made in Maintenance Mode, exit this mode now. After restarting, the WirelessProfessional WLZent04 will automatically connect to the wireless network.

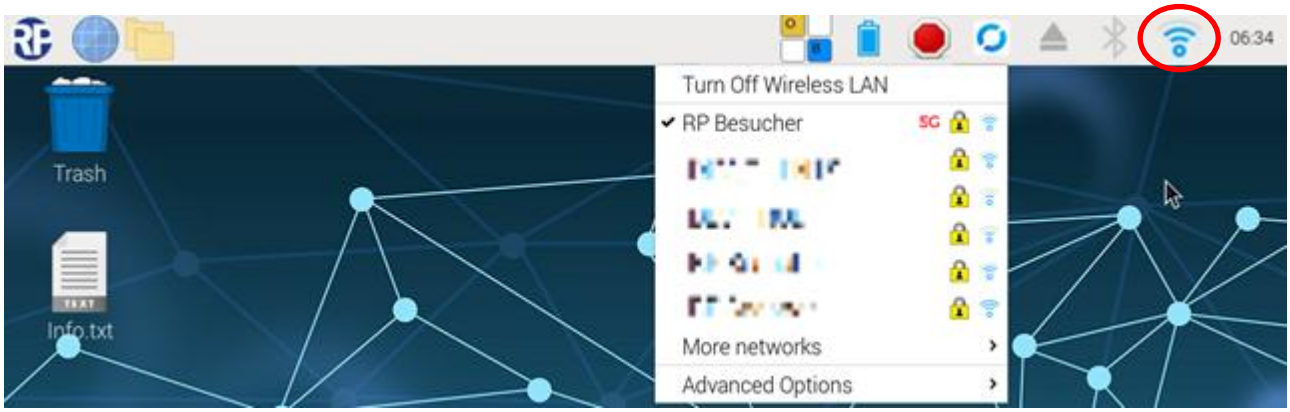


Figure 58 WLZent04 with connected WLAN

14.3 Displaying connection information

To find out the IP address assigned by the DHCP server, open the *Start menu->System Tools->IP Address Display*. These are only available in Read-Only mode.

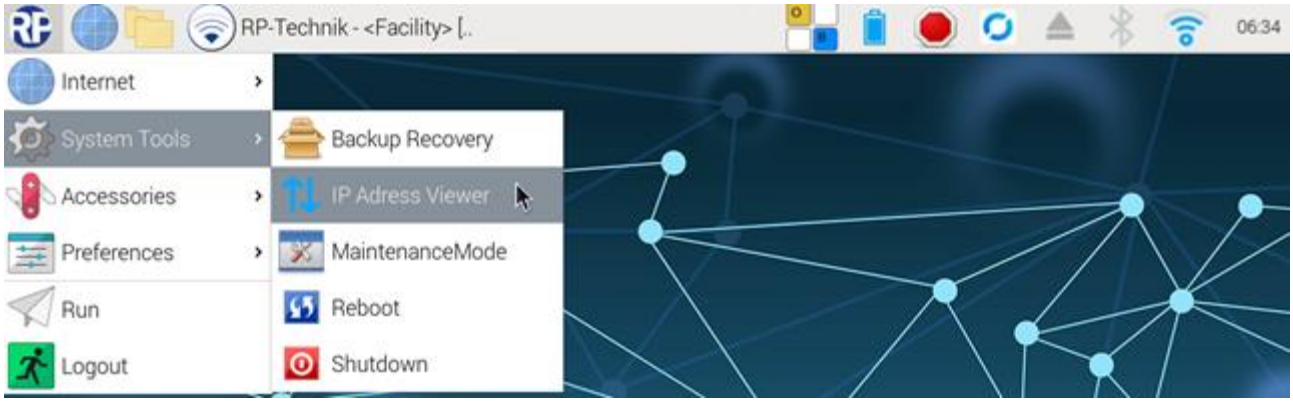


Figure 59 Start menu -> System tools -> IP addresses display

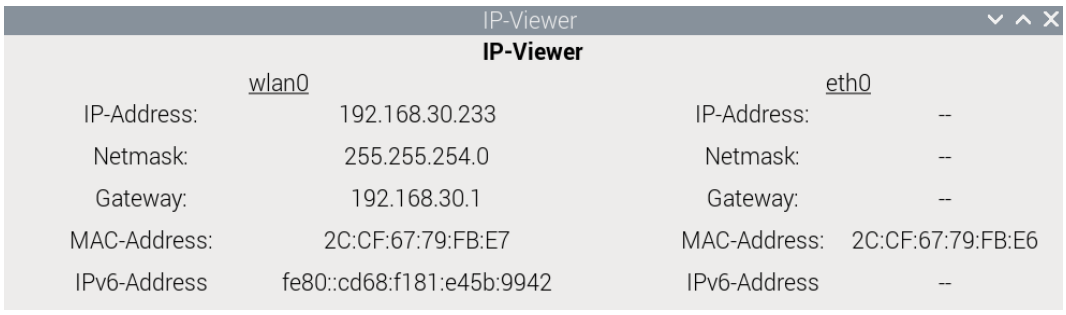


Figure 60 IP address display

15 Remote access via RustDesk

RustDesk remote access software is installed on the WirelessProfessional WLZent04.

A connection is possible both online via an internet connection (see 15.3) and offline (see 15.4) from a local LAN.

15.1 Establishing a connection

RustDesk must be started on the device (client) that is to be used to establish the connection to WLZent04.

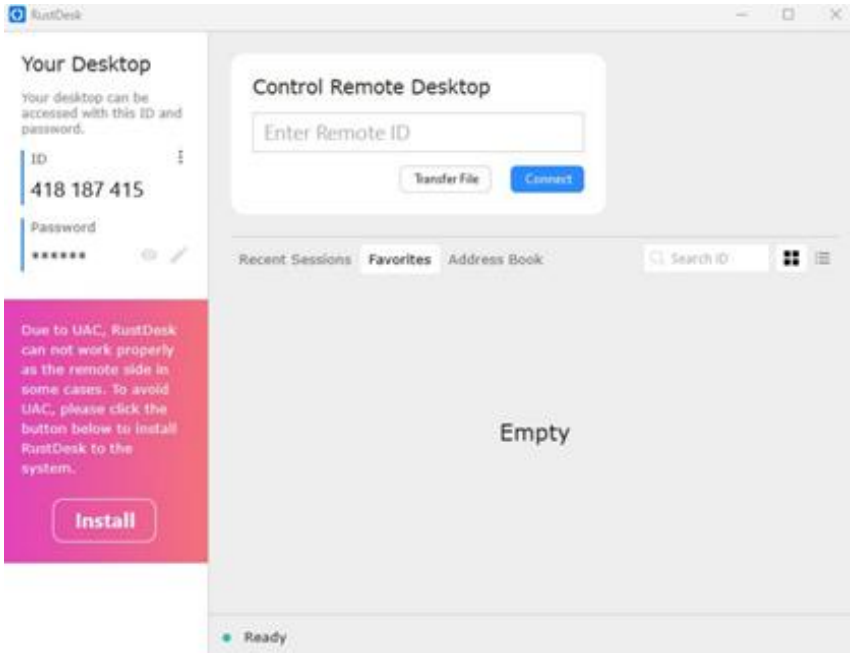


Figure 61 RustDesk interface on a client device

Important: The RustDesk ID for WLZent04 is unique for each device and is noted on the enclosed WLZent04 information sheet (see Figure 62 Information sheet) together with the password.

WL Infoblatt - Wichtige Informationen zu Ihrem WL-Gerät

Bitte beachten: Dieses Blatt enthält Passwörter und weitere wichtige Informationen, die Sie für die Inbetriebnahme Ihrer WLZENT04 und für die Wartung des Betriebssystems benötigen. Bewahren Sie diese Informationen daher bitte sorgfältig auf. Geänderte Passwörter sollten notiert und aufbewahrt werden, da diese im Falle von Verlust nicht zurückgesetzt werden können!

Wichtig: Für die **Wireless-Professional-Software** gelten weiterhin die Standard-Passwörter 1111 (Haustechniker) und 2222 (Installateur).

Hinweis zum Handbuch: Die Bedienungsanleitungen der WLZENT04 und der Wireless-Professional-Software sind auf dem Gerät unter **/media/rp/WLPROSAFE/manual** abgelegt. Sie erreichen sie durch Starten des Dateiexplorers über das Icon in der Taskleiste **(1)** (siehe Abbildung unten). Im Dateiexplorer ist eine Verknüpfung "manual" **(2)** vorhanden, die direkt den Ordner **/manual** öffnet. Alternativ können die Handbücher von der Internetseite des Herstellers als PDF heruntergeladen werden.

WL Info Sheet - Important information regarding your WL device

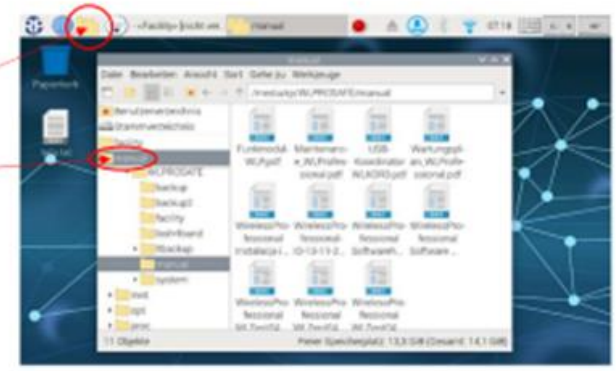
Please note: This sheet contains passwords and other important information which you will need during the commissioning of your WLZENT04 and for the maintenance of the operating system. Store this information therefore carefully. Changed passwords should be noted down and kept, as they cannot be reset in case of loss!

Important: For the **Wireless Professional software** itself, the standard passwords 1111 (Technician) and 2222 (Installer) remain valid.

Note regarding the user manuals: All user manuals for WLZENT04 and Wireless-Professional-Software are stored in the folder **/media/rp/WLPROSAFE/manual** on the device. To access them, launch the File Explorer using the icon in the taskbar **(1)** (see screenshot below). In the file explorer, you will find a shortcut "manual" **(2)** which directly navigates to the **/manual** folder. You can also download the manuals from the manufacturer's website.

(1) Dateiexplorer / File Explorer

(2) Verknüpfung / shortcut "manual"



Auftragsnr./Order no.: _____

```
Product Type:           WLZent4

Host name:              WLZent4-bcgbd9

Local User:             rp
- Password:             [illegible]

RustDesk
- ID:                   [illegible]
- Password:             [illegible]
- Server ID:            connect.rp-group.com
- Server Key:           lv8tdJeQjEendFHSCsoDNCYxjbfDQqz+cfbwiww0Um8=

Local RustDesk Server
- Server ID:            localhost (*)
                        WLZent4-bcebd9 (**)
                        IP-Adresse dieses Geräts / IP address of this device (**)

- Server Key:           fs6e3IFuThPeOqETy4BCaERQHWpqP9ND+3OH9vYOMpk=

MAC Addresses
- MAC Wi-Fi:            d8:3a:da:bc:eb:da
- MAC LAN:              d8:3a:da:bc:eb:d9

Cloud activation code: 8B3NRF

(*)  bei Verbindung von diesem Gerät / when connecting from this device
(**) bei Verbindung von anderen Geräten / when connecting from other devices
```

Figure 62 Information sheet

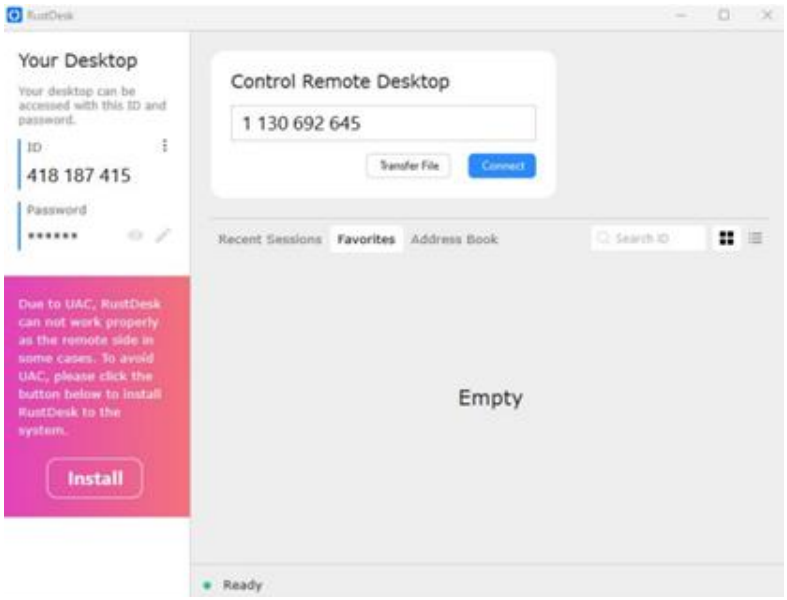


Figure 63 RustDesk with connection data

After entering the ID, click on the “Connect” button. The connection to WLZent04 is then established. A prompt for the password will appear

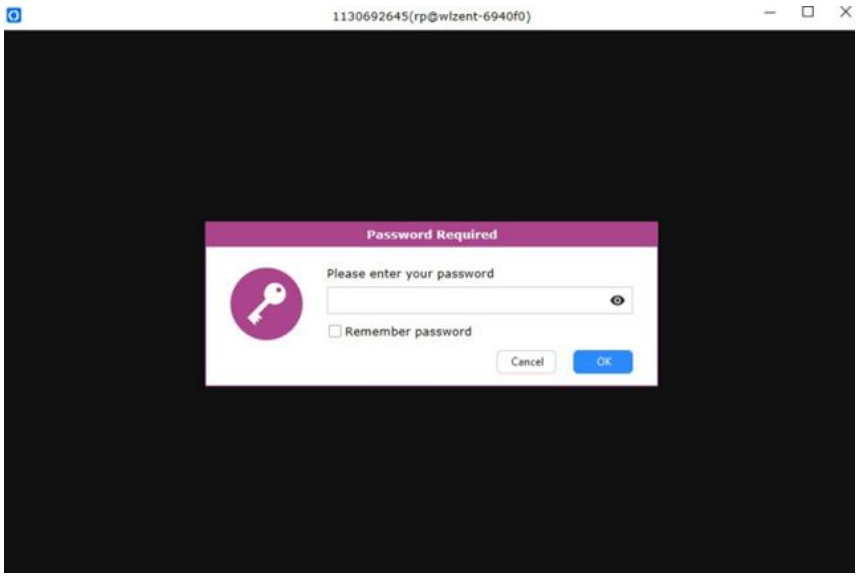


Figure 64 RustDesk password entry

After entering the password, the WLZent04 display appears.

Figure 65 RustDesk Remote Connection

15.2 Terminating a connection

To terminate the remote connection, close the RustDesk window.

Figure 66 Disconnecting RustDesk Remote

RustDesk remembers the most recently used connections so that the ID does not have to be re-entered the next time you log in.

