ctrlX CORE

Runtime

Liability

The specified data is intended for product description purposes only and shall not be deemed to be a guaranteed characteristic unless expressly stipulated in the contract. All rights are reserved with respect to the content of this documentation and the availability of the product.

DC-IA/EPI5 (TaDo/MePe)

365fc654af0acca90a347e880947dd62, 1, en_US

Table of contents

1   About this documentation

Editions of this documentation

Edition	Release	Notes
01	2021-07	First edition ctrlX CORE Runtime version XCR-V-0110

Further information

- See ➡ ctrlX CORE Runtime, Application Manual

2 Important information

2.1 Product information

For the latest information on our products, go to ➡ https://www.boschrex-roth.com.

For current security advisories, please refer to ➡ https://psirt.bosch.com/security-advisories/

2.2 Updating the apps to the ctrlX CORE Virtual

The setup ctrlX WORKS 01V10 provides a new device ctrlX CORE Virtual including the current system apps. If existing applications have to be converted for version 01V10, proceed as follows:

Execute the following steps in the described sequence:

1. ▸ Backup the current control data ("Configuration") via the button ⌷Save⌷.
2. ▸ Save all available "Configurations" by highlighting the respective configuration in the list and click on the button ↓ .
3. ▸ Create a new ctrlX CORE Virtual in ctrlX WORKS in the "Devices" window.
4. ▸ Install the application apps. This is also required if the system apps were installed via the rescue system. In this case, press the button "Service Mode".
   - Load the application app to the Local Storage first. Press the button +
   - Highlight all application apps and confirm them in the following file drop-down box. Subsequently, these apps are bundled and transmitted to the control
   - Wait until loading is completed
   - Press the button "Update all apps". The apps are installed
   - Press the button "Operation Mode". The control is ready again
5. ▸ Go to the menu item "Configurations" and load the relevant backups of the configurations. Subsequently, enable the "Configuration" to be executed. The update is completed.
6. ▸ Please verify that all data has been applied. If the original control is not required anymore, the control can be deleted.

2.3 Updating the apps to the ctrlX CORE

Check the version of the installed apps on the ctrlX CORE control.

The following handling instruction is only valid if the release RM 21.03 or a subsequent patch is installed on the ctrlX CORE.

NOTICE	When using a ctrlX DRIVEplus with integrated ctrlX CORE, prior to updating the apps, it is mandatory to update the ctrlX DRIVE firmware to the version AXS-V-03.04.

Preparation: The apps to be updated were copied to a local directory on the PC. Update from the PC.

Execute the described steps in the described sequence:

1. ▸ Connect to the ctrlX CORE and go to menu item "Configurations".
2. ▸ Backup the current control data ("Configuration") via the button ⌷Save⌷.
3. ▸ Backup all available "Configurations" by highlighting the respective configuration in the list and click on the button ↓ .
4. ▸ Select the menu item "Settings" → "Apps" to go to the overview of installed apps and select the tab "Local storage".

5. ▸ Press the button "Service mode". The control is set to the safe state. Subsequently, the button display changes to "Operation Mode".

6. ▸ Install the system apps in the described order. Select the ╋ button to load the app to be installed on the control. An individual app installation is triggered via the buttons "Install" or "Update". Subsequently, a confirmation dialog is displayed. Confirm is with "Continue". In this case, wait until each app installation is complete. As long as an installation is active, a progress bar is displayed below the relevant app.

