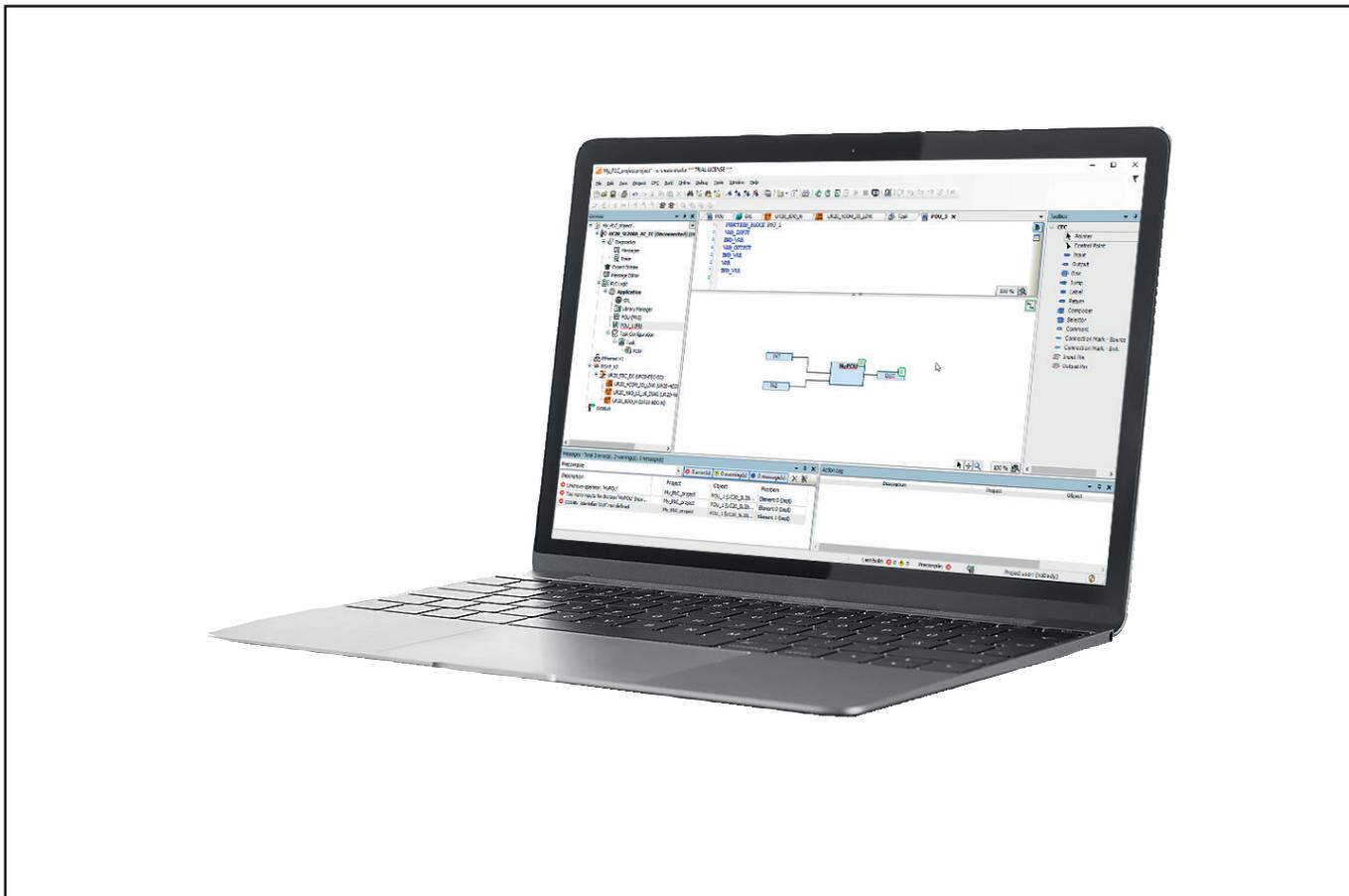


u-create studio

Quick start guide



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1 Introduction

1.1 About this guide

This guide contains instructions on how to install the Windows based engineering software **u-create studio** on a PC and how to create the required u-control studio firmware on a micro SD card.

