Orange Apps

# UserLogonIO V1.0

KUKA KRC2 and KRC4: User logon and language switching using robot IO interface

User Manual

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**History of document versions**

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| **0.1** | Feb 04,2014 | Christian Mayer | First release |
| **0.2** | Feb 18,2014 | Christian Mayer | Implementation KRC2<br>Implementation Scope of delivery<br>Implementation hint detection toggle control bit |
| **0.3** | Feb. 24,2014 | Christian Mayer | Chapter 4.4 implemented |
| **0.4** | Oct. 10'th 2015 | Christian Mayer | Installation on KRC2 |

# Content

# 1 Introduction

## 1.1 Target group

This documentation is intended for users with the following skills:

- Knowledge of the expert documentation for system integrators KSS 5.5/8.2 or higher

## 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 |
|---|---|
| KRC | KUKA Robot Controller |
| KRL | KUKA Robot Language |
| WoV | KUKA WorkVisual |

**Table 1-1: Used Terms**

# 2 Product description

The software tool UserLogonIO provides a personalized logon to the robot system by means of input signals on the robots IO interface from an external system.

**Features and characteristics**

- Automatic change of the user group by means of input signals
- Optionally, automatic change of the robots language at every change of the user group
- The registration of the user group to the robot system can be done either bit or integer-coded
- The user logon is independent of the robot mode
- Optionally, the transfer of a maximum 32-bit wide user ID is possible
- Optionally, the transfer of a maximum 8-bit-wide language ID is possible
- The IO interface and the way users logon is configurable by a fully implemented plugin and is stored in an XML file
- Each user logon with the given user group (and optionally with user-ID) and the date and time is stored in the logbook
- Each change of the IO-configuration is saved in the logbook
- No KRL files or KUKA system files are manipulated
- A User Documentation (German / English) is included

**Security**

- The plugin to configure the IO interface is restricted to the user group "Administrator"
- The configuration is saved in an XML file and is provided with a checksum to detect manual changes in the configuration file. In case of a changed configuration file the functionality of the user login is disabled until detection of a correct configuration file.

**Hint**

- The KUKA standard user registration will continue to remain functional. To protect against abuse the passwords of the KUKA standard user login should be changed.

# 3 Scope of delivery

The package contains the following files:

- KUKA option package for installation via WorkVisual or directly at the robot controller
- Userlogon.xml with a default configuration of the IO interface

The Userlogon.xml file contains a default configuration of the IO interface and serves as the basis for your custom configuration. If you have already created a custom configuration of the interface, you can replace this file for use with other installations on robots.

# 4 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.

## 4.1 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) before purchasing this product.

## 4.2 Installation on KRC4

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

### 4.2.1 Installation via Work Visual

#### 4.2.1.1 Install or update UserLogonIO

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.

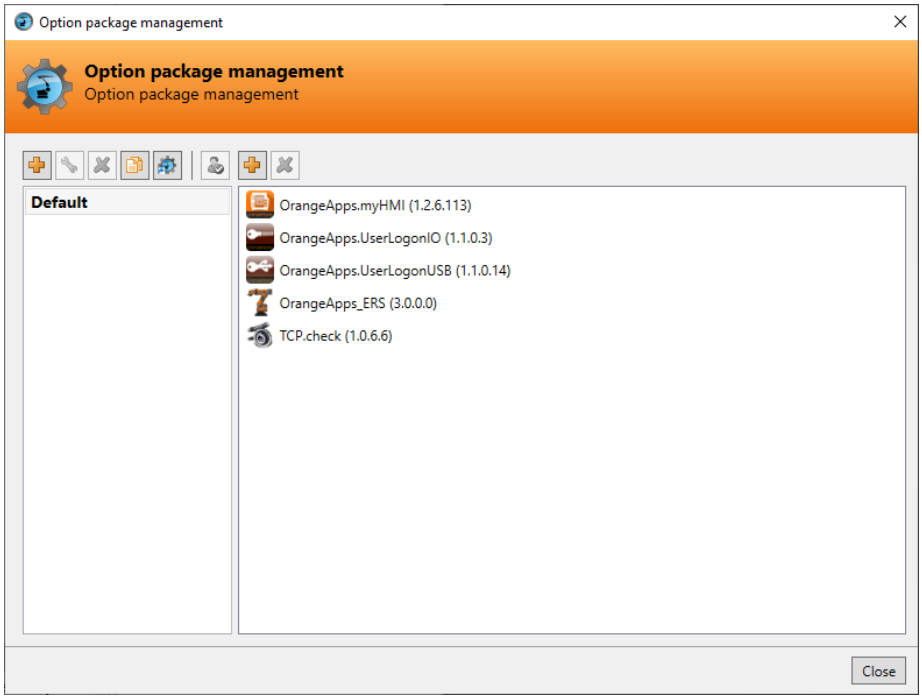



**Figure 4-1: Option package management**

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 UserLogonIO option package in WorkVisual.
2. Install the UserLogonIO option package in WorkVisual.
3. Load the project from the robot controller.
4. Add the UserLogonIO 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**

Configuraton → UserLogonIO

**Entry in the information window**

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

**Changed robot system files**

-

### 4.2.1.2 Uninstall UserLogonIO

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. Add the UserLogonIO option package to 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.

### 4.2.2 Installation via smartHMI

#### 4.2.2.1 Install or update UserLogonIO

**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.UserLogonIO 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.UserLogonIO 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.UserLogonIO option is available and save your selection with ***Save***. The window closes. An entry ***OrangeApps.UserLogonIO*** 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.UserLogonIO 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**

Configuration → UserLogonIO

**Entry in the information window**

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

**Changed robot system files**

-

#### 4.2.2.2 Uninstall UserLogonIO

**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.UserLogonIO 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.

## 4.3 Installation on KRC2

### 4.3.1 Install UserLogonIO 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.UserLogonIO*** 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.UserLogonIO*** 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.UserLogonIO.***
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.UserLogonIO*** is located and save your selection with ***Apply***. Close the window with ***Apply***. The entry ***OrangeApps.UserLogonIO*** 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.UserLogonIO*** 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 UserLogonIO will be installed on the computer.
15. Remove the USB stick from the PC.

