



OrangeApps

RobotBackupSolution 1.0

User Manual

Date: 16'th November 2021, Version 1.0

© Copyright 2020

OrangeApps GmbH
Arnikaweg 1
87471 Durach
Germany
www.orangeapps.de

This documentation may be reproduced - including extracts - and made accessible to third parties. In the case of partial reproduction, however, a reference to the copyright holder and this document must be noted

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

Version documentation	Software version	release	date
	from	to	
1.0	1.0	Mayer	16'th Oct 2020

History of the document versions

version	date	author	Reason for change / comment
1.0	16'th Oct 2020	Christian Mayer	Initial creation

content

1	Introduction	5
1.1	Target group	5
1.2	Presentation of information	5
1.3	Trademark	5
2	Product description	6
2.1	features	6
2.2	scope of delivery.....	6
3	Security, requirements and licensing	7
3.1	Safety	7
3.2	Requirements for operating the software	7
3.3	Licensing	7
3.4	Show product ID and use license file	7
4	Working principle	8
5	Installation and configuration	9
5.1	Web server configuration.....	9
5.2	Terminals	9
6	Start / stop server application	10
6.1	Start application.....	10
6.2	close application.....	10
7	User interface	11
7.1	Calling up the website.....	11
7.2	Setting the language	12
7.3	Find robots	12
7.4	Robot list	13
7.5	main menu	15
7.6	Robot management	15
7.7	Backup management.....	15

7.7.1	Create backup task.....	16
7.7.2	Recovery wizard	17
8	Advanced configuration (for system administrators).....	18

1 Introduction

1.1 Target group

This documentation is aimed at users with the following knowledge:

- IT administrators

1.2 Presentation of information



These notes contain useful tips or special information for the current topic.

1.3 Trademark

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

Windows is a brand of Microsoft Corporation.

2 Product description

The “RobotBackupSolution” server application provides functions for easy archiving and restoring of robot data and programs via an intuitive web interface. Robots can be archived manually or on a schedule. The data is saved in the company's own network and is therefore available for restoration at any time.

All archiving is logged and the status is displayed. Status reports can be sent via optional email notification.

The robots to be archived can be searched for using the scan function or added using import lists. Each backup is optionally unpacked immediately.

Detailed information such as robot type, serial number, KSS version, number of available backups and installed option packages are displayed for each robot.

With each archiving, the option packages installed on the robots are determined and saved in a folder. In the event of a restore, the required option packages are automatically reinstalled.

2.1 features

- Comfortable web interface, compatible with tablet and smartphone or simply in the web browser
- easy configuration through automatic scanning of your robots
- full overview of your robots and their archiving status
- Creation of individual schedules for archiving
- Email notification of the archiving status
- manual archiving at the push of a button
- 'History' function for up to 10 archives per robot
- Decomposer, the last backup is unpacked
- Installed option packages are archived and automatically reinstalled during a recovery
- Recovery wizard
- Display of detailed information such as robot type, serial number, KSS version, number of available backups, installed option packages
- Compatible with KUKA KRC4 KSS 8.2, 8.3, 8.5, 8.6
- no additional software required on the robots
- executable as Windows application or service (e.g. for Windows server)

2.2 scope of delivery

The delivery takes place as a zip file.

3 Security, requirements and licensing

3.1 Safety

The software described in this document has been developed according to the state of the art.

The software may only be used for its intended purpose, with an awareness of safety and dangers. Use must be made in compliance with this document and the license agreements.

3.2 Requirements for operating the software

The server application runs on all Windows PCs with .NET Framework 4.1.6

3.3 Licensing

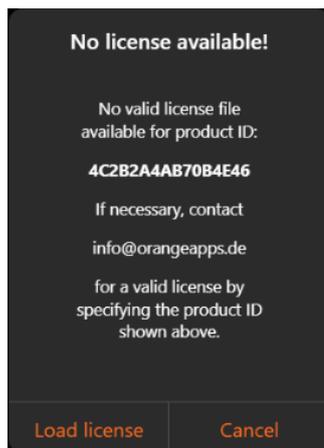
The server component of RobotBackupSolution requires a license. The license is tied to the workplace. A license is required for each workstation. A new license must be used when replacing the computer hardware. The maximum number of robots to be archived is stored in the license. This must be specified when ordering.

