



Orange Apps

# **UserLogonUSB V1.0**

**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.

## History of document versions

Version	Date	Author	Change Reason / Comment
1.0	07/08/2013	Christian Mayer	First release
1.1	08/20/2013	Christian Mayer	Extension for KRC2

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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

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

- Setup package to install the technology package "UserLogonUSB" on the robot controller
- Windows Software "UserLogonUSB Dongle Manager" to configure the dongle on the PC
- USB dongle with stored customer password
- Individual customer password for dongle configuration
- Customer Config-file to activate the option "block foreign dongle"

## 3 Installation, uninstallation

### 3.1 Installation / removal to / from the robot controller

The installation/uninstallation is done via the *additional software* option. These can be found in the main menu under *start-up*.

#### 3.1.1 System requirements for running

##### Minimum Hardware Requirements

- Installation on KRC4: KUKA System Software 8.2
- Installation on KRC2: KUKA System Software >=5.5
- USB 2.0

#### 3.1.2 Install UserLogonUSB or upgrade to new version on KRC4

##### Condition

- Expert group
- Operation Mode T1 or T2

##### Method

Installation is done via **commissioning** → **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 **commissioning** → **Additional software** from the main menu.
5. Click the button **New software**.
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 9.
7. If the entry does not appear, the drive from where to install must be configured first. To do this, choose **Configuration**. 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 options** and click **path selection**. The available drives are displayed. Select the drive on which the folder **OrangeApps.UserLogonUSB** is located and save your selection with. The window closes. **OrangeApps.UserLogonUSB** should now appear as an entry 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 Control PC now** or later by clicking **later**.
12. If you select **later**, the window is closed. In order finalize the installation proceed with step 14. 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 **shutdown** 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

