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TwinCAT 3 PLC Training

Module 2 – Installation

Overview of Course

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Introduction and Quick Start

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Programming Basics

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Diagnostics and Hardware

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1. General PLC Architecture
2. **TwinCAT 3.1 Installation**
3. First Project
4. Setting the Cycle Time

2.1 System Requirements

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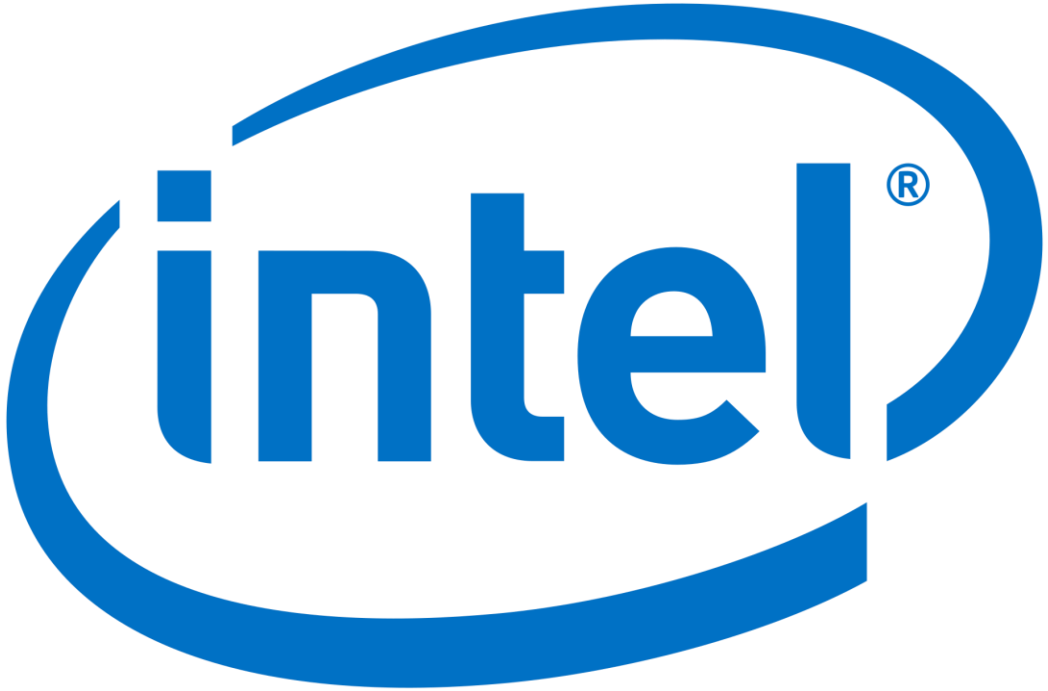
- Only Intel processors are supported.
- You will need Administrator privileges to install TwinCAT 3.1.
- During installation, you will need to restart your computer.
- Access to network settings (IP address, etc.) is preferred after installation is complete.



2.2 Download

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- All tools required for PLC development are free of charge and don’t require a license.

- Latest version is available at www.beckhoff.co.uk

2.2 Download

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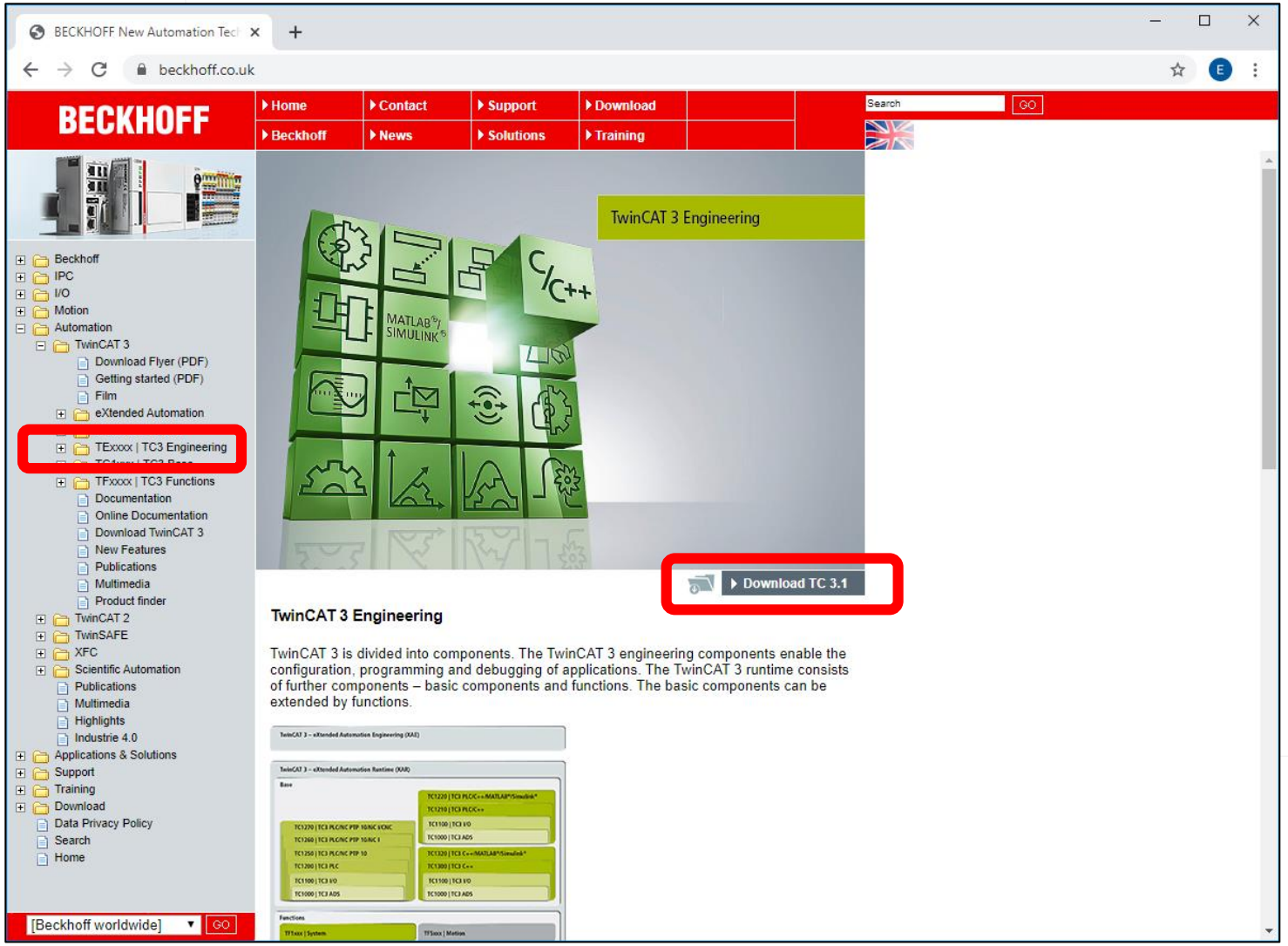
- Open www.beckhoff.co.uk in a web browser.
- In the folder structure on the left-hand side, navigate to

  Automation

  → TwinCAT 3

  → TExxxx | TC3 Engineering
- Click on Download TC 3.1.



