

FactoryViews 1.4.2 with MES4 V3

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1 Installation and Activation

1.1 Installation of „WIBU CodeMeter User Runtime for Windows“

FactoryViews uses the CodeMeter Runtime to access CodeMeter-based licenses. The licenses can be integrated on a USB dongle or via a license file.

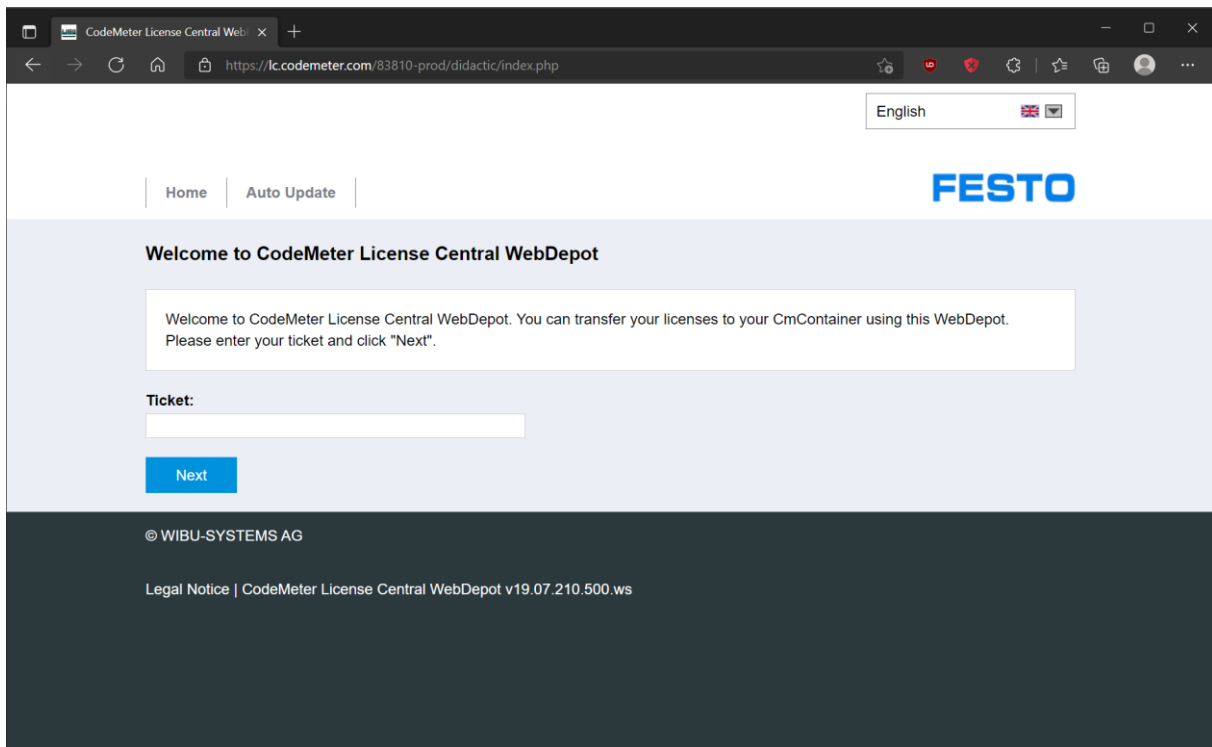
Note: Administrator rights are required for installing the CodeMeter User Runtime.

Download “WIBU CodeMeter User Runtime for Windows” from the manufacturer's homepage and install it, if not already installed on your PC.

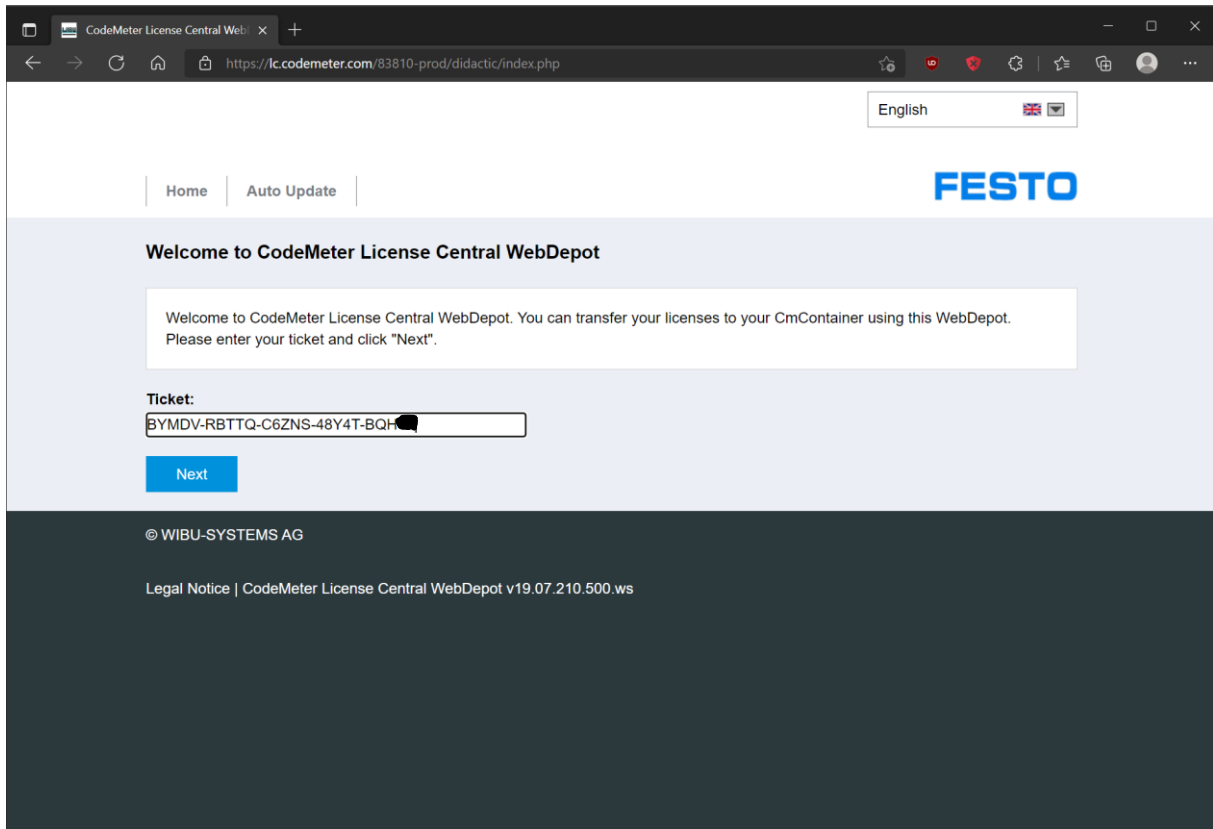
Link to download page: <https://www.wibu.com/support/user/user-software.html>