When using the software without a license, a license dialog with a product ID is displayed. This product ID is required to create the license. contact us under [mailto: info@orangeapps.de](mailto:info@orangeapps.de)

To test the software, test licenses are available under www.orangeapps.de available.

3.4 Show product ID and use license file

If no valid license is found when starting the server application, the following dialog message appears:

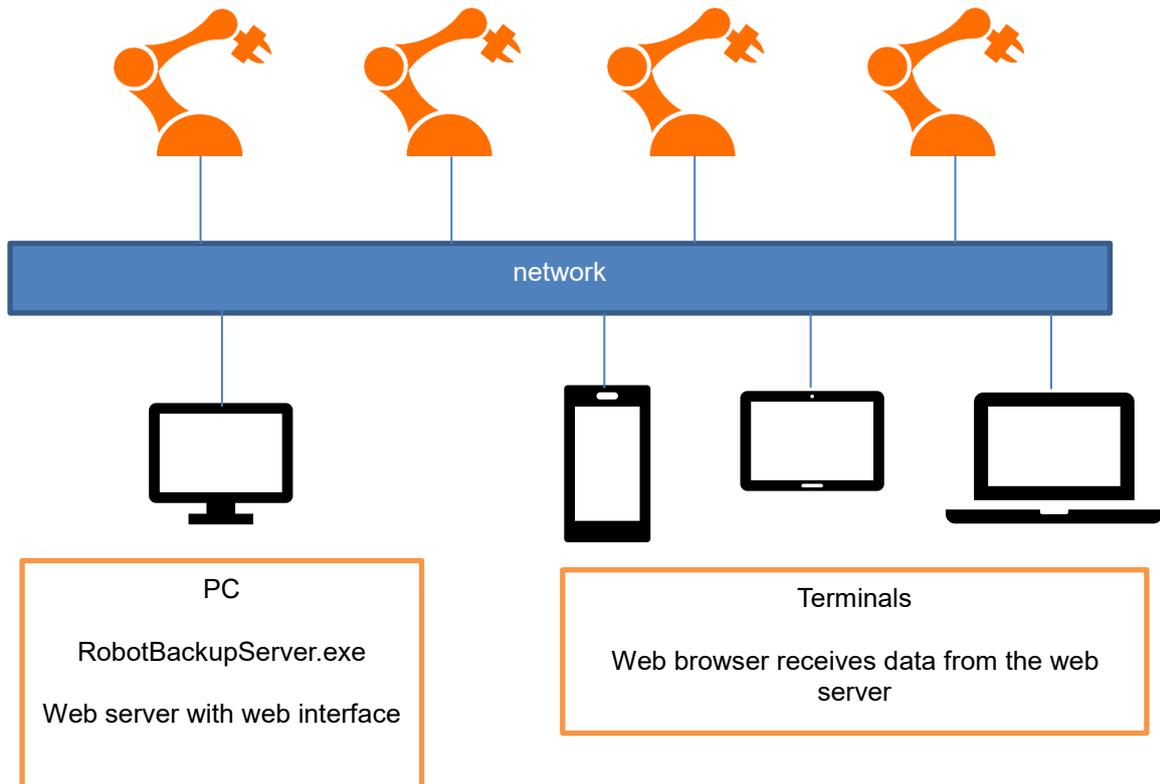


OrangeApps creates a license with the product ID displayed. When you click the Yes button, a file selection dialog appears to select a license.

4 Working principle

All robots and all devices involved are in the same network. The application is started on any network PC. The web server can be connected from any device with any web browser via the web interface.

The web server provides a user interface to each end device via a website.



5 Installation and configuration

The application does not require any installation.

Unzip the OrangeApps.RobotBackupServer_V1.x.zip file and copy the unzipped folder to the PC.

5.1 Web server configuration

The communication port of the web interface must be configured in the file OrangeApps.RobotBackupServer.exe.config.

```
<setting name="HttpPort" serializeAs="String">
  <value>8080</value>
</setting>
<setting name="HttpsPort" serializeAs="String">
  <value>8443</value>
</setting>
```

Further settings are possible in the file. These are discussed in Chapter 8 described.