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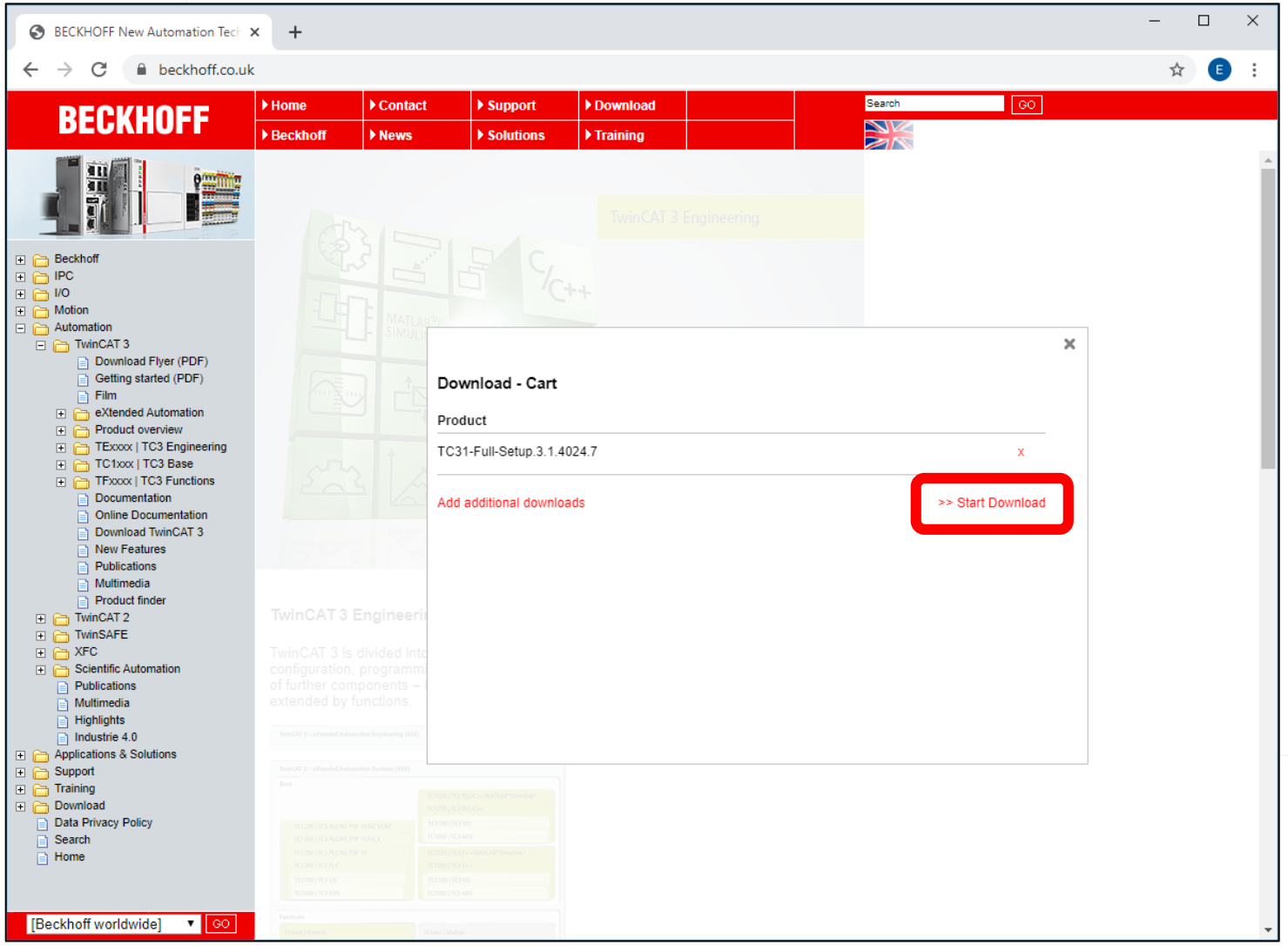
- This will open the Download Cart window.

- Click on

  >> Start Download link



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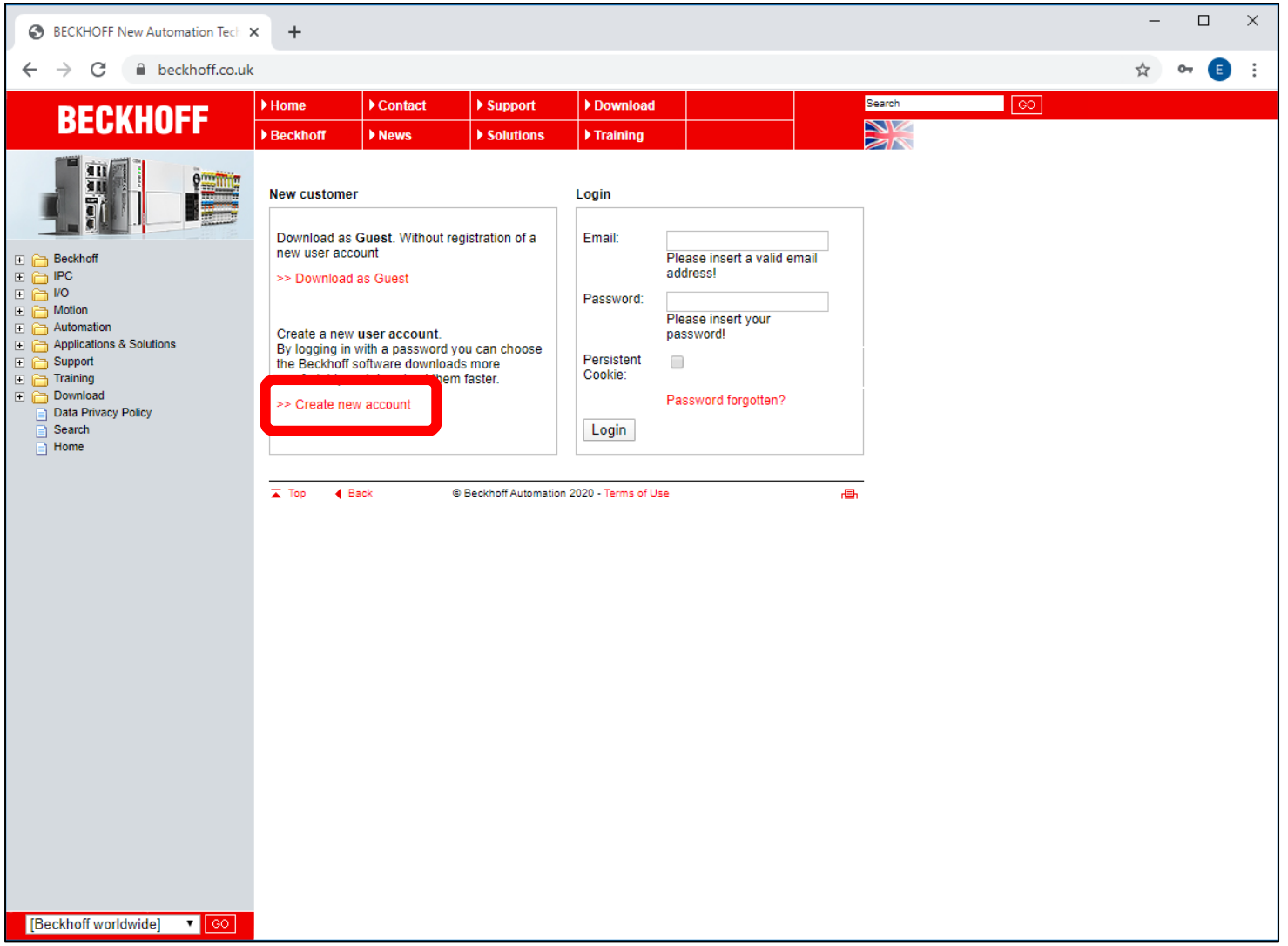
- If you have already created a website account, please log in.
- Otherwise, you can create one by clicking on

