

ReadMe FluentControl 3.9

2026-08-14 Build 3.9.9.1654

Introduction

This document contains important information about FluentControl 3.9. Please read it carefully before installing or upgrading the software. Our [Knowledge Portal](#) has additional information on FluentControl and other Fluent related topics.

Contents of this Readme

1. Installation Procedure
2. Upgrade Procedure
3. Changes in FluentControl 3.9
4. Additional Information
5. Compliance Features
6. Known Issues
7. FluentSetup

1. Installation procedure

To install FluentControl, follow these steps and reboot the computer whenever prompted to do so:

- a) Execute the autorun.exe
- b) Execute installation steps in the following order:

Step 1: Pre-Installation

During the installation of the IAM user administration module, an Administrator username and password must be entered. The password must be a minimum of 12 characters in length and include at least one non-alphanumeric character, one numeric digit, one uppercase letter, and one lowercase letter.

If you upgrade from a previous version of FluentControl also refer to chapter “2. Upgrade Procedure”

Step 2: Install FluentControl

During the execution of this installation step, an installation log file is generated in the user temp folder (%temp%) (e.g., Fluent_Install_2025_09_08__15-30-20.log).

(optional) Step 3: Install Sample Tracking

- The InstallShield wizard may show MAP.IAM as a pending requirement (it does not recognize that MAP.IAM v2 is already installed).
- Click Install on this screen.
- When the MAP.IAM installation wizard appears, cancel it (MAP.IAM v2 is already installed).
- A message will appear: "The installation of MAP.IAM appears to have failed. Do you want to continue the installation?"
- Click Yes to continue. Sample Tracking will be installed successfully.

- c) Install the DisplayLink driver for the touch monitor from the Drivers > Touch Screen Driver folder. Please consult the ReadMe for the DisplayLink driver first.

Using HydroControl, Magellan Tracker and/or SPARKControl Magellan with FluentControl 3.9

HydroControl, Magellan Tracking and SPARKControl Magellan are not compatible with IAM and require the legacy User Management System (UMS) to be installed. However, the FluentControl 3.9 installation and upgrade process removes UMS from the PC and installs IAM instead. To use any of the three software products with FluentControl 3.9 on the same PC, UMS as well as IAM must be installed:

- A. If neither software was previously installed, install FluentControl 3.9 first and then install HydroControl / Magellan Tracking / SPARKControl Magellan
- B. If HydroControl / Magellan Tracking / SPARKControl Magellan are already installed and an installation of FluentControl 3.9 is needed:
 1. Stop "Tecan User Management Server 1.1" service if it is running
 2. Create a backup of folder 'C:\ProgramData\Tecan\Tecan User Management' including all subfolders
 3. Install, or upgrade to, FluentControl 3.9
 4. Either
 - a. Re-install HydroControl / Magellan Tracking / SPARKControl Magellan
 - b. Install UMS using a stand-alone installer
 5. Stop "Tecan User Management Server 1.1" service
 6. overwrite all files in 'C:\ProgramData\Tecan\Tecan User Management' including all subfolders with the backup files
 7. Start "Tecan User Management Server 1.1" service

Ensure that the user login credentials (name and password) in IAM and UMS are identical.

2. Upgrade procedure

To upgrade FluentControl, follow these steps and reboot the computer whenever prompted to do so. It is not necessary to uninstall FluentControl first.

- a) If User Management is used, de-activate it before upgrading
- b) Close FluentControl
- c) Execute the autorun.exe
- d) Execute installation steps in the following order:

Step 1: Pre-Installation

As part of pre-installation the new Identity Access Management (IAM) module will be installed. Depending on what version of FluentControl you are upgrading from, see overview table and details below:

Scenario	What to Do	What Happens to Users/Data
1) Upgrading from FC 3.7 and earlier	Install as normal, do not cancel installation of MAP IAM	Users/data are migrated. Administrator gets a list of one-time passwords for users
2) Upgrading from FC 3.7 SP1, 3.8 or 3.8 SP1	Enter credentials during install	Users/data are migrated
a) with credentials b) without credentials	Cancel credentials prompt, clean install, disable User Management first	Users/data are NOT migrated
3) Upgrading from 3.9 beta version	Uninstall MAP, reinstall MAP	Users must be recreated
4) Sample Tracking install/upgrade (FC 3.9)	Cancel MAP.IAM install when prompted, continue Sample Tracking install	No issues, proceed as above

1. If you upgrade from FluentControl 3.7 or lower

FluentControl 3.9 automatically migrates any existing users defined in the user administration settings from the legacy User Management System (UMS) to the new IAM. An Administrator is required to log in with their old UMS password and set a new IAM password.