- Load the "Version Guard XCR-V-0108.0.app" file. The **Version Guard** entry is displayed in the list. Press on the button "Install". Refresh the browser window after the installation has been completed
- Load the file "snapd-2.51.1.app". Select the **snapd** entry in the list. Press the button "Update". Confirm the following dialog and wait until the installation is complete. Refresh the browser window after a successful installation
- Load the file "core18-20210611.app". Subsequently, the entry **core18** is shown in the list. Press the button "Update". Reboot the control after a successful installation. The website reports a connection error
- Wait until the control has booted and can be contacted again via the web browser. Log in again and go to the "Apps" site in "Local storage".
- Load the file "Device Admin XCR-V-0110.1.app". Subsequently, the entry **Device Admin** is shown in the list. Press the button "Update". An error is displayed after a successful installation, as the control is temporarily not available due to initialization tasks. The initialization can take approx. 2 minutes
- Wait until the control can be contacted again via the web browser. Log in again and go to the "Apps" site in "Local storage"
- Load the file "Hardware Support XCR-V-0110.4.app". Subsequently, the entry **Hardware Support** is shown in the list. Press the button "Update". Reboot the control after a successful installation
- Wait until the control can be contacted again via the web browser. Log in again and go to the "Apps" site in "Local storage"
- Load the file "Automation Core XCR-V-0110.0.app". Subsequently, the entry **Automation Core** is shown in the list. Press the button "Update"
- Load the file "Linux Kernel XCR-V-0110.0.app". Subsequently, the entry **Realtime Kernel** is shown in the list. Press the button "Update". Reboot the control after a successful installation. The website reports a connection error
- Wait until the control has booted and can be contacted again via the web browser. Log in again and go to the "Apps" site in "Local storage".
- Refresh the browser window after a successful installation
- Load the file "Solutions XCR-V-0110.0.app". Subsequently, the entry **Solutions** is shown in the list. Press the button "Update"
- System app update completed

7. ▸ Install the required application apps.

The next steps are always required even if the system apps were installed via the rescue system or if the current system apps are already installed on your control. If the control is not yet in the state, press the "Service Mode" button.

- Load the application app to the Local Storage first. Press the button ＋
- Highlight all application apps and confirm them in the following file drop-down box. Subsequently, these apps are bundled and transmitted to the control
- Wait until loading is completed
- Press the button "Update all apps". In an info box, update info on the apps installed on the control is displayed. Press the button "Update" and confirm the following dialog
- The update result is displayed in an message box
- Apps - not yet available on the device - have to be installed individually via the "Install" interface
- Press the button "Operation Mode". The control is ready again

8. ▸ Go to the menu item "Configurations" and load the relevant backups of the configurations. Subsequently, enable the "Configuration" to be executed. The update is completed.

3 XCR-V-0110

3.1 Software

Table 1: Components included in the release RM21.07

Short name	Software	Version	Additional notes
ctrlX Apps			
XCR-V-0110.4	arch01.ubuntucore	1.10.4	Image
	core18	20210611	Update of the following components: ```apt 1.6.13\ncloud-init 21.2-3-g899bfaa9-0ubuntu2~1\ndistro-info-data 0.37ubuntu0.10\nisc-dhcp-client 4.3.5-3ubuntu7.3\nlibapt-pkg5.0:arm64 1.6.13\nlibdns-export1100 1:9.11.3+dfsg-1ubuntu1.15\nlibglib2.0-0:arm64 2.56.4-0ubuntu0.18.04.8\nlibhogweed4:arm64 3.4-1ubuntu0.1\nlibisc-export169:arm64 1:9.11.3+dfsg-1ubuntu1.15\nliblz4-1:arm64 0.0~r131-2ubuntu3.1\nlibnettle6:arm64 3.4-1ubuntu0.1\nlibpam-modules:arm64 1.1.8-3.6ubuntu2.18.04.3\nlibpam-modules-bin 1.1.8-3.6ubuntu2.18.04.3\nlibpam-runtime 1.1.8-3.6ubuntu2.18.04.3\nlibpam-systemd:arm64 237-3ubuntu10.47\nlibpam0g:arm64 1.1.8-3.6ubuntu2.18.04.3\nlibseccomp2:arm64 2.5.1-1ubuntu1~18.04.1\nlibssl1.1:arm64 1.1.1-1ubuntu2.1~18.04.9\nlibsystemd0:arm64 237-3ubuntu10.47\nlibudev1:arm64 237-3ubuntu10.47\nopenssl 1.1.1-1ubuntu2.1~18.04.9\nsquashfs-tools 1:4.3-6ubuntu0.18.04.2\nsystemd 237-3ubuntu10.47\nsystemd-sysv 237-3ubuntu10.47\nubuntu-keyring 2018.09.18.1~18.04.2\nii udev 237-3ubuntu10.47```
	rexroth-arch01-hw	1.10.4	
	rexroth-arch01-kernel	4.19.173-rt72-icx37	● → Note on use and known restrictions
	rexroth-automationcore	1.10.0	● → New functions ● → Resolved defects and modifications ● → Note on use and known restrictions (relevant to rexroth-automationcore, snapd, rexroth-version-guard, core, core18, rexroth-arch01-hw, rexroth-arch01-kernel)
	rexroth-deviceadmin	1.10.1	● → New functions ● → Resolved defects and modifications ● → Note on use and known restrictions
	rexroth-solutions	1.10.0	● → New functions
	snapd	2.51.1	→ https://github.com/snapcore/snapd/blob/master/packaging/ubuntu-16.04/changelog
	rexroth-version-guard	1.8.0	
THE-V-0110.0	bosch-bttheme	1.10.0	→ New functions
SDK-V-0110.0	ctrlX SDK	1.10.0	