  >> Create new account

- Creating an account is free and only takes a few minutes.



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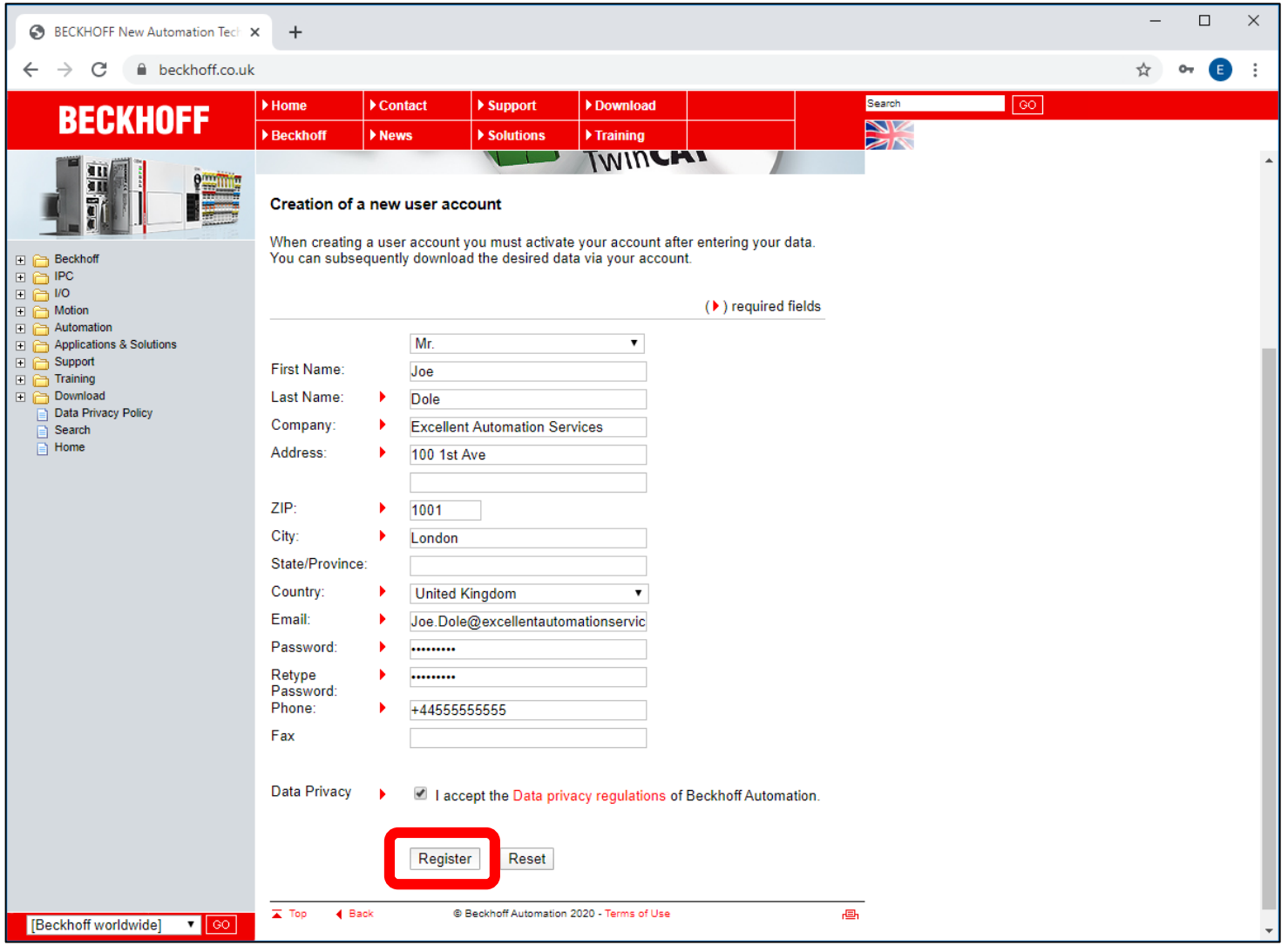
- Please fill in your contact details.
- The fields with the ▸ next to them are mandatory .
- Please read the Data privacy regulations, and tick the box if you agree.
- Click on the Register button at the bottom.