1.2 Activate licenses

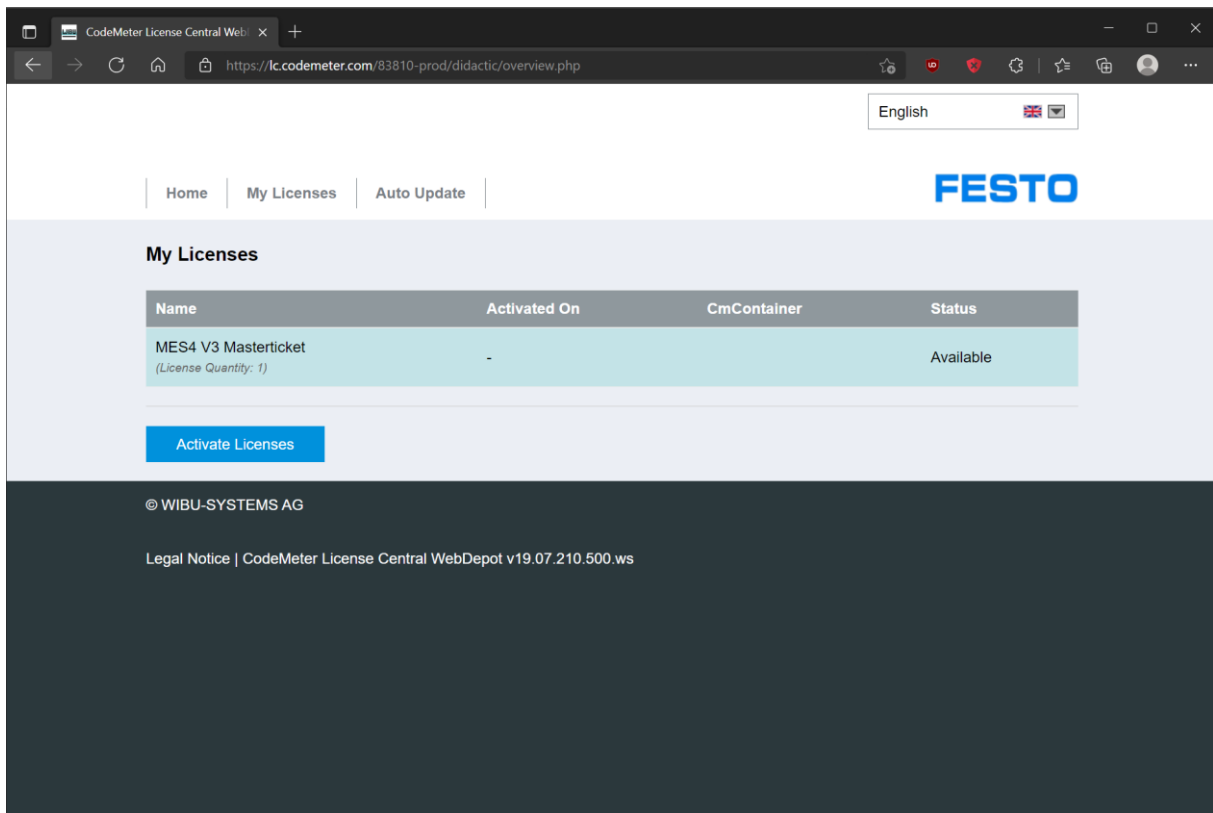
Open the WebDepot via <http://cm.festo-didactic.com/webdepot/index.php>



Enter a ticket of a license to be activated and click “Next”.



Click on “Activate Licenses”.

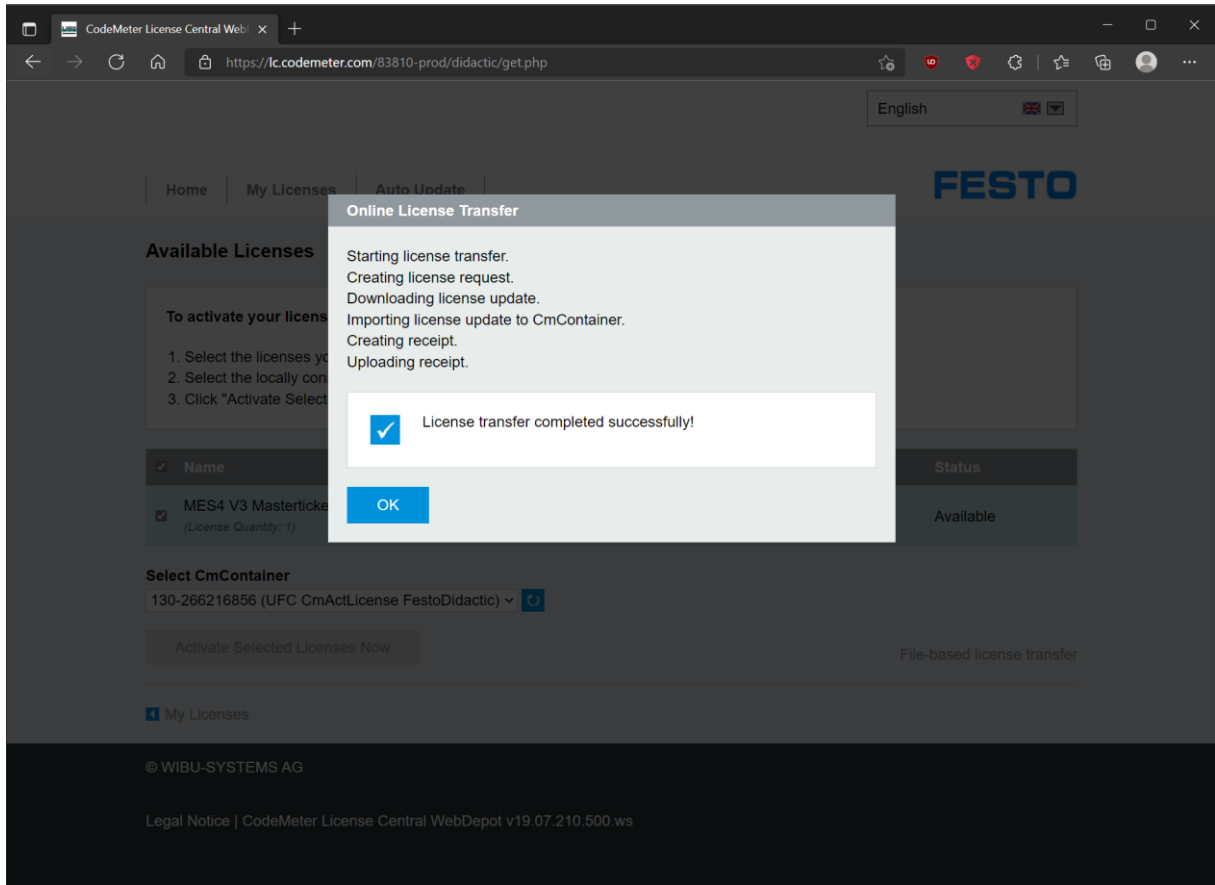


Depending on the license type, an option might be shown to install the license either on a virtual dongle on the PC (as here) or on a connected USB license dongle.