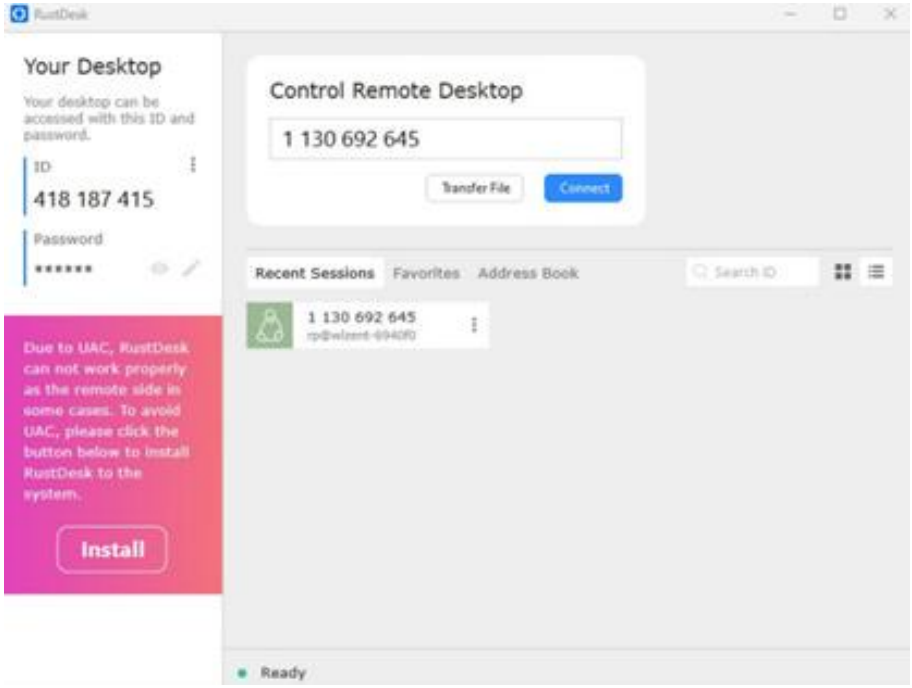


Figure 67 RustDesk interface with recently used connections

15.3 Online connection

The WLZent04 is preset to use a private RustDesk ID server located in Europe when delivered. This enables a connection from the Internet. It is therefore necessary to adjust the ID server on the client device that is to be used to establish the connection to WLZent04.

Note: The access data for the ID server can be found on the enclosed WLZent04 information sheet (see Figure 62 Information sheet).

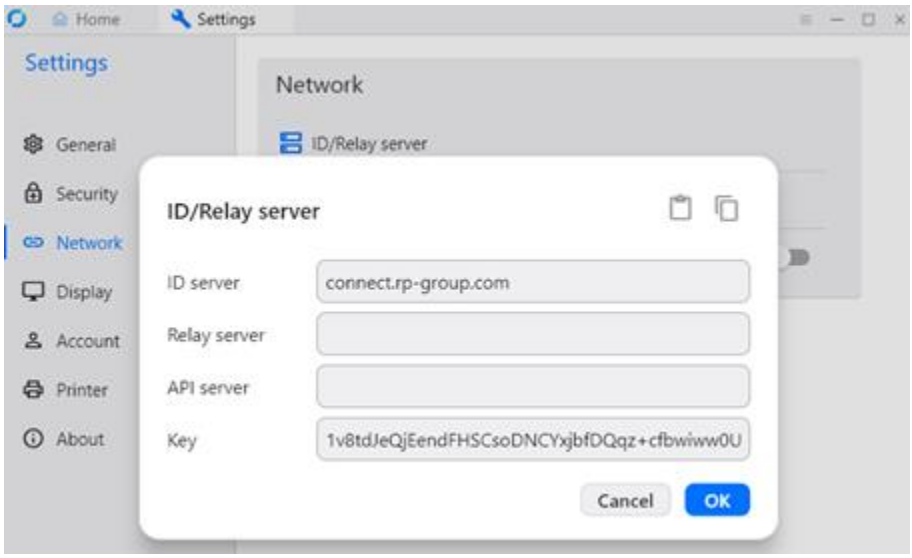


Figure 68 Rustdesk ID/Relay server setting for a client device

15.4 Offline connection

The WLZent04 has an integrated RustDesk ID server. This allows you to establish a RustDesk connection from the local LAN without an internet connection.

Important: To do this, the WLZent04 must be integrated into the network by the network administrator.

Important: The WLZent04, which is to serve as an ID server/connection server, must be assigned a fixed IP address by the DHCP service.

The WirelessProfessional WLZent04 cannot be accessed via the integrated RustDesk ID server in its factory default state. It is therefore necessary to adjust the ID server/connection server on WLZent04.

Note: The access data for the ID server/connection server can be found in the information sheet (see Figure 62 Information sheet). The Rustdesk ID Server is customised using the WLX Settings Tool (see 12.2 Rustdesk Server Settings).

On the WLZent04, which is to be used as an ID server/connection server, “localhost” is entered as the RustDesk ID server. The Own Rustdesk server public key can be found in the information sheet (see Figure 62 Information sheet).

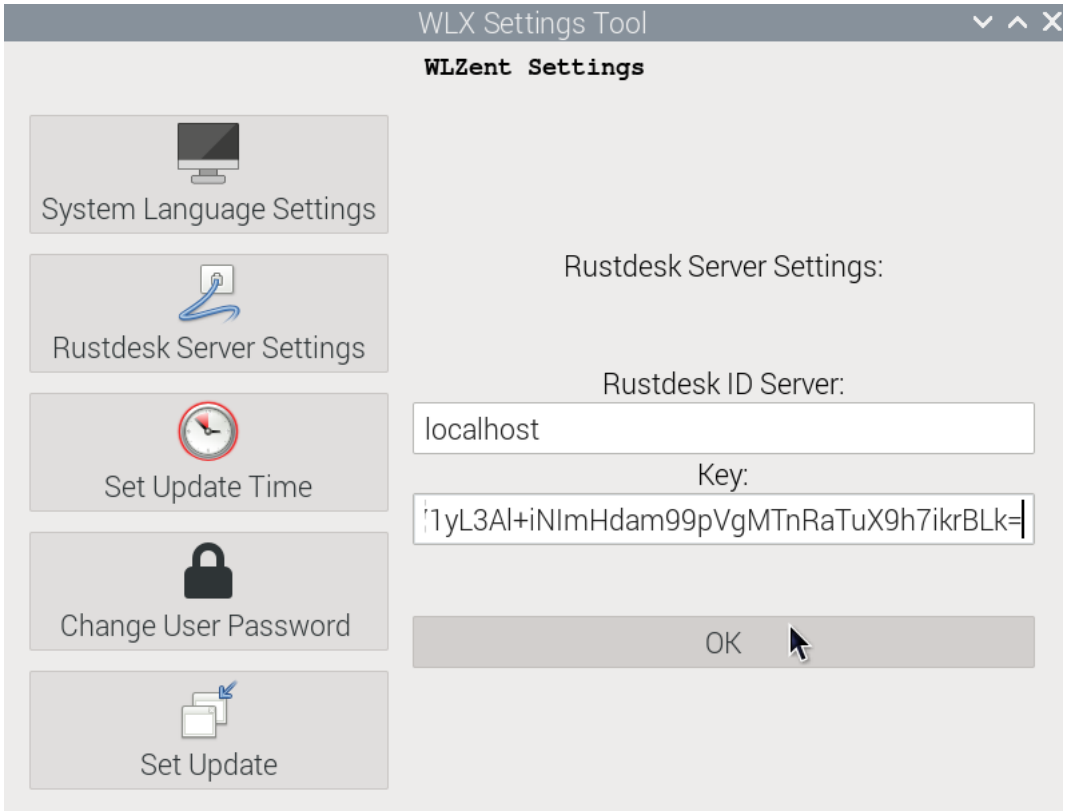


Figure 69 Rustdesk Server Settings Setting on WLZENT04

Important: RustDesk can only use one ID server. If the connection data of the internal RustDesk ID server is entered, the device can no longer be accessed from the internet.

The IP address of the WLZENT04 must be entered for all client devices that are to use the WLZENT04 as an ID server/connection server.

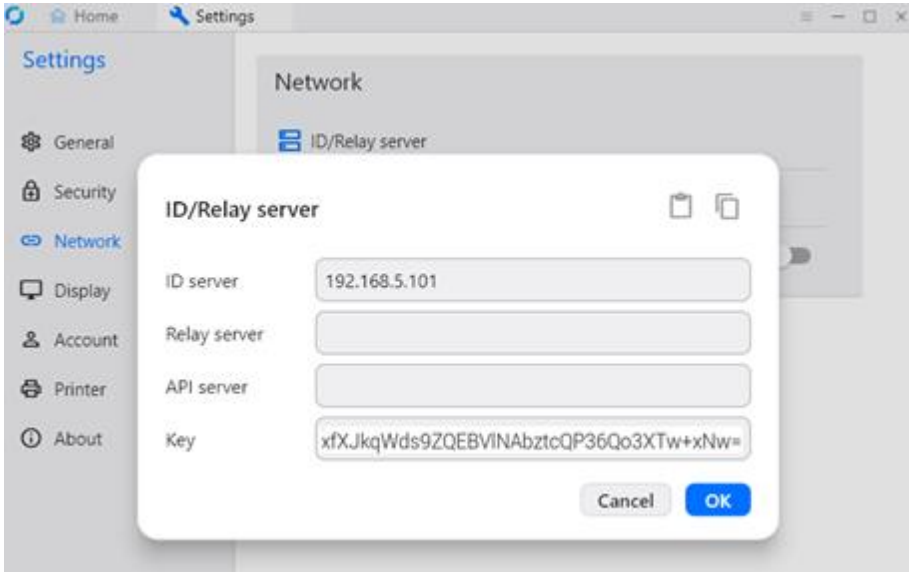


Figure 70 Rustdesk ID/Relay server setting for a client device

If a local DNS server is operated, the host name of WLZent04, which provides the ID server/connection server, can be used instead of the IP address.

Note: The host name is included on the information sheet (see Figure 62 Information sheet).

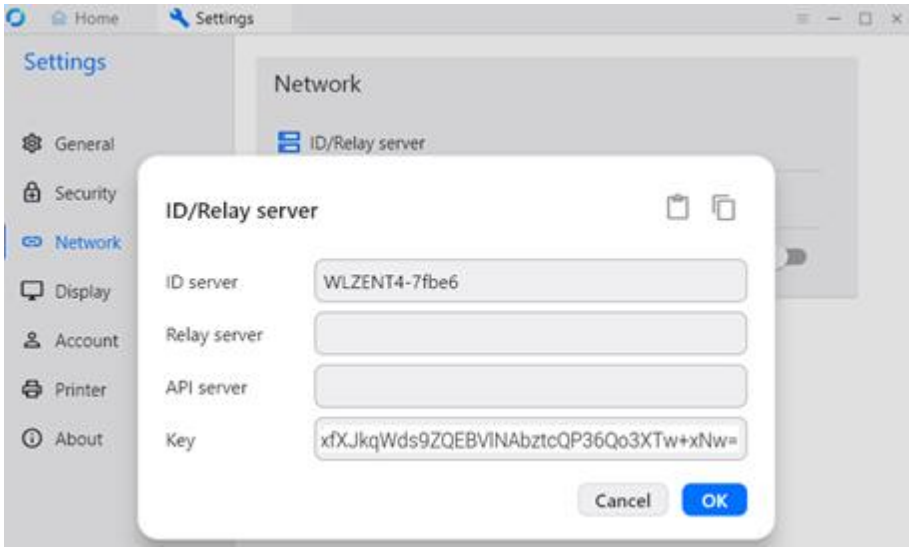


Figure 71 Rustdesk ID/Relay server Setting up a client device with DNS server with host name entered as ID server

Note: Both the WLZent04 and all devices that are to connect to the WLZent04 must connect to the WLZent04's internal RustDesk ID server.

Note: If there are several WLZent04 or devices with an integrated RustDesk ID server in the same network, the ID server of one of these devices must be used by all of them.

15.5 Changing the RustDesk connection password

The RustDesk connection password for WLZent04 cannot be changed.

15.6 RustDesk connections from WLZent04 to other devices

If a Desk Remote connection is established from WLZent04 to another device, the use of an external mouse is recommended. This is also necessary to exit RustDesk's full-screen mode if it has been activated.

16 Data backup

All files containing personal data are stored on WLZent04 in encrypted form only.

16.1 Automatic backup

The WirelessProfessional WLZent04 copies relevant data every 4 hours from the volatile main memory to the internal backup USB stick installed in the WLZent04. This ensures that an encrypted data backup is maintained.

Note: The internal backup USB stick and the device form a single unit. The internal backup USB stick cannot be exchanged or replaced with another USB stick. If the internal backup USB stick is lost, it must be reordered as a replacement part.

Important: The internal backup USB stick (17, see Figure 4 WLZent04, internal structure) may only be removed when the WLZent04 is powered down. The WLZent04 function is not available without a backup USB stick.

16.2 Manual backup

It is possible to manually copy the encrypted backup data from the WirelessProfessional from the internal backup USB stick to another external storage medium.

Before connecting such an external USB stick to the WLZent04, minimise the WirelessProfessional software so that the desktop is visible. Inserting an external USB stick opens the removable media window. Tapping or clicking the “OK” button opens the file explorer.

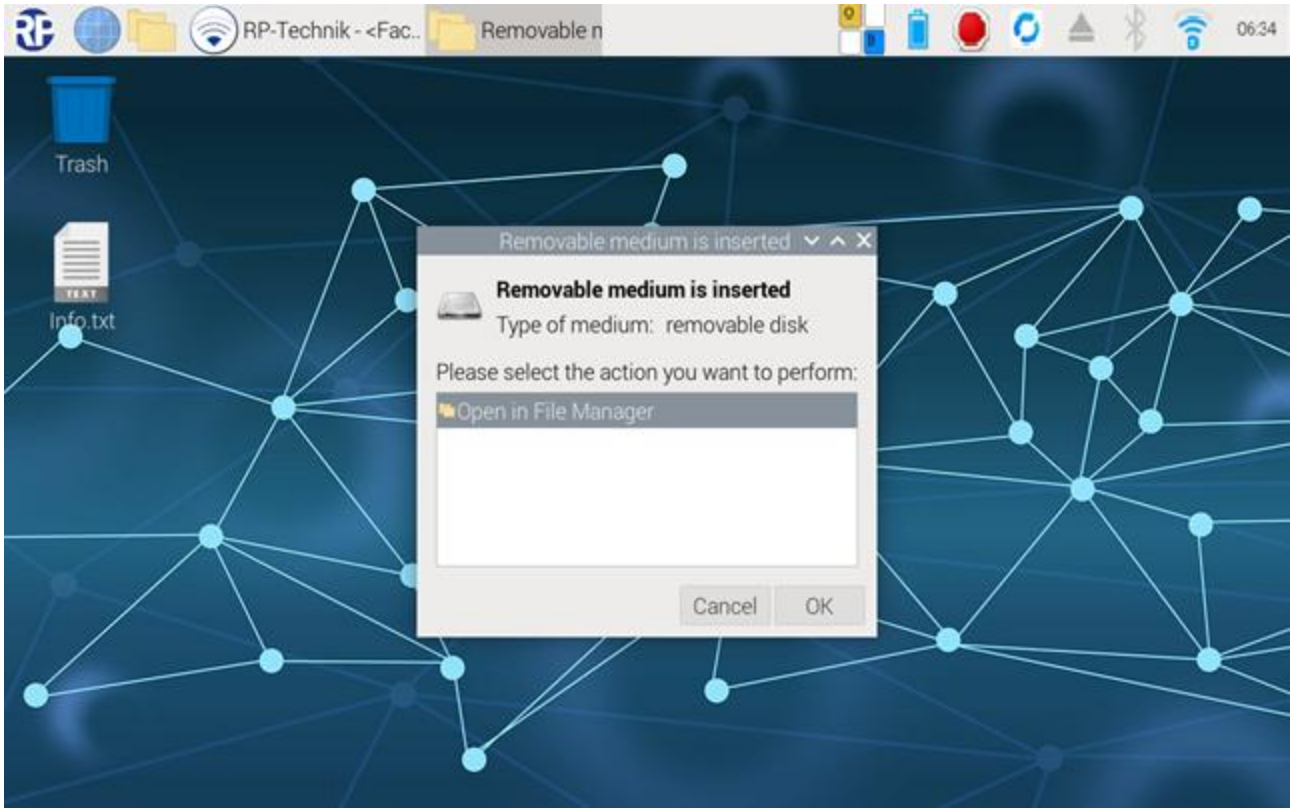


Figure 72 Confirming storage medium

The internal backup USB stick (WLPROSAFE) is located below the external USB stick (KINGSTON in the example shown below).