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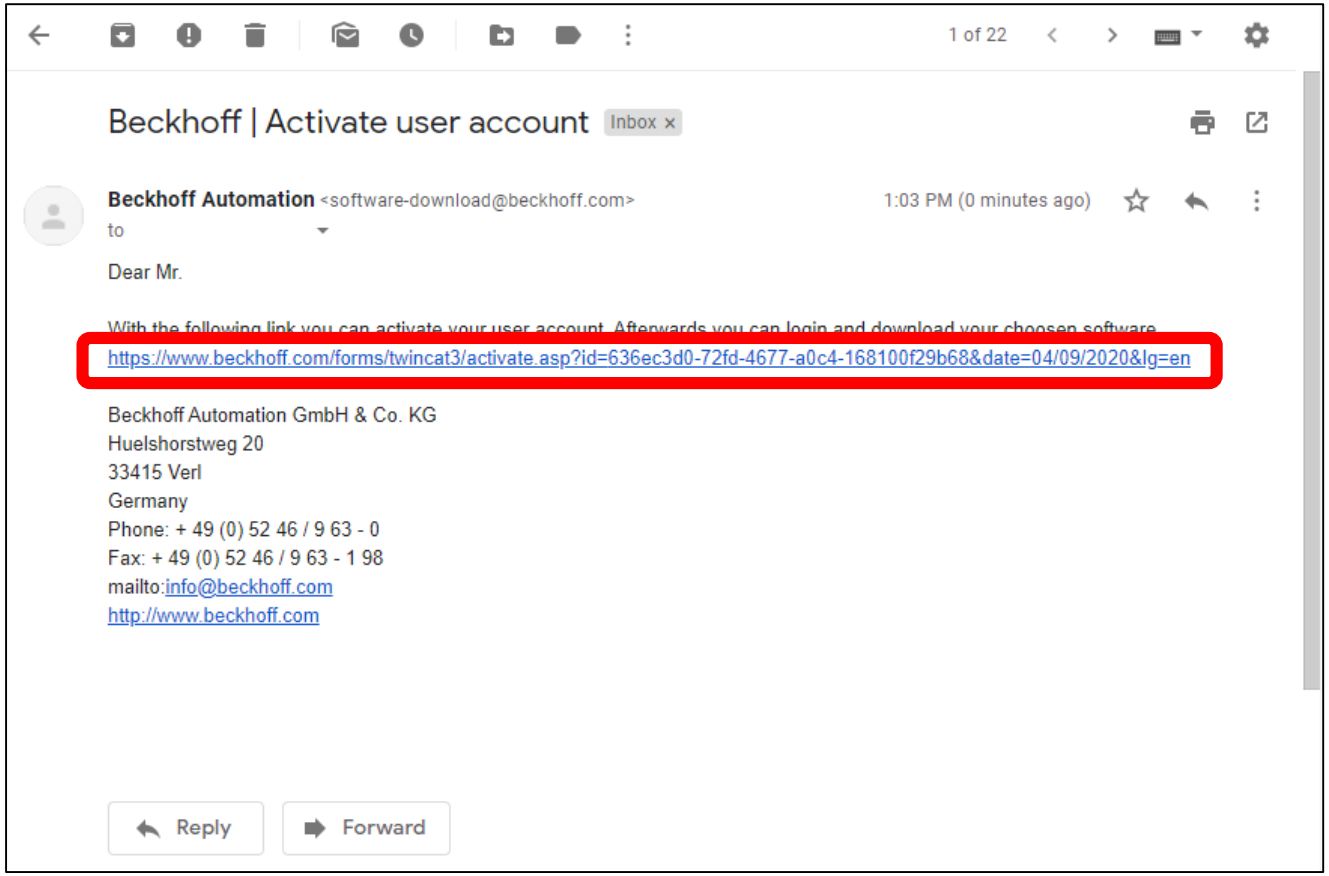
- Check the inbox of the supplied email address for a mail from Beckhoff Automation.
- Click on the link in the mail to confirm your registration.



2.2 Download

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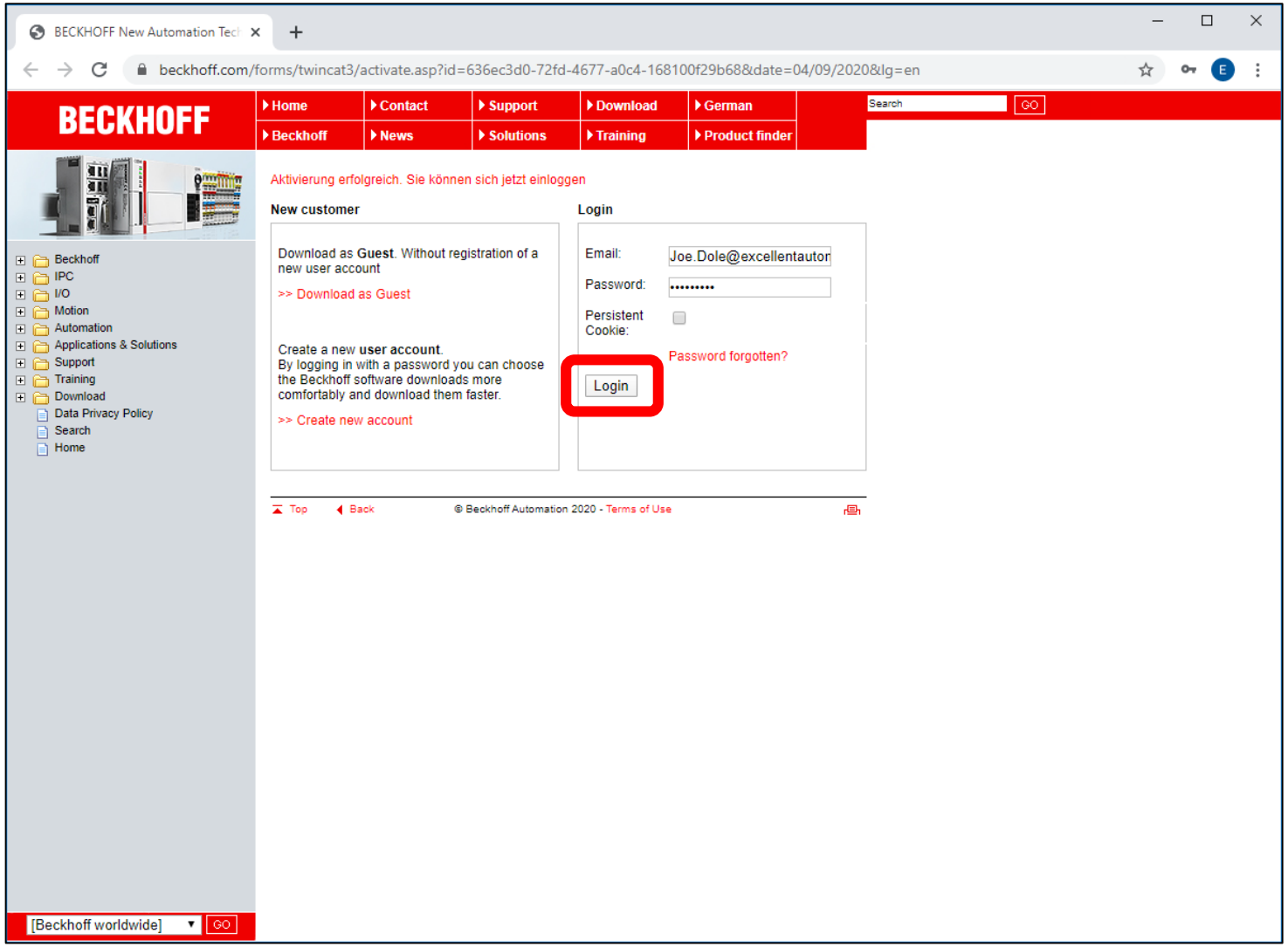
- Fill in the email address and password provided during account creation.

- Click on the Login button.