**Entry in the main menu**

Configuration → UserLogonIO

**Entry in the Info window**

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

**Modified robot system files**

None

### 4.3.2 Uninstall UserLogonIO

**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.UserLogonIO*** 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 UserLogonIO will be uninstalled from the computer.

## 4.4 KSS Systems Update

The technology package is fully maintained at a KSS system update.

# 5 Licensing

UserLogonIO is generally subject to licensing. Licensing is a license file. For testing purposes, are free trial licenses under www.orangeapps.de available. Without a license, the software is indeed run, but the recognition of a user application via the configured IO interface is disabled.

**Reference**

- A license for each robot is necessary.
- Per robot once a trial license can be obtained
- Trial licenses limited in time
- For environments Office Lite and OfficePC trial licenses can be requested unlimited.
- Date manipulations on the system are detected, UserLogonIO automatically disables the license

## 5.1 Licenses for robots, Office Lite office computer and

Trial licenses can be obtained directly at www.orangeapps.de. Runtime licenses are delivered on receipt of the license fee.

### 5.1.1 Robot license

In order to obtain a valid license, you need the serial number of the robot. These can be found on the rating plate of the robot or in the robot software in the Help menu ***Help→Info→Robot→Serial number***.

### 5.1.2 License for KUKA OfficePC/ OfficeLite

The product ID is "OFFICE". You need this ID in order obtain a valid license on www.orangeapps.de.

## 5.1 Installing a License

**Method 1**

- Plug in a USB stick containing the license file to a USB port of the controller or SmartPad.
- Alternatively, copy the license file to the robots d: drive
- At startup of the software the license will be copied automatically into the license folder and then be enabled. **Note**: A run-time license in the license folder will not be overwritten by a trial license
- Remove the USB stick

**Method 2**

- Copy the obtained license in the folder c:\KRC\TP\UserLogonIO\Lic

# 6 Description of the function

A single control bit on the IO-interface indicates a user login to the robot system. Depending on the configuration of the IO area a toggle of the control bit from FALSE to TRUE causes the user group, the user ID and language ID on the IO-interface to be read. Thereafter the user registration is performed accordingly. If the control bit falls back to FALSE the user is logged out and the lowest user mode "operator" and the previously selected language are selected. Each user login is stored in the logbook of the robot. The selection of the user group can be done bit-coded or integer-coded.

### Input ranges of IO interface

| Input | Description | Range of values | Width |
|---|---|---|---|
| Control bit | Input which indicates the user login to the robot system | TRUE, FALSE | 1 bit |
| User Group | Area of inputs which indicates the user group | INT, BIT | 5-8bit |
| User ID | Areas of inputs to indicate a user ID. This user ID will be stored in the logbook. Whether a user ID is used, can be configured. | INT | 1-32bit |
| Language ID | Areas of inputs to indicate a language ID. The language of the SmartHMI is switched accordingly. Whether language switching is used can be configured. | INT | 1-8bit |

**Table 6-1: Input ranges of IO interface**

### Bit-coded registration

The user group selection on the robot system is done by bitwise assignment to the available user groups. If multiple bits are set the lowest user group out of the bits is selected.

### Integer-coded registration

The user group selection on the robot system is done by passing an integer value to the robot system corresponding to the user groups available. Integer values outside the table below will be ignored.

### Available User Groups

| Type of Application | | Groups |
|---|---|---|
| Integer-coded | Bit-coded | |
| 10 | Bit 1 | User |
| 20 | Bit 2 | Expert |
| 27 | Bit 3 | Safety Recovery |
| 29 | Bit 4 | Safety Maintenance |
| 30 | Bit 5 | Administrator |

**Table 6-2: Available user group**

**User ID**

Passing a user ID as INT value is optional. The user ID is saved in the logbook.

**Language ID**

Passing a language ID as INT value is optional. If a language ID is specified the language of the SmartHMI is changed accordingly the following table:

| Value of the language ID | Language | Value of the language ID | Language |
|---|---|---|---|
| 1 | Czech | 12 | Romanian |
| 2 | Danish | 13 | Slovak |
| 3 | German | 14 | Slovenian |
| 4 | English | 15 | Finnish |
| 5 | Spanish | 16 | Swedish |
| 6 | French | 17 | Turkish |
| 7 | Italian | 18 | Greek |
| 8 | Hungarian | 19 | Russian |
| 9 | Dutch | 20 | Korean |
| 10 | Polish | 21 | Chinese |
| 11 | Portuguese | 22 | Japanese |

**Table 6-3: Available languages**

**Peculiarities of language change during user logon**

If no language switching is used (used = FALSE), then even with a given integer value > 0 on the IO interface no change of the currently selected language is performed.

If language switching is used (use = TRUE) the language will be switched to English by default when an Integer value = 0 on the IO interface is given.

### Entry in the logbook

Each user login is stored, specifying the user ID and the language in the logbook of the robot.

