



Orange Apps

# **UserLogonUSB V1.2**

**KUKA KRC4 and KRC2**

User Documentation

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The contents of this document have been tested with the described software. Since deviations cannot be excluded, no guarantee for full compliance can be taken.

**Documentation validity**

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# 1 Introduction

## 1.1 Target group

This documentation is intended for users with the following skills:

- Usage of KUKA KRC4 robots

## 1.2 Representation of information



These notes indicate that death or severe personal injury will be safe or very likely to occur if precautions are not taken.



These notes indicate that death or serious bodily injury could occur if precautions are not taken.



These notes indicate that minor personal injury can result if precautions are not taken.



These notes indicate that damage may occur if precautions are not taken.



This manual contains useful tips or special information for the current topic.

## 1.3 Terminology used

Notion	Description
SmartPad	Handheld unit
KCP	KUKA Control Panel
USB dongle	Dongle
WoV	KUKA WorkVisual

Table 1-1: Used Terms

## 1.4 Trademarks

. **NET Framework** is a trademark of Microsoft Corporation.

**Windows** is a trademark of Microsoft Corporation.

## 2 Product Description

The software tool UserLogonUSB provides a personalized logon to the robot system via a USB dongle. Each dongle can be configured with name, user group, department, language, user ID and the expiration date on the PC. The data is stored encrypted on the dongle and can only be changed with the included software and the individual customer password.

When connecting the dongle to the robot controller, the data on the dongle are analyzed and the corresponding user group and language is set.

Each customer receives an individual password. This is stored unchangeable on each dongle. Thereby the access to the robot system can optionally be limited to specific dongle containing the correct password.

### Features

- Automatic user group change at the KRC4/KRC2 when plugging the dongle
- Automatic language selection at the KRC4/KRC2 when plugging the dongle
- The validity of the dongle can be time-limited
- User data of the dongle are written to the robot logbook
- When removing the Dongle the robot control changes back to the default user and the previously set language
- Dongle data are protected and can only be changed with the appropriate Windows software and the individual customer password
- Easy configuration of the dongle at a PC
- By (optionally) using the supplied custom specific config-file on the robot system, only the matching custom dongle are granted for logon (option "block foreign dongle")

### Scope of delivery

- KUKA option package for installation via WorkVisual or directly at the robot controller
- Windows Software "UserLogonUSB Dongle Manager" to configure the dongle on the PC
- USB dongle with stored customer password (blue: without storage capacity, silver: with 16 GB storage capacity)
- Individual customer password for dongle configuration
- Customer Config-file to activate the option "block foreign dongle"

### 3 Installation, uninstallation, update

Installation on the KRC4 and KRC2 is described below.

On the KRC4 the software is installed as KOP, i.e. the option package can be installed both via WorkVisual and directly on the robot controller.

The installation on the KRC2 takes place directly on the robot controller.

#### 3.1 System requirements for running

##### Minimum hardware requirements

- Installation on the KRC4: KUKA System Software 8.3.23
- Installation on the KRC2: KUKA System Software > = 5.5
- USB 2.0
- When installing via WorkVisual: WorkVisual 5.x or higher

If the technology is to be installed on KRC4 robots with KSS version older than 8.3.23, this version is available from us. Please contact us.



If the software KUKA.CPC is used on the robot, a software certificate is needed to install the plugin. In this case, please get into contact with our customer service (email to [info@orangeapps.de](mailto:info@orangeapps.de)) before purchasing this product.

## 3.2 Installation on KRC4

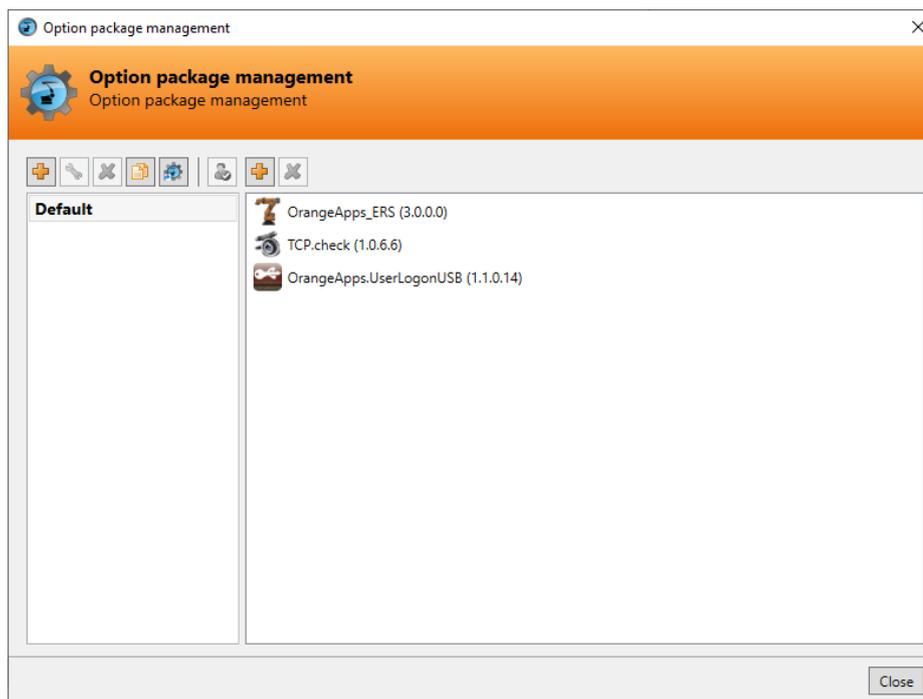


Versions older than 1.0.9 must be deinstalled before installing the KOP.