3.2 New functions

3.2.1 Automation Core

Feature 249251: Availability of the 2nd Ethernet port and the USB interface in the drive-integrated control

Description

A new PCB is provided in the drive-integrated control with the patch RM 21.03.2. This PCB allows the functionality of the 2nd Ethernet port and the USB use.

Use the type code of the type plate to check whether the new PCB is assembled. ID: LK CX-CPU01-07 SMT RJ45.

Feature 257709: Extensions in the Data Layer connection of the Scheduler

Description

- Available CPU kernel displays
  - The Scheduler shows the available CPU cores. They are divided into "real-time" and "non-realtime".
    DL URL: "*scheduler/admin/info/cpu-cores/total*"
  - realtime: These CPU cores are reserved for the application "automation.core". The best real-time capability is ensured.
    URL: "*scheduler/admin/info/cpu-cores/realtime*"
  - non-realtime: These CPU cores are available for all applications and for the operating system. The real-time capability, e.g. by interrupts, cannot be completely ensured on these CPU cores. These cores are used by the operating system and should not be too highly loaded by tasks with real-time priority to ensure the operability of the system.
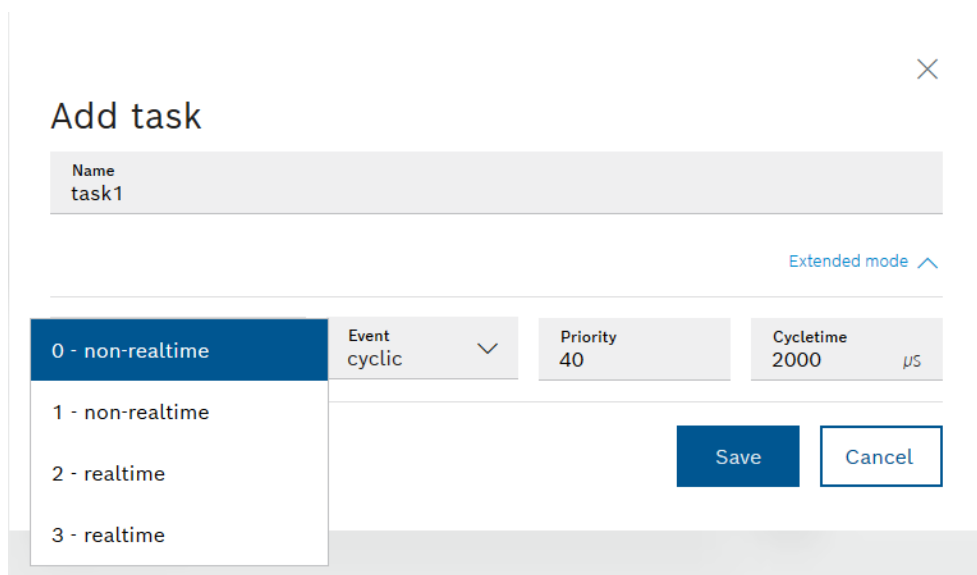   URL: "*scheduler/admin/info/cpu-cores/non-realtime*"

Fig. 1: ctrlX CORE Runtime Release Notes Feature 257709

- The time measurements are also shown in the Data Layer Realtime.
  DL URL: "*scheduler/tasks/<taskname>/info/duration-rt*"
- The starting point in time of a task can be retrieved by the Data Layer Real-time.
  DL URL: "*scheduler/tasks/<taskname>/info/common-data-rt/data/start-time*"

Feature 286232: Diagnostic extensions for XCR-V-0110

Description

The following extensions were implemented for the ctrlX CORE diagnostic system:

- Retrieving the number of currently pending errors and warnings via Data Layer addresses
  - *diagnosis/get/actual/list/amount-errors*
  - *diagnosis/get/actual/list/amount-warnings*
- OEM and partner diagnostics can only be managed via the diagnostic system. It includes for example the registering, unregistering and issuing of diagnostics.