Select those licenses, which you would like to activate on this PC now, and click on “Activate Selected Licenses Now”.

The screenshot shows the CodeMeter License Central Web interface. At the top, there is a navigation bar with "Home", "My Licenses", and "Auto Update" links, and the FESTO logo. The main content area is titled "Available Licenses". Below this, there is a box with instructions: "To activate your licenses: 1. Select the licenses you want to activate. 2. Select the locally connected CmContainer to which you want to transfer the licenses. 3. Click 'Activate Selected Licenses Now'." Below the instructions is a table with columns: Name, Activated On, CmContainer, and Status. The table contains one row: "MES4 V3 Masterticket (License Quantity: 1)" with a checked checkbox in the Name column and "Available" in the Status column. Below the table, there is a "Select CmContainer" section with a dropdown menu showing "130-266216856 (UFC CmActLicense FestoDidactic)" and a refresh icon. A blue button labeled "Activate Selected Licenses Now" is visible. To the right of the button, it says "File-based license transfer". At the bottom left, there is a link for "My Licenses". The footer contains "© WIBU-SYSTEMS AG" and "Legal Notice | CodeMeter License Central WebDepot v19.07.210.500.ws".

The screenshot shows the same CodeMeter License Central Web interface, but with a modal dialog box titled "Online License Transfer" overlaid. The dialog contains a warning icon and the text: "Please wait! The selected licenses are transferred. This process may take several minutes to complete. Please do not remove the CmContainer during this process and do not reload this page." Below the text is a progress bar. Underneath the progress bar, the following steps are listed: "Starting license transfer.", "Creating license request.", and "Downloading license update." The background interface is dimmed, showing the same "Available Licenses" table and "Activate Selected Licenses Now" button as in the previous screenshot. The footer remains the same.

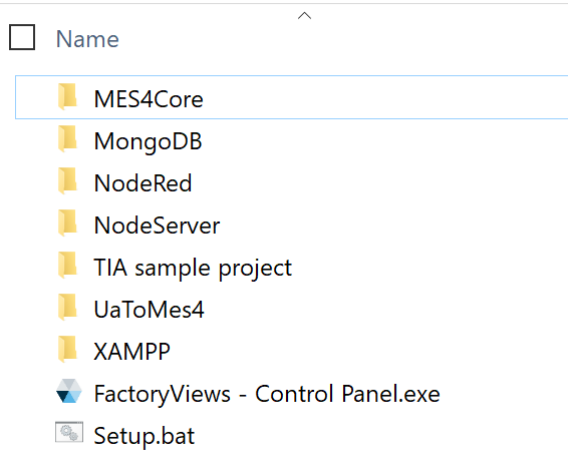


The license activation is complete.

1.3 Extract

Open "FactoryViews.exe" and extract the content to a local drive with write access, e.g. to C:\Festo
Note: For extraction, a valid license of FactoryViews app (e.g. MES4 V3) must be activated.

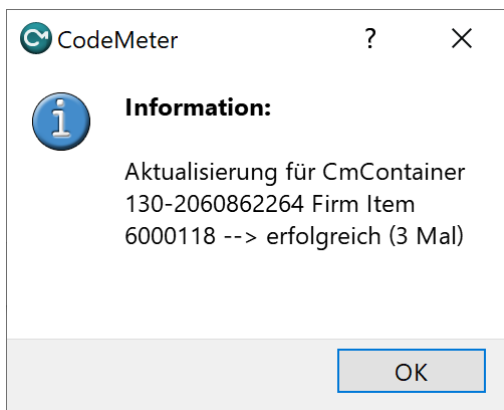
› Local Disk (C:) › Festo › FactoryViews



1.4 Setup

Start the file "Setup.bat". Two actions are executed:

1. A license to run FactoryViews is automatically updated in CodeMeter if necessary. This license is independent of your MES4 licenses or licenses for additional apps and serves to protect the software. Confirm this update.



2. Path information for the web and database server are adapted to your local copy. Type “1” and “Enter” to perform the update.

```
C:\WINDOWS\system32\cmd.exe

#####
#
#           XAMPP USB Stick Installation
#
#####

#####
# ApacheFriends XAMPP setup win32 Version
#-----#
# Copyright (c) 2002-2020 ApacheFriends ?.?.?
#-----#
# Authors: Kay Vogelgesang <kvo@apachefriends.org>
#           Carsten Wiedmann <webmaster@wiedmann-online.de>
#####

USB stick installation found! Using relative paths by default (\Festo\FactoryV
iews\XAMPP).
Do you want to refresh the XAMPP installation?
Soll die XAMPP Installation jetzt aktualisiert werden?

1) Refresh now! (Jetzt aktualisieren!)
x) Exit (Beenden)
1
```

Then terminate the setup with any key.

```
C:\WINDOWS\system32\cmd.exe

#           Carsten Wiedmann <webmaster@wiedmann-online.de>
#####

USB stick installation found! Using relative paths by default (\Festo\FactoryV
iews\XAMPP).
Do you want to refresh the XAMPP installation?
Soll die XAMPP Installation jetzt aktualisiert werden?

1) Refresh now! (Jetzt aktualisieren!)
x) Exit (Beenden)
1

XAMPP is refreshing now ...
XAMPP wird nun aktualisiert ...

Refreshing all paths in config files ...

Configure XAMPP with awk for 'Windows_NT'
Updating configuration files ... please wait ... DONE!

##### Have fun with ApacheFriends XAMPP! #####

Drücken Sie eine beliebige Taste . . .
```

If you move the “FactoryViews” directory later, the setup must be run again.

2 Starting FactoryViews and MES4 V3

2.1 Configuration of Apps

In the file "FactoryViews\NodeServer\config.jsonc" settings can be made to your installation of FactoryViews.