By default, IAM passwords must be a minimum of 12 characters in length and include at least one non-alphanumeric character, one numeric digit, one uppercase letter, and one lowercase letter.

The Administrator user is directed to a password protected ZIP file containing temporary IAM passwords for all other users. A 3rd party tool must be used to unzip the file. The default Microsoft tool will give an error.

After the initial login to IAM, the temporary password must be reset by each user individually.

2. If You Already Use MAP.IAM v1 (Installed with FC 3.7 SP1 or Higher)

To migrate your existing data, you need the username and password of the service account user to install MAP.IAM v1.

If you have the credentials:

- When asked the first time for a service account enter a new service account; this account will become obsolete when the installation is finished.
when the installer for the 2nd time asks for the old service account enter those credentials.
- Your users and data will be transferred to MAP.IAM v2.

Important: Do NOT reset the service account password. If you do, the IAM service will not work. You must use the original password.

If you do NOT have the credentials:

Important: Disable User Management in FluentControl BEFORE starting the clean installation.

- Cancel the credentials input window during installation.
- Proceed with a clean installation of MAP.IAM v2.
- The new database will start with only one user (created by the installer).
- Your users and data will NOT be carried over to MAP.IAM v2.

3. Upgrading from FC 3.9 (BETA) to FC 3.9 (RELEASED)

Note: your IAM user accounts will NOT be available after uninstalling MAP.

Steps:

1. Uninstall MAP and restart your PC
2. Install MAP again (this will create a new User Database).
3. **Finally:** All IAM user accounts must be created from scratch.

4. If You Use Sample Tracking (New Installation or Upgrade of FC 3.9)

The InstallShield wizard may show MAP.IAM as a pending requirement (it does not recognize that MAP.IAM v2 is already installed).

- Click Install on this screen.
- When the MAP.IAM installation wizard appears, cancel it (MAP.IAM v2 is already installed).
- A message will appear: "The installation of MAP.IAM appears to have failed. Do you want to continue the installation?"
- Click Yes to continue. Sample Tracking will be installed successfully.

5. Using HydroControl, Magellan Tracker and/or SPARKControl Magellan with FluentControl 3.9

see respective section under 1. Installation Procedure

Step 2: Install FluentControl

During the execution of this installation step, an installation log file is generated in the current user's temp folder (%temp%) (e.g., Fluent_Install_2025_09_08__15-30-20.log).

(optional) Step 3: Install Sample Tracking

- The InstallShield wizard may show MAP.IAM as a pending requirement (it does not recognize that MAP.IAM v2 is already installed).
- Click Install on this screen.
- When the MAP.IAM installation wizard appears, cancel it (MAP.IAM v2 is already installed).
- A message will appear: "The installation of MAP.IAM appears to have failed. Do you want to continue the installation?"
- Click Yes to continue. Sample Tracking will be installed successfully.

After the installation or upgrade

A Tecan Field Service Engineer must open FluentSetup to perform any necessary firmware updates and service actions.

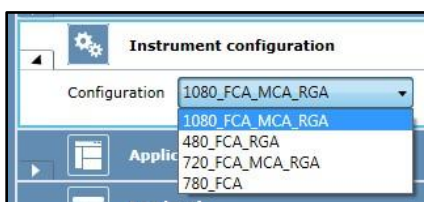
Open FluentControl and accept importing the updated labware definitions. This process may take some time to complete.

If used, re-activate and open User Administration to verify that the login and password settings are correct.