Feature 286970: Hardware variant ctrlX CORE X2

Description

The ctrlX CORE X2 is a hardware variant of the ctrlX CORE X3. The interfaces "2nd Ethernet port" and "USB Interface" are not available in the ctrlX CORE X2. All available apps can run on the ctrlX CORE X2.

Feature 290444: Supporting ambiguous detailed diagnostics

Description

Due to the support of ambiguous detailed diagnostics, the same detailed diagnostic number with different meanings/texts can be registered for different main diagnostics.

The meaning of the main diagnostics (main diagnostic number + text) always has to be unique in the system. However, the meaning of a detailed diagnostics (detailed diagnostic number + text) can be ambiguous. As only unique diagnostics are permitted in the system (e.g. to identify an exact diagnostic source/ diagnostic text), the combination of main and detailed diagnostics has to be unique.

These diagnostics can now be registered and unregistered with a .json file using Data Layer addresses

- *diagnosis/registration/register*
- *diagnosis/registration/unregister*

The respective diagnostic texts can be retrieved via Data Layer addresses

- *diagnosis/get/text/main*
- *diagnosis/get/text/detailed*

The C++ bundle interface was updated analogously to the extensions in the Data Layer.

Feature 349531: Ubuntu Core: Update of the system components Core18 and Snapd

Description

Release RM21.07 provides the new released Rescue System Version 0.3.6.

Modifications: Written Offer Template in Open Source Licenses dialog updated

New Canonical system components were published since the release RM21.03. These are implemented as the snaps "snapd" and "core18" in the Ubuntu Core Image XCR-T-0110.0.

Core was removed from the image RM21.07 and is not supported anymore.

Core18 contains the system libraries used by installed applications.

3.2.2   Device Admin

Feature 181959: Backup/Restore via Device Portal

Description

Backups can be created or restored via the Device Portal.

Feature 233218: Backup and Restore via USB stick

Description

A backup can be created directly on a USB memory stick.

The control can be restored directly or via a backup file on a USB memory stick.

Feature 249723: Handling extensions of "Certificates & Keys"

Description

The following new functions were implemented in "Certificates & Keys":

- Download private key: Private key (not secured by HSM) can now be downloaded
- Renaming keys & certificates: Keys and certificates can now be renamed using the web interface
- HSM - Secure keys: Keys can now be protected via the integrated Trusted Platform Modules (TPM). Such keys belong to specific devices and can neither be downloaded to other devices nor decrypted
- Import of password-protected keys: Password-protected keys can now be uploaded. The key is encrypted when stored on the device. However, it can be decrypted.

Feature 250739: "About" site and "App not available" site cannot be modified

Description

The "About" site can now be modified with regard to manufacturer information, legal information and corporate design.

The "App not available" site can be modified with regard to the corporate design.

Feature 269242: Using microSD card and USB stick

Description

The microSD card or a USB stick can be used to exchange data (e.g. Backup/Restore).

Therefore, the removable media can be connected and formatted. After using, the removable media can be released again.

Feature 279927: Simple access to the Service

Description

If the option "Easy service access" is enabled, the device owner allows that the Bosch Rexroth Service creates a "superuser" for the device. Service employees can thus retrieve device data, even if the owner of the device forgot the password.

This option is not enabled by default.

Feature 290714: License management on the ctrlX CORE

Description

The ctrlX CORE is now provided with a license management interface to manage the licenses purchased for the device.

Feature 296678: The user can connect the ctrlX to a WiFi network that supports a WPA2-EAP protocol

Description

If the user is provided with a WPA2-EAP network infrastructure, the user can use the keys and certificates stored in the network settings of the ctrlX to set up a connection to the network.