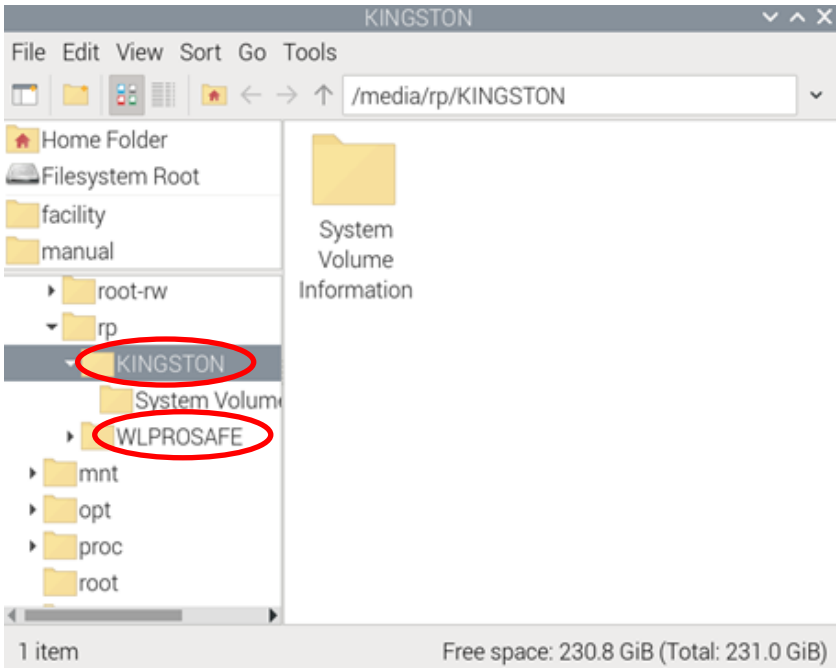


Figure 73 File explorer with internal and external USB stick

Select WLPROSAFE and mark the “backup” and “ltbackup” folders.

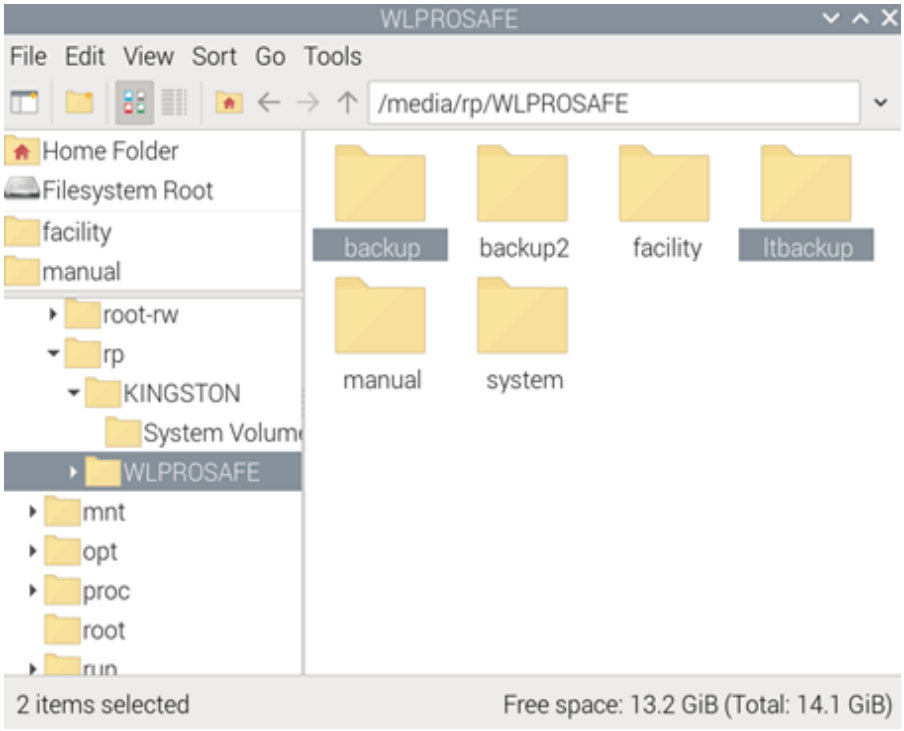


Figure 74 Selecting WLPROSAFE Backup files

The files are then copied via *Edit-> Copy*.

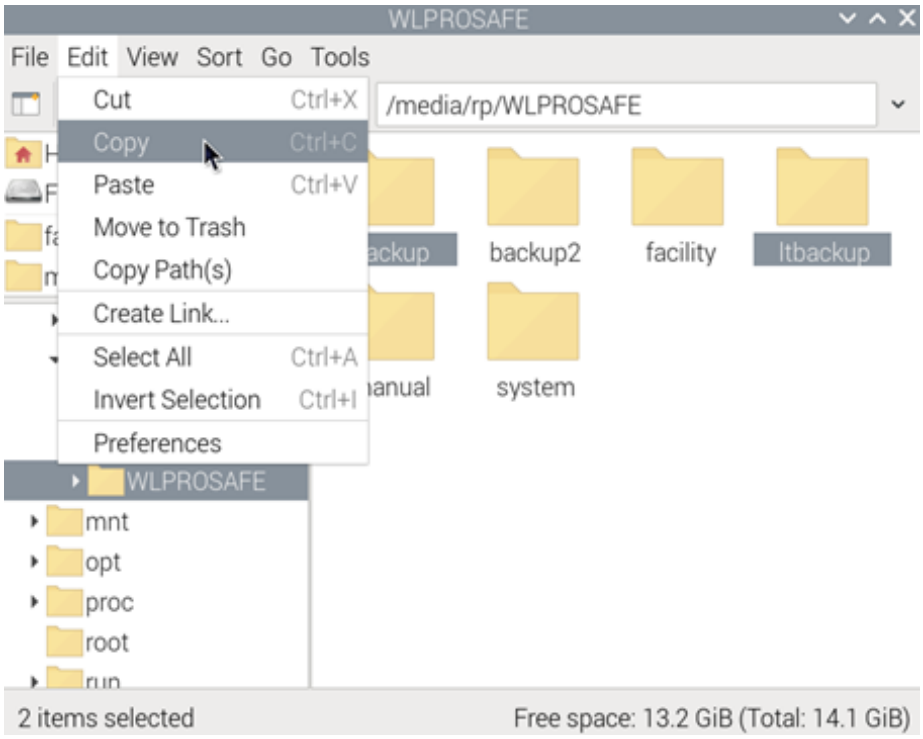


Figure 75 Copying WLPROSAFE Backup files

Now select KINGSTON. Then, using *Edit->Paste*, insert the previously copied files.

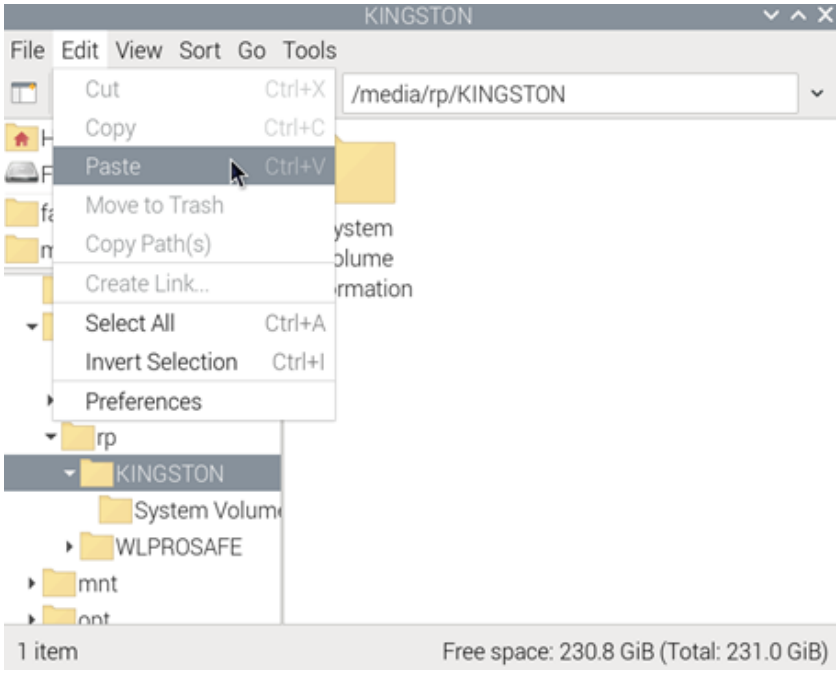


Figure 76 Inserting backup data on external USB stick

Then close the window by clicking on the “X” in the top right-hand corner and eject the external USB stick.

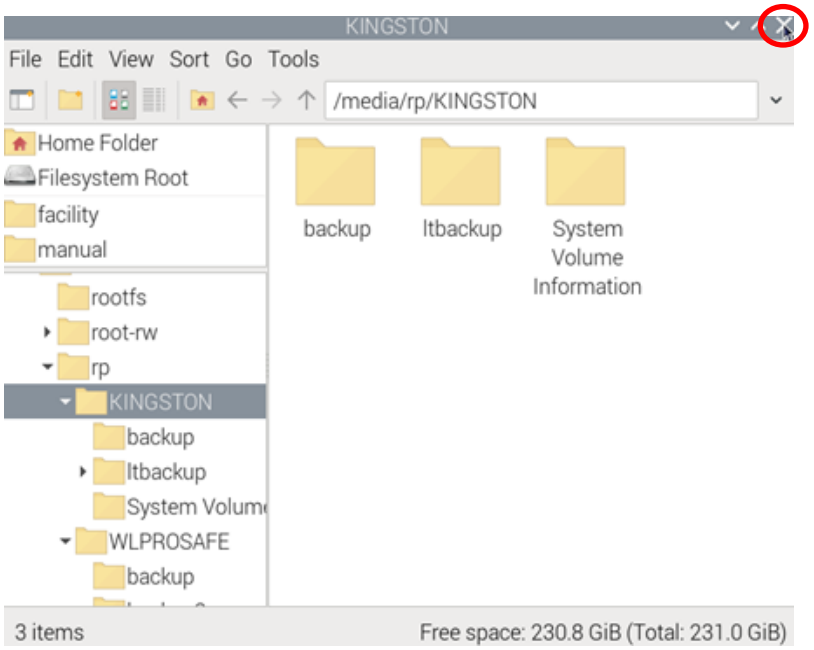


Figure 77 Closing File Explorer

To eject the external USB stick, click on the eject symbol ⏏.

Figure 78 Ejecting storage medium

16.3 Long Term Backup

The WirelessProfessional WLZent04 regularly stores an encrypted backup copy of the user data and log files in a special folder on the internal backup USB stick.

These so-called “Long-term backups” are automatically created on the 1st and 15th day of each month. Folders for long-term backups are retained for a maximum of 24 backups, which corresponds to the past 12 months. After that, the oldest backup will be overwritten. The backups are named with the date of creation in the folder name.

The path on the internal backup USB stick where the data is stored is: **media/rp/WLPROSAFE/ltbackup**

These backups can be used in conjunction with the Backup Recovery Tool (see 16.4) to restore a previous state.

16.4 Recovering long-term backup data

Backups should only be recovered by a suitably qualified and authorised person. To recover a long-term backup created by WLZENT04, use the Backup Recovery Tool.

Note: The Backup Recovery Tool is only available in Read-Only mode.

The recovery tool can be started via *Start menu->System tools->Backup and recovery*.

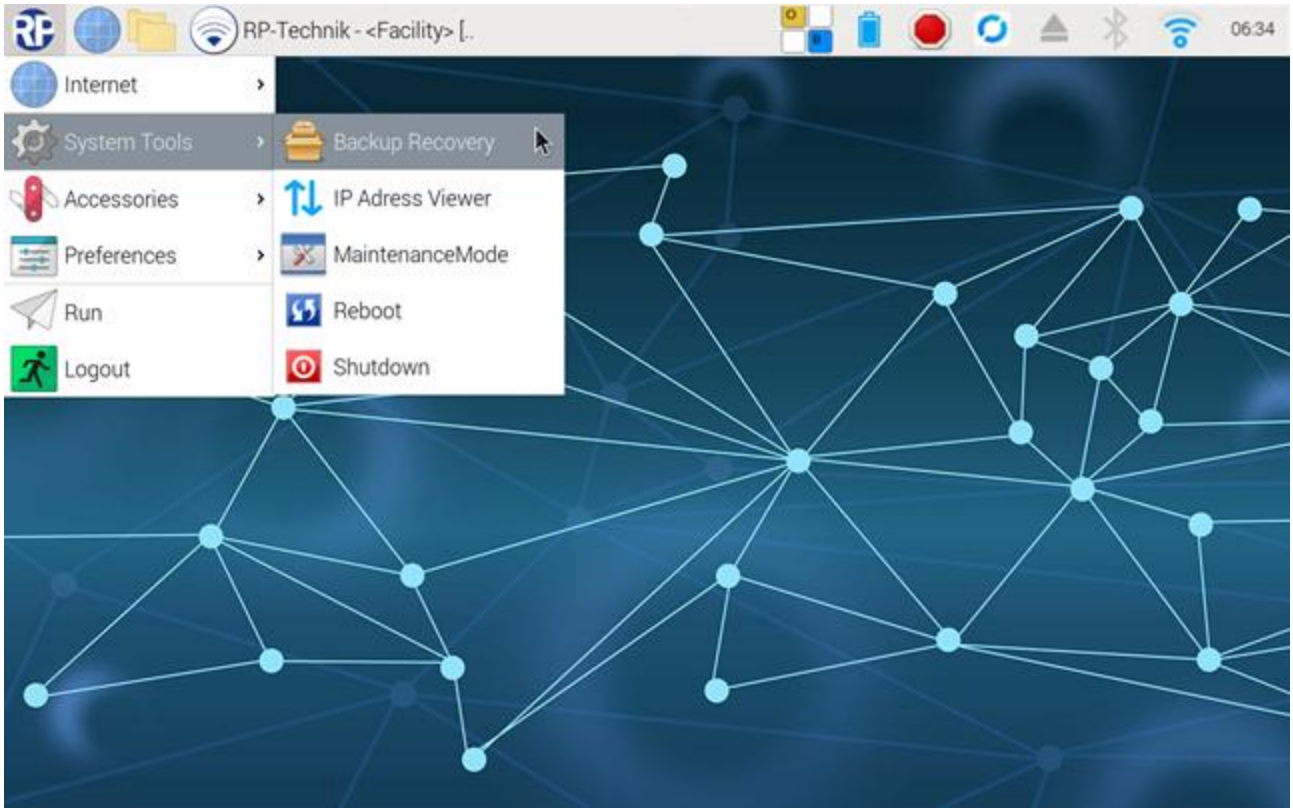


Figure 79 Start menu -> System tools -> Backup and restore

The Backup Recovery Tool opens. This displays all available long-term backups. The sorting is based on the creation date of the backup, with the most recent backup displayed first at the top left.