### 3.2.1 Installation via Work Visual

#### 3.2.1.1 Install or update UserLogonUSB

The KOP is installed like a normal KUKA option package and must be installed via the option package management in WoV. It is then available as a catalog element.



**Figure 3-1: Option package management**

The option package is then added to the project in WoV and automatically installed on the robot controller when the project is transferred.

In the event of an update, the previous version of the option package must first be uninstalled in WoV. All associated data should be archived before an update.

#### Overview of steps to install via WoV

- Install the option package in WoV as a catalog element
- Drag project from robot
- Insert option
- Register on the robot as an expert and transfer the project

**Requirement**

- At least user group Expert
- Operating mode T1 or T2
- No program is selected
- Network connection to the robot controller
- The KOP file of the software

**Method**

1. **Only for an update:** Uninstall the previous version of the UserLogonUSB option package in WorkVisual.
2. Install the UserLogonUSB option package in WorkVisual.
3. Load the project from the robot controller.
4. Add the UserLogonUSB option package to the project.
5. Deploy the project from WorkVisual to the robot controller and activate it.
6. The request for confirmation ***Do you want to activate the project [...]?*** Is displayed on the smartHMI. When activated, the active project is overwritten. If no relevant project is overwritten: Confirm the query with Yes.
7. An overview with the changes and a request for confirmation is displayed on the smartHMI. Answer this with **Yes**. The option package is installed and the robot controller performs a restart.



Information on processes in WorkVisual can be found in the WorkVisual documentation.

**LOG file**

A LOG file is created under C:\KRC\ROBOTER\LOG.

**Entry in the main menu**

-

**Entry in the information window**

After a successful installation, an entry "OrangeApps.UserLogonUSB" is displayed under ***Help***→***info***→***Options***.

**Changed robot system files**

-

**3.2.1.2 Uninstall UserLogonUSB**

All related data should be archived prior to deinstallation.

**Overview of steps to uninstall via WoV**

- Drag project from robot

- Remove option
- Register on the robot as an expert and transfer the project

### Requirement

- At least user group Expert
- Operating mode T1 or T2
- No program is selected.
- Network connection to the robot controller
- The option package is available as a LAD file.

### Method

1. Load the project from the robot controller.
2. Remove the UserLogonUSB option package from the project.
3. Transfer the project from WorkVisual to the robot controller and activate it.
4. The request for confirmation ***Do you want to activate the project [...]?*** Is displayed on the smartHMI. When activated, the active project is overwritten. If no relevant project is overwritten: Confirm the query with Yes.
5. An overview with the changes and a request for confirmation is displayed on the smartHMI. Answer this with **Yes**. The option package is uninstalled and the robot controller performs a restart.



Information on processes in WorkVisual can be found in the WorkVisual documentation.

### LOG file

A LOG file is created under C: \ KRC \ ROBOTER \ LOG.

## 3.2.2 Installation via smartHMI

### 3.2.2.1 Install or update UserLogonUSB

#### Requirement

- At least user group Expert
- Operating mode T1 or T2
- No program selected
- USB stick with the option package (KOP file)
- KSS 8.3 or higher

#### Method

Installation takes place via commissioning → **Additional software** in the main menu.

1. Copy the KOP file either to a USB stick or directly to a drive of the target system (e.g. d:\).
2. When installing from a USB stick, connect it to the control PC or the smartPad.
3. In the main menu select **Startup** → **Additional software**.
4. Click the button **New Software**
5. You will receive a list of software available for installation. If there is no entry OrangeApps.UserLogonUSB in the list, click on **Refresh**. If the entry is now displayed, continue with step 8.
6. If the entry is not displayed, the drive from which the software is to be installed must first be configured. To do this, choose **Configuration**. In a new window you can now select the path under which the OrangeApps.UserLogonUSB option package can be found.
7. In the area **Installation paths for options**, highlight an empty cell and choose **Path Selection**. The existing drives are displayed. Select the drive where the OrangeApps.UserLogonUSB option is available and save your selection with **Save**. The window closes. An entry **OrangeApps.UserLogonUSB** should now appear in the list. If this is not the case, press **Update** and / or repeat steps 7 and 8.
8. Highlight the OrangeApps.UserLogonUSB entry and press **Install**. Confirm the installation instructions with **OK**
9. The request for confirmation **Do you want to activate the project [...]?** Is displayed on the smartHMI. When activated, the active project is overwritten. If no relevant project is overwritten: Confirm the query with Yes.
10. An overview with the changes and a request for confirmation is displayed on the smartHMI. Answer this with **Yes**. The option package is installed and the robot controller performs a restart.
11. If applicable, remove the USB stick.

#### LOG file

A LOG file is created under C:\KRC\ROBOTER\LOG.

#### Entry in the main menu

-

### Entry in the information window

After a successful installation, an entry "OrangeApps.UserLogonUSB" is displayed under **Help**→**info**→**Options**.

### Changed robot system files

-

## 3.2.2.2 Uninstall UserLogonUSB

### Requirement

- At least user group Expert
- Operating mode T1 or T2
- No program selected

### Method

The deinstallation takes place via **Startup** → **Additional software** in the main menu.