### Logbook KRC4

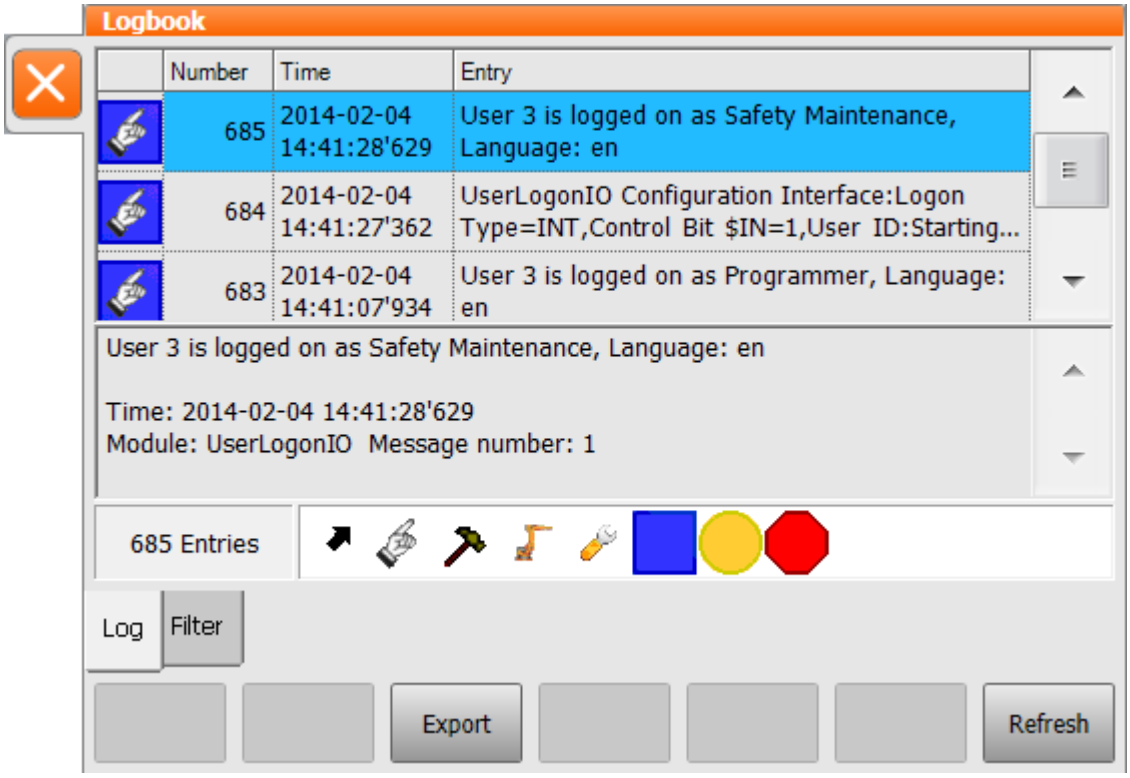
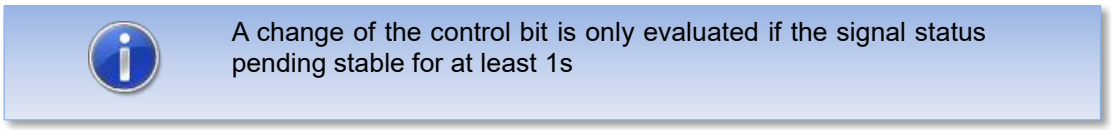



**Figure 6-1: Logbook KRC4**

### Logbook KRC2


**Figure 6-2: Logbook KRC2**

**Hint detecting toggle of the control bit**




**Flowchart**

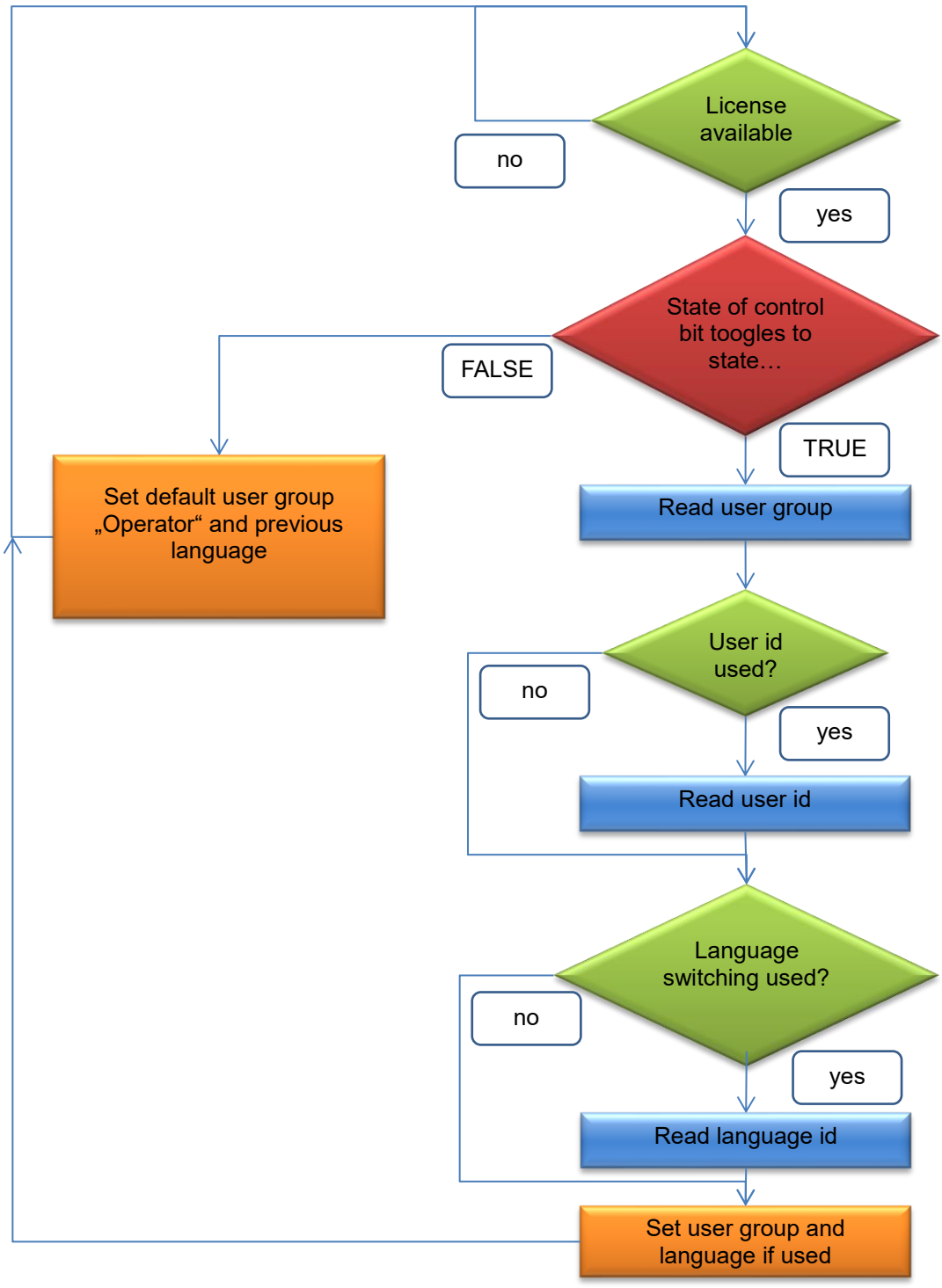



**Figure 6-1: Flowchart Logon to robot system**

# 7 Configuration

The configuration of the IO interface is stored in the XML file "OrangeApps.UserLogonIO.xml" and is available as a plugin available.