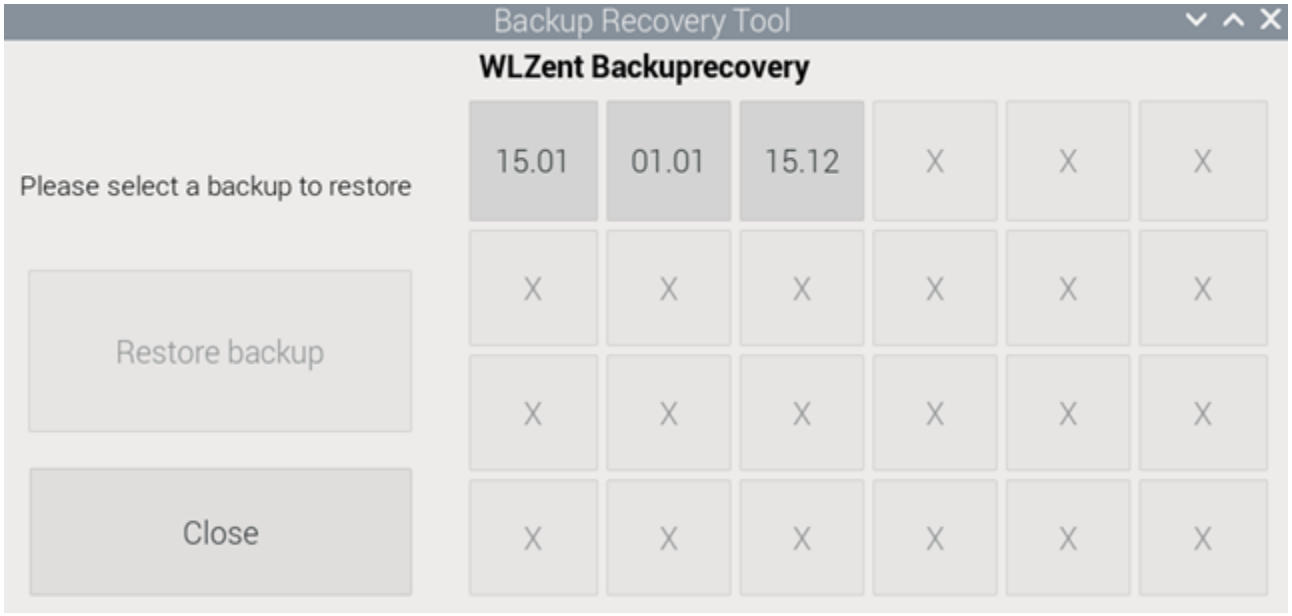


Figure 80 Backup Recovery Tool

Tap or click on the backup you want to import to select it. By subsequently tapping or clicking on the “Recover backup” button, the previously selected backup will be imported.

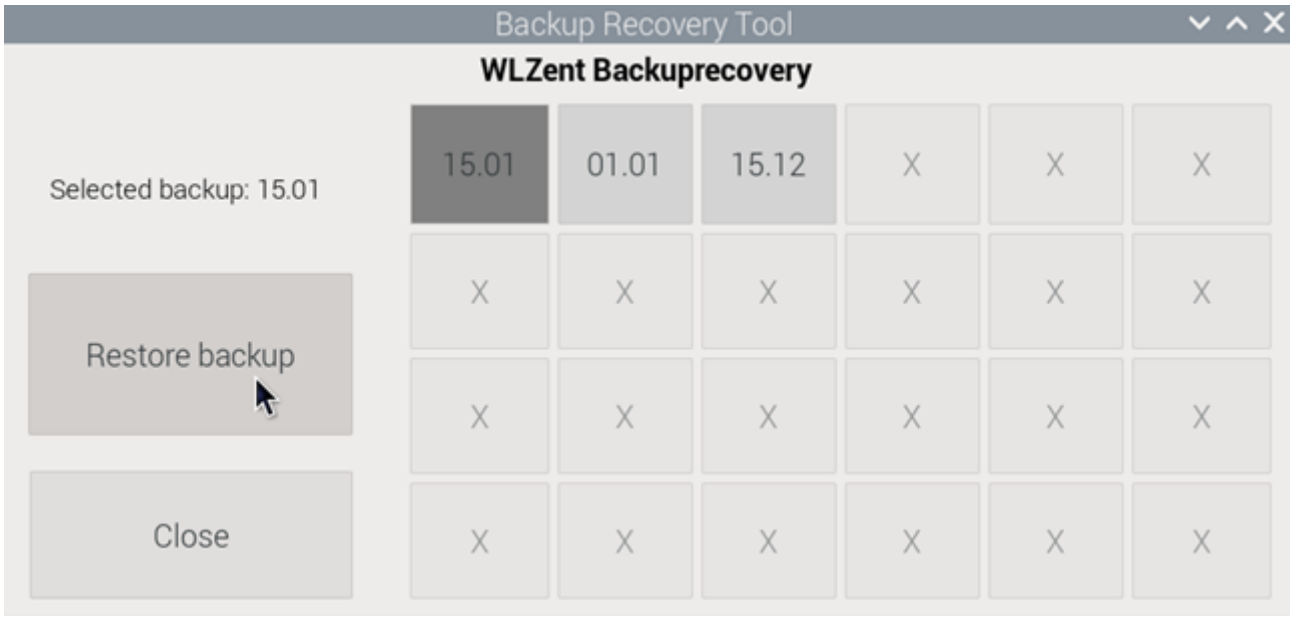


Figure 81 Selecting and recovering a backup with the Backup Recovery Tool

A notification window will appear, which must be confirmed by clicking the “OK” button.

Important: The WirelessProfessional software must be closed before confirmation.

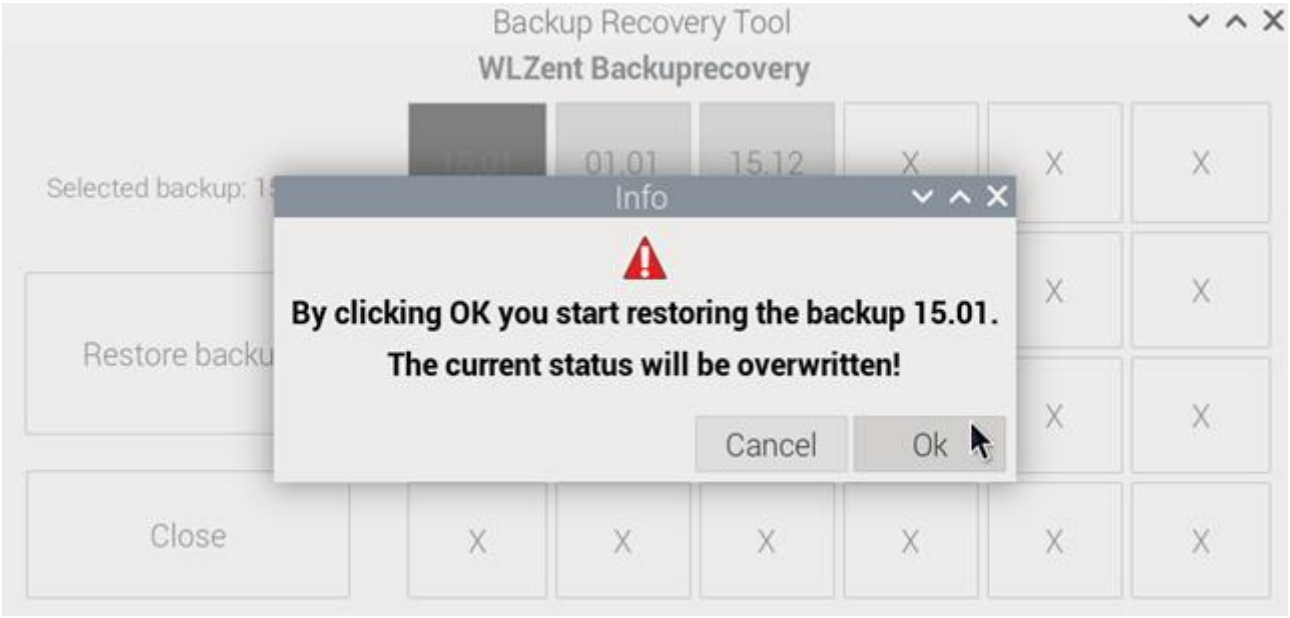


Figure 82 Recovering backup information window

The Backup Recovery Tool reappears with the confirmation “Backup has been successfully recovered”

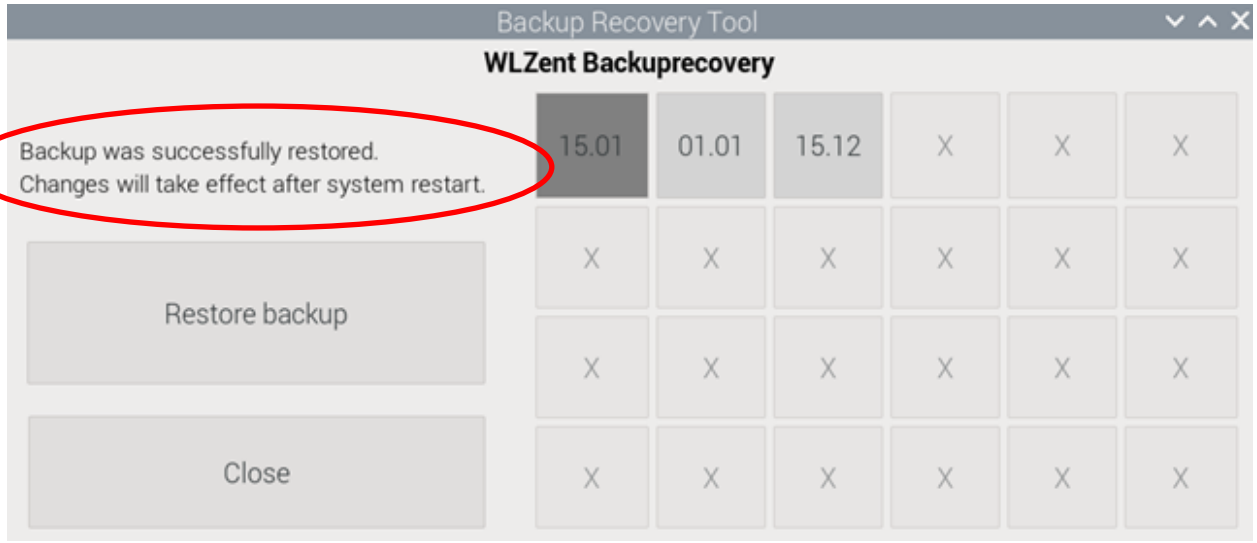


Figure 83 Backup successfully recovered

The WLZent04 must then be restarted. After WLZent04 has restarted, the WirelessProfessional software starts up with the data from the backup that has just been recovered.

17 Transferring systems to WLZent04

The transfer of source systems should only be carried out by a sufficiently qualified and authorised person. Only the WLZent04 import system may be used for importing. The backup of the source system must be correctly saved and named. Please refer to the instructions for manual backup in the relevant system manual.

Important: The backup previously saved by the source system must be named as follows:
WLTouch (Windows-System): "WirelessProfessional"
WLZent01 and WLZent02: "wireless"
CPC3, WLZent03 and WLZent04: "backup"

Note: The import system is only available in Read-Write mode. (see chapter 9 MaintenanceMode)

To import a source system, select *Start menu->System tools->Import System*.

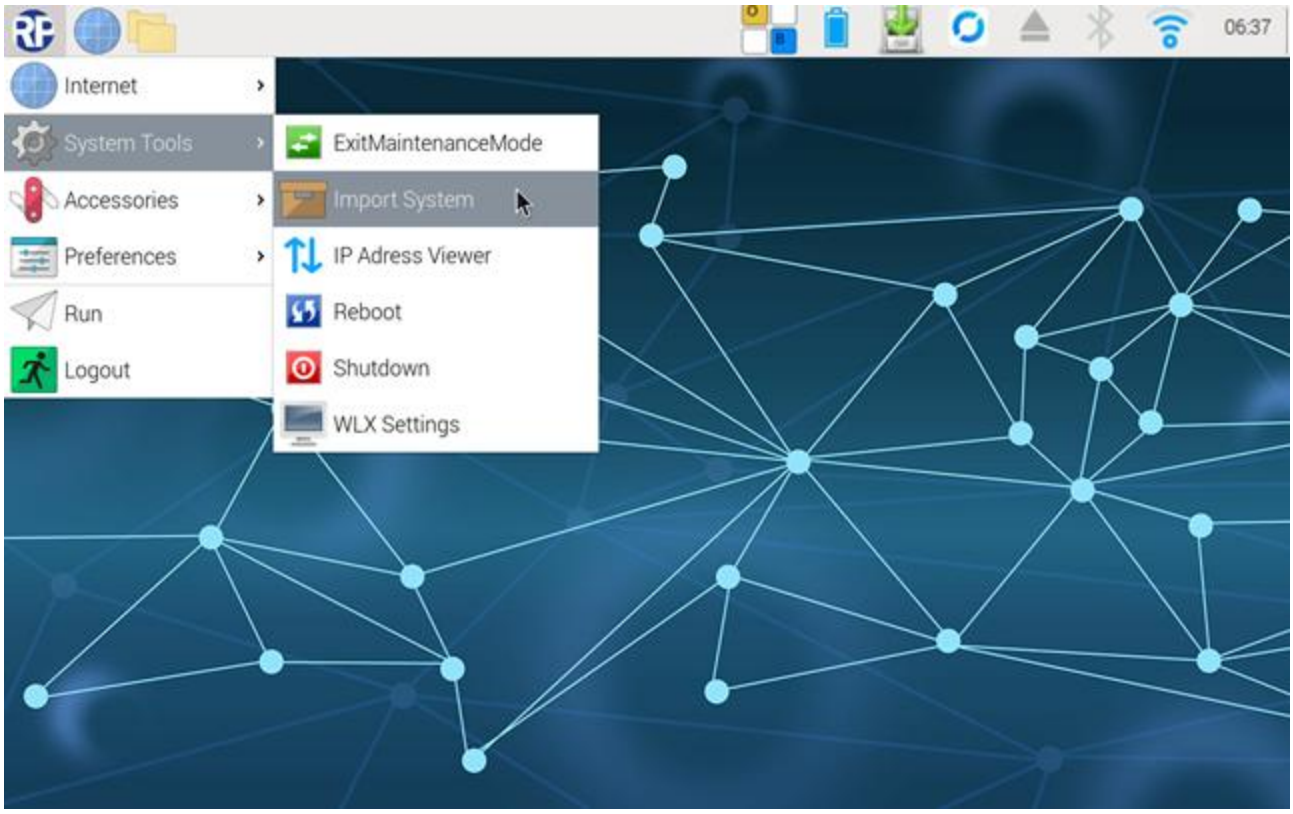


Figure 84 Start menu -> System tools -> Import System

The WLZent04 Import Tool opens. This displays all available source systems that can be imported.

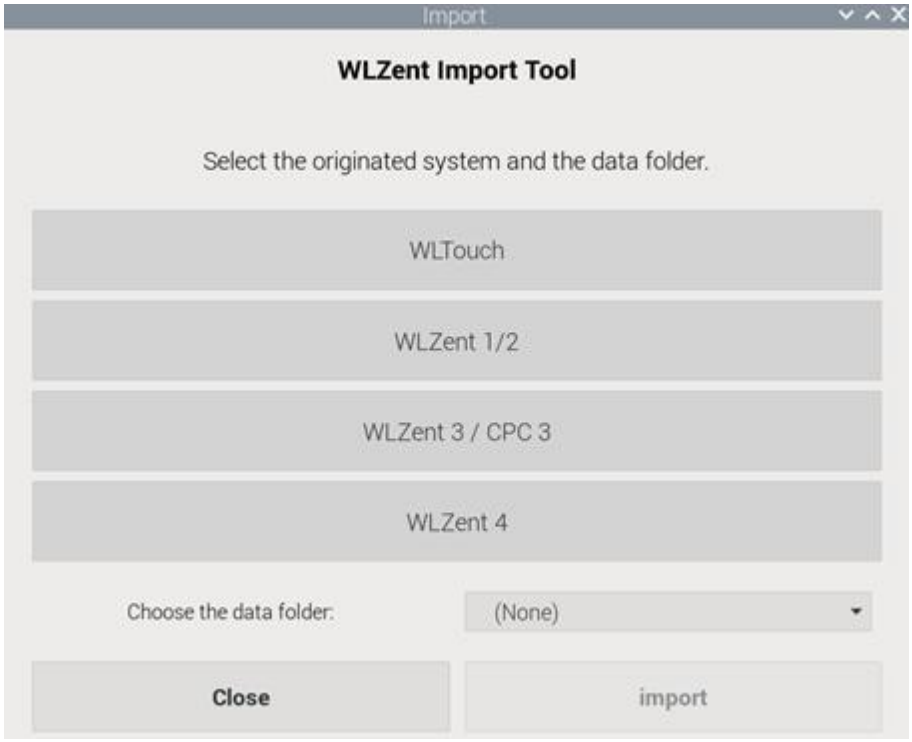


Figure 85 WLZent04 Import Tool

Tap or click to select the source system to be imported (here WLZENT03 as an example).