Please be aware, that the u-control controller will be delivered without a firmware. Preparing a micro SD card is therefore mandatory for the first startup as well as for firmware updating of the controller.

1.2 Weidmüller license agreement

Before installing u-create studio, you will be asked to read and accept the **Weidmüller License Agreement**. You can download a copy of the agreement from weidmueller.com/u-create-download.

1.3 System requirements

Processor	Windows PC with Quad-Core, Intel Core i7 recommended
Main memory	Recommended 8 GB RAM or higher
Hard disk memory	approx. 5 GB for software installation, every created simulation and target requires up to 800 MB
Operating system	PC-Platform, Microsoft Windows 10® 64 Bit

2 Product overview

The software products are grouped according to their intended use.

Windows PC based software for application development

Order No.	Product
2660130000	U-CREATE-STUDIO
2722700000	U-CREATE-STUDIO-SIMULATION

PROCON-WEB runtime licenses for visualisation as optional extension

Order No.	Description
Integrated for free	U-CREATE-PROCON-WEB-RT-UC-100
2708630000	U-CREATE-PROCON-WEB-RT-UC-2000
2708640000	U-CREATE-PROCON-WEB-RT-UC-5000



Information about the required PROCON-WEB licenses are available from the [Weidmüller Web-site](#).

Compatibility

u-create studio requires u-create PROCON-Web V 6.4.5 or higher.

2.1 Supported systems

Applications designed with u-create studio can be used on the following u-control controllers:

Hardware without runtime license

Order No.	Product
2674520000	UC20-SL2000-EC
2674620000	UC20-SL2000-EC-CAN

Packages consisting of controller and runtime license

Order No.	Product
2708400000	UC20-SL2000-AC-EC
2655600000	UC20-SL2000-AC-EC-CAN
2638920000	UC20-SL2000-OLAC-EC
2655590000	UC20-SL2000-OLAC-EC-CAN

UC20-SL2000-AC-EC and UC20-SL2000-AC-EC-CAN can download and perform IEC 61131-3 applications only. UC20-SL2000-OLAC-EC and UC20-SL2000-OLAC-EC-CAN can download and perform IEC 61131-3 and C/C++ applications.

3 Installation of u-create studio

3.1 Installing u-create studio



Please refer to the license certificate for your ticket number.



Always keep your license ticket! The ticket number is mandatory for the license activation as well as for a deactivation and reactivation in case of a device exchange.



The u-create studio user manual as well as the general license terms of the u-create studio software can be downloaded from the [Weidmüller Website](#).

Requirements

- Installation of u-create studio to create a target
- PC administration rights
- Micro SD card (min. 2 GB, max. 32 GB) for flashing the controller



Always use a fresh formatted micro SC card for the first target installation. You can order a micro SD card from Weidmüller.

1. Download the u-create studio installation file from www.weidmueller.com/u-create-download.
2. Unzip the file <u-create-studio_x.y.zip>. Depending on the version you will get one (V1.20.2) or more (V4.2.x) directories. Each directory contains one set-up file, which has to be used for installation.
3. Start the installation by double click on the setup file. The **Deliverable_Engineering_Environment** must be installed on every Engineering PC. The **Deliverable_Server_Setup** can be installed either on the same PC or once in the local network as a server instance.
4. After installing please start the software.

3.2 Activating your license



u-create studio can be used license-free as a trial version for 30 days. At the end of this period a license code is required.

- To activate a license, navigate to the licensing on the [Weidmüller Website](#) and click

LICENSE ACTIVATION @ CODEMETER 

- Enter your ticket number.

The licensed version will be activated immediately.

An overview of your licenses can be found in your CodeMeter ControlCenter.

- Open your Windows Desktop/Programs and search for CodeMeter.