5.2 Terminals

All devices must have network access and be able to communicate on the configured port.

6 Start / stop server application

Unzip the OrangeApps.RobotBackupServer_V1.x.zip file and copy the unzipped folder to the PC.

6.1 Start application

method

- Start the OrangeApps.RobotBackupServer.exe file with administrator rights



➔ A console window opens.

```
C:\Users\Christian\Desktop\OrangeApps.RobotBackupServer_V1.0\OrangeApps.RobotBackupServer.exe
write: _internal\Robots.json
write: _internal\TreeviewSettings.json
write: _internal\RobotCsvSettings.json
Das SSL-Zertifikat wurde erfolgreich gelöscht.
DEBUG[11/4/2020 5:24:54 PM|Debug||Unregistend SSL from port: 8443|en
Generated certificate,
Thumbprint: 6E197BF9F4E74808C535FE5579587898F6E312D4

Certificate added to store,
Thumbprint: 6E197BF9F4E74808C535FE5579587898F6E312D4

b382e018-4762-4773-b14f-ec7d56f2c97d
Das SSL-Zertifikat wurde erfolgreich hinzugefügt.
DEBUG[11/4/2020 5:24:56 PM|Debug||Registerd SSL on port: 8443|en
DEBUG[11/4/2020 5:24:56 PM|Debug||Web-Server has started at http://localhost:8080|en
DEBUG[11/4/2020 5:24:56 PM|Debug||Web-Server has started at https://localhost:8443|en
```

6.2 close application

method

- Close like a normal Windows window by clicking on "X" in the top right corner

7 User interface

7.1 Calling up the website

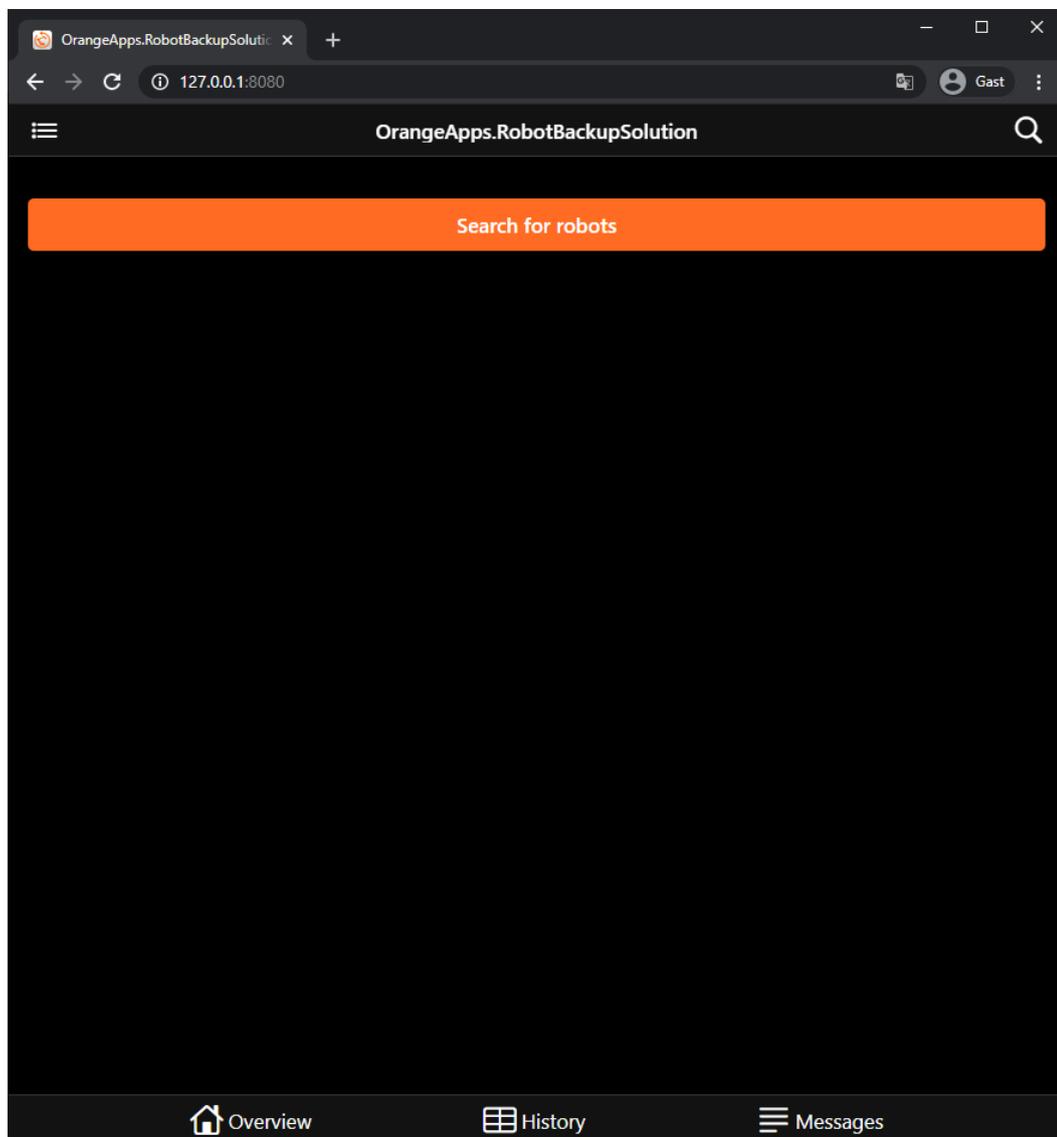
The website of the server can be loaded via any web browser. The specified IP address must contain the previously configured port.

