

Installation Manual

DeviceBridge App Installation Manual

Ver 1.0

Revision index

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1 Legal Notice and Disclaimer

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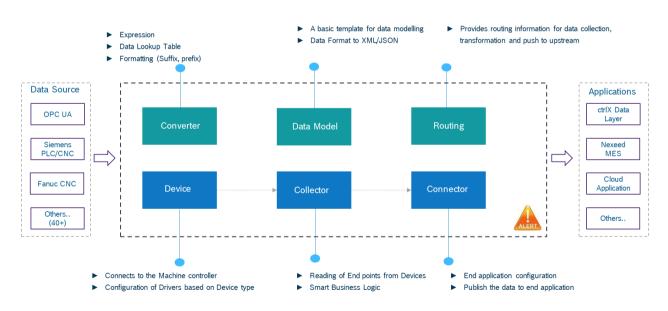
2 Introduction

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:

SI. 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

ltem	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.

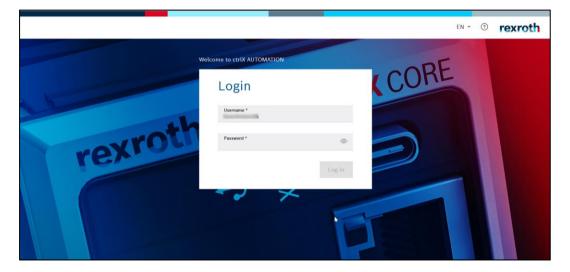


Fig. 2: DeviceBridge ctrlX login screen

- 3. To login to the ctrlX gateway, enter the **Username** and **Password**.
- 4. The user will be redirected to the ctrIX CORE gateway landing page as shown below.

ctrlx-CORE X	Home	Ļ ≞	& boschrexroth EN + ⑦ rexroth
🔓 Home			~
V_{lk} Diagnostics \sim	ctrlX CORE		CORE
	Customization		Engineering software
	Add apps to customize the functionalities of ctrlX CORE according to your needs.		Install ctrIX WORKS and start the engineering tools you need right out of the app.
	Go to documentation		
	Manage app data -	+ Install an app	
ලි Settings			
About About			

Fig. 3: ctrIX 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.

ctrlx-CORE ×	Apps 🗘 🖻 A boschrevroth EN * 🕐 rexroth
G Home	
$V_{ m B}$ Diagnostics \checkmark	A The control is currently in Service mode, Processing of real-time data is stopped. Switch to Operation mode to restart.
	Search Q Search in All ∨ 7 Show system apps 1 Install from file □ Apps available on ctriX CORE :
	No app installed
	↑ Dinstall from file
	The device is not connected to the Store. No apps are installed on the device except for system apps.
	Please download the installation files of the apps from our ctrlX Store to your PC or tablet. Then click on "Install from file", select the downloaded app files on your PC/tablet and confirm the installation.
④ About	

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.

ctrlx-CORE ctrlX CORE		×	Apps						1	Ĵ 🖶	A boschrex	roth EN 🔻	?	rexrot
G Home			A 1					ime data is stopped. Swit					* 0	peration mode
ပို့ Diagnostic		~					ong of react						760	
			Ø	Search	Q	Search in All	~	Show system ap	os <u>↑</u>	Install fro	m file 📋	Apps availat	ole on ctri	IX CORE :
📦 File Upload							×	No app install	ed					
← → × 1	1	-			~ O	,P Search DB Sna	ips							
Organize *	New folder					E	• 🔳 👩	\uparrow						
_	OPC D/ ^	Name	^		Date modified	Туре	Size	<u> </u>						
	PFA File Plant Si Priority Produc	devicebridg	e_3.1.0.3601_am	d64.snap	2/18/2022 3:38 PM 2/16/2022 5:27 PM	SNAP File SNAP File	66,852 Ki 80,392 Ki		ile					
	Rajesh File pame				J	All Supported Type		illed on the device ex	cept for s	system ap	ps.			
	r ne Dame	· L			-	Qpen	Cancel	ctrlX Sto্হু to your Pe stallation.	C or table	et. Then c	lick on "Insta	all from file"	, select 1	the
ලි Settings														

Fig. 5: ctrlX CORE –File Upload

- 12. Select the snap and click **Open**.
- 13. DeviceBridge snap will start uploading the snap as shown below.