1. In the main menu choose **Startup** → **Additional software**.
2. Mark OrangeApps.UserLogonUSB and press **Uninstall**.
3. The request for confirmation **Do you want to activate the project [...]?** Is displayed on the smartHMI. When activated, the active project is overwritten. If no relevant project is overwritten: Confirm the query with Yes.
4. An overview with the changes and a request for confirmation is displayed on the smartHMI. Answer this with **Yes**. The option package is installed and the robot controller performs a restart.

### LOG file

A LOG file is created under C: \ KRC \ ROBOTER \ LOG.

### 3.3 Installation on KRC2

#### 3.3.1 Install UserLogonUSB or upgrade to new version on KRC2

##### Requirement

- At least user group Expert
- Operation Mode T1 or T2
- No program selected

##### Method

Installation is done via **Setup** → **install additional software** in the main menu.

1. Extract the .Zip file
2. Copy the installation folder **OrangeApps.UserLogonUSB** containing the setup files to a USB stick or directly to a drive on the target system (for example, d: \).
3. When installing from a USB stick, connect this to the controlling PC or the SmartPad.
4. Choose **Setup** → **install additional software** from the main menu.
5. Click the button **New SW**.
6. You'll get a list of available software for installation. If there's no entry **OrangeApps.UserLogonUSB** in the list, click **Refresh**. If now the entry appears, go to step **Fehler! Verweisquelle konnte nicht gefunden werden..**
7. If the entry does not appear, the drive from where to install must be configured first. To do this, choose **Config**. In the new window you now have the option to select the path where to find the folder **OrangeApps.UserLogonUSB**.
8. Select an empty cell in the **installation paths for additional software** and click **Browse**. The available drives are displayed. Select the drive on which the folder **OrangeApps.UserLogonUSB** is located and save your selection with **Apply**. Close the window with **Apply**. The entry **OrangeApps.UserLogonUSB** should now appear in the list. If this is not the case, press **refresh** and/or repeat steps 7 to 8
9. Highlight the entry **OrangeApps.UserLogonUSB** and press **Install**. Confirm the security prompt with **Yes**.
10. Read the license agreement carefully. Explain your agreement to the license terms by clicking **I Accept** and continue the installation by clicking **Continue**. If you do not agree with the license terms, please cancel the installation by clicking **Cancel**.
11. The installation will be prepared now. To perform the final installation the control PC has to be restarted. This can immediately be executed by clicking **Reboot Controller** or later by clicking **Later**.
12. If you select **Later**, the window is closed. In order to finalize the installation proceed with step 13. If you select **Reboot Control PC now**, a restart of the control PC will be performed. Step 14 is then executed.
13. Perform a shutdown of the control PC by clicking **File**→**shutdown KRC** in the main menu.
14. During reboot of the control PC UserLogonUSB will be installed on the computer.
15. Remove the USB stick from the PC.

##### Entry in the main menu

None

##### Entry in the Info window

After successful installation, under **Help**→**Info**→**Options** in the main menu, the entry "OrangeApps.UserLogonUSB" is displayed.

### Modified robot system files

None

## 3.3.2 Uninstall UserLogonUSB

### Requirement

- At least user group Expert
- Operation Mode T1 or T2
- No program selected

### Method

1. Choose **commissioning** → **Additional software** from the main menu.
2. Highlight the **OrangeApps.UserLogonUSB** and click **Uninstall**. Answer the security prompt with **Yes**. The uninstallation is prepared. After completion of the preparatory work, a message box appears. To perform the final installation the control PC has to be restarted. To perform the final installation the control PC has to be restarted. This can immediately be executed by clicking **Reboot Control PC now** or later by clicking **later**.
3. If you select **later**, the window is closed. In order to finalize the uninstallation, proceed with step 4. If you select **Reboot Control PC now**, a restart of the control PC will be performed. Step 5 is then executed.
4. Perform a shutdown of the control PC by clicking **shutdown** in the main menu.
5. During reboot of the control PC UserLogonUSB will be uninstalled from the computer.

## 3.4 OPTION "block foreign dongle"

Optionally, the robot can be configured so that only authorized dongle with the correct password can be used. This option is controlled and activated when a customer config-file is found in the folder **c:\KRC\TP\UserLogonUSB**. Each customer receives his individual file.



Several config-files can be stored in this folder. Thus specific dongle of foreign companies can be permitted for logon.

### Procedure 1

- Copy before installing the software on the robot, the customer config-file into the setup folder of the software. The file is then automatically copied during installation into the correct directory

### Procedure 2

- Copy the customer config-file manually into the folder **c:\KRC\TP\UserLogonUSB**

## 3.5 Installing the Dongle Manager on the PC

### 3.5.1 System requirements for running

#### Minimum Hardware Requirements

- PC with min. 1 GHz processor clock
- 512 MB RAM
- 1 MB free hard disk space

#### Recommended Equipment

- PC with 2 GHz processor clock
- 1GB of RAM
- 1 MB free hard disk space

#### Software

- Windows XP with Service Pack 2
- Windows Vista 32/64 bit
- Windows 7 32/64 bit
- .NET Framework 3.5

### 3.5.2 Installation

#### Method

- Start the file Setup\_UserLogonUSB\_DongleManager\_1.x.exe
- Select the language and press OK
- Follow the installation wizard by clicking Next