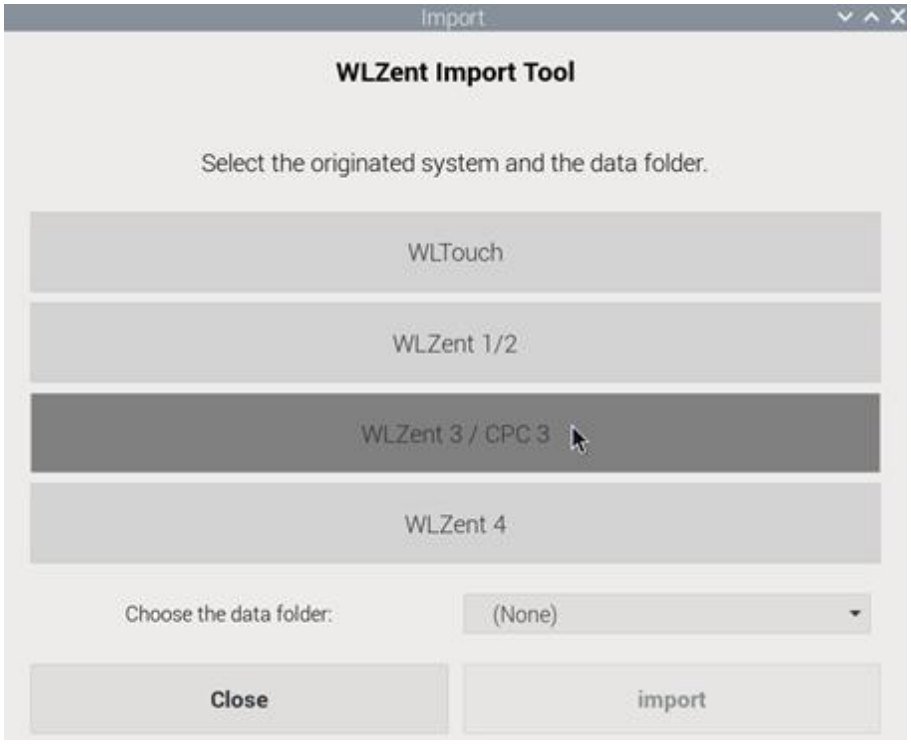


Figure 86 WLZent04 Import Tool: System selection

In this example, the system to be imported is located on an external USB stick (KINGSTON). Inserting the external USB stick opens the removable media window. Tapping or clicking the “OK” button opens the file explorer.

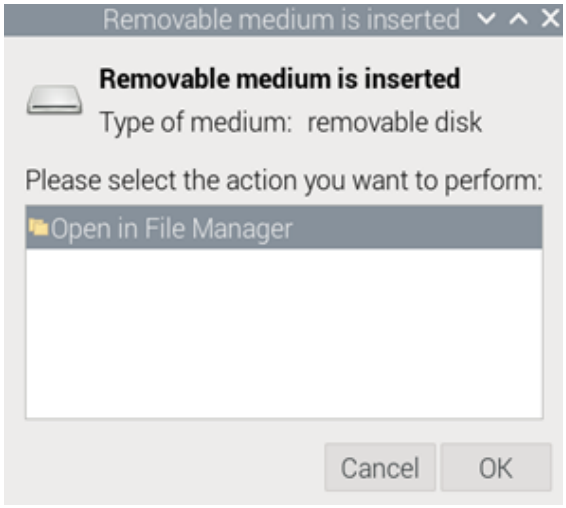


Figure 87 Confirming storage medium

The source system to be imported is dragged and dropped into the selection field.

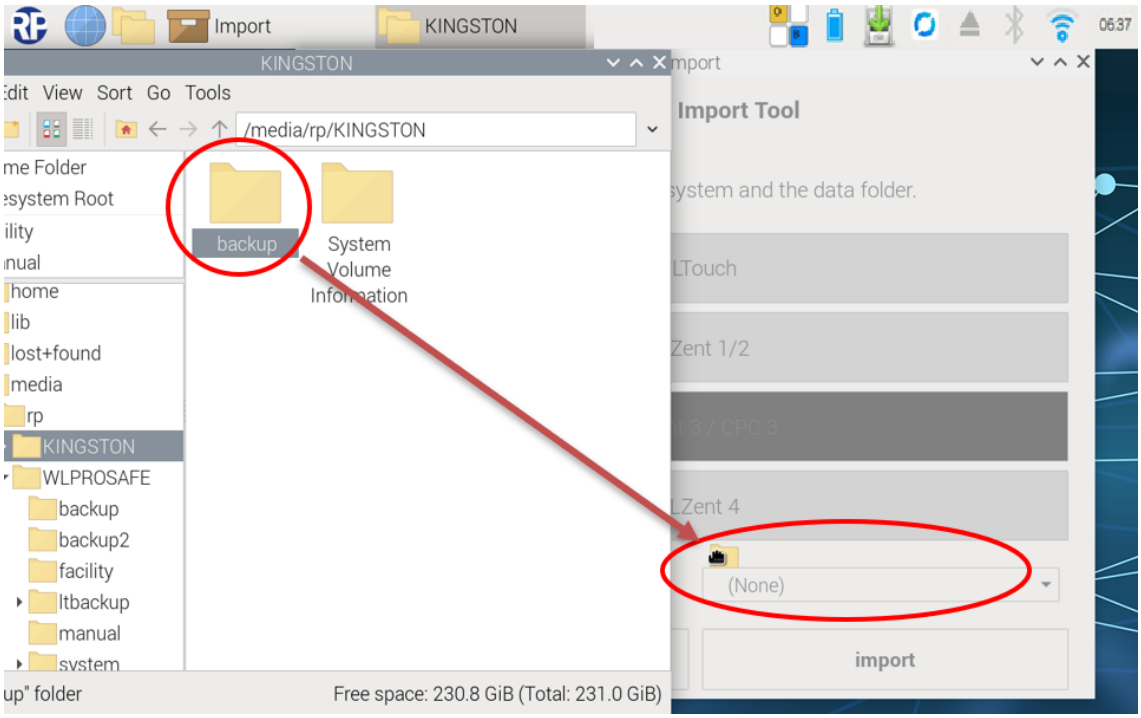


Figure 88 WLZent04 Import Tool: Selecting a source system using drag and drop

The selected folder is displayed. Now tap the “Import” button. A security prompt will open.

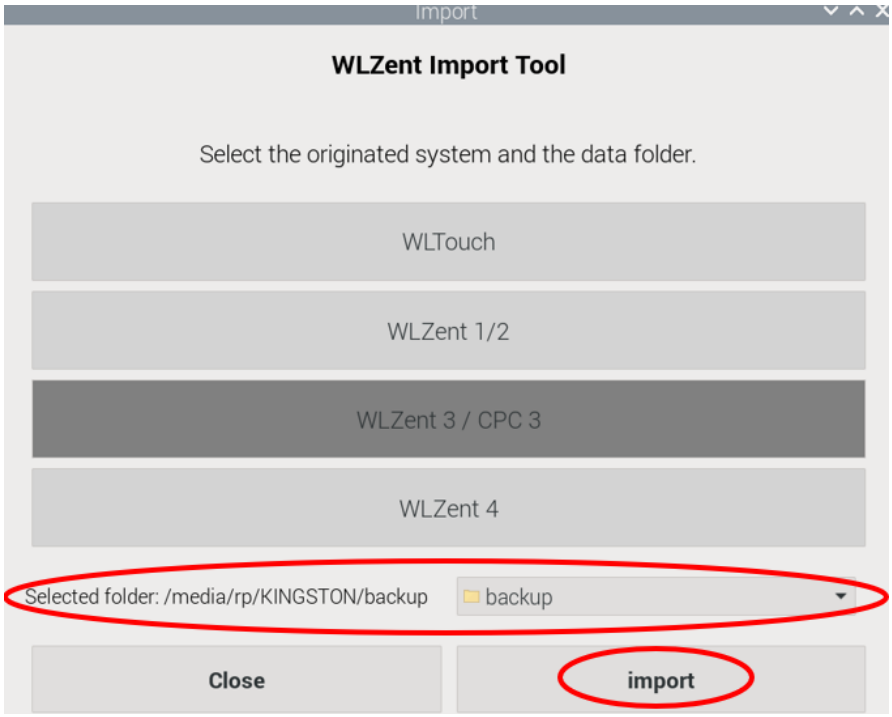


Figure 89 WLZent04 Import Tool: Importing selected file folder

Here, you must check whether the information is correct. Tap or click the “OK" button to start the import process.

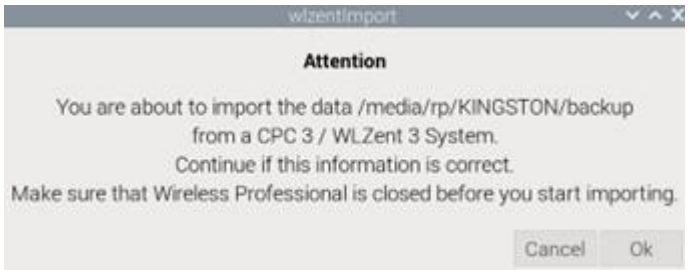


Figure 90 WLZent04 Import Tool: Import confirmation

Figure 91 WLZent04 Import Tool: Data is being imported

If the import is successful, the message “Data imported successfully” will appear. Tap or click the “Close” button or the “X” in the top right corner to close the program.

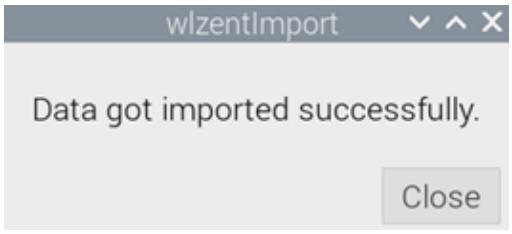


Figure 92 WLZent04 Import Tool: Successful import

If the import fails, the message "Import failed: ...“ appears

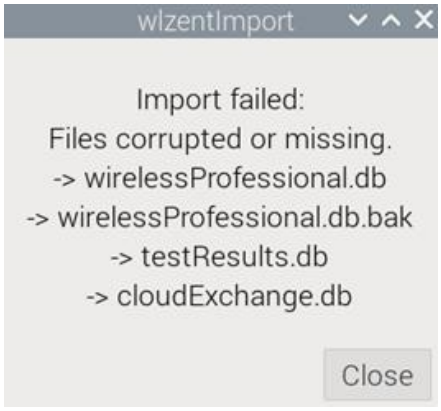


Figure 93 WLZent04 Import Tool: Failed import

Note: The error message may vary depending on the cause of the failure.

Important: It must be checked whether the backup to be imported has been correctly saved by the source system beforehand. Please observe the instructions for manual backup of the respective device.

Important: Check whether the backup is correctly named and whether the necessary files listed in the error message are present.

18 Webbrowser

A web browser is installed on the WirelessProfessional WLZent04. The web browser is intended to enable access to central battery systems with a web server (e.g. multiControl *plus*). Launching the web browser

The web browser can be launched via the taskbar icons or via the *Start menu->Internet->Firefox*.

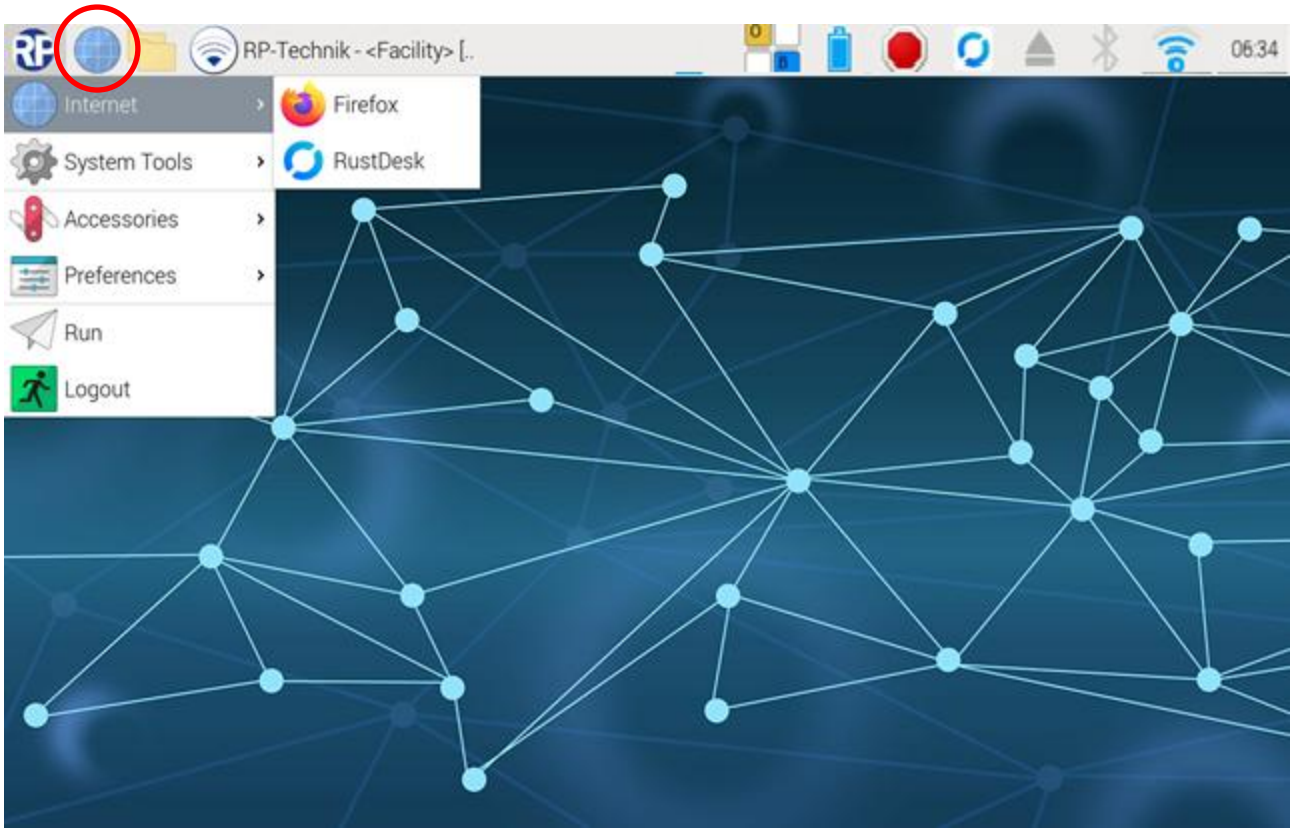


Figure 94 Start menu -> Internet

Firefox is installed as the web browser in this version of WirelessProfessional WLZent04. However, the web browser used may change due to an update of WLZent04. If you need help using the web browser, please use the web browser's help menu.

Note: The web browser may take approximately 10 seconds to start up.

