BOSCH

Installation Manual

DeviceBridge App Installation Manual

Ver 1.0

Revision index

Version	Revision	Author	Date
1.0	Installation Manual	Praveen Ramachandran	18-02-2022
1.1	Updates	Praveen Ramachandran	20-07-2022

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2   Introduction

## 2.1 Purpose

DeviceBridge is an Industry 4.0 software that connects to a wide variety of shop floor devices, acquires process/machine-related data seamlessly, and delivers to the top IT applications like MES, Database, File systems, and Cloud.

2.2 Features and Benefits

The DeviceBridge is a scalable Software and has the flexibility to be deployed in a compatible hardware system. The DeviceBridge defines the Smart Business Logic, thus making this device more powerful. The configuration and deployment tool allows easy & user-friendly end-to-end configurations and Test & Deploy. Post-deployment, the application will run in the background on multiple threads not to compromise on the performance. It has a service monitoring tool to monitor the data collected in real-time. E-mail triggers in case of any failure in data collection. M2M connectivity is also established. The DeviceBridge is ready to deploy the configuration to interface between the Machine and upstream IT systems.

2.3 Working Overview
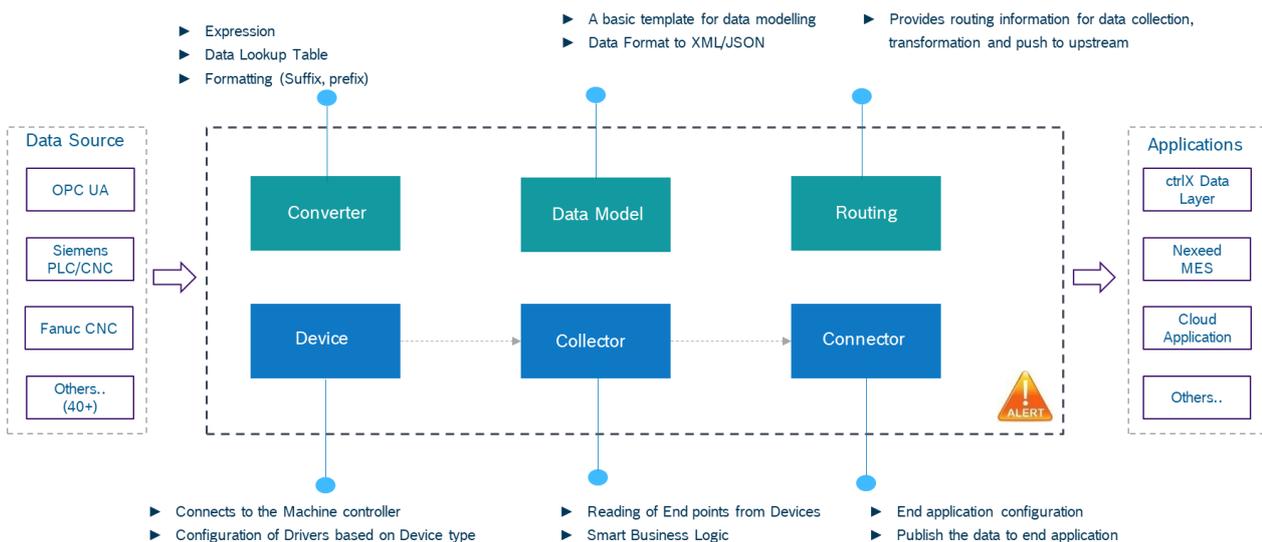
Fig. 1:   **Working Overview**

2.4 List of Supported Devices

The DeviceBridge application supports the following devices:

Sl. No	Controller Make	Model
1	Siemens	S7, CP243
2	Mitsubishi	Q-Series
3	Allen Bradley	CompactLogix, MicroLogix
4	OPC UA	
5	OPC Tunneler	For OPC DA server
6	Modbus TCP	Modbus TCP supported controllers
7	Protocols	MQTT
8	CISS Kit	

Tab. 1: List of Devices for DeviceBridge application

> **Note:**
>
> The controllers mentioned above can directly be configured and provides the pre-requisites are met. In case of any new controller needs to be communicated, the BGSW will study and finalize the feasibility of the interface to the DeviceBridge.