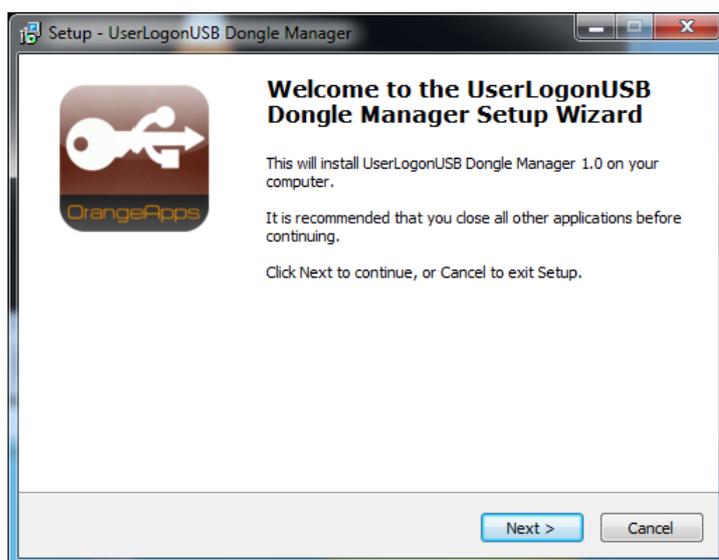


Figure 3-2: Setup Wizard

## 4 User interface of the dongle manager

The user interface shows:

1. Customer password input field
2. Window for entering the user data
3. Log (indicates on which robot the dongle was plugged in latest)

The screenshot shows the 'UserLogonUSB Dongle Manager V1.0.5.6' application window. It features a 'Customer password' field with a red '1' next to it. Below this is the 'User information on Dongle' section, which includes several input fields and dropdown menus: 'Name' (Schmidt), 'User group' (Administrator), 'Firstname' (Daniel), 'Language' (English), 'User id' (123456), 'Expiry date' (07.07.2013), 'Department', 'Dongle no.' (1514091), and 'Company' (OrangeApps GmbH). A red '2' is placed next to the 'Company' field. To the right of these fields are three buttons: 'Save', 'Reset dongle', and 'Delete Log'. At the bottom of the window is a 'Log' section with a table that has two columns: 'Date-Time' and 'Robot'. A red '3' is placed below the table.

Figure 4-1: User interface

### Buttons

Button	Description
Save	Stores the user data on the dongle
Reset Dongle	Deletes all user data on the dongle
Delete Log	Deletes all entries in the log book on the dongle

Table 4-1: Buttons

**Fields**

Field	Description
Customer password	Enter the customer password to unlock the user data input fields
Name and first name	Optional specification of a user's name
User ID	Optional specification of a user ID
Department	Optional specification of the user's department
Company	Optional specification of the user's company
User Group	Predefined user groups on the control KRC4/KRC2
<b>Number field</b>	<b>This user level is used to log-on at the KRC4/KRC2</b>
Language	This Language is enabled when the dongle is plugged into the KRC4/KRC2
Expiry Date	Runtime limit of the dongle activated by checkbox
Dongle No	ID of the dongle, non-changeable

**Table 4-2: User data entry fields**

## 5 Using the Dongle Manager

Under <http://www.orangeapps.de/?page=apps/userlogonusb> you can find a video of how to use the Dongle Manager.

### 5.1 Start Application

#### Method

- Start the file UserLogonUSB dongle Manager.exe (e.g. by double-clicking)



### 5.2 Quit the application

#### Method

- Like a standard Windows window by clicking on 

### 5.3 View user data

#### Method

- Start Application
- Insert dongle

→ the currently stored data on the dongle are displayed

### 5.4 View Logbook

#### Method

- Start Application
- Insert dongle

→ the log displays with date and time at which robots the dongle was plugged in latest

### 5.5 Delete logbook

#### Method

- Start Application
- Insert dongle
- Enter customer password
- Click Clear Log button

→ the log on the dongle is deleted

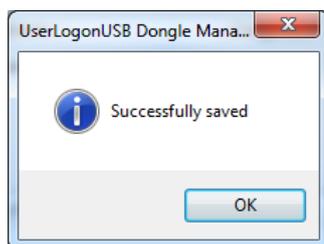
## 5.6 Enter or modify user data

### Method

- Start Application
- Insert dongle
- Enter customer password

→ the input fields will be unlocked

- Enter User Data
- Optionally enable expiry date
- By clicking Save, the data is stored on the dongle
- Successful storage is shown by the dialog box



Relevant for the user logon to the KRC is the defined number of the user!



Note for the silver colored dongle:  
When saving, an activation file "OrangeApps\_Dongle-Serialnumber.activation" is saved on the dongle. This file is also saved in the local installation directory /ActivationFiles of the application as a backup. If the file is deleted from the dongle, the corresponding activation file from the backup folder can be saved on the dongle. It is important to note the serial number!

## 5.7 Delete user data

### Method

- Start Application
- Insert dongle
- Enter customer password
- Click the Reset dongle button

→ the user data are deleted

## 5.8 Restore user data

This only applies to the silver colored dongle:

If the activation file has been deleted from the dongle, the backup file from the backup folder can be saved on the dongle. It is imperative to pay attention to the serial number. This can be seen in the file name.