3.3 Installing u-create studio runtime on u-control studio

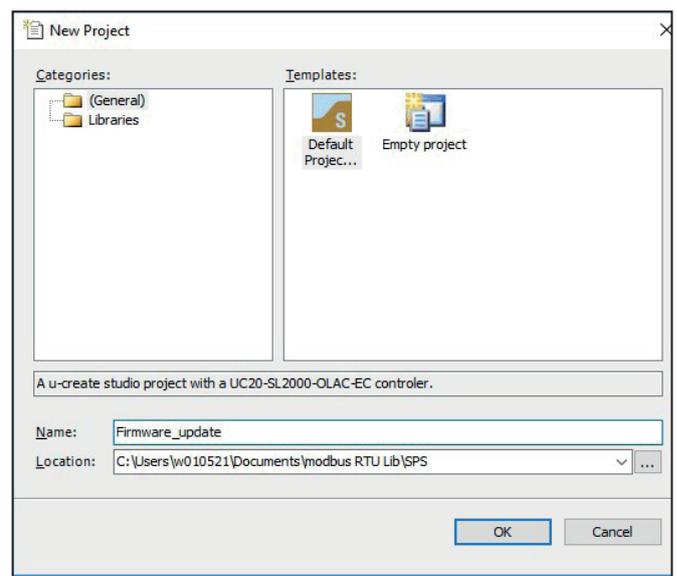


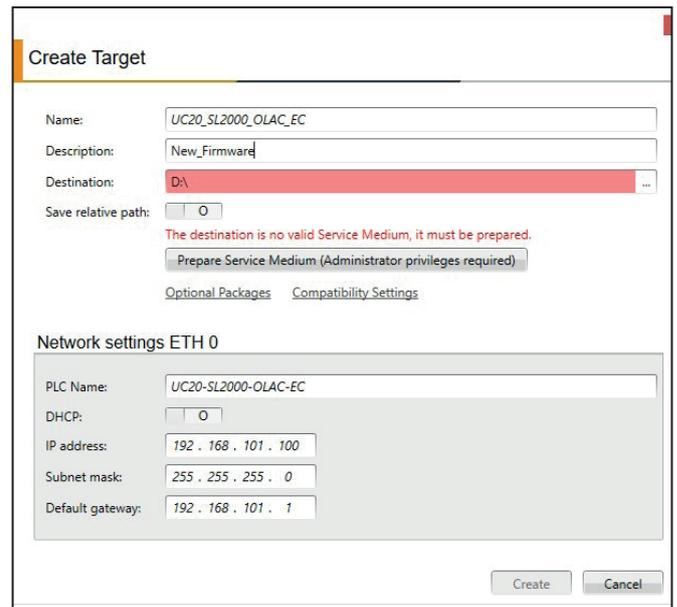
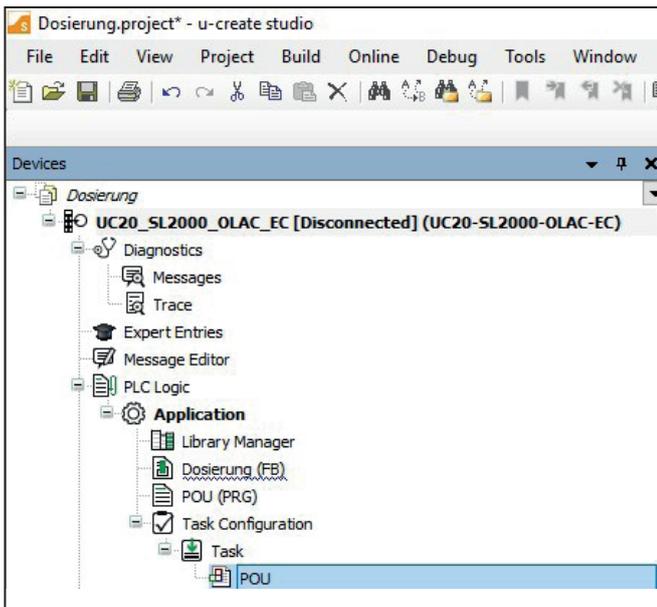
Prior to commissioning, check the release notes with regard to updates and patches. The release notes can be downloaded from the [Weidmüller Website](#).



For the first set up of the u-control hardware please follow the instructions and safety warnings described in the u-control user manual. The manual can be downloaded from the Weidmüller product catalogue.

- Select New project.
- From the General folder select the Default Project... template or open a working project.



