

Device maintenance for the Cubis® MCA Balance



Executive Summary

This description provides an overview of the maintenance function for the Sartorius Cubis® II MCA laboratory balance. It contains explanations of each corresponding function for device updates, backup and restore of device data, export and import of device settings as well as diagnostic functions.

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1 Device maintenance

This chapter describes the software maintenance of the Cubis® MCA laboratory balance. This includes:

- updating the device software
- the installation of a QAPP center
- the installation of customized QAPPs
- the backup of the complete device data
- restoring the complete device data
- exporting individual settings
- importing individual settings
- resetting the device to factory settings
- creating a diagnostic file for a detailed analysis

2 Firmware updates

Firmware updates are continuously offered for the device. The firmware contains all basic functions required for the operation of the device. QAPPs are part of the applications and are therefore not included in the firmware. Firmware updates include functional enhancements of the device, as well as corrections of existing functions. Not every firmware update is necessary or affects parts that are not used by you. Therefore, please check the enclosed documents beforehand to find out which parts of the firmware are updated and what effects the update has on your work processes. You can obtain the current version approved for your country from your service partner, the website www.sartorius.com or your dealer.

2.1 Preparation

Before you start the update, please ensure that your data is fully backed up. To be on the safe side, create your own backup and save it to an external location. If your device has been qualified, it will lose its qualification when the new firmware is installed. It must be re-registered in the device by a Sartorius service technician or another authorized person.

Make sure that the file to be installed is available on the balance via a connector. Set up a new connector if necessary.

2.2 Process

To transfer the software update to the balance, follow the steps below.

User steps:

1. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
2. Navigate to menu [Device maintenance] -> [Update firmware]
3. Select the connector through which the previously provided file is reached.
4. The device shows all files found in a valid file format via the connector. Select the desired update file.
5. The device displays a confirmation prompt with the selected file. To update the device now, select the [Continue] button.
6. The device will now automatically start the update process. The file is transferred to the device, a data backup is stored on the internal memory and any necessary data structures are updated after the restart. This process may take several minutes depending on the available data. The balance must not be disconnected from the power supply during this time.

After the automatic restart, the device is available with the updated firmware. The new software version can be checked in the status center.

2.3 Error handling during firmware update

For various reasons, you may not be able to perform a firmware update.

Menu item is inactive

The balance is in the verified state. Updating the operating software is not permitted in this state. Please contact your responsible service technician.

Backup is not possible

Before the operating software is updated, the balance always creates a data backup which is stored in the internal memory. If the internal memory is not available (e.g. hardware error) or not enough memory is available, the data backup cannot take place. In this case, please contact the technical support.

File selection shows no files

If the device does not provide you with an update file to choose from, please check the connector you are using first. If subdirectories are set in the connector, check whether the update file is located at the corresponding directory on the file system.

The update file consists of two parts. If you have received an archive (e.g. ZIP), first unpack this with a suitable program before making the data available via the connector. A valid firmware update file consists of two parts. A main file with the file extension 'upd' and a checksum with the extension 'upd.md5'.

Incompatible software downgrade detected

You have installed a software version that had a lower version and data level than the previously installed version. Since proper use cannot be ensured, all data will be deleted. The device must be set up again.

3 Updating the QAPPs

Sartorius offers regular updates of the existing QAPPs as well as new ones. New standards, regulations and bug fixes are introduced in the updates. All QAPPs are combined in a QAPP Center and categorized in different packages. Updating the QAPP Center does not update the currently existing tasks. However, new tasks are always created with the installed version of the QAPP Center.

3.1 Updating the QAPP Center

You can obtain the latest version of the QAPP Center from the Sartorius product page or from your service partner.

User steps:

1. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
2. Navigate to menu [Device maintenance] -> [Install QAPP Center]
3. Select the connector through which the previously provided file is reached.
4. The device shows all files found in a valid file format via the connector. Select the desired QAPP center file.
5. The device shows a message that you can close with the [Continue] button to start the update.
6. The device now automatically starts the update process. This transfers the file to the device and renews the existing QAPP files for new tasks. After completion, the device will guide you back to the menu. The balance must not be disconnected from the power supply during this time.