3 System Requirements

3.1 Hardware Requirements

The minimum hardware requirements for installing the DeviceBridge as listed below:

3.1.1. ctrlX Snap Version - ctrlX Core X3

Item	Specification
CPU Core	64 Bit Quad-Core ARM CPU
RAM	2 GB
Fixed storage	4 GB eMMC
OS	Linux Ubuntu Core
Use-Case	Connection of ~2 m/c with Standard Nexeed MES PDA/MDA

Tab. 2:Hardware – ctrlX snap version

3.2 Software Requirements

The software requirements for installing the DeviceBridge as listed below:

3.2.1. ctrlX Snap Version

1. ctrlX Core Firmware
2. Data Layer (where applicable)
3. Other ctrlX Apps (where applicable)

4   Installing DeviceBridge App in ctrlX Gateway

The below procedure provides an explanation for installation of DeviceBridge App from Local Drive.

Download/copy the DeviceBridge snap in the local drive of the system/server and follow the below steps:

1. To load the ctrlX login page, browse the ctrlX gateway link (https://ctrlXGatewayIP/).

2. The user will be redirected to the ctrlX login screen.
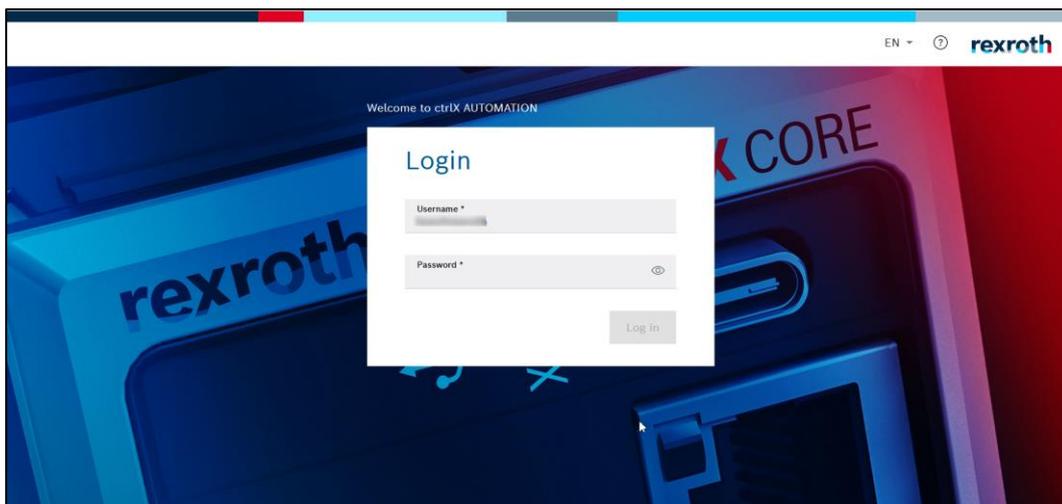
Fig. 2:   DeviceBridge ctrlX login screen

3. To login to the ctrlX gateway, enter the **Username** and **Password**.

4. The user will be redirected to the ctrlX CORE gateway landing page as shown below.
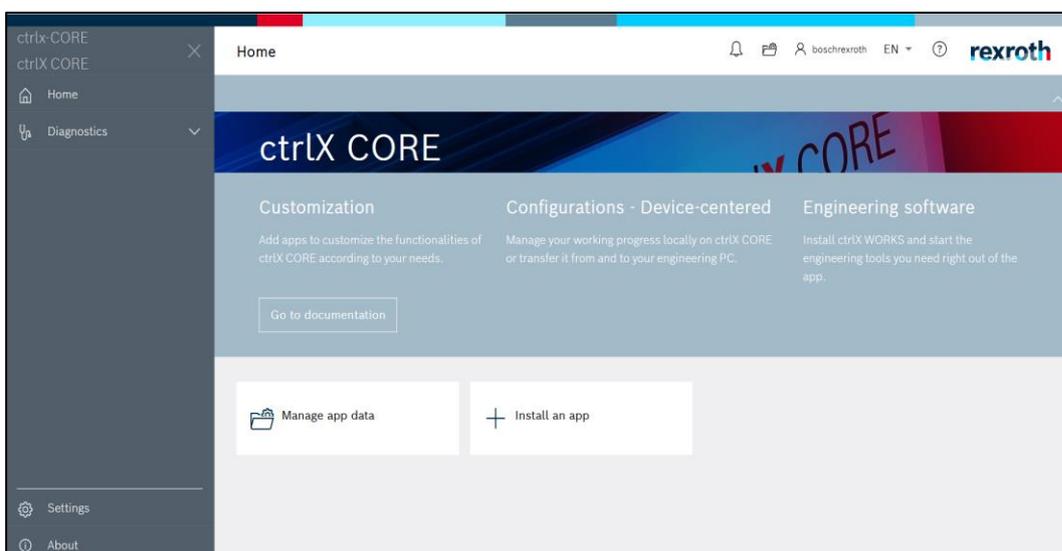
Fig. 3:   **ctrlX CORE gateway landing page**