## 6 Usage of the dongle at the robot

After installing the software on the robot controller is ready for operation, starting is not necessary. To log on to the robot with the dongle, plug the dongle into any available USB port on the controller. After positive verification of authorization (option "Block external dongle") and the expiry date of the dongle the robot automatically switches to the stored user group and language.



Plug the dongle to the robot cabinet only. A dongle plugged to the SmartPad is not detected.

In the message window the name and the user group is displayed. In the log an entry is created.

When the dongle is removed the robot will automatically switch to the user group **operator** and the previously selected language.

### Flowchart

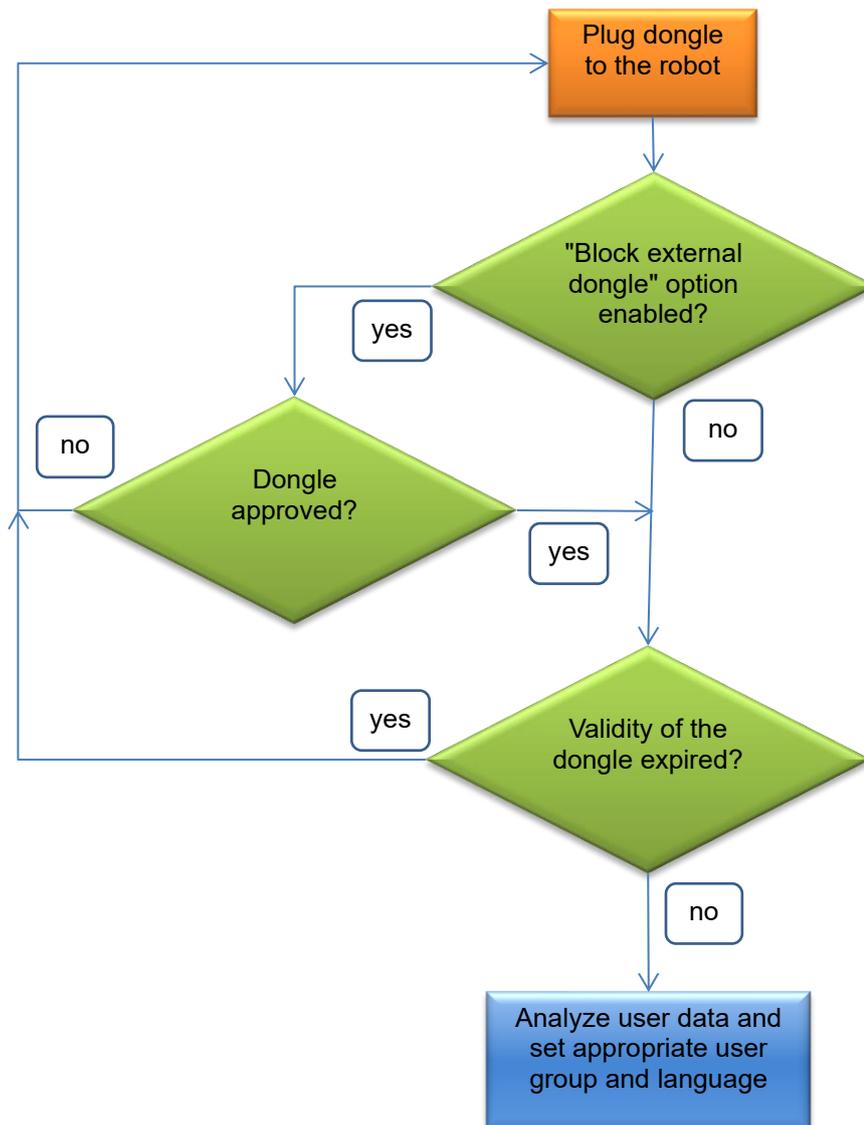
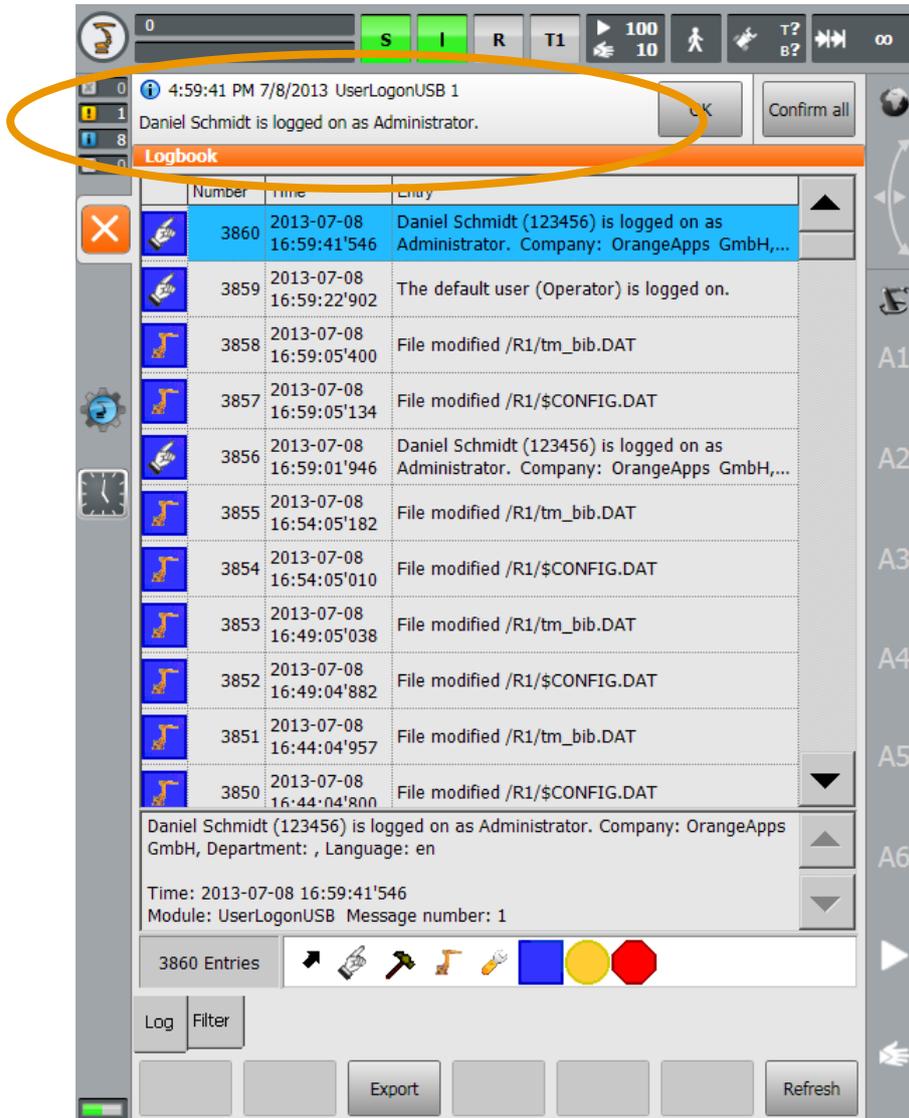
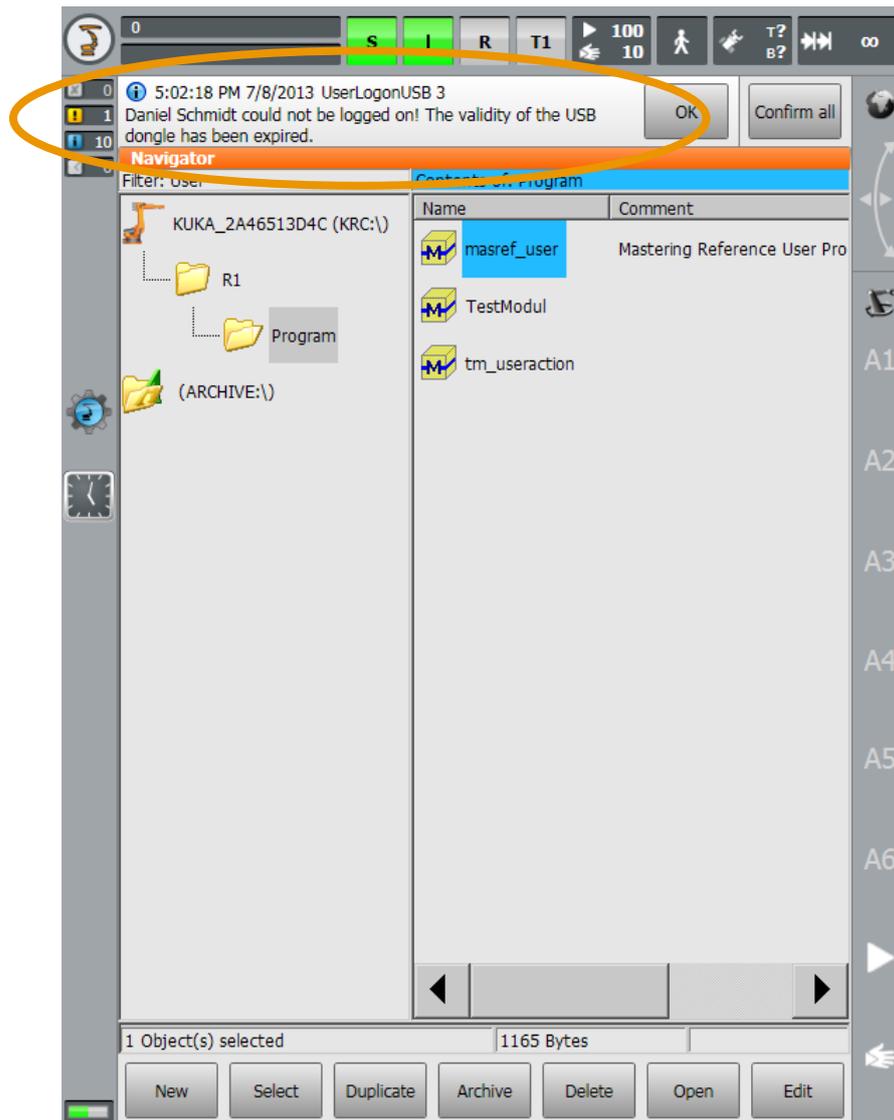