**Requirement to display the Setup Plugins**

- User "Administrator" group

**The following configuration options are available**

- Number of control bits
- Way users log on ("BIT" or "INT")
- Start bit and BIT-width of the user group (minimum of 5 bits, a maximum of 8 bits)
- Using a user ID
- Start bit and BIT-width of the user ID (up to 32 bit)
- Use of a language ID
- Start bit and BIT-width of the language ID (up to 8-bit)

## 7.1 Configuration plugin KRC4

**Calling the configuration plugin**

The call of the Configuration Plugin takes place in the main menu under Configuration → ***UserLogonIO.***


**Configuration Plugin**

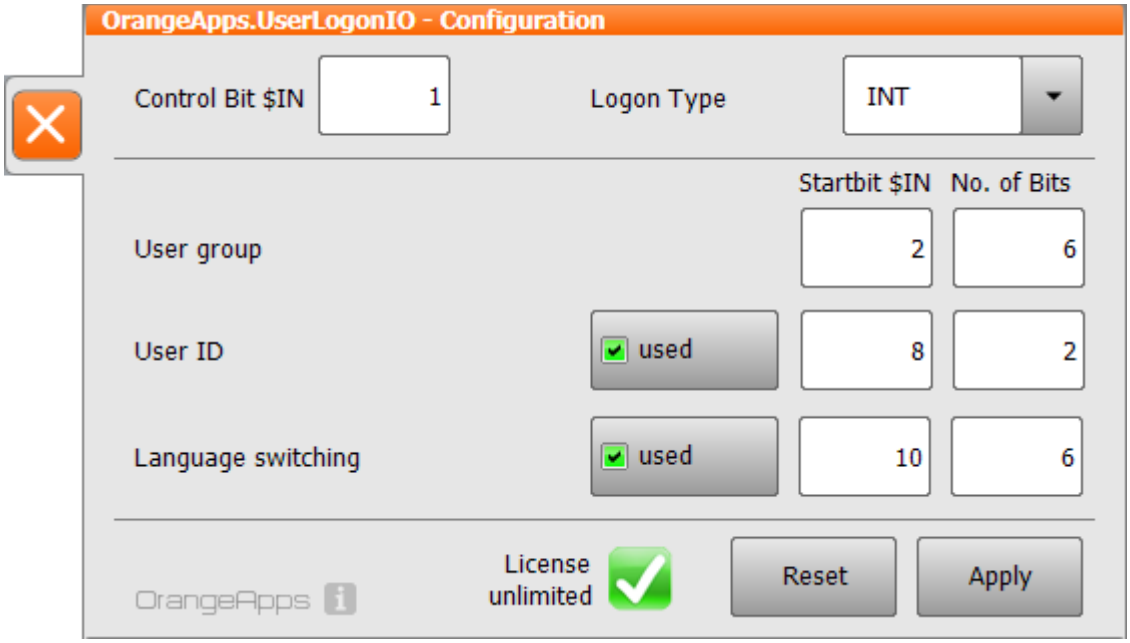



**Figure 7-1: configuration plugin KRC4**

### Controls

| item | | Description | Possible values |
|---|---|---|---|
| Control Bit $IN | - | Configures which input indicates the user login to the robot system | 1-4096 |
| Logon Type | - | Configures whether the selection of the user group is given bit-coded or as an integer value on the IO interface | INT, BIT |
| User Group | Start bit $IN | First bit of the user group | 1-4096 |
| | No. of Bits | Bit width of the user group | 5-8 |
| User ID | Used | Using the user ID for entry in the logbook | TRUE, FALSE |
| | Start bit $IN | First bit of the user ID | 1-4096 |
| | No. of Bits | Bit width of the user ID | 1-32 |
| Language switch-over | Used | Use the language ID for switching languages | TRUE, FALSE |
| | Start bit | First bit of the language ID | 1-4096 |
| | No. of Bits | Bit width of the language ID | 1-8 |

**Table 7-1: Controls in the configuration plugin**

### Buttons

| Button | Description |
|---|---|
| Return | resets the displayed values to the actually saved values |
| Apply | Saves the displayed values |

**Table 7-2: Buttons in the configuration plugin**

**Plausibility Check**

Simultaneously to an input of a value  a plausibility check is performed. If an error occurs a state message appears in the message window, the entry is marked in red and the ***Apply*** button is deactivated.