3.1.1 Update the QAPP Center of FTP server

This example describes the setup and application of the Cubis® MCA balance, in order to load the update for the QAPP Center of an FTP server.

For transferring files from an FTP network server, a [Connection to FTP/FTPS] QAPP extension from the [Connectivity] package is required. The extension can be used free of charge for 30 days, after which it must also be licensed.

Prerequisite for this application is an appropriately set up FTP server in your network.

For networked MCA balances, this application enables the update of the QAPP Center from a central source.

3.1.1.1 Setting up

Configuration steps:

1. Activate the [Connection to FTP/FTPS] QAPP extension, if this has not yet been done.

- a. Open the [Task management] menu, followed by the [QAPP Center].
 - b. Select the [Connectivity] software package, and within it, the [Connection to FTP/FTPS] QAPP. The description and version of the QAPP will be displayed.
 - c. Use the [License] button to activate this QAPP; the order and license information will be displayed.
 - d. If this QAPP was not ordered as [factory licensed], start the test version or enter the license code that you have purchased for this QAPP.
2. Set up a connector to an FTP server e.g., [My FTP server for QAPP Center update].
 - a. Open the [Settings] menu.
 - b. Navigate to [Connections] -> [Connectors] -> [FTP].
 - c. Use the [+] button to activate the creation of a new connector.
 - d. Assign a unique name to this connector.
 - e. Enter the IP address of the network server, ensuring that you spell it correctly
 - f. A port number is required for the connection: the number 21 has been assigned. If required, you can enter a different port number.
 - g. For updating the QAPP Center, you can also specify a sub-directory for the files stored in the server.
 - h. Enter the username and password for accessing the FTP server. Pay attention to the correct notation here too, particularly, upper/lower case letters.

3.1.1.2 Application

User steps:

1. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
2. Navigate to the [Device maintenance] -> [Install QAPP Center] menu item. A list of connectors is displayed, using which a package can be loaded for updating the QAPP Center.
3. Select your created connector e.g., [My FTP server for QAPP Center update]. The connection to the FTP server is established and a list of available packages for updating the QAPP Center is displayed.
4. Select the desired version of the QAPP Center and confirm the message for update.
5. The QAPP Center is now copied in the balance from the FTP server and updated. As confirmation, you get the updated version of the QAPP Center displayed.
6. See Troubleshooting, if the update could not be done.

3.1.1.3 Troubleshooting

Updating the QAPP Center not possible via the connector.

1. Make sure that all the configuration steps mentioned above have been followed.
2. Check that the balance is connected to the network e.g., via an Ethernet cable. The IP address of the balance in the network must be displayed in the [Status center] under [Device information].
3. Check the IP address and port number of the FTP server, as well as the username and password for access rights to the server in the connector.
4. Test the connection of the connectors with the FTP server by activating the [Info] button in the overview of the set values. If all the settings are correct and the FTP server is accessible, you will receive a message stating that the connector is available.
5. Check with your PC whether the specified sub-directory and as well as the file for updating the QAPP Center are present in the FTP server in the network.

3.2 Installation of a customized QAPP

For special workflows, Sartorius offers a service for developing customized QAPPs. These are not provided in the QAPP Center and must be individually installed on the target device. The process for installing individual QAPPs is described below.

User steps:

1. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
2. Navigate to menu [Device maintenance] -> [Install customized QAPP]
3. Select the connector through which the previously provided file is reached.
4. Select the file that contains the individual QAPP based on the file name.
5. The device installs the individual QAPP and displays a confirmation after successful installation. The QAPP can now be used in a task via the task management.

4 Backup and restore

The device stores all settings and configurations in the internal memory. After setup, this data will probably only change rarely. In addition, depending on the QAPP used, there may also be applicative and logging data. These are also stored in the device and change depending on usage behavior.

To protect this data from accidental deletion, manipulation or technical failure, we recommend that you back up your user data regularly.

The backups are assigned to the source balance and can only be restored on this system. The Export and Import device function can be used.

4.1 Backup

Backup files can be used to restore previous configurations. They contain all the data (operational and applicative) on the device at the time of backup. If the device is to be updated or repaired, it is important to create backup files beforehand. Backups are used to still be able to access the settings and especially the applicative data in case of data loss and to restore them if necessary.

The final backup consists of two files: the actual backup file and a checksum file. Both are needed for the restore.

User steps:

1. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
2. Navigate via the [General device settings] -> [Device maintenance] to the menu item [Backup of device settings].
3. Select the connector through which you want to create the backup.
4. The device now compiles all the data for the backup and creates the corresponding backup on the selected connector. After the successful backup, you can close the displayed message window by confirming it.

4.2 Restore

The restore function offers the option of restoring previously backed up data to the system. All previously backed up settings and application data are overwritten and restored to the status of the backup. To ensure the traceability of the data, the data store and the audit trail are retained.

User steps:

1. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
2. Navigate via the [General device settings] -> [Device maintenance] to the menu item [Restore of device settings].
3. Select the connector through which the previously provided file is reached.
4. Select the file that contains the backup you want to restore based on the file name.
5. The device loads the recovery file and transfers the data to the system. The device is then restarted. After the restart, the balance can be used with the restored data.

In service mode (logging in as a service), the data storage and audit trail are also restored to the status of the backup. This mode is used exclusively for recovery after a repair.

5 Import and export of device settings

You can export the settings of the device and import them at a later time on the same or another device. In the exported file, all settings are saved that are necessary for the later setting. In contrast to a data backup, individual data can be exported selectively in the export and imported independently of the target model.

5.1 Concept

The export and import functions are fundamentally based on the menu structure of the device. A distinction is made between two basic types:

- SETTING_UP
- Configuration item

Based on these two types, the data is grouped into meaningful units for export. This means that related settings are grouped together in an exportable group (e.g. password rules include all settings for password length, minimum length, password reuse, etc.).

SETTING_UP

Settings are individual parameters that only exist once in the device and apply to the entire device. Often there are several individual setting parameters for a main point, such as local password rules, which only jointly create the desired functionality. During an import, settings are always overwritten without prompting.

Configuration item

In contrast to individual settings, there are configuration elements in the device that can occur more than once. These include, for example, connectors, users, roles, profiles or tasks. When a configuration item is imported, depending on whether there is a conflict or not, it can be added, overwrite / replace an existing item, or keep the existing one.

5.1.1 Dependency of exportable data

Settings and configuration items can reference other configuration items. This can be seen, for example, in a task. It requires a weighing profile and one or two print profiles as configuration element for the complete configuration. Furthermore, roles that can execute this task are linked to the task. The following diagram depicts the dependency relationships.

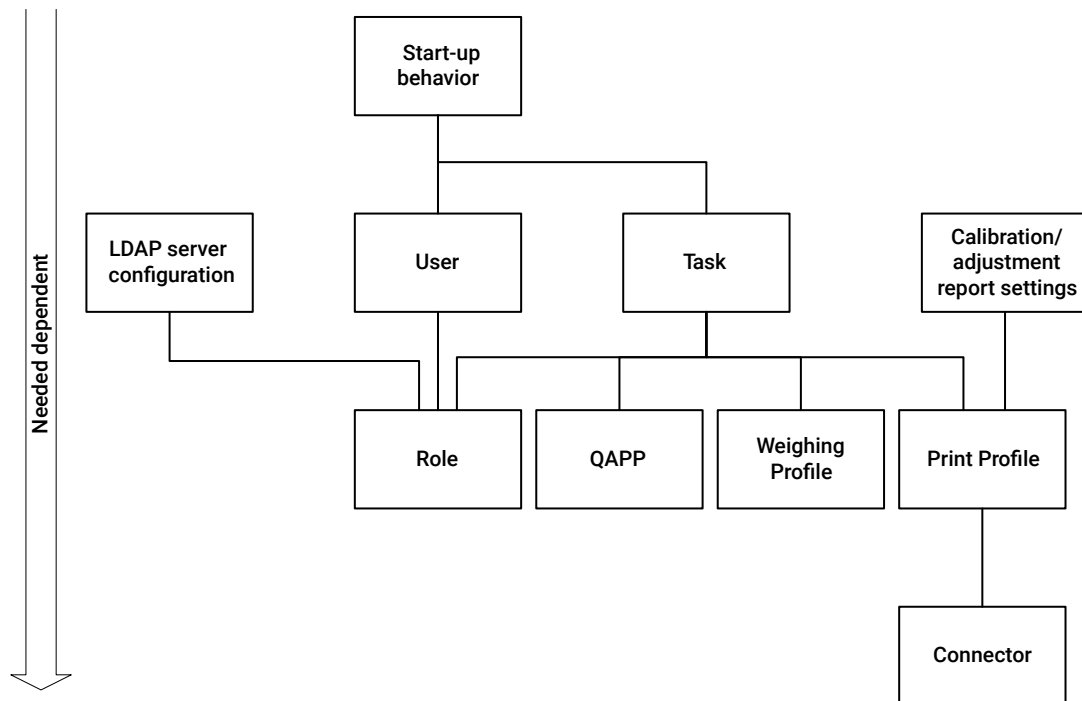


Fig. 1: Dependencies between data structures

In export and import, the dependent elements are automatically selected and output in the export file. During an import, the dependencies are also selected. An information symbol is displayed in the selection. After the selection the device shows the dependency hierarchy of the elements.

5.1.2 Exceptions

Not all settings are suitable for export or import. Therefore, the following settings cannot be exported:

- Weighing system-dependent settings (e.g. units, minimum sample weight, etc.)
- Data storage device and Audit trail
- Qualification information
- Service dates

In addition, there are device type-dependent settings, such as for the draft shield or ionizer, which are only displayed if the device supports the hardware. If this is not the case, the settings cannot be exported or imported.

5.2 Export

The export consists of the following basic steps:

1. Collect the device data
2. Select elements and settings to be exported
3. Configure file names and optionally add a comment
4. Select the connector for file transfer
5. Transfer the file

5.2.1 Export categories

At the beginning of an export, all settings and configuration elements available on the device are collected. Depending on the number of individual elements, this process can take a few seconds. Based on the menu structure, the individual export categories and the number of respective elements or settings are displayed.

5.2.2 Export file

The export function offers the possibility to adapt the file name as well as to enter additional information as free text into the file. These can be read out again during an import and displayed to the user.

For the file name, there are general rules that must be followed to enable file transfer. The rules applied were defined by POSIX (www.opengroup.org/onlinepubs/007904975/basedefs/xbd_chap03.html). Accordingly, the file name may only consist of the characters 0-9, a-z, A-Z, '.', '_', and '-' and may not be empty.

5.3 Import

The import consists of the following basic steps:

1. Select the connector for file transfer
2. Transfer the file and read the contents
3. Select the elements and settings to be imported
4. Resolve conflicts
5. Overview of the selected settings and data import

5.3.1 Conflict resolution

During the import, various conflicts can occur, which are handled differently. Generally, a distinction is made between two different types:

- Non-resolvable conflicts
- Resolvable conflicts

5.3.1.1 Non-resolvable conflicts

Non-resolvable conflicts are conflicts that cannot be automatically resolved by the system. These can be:

- Wrong firmware version
Some configurations may have a dependency on a specific firmware version. In the detail view of a QApp, for example, the minimum required firmware version can be viewed. If a task of such a QApp is now imported on a Cubis with a lower firmware version, this task is marked with an unsolvable conflict.
- Not installed extension
Some configurations can only be used if a corresponding QApp extension is installed on the Cubis. An example of this are the network connectors FTP and FTPS. These configurations cannot be imported on a device that does not have the respective extension installed.
- Not applicable configuration
Not every configuration can be imported on every Cubis. For example, the configuration of a draft shield cannot be imported on a Cubis without a draft shield.
- Dependency conflict
If a configuration is dependent on another configuration which itself cannot be imported due to an unresolvable conflict, the dependent configuration cannot be imported either. For example, if a PDF print profile with an FTP connector as output is to be imported, but the connector cannot be imported due to a missing extension, the print profile itself cannot be imported either.

To make it clear as early as possible during the import which configuration cannot be imported, these are highlighted in gray in the overview. Thus they cannot be selected for the import. By selecting the respective entries, information is displayed as to why this configuration cannot be imported.

5.3.1.2 Resolvable conflicts

In addition to conflicts that cannot be resolved, there are also conflicts that can be resolved during import. The only possible conflict here is the name conflict.

Name conflicts

A name conflict exists if a configuration item of the same type to be imported already exists on the target system with the same name. These conflicts must first be resolved. For example, if a user with the name "Bob" is imported who already exists as a user with this name on the target device, a solution strategy must be found for this conflict.

5.3.1.3 Solution strategies

There are three different strategies to choose from for resolving a conflict:

- **Keep the existing configuration**
With this strategy the already existing configuration is kept and the configuration to be imported is discarded. For example, if a PDF print profile named "PDF Print" is imported with an FTP connector as output, but a print profile with this name and a USB connector as output already exists on the target device, only the print profile with the USB connector will exist after the import with this strategy.
- **Overwrite the existing configuration**
With this strategy, the existing configuration is overwritten with the configuration to be imported. This resolution strategy directly affects the existing system configuration, as all other items associated with this configuration item then use the imported configuration. In the example above, with this strategy, only the print profile with the FTP connector would be available as output after the import.
- **Adding the new configuration by renaming it.**
With this strategy, both the existing configuration and the configuration to be imported are available after the import. In the above example, the print profile with the USB connector and the FTP connector would be available after the import. To resolve the name conflict, a new name is generated for the configuration to be imported. This name consists of the old name together with a sequential number. In the above example, print profile would be saved with the FTP connector with the name "PDF Print_1".

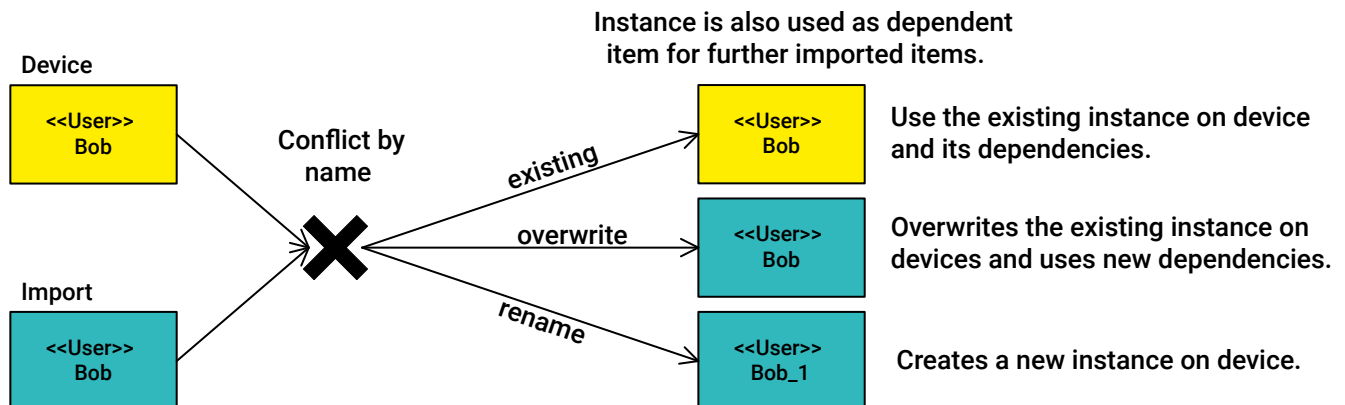


Fig. 2: Conflict solving strategy

5.3.1.4 Visualization of the solution strategies

The user can select a resolution strategy both globally for all conflicts, and selectively for individual conflicts. The process is as follows:

1. After confirming the configuration to be imported, a message about found conflicts appears. Here the user can now select a strategy for all conflicts. Existing] and [Overwrite] are available for selection. If the user decides on one of these two strategies, the overview screen for the configurations to be imported appears directly. If the user does not want to select a global strategy, but decides for each category individually, he can select [Decide individually].
2. If [Decide individually] was selected in the first step, the conflicts for each individual category are now displayed. For example, all conflicts found for print profiles are displayed. Here the user can again decide which strategy should be used for this category. If a strategy is to be selected for each individual configuration, [Decide individually] can be selected again.
3. If [Decide individually] was selected in the second step, all conflicts of the respective category are now displayed individually and a solution strategy can be selected.

When all conflicts have been resolved, a summary of the configuration to be imported appears together with the selected resolution strategy. The Back button can be used to reset the selected resolution strategies and restart the selection.

5.4 Application examples

5.4.1 Transferring a complete Task

You can use the export and import to transfer a task with all settings from one balance to another. In doing so, all settings and dependencies are transferred so that the behavior on both devices is as identical as possible. Please also note the exceptions here.

User steps for export:

1. On the source device, check the task to be exported and prepare a storage medium or create an appropriate connector through which you want to save the export.
2. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
3. Navigate via the [General device settings] -> [Device maintenance] to the menu item [Export].
4. Select the [Tasks] option in the export settings. The device then displays all the tasks set up there. Select the task(s) to be exported.
5. After you have selected all the tasks you want to export, you can go back to the export options using the [back arrow]. The numbers in the Task option should now show the number of tasks selected as well as the maximum number of tasks. Furthermore, you can see that all dependencies relevant for the task (profiles, connectors and roles) have been automatically selected as well.
6. Now press the right arrow. In the next screen you can optionally adjust the file name or store additional information in the comment, which the importing person can view later. Another click on the arrow symbol takes you to the selection of the connector to which the data is to be transferred to.
7. The device now transfers the export file to the connector. You will then be returned to the menu.

User steps for import:

1. Switch to the target device. Open the menu for the scale settings with the [Setup] button.
2. Navigate via the [General device settings] -> [Device maintenance] to the menu item [Import].
3. Select the corresponding connector through which you created the previously created export file.
4. The device displays a list of files that are accessible via the connector. Select the previously exported file. The device loads the file and guides you further to the categories contained in the export file.
5. Either select the entire data using the selection box in the header or select the Task category to select the task to be imported individually. Within the category, select the task by its name. In the main selection you will now see that the necessary dependencies have also been selected automatically.
6. Select the right arrow in the header to continue the import process. If conflicts exist, you will first reach the conflict resolution.
7. Choose the conflict resolution strategy that is right for you, as described in the Conflict resolution strategies chapter.
8. In the following overview, the device shows you once again the complete list of all elements to be imported and any conflict resolution. Select the button with the arrow pointing to the right in the header to start the import now.
9. The individual import categories are processed in sequence. At the end, the dialog can be exited by confirming the message with OK.

Caution: Each task has a dependency on a role that controls visibility and executability. Depending on your choice of conflict resolution, the new task may not be visible in your profile. Adjust the role assignment of the new task in the task management here.

5.4.2 Transferring LDAP settings

Using the export and import function, settings for the IT infrastructure can be transferred. This application example shows the steps for transferring LDAP settings from a source device to a target device. All settings and the dependent role settings are transferred so that the behavior is identical on both devices.

User steps for export:

1. On the source device, check the LDAP setting to be exported and prepare a storage medium or create an appropriate connector through which you want to save the export.
2. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
3. Navigate via the [General device settings] -> [Device maintenance] to the menu item [Export].
4. Select the [Device settings] option in the export settings. The device then displays all exportable settings. Select the LDAP server settings.

5. Now you can go back to the export options via the back arrow. The numbers in the Device Settings category should now show a selected option (first number). Furthermore, you can see that automatically all dependencies (roles) relevant for the LDAP settings have been selected as well.
6. Now press the right arrow. In the next screen you can optionally adjust the file name or store additional information in the comment, which the importing person can view later. Another click on the arrow symbol takes you to the selection of the connector to which the data is to be transferred to.
7. The device now transfers the export file to the connector. You will then be returned to the menu.

User steps for import:

1. Switch to the target device. Open the menu for the scale settings with the [Setup] button.
2. Navigate via the [General device settings] -> [Device maintenance] to the menu item [Import].
3. Select the corresponding connector through which you created the previously created export file.
4. The device displays a list of files that are accessible via the connector. Select the previously exported file. The device loads the file and guides you further to the categories contained in the export file.
5. Either select the entire data using the selection box in the header or select the device settings category to select the LDAP server configuration. In the main selection you will now see that the necessary dependencies have also been selected automatically.
6. Select the right arrow in the header to continue the import process. If there are conflicts due to the dependent role, you will first enter the conflict resolution.
7. Choose the conflict resolution strategy that is right for you, as described in the Conflict resolution strategies chapter.
8. In the following overview, the device shows you once again the complete list of all elements to be imported and any conflict resolution. Select the button with the arrow pointing to the right in the header to start the import now.
9. The individual import categories are processed in sequence. At the end, the dialog can be exited by confirming the message with OK.

The imported LDAP settings are valid immediately after the import. They take effect from the next time a user logs in via LDAP.

5.4.3 Transfer of a print profile

This application example shows the steps to transfer a print profile from a source device to a target device. The aim is to transfer the print settings used in tasks, including the settings of a connector, to another device.

User steps for export:

1. On the source device, check the setting to be exported and prepare a storage medium or create an appropriate connector through which you want to save the export.
2. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
3. Navigate via the [General device settings] -> [Device maintenance] to the menu item [Export].
4. Select the [Print profiles] option in the export settings. The device then displays all created print profiles. Select the desired profile to be transferred.
5. Now you can go back to the export options via the back arrow. The numbers in the Device Settings category should now show a selected option (first number). Furthermore, you can see that automatically all dependencies (connectors) relevant for the print profiles have been selected as well.
6. Now press the right arrow. In the next screen you can optionally adjust the file name or store additional information in the comment, which the importing person can view later. Another click on the arrow symbol takes you to the selection of the connector to which the data is to be transferred to.
7. The device now transfers the export file to the connector. You will then be returned to the menu.

User steps for import:

1. Switch to the target device. Open the menu for the scale settings with the [Setup] button.
2. Navigate via the [General device settings] -> [Device maintenance] to the menu item [Import].
3. Select the corresponding connector through which you created the previously created export file.
4. The device displays a list of files that are accessible via the connector. Select the previously exported file. The device loads the file and guides you further to the categories contained in the export file.
5. Either select the entire data via the selection box in the header or select the previously exported profile in the Print profiles category. In the main selection you will now see that the necessary dependencies (connector, if applicable) have also been selected automatically.
6. Select the right arrow in the header to continue the import process. If there are conflicts due to the dependent connector, you will first enter the conflict resolution.

7. Choose the conflict resolution strategy that is right for you, as described in the Conflict resolution strategies chapter.
8. In the following overview, the device shows you once again the complete list of all elements to be imported and any conflict resolution. Select the button with the arrow pointing to the right in the header to start the import now.
9. The individual import categories are processed in sequence. At the end, the dialog can be exited by confirming the message with OK.

The imported profile can be used immediately after the import. Either link the print profile to a new or existing Task or use it for the calibration report.

5.4.4 Cloning an entire device

This application example shows the steps to transfer all settings as well as tasks from a source device to a target device. The goal is to obtain a similar device with the same settings, but device-dependent data is not transferred (see also Exceptions).

User steps for export:

1. On the source device, check the settings to be exported and prepare a storage medium or create an appropriate connector through which you want to save the export.
2. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
3. Navigate via the [General device settings] -> [Device maintenance] to the menu item [Export].
4. Use the selection box in the header to select all the data. In the main selection, you can see from the two equal numbers behind each category that all data has been selected.
5. Now press the right arrow. In the next screen you can optionally adjust the file name or store additional information in the comment, which the importing person can view later. Another click on the arrow symbol takes you to the selection of the connector to which the data is to be transferred to.
6. The device now transfers the export file to the connector. You will then be returned to the menu.

User steps for import:

1. Switch to the target device. Open the menu for the scale settings with the [Setup] button.
2. Navigate via the [General device settings] -> [Device maintenance] to the menu item [Import].
3. Select the corresponding connector through which you created the previously created export file.
4. The device displays a list of files that are accessible via the connector. Select the previously exported file. The device loads the file and guides you further to the categories contained in the export file.
5. Use the selection box in the header to select all the data for import. In the main selection you can see from the numbers in the categories that all data have been selected.
6. Select the right arrow in the header to continue the import process. Select the right arrow in the header to continue the import process. If conflicts are detected, select [Overwrite] at this point so that all settings are taken from the import data without creating duplicates.
7. In the following overview, the device shows you once again the complete list of all elements to be imported and any conflict resolution. Select the button with the arrow pointing to the right in the header to start the import now.
8. The individual import categories are processed in sequence. At the end, the dialog can be exited by confirming the message with OK.

To make all data effective after the import, it is advisable to restart the device. Afterwards you have the data of the source device and possibly still existing old data, which were not overwritten, on the target device.