In the "apps" section, you can enable (true) or disable (false) individual apps, as shown below.

```
5  /*
6  Validate license for the app.
7  If licence present, process app requests.
8  */
9  "apps": {
10     //true = enable app
11     //false = disable app
12
13     "mes4":      false,
14     "webshop":   false,
15     "energy":    false,
16     "infoportal": true,
17     "ar":        false,
18     "maintenance": false,
19     "uaToMes4":  false,
20     "stations":  false
21  },
```

On startup of the Control Panel, for activated apps the system first checks whether a valid license is available, if necessary, and if the app has been installed. The app is then activated on the FactoryViews user interface.

Deactivated apps are not selectable on the user interface, related services are not started, and no license check is performed.

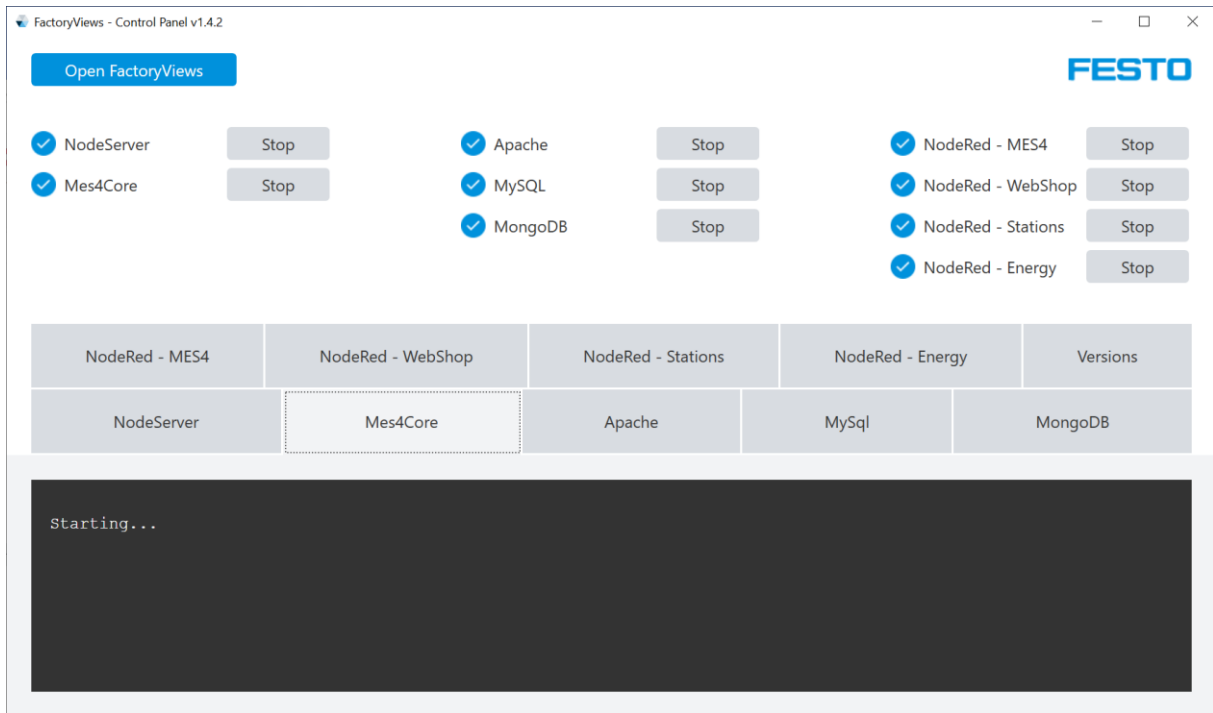
2.2 Starting FactoryViews Control Panel

Run „FactoryViews - ControlPanel.exe“.

The following services are automatically started depending on the configured range of functions:

Service	Description
NodeServer	HTTP web server for FactoryViews apps
Mes4Core	MES4 services for communication via TCP/IP and to the database
UaToMes4	MES4 interface for OPC UA (Data Access)
Apache	HTTP web server for FactoryViews apps
MySQL	SQL database server for FactoryViews apps
MongoDB	NoSQL database server for FactoryViews apps
NodeRed - MES4	Node-RED application for additional MES4 services
NodeRed - Webshop	Node-RED application to connect the Webshop to MES4
NodeRed - Stations	Node-RED based station specific applications
NodeRed - Energy	Node-RED based energy monitoring app

When starting apps for which no valid license is available, a corresponding error message appears. To avoid this, either a valid license should be available on the PC or on a connected license dongle (see section 1.2), or the app should be disabled in the configuration (see section 2.1).



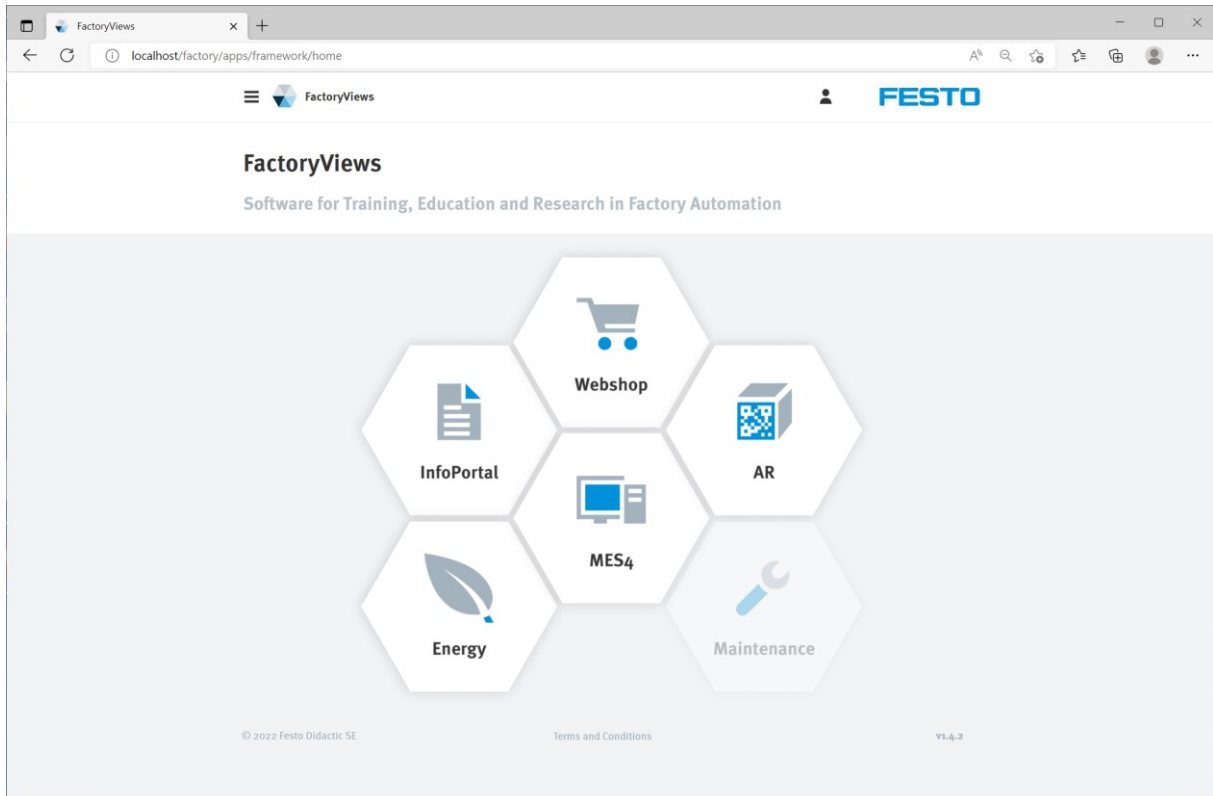
All services of activated Apps must be started successfully (blue check icon). Otherwise stop any running services on your system, e.g. web or database server and restart the services in the control panel, or the Control Panel if needed.