Figure 6-1:Flow chart of application on the robot system

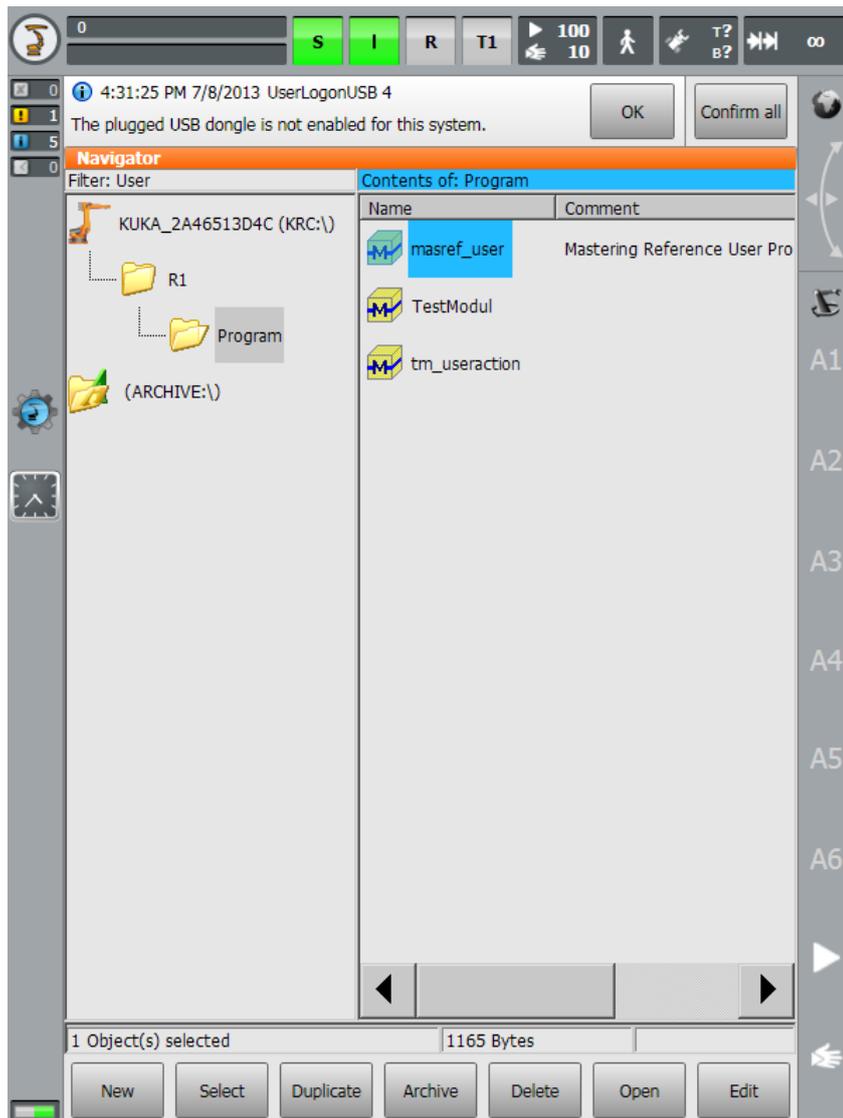
**KRC4: Entry in the message window and the logbook when log-on was valid**



**Figure 6-2:: KRC4: Entry in Logbook and message window with valid log-on**

**KRC4: Entry in the message window when validity of the dongle has expired****Figure 6-3: KRC4: Entry in the message window due to expired validity of the dongle**

**KRC4: Option “Block foreign dongle”:** Entry in the message window when using an invalid dongle



**Figure 6-4: KRC4: Option “Block foreign dongle”:** Entry in the message window when using an invalid dongle

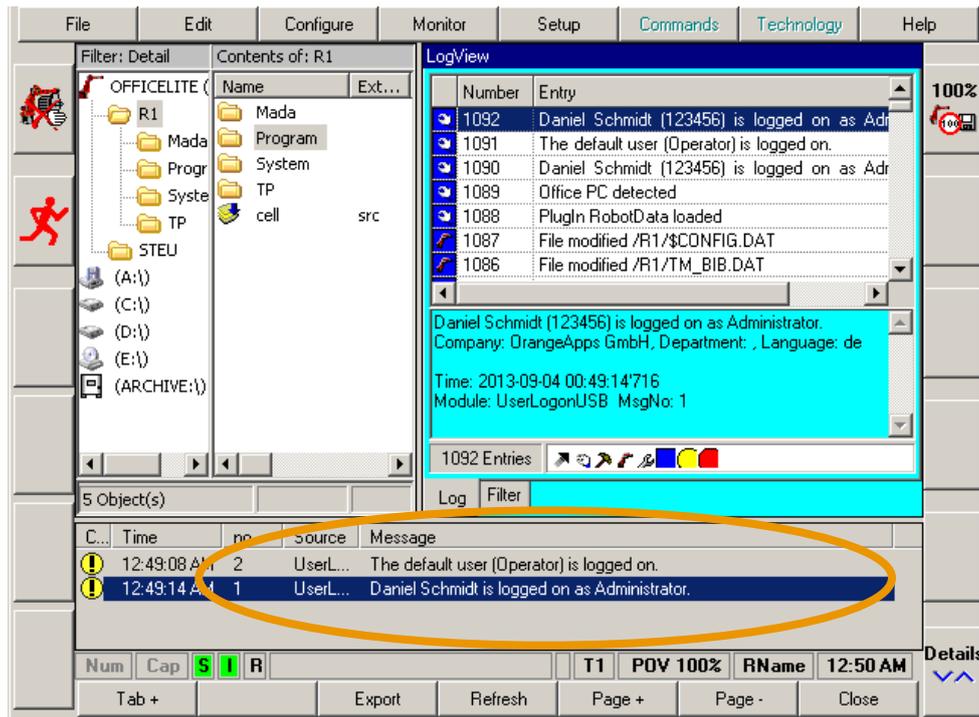
**KRC2: Entry in the message window and the logbook when log-on was valid**