Feature 298574: Backup & Restore supplements

Description

Number of required authorizations reduced:

Backup:

Backup & Restore: Manage Backup

Apps: Manage apps

Restore:

Backup & Restore: Manage Restore

Apps: Manage apps

3.2.3   Solutions

Feature 212287: Configurations 2.0

Description

- "Manage app data" replaces "Configurations".
  Navigate via the tile "Manage app data" on the homepage or via the respective symbol in the site header. Configurations are not provided anymore via a sidebar menu entry.
- The "appdata" directory contains the current app settings. Der state "active configuration" is obsolete. Switching the "active configuration" is obsolete.
- Configurations files are only applied if the apps allow this modification. (No application via loading and restarting the control)
- "appdata" contains the currently active configuration parts of the installed apps. Configuration parts of currently uninstalled apps are not applied while loading.
  => The configuration has to be reloaded to load the data to a recently installed app.

Due to a simplified migration, the current behavior might be different if the app "delegates" the application of configuration files to the Solutions app.

- Loading via REST-API requires the specification of the configuration to be loaded
- Loading the configuration issues an error (400) if loading failed.
- For app developers: The app is responsible to refresh files in "appdata" It has to store your configuration state. To simplify the migration, the Solutions app provides a "copyOnLoad" functionality.

Feature 249573: Remote access to configurations

Description

Remote access to configurations available via the WebDAV protocol.

Read-only access for the currently enabled configuration parts (appdata).

Read-only and write access to the archived configuration parts (archive).

3.3   Resolved defects and modifications

3.3.1   Automation Core

Bug 225645: HW watchdog is triggered sporadically after an exception and the control reboots

Description

If the snap rexroth.automationcore closes unplanned, a hardware watchdog might have occurred on the control and the control might have restarted.

Bug 298815: Renaming a task to an already existing task name deletes the task

Description

Renaming an existing task to an already existing task name of another task deletes the renamed task without generating an error.

Bug 300197: Unable to contact the web server on ctrlX anymore

Description

When using the web server, it can freeze when executing specific functions containing internal diagnostic functions. The call might not be processed due to a corresponding direct execution of REST calls.

Bug 304676: Crash during PLC program download with simultaneously active Data Layer subscription

Description

If a PLC program is downloaded to the control and a Data Layer subscription is active on a symbol in the symbol configuration, the ctrlX CORE might crash.

Bug 309774: Issuing asynchronous Data Layer requests can freeze

Description

If multiple further asynchronous Data Layer requests are issued in the callback of one asynchronous Data Layer request, one of these requests might be blocked.

Bug 313928: Data of the child nodes "duration" and "histogram" cannot be read

Description

Data of the child nodes "duration" and "histogram" (see below) cannot be read. However, they are output when browsing the parent node.

/scheduler/admin/info/duration/*/avg
/scheduler/admin/info/duration/*/min
/scheduler/admin/info/duration/*/max
/scheduler/admin/info/histogram/*/scale
/scheduler/admin/info/histogram/*/values
/scheduler/tasks/*/info/duration/*/avg
/scheduler/tasks/*/info/duration/*/min
/scheduler/tasks/*/info/duration/*/max
/scheduler/tasks/*/info/histogram/*/scale
/scheduler/tasks/*/info/histogram/*/values

Bug 319940: Empty value in Data Layer REST response

Description

If an empty array is returned upon a REST request upon a Data Layer node, the value of the response is empty instead of "[]".

Bug 319941: Subscription not working on nodes to which filters can be applied

Description

If a node is subscribed on which a filter can be used, this node provides no or only a part of that data.

Bug 325868: Data Layer IProvider::start() does not provide an error code in case of faulty connection

Description

The method IProvider::start() does not provide a correct error code if a wrong username-password combination was specified for example.

Bugfixing

An error code is returned providing information on its cause.

Bug 337282: Using Data Layer C++ library and httplib causes a crash

Description

If the Data Layer C++ library is used together with the httplib (header only), the created application is crashed.

Bug 338658: Trace and diagnostics: Change of the time stamp format acc. to ISO8601

Description

A format for the time stamp was used for traces and diagnostics in the journald metadata MESSAGE and in the Data Layer address *diagnosis/get/actual/list* that could not be interpreted correctly by the logbook GUI.

Bugfixing

The time stamp format corresponds now to the standard ISO8601.
Example of an old format: "05/21/2021, 01:23:16.726 PM (UTC)"
Example of a new format: "2021-05-21T13:23:16.726368Z"

Bug 344549: Configuration of the Scheduler lost

Description

If the Scheduler configuration is saved while the application has not yet been started completely, an empty configuration might not be saved.