Format: <IP address web server>: <Port>

example

127.0.0.1:8080

After entering the IP address, the user interface opens



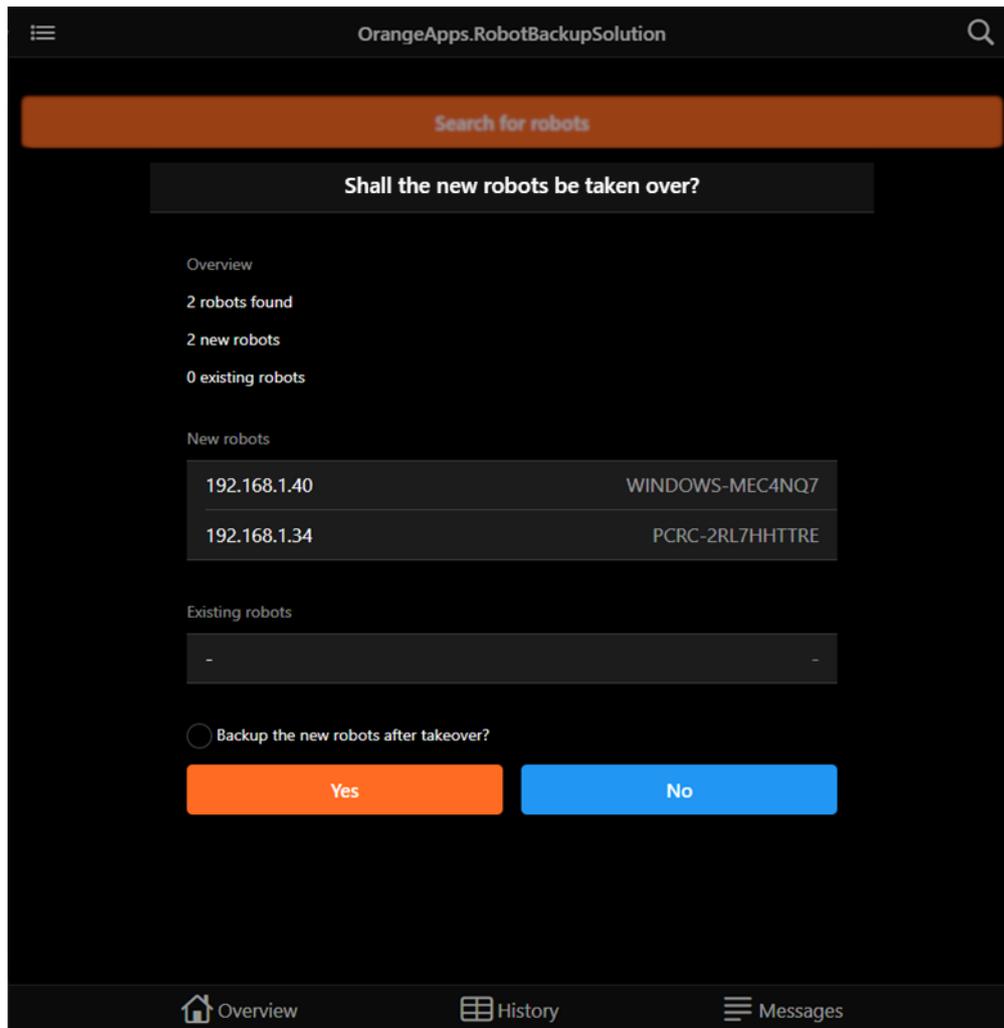
7.2 Setting the language

The language of the website can be switched between German and English in the settings menu.

7.3 Find robots

Clicking the “Search for robots” button searches for robots in the network

When the search is complete, a window will appear showing the number of robots found.



With Yes, newly found robots are added to the robot list. As an option, newly added robots can be archived immediately.