19 Text editor

A text editor is installed on the WirelessProfessional WLZent04. With this text editor, WirelessProfessional logs can be saved as plain text.

19.1 Launching text editor

The text editor can be started via *Start menu->Accessories->Text Editor*.

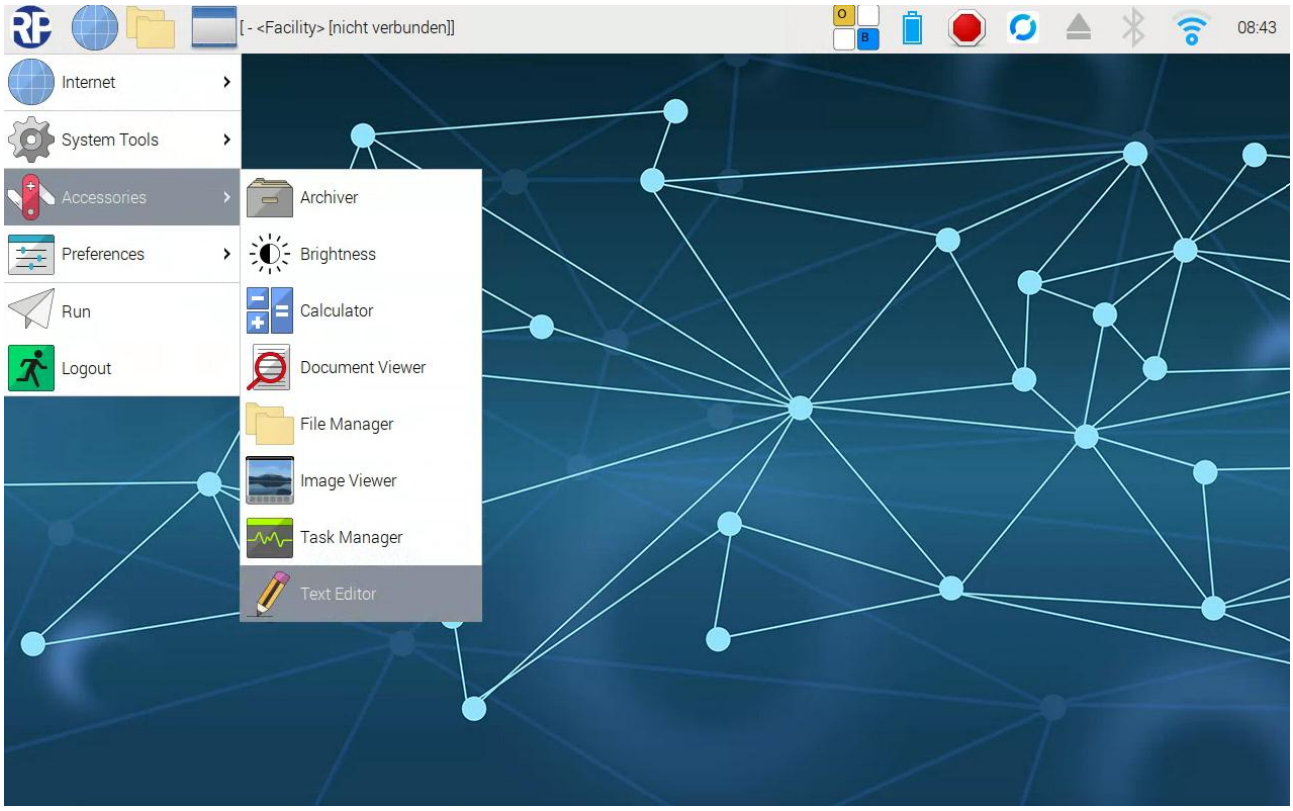


Figure 95 Start menu -> Accessories -> Mousepad

19.2 Pasting text from the clipboard

To paste text from the clipboard into the editor, tap the “Ctrl” and “v” buttons in succession on the on-screen keyboard that opens.

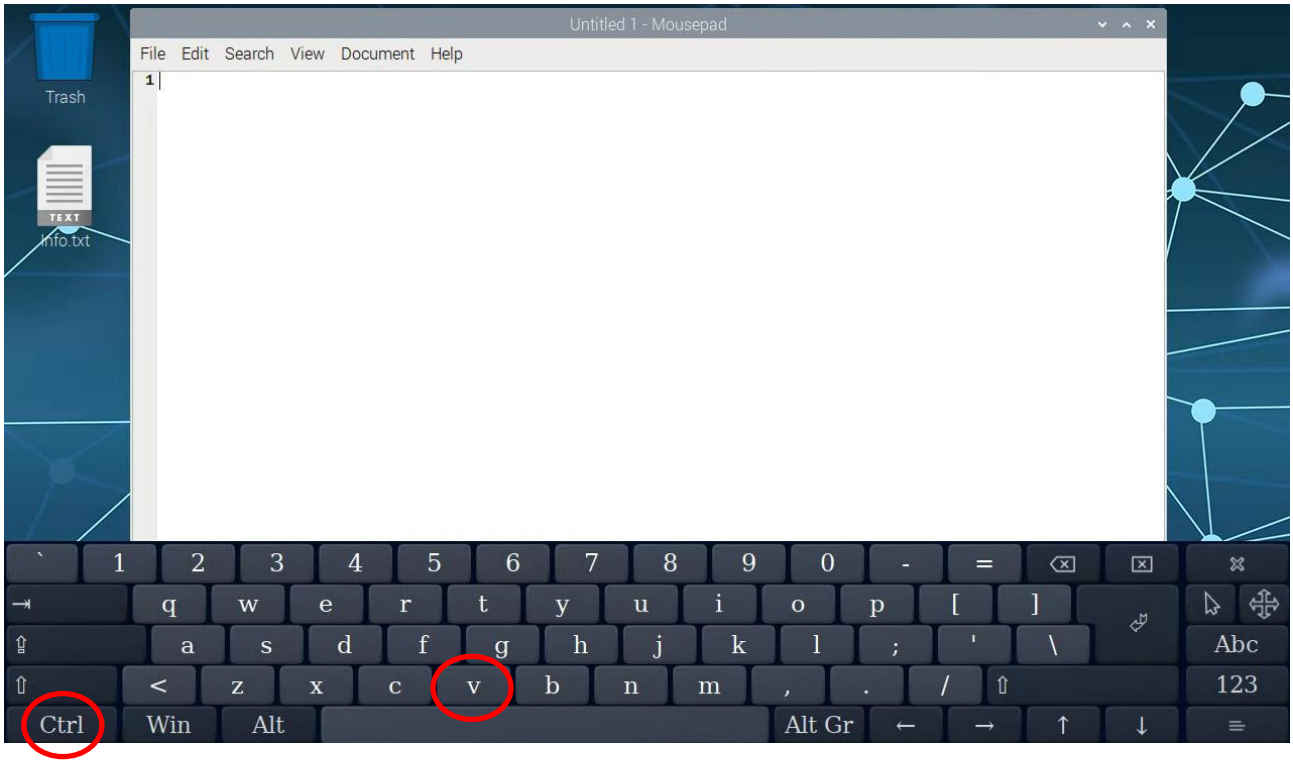


Figure 96 Text editor

Alternatively, you can select *Edit->Insert* from the menu bar.

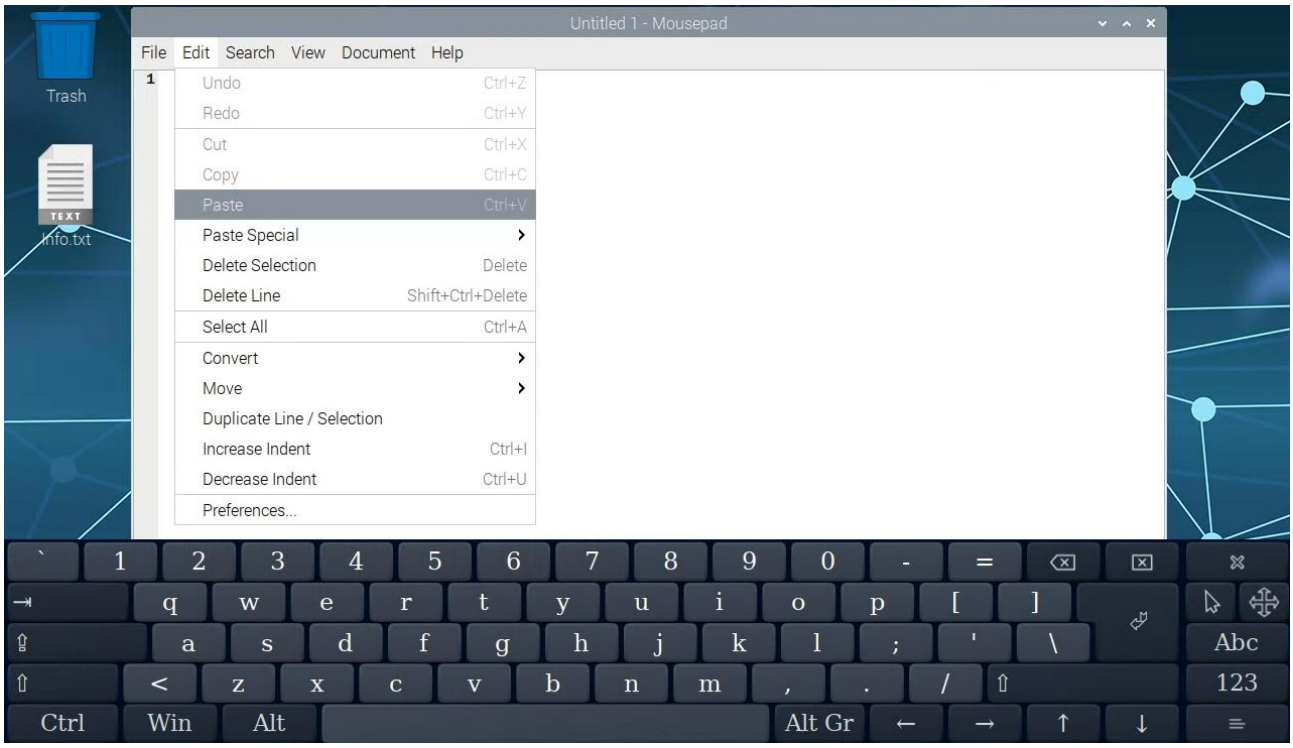


Figure 97 Text editor Edit menu

19.3 Save file

To save the document, select *File->Save As...* from the menu bar.

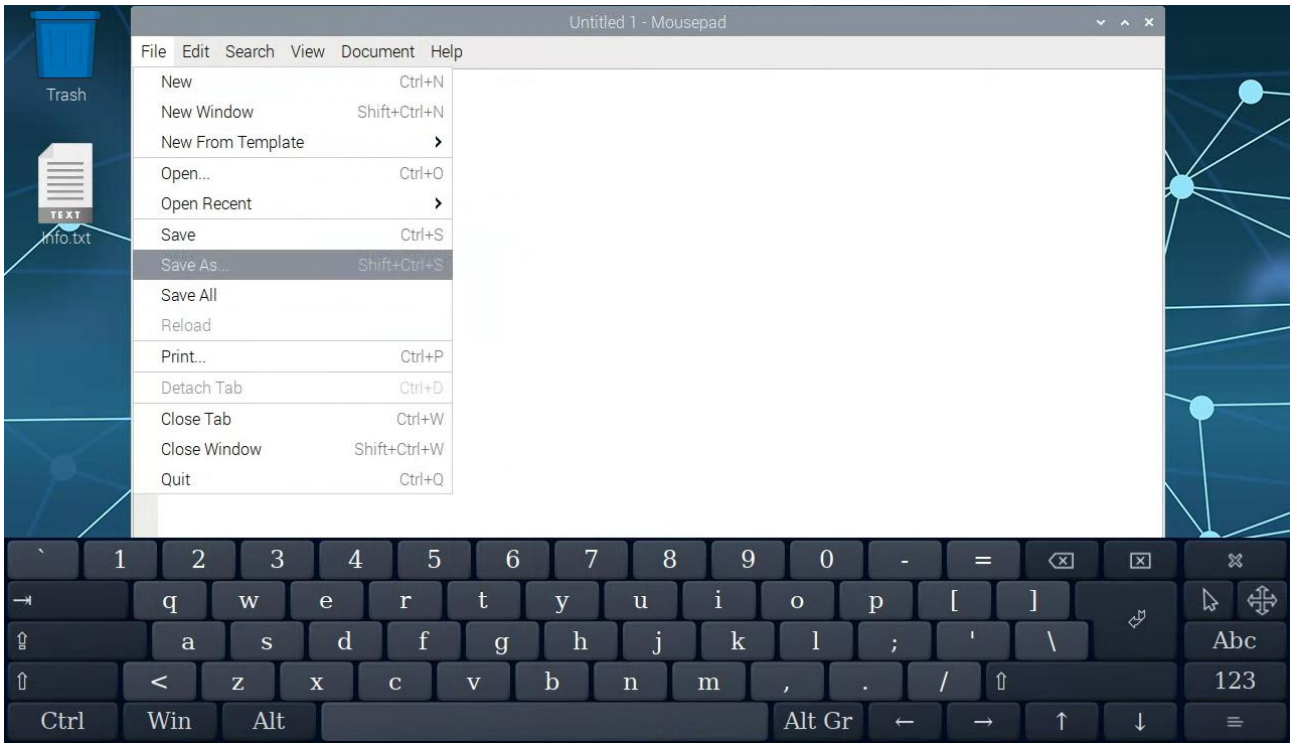


Figure 98 Text editor Save file

Another window will then open, allowing you to select the storage location and assign a file name.

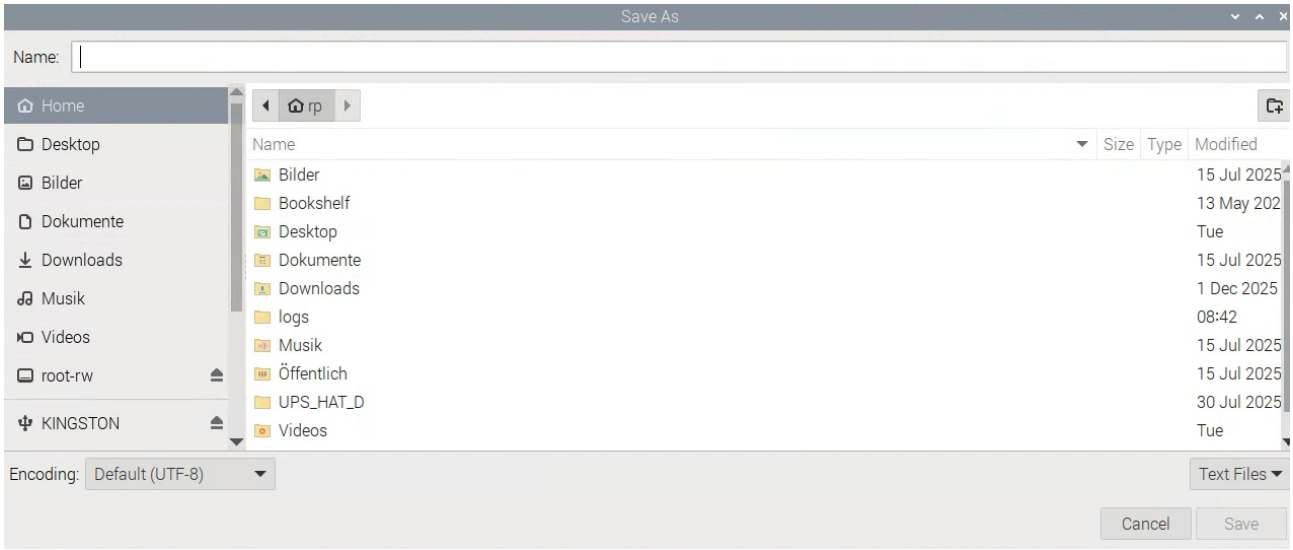


Figure 99 Text editor Save dialogue

Note: Plain text log files should not be stored in the WLZent04 file system, as they will be lost when the system is restarted.