When the software is started for the first time, the operating system may offer to create firewall rules. The creation is only required if the software is to be accessed from devices within the network. For purely local use, the firewall suggestions can be cancelled.

2.3 Starting the FactoryViews User Interface

Open the user interface by

- choosing „Open FactoryViews“ on the Control Panel, or
- navigating in a web browser on the same PC to <http://localhost> or <http://127.0.0.1> or
- navigating in a web browser on a network connected device to <http://{ip}> where {ip} is the IP address of the host PC running the FactoryViews Control Panel, or <http://mes-pc.festo.systems>, if you have purchased a learning factory with MES PC and DNS service.



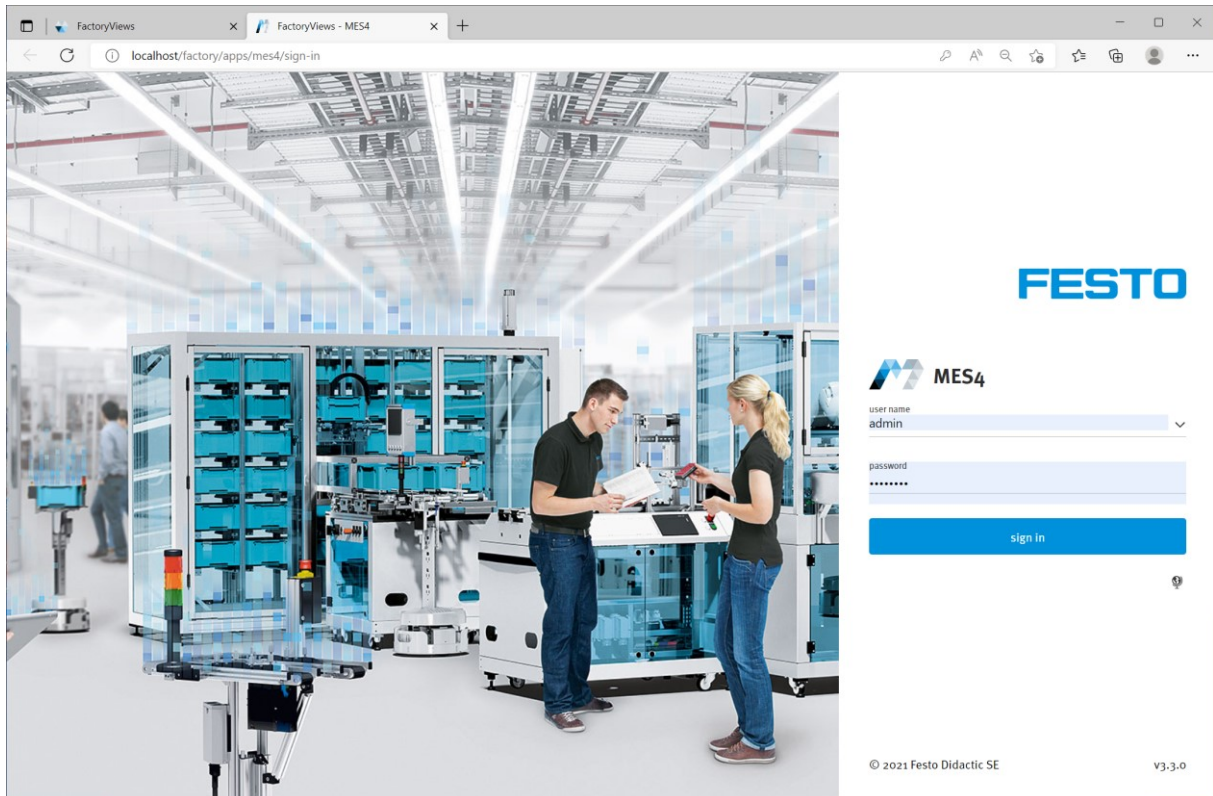
2.4 Starting MES4 V3

Choose “MES4” in FactoryViews. The login screen appears.

The following logins are available:

Name	Password
user	Festo4.0
admin	Festo4.0
admin-lite *	Festo4.0

* Only available in the “Lite” installation package.



The logins have the following authorizations in the various views:

View	Action	user	admin	admin-lite
System	Display	■	■	■*)
	Add		■	■
	Change		■	■
	Activate		■	■
	Delete		■	■
	Import		■	■
	Export		■	■
	Parts	Display	■	■
Test workplan		■	■	■
Add			■	■
Duplicate			■	■
Change			■	■
Delete			■	■
Orders	Display	■	■	■
	Show status	■	■	■
	Add	■	■	■
	Import	■	■	■
	Change step status		■	■
	Delete		■	■
Operation	Display	■*)	■*)	
Queries	Display	■	■	■
	Add		■	■
	Duplicate		■	■
	Change		■	■
	Delete		■	■