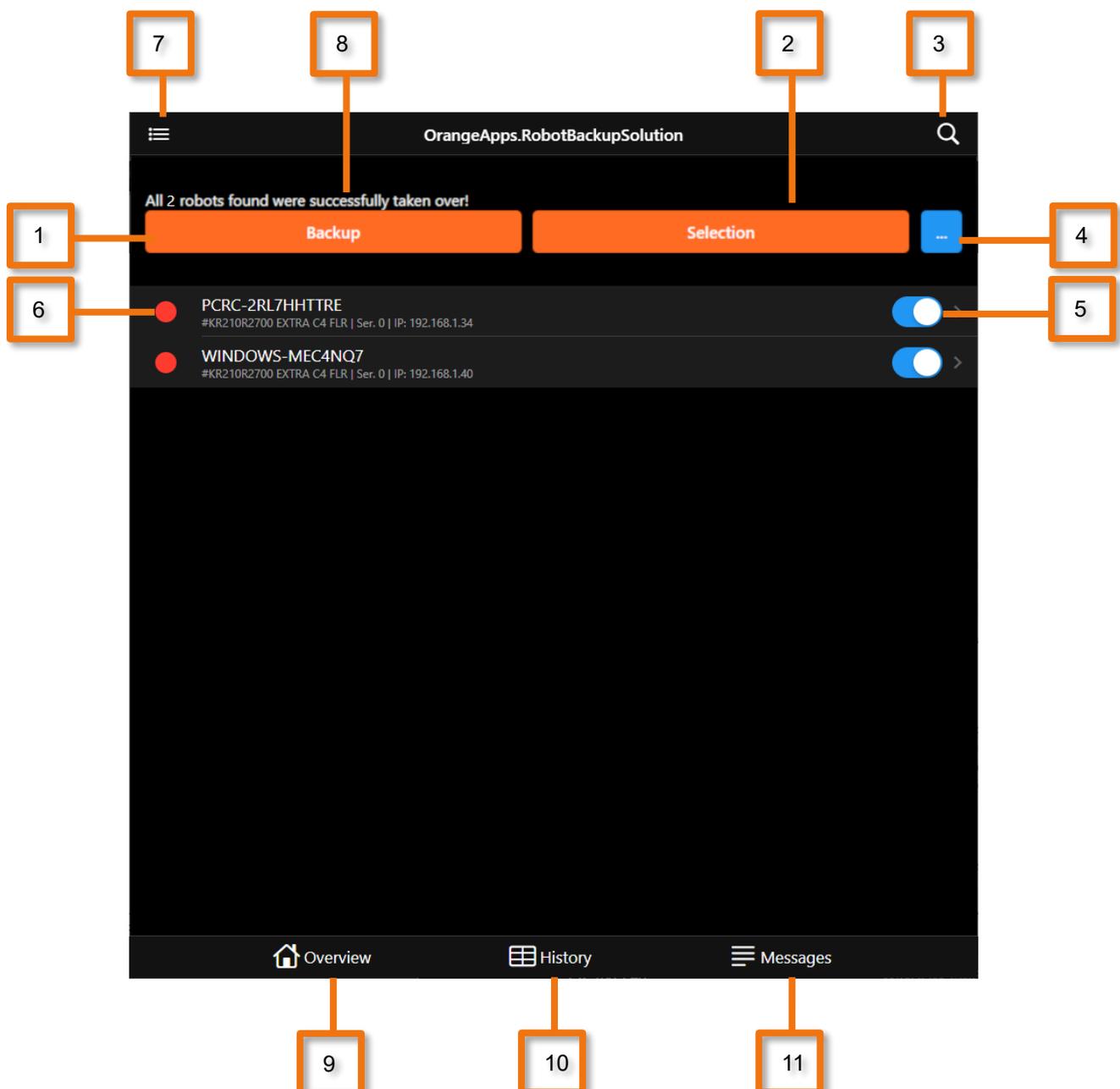
7.4 Robot list

Various actions can be carried out for the robots in the robot list:

- Archiving
- Choose
- Create tasks
- Look for robots

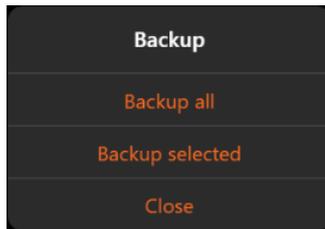
Information about each robot is also displayed:

- Archiving status
- Robot type
- serial number
- IP address



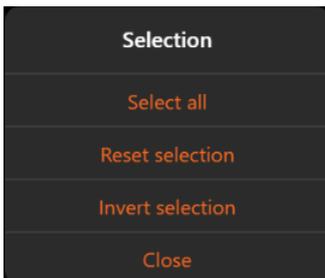
1

Opens the archive menu to manually archive all robots or selected robots



2

Opens the selection menu to select robots

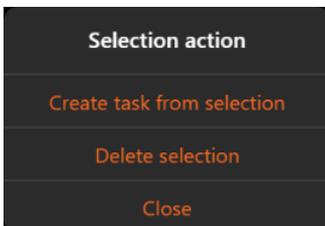


3

Search the robot list

4

Opens the action menu to create a task for the selected robot or to delete it from the list



5

Robot selection (blue = on, gray = off)

6

Status display (red = no archive within a configurable period of time, blue = archiving in progress, green = archive available). If a robot is not available in the network, this is indicated by the symbol