Please check any scripts, processes and methods for validity and execute test runs.

3D Simulator instrument configuration

It is strongly recommended after installing FluentControl that the instrument's configuration is selected in *Settings > Configure System > Instrument configuration*. The instrument's configuration name is based on the serial number of the connected instrument:



If working with the 3D Simulator to develop methods for a specific instrument that is not connected to that PC, the instrument's configuration can be used. Copy the .config file *C:\ProgramData\Tecan\VisionX\InstrumentConfigurations* from the Fluent PC to the same folder on the PC not connected to the Fluent. Launch FluentControl and select the configuration in *Settings > Configure System > Instrument configuration*.

Registering the IoT client

Information on how to register the IoT Client can be found on the [Knowledge Portal](#).

The Introspect app can be downloaded from the App Store and Google Play Store for Apple and Android devices respectively.

Anti-malware software and FluentControl

Tecan recommends refraining from actively scanning hard drives or memory while a run is in progress in FluentControl. If a malware scan must be executed during a run, exclude (whitelist) the following directories and their subdirectories from the scan:

```
C:\Program Files (x86)\Tecan  
C:\Program Files (x86)\Common Files\Tecan  
C:\Program Files\Tecan  
C:\ProgramData\Tecan
```

3. Changes in FluentControl 3.9

The following changes have been made in FluentControl 3.9

- PMP Outlier Detection for Aspirate and Dispense + Curve Viewer
- API V3, no longer supporting COM-Interface, support for process start
- New lookup functions (SW Version, FW Version)
- Adjustments for Combi-Tray-Light (new mount offset)
- Allow setting preferred grip mode in RGA Transfer Labware Command
- Trigger Subroutine on Runner insertion
- Removed Obfuscation for IoT by default
- Removed support for FRIDA reader

See Revision History FluentControl 3.9 for a complete list of bug fixes and changes. See FluentControl Manual for more information on software functions.

Important to know:

The robustness improvements for disposable tip pickup introduced with FluentControl 3.8 SP1 depend on parameters stored (as custom attributes) in the disposable tip labware definition. When upgrading from FluentControl 3.7 SP1 or earlier, the new labware definitions are automatically imported on first startup of FluentControl. When upgrading from FluentControl 3.8, please manually import the tip definition from the Import Library folder. When importing methods from old versions of FluentControl please make sure to exclude (remove conflicts) disposable tip labware, so that the latest version with optimal parameters stays in FluentControl.

4. Additional Information

Teaching Nests next to MCA Thru Deck Waste Chute

Accessing the nests next to the MCA Thru Deck Waste Chute with the RGA in narrow orientation is not possible with the default vectors. If access is required, please duplicate the nests, and teach a custom vector. Z-travel should be taught higher than the Waste Chute to avoid Pathfinder errors.

Touch monitor content shown on main monitor if instrument is disconnected or turned off

If the PC loses connection to the Fluent, for example if it is powered off or the USB cable is disconnected, the touch monitor content is displayed on the main monitor.

The easiest solution is to turn on the instrument, verify the USB connection, and restart FluentControl. The fastest solution is to turn on the instrument and change a setting in Settings > Configure System > Drivers > TouchTools (e.g., de-select and re-select Use Full Screen checkbox).

Microsoft Remote Desktop Protocol (RDP)

Tecan sporadically receives reports of issues when using RDP with FluentControl. FluentControl was not tested with Microsoft Remote Desktop Protocol (RDP) and compatibility is not guaranteed. Issues such as FluentControl crashes caused by using RDP will not be analyzed and resolved by Tecan product support.

Pressure Monitored Pipetting AI cannot be used together with the Phase Separator commands

The PMP AI algorithms have not been trained to evaluate the pressure profiles resulting from executing the Phase Separator workflows. To avoid run time errors, do not switch on PMP AI when running a Phase Separator method.

Ejecting 5ml disposable tips

5ml disposable tips are wider than smaller tips and require 18mm spacing between channels with mounted tips. Due to the limited length of the tip eject bar, please use only channels 1, 3, 5 and 7 when working with 5ml tips.