5. The user can see the options **Manage app data** and **Install an app**.

6. The left pane shows the Home, Diagnostics, Settings, and About.

7. To install the necessary apps, the user must click **Install an app**.

8. The user will be redirected to the below screen.
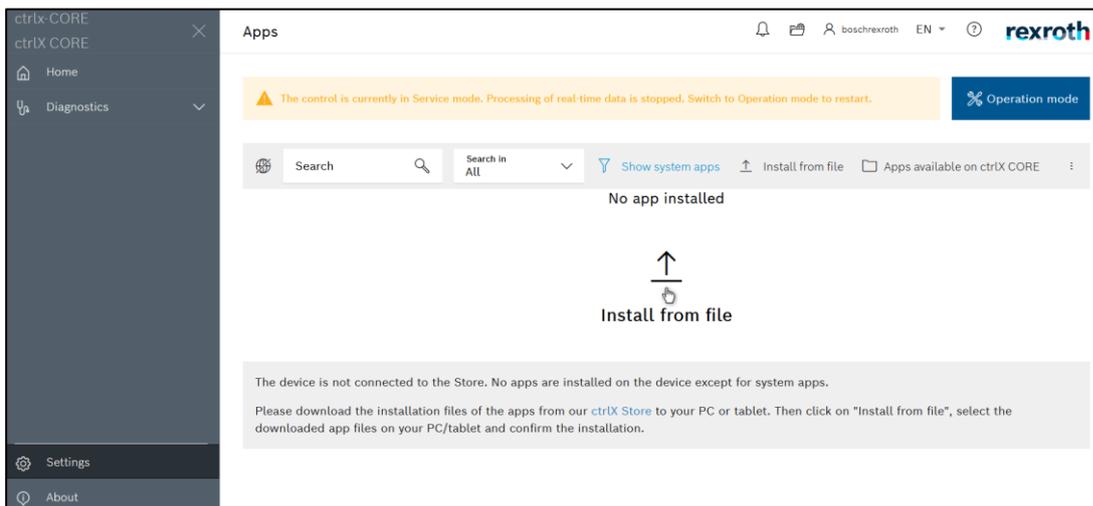
Fig. 4:   **ctrlX CORE − Apps window**

9. Click **Install from File**.

10. A dialog box appears for the user to choose the downloaded `DeviceBridge.snap or DeviceBridge.app file`.

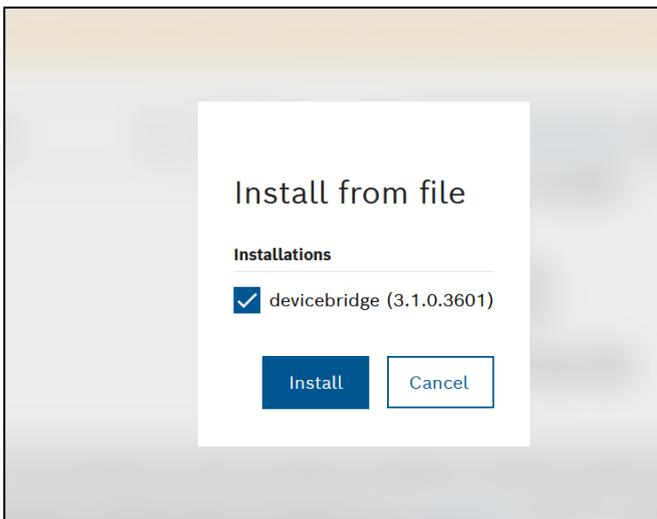11. The user can choose the `DeviceBridge.snap/.app file` as shown below.
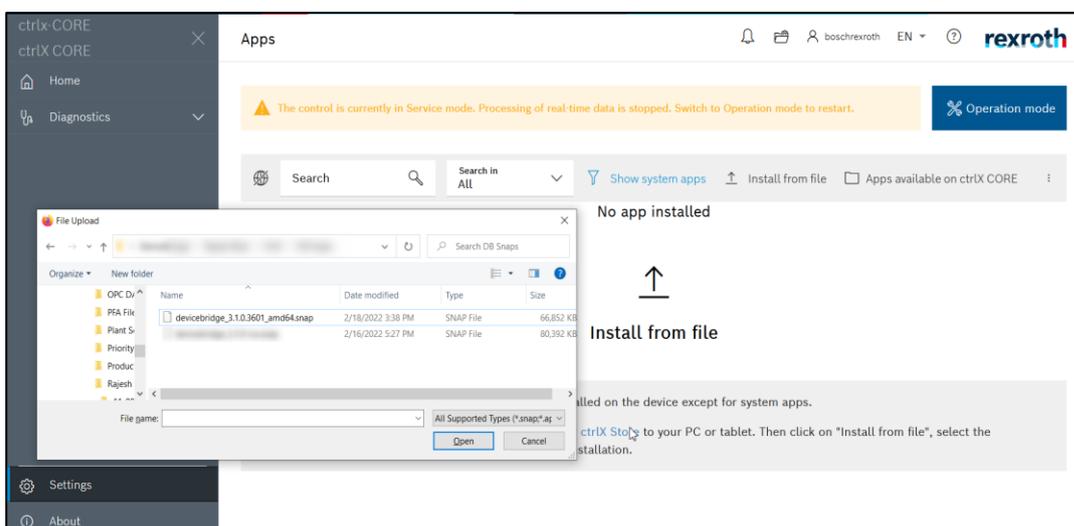
Fig. 5:   **ctrlX CORE −File Upload**