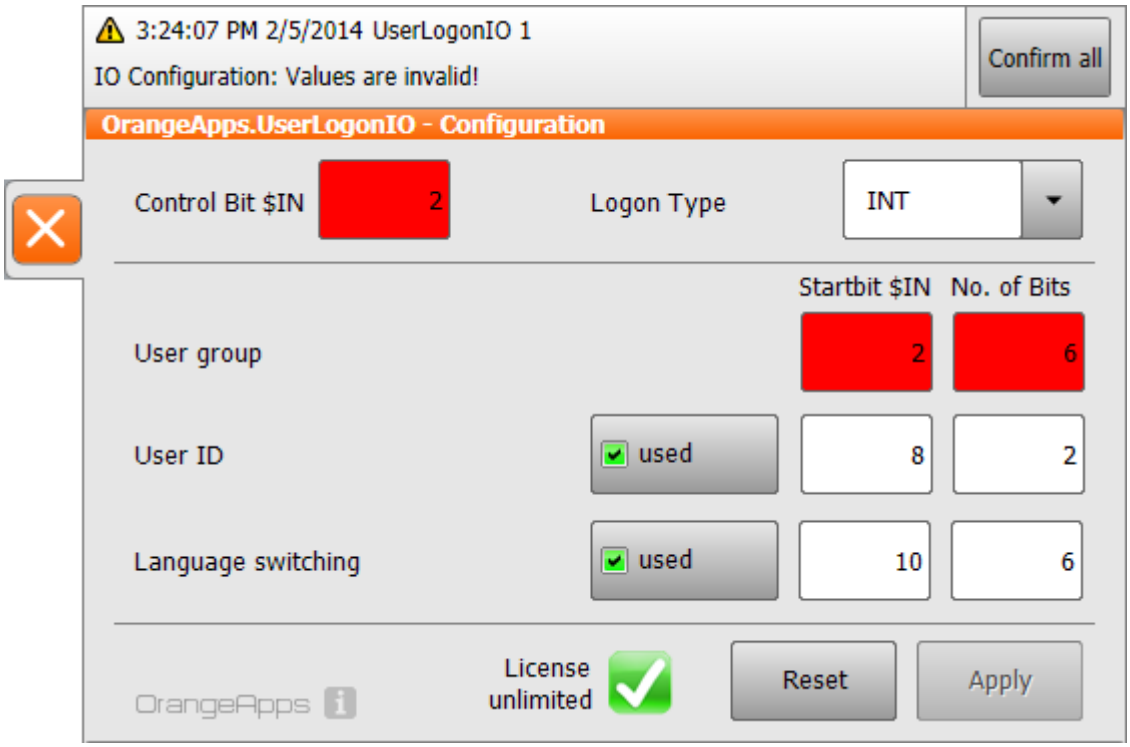



**Figure 7-2: configuration error detection plugin KRC2**

## 7.2 Configuration plugin KRC2

**Calling the configuration plugin**

The call of the Configuration Plugin takes place in the main menu under Configuration → ***UserLogonIO.***

### Configuration plugin

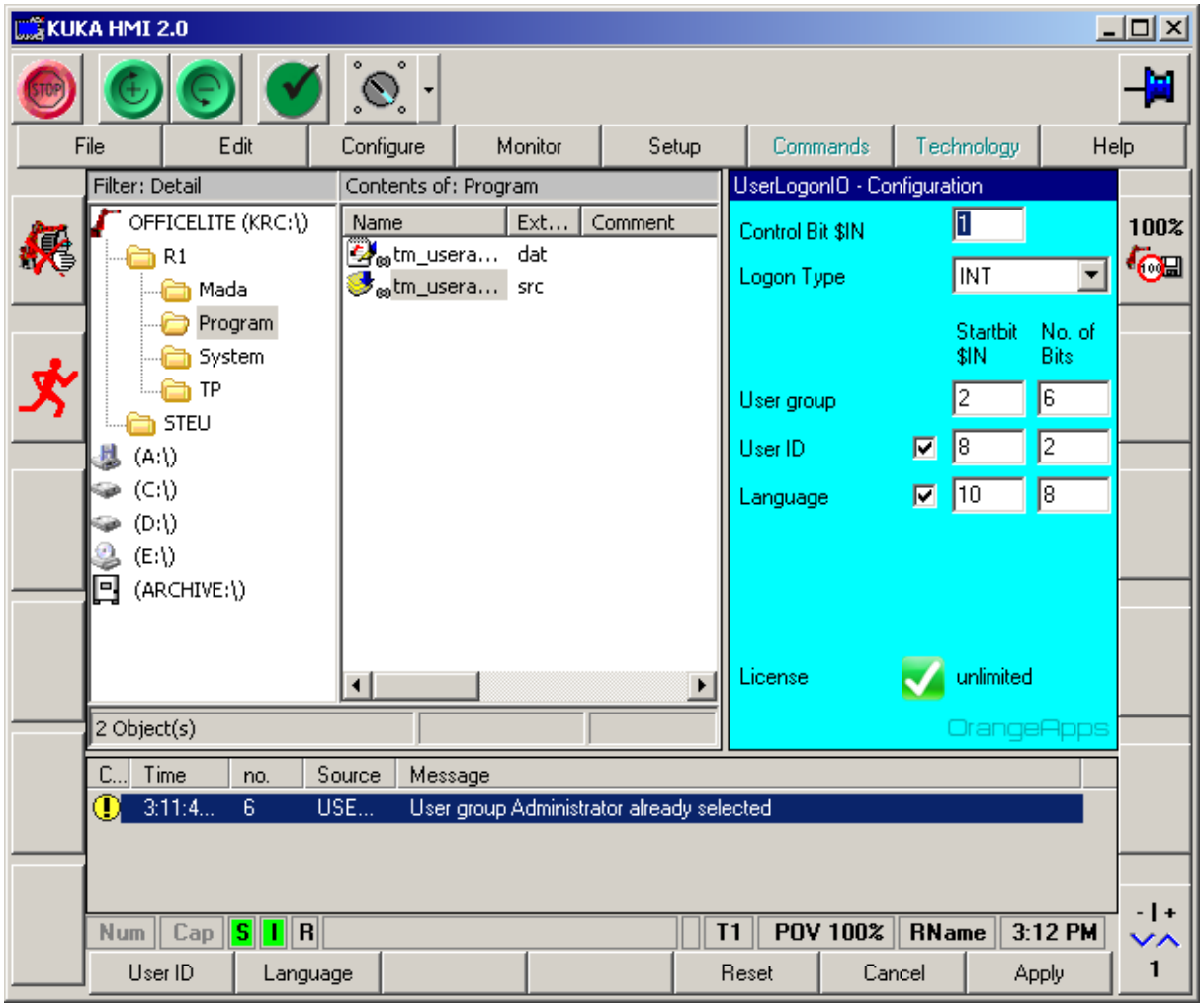



**Figure 7-3: configuration plugin KRC2**

Navigate through the fields using the arrow keys on the keyboard. The values are entered using the numeric keypad or the status button.

### Controls

| Item | | Description | Possible values |
|---|---|---|---|
| Control Bit $IN | - | Configures which input indicates the user login to the robot system | 1-1024 * $Set_IO_Size |
| Logon Type | - | Configures whether the selection of the user group is given bit-coded or as an integer value on the IO interface | INT, BIT |
| User Group | Start bit $IN | First bit of the user group | 1-1024 * $Set_IO_Size |
| | No. of Bits | Bit width of the user group | 5-8 |

| | | | |
|---|---|---|---|
| User ID | checkbox | Using the user ID for entry in the logbook | TRUE, FALSE |
| | Start bit $IN | First bit of the user ID | 1-1024 * $Set_IO_Size |
| | No. of Bits | Bit width of the user ID | 1-32 |
| Language switch-over | checkbox | Use the language ID for switching languages | TRUE, FALSE |
| | Start bit | First bit of the language ID | 1-1024 * $Set_IO_Size |
| | No. of Bits | Bit width of the language ID | 1-8 |

**Table 7-3: Controls in the configuration plugin**

### $Set_IO_Size

$Set_IO_Size depends on the memory configuration of the robot. Possible values are 1,2 oder 4.