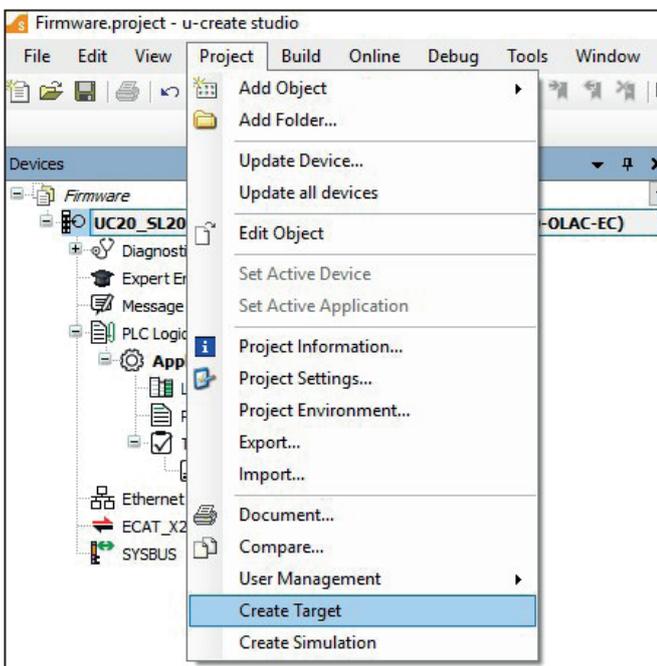


3.4 Creating a target SD-card



If you require the access to the operating system of the controller, follow the instructions in chapter 4 at first.

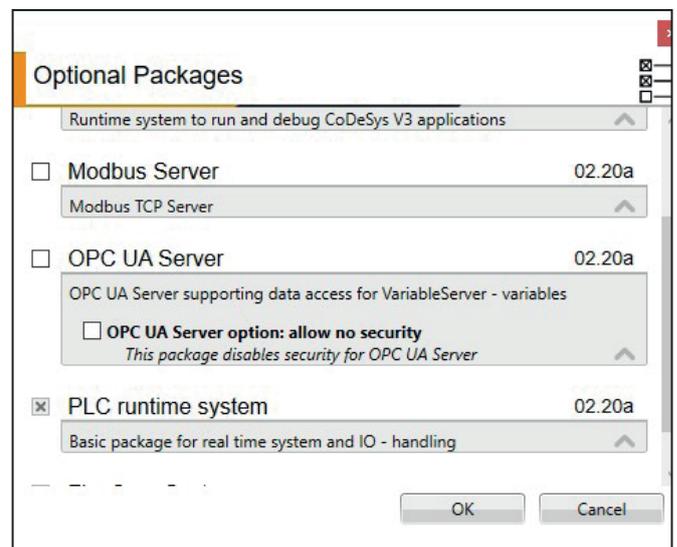
1. In the menu bar, click **Project** and select **Create Target**.



2. Select a description for the target file and the destination path on your micro SD card.
 - If your micro SD card is not a bootable device, choose **Prepare Service Medium** to create one.

3. Configure the network settings for the X1 port of the u-control to your needs (default address: 192.168.101.100).

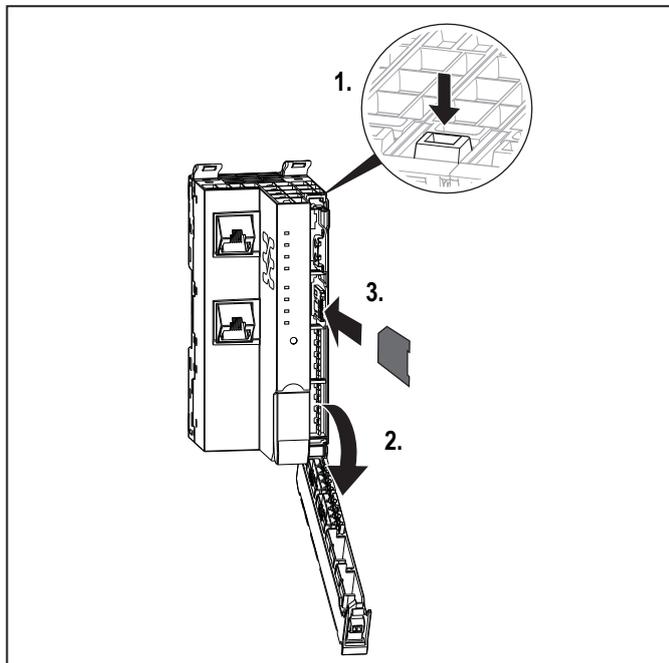
- On **Optional Packages**, you can choose optional products like Modbus Server, OPC-UA-Server, PRO-CON-WEB RT-ES etc.



- Click **OK**.
4. In the **Create Target** form, click **Create**.
The target is being created, which will take a few minutes.
 5. After successful procedure, remove the micro SD card carefully.

3.5 Flashing firmware on the controller

- ▶ Insert the micro SD card into your u-control.
The SD card slot is located behind the connector frame.



Inserting the micro SD card

- ▶ Close the connector frame.
- ▶ Restart the controller.

The installation procedure is indicated by the **RUN LED**:

- Orange flashing: installation is in process
- Steady green: installation has been finished



Run LED indicates the installation procedure

- ▶ After installation is finished, remove the SD card from the u-control.
- ▶ Restart the controller.

3.6 Activating u-create runtime license on u-control studio

- ▶ u-create studio runtime can be used license-free as a trial version for 30 days. At the end of this period a license code is required. Be aware that a runtime license is needed for productive usage.



For a description of the specific features and functions of your software license, please refer to the u-create studio user manual. The manual as well as the general license terms of the u-create studio software can be downloaded from www.weidmuller.com/u-create-download.

Online activation via "DevAdmin"

A PC with an internet connection is required for the online activation. The u-control does not require an internet connection, but must be connected to the PC via a network connection.

1. Establish a connection between PC and device via a web-browser.
2. Enter the IP address assigned in section 3.4.
3. Enter the default user name **Administrator** and the password **tobechanged**.

DevAdmin starts.

4. In the config menu, enter date and time. The current date and time is essential for licensing.
5. Click **Licensing** and then click **Online License Activation**.
6. Enter the ticket code.



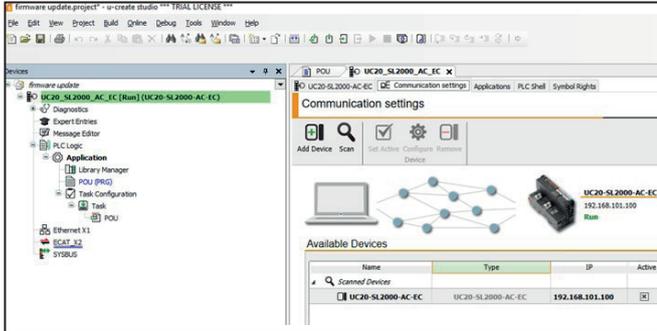
Please change the password within **DevAdmin** and keep it protected from unauthorised access.

- ▶ To activate the trial version, click **Licensing** and then click **Activate Trial License**.

3.7 Final check

- ▶ Connect your controller to the u-create studio and check if everything works fine.

Your controller should be displayed in the configured network settings.



4 Adding a personal SSH key for u-create studio installation

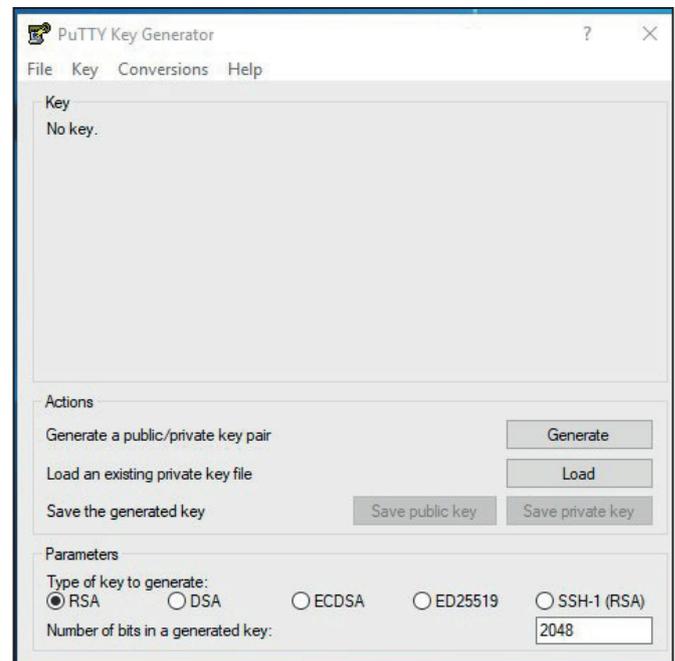
Some users may require the access to the operating system of the controller. The access via SSH is protected by a public key authentication. Weidmüller asks you to change the key pair by a personal one, even if users do not need access to the operating system. This improves the security of the system.