2.2 Download

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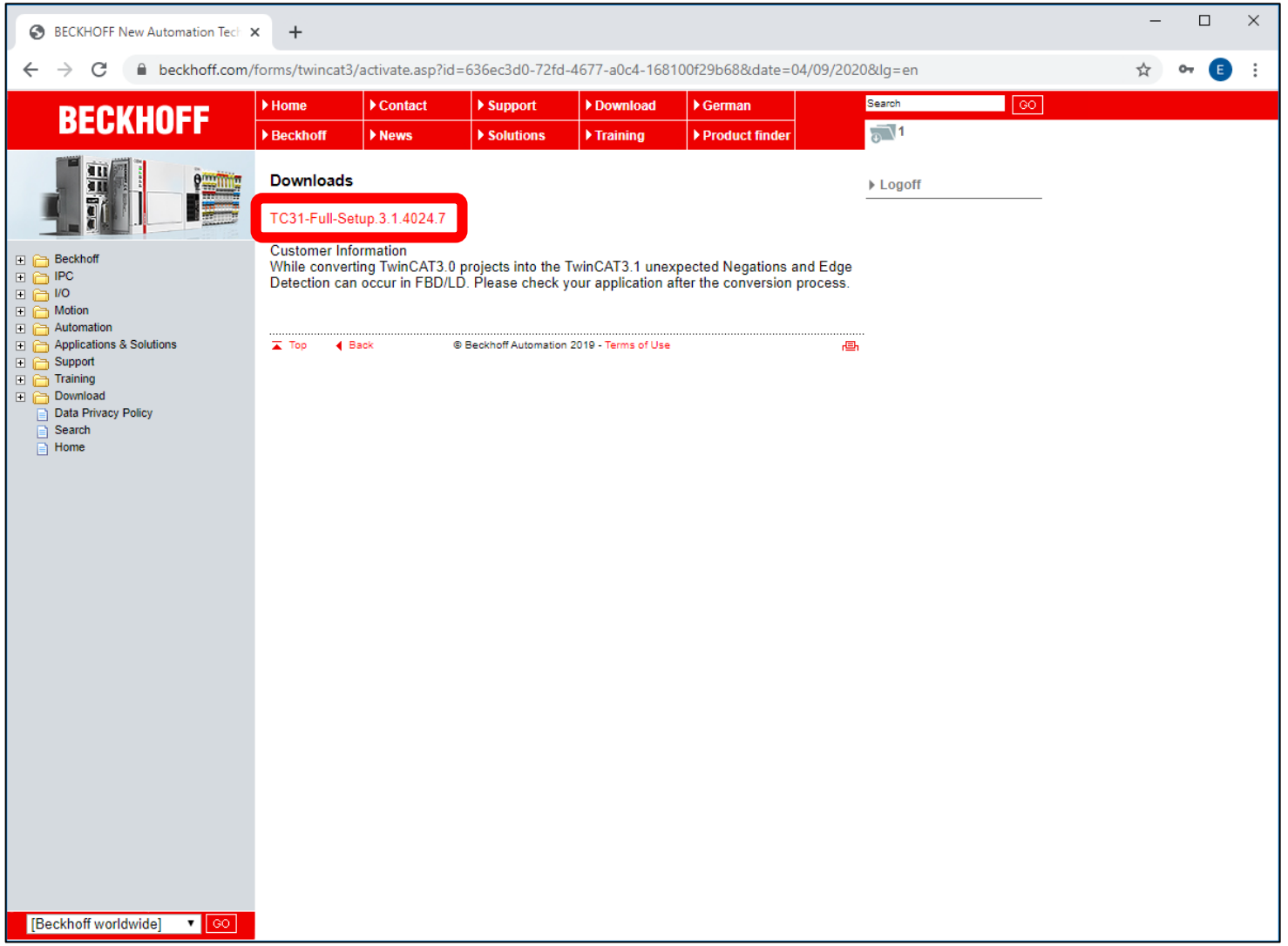
- Once logged in, your download cart is shown.
- Click on the link to download TwinCAT 3.1.



2.2 Download

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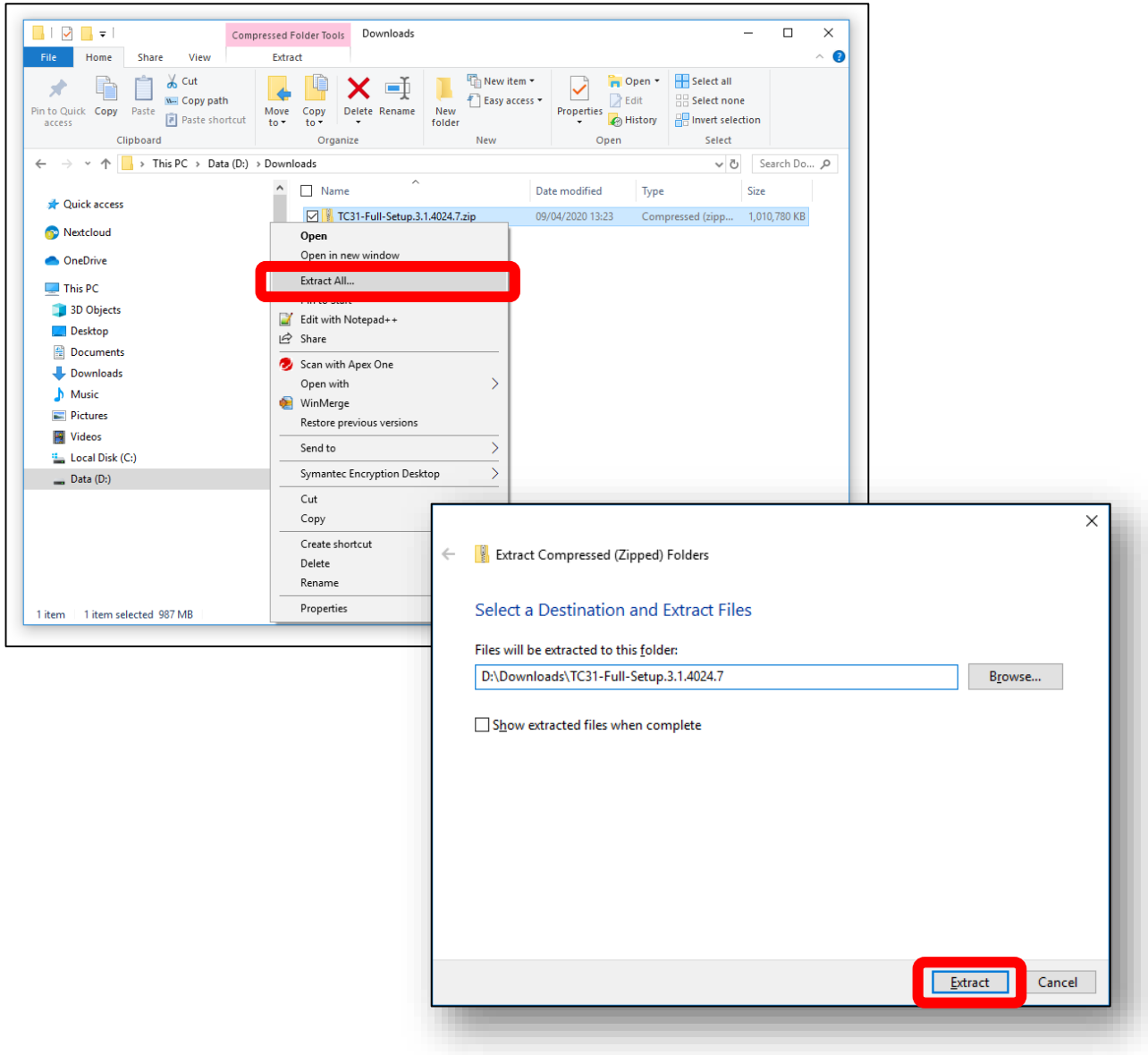
- Once downloaded, right click on the zip file and select

  Extract All…

- Then click the Extract button on the window that pops up.