19.4 Exit program

To exit the program, tap the “X” in the top right corner.

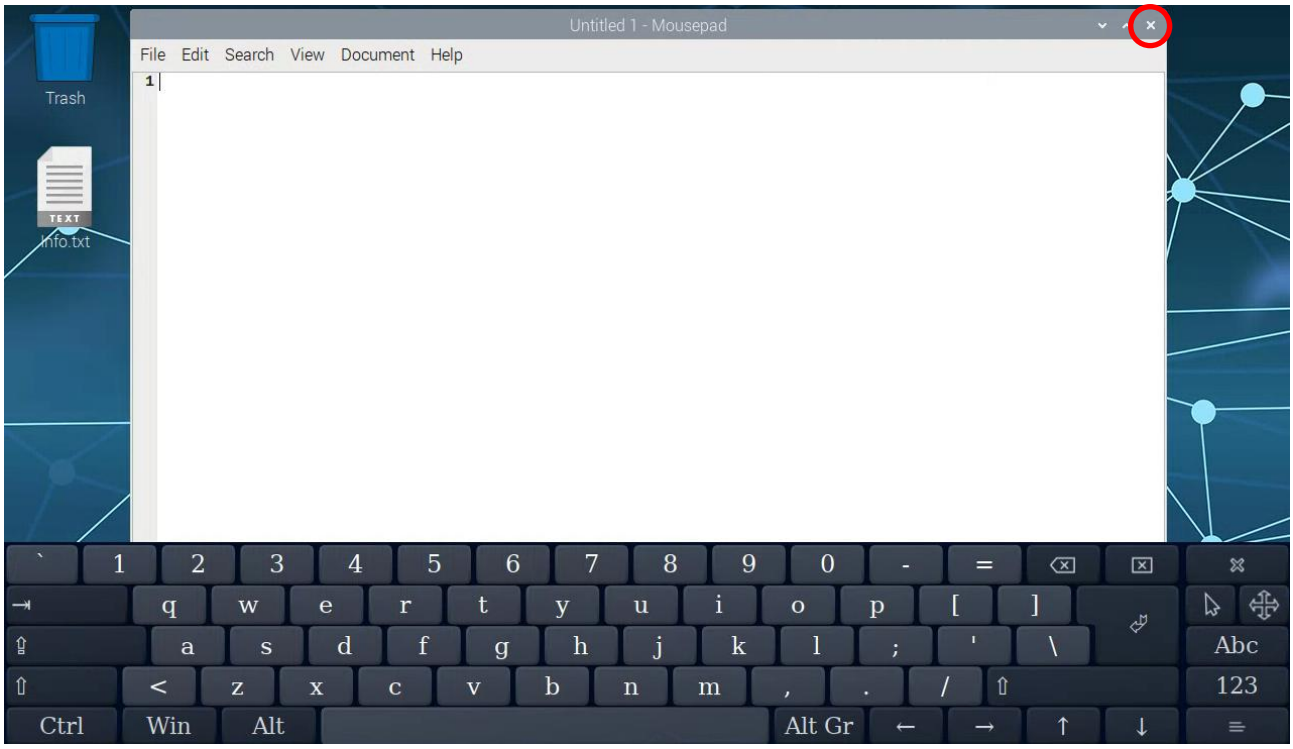


Figure 100 Closing text editor

Alternatively, select *Edit->Exit* from the menu bar. If the text document has not yet been saved, the program will ask whether the document should be saved or not.

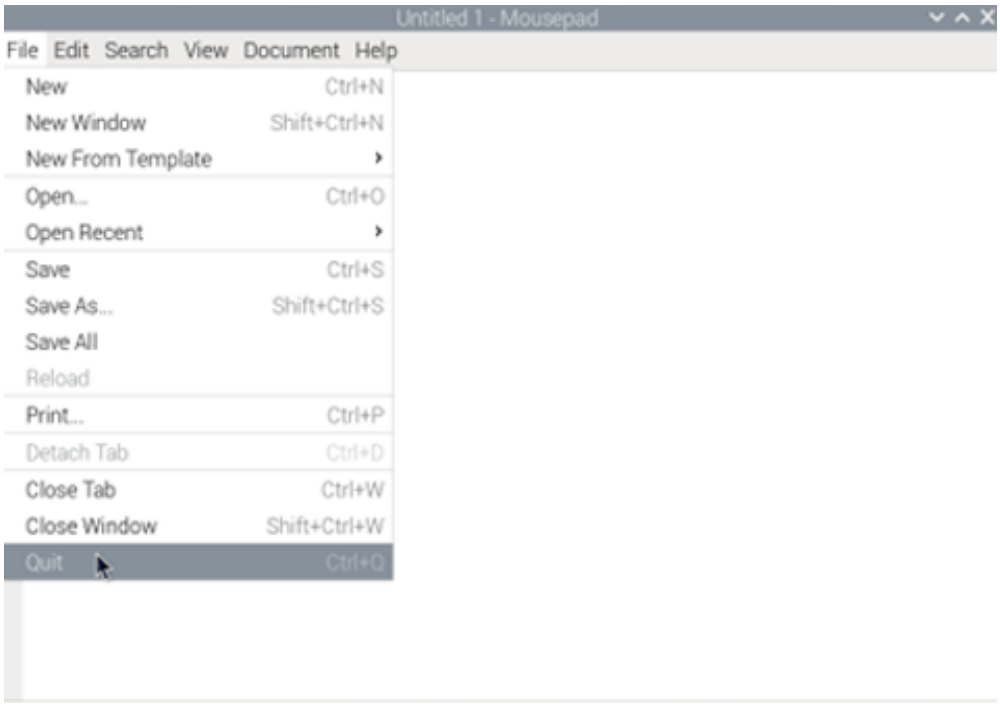


Figure 101 Closing the text editor via the menu

20 Updates to the operating system and WirelessProfessional software

The WirelessProfessional WLZent04 periodically checks for updates to the operating system and the WirelessProfessional software. The WLZent04 requires an internet connection for this check. The WLZent04 automatically searches for updates once a week (the default setting is Sundays at 1:00 a.m.), downloads them independently and installs them. The time can be set individually (see chapter 12.2 Set Update Time).

Important: From time to time, the operating system itself displays an icon in the bar at the top of the screen to indicate that an update is available and allows it to be installed by clicking on the icon (see Error! Reference source could not be found.). However, for technical reasons, updates installed in this way are lost when the system is restarted. Therefore, updates should NEVER be performed via the icon, but ONLY via the 'Check for Updates' command in the Start menu.

Note: It may happen that individual operating system updates are not installed. In this case, the update icon remains or reappears. This is not a malfunction, but intended behaviour. In such a case, the update icon should be ignored.

Figure 102 Taskbar: Update Available

The automatic update process does not require any manual intervention. However, it is possible to manually start the search and installation of updates at any time, regardless of the weekly cycle described above. The WLXUpdater is used for this purpose. The WLXUpdater allows you to manually search for updates or import an offline update from an external storage medium, such as a USB stick. It is only available in Maintenance Mode and can be accessed via Start Menu->System Tools->Updates.

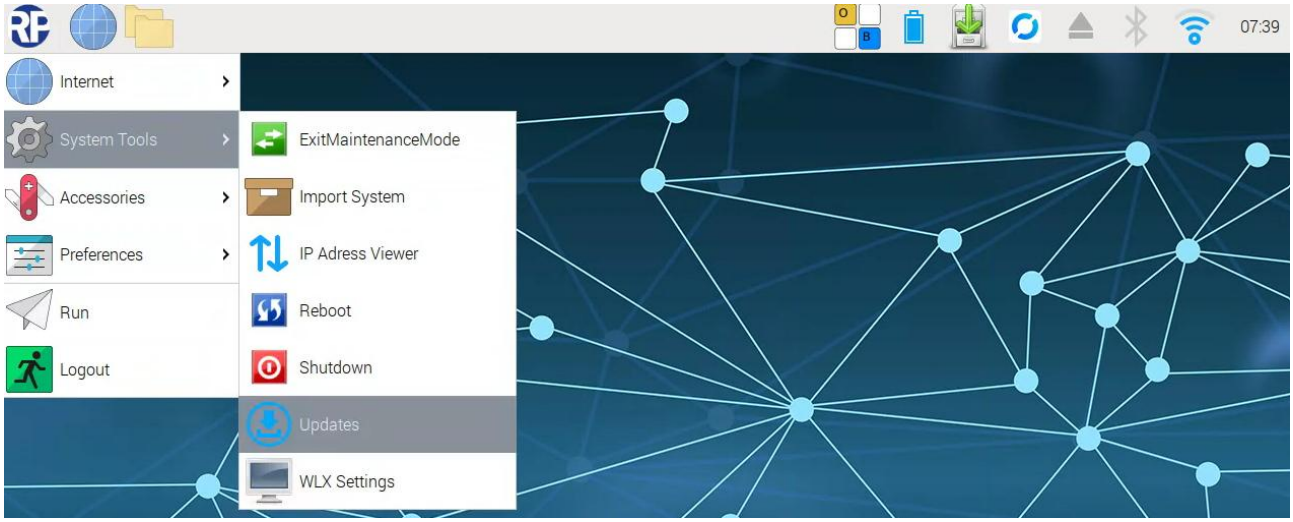


Figure 103 Start menu -> System tools -> Update

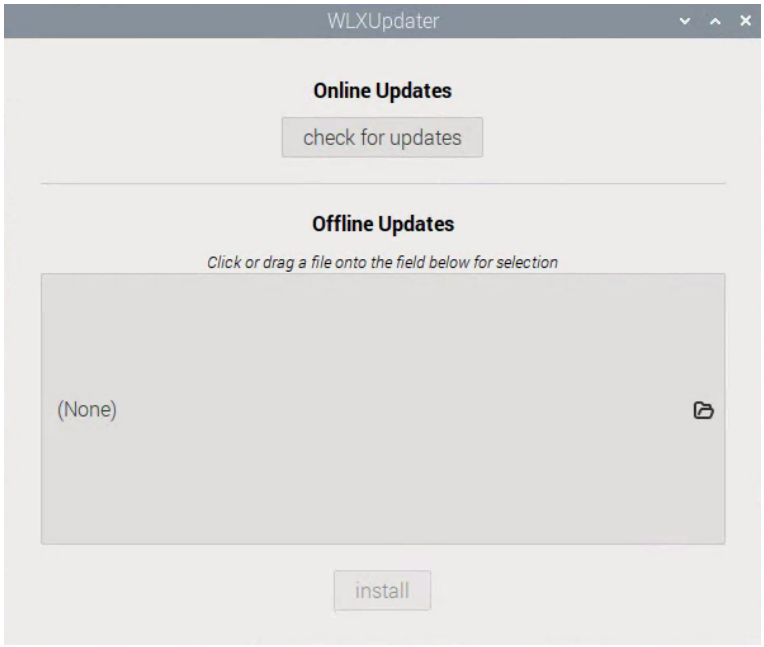


Figure 103 WLXUpdater

20.1 Online Update

Important: WLZent04 requires an internet connection for online updates.

Tapping or clicking the 'Check for Updates' button will search the update server for the latest update. Tapping or clicking the 'Install' button will automatically install it.

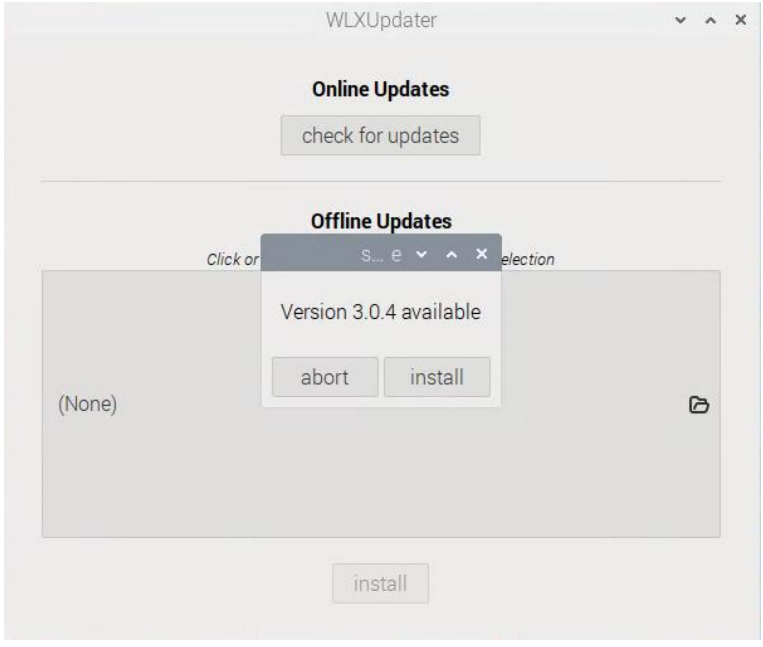


Figure 105 WLXUpdater Search for online updates

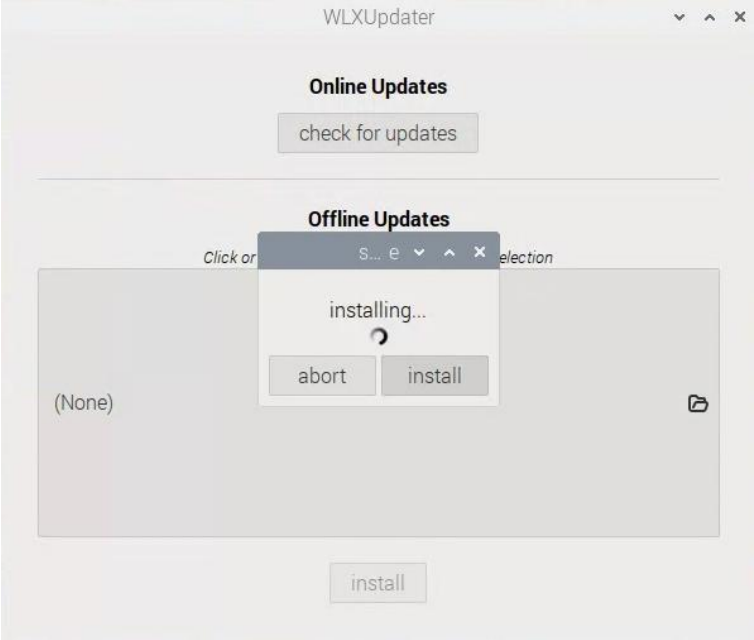


Figure 106 Installing an online update

Once the installation is complete, the WLXUpdater can be closed by tapping or clicking the 'Finish' button.

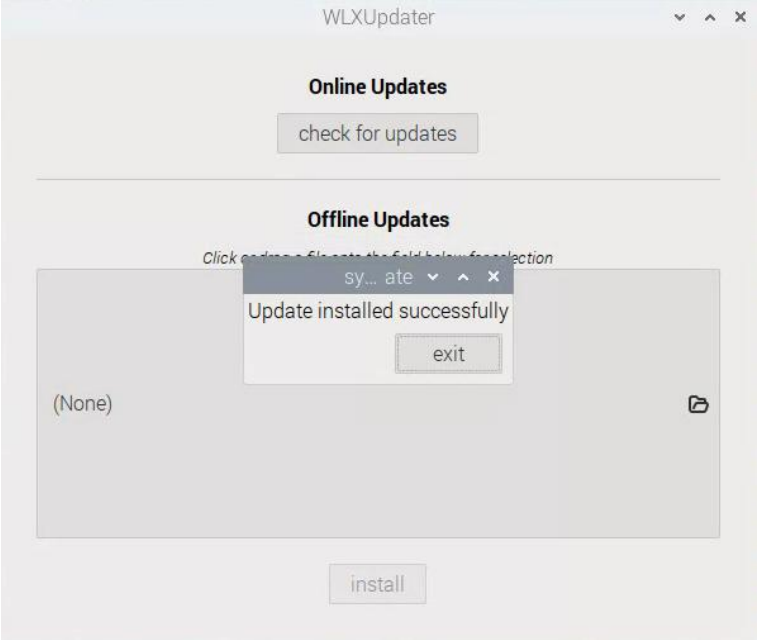


Figure 107 Online update successfully installed

20.2 Offline Update

In this example, the offline update is located on an external USB stick (KINGSTON). Inserting the external USB stick opens the removable media window. Tapping or clicking the 'OK' button opens the file explorer.