Figure 6-5: KRC2: Entry in Logbook and message window with valid log-on

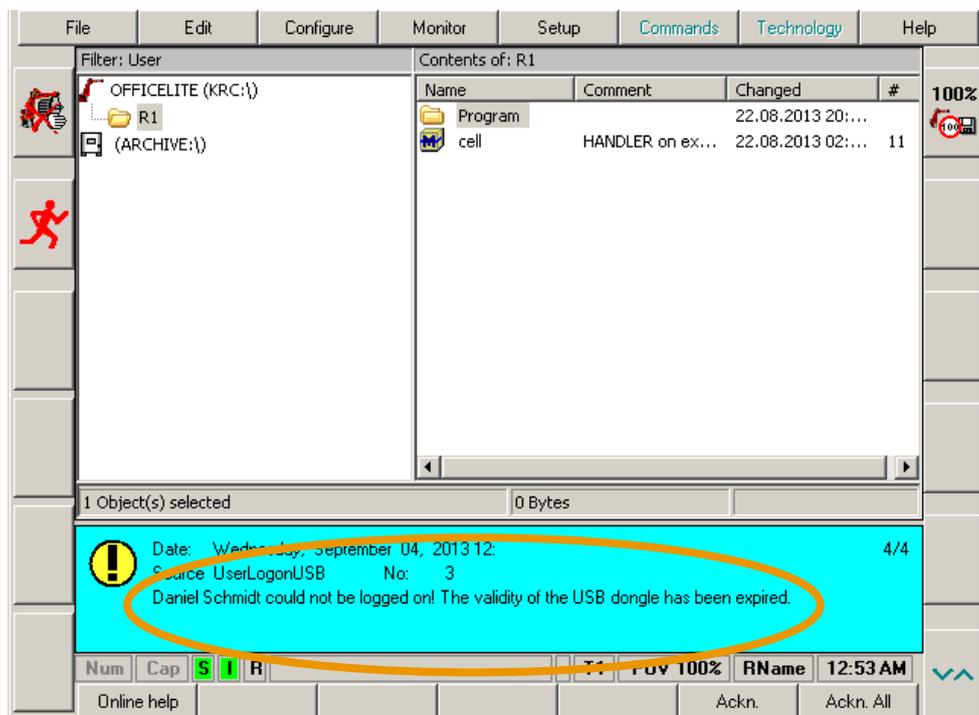
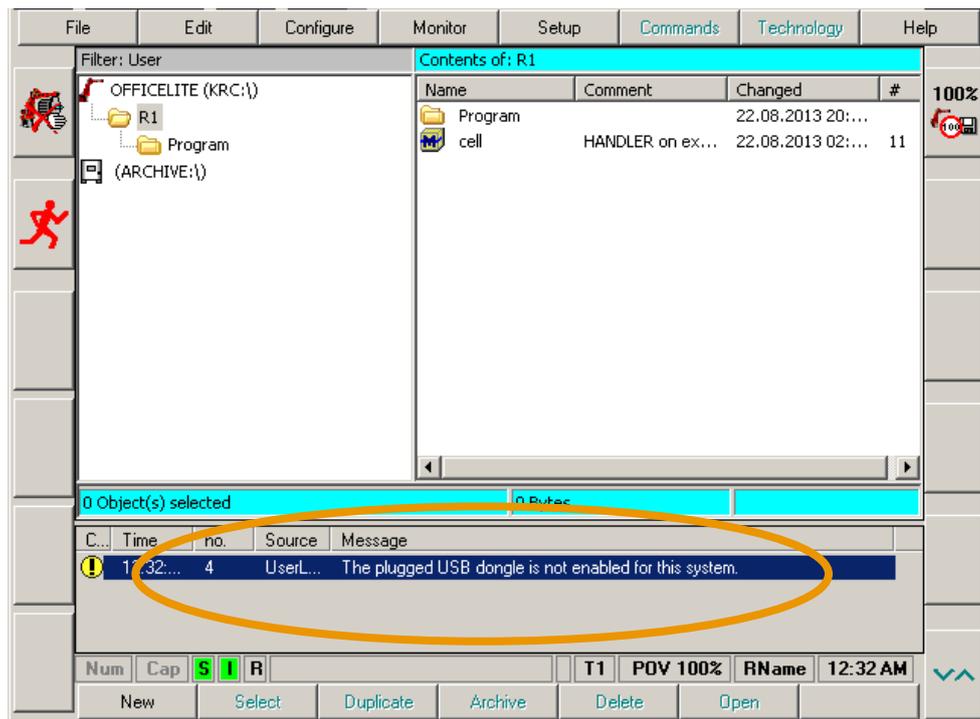
**KRC2: Entry in the message window when validity of the dongle has expired**

Figure 6-6: KRC2: Entry in the message window due to expired validity of the dongle

**KRC2: Option “Block foreign dongle”:** Entry in the message window when using an invalid dongle



**Figure 6-7:** KRC2: Option “Block foreign dongle”: Entry in the message window when using an invalid dongle

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