2.3 Run Installer as Administrator

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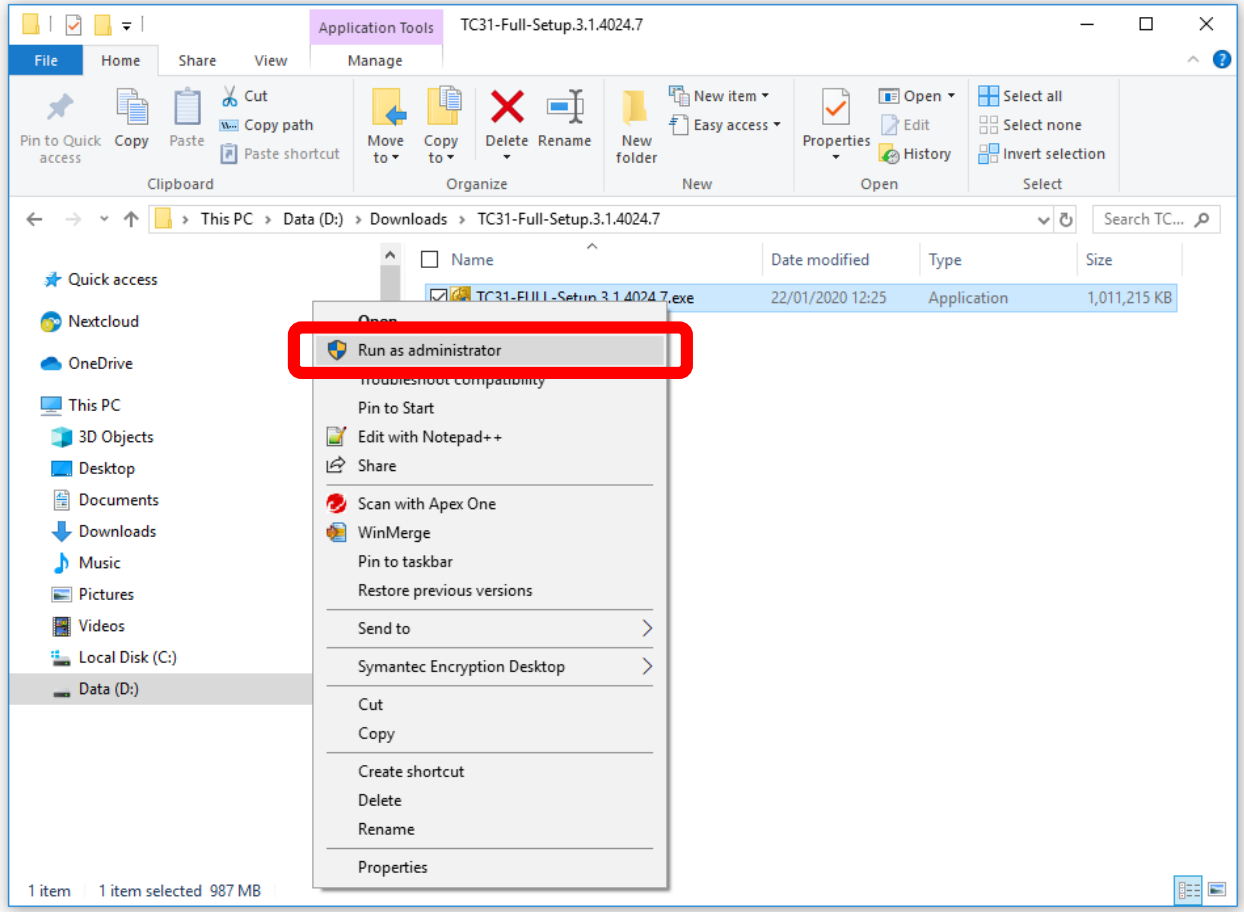
- Once extracted, open up the folder containing the TC3.1 installer.

- Right click on the installer and select

  Run as Administrator…

- When prompted to allow application to make changes to your system, agree.



2.3 Run Installer as Administrator

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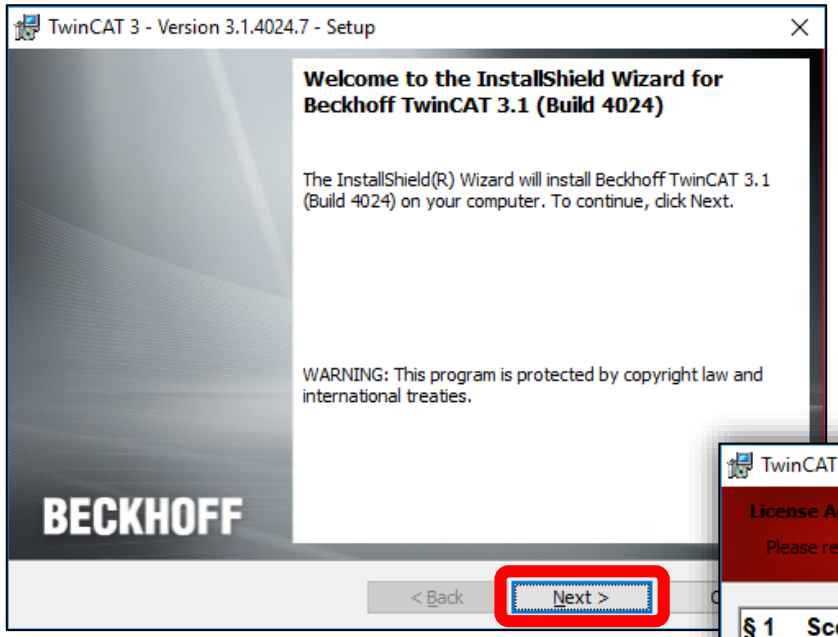
- Click Next.



- Then read and accept the license agreement.
- Click Next again.

2.3 Run Installer as Administrator

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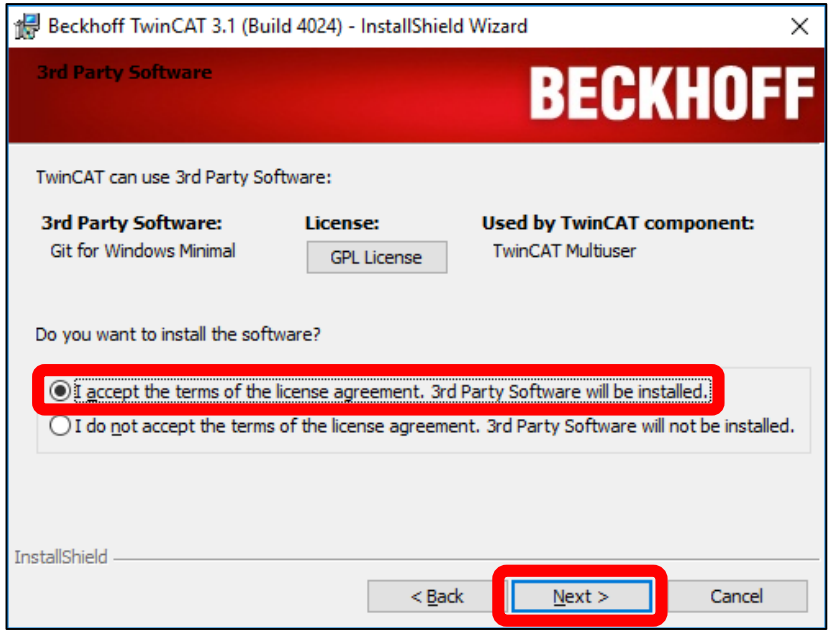
- In order to support multi-user login to the PLC, the installer will need to include Git, which is covered by the GPL License.