The following sections will guide you through the process of generating the public/private rsa key pair and adding it to your u-create studio installation. If a team of users is collaborating in an organisation, the public/private rsa key pair must be created only once and be reused by the other users of the team or the organisation.

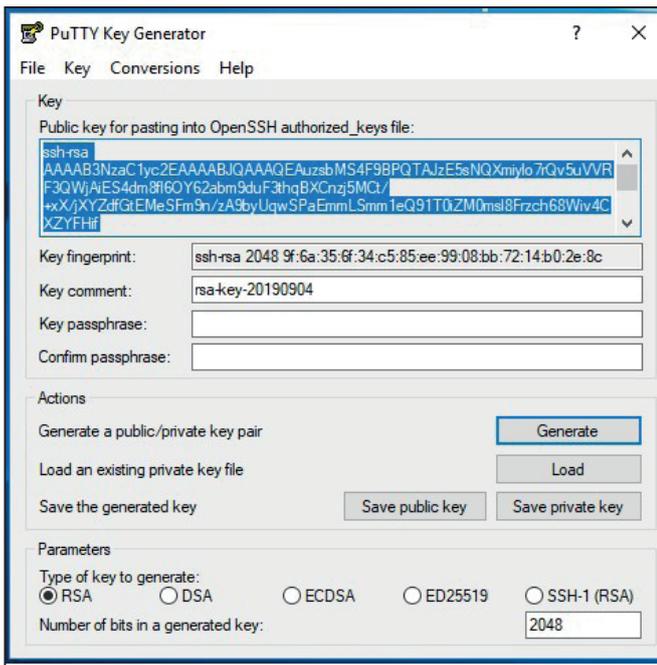
Creating a ssh key pair can be done with different programs, e.g. the **PuTTYgen** tool which can be downloaded from <https://www.putty.org/>. Due to changes in the private key format, it is suggested to use PuTTY < V0.75. Otherwise older 3rd party software might not be able to communicate with the controller.

We use this as an example to describe the procedure.

- ▶ Start the program.



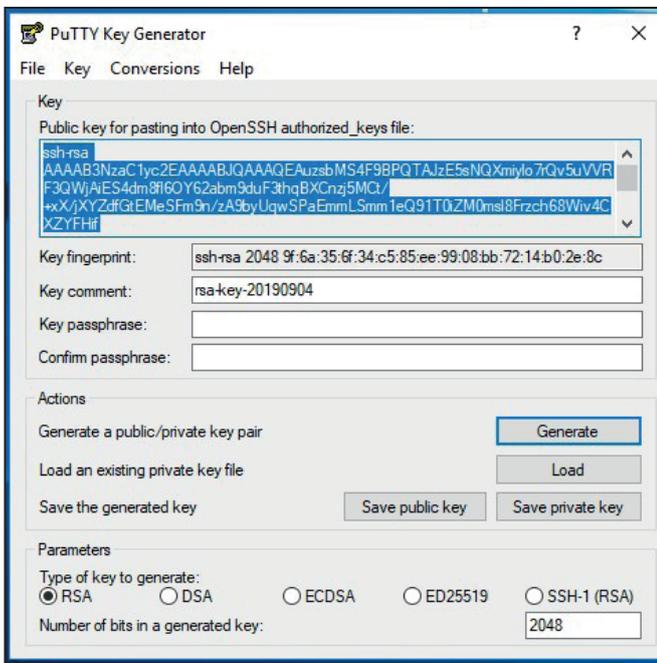
- ▶ Keep the default key type RSA.
- ▶ Click **Generate** to generate a new key.
- ▶ During the generation process you need to move the mouse for generating some randomness!



► After the key pair is generated copy and paste the displayed public key into a file with the name **admin**.