7

main menu

8

Message bar

9 The Overview page is displayed

10 History page is displayed

11 The Messages page is displayed

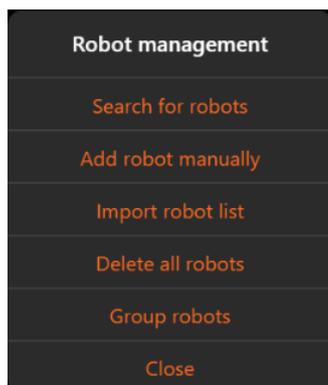
7.5 main menu

Various functions can be selected via the main menu. These include:

- Settings
- Robot management
- Backup management
- Backup tasks
- Recovery wizard
- Language switching German, English

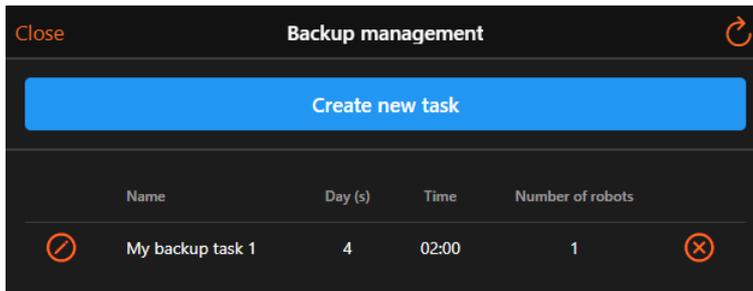
7.6 Robot management

In the robot management, robots can be added, deleted, searched for or grouped manually or via an import list.



7.7 Backup management

Plans for automatic backups are managed in the backup management. Any number of backup tasks can be created.



By clicking on the edit icon  the existing task is opened for editing. By clicking on the delete icon  the task is deleted.