Bugfixing

If the application has not yet been started, an error is returned while saving the configuration and no configuration is saved.

Bug 346778: Pending diagnostic messages without a detailed diagnostics are not visualized in "Pending diagnostics"

Description

If a diagnostic message is only issued with a main diagnostics and without a detailed diagnostics, this diagnostic message is not displayed in the "Pending diagnostics" interface. It is also possible that other pending diagnostics cannot be visualized.

This applies to:
- Active errors
- Reset errors
- Active warnings

Bugfixing

All pending messages, including diagnostic messages without a detailed diagnostics, are visualized in the "Pending diagnostics" interface.

3.3.2   Device Admin

Bug 253468: SD and microSD cards can be formatted with FAT32

Description

Formatting SD and microSD cards is not possible anymore. An error message is shown instead.

Bugfixing

The package mkfs.vfat required for formatting is implemented into the build process.

Bug 285058: Outputting status messages after installing or deleting an app

Description

While installing or deleting apps, status messages (trace messages) are output showing whether the process was completed successfully or whether errors occurred.

Bugfixing

Status messages on a successfully completed procedure are output too early. It is only output after all steps to install/delete after all steps have been executed.

Bug 286442: Changing the time zone also changes the time

Description

If only the time zone is changed, but not the time, the time also changes while saving.

Bugfixing

When the time zone is selected, the time is adjusted automatically. Thus, it is obvious before saving which time is applied after saving.

Bug 287394: Optional input fields in the certificate management

Description

Optional input fields are now mandatory and not optional anymore.

Bugfixing

Optional input fields are now optional.

Bug 290398: Setting PC time

Description

The button "Set to PC time" sets the input field "Time" to the time of the PC in UTC. The current time zone remains in the drop-down menu "Timezone" and is not set to UTC.

Bugfixing

If the button "Set to PC time" is selected, the input field "Time" is set to the time of the PC in UTC. In the drop-down menu "Timezone" , the time zone is set to "UTC" .

Bug 298653: Useful detailed information after uploading apps

Description

Detailed information is hidden after uploading an app. The arrow to expand the information is not shown.

Bugfixing

Detailed information is shown directly after uploading an app.

Bug 300323: SSH access after enabling the super user

Description

By installing a manipulated software package, an attacker can upload an application to the system which allows for a non-privileged user to extend authorizations via Shell access. To take advantage of this vulnerability, the option "Allow installation from unknown source" has to be active and the attacker had an account which uses Secure Shell (SSH).

Bugfixing

The SSH access is disabled immediately by default. SSH is automatically enabled when using a system-user assertion and disabled again after the assertion expired.

Bug 301341: Timeouts in Online Store

Description

If it is searched in the Online Store, the apps found are hidden briefly.

Bugfixing

A loop was implemented around the HTTP request (15 attempts max. with a pause of 1 s. In tests, already applied after a maximum of 6 attempts). Subsequently, no interruptions were determined anymore.

Bug 301786: Large snaps and apps can be loaded

Description

The maximum size of apps and snaps that can be loaded to the local storage is limited to 256 MB.

Bugfixing

The ctrlX checks the size of the free memory on the internal storage medium. Apps and snaps, which are smaller than half the available memory, can be loaded.

Bug 310491: Displaying app versions from the Online Store if enabled

Description

All available versions are shown in the detailed view of the apps. The versions from the Online Store are also listed. They should only be displayed if the Online Store was also enabled (via 'serial vault').

Bugfixing

Before listing the app versions, the 'serial vault' (enabling the Online Stores) is checked.

Bug 312705: User is informed if there is insufficient memory to install an app

Description

The displayed error message does not contain any information on the problem cause when installing an app.

Bugfixing

The following error message is output:

"App cannot be installed: not enough space left on device"

Bug 314442: Error while adding routes to the network settings

Description

When adding routes, error messages result when applying network settings, as incorrect names were generated while writing the file netplan.yaml.

Bugfixing

Correct entries are generated in the netplan.yaml file.

Bug 315287: Snap restart after connection by Device Admin

Description

If the PackageManager sets up interface connections, the respective snap might not respond as expected.

Example:

The Motion snap remains in the "Booting" state for a very long time and the Remote Agent cannot retrieve its certificates and reports "No device found".