5. Compliance Features

This section contains a brief overview of some of the features that FluentControl offers to support compliant usage.

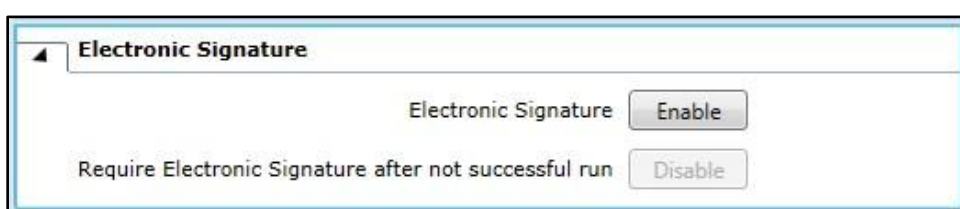
Audit Trail

Changes to all data objects, user logins and logouts, runs status, errors, changes to variables, and more are logged in the Audit Trail. By default, Audit Trail .csv files are saved in:

C:\ProgramData\Tecan\VisionX\AuditTrail

Electronic Signatures (requires Fluent Gx Assurance Software license)

Electronic signatures must be used in combination with User Administration. Enable this feature in Settings > User Administration.



Reason and user credentials must be given upon saving any changes in FluentControl. The input will be saved in the Audit Trail.

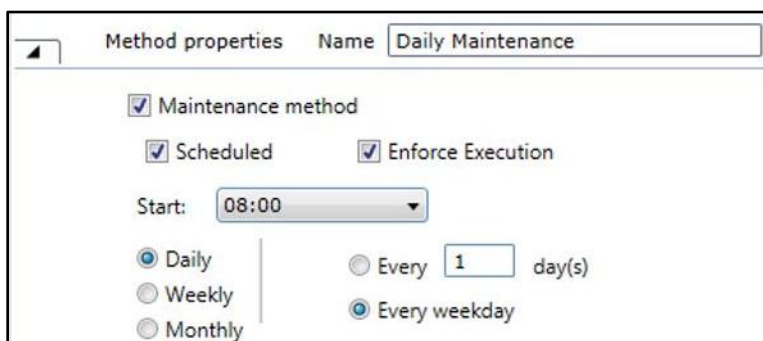
Data Audit Tool (requires Fluent Gx Assurance Software license)

This tool can be opened via the Start menu. It verifies the electronic records for a given date range, including validity of all database files, validity of all Audit Trail logs, no presence of unexpected files and no missing files.

It also enables the export of the human readable files (.xml formatted checksum protected text files) to a single directory. This export can be used for an audit or for backup and archival purposes. Please note that this is an intensive check and may take a few minutes to execute.

Scheduled and Enforced System Care Methods

In the Method Editor, methods may be scheduled based on calendar events, like a recurring meeting in Outlook. If a scheduled, enforced method is due, no other methods can be executed until it has been run.



6. Known issues

This section contains information about known issues and guidance on avoiding or handling them. If issues not described here are encountered, please contact the local helpdesk.

After upgrading FluentControl the first start of the software must be done via the Windows Start Menu (PWI 128365)

After upgrading from an earlier version than FluentControl 3.7 SP1 the software must be launched via the Windows Start menu and not directly from the application folder. Otherwise, an error is shown. This only applies to the first startup of FluentControl after the upgrade.

Runtime Error for 7mm Nest when 10ul or short 50ul tips mounted on MCA96 (PWI 118380)

During script edit time there will be no context check error when these tips are used for pipetting with an MCA96 on a microplate located on a 7mm nest. The user will only get an error during runtime that pipetting with these tips is not possible.

Default liquid class “*Whole Blood Pierce Single*” is only verified for use with 200 µl (PWI 115350)

The default liquid class “*Whole Blood Pierce Single*” is verified for use with a volume of 200 µl. When using it with lower or higher volumes, the trailing air gap (TAG) is aspirated but not dispensed. The liquid class’s MicroScript must be adapted when using it with volumes higher or lower than 200 µl. Default Liquid class “*Whole Blood Pierce Multi*” can be used with all volumes defined in that liquid class.