7.7.1 Create backup task

A new task is created by clicking the "Create new task" button. A configuration window opens.

Create backup task

Name of backup task
My backup task 1 
required

Email (s)
info@orangeapps.de 
optional

Weekday (s)
Monday, Wednesday, Friday, Sunday >

Time
02:00 
required

Robot selection

PCRC-2RL7HHTRE

KUKA_2A46513D4C9B47C

The days, the time and the robots to be archived are specified there. With the optional specification of one or more e-mail addresses, a status e-mail is sent every time a backup is carried out.

7.7.2 Recovery wizard

The restore wizard shows the steps to be carried out in table form to restore a backup on the robot. You can choose between the latest or an older backup. The steps differ depending on the selection.

Follow the steps below.

Restore assistant for the latest backup
Close

1 Login

Login at least as Expert on the robot controller.

- Call up the main menu (button with robot at the bottom right or top left of the SmartPad)
- Click „Configuration“
- Click „User group“, select at least „Expert“, enter password and click „Log on“

2 Restore

Restore backup

- Call up the main menu (button with robot at the bottom right or top left of the SmartPad)
- Click „File“
- Click „Backup Manager“
- Click „Restore“
- Click „Projects and options“

3 Project activation

Allow project activation

- Answer the following dialog „Do you want to activate ...“ with „Yes“

4 Project changes

Confirm project changes

- Confirm the „Do you want to continue?“ Dialog with „Yes“

5 The restore is now carried out, which may include restarting the robot.

Completion

8 Advanced configuration (for system administrators)

Various settings can be made in the configuration file `OrangeApps.RobotBackupServer.exe.config`.

Intervals

- BackupExpiryTimeSpan

[TIMESPAN, 7.00: 00: 00] → Period of time after which a backup is marked as obsolete and the LED in the robot list is set to red

- OnlineCheckInterval

[TIMESPAN, 01:00:00] → Interval, in this rhythm all robots are pinged one after the other. Robots that do not send an answer are marked as "offline" in the robot list

BackupManager

- BackupManagerPath

[STRING, _tools\BackupManager\BackupManager.exe] → Path to the BackupManager

- ArchiveHistoryCount

[INT, 10] → Max. Number of backups for each robot

- ProjectBackupDirectoryPath

[STRING, empty] → Storage location of the backups. If there is no entry, the backups are saved in the '_backups' folder

- KopBackupDirectoryPath

[STRING, empty] → Storage location of the option packages (KOP's). If there is no entry, the option packages are saved in the '_backups' folder

- Username

[STRING, empty] → Username if backups are to be stored on a server

- Password

[STRING, empty] → Password if backups are to be stored on a server

Decomposer

- DecomposerEnabled

[BOOL, true] → Flag whether the decomposer should be executed after the backup

- DecomposerOutputPath

[STRING, decomposed] → Relative path to the respective robot backup, e.g. B. `_backups / {robot name} / decomposed`

General

- MaxBackupThreads

[INT, 3] → Max. Number of threads for parallel processing

- BackupHistoryMaxEntrys

[INT, 100] → Max. Number of entries saved in the backup history

- HttpPort

[INT, empty] → Port for the http connection

- HttpsPort

[INT, empty] → Port for the encrypted https connection is only required if an SSL certificate is used or *UseSelfsignedCert* is set to TRUE

E-mail delivery

- SendEmails

[BOOL, false] → (De) activate the sending of e-mails for automatic backups

- SmtServer

[STRING, empty] → If *SendEmails* is set to TRUE, the following settings (all that begin with Smt) must also be edited so that the e-mail can be sent

- SmtPort

[INT, empty]

- SmtServerUsername

[STRING, empty]

- SmtServerPassword

[STRING, empty]

- SmtpeEnableSsl

[BOOL, true] → Flag whether or not encrypted e-mails are sent

Encrypted connection server <-> client

- SslPfxCertFilePath

[STRING, empty] → Path to the SSL certificate

- SslPfxCertPassword

[STRING, empty] → Password belonging to the SSL certificate

- UseSelfsignedCert

[BOOL, true] → Flag whether a self-signed certificate should be used if no real SSL certificate is available