### Softkeys

| Key | Beschreibung |
|---|---|
| User id | Switches the usage of a user id on/off |
| Language | Switches the usage of language switching on/off |
| Reset | Resets all values to the stored ones |
| Cancel | Closes the plugin without storing values. If values have been changed a dialog message appears. |
| Apply | Stores the actual values |

**Tab. 7-4: Softkeys of the configuration plugin**

### Plausibility Check

Simultaneously to an input of a value  a plausibility check is performed. If an error occurs a state message appears in the message window, the entry is marked in red and the softkey ***Apply*** is deactivated.

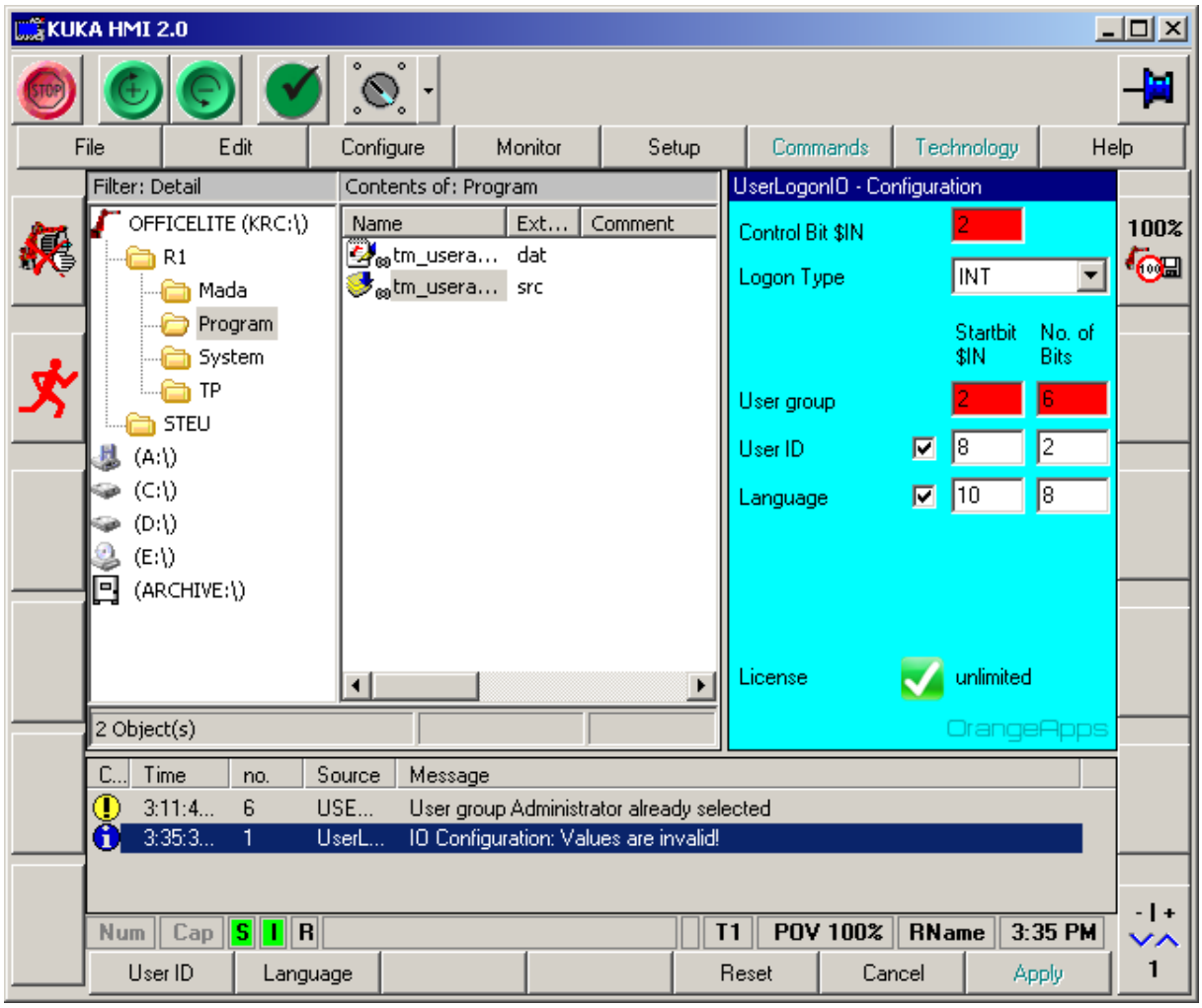



**Figure 7-4: error detection configuration KRC2**

## 7.3 License verification

The presence of a valid license will be periodically checked and displayed in the plugin. If no license is available, the recognition of a user registration is disabled. Using a time-limited license, the number of days remaining before the user login is disabled is displayed.

## 7.4 Security

To protect against manipulation of the user login the access of the configuration plugin is allowed only for the user group "Administrator". Any change in the configuration is saved in the logbook of the robot.

The entered values are stored in the file under UserlogonIO.xml generating a security code. This security code is checked for plausibility. If the plausibility test fails the function of the user login is disabled until a positive test is performed. Thus manually changing of the configuration file is prevented.

A generated XML file can be copied from robot to robot.

The programming of the user login on to the higher-level control must be only be performed by the plant operator authorized personnel. Additionally this documentation must be observed.

The correct function of the IO interface must be checked regularly and documented.

An incorrect configuration of the interface can have a false, unauthorized, user notification.