12. Select the snap and click **Open**.

13. DeviceBridge snap will start uploading the snap as shown below.
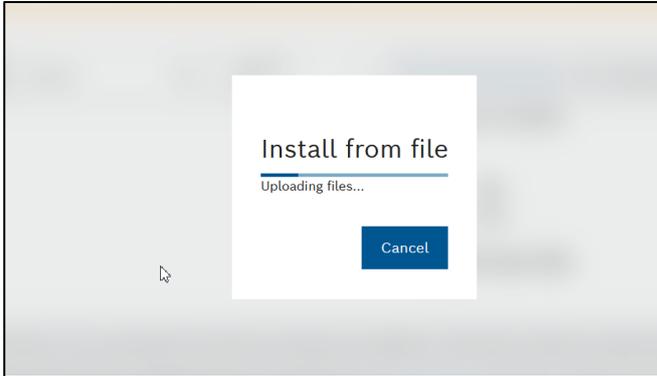
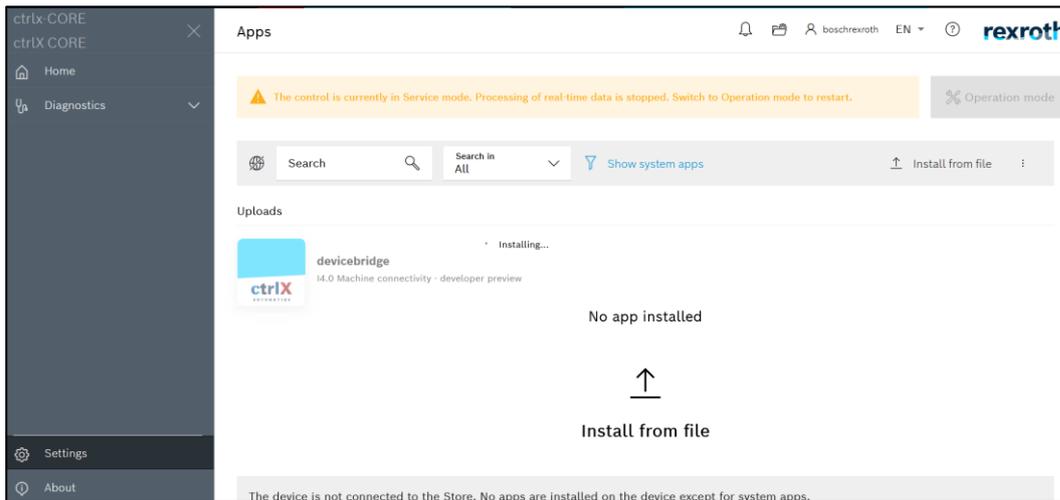**Fig. 6:   DeviceBridge snap − uploading files**