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

#### Condition

- Expert group
- Operation Mode T1 or T2

#### 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 9.
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

### 3.1.4 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**

### 3.1.5 Uninstall UserLogonUSB

#### Condition

- Expert groups

#### 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.

## 3.2 Installing the Dongle Manager on the PC

### 3.2.1 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

## 3.2.2 Installation

### Method

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

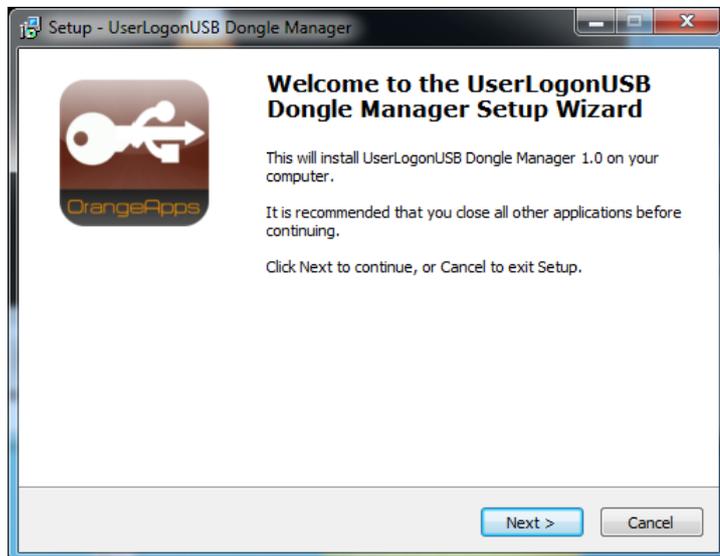


Figure 3-1: Setup Wizard

## 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)

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

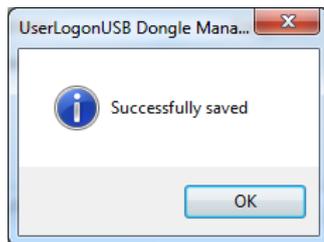
## 5.6 Enter or modify user data

### 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!

## 5.7 Delete user data

### Method

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

→ the user data are deleted

## 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

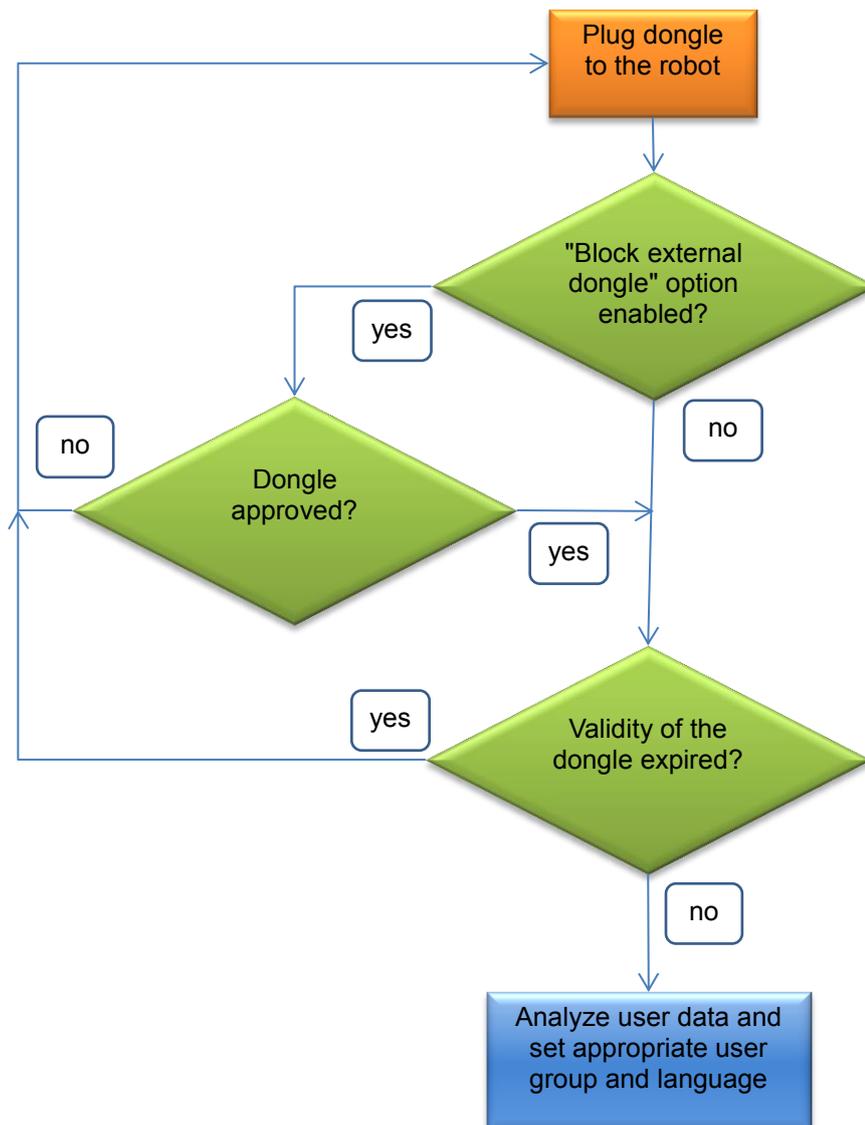


Figure 6-1:Flow chart of application on the robot system

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

The screenshot shows the KRC4 interface with a message window and a logbook. The message window displays the following information:

4:59:41 PM 7/8/2013 UserLogonUSB 1  
 Daniel Schmidt is logged on as Administrator.

The logbook displays the following entries:

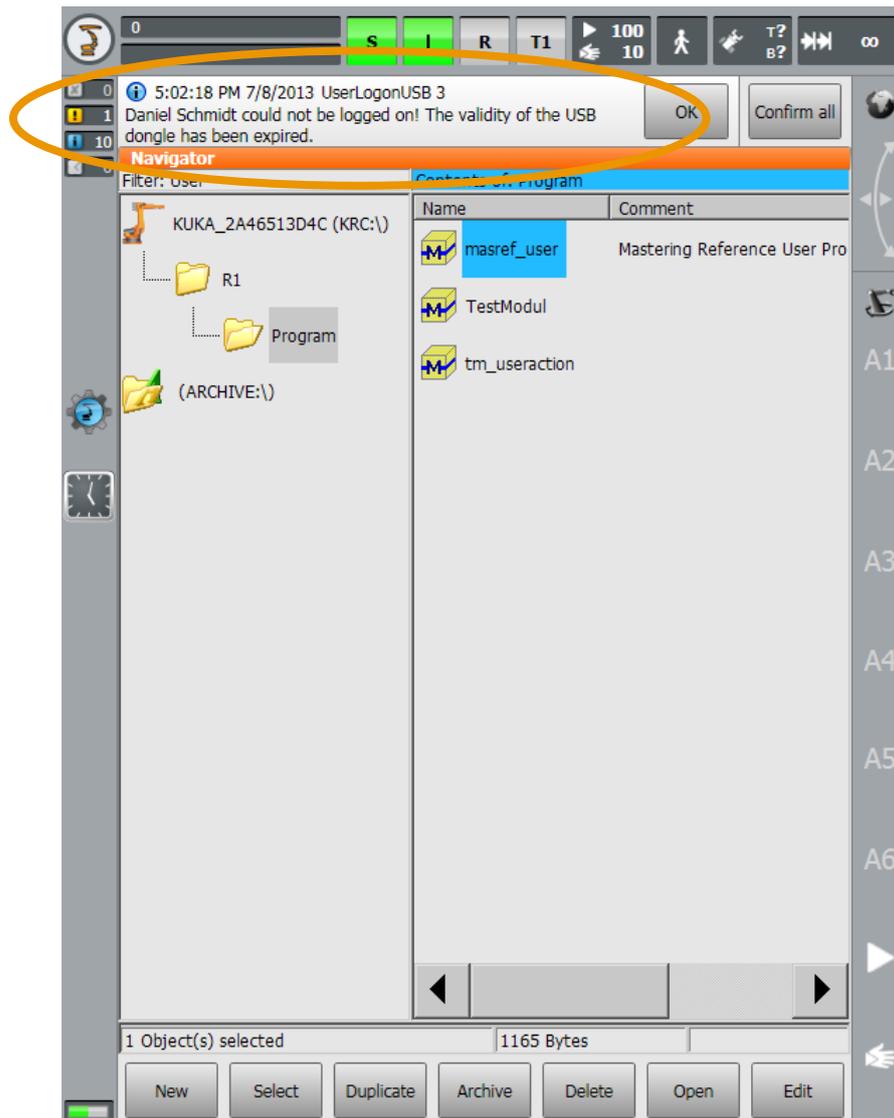
Number	Time	Entry
3860	2013-07-08 16:59:41'546	Daniel Schmidt (123456) is logged on as Administrator. Company: OrangeApps GmbH,...
3859	2013-07-08 16:59:22'902	The default user (Operator) is logged on.
3858	2013-07-08 16:59:05'400	File modified /R1/tm_bib.DAT
3857	2013-07-08 16:59:05'134	File modified /R1/\$CONFIG.DAT
3856	2013-07-08 16:59:01'946	Daniel Schmidt (123456) is logged on as Administrator. Company: OrangeApps GmbH,...
3855	2013-07-08 16:54:05'182	File modified /R1/tm_bib.DAT
3854	2013-07-08 16:54:05'010	File modified /R1/\$CONFIG.DAT
3853	2013-07-08 16:49:05'038	File modified /R1/tm_bib.DAT
3852	2013-07-08 16:49:04'882	File modified /R1/\$CONFIG.DAT
3851	2013-07-08 16:44:04'957	File modified /R1/tm_bib.DAT
3850	2013-07-08 16:44:04'800	File modified /R1/\$CONFIG.DAT

Additional information shown in the logbook summary:

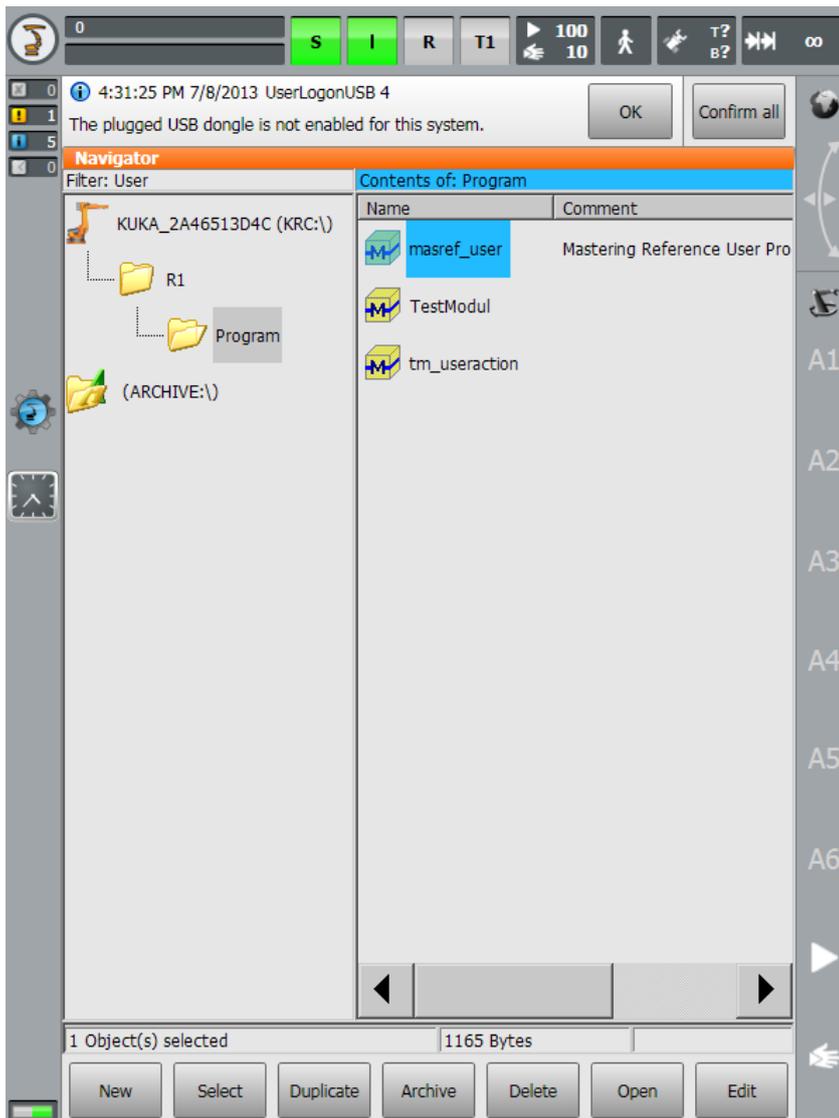
Daniel Schmidt (123456) is logged on as Administrator. Company: OrangeApps GmbH, Department: , Language: en  
 Time: 2013-07-08 16:59:41'546  
 Module: UserLogonUSB Message number: 1

The interface also shows 3860 entries in the logbook and buttons for Log, Filter, Export, and Refresh.

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

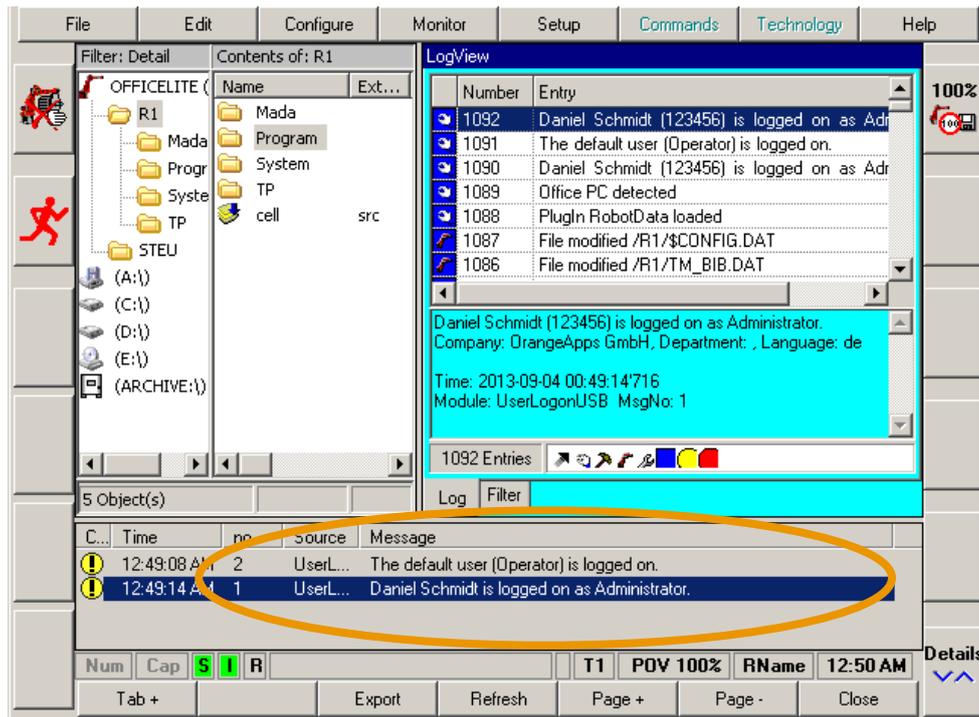
**KRC2: Entry in the message window and the logbook when log-on was valid**