## 7.5 Configuration Examples KRC4

### Example 1

- User Switching via INT value
- Control bit is on input 65
- User Group: start bit is on input 66 bit, width is 8 bits
- User ID: used YES, start bit is input to 74 bit, width is 16 bits
- Language ID: used YES, start bit is input to 90 bit, width is 8 bits

### Configuration Plugin

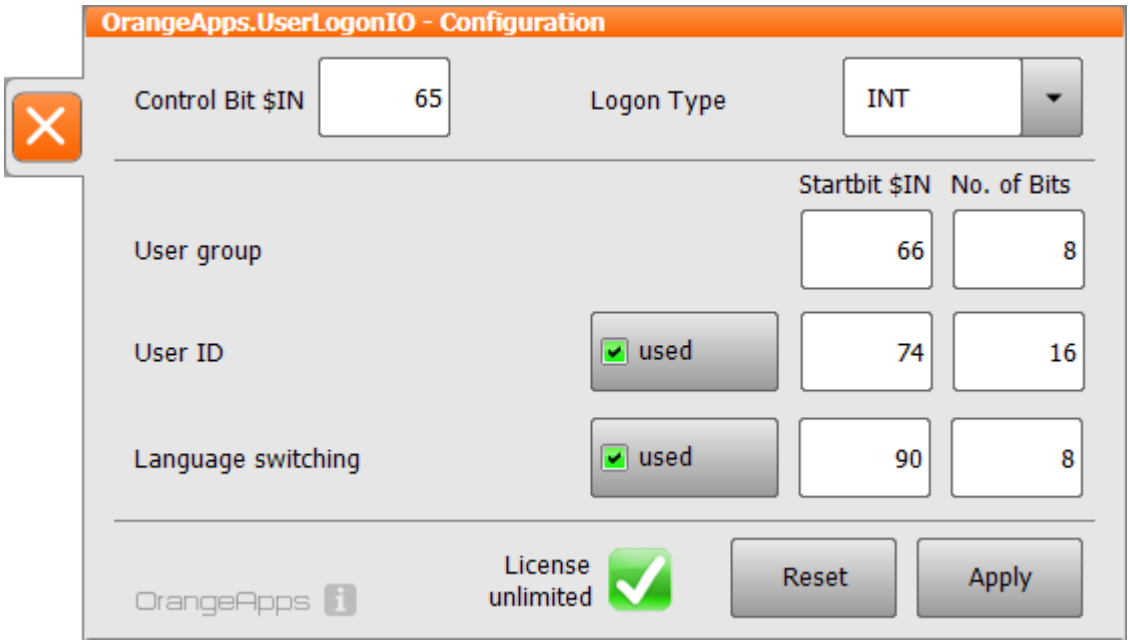



**Figure 7-5: configuration example 1 KRC4**

### Storing the values in the XML file:

```
<Configuration>
  <LogonType>INT</LogonType>
  <LogonBit>65</LogonBit>
  <UserLevel Start="66" Length="8" />
  <UserID Enable="True" Start="74" Length="16" />
  <LanguageID Enable="True" Start="90" Length="8" />
  <Security>501EAA5FC646CDAF42D51C04874EF856</Security>
</Configuration>
```

**Example 2**

- Bit coded User Switching
- Control bit is on input 128
- User Group: start bit on input 255, bit width 5 bits
- User ID: used Yes, start bit at input 513, bit width of 16 bits
- Language ID: used No

**Configuration Plugin**

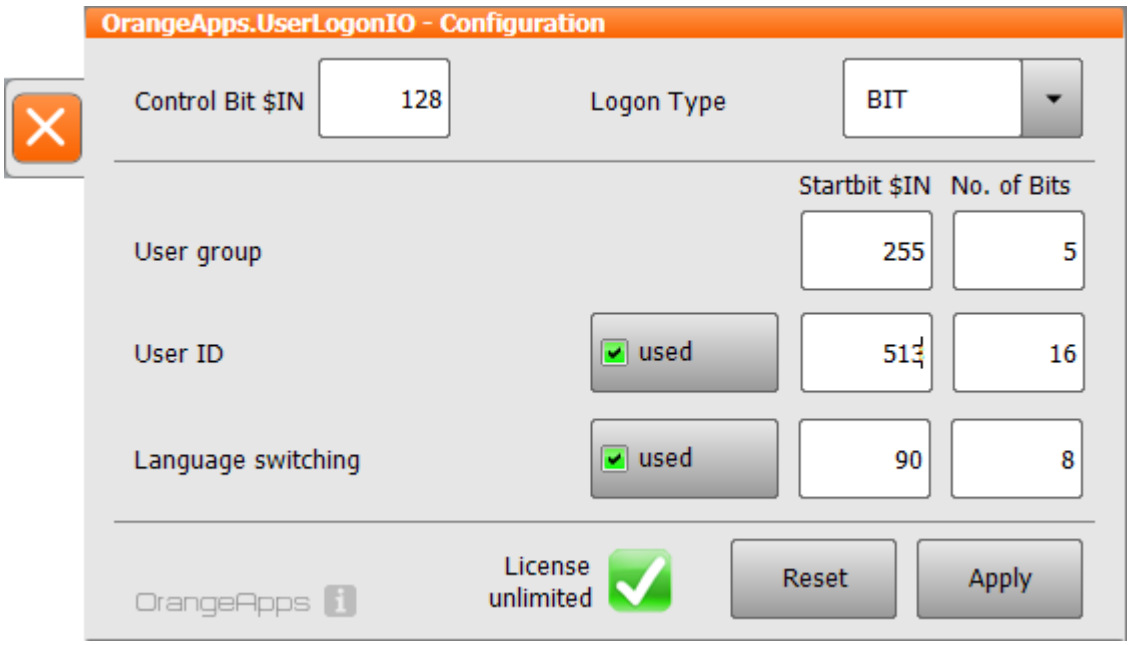



**Figure 7-6: configuration example 2 KRC4**

**Storing the values in the XML file:**

```
<Configuration>
  <LogonType>BIT</LogonType>
  <LogonBit>128</LogonBit>
  <UserLevel Start="255" Length="5" />
  <UserID Enable="True" Start="513" Length="16" />
  <LanguageID Enable="False" Start="530" Length="8" />
  <Security>3FC6E1C0C3A17531724BDE7E798B8909</Security>
</Configuration>
```

# 8 Starting the software

The software runs as a background service and is started automatically when booting the robot controller.