*) Start view after login

3 Backup and Restore

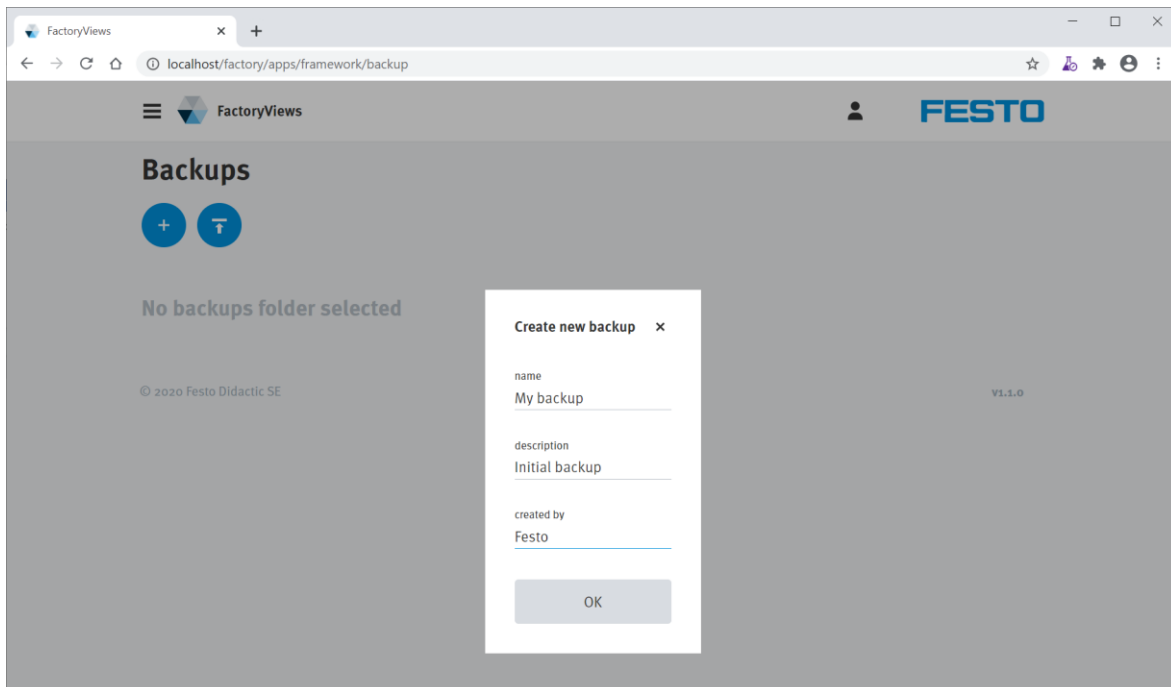
3.1 Scope of backup

The current status can be saved in an fdb file using the “Backup” function. This includes

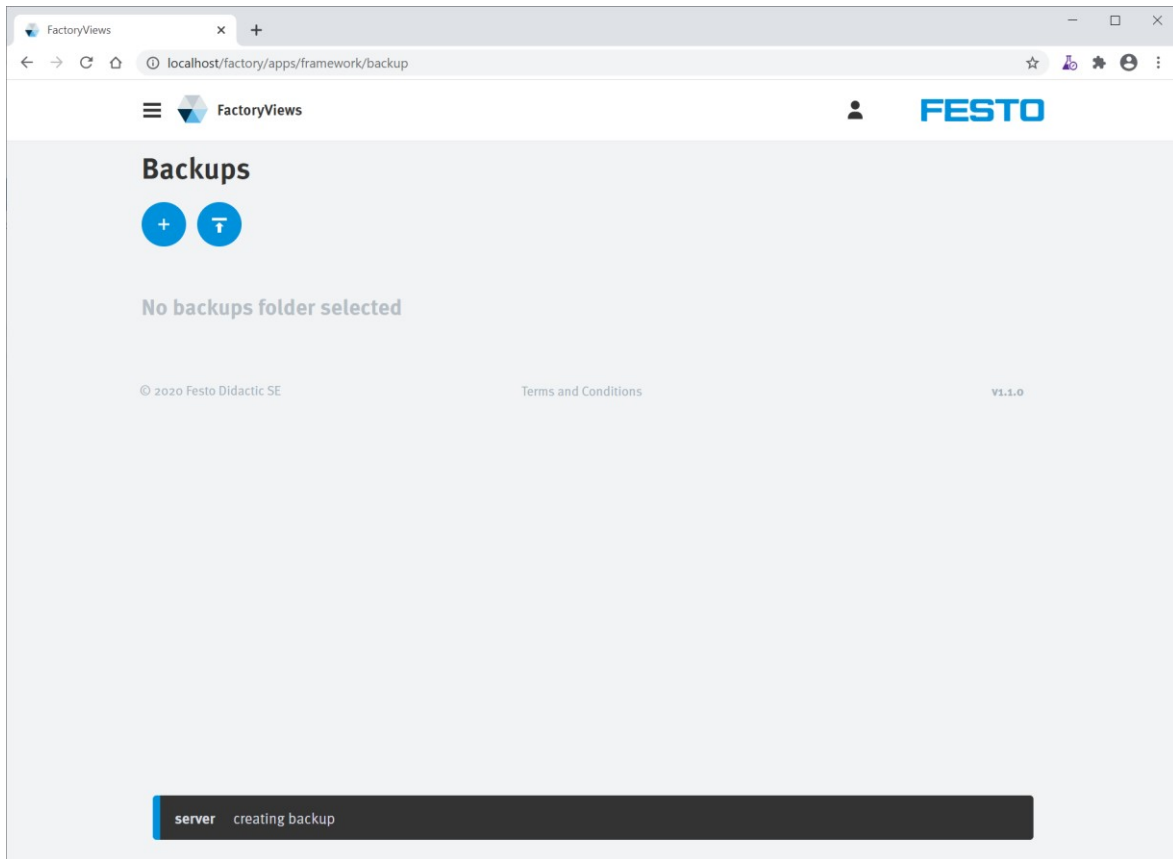
- FactoryViews framework: All texts in all languages
- MES4 V3: Complete databases (MariaDB + MongoDB) including system configuration, workpieces, orders, database queries, station templates as well as all texts and program messages in all languages.
- Webshop: Complete database (MariaDB) including orders, products, webshop settings, but no custom added files.

3.2 Backup

Click on “Backup and restore” in the menu, “new backup” and enter the name, description and creator information.



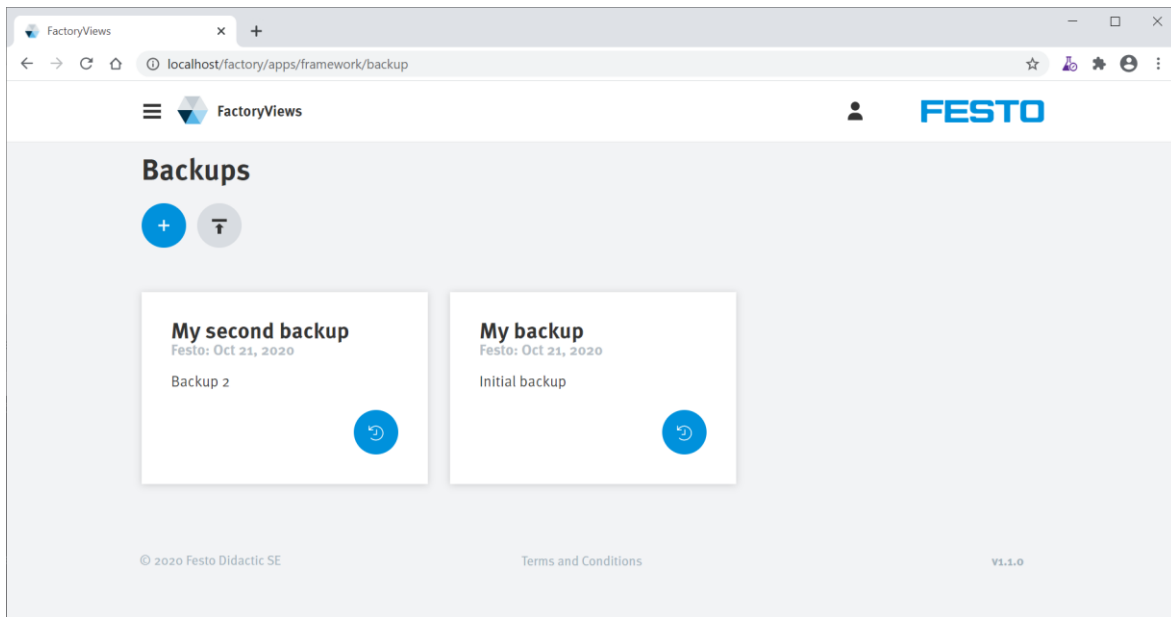
Then click on “OK”.