Additional known issues

Below are additional issues that may be encountered. Fixed issues will be listed in the Revision History of future versions of FluentControl. PWI = Project Work Item.

PWI	Title
118374	[Scheduler] Missing FluentControl Scheduler logs when Automated DiTi Handling cannot be executed
121537	Tip contents not removed on software side when tip is dropped by Air FCA or Liquid FCA
122979	[Teaching] Vector Teaching in Carriers: "Move arm to" buttons not working
123402	Convert CSV to GWL command does not recognize variable at parameter 'Stop with line'
123430	Manual Restart required after configuring SiLA2 commands
124113	[Performance] Labware not displayed after expanding command
125272	[LiquidHandling] Too much in plunger error message at Wash with 5ml syringes
126731	[Scheduler] Continuous Loading via Add button in TouchTools leads to invalid expression error for variable of scope iteration
126800	When EVA Adapter tries to pick up incorrect tips (for MCA96) the context-check message hints to a wrong cause
126877	Aspirate step leads to "Specified Cast is not valid" error and run abort
127174	Tracking at Dispense moves up and down when Z-max is close to Z-bottom
127533	[Scheduler] Traceview Process iteration array count incorrect after FluentControl restart
127671	[ErrorText] AirFCA error "Specific argument was out of range of valid values Parameter name: volume" when pipetting more than one channel
127720	[Scheduler] Plate with orientation 180° at process swaps to opposite orientation if it is the second process in a batch or if it is added by continuous loading
128439	[Scheduler] Software crash during edit time
128573	[Compliance] Enforced maintenance not restricting operator from running script before maintenance
128610	ODTC vectors change spontaneously resulting in RGA crash
128628	[Scripting] Changing labware orientation or adding plates in carousel makes the labware disappear if script line is selected
128652	[Scripting] Well Offset direction does not follow the sample direction when plate is in portrait mode
128778	RGA Transfer Labware command used for a lid gives an error
128864	[PhaseSeparator] Transfer Phase command doesn't support labware created by Add Labware command
128902	Controlbar does not display the usual categories Methods, Processes, Scripts, if user name contains an exclamation mark
128905	Run stops after MCA384 Tip Pick Up at nested tip wafer removal
128912	[i300] Move Tool Pressure does not record last value with Stop record
128930	[Scheduler] Timing Constraint Violated - Mismatch of actual duration shown in Report file and message displayed in System Trace View
129065	[Compliance] Entry could not be written to Audit File error pauses the run at midnight
129088	RGA only picks up lid and not plate on a transfer labware
129247	Failed IAM user Login on vControl Startup
129275	MCA96 errors on aspirate line in Simulation: Object reference not set to an instance of an object