# 9 Messages

The following messages can be displayed in the message window

| Message | Description | Error type | Number |
|---|---|---|---|
| IO configuration: values are invalid! | Data entered in the configuration plugin are incorrect. Correct the values. | Status | 1 |
| UserLogonIO.xml file has been deleted. UserLogonIO is temporarily disabled! | The specified file was deleted. Copy the correct file to directory c:\ KRC\User | Status | 2 |
| Plugin OrangeApps.UserLogonIO successfully loaded | The plugin was successfully loaded at startup of the control | Info | 51 |
| User {ID} is logged on as {user group} | Represents, under which user group the user with the {id} is logged into the system | Info | 60 |
| The default user operator is logged on | The default user “operator” is logged on | Info | 62 |
| Path C:\KRC\User not found | The folder c:\KRC\User could not be found | Info | 100 |
| file UserLogonIO.xml not available. Automatically creation performed. Check the configuration! | The specified file could not be found and was created automatically using default values (all 0 or FALSE). Additional messages will follow stating the result of the verification check. Perform a new Configuration or copy a correct file in the directory c:\KRC\User. | Info | 101 |
| The file UserLogonIO.xml cannot be loaded. Copy the correct file to the directory C:\KRC\User, and then restart the SmartHMI. | The UserLogonIO.xml file appears to be corrupted and cannot be loaded. Check the file and restart the SmartHmi. | Info | 102 |
| logon type incorrectly configured, must be INT or BIT! Value set to 'INT' automatically. | The value of the element logo type in the UserLogonIO.xml file has an incorrect value and has been automatically set to INT. Verify the configuration. | Info | 103 |
| logon bit incorrectly configured, must be type of integer. Value set to 0 automatically | The value of the element Logonbit in the UserLogonIO.xml file has an incorrect value and has been automatically set to 0. Verify the configuration. | Info | 104 |
| start bit for user group incorrectly configured, must be type of integer. Value automatically set to 0 | The value of the attribute Start of the element user level in the file UserLogonIO.xml has an incorrect | Info | 105 |

| | | | |
|---|---|---|---|
| | value and has been automatically set to 0. Verify the configuration. | | |
| no. of bits for user group incorrectly configured, must be type of integer. Value automatically set to 0 | The value of the attribute length of the element user level in the file UserLogonIO.xml has an incorrect value and has been automatically set to 0. Verify the configuration. | Info | 106 |
| Flag user group used incorrectly configured, must be TRUE or FALSE. Value automatically set to FALSE | The value of the attribute USED of the element UserID in file UserLogonIO.xml has an incorrect value and has been automatically set to FALSE. Verify the configuration. | Info | 107 |
| start bit for user-id incorrectly configured, must be type of integer. Value automatically set to 0 | The value of the attribute START of the element UserID in file UserLogonIO.xml has an incorrect value and has been automatically set to 0. Verify the configuration. | Info | 108 |
| no. of bits for user-id incorrectly configured, must be type of integer. Value automatically set to 0 | The value of the attribute LENGTH of the element USER LEVEL in file UserLogonIO.xml has an incorrect value and has been automatically set to 0. Verify the configuration. | Info | 109 |
| 'language switching used' incorrectlyly configured, must be TRUE or FALSE. Value automatically set to FALSE | The value of the attribute USED of the element languageID in file UserLogonIO.xml has an incorrect value and has been automatically set to FALSE. Verify the configuration. | Info | 110 |
| start bit for language switching incorrectly configured, must be type of integer. Value automatically set to 0 | The value of the attribute START of the element LanguageID in file UserLogonIO.xml has an incorrect value and has been automatically set to 0. Verify the configuration. | Info | 111 |
| no. of bits for language switching incorrectly configured, must be type of integer. Value automatically set to 0 | The value of the attribute LENGTH of the element LanguageID in file UserLogonIO.xml has an incorrect value and has been automatically set to 0. Verify the configuration. | Info | 112 |
| Check sum error, impossible to read value | The value of the element SECURITY in file UserLogon.xml can not be read. Check the correctness of the file. | Info | 113 |
| Check sum error, check sum is invalid | The value of the element SECURITY in file UserLogon.xml does not match with the calculated value. Check the correctness of the file. | Info | 114 |
| no. of bits user group has incorrect value, min. 5 and max. 8 allowed | The value of the attribute LENGTH of the element user level in file UserLogonIO.xml is outside the limits. When logon type BIT is used at least 5 bits are required. | Info | 180 |

| | | | |
|---|---|---|---|
| no. of bits user group has incorrect value, min. 6 and max. 8 allowed | The value of the attribute LENGTH of the element user level in file UserLogonIO.xml is outside the limits. When logon type INT is used at least 6 bits are required. | Info | 190 |
| {Element} has incorrect value, must be higher than 0 | The value of an element in the file UserLogonIO.xml is less than 1, but must be greater than or equal to 1 | Info | 200 |
| Value exceeds maximum number of inputs | The value of an element in the file UserLogonIO.xml exceeds the maximum available number of inputs (= 4096) | Info | 210 |
| Range overlap | At a value of an element in the UserLogonIO.xml file, there is a range overlap with the value of another element | Info | 220 |
| Configuration successfully saved | The entered values in the configuration plugin were saved successfully. | Info | 400 |
| there's no user group for value {value} | There is no user group for the value of the user group on the IO interface. | Info | 500 |
| The configuration has been changed. Would you like to save? | The configuration plugin was closed without saving the changed values. Yes button saves and closes the form. No button closes the form without saving. Cancel button cancels the closing of the form. | Dialogue | 600 |
| No license for robot {serial number}. UserLogonIO is inactive. | The license file to operate the software in a production environment is missing for this robot serial number. UserLogonIO is inactive. | Status | 101 |
| No license file for OFFICE available. UserLogonIO is inactive. | The license file for the operation of the software on the office computer systems and Office Lite is missing. UserLogonIO is inactive. | Status | 101 |
| License for robot {serial number} is invalid or expired. UserLogonIO is inactive | The license to operate the software in a production environment for these robot serial number expired or is invalid. UserLogonIO is inactive. | Status | 102 |
| {x} Days left until license expires | Number of days UserLogonIO can still be used. | Status | 103 |

**Table 9-1 Messages**

# 10 Appendix

## 10.1 List of Tables



## 10.2 List of Figures