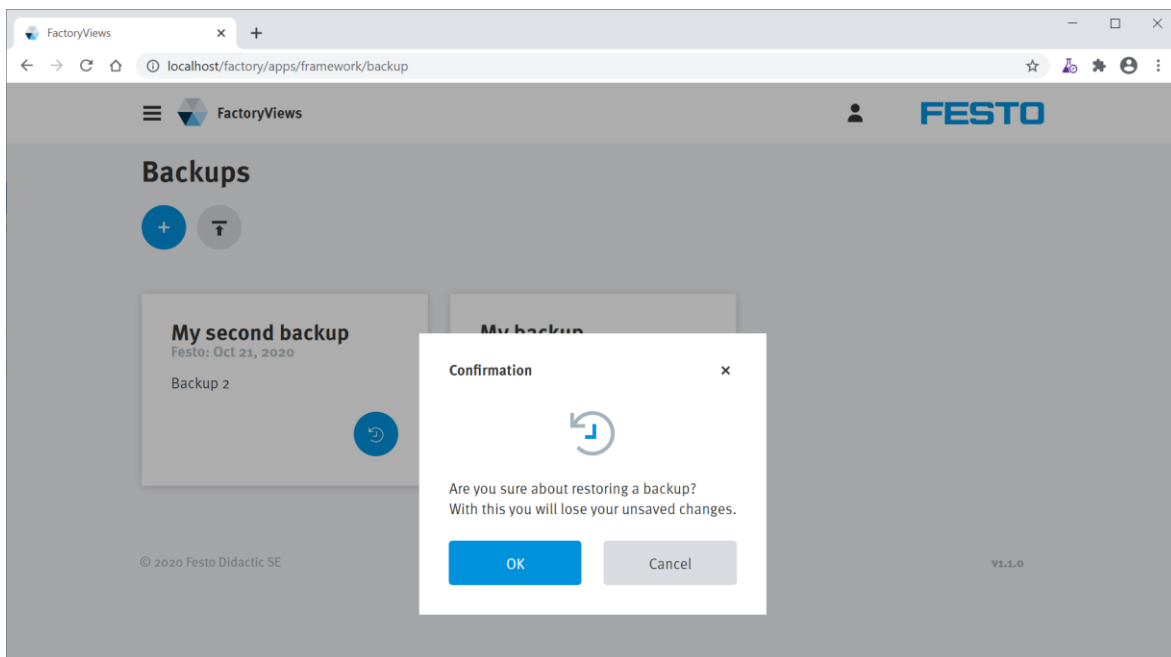
The backup has been created and downloaded.
Depending on the browser settings, the file is typically located in the user's Downloads folder.

3.3 Restore

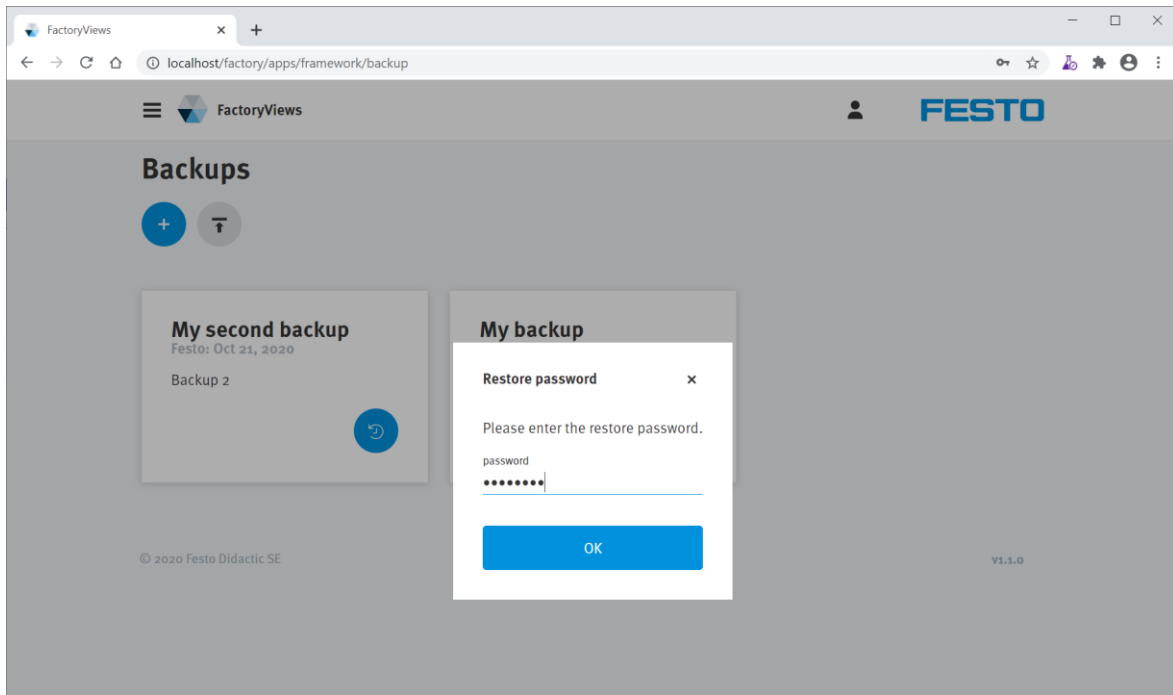
To restore, click Upload Data on the Backup and Restore menu and select one or more fdb backup files. Details about the backups are displayed.