14. The user will be prompted with a dialog box to proceed with the snap installation in the ctrlX gateway.

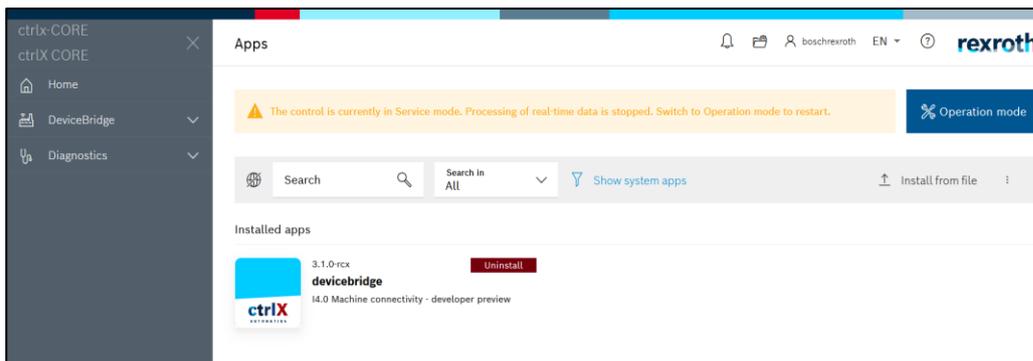**Fig. 7:   Snap Installations confirmation message**

15. Click **Install**.

16.   The below screen represents the **App Installation − In Progress window**.
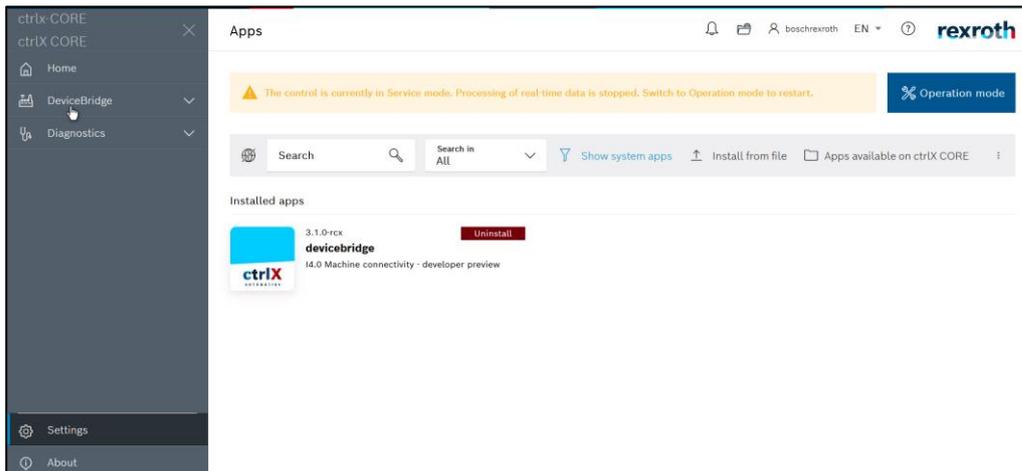

Fig. 8:   App Installation window

17.   DeviceBridge App will be installed in the **ctrlX CORE** as shown below.

18.   The DeviceBridge application is visible in the **Apps** under the **Settings** tab.

Fig. 9:   Installed apps in settings tab

19. The installed DeviceBridge application is visible in the left pane of the ctrlX CORE screen.

Fig. 10:   DeviceBridge under ctrlX CORE screen

20. DeviceBridge has been successfully installed into the ctrlX CORE. Please follow the below instructions to configure DeviceBridge based on the requirements.

Note:

The DeviceBridge App can be directly downloaded from ctrlX App Store

5. Uninstalling the DeviceBridge App

Uninstalling the DeviceBridge app stops the running services (collector service) and uninstalls the DeviceBridge application Service.

> **Note:**
>
> Before uninstalling, the users are recommended to take a backup of the configuration files.

Following are the steps to uninstall the DeviceBridge:

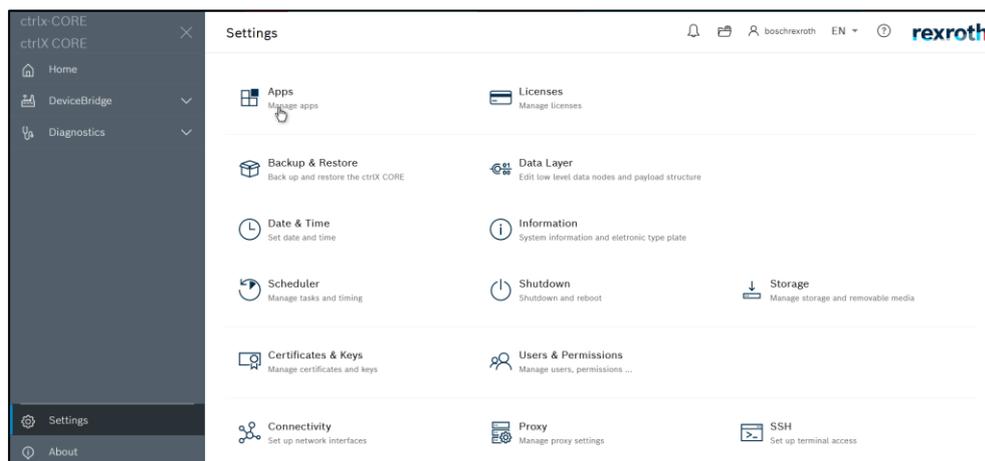1. Go to **Settings** -> Select **Apps** as shown below.

Fig. 11:   Apps under settings tab

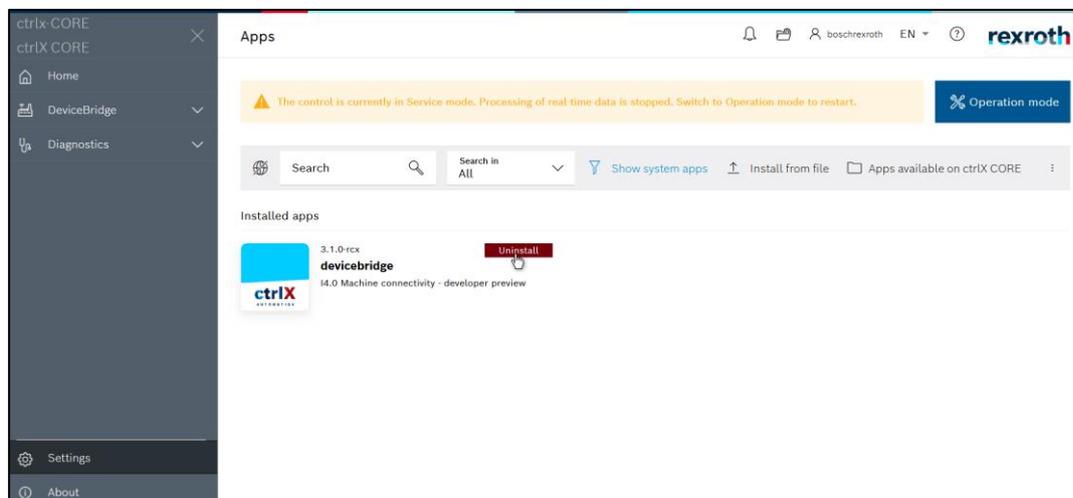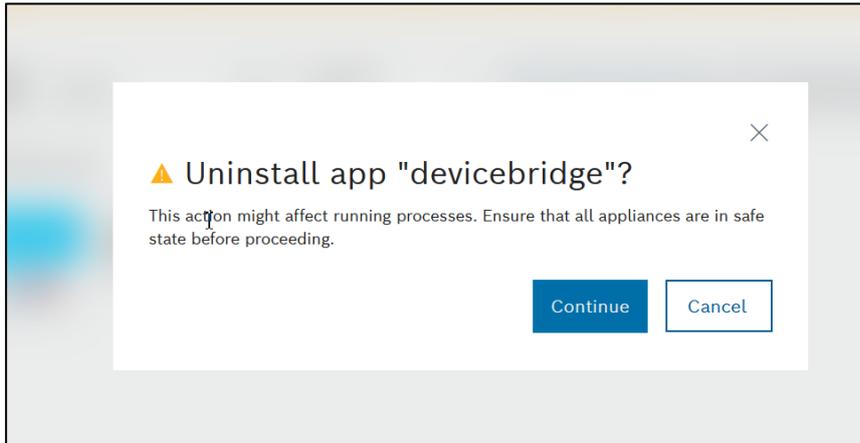2. The DeviceBridge app will be shown in the Apps window.

Fig. 12:   ctrlX CORE − Apps window

3. Click **Uninstall**.

4. The user will be prompted with a small pop-up as shown below.

Fig. 13: Confirmation window for uninstalling app

5. Select **Continue** to Uninstall.

6. The DeviceBridge app will be uninstalled from ctrlX CORE and removes all their data.

6. Support

For support related clarifications, please contact

ProductSupport.EIA@in.bosch.com