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

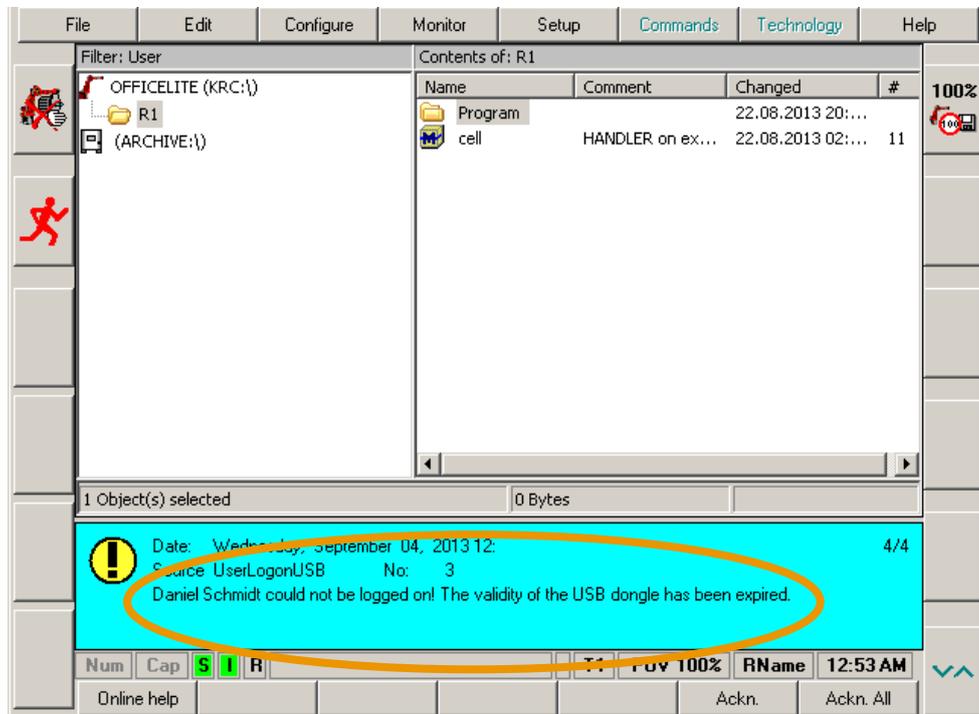
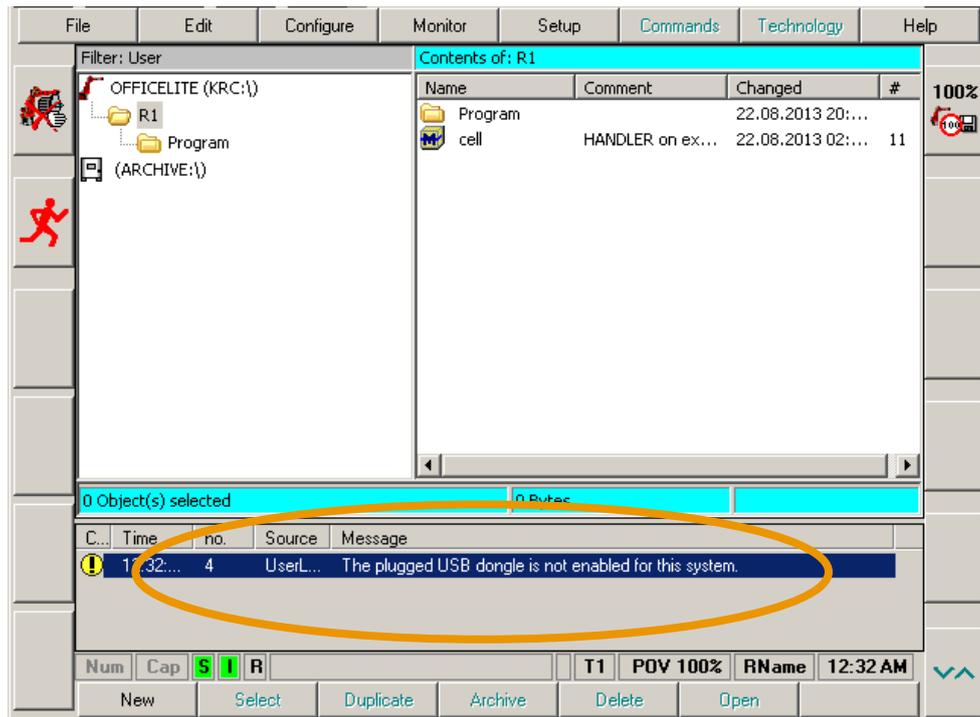
**KRC2: Entry in the message window when validity of the dongle has expired**

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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