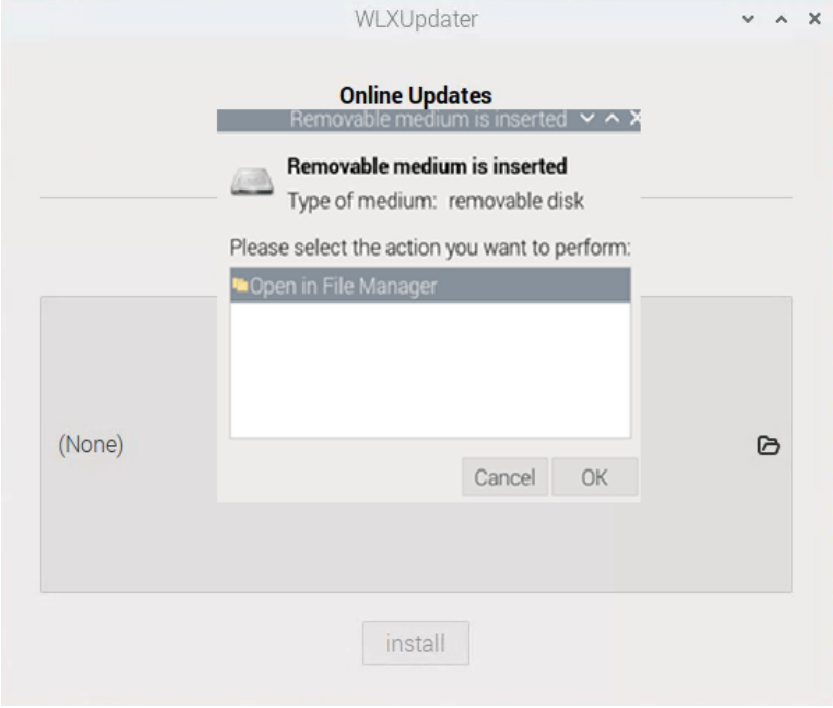


Figure 108 Confirm storage medium

Drag and drop the offline update into the selection field.

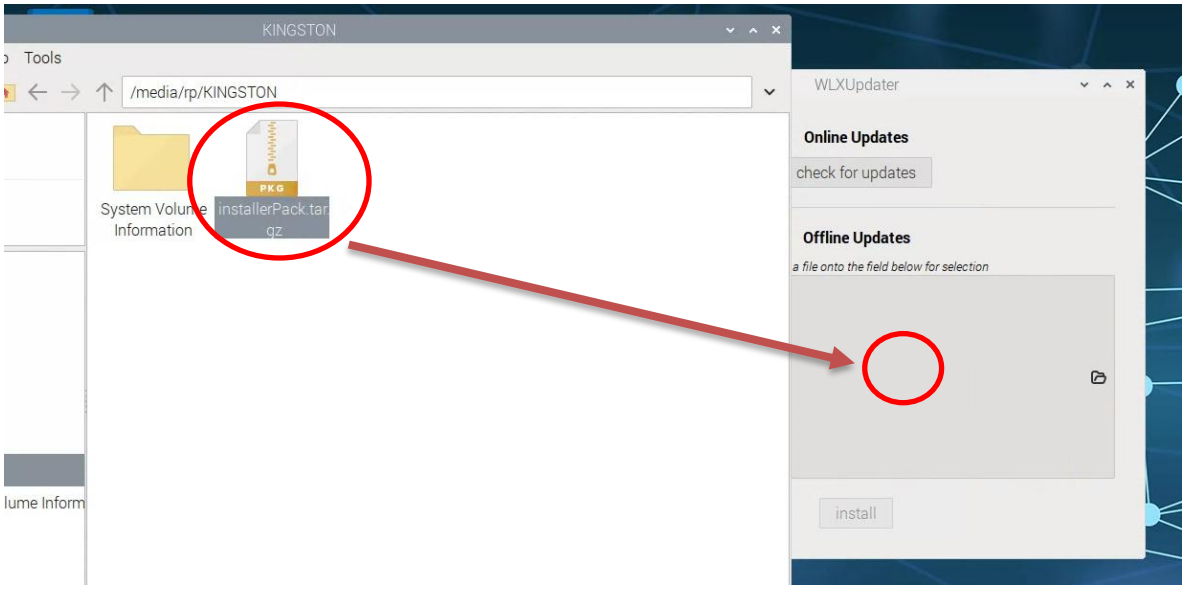


Figure 109 Select offline update via drag and drop

By tapping or clicking on the 'Install' button, it will be installed automatically.

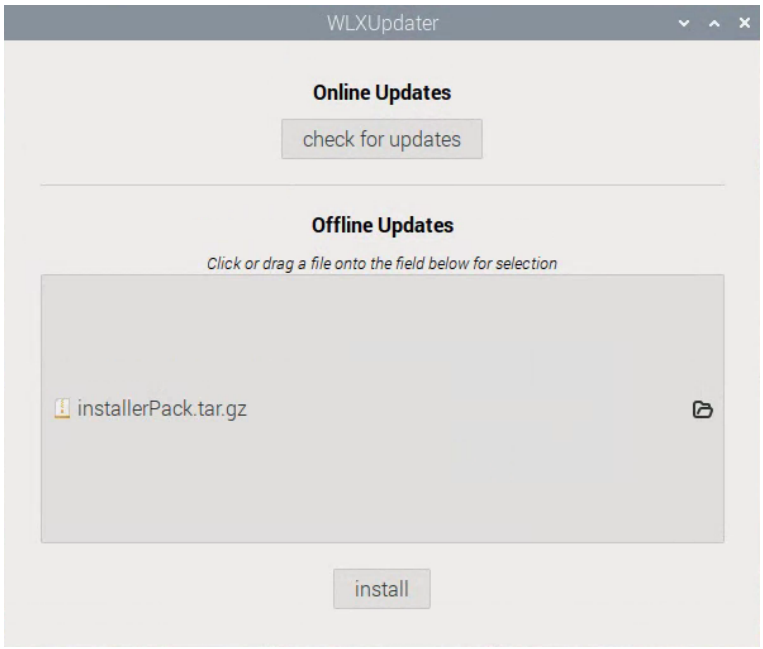


Figure 110 Importing offline updates

Once the installation is complete, the WLXUpdater can be closed by tapping or clicking the 'Finish' button.

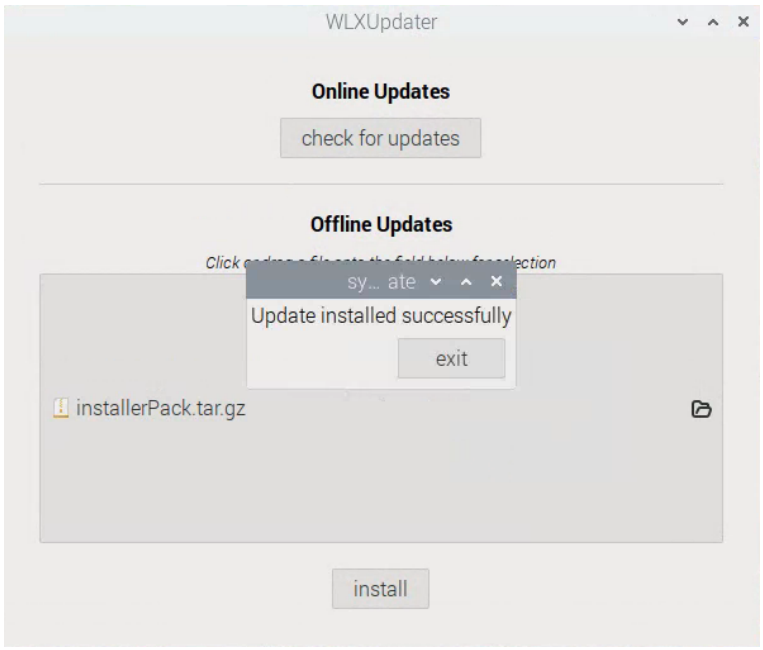


Figure 111 Offline update successfully installed

21 Firewall

The WirelessProfessional WLZent04 has a firewall that blocks incoming and outgoing connections to the device that are not necessary for operation.

Note: In order to make permanent changes to the operating system, the operating system must first be switched to Read-Write mode. (see chapter 9 MaintenanceMode)

Note: Some drop-down menus are difficult to use on the WLZent04 touch display. It is therefore recommended to use the arrow keys on the on-screen keyboard to make a selection in a drop-down menu.

The firewall configuration can be started via the *Start menu->Settings->Firewall configuration*.

Figure 104 Start menu -> Settings -> Firewall configuration

The local user password can be found in the Info.txt file on the desktop or in the information sheet provided.

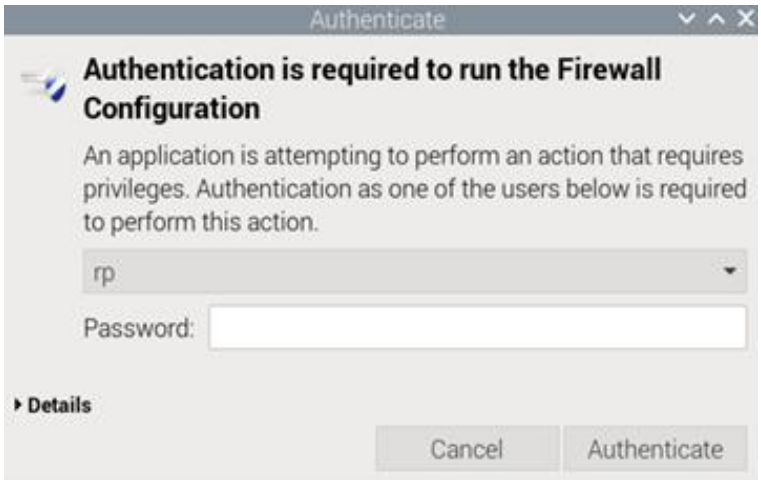


Figure 105 Firewall authentication

Once the password has been entered, the “Firewall” window appears.

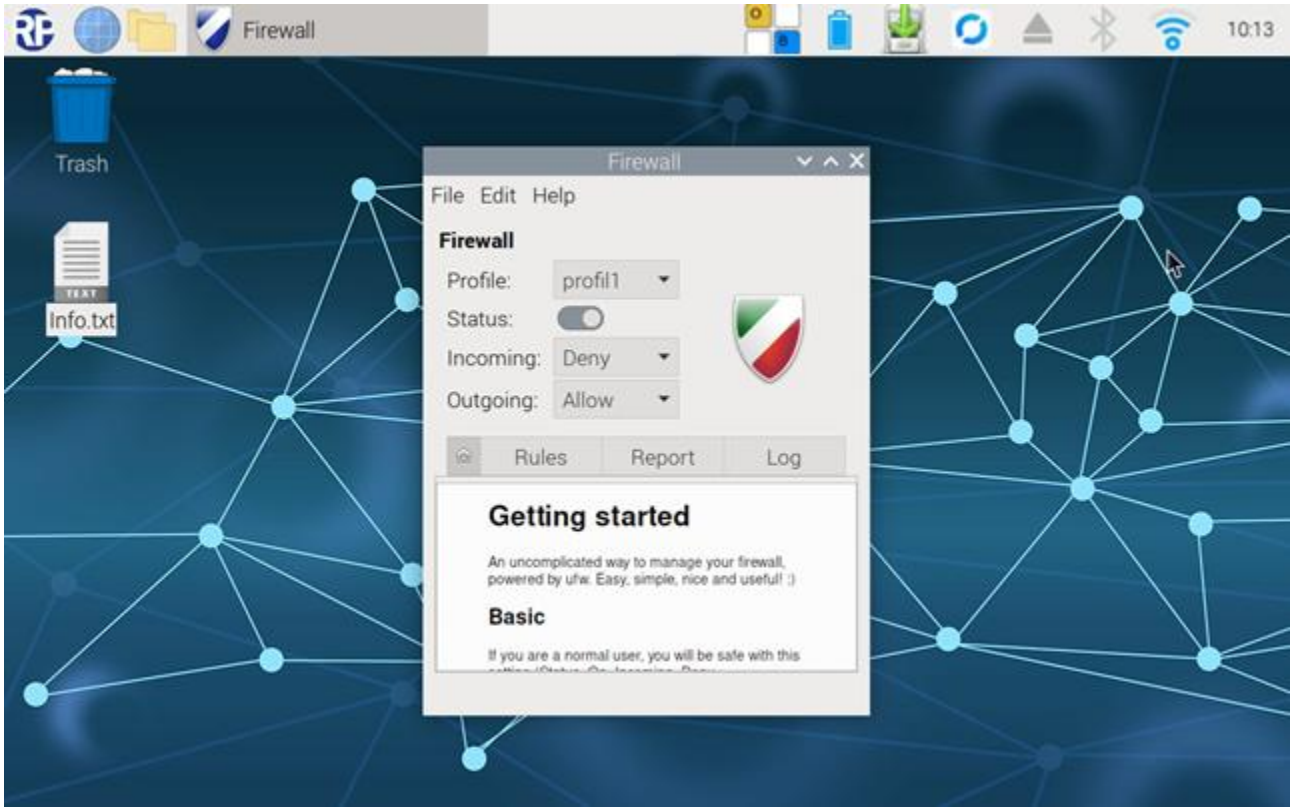


Figure 106 Firewall window

Important: Changes to the firewall configuration are not recommended and are made at your own risk.

22 Installing additional languages

The WirelessProfessional software supports multiple languages ex works.

Additional languages or newer language files for the WirelessProfessional software will be installed via the automatic software update as soon as they become available.

Note: The language of the Linux operating system can be switched between German and English (see chapter 12.1 System Language Settings).

23 FAQs

23.1 Which devices can be connected to the USB port?

Hubs, USB storage devices, and external input devices such as keyboards or mice.

Note: When connecting multiple external devices, ensure that their total power consumption does not exceed the device's capacity. E.g.: external hard drives.

23.2 Is it possible to install additional software on the device?

The installation of additional software is possible but requires detailed knowledge of Linux. In general, only software approved by the manufacturer may be installed on the device.

Warning: The warranty shall be void if third-party software or software not approved by the manufacturer is used on the WLZent04. The manufacturer shall not be liable for data loss or damage caused by malfunction if third-party software or software not approved by the manufacturer is used on the system. Furthermore, the manufacturer does not provide any support for the installation and operation of third-party software.

23.3 Why does the WirelessProfessional application keep restarting?

To ensure continuous monitoring of the individual battery emergency lights, the WirelessProfessional software must be active at all times. The WLZent04 has a so-called WatchDog mechanism, which checks every 180 seconds whether the WirelessProfessional application is running. If this is not the case, the WirelessProfessional software will be restarted.

23.4 How long can the UPS unit supply power to WLZent04 in the event of a power failure?

Up to 60 minutes.

24 Revision history

Date	Version / Revision	Comments / Key changes from the previous version

25 Contact information

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