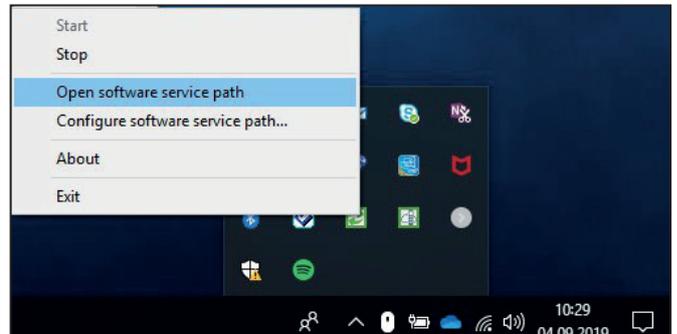
 Make sure that filename is just **admin** without any extension like ".txt" or anything else. Some text editors may add an extension by default.

The next step is to save the private key that enables admin users to log on to the controller.



- Click `Save private key`.
 - Choose an individual name for the key file.
- A **.ppk** file is created which is later required to establish an SSH connection to the controller.

 Be aware that the key grants the full access to the controller! Always keep the private key file protected from unauthorised access.



► After the **admin** file has been created, open the software service path.

Example:

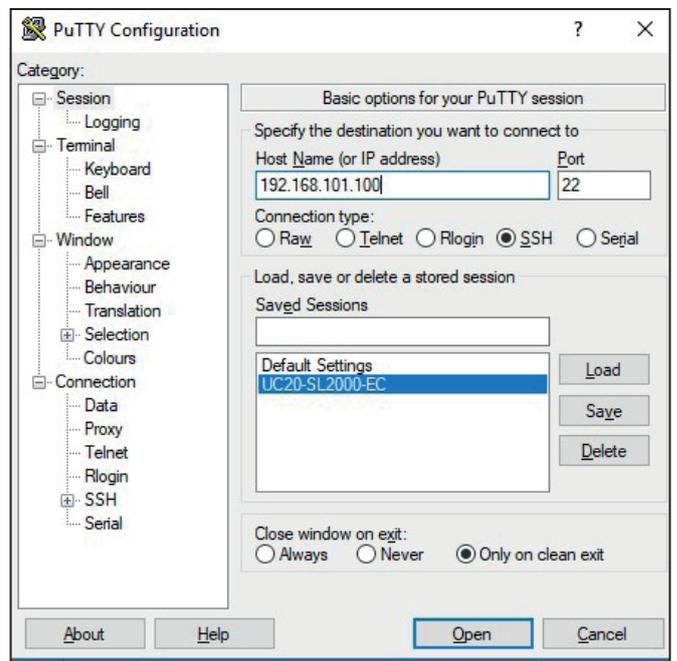
```
C:\Program Files (x86)\Weidmueller\Storage\SystemSoftware\u-create studio_<your version>\dsarmxilinxkebwmm<version>_arm\config\key\
```

► Add the created file into the path shown above by replacing the old admin file.

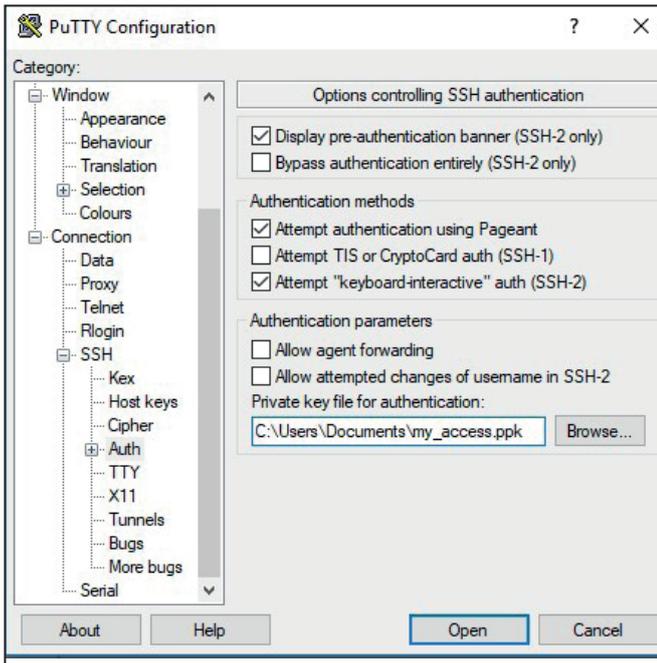
After the process of public key and private key generation is finished a new target file has to be generated and transferred to the u-control, as described in section 3.4 on page 5.