This behavior can be troubleshot by restarting the snap for which connections were just set up. Up to now, it was troubleshot by manual disabling and enabling.

Bugfixing

The Remote Agent (the app) is restarted after a reinstallation. This validates the certificate and the key and they are copied to the correct locations if required.

Subsequently, the connections of the Remote Agent are checked.

Bug 317003: Empty fields are not ignored when generating Certificate Signing Requests (CSRs)

Description

Empty fields are not ignored when generating Certificate Signing Requests (CSRs), but they are included. Consequently, the CSR contains empty fields which can cause problems during the validation.

Bugfixing

Empty fields are ignored.

Bug 317593: Information on lack of memory on the control when loading an app

Description

If an app cannot be loaded to the control due to a lack of memory, the displayed error message is not conclusive.

Bugfixing

The following message is now shown:

"Upload failed! Internal server error (500) not enough space left on device"

Bug 318646: Time setting not possible

Description

If the buffer battery of the ctrlX CORE is missing or not plugged in correctly or empty, the user cannot modify the time anymore. Indicates that an error occurred when loading the site.

Bugfixing

The hardware clock is now always set when starting the Device Admin. All time information can then be retrieved and the settings site can be displayed correctly.

Bug 328376: Missing authentication in LDAP client allows login with incorrect password

Description

Due to a missing validation of a return value in the LDAP login routine, the sent password is not validated. The attacker knowing the name of a valid login account can log in using this account without entering the password.

Bugfixing

The validation routine checks the return value and denies the login with invalid access data.

Bug 331286: No saving request in case of WiFi changes

Description

If changes are made in the WiFi settings and the settings of the network interface are then exited without saving, saving is not prompted.

Bugfixing

If there are unsaved changes, a query on saving is issued.

3.4 Notes on the use and known restrictions

3.4.1 Automation Core

Bug 341020: Wrong Scheduler Config in ctrlX Virtual

Description

There is a Scheduler Config in the image of the ctrlX Virtual. This config was created in the build environment. This Scheduler Config does not match at a later runtime. Reset manually.

Bug 347702: Status LED flashes yellow for a warning immediately acknowledged while issuing

Description

If a warning is issued and reset at the same time, this warning is also acknowledged at the same time (as defined). Thus, this warning is not present anymore. However, the status LED flashes yellow for a warning, even though it should be permanently green, as no pending messages are present.

This problem exists on the devices ctrlX CORE and ctrlX DRIVEplus with integrated ctrlX CORE.

Bug 339813: Sporadic PLC cycle time increase when accessing the NRT Data Layer via function blocks

Description

The processing times of function blocks from the CXA_Datalayer and CXA_Ether-catMaster, e.g. IL_ECATSoeRead took several milliseconds sporadically. Sometimes, this resulted in watchdogs in the calling PLC tasks.

Bug 315404: USB Ethernet adapter is not identified at the ctrlX DRIVEplus

Description

A USB Ethernet adapter (type I-tec USB-C Metal 3-Port HUB Gigabit Ethernet Adapter) is connected via the USB port of the drive panel to the ctrlX CORE M3, but the Linux system of ctrlX CORE does not detect it.

Bug 198016: High number of logs causes a loss of logs without a unique notification in the ctrlX logbook

Description

If the rate of the entered diagnostics, traces or Linux system is too high within a certain period, the logs are lost.

This situation is not directly shown as diagnostic message in the logbook. It has to be analyzed by enabling "Show system messages" (requires the permission "Logbook: View system logs" and filtering for "suppressed". The respective log looks like "...systemd-journald...: Suppressed <number> messages from <service name>".

As the Linux logbook (journald) is a ring memory, the suppressed log might already been suppressed from the logbook if to many logs were entered in the meantime.

Bug 344973: To ensure the best real-time behavior possible, task and trace settings have to be correct

Description

● The callables of 'Ethercat', 'Motion' and 'Axisprofile' should run within the same task
  – Due to locks on other cores, these callables might not be executed in the correct sequence if they do not run in one task.
    See Bug 206983 and Product Backlog Item 225458.
● All Traces of 'rexroth-automationcore' should be disabled
  – Active traces can result in task watchdogs of the real-time task, e.g. ctrlXAutomation or plcEvent07
● The priorities of all PLC tasks should be lower than the priority of the 'ctrlXAutomation' task
  – Lock on other cores than the core on which the task 'ctrlXAutomation' is running, can lead to task watchdogs of the 'ctrlXAutomation' task.

Bug 345329: Modifications in the Scheduler configuration can cause errors at the Ethercat devices

Description

Changes in the configuration of the Scheduler, e.g. creating, deleting or changing the priority of a task, can cause errors in the Ethercat devices. Possible resulting errors are "0x001B sync manager watchdog" at the EtherCat master or "F4036" at the drive.

Bug 349677: ctrlXAutomation task created with incorrect properties

Description

If a task with the name ctrlXAutomation is created and it is the only property, create this task with the same specified properties, e.g. cycle time 2 ms. If the task ctrlXAutomation is not yet available, this task is created with incorrect properties.

Bugfixing

The task ctrlXAutomation is created with correct properties.

Temporary solution:

The properties can be set to the required values via the Web GUI Scheduler (cycle time 2000, affinity 3, priority 27).

3.4.2   Device Admin

Bug 252549: Time set to a future time cannot be reset after an image update

Description

If a time was set to a future time after an image update and a restart was executed, the time cannot be reset to a time before the set time in the future.

Preliminary solution

If an NTP server is set, it sets the time correctly again. The behavior is then again like after the image update.

Bug 349728: HSM-protected keys are not shown anymore after renaming

Description

If keys - protected by HSM - are renamed, they are not listed anymore and cannot be restored.

Preliminary solution

There is no known workaround. Do not rename the key. Create a new key with an own file name.

Bug 351455: Available licenses become invalid and cannot be applied again

Description

In a few cases, licenses might become invalid and cannot be applied again. The license remains in a damaged state. No new license can be assigned.

For debugging delete the license file manually from the file system. It is required that the Bosch Rexroth Service provides support.

Preliminary solution

Please contact the Bosch Rexroth Service.

Bug 352365: Large backup files cannot be restored

Description

Backup file cannot be restored;

- Situation
  - The local storage contains multiple apps

- Action
  - Create backup
  - Start restoring data
- Problem
  - Data and apps are missing after data restoration
  - The logbook contains the error "Restoration failed completely" or "Restoration failed"
- Cause
  - This behavior is caused by the limited memory during the restoration

Preliminary solution

Remove all apps from the local memory before starting the backup. This reduces the size of the backup file.

3.4.3 Solutions

Bug 355411: Online help to "Manage app data" is shown in version 0108 instead of 0110

Description

If F1 is pressed on the "Manage app data" site or it is clicked on the question mark and "Current page help" is selected in the submenu, the online help on "manage app data" opens in the version 0108 and not in the version 0110.

Preliminary solution

Press F1 or click on the question mark icon to open the online help on "Manage app data" and select "Current help page" is the displayed submenu. Use the function "Switch version" to switch to the help on the version 0110 on the open help site.

4   Service and support

Our worldwide service network provides an optimized and efficient support.
Our experts provide you with advice and assistance. You can contact us **24/7**.

Service Germany

Our technology-oriented Competence Center in Lohr, Germany, is responsible
for all your service-related queries for electric drive and controls.

Contact the **Service Hotline** and **Service Helpdesk** under:

Phone:	**+49 9352 40 5060**
Fax:	**+49 9352 18 4941**
Email:	➦ service.svc@boschrexroth.de
Internet:	➦ http://www.boschrexroth.com

Additional information on service, repair (e.g. delivery addresses) and training
can be found on our internet sites.

Service worldwide

Outside Germany, please contact your local service office first. For hotline
numbers, refer to the sales office addresses on the internet.

Preparing information

To be able to help you more quickly and efficiently, please have the following
information ready:

- Detailed description of malfunction and circumstances
- Type plate specifications of the affected products, in particular type codes
  and serial numbers
- Your contact data (phone and fax number as well as your e-mail address)

5   Index

Bosch Rexroth AG
P.O. Box 13 57
97803 Lohr a.Main, Germany
Bgm.-Dr.-Nebel-Str. 2
97816 Lohr a.Main, Germany
Tel. +49 9352 18 0
Fax +49 9352 18 8400
www.boschrexroth.com/electrics