- Although a very useful feature, it is not critical to the operation of TwinCAT and can be excluded from the installation if required.



2.3 Run Installer as Administrator

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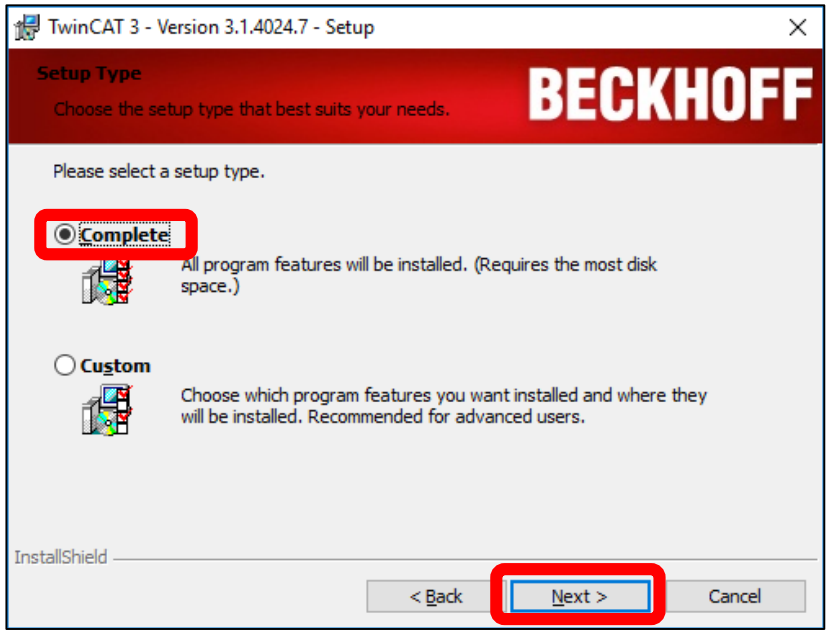
- A complete installation is recommended.



2.3 Run Installer as Administrator

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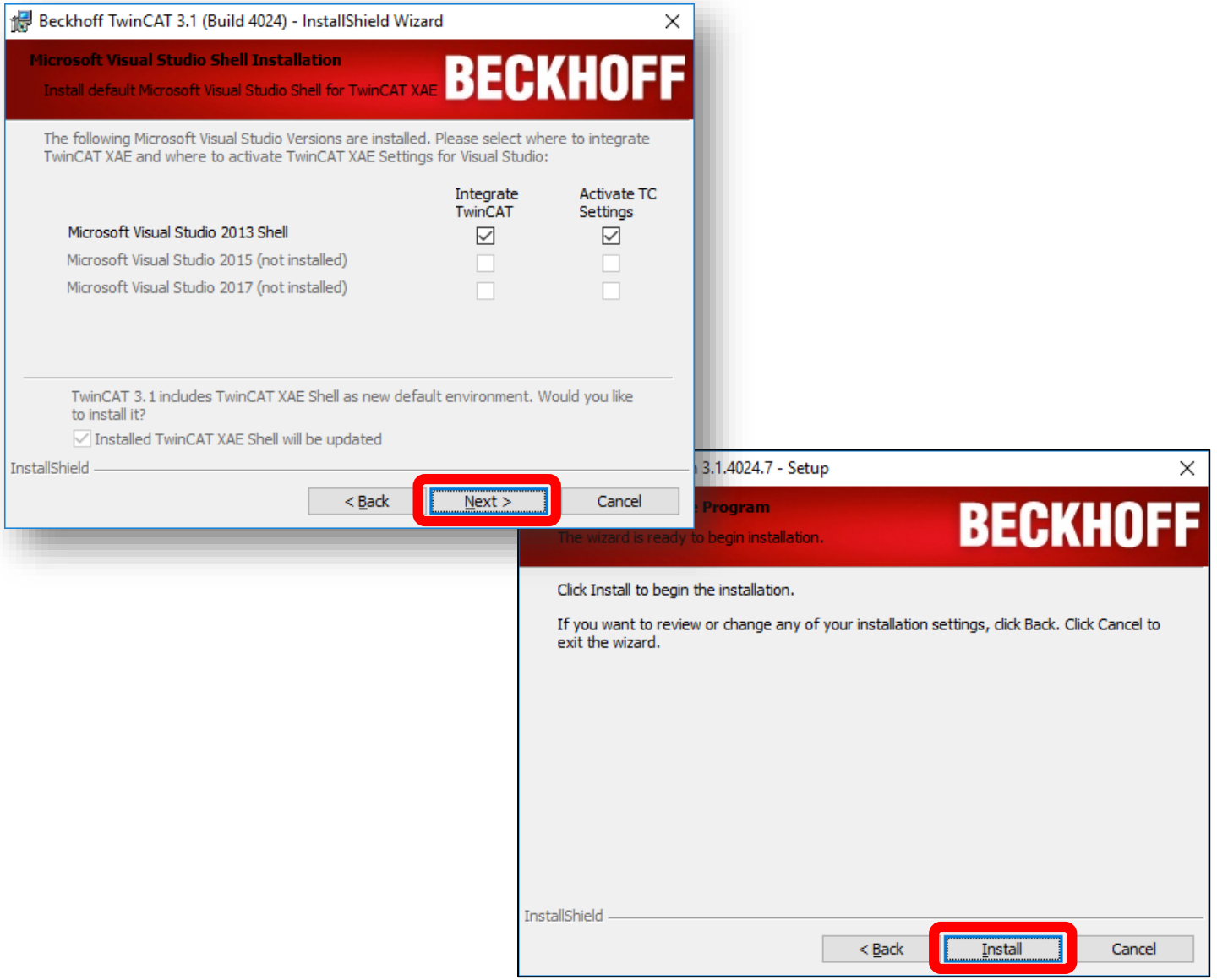
- If an existing installation of Visual Studio 2013/15/17 Shell or Full is detected, TwinCAT can be integrated into it. This is optional.
- In addition, TwinCAT XAE Shell is installed, and will be used for this course.
- Click on Install to start the installation of TwinCAT 3.1, which may take up to 30 minutes.