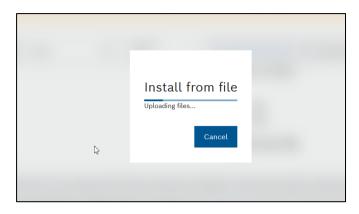


Fig. 6: DeviceBridge snap – uploading files

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

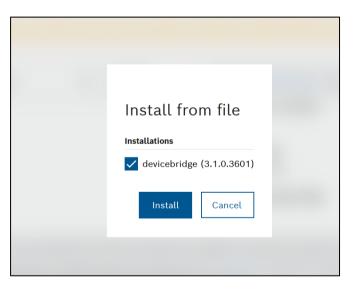


Fig. 7: Snap Installations confirmation message

15. Click Install.

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

ctrlx-CORE ×	Apps Q 🖻 A boschrewoth EN * 🕐 rexroth
ඬ Home U _{ja} Diagnostics ∨	The control is currently in Service mode. Processing of real-time data is stopped. Switch to Operation mode to restart.
	Bearch Q Search in All ∨ Y Show system apps 1 Install from file :
	Uploads
	Installing devicebridge 4.0. Machine connectivity - developer preview
	No app installed
	\uparrow
 බු Settings	Install from file
① About	The device is not connected to the Store. No apps are installed on the device except for system apps.

Fig. 8: App Installation window

- 17. DeviceBridge App will be installed in the **ctrIX CORE** as shown below.
- 18. The DeviceBridge application is visible in the **Apps** under the **Settings** tab.

ctrlx-CORE ctrlX CORE	×	Apps Deschrewroth EN = ? rexroth
습 Home 긢 DeviceBridge	~	A The control is currently in Service mode. Processing of real-time data is stopped. Switch to Operation mode to restart.
₩ Diagnostics	~	Image: Book with the search in All Search in All ✓ ▼ Show system apps ↑ Install from file :
		Installed apps 3.1.0 rex Uninstall devicebridge 4.0 Machine connectivity - developer preview
		CTTX

Fig. 9: Installed apps in settings tab

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

Fig. 10: DeviceBridge under ctrlX CORE screen

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

Note:

The DeviceBridge App can be directly downloaded from ctrIX 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.

ctrlx-CORE ctrlX CORE	× Settings	Д.	🖱 8 boschrexroth EN 🛪 🕐 rexroth
G Home			
🛃 DeviceBridge	Apps Manage apps	Licenses Manage licenses	
U _A Diagnostics	×		
	Backup & Restore Back up and restore the ctrtX CORE	Contact Layer Edit low level data nodes and payload structure	
	Date & Time Set date and time	Information System information and eletronic type plate	
	Scheduler Manage tasks and timing	Shutdown Shutdown and reboot	Storage Manage storage and removable media
	Certificates & Keys Manage certificates and keys	A Users & Permissions	
Settings	Connectivity Set up network interfaces	Proxy Manage proxy settings	SSH SSH
About	Set up network interfaces	ESP Manage proxy settings	Set up terminal access

Fig. 11: Apps under settings tab

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

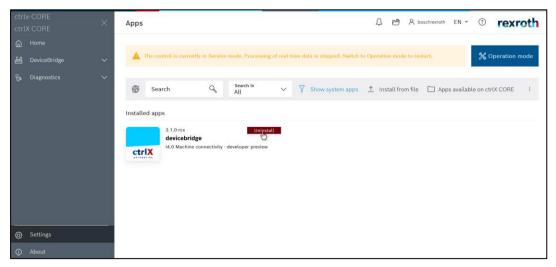


Fig. 12: ctrlX CORE – Apps window

3. Click Uninstall.

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

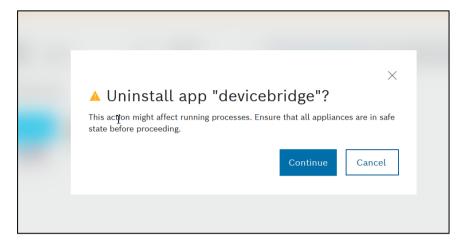


Fig. 13: Confirmation window for uninstalling app

- 5. Select **Continue** to Uninstall.
- 6. The DeviceBridge app will be uninstalled from ctrIX CORE and removes all their data.

6. Support

For support related clarifications, please contact

ProductSupport.EIA@in.bosch.com