The system is now prepared for a secure operation system access via PuTTY.

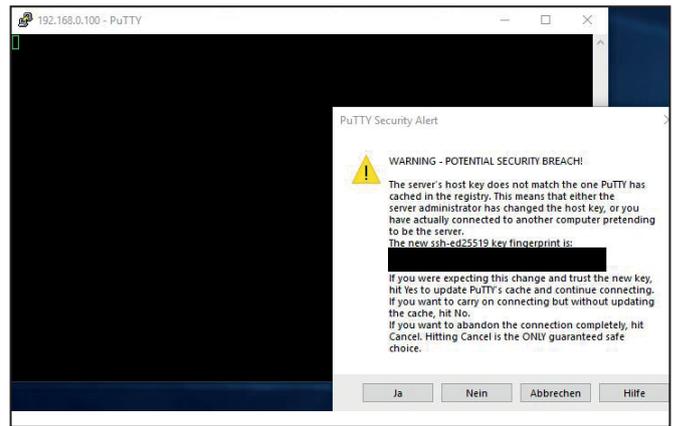
- Start the PuTTY program.
- In the Configuration, select **Session** and enter the IP address (default 192.168.101.100 if not changed).



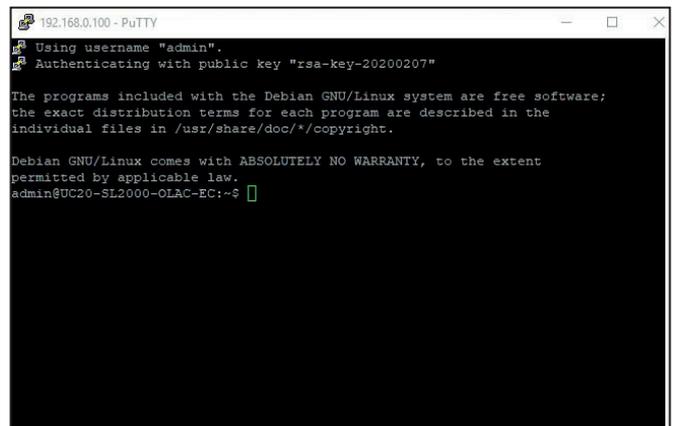
- Select SSH and Auth and load your private key into the Authentication parameters.



- Please confirm the upcoming warning.



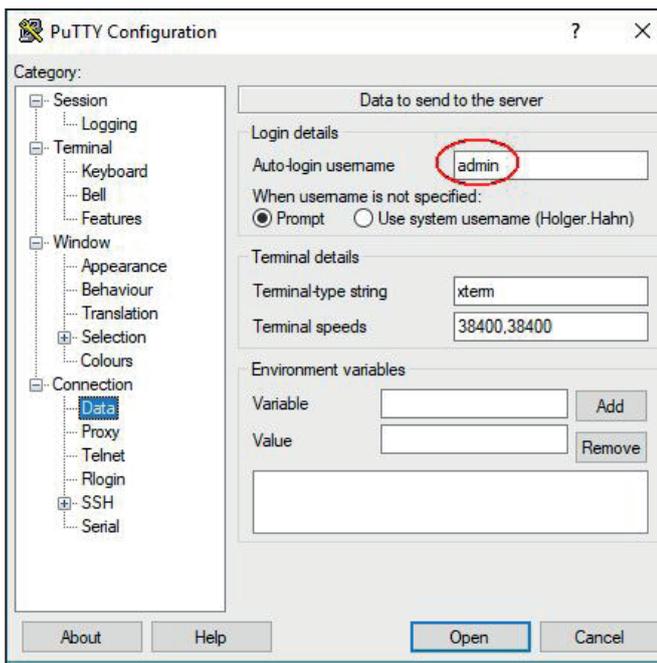
An access via SSH-key is done.



- In the tree view, click Session.
- Click Save to save the new session by an individual name.

Auto-login

- In the tree view click Connection/Data.
- For an **Auto-login** please enter your user name ("admin" in the example).



Please note that you now have access to the controller! Weidmüller is neither liable for damage resulting from improper intervention in the control unit nor can we support you in such cases.

- Click Open for login to u-control.