2.3 Run Installer as Administrator

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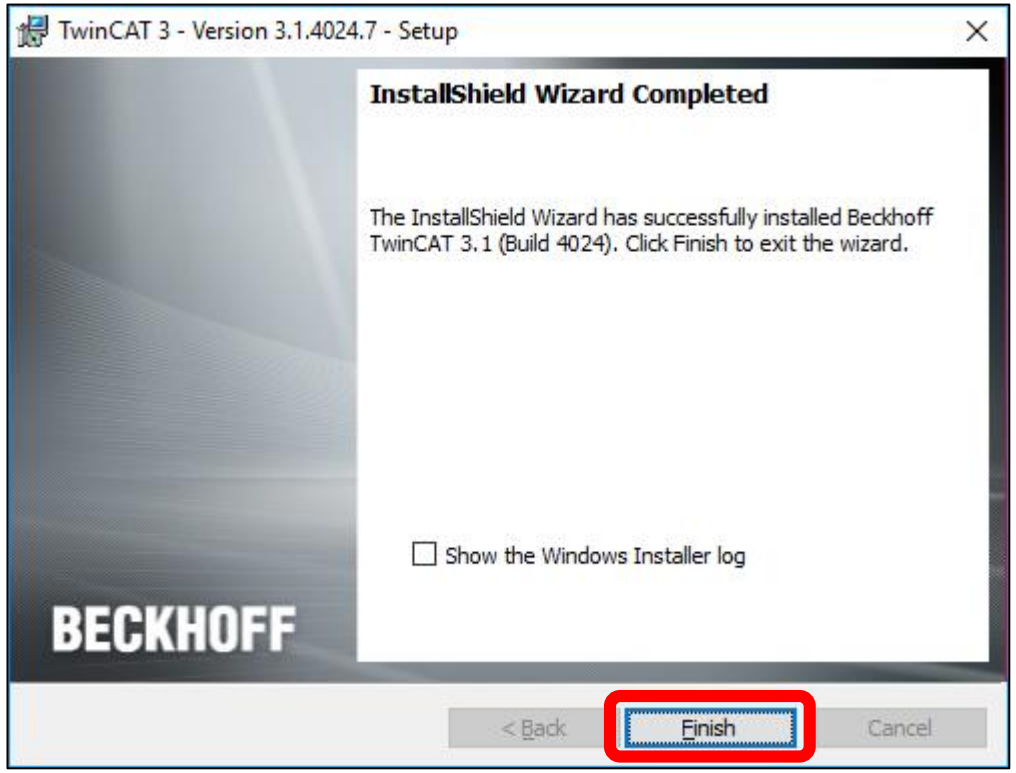
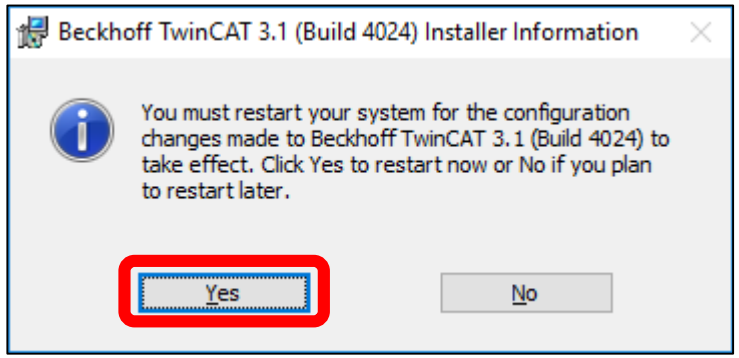
Once complete, your computer will need to reboot in order to complete the installation.

Your computer must be restarted before continuing with the next step.





2.4 Finish Installation

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- After rebooting, The Cog should be visible in the System tray.

- This indicates that TwinCAT was installed successfully, and that the background service is running.

2.4 Finish Installation

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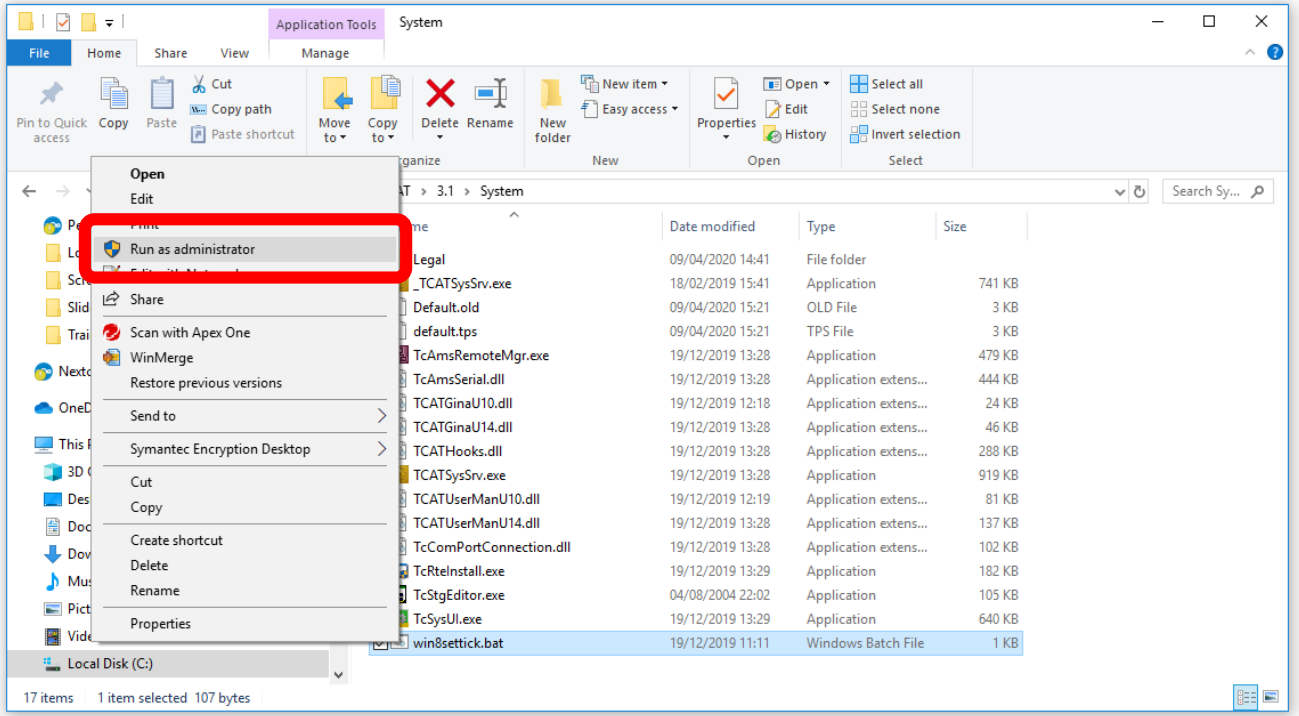
One last task remains on Windows 8 and Windows 10 computers to allow simulation on your computer: please run

```
C:\TwinCAT\3.1\System\win8settick.bat
```

as Administrator, and allow it make changes to your system, then reboot again.



Module 2 Recap

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- TwinCAT 3.1 is now installed on your computer, allowing you to:
  - Write PLC applications,
  - Simulate PLC programs on your computer without any hardware,
  - Connect to an IPC and remotely debug your PLC program whilst running on real hardware.

- No licenses are required to run, deploy and debug TwinCAT 3.1 PLC applications.

Contact

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