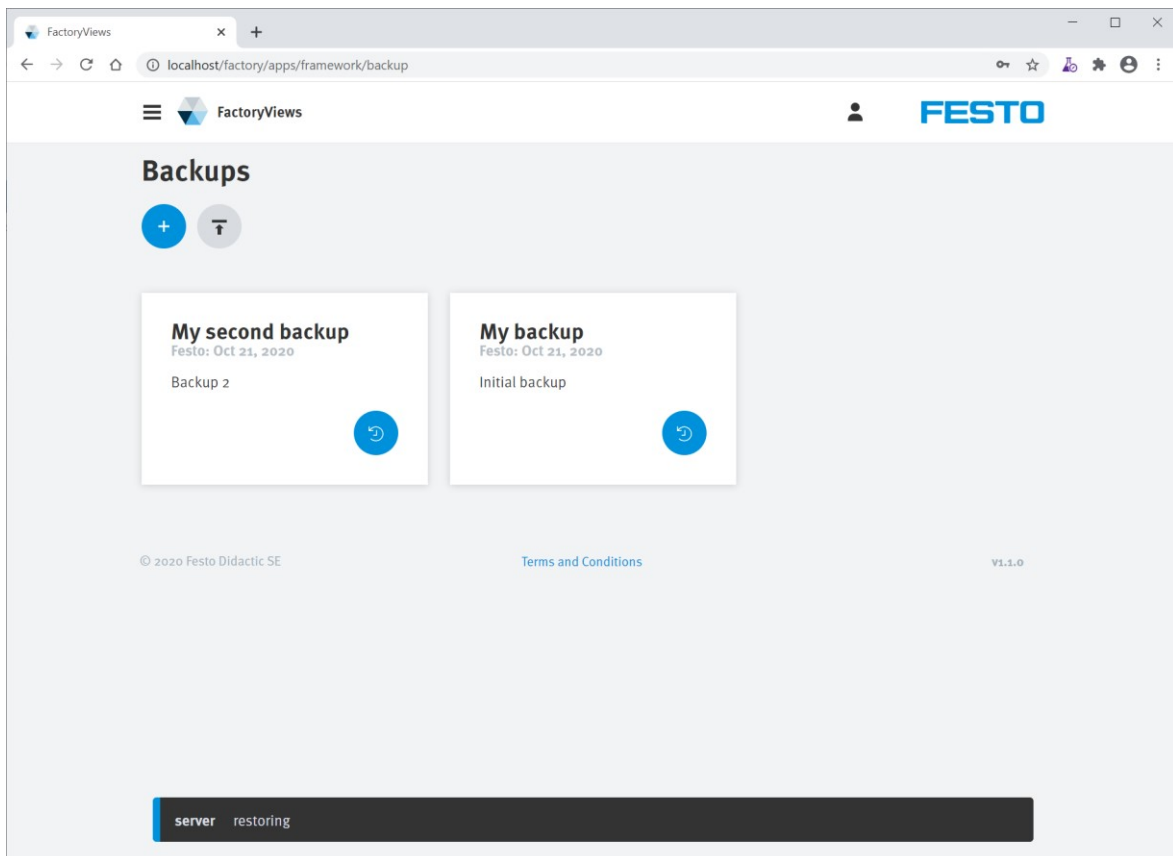
On one backup card click “restore”.

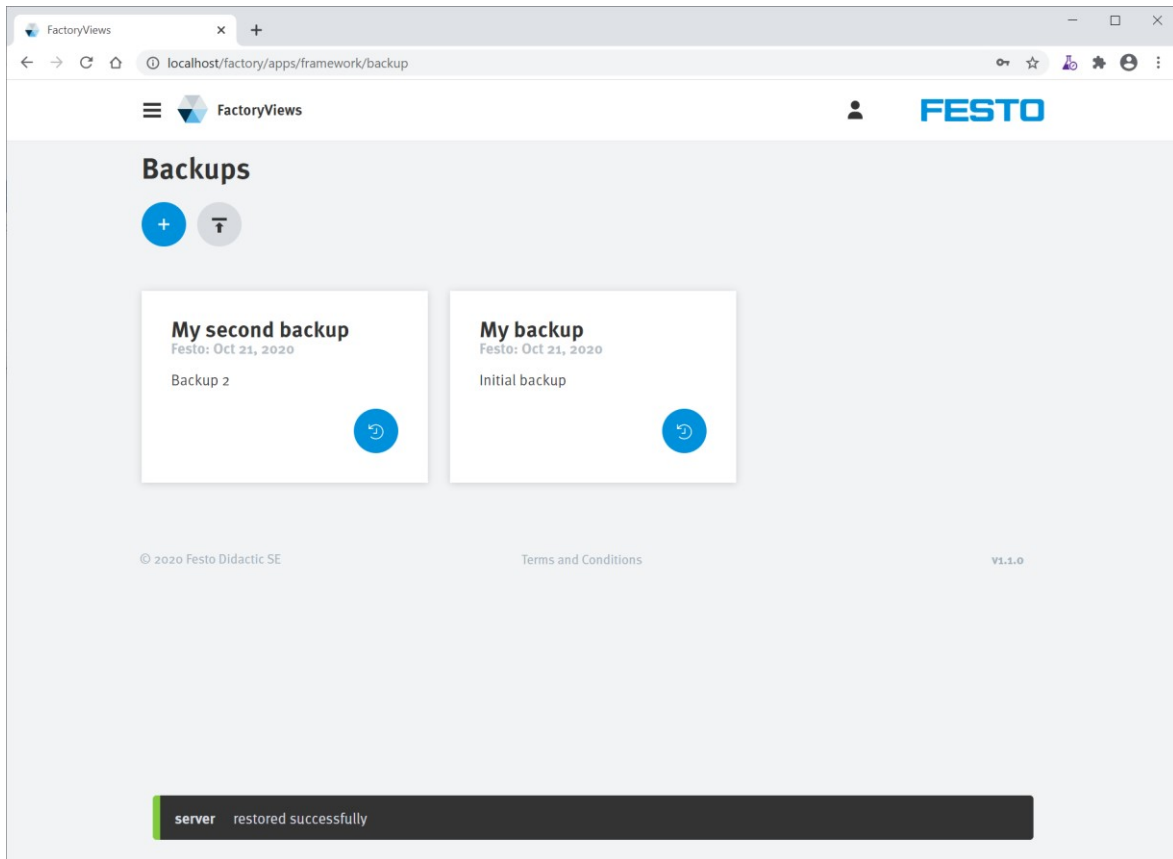


Confirm with „OK“.



Enter the password "Festo4.0" and confirm with "OK".





The saved state has been restored.

4 Terminating FactoryViews

To terminate the application, close the browser windows and the FactoryViews Control Panel.