129313	[IAM] User Roles and Rights need to be updated
129368	[Robustness] Aspirate / Dispense command can loose plate and well selection when expanding the command
129415	FCA collision on end position for MCA nested tips at FCA pickup tips command
129548	"Invalid Job at index 0: Invalid CarrierOrLabware: ..." when placing orphaned labware on worktable
129690	Recovery of method with asynchronous subroutines causes an abort in some scenarios
129859	[SmartCommands] Row-wise in Reagent Distribution command does not work properly
129893	[i300] i300 fails to re-initialize when a Mettler balance is connected to Te-Motion
129933	Timing problem when TRD and other arms running in parallel in separate subroutines
129970	Warning about non-synchronized device placements at FC or FS startup
129985	[ErrorText] Context check error in Sample Transfer smart command with fixed tips
130038	[Database][LiquidHandling] Correct tip capacity MCA96, 1000ul Filtered SBS
130061	[Performance] Start up of AppSW takes longer than 30 sec
130063	Sample Transfer command runs into runtime error during execution of generated script while having unusual tip to well assignment
130170	Software cannot restart with error message audit trail syncing problems
130194	LiquidFCA flushes outside of the wash station during initialization
130208	Unable to delete script sporadically
130448	Transfer Individual Volumes command well "Range-Overflow" works for target plate but not for source plate
130566	Clot, liquid-detection and system errors during pipetting commands when using PMP monitoring
130666	No tube found error in 3D Sim
130667	[MCA384] the context check does not report missing labware for Drop Tips command
130672	Import conflict is still there at importing the same definition twice
130752	[FluentID] TouchTools highlights some tubes as duplicates until all runners scanned
130757	Run aborts when all tips have been consumed without option for the user to replace tip boxes and continue (ADH with SBS DiTi for FCA)
130849	FluentControl crashes if labware with different internal IDs but identical names is present on the worktable
130945	[GUI] When no wells are selected for MCA, highlights are not displayed for the user as in FCA
130954	[Performance] DeckCheck undo/redo history causes performance issues
131012	Freeze during MicroScript execution using TIP_TOUCH_DISTANCE_X in Wall Dispense
131061	MultiSense error 'Error while setting pressure trigger levels' after instrument restart without software restart
131241	Transfer Individual volumes: FCA does not follow the tip selection in the smart command
131261	It is possible to return to edit mode after a failed test without electronic signature
131403	Sporadic timing issue preventing start of processes
131941	FluentControl crash during system initialization after i300 connection retry
132001	Pathfinder cannot find path to transfer FCA 1000ul DiTi box from Carousel transfer station to 61mm nest
132059	Context Check error 'too much in tip' when using Trailing Airgap after each Dispense
132112	Transferring string from main script to module doesn't work if the string is also a variable name
132122	System abort when clicked on "Previous Page" in loading dialogue

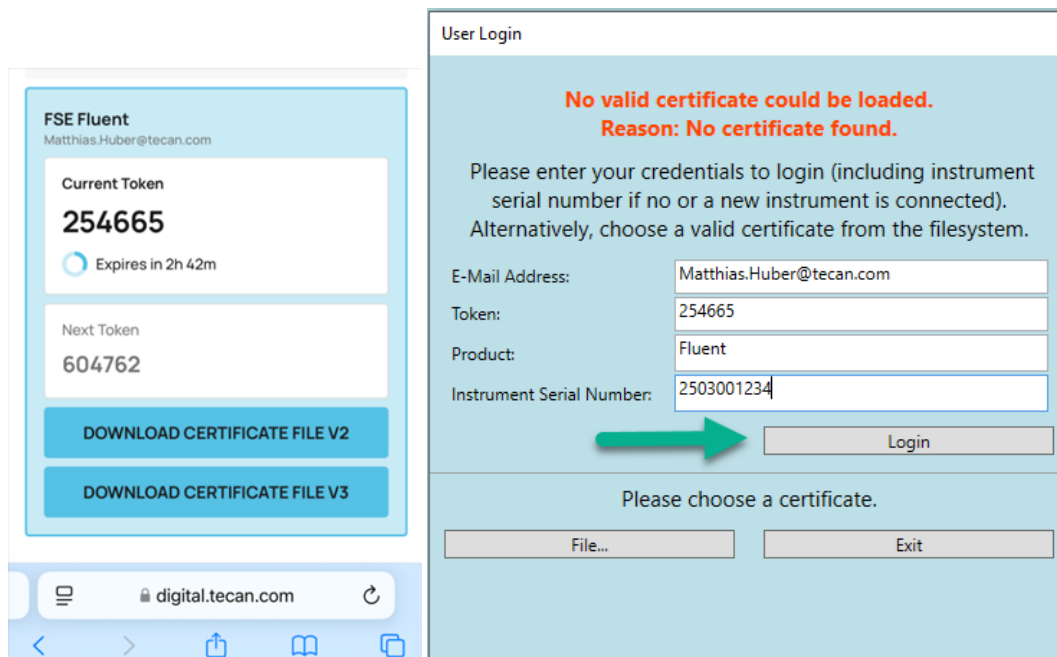
132385	Aspiration with tracking should preserve the submerge depth
132433	[API] FluentControl run unexpectedly stopped and crashed during run pause
132439	Recovery of Mix command not possible
132469	Scheduler does not terminate even though the scripts contain errors in different iterations
132505	runs with tilt carrier can only be paused but not aborted
132516	[Pathfinder] Delayed error about no evasion route found
132523	FluentControl freezes on command WaitForTimer in a Module
132551	Wait screen does not show progress bar for preparing method with operator user
132572	Runtime fatal error "Object Reference not set to an instance of an object" on some runs
132589	Run stops with error for pLLD detection if there was an On Empty Tray removal at previous Get Tips command
132610	Variable liquid class in load worklist incorrectly used
132621	Multithreading issue leading to sporadic crash at edit time
132634	sporadically z-axis hard-stop error is errorously displayed during empty tip command
132647	Detect liquid command (cLLD with MultiSense) logs detection actions for unused channels
132675	Run abort if a Wait command in a subroutine coincides with a recoverable collision error in main script
132705	FluentControl sporadically crashing when trying to save scripts containing variable mappings in modules or subroutines
132710	TouchTools Standard command - Progress settings radio button gets unselected while editing a different script command
132761	FCA does not dispense simultaneously with all tips even when Y distance of the wells is within range
132795	FluentControl crashes when printing one specific script to PDF
132796	Error when UV-light switches off 1 second ahead of schedule
132837	[Scheduler] Process becomes corrupt when adding Tube Rotator commands to process steps
132861	Large gaps in Gantt chart
132878	Worktable update at Edit Time is delayed resulting in context check errors
132985	Worktable view empty after script run.