5.4.5 Customized default configuration

Exported data can be used to bring the device into a defined, pre-configured state after reset.

User steps for export:

1. Create a complete configuration on a device to be used as a starting point for pre-configuration.
2. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
3. Navigate via the [General device settings] -> [Device maintenance] to the menu item [Export].
4. Go through all export categories one by one, selecting those elements and settings that should be restored to their current state after a factory reset. Note that the necessary dependencies are automatically selected as well.
5. Now press the right arrow. In the next screen you can optionally adjust the file name or store additional information in the comment, which the importing person can view later. Another click on the arrow symbol takes you to the selection of the connector to which the data is to be transferred to.
6. The device now transfers the export file to the connector. You will then be returned to the menu.

User steps for import:

1. Log in to the device as a service user. The function for setting the user-defined pre-configuration is only accessible in service mode.
2. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
3. Navigate via the [General device settings] -> [Service functions] to the menu item [Manage factory defaults].
4. Select the function [Load user-defined defaults]. Confirm the following dialog by selecting [Continue].
5. Select the corresponding connector through which you created the previously created export file.
6. The device displays a list of files that are accessible via the connector. Select the previously exported file. The device loads the file and guides you further to the categories contained in the export file.
7. The device will now load the file and install it on the device.
8. You can view the installed file using the [View meta data] function.

In the case of a regular reset to factory settings, the installed data is automatically loaded the next time the device is started. If the device has been reset in service mode, the installed pre-configuration is also deleted.

6 Reset to factory settings

Resetting to factory settings resets the device to its original state at delivery. Please note that all settings, all installed QAPPs and task-specific data are reset or deleted. We therefore recommend creating a backup of the data beforehand.

6.1 Reset to factory settings (normal mode)

User steps:

1. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
2. Navigate via the [General device settings] -> [Device maintenance] to the menu item [Reset to factory settings].
3. The device displays a note for switching on again after the reset. Select [Continue].
4. The device now terminates all services and deletes all settings. However, the data memory and audit trail are retained. The device then goes into standby. Depending on the application, the device can now be disconnected from the power supply or restarted by briefly pressing a button on the back of the device.

6.2 Reset to factory settings (service mode)

Resetting to factory settings changes in function if you perform a service reset as a service user. In this case, the data memory and audit trail are also deleted. The function can only be accessed via the Service menu.

User steps:

1. From the main menu, use the [Setup] button to open the menu for the settings of the balance.
2. Navigate via the [General device settings] -> [Service functions] to the menu item [Repair functions].
3. Select the function [Reset to factory].
4. The device displays a note for switching on again after the reset. Select [Continue].
5. The device now terminates all services and deletes all settings incl. data memory and audit trail. The device then goes into standby. Depending on the application, the device can now be disconnected from the power supply or restarted by briefly pressing a button on the back of the device.

7 Diagnostic files

Each delivered version of the device software is subject to extensive testing and quality assurance. Nevertheless, it can happen that faulty or unforeseen conditions arise within the system. To be able to analyze these states, the device is able to create a diagnostic file.

The diagnostic file is a file archive containing data arising from the system components during operation. The logging here is aimed only at functional operation and not at the collection of customer data. Therefore, no log file contains specific customer data, passwords or access to the infrastructure in which the device is integrated.

The diagnosis can be generated in two variants. The [normal diagnosis] contains:

- General device information
- List of recent errors

- Functional log
- Statistic of wear parts

The [extended diagnosis] contains all data of the normal diagnosis. In addition, it may contain data that allows Sartorius to reconstruct the specific cause of a fault, but without using customer data.

User steps:

1. Navigate to the menu [Device settings] -> [Device maintenance] to the item [Create diagnostic file].
2. Confirm the data content dialog with [Create].
3. Select a suitable connector for data transmission.
4. Depending on the analysis, select either [Standard content] or [Extended content]. If necessary, a Sartorius employee will inform you of the type of diagnosis.
5. The device collects the necessary information and creates the diagnostic file. It is then automatically copied to the connector. You can exit the dialog by clicking the [Check mark].

Send the diagnostic file to your service technician. If you have any further questions, Sartorius Service will contact you.