7. FluentSetup

Access tokens must be used

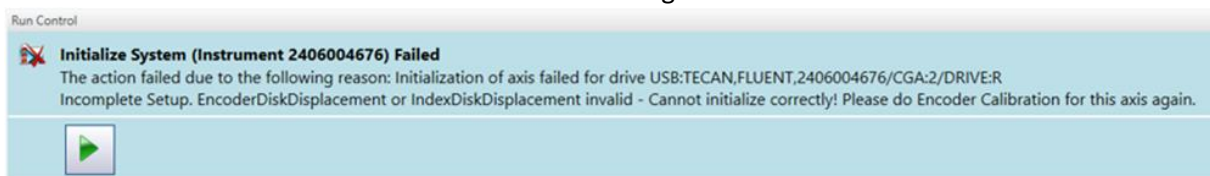
Since version 3.8 FluentSetup no longer accepts certificates. Please use access tokens instead.

Access to Tecan Service Software is restricted to trained and certified engineers to ensure that IQ/OQ actions are executed safely and correctly thereby safeguarding product performance, quality and compliance. FluentSetup 3.8 and higher require a valid Access Token to log in. To request an Access Token, go to <https://digital.tecan.com/authenticate>.



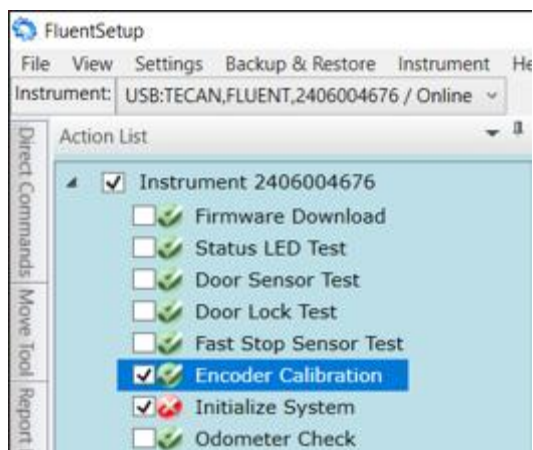
RGA Encoder Calibration action must be executed to initialize an instrument using FluentControl / FluentSetup when upgrading from FluentControl 3.7 and earlier

A new value has been added to the RGA encoder in FluentSetup 3.8, necessitating a re-calibration. Failure to execute this action will lead to an error during instrument initialization:



No tools are needed for the Encoder Calibration and the action is executed with the arm in the air. It is therefore possible to do this via remote access. It is not necessary to execute any other actions.

After installing or upgrading the software, apply the configuration to the instrument as usual and restart FluentSetup. After the restart, select the Encoder Calibration manually:



Run the Encoder Calibration action:

