ReadMe vControl 1.2

In vControl 1.2 we have many exciting new features and a lot of bugfixes. Here a list of the main new features:

- Modernized and harmonized look & feel including new vControl icon
- AI-based automatic runtime estimation
- Pipette across multiple plates simultaneously in y-axis
- New option in liquid class to do tip touching after dispense
- New option in liquid class to keep volume in tip while mixing to improve mixing performance
- Option to do bottom detection in a labware to improve pipetting accuracy
- Updated inline filter test (new command called "Inline Filter Test" that replaces "Channel Self Check")
- Support for Custom Models when using 3D sim in order to support
- Show Run Progress List (completed steps of a Method) in OneView
- Support for new US tips -> provided as import file on Master Medium
- And many more

For more information on the new features attend our 2nd Veya Tips&Tricks call or watch the recording afterwards and read the Application software manual.

Please note, the following software components have been updated to newer versions compared to vControl 1.1 SP1:

- Setup SW 6.3, which comes with an updated Te-Motion II FW 5.0
- 3D Sim 4.0
- Sample Tracking 1.5 -> This version is now also compatible with IAM, therefore UMS is no longer needed and not delivered with this SW version anymore

As always please also check the compatibility list delivered on the .iso image.

Introduction

This document contains important information about vControl v1.2. Please read carefully before using or installing the software. Our Knowledge Portal or the vControl application software manual (402665) has additional information on vControl and other Veya related topics.

1. **Important information – Read before upgrading!**
2. Considerations if not having a Tecan standard PC
3. Good to Know & general information
4. Known issues in vControl 1.2
5. Know issues in SetupSW 6.3

1. Important Information – Read before upgrading!

1) Make sure to upgrade to Setup SW 6.3 containing the updated Te-Motion II FW 5.0. Furthermore, there are newer versions of 3D Sim software (4.0) and Sample Tracking software (1.5).

2) If you're using Sample Tracking please read this section:

Before upgrading vControl, upgrade Sample tracking software first (Step 4 in vControl installation wizard). Otherwise upgrade procedure is not successful.

3) Please read the following section if you are having an export file of a version prior to V1.1 SP1:

With vControl 1.1 SP1, a new feature was introduced where liquid properties are now part of the dependency of a liquid class. If an export of a script prior to V1.1 SP1 exists, please do the following after upgrading:

Applicable for all scripts (independent of application):

1) When importing an import/export.zeia file, the file "LiquidProperties.config" under "external files" needs to be removed (if present)
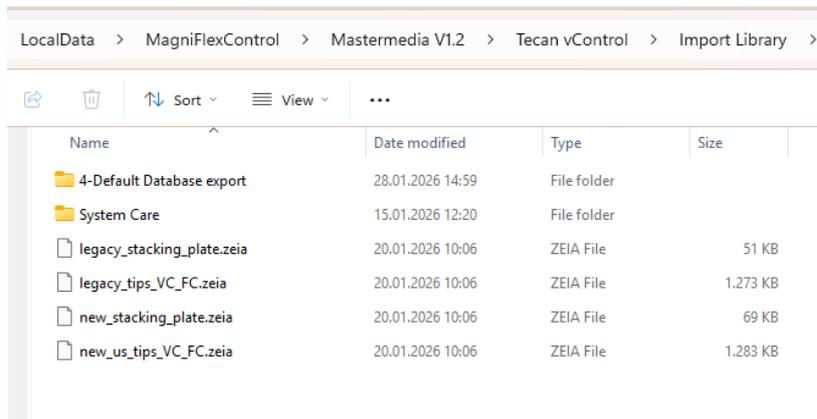
Applicable only for NAP scripts:

2) Import provided NAPLiquidProperties.zeia that contains the liquids needed for the NAP application package
3) Open all NAP related Liquid Classes. Trigger some changes and revert to being able to save them -> Dependency to Liquids will be created and saved in the Liquid Class.
4) Now create a new export of the NAP Scripts (if applicable) -> The NAP Liquids are now added to the Export as dependency

4) Support for Eton tips (US tips)

In order to use the new US-production line tips, import the new tip definition called "new_us_tips_VC_FC.zeia" on the Mater Medium in the import library folder (see screenshot below) and choose the applicable tip size(s) in the import window. The import of the tip definition will overwrite the old one, hence no changes in scripts and methods and liquid classes are needed. The old tips are also available in case it is required to change back to the legacy tips. They are called "legacy_tips_VC_FC.zeia".
There is also a new adapter plate available for the new tips, which is called "new_stacking_plate.zeia". Only use the new stacking plate on new tips and legacy stacking plate on legacy tips.

LocalData > MagniFlexControl > Mastermedia V1.2 > Tecan vControl > Import Library >

Name	Date modified	Type	Size
📁 4-Default Database export	28.01.2026 14:59	File folder	
📁 System Care	15.01.2026 12:20	File folder	
📄 legacy_stacking_plate.zeia	20.01.2026 10:06	ZEIA File	51 KB
📄 legacy_tips_VC_FC.zeia	20.01.2026 10:06	ZEIA File	1.273 KB
📄 new_stacking_plate.zeia	20.01.2026 10:06	ZEIA File	69 KB
📄 new_us_tips_VC_FC.zeia	20.01.2026 10:06	ZEIA File	1.283 KB

5) Instructions for improving the Startup Time on Veya Image

It has been identified that Windows defender virus scanner is one reason for a long startup time on Veya. In order to improve the situation and still ensure a cybersecure state of the system please execute the following procedure:

1. Exclude SystemSpecific folder from Windows Defender
   a. Open Windows Security
   b. Open Virus&Threat Protection
   c. Go to 'Virus&Threat Protection settings'
   d. Click 'Manage Settings'
   e. Go to Exclusions
   f. Click 'Add or Remove Exclusions'
   g. Click 'Add an exclusion' and select 'Folder'
   h. Browse for folder
      'C:\ProgramData\Tecan\VisionX\Database\SystemSpecific\Worktable\Connectors'
   i. Click 'Select folder'
2. Enable Controlled Folder Access for excluded *SystemSpecific* folder
   a. Open Windows Security
   b. Open Virus&Threat Protection
   c. Go to 'Virus&Threat Protection settings'
   d. Click 'Manage Settings'
   e. Go to Controlled Folder Access
   f. Click 'Manage Controlled Folder Access'
   g. Enable 'Control Folder Access'
   h. Click 'Protected folders'
   i. Enable Controlled Folder Access for folder
      'C:\ProgramData\Tecan\VisionX\Database\SystemSpecific\Worktable\Connectors'
   j. Click 'Allow an app through Controlled folder access

       k.   Click 'Add an allowed app'
- i. C:\ProgramFiles (x86)\Tecan\vControl\SystemSW.exe
- ii. C:\ProgramFiles (x86)\Tecan\SVN\bin\svnserve.exe
- iii. C:\ProgramFiles (x86)\Tecan\SVN\bin\svnversion.exe
- iv. C:\ProgramFiles (x86)\Tecan\SVN\bin\svnsync.exe
- v. C:\ProgramFiles (x86)\Tecan\SVN\bin\svn.exe
- vi. C:\ProgramFiles (x86)\Tecan\SVN\bin\svnadmin.exe
- vii. C:\Windows\System32\msiexec.exe
- viii. C:\Windows\System32\rundll32.exe
- ix. C:\ProgramFiles (x86)\CommonFiles\Tecan\Core\Recent\SvnRepair.exe

3. Add AppLocker Rule
- a. Open Local Security Policy
- b. Expand 'Application Control Policies'
- c. Expand 'AppLocker'
- d. Select 'Executable Rules'
- e. Right Click 'Executable Rules'
- f. Create new rule for group 'Everyone'
  - i. Click 'Create New Rule'
  - ii. Click 'Next'
  - iii. Select action 'Deny'
  - iv. Select group 'Everyone'
  - v. Click 'Next'
  - vi. Select 'Path
  - vii. Click 'Next'
  - viii. Click 'Browse Folders..'
  - ix. Browse and select 'C:\ProgramData\Tecan\VisionX\Database\SystemSpecific\Worktable\Connectors'
  - x. Click 'Next'
  - xi. Click 'Next'
  - xii. Enter name 'Deny vControl folder for executable for Everyone'
- g. Create new rule for group 'Administrator'
  - i. Click 'Create New Rule'
  - ii. Click 'Next'
  - iii. Select action 'Deny'
  - iv. Select group 'Administrator'
  - v. Click 'Next'
  - vi. Select 'Path
  - vii. Click 'Next'
  - viii. Click 'Browse Folders..'

         ix.   Browse and select 'C:\ProgramData\Tecan\VisionX\Database\SystemSpecific\Worktable\Connectors'

         x.   Click 'Next'

         xi.   Click 'Next'

         xii.   Enter name 'Deny vControl folder for executable for Administrator

h.   Create new rule for group 'Users

         i.   Click 'Create New Rule'

         ii.   Click 'Next'

         iii.   Select action 'Deny'

         iv.   Select group 'Users

         v.   Click 'Next'

         vi.   Select 'Path

         vii.   Click 'Next'

         viii.   Click 'Browse Folders..'

         ix.   Browse and select 'C:\ProgramData\Tecan\VisionX\Database\SystemSpecific\Worktable\Connectors'

         x.   Click 'Next'

         xi.   Click 'Next'

         xii.   Enter name 'Deny vControl folder for executable for Users

6)   Maintenance Methods found on the Master Media

To start using these maintenance methods, please import the correct .zeia file provided in the Import Library on the master media. After importing, the maintenance methods will appear in System Care in TouchTools.

The maintenance methods have been set up using the base worktable file provided by default in vControl. If this worktable file is imported, the base worktable will be overwritten. If the worktable should not be overwritten, it is possible to import the system care methods without the base worktable and then create a new worktable which contains a sealing block. This new worktable must then be assigned to the system care methods.

Disclaimer: These Methods are not validated.

For further information, please refer to the Operating Manual, or contact Tecan.

2. Considerations if not having a Tecan Standard PC

Considerations before installation

Operating system

The minimum requirements to run vControl can be found in Chapter 4.1 Computer Requirements of the vControl Application Software Manual (402665). To guarantee a good performance, Tecan recommends using an Intel processor (CPU) of the 11th generation or higher. Using a CPU of a lower generation is also possible, but performance should be verified. Scheduler applications require more computing power, and it is recommended to use an Intel i9 of the 11th generation or higher.

DeckCheck Computer Requirements

All Veya instruments have DeckCheck camera(s) integrated in the chassis. DeckCheck commands may be integrated in methods to check prior to a run that the worktable has been set up correctly. The DeckCheck feature can be disabled in Configure System. DeckCheck might not work properly when using a separate graphics card, a graphics chip integrated into the processor must be used instead. The speed of the DeckCheck command execution depends on the PC hardware configuration. **Please note that the PC requires a separate ethernet port to receive the camera signal via an ethernet cable.**

Registering the IoT client

Information on how to register the IoT Client can be found here:
https://www.tecan.com/knowledgeportal/digital-solutions#introspect-how-to

General considerations

vControl uses Windows components, especially the .NET library. Please make sure to regularly upgrade to the latest .NET security and quality updates to prevent a negative impact on vControl.

Anti-virus software and vControl

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

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

Touch monitor configuration

For more information on touch monitor configuration, refer to the ReadMe for DisplayLink driver in the Touch Screen Driver folder on the vControl installation medium.

3. Good to Know & general information

The following section contains noteworthy information on the usage of vControl.

Only Tecan tips can be used in vControl

The default disposable tip definitions contain an attribute "Tecan" in section *Miscellaneous -> Vendor.* Duplicating definitions hinders a user to use the attribute Tecan in this field. If this is not present, the tips can't be selected in all the Pipetting commands.

3D Sim Configuration Files

When installing vControl, the installer will provide all the necessary configuration files needed to use vControl with 3D Sim. These do not have to be installed separately with the 3D Sim Installation. In case those are needed for troubleshooting purposes for service these configuration files can be found here:

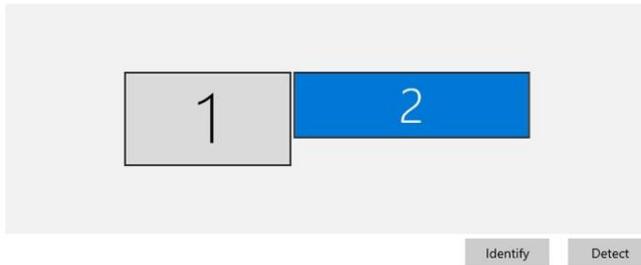ProgramData -> Tecan -> VisionX -> InstrumentConfigurations -> VControl_Configuration

OneView size not correct

OneView is configured to only show when the aspect ratio is 32:9, hence the display resolution needs to be set to 1920x540. Furthermore, the refresh rate needs to be configured to 59.989 Hz

Display

Scale and layout

Change the size of text, apps, and other items

100% (Recommended) ▽

Advanced scaling settings

Display resolution

| 1920 × 540 (Recommended) ▽ |

Display orientation

Landscape ▽

Display

Rearrange your displays

Select a display below to change the settings for it. Press and hold (or select) a display, then drag to rearrange it.

```
┌───────┐ ┌──────────────┐
│       │ │              │
│   1   │ │      2       │
│       │ │              │
└───────┘ └──────────────┘
```

Identify   Detect

Multiple displays

Multiple displays

Extend these displays ▽

☐ Make this my main display

Advanced display settings

Graphics settings

⌂ Advanced display settings

Choose display

Select a display to view or change the settings for it.

Display 2: cvt_rb1 ▽

Display information

cvt_rb1
Display 2: Connected to Intel(R) UHD Graphics 630

Desktop resolution	1920 × 540
Active signal resolution	1920 × 540
Refresh rate (Hz)	59.989 Hz
Bit depth	8-bit
Color format	RGB
Color space	Standard dynamic range (SDR)

Display adapter properties for Display 2

Refresh Rate

Choose the refresh rate for your display. A higher rate provides smoother motion, but also uses more power.

Refresh rate

| 59.989 Hz ▽ |

**vControl and FluentControl software on same PC**

vControl and FluentControl can't be installed on the same PC because the two software partly share the same folder structures and registry paths.

Online Help

When vControl is in edit mode, pressing the <F1> key will open the Online Help. The section relevant to the selected or displayed GUI elements will be shown. Online Help content is identical to the vControl Manual.

Search function

vControl has a search function in the Infopad. Search results have the same drag and drop behavior as Controlbar elements. The search is active in all currently open Scripts, Modules and the Controlbar.
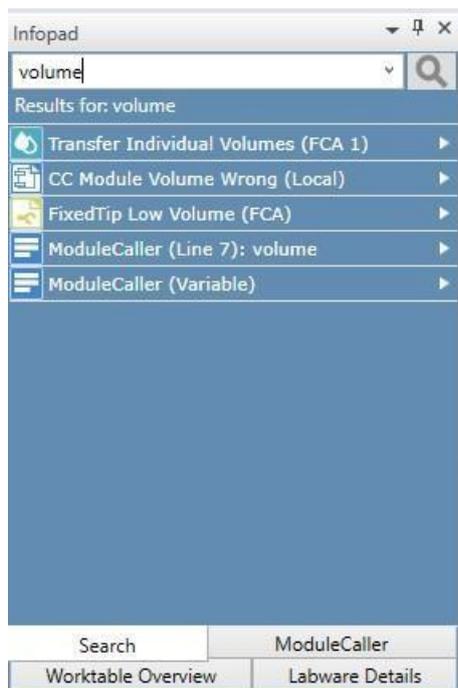
DeckCheck

If any devices are positioned at the right or left side of the worktable, the arm positions for DeckCheck image capture may need to be modified in Configure System. The default DeckCheck arm positions could be within the bounding boxes of such devices, which would lead to an error at runtime. Positions for the right- and left-most arm can be configured.
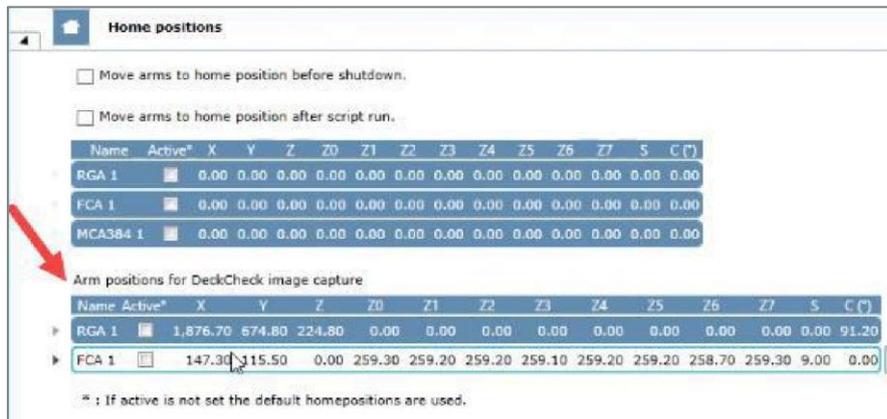
Sample Tracking cannot handle duplicate barcodes

If Sample Tracking is used and duplicate barcodes are part of the workflow, make sure they are renamed to be unique before the Labware is registered in Sample Tracking. For example, suffixes or index numbers may be added using the GetAttribute and SetAttribute functions.

Microsoft Remote Desktop Protocol (RDP)

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

Teaching – Do not teach with open doors

When teaching is executed on a Veya instrument with an open door, the accuracy will be reduced. This is due to the speed of the arms being reduced to 30% to comply with the safety concept of Veya. To increase the accuracy while teaching, please close the door when the arms are moving.

Device Placement with more than one instance of a driver

The following steps shall be followed when placing multiple devices, such as incubators, using Device Placement. Not following these steps can lead to incorrectly placed devices, or their respective Direct Commands not being shown.

1. Duplicate the driver and configure it as needed in Configure System.
2. Duplicate the device carrier and assign it to the correct driver which was duplicated.
3. Set the correct slot ID of the driver in Configure System.
4. Place the carrier onto the worktable.
5. Execute the Device Placement.

Automatic Teaching for sites with PCR adapters

The sites for devices, which can have a PCR adapter like Teleshake, CPAC or ODTC have been modified in vControl to contain a teaching plate -specific site, which accounts for different heights the teaching plate sits on this device versus the PCR plate. If there is no such teaching site for the teaching plate on a device where the plate sits differently than the teaching plate, the site shall be taught manually or a specific teaching site needs to be manually created.

Using 2 different liquid classes for aspirate and dispense – only pressure data from aspiration liquid class is used (129384)

vControl supports using of 2 different liquid classes for aspirate and dispense. However, pressure tank settings are only used from the liquid class defined in the aspiration step. This is because the pressure preparation is only performed before the aspiration step and not before the dispense step.

DeckCheck: Error while taking images (129716)

Using the DeckCheck driver can lead to an error being reported while taking reference images. This happens sporadically and pressing Retry will resolve the issue, as usually the second time it works.

vControl asking for a license even though running in simulation mode (PWI 129302)

This can happen if the same instrument (simulated) has been using as a real instrument before (i.e. application connected to 3DSim in real mode).
When connecting to a real instrument - which 3DSim usually and intentionally represents (starting 3D sim prior to starting vControl)- the SW writes the serial number to a registry key, which is used at subsequent startups and compared against the then connected instrument (real or simulated). After that, the registry key is still present (when not deleted manually or by cleaning the database) and is checked for when the serial number match.
If the serial number of the simulated instrument do not match the real one registered, the SW doesn't check for a license and simply returns "license available".

Loading a script with Sample Tracking commands & no running ST server (115156)

If the communication to the Sample Tracking server cannot be established (e.g. sample tracking not installed, or server mistakenly killed) loading a script with Sample Tracking commands in it can result in a timeout exception. In this case, the I/O state needs to be set to off to load the script.

Conflicts at import for default database entries due to duplication of carrier where labware is configured as allowed location

If a carrier is duplicated, e.g. the 7mm Nest to define a storage position, then all associated allowed labware get a new connector. This is then shown during import as conflict (since the connectors associated to the labware are indeed different). However, importing without conflicts will not result in missing connectors, since the duplicated carrier also brings the connector with the import.

Device placement for duplicated device not working out of the box (PWI 126124)

When duplicating a device, to have multiple instances of a driver for example, the placement on the worktable for the duplicated device does not work out of the box. To make it work, the custom attribute "MapTemplateName" must be adjusted to be different and unique.

Selecting Empty Cavity in Liquid Classes results in Pressure Profile Error Detection if not deactivated in liquid class (PWI 126474)

The empty cavity option in the liquid class will cause a Pressure Profil Error stopping aspiration if the option is not deactivated in the advanced section.

4. Known Issues in vControl 1.2

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.

Stop button doesn't work in very specific situation (PWI 131247)

A stop is no longer possible if there was a previous Pause, Stop and Retry sequence in the same run previously.

Save button is not active after editing rotation axis (only) of RGA vector (PWI 131059)

To save the change in rotation axis of RGA axis in the vector teaching, a slight change in one of the x,y,z coordinates is needed.

Aspirate fails due to a NegativeUnderflow pressure problem (PWI 129385)

To avoid this problem the absolute negative pressure in the liquid class under advanced settings can be lowered to a smaller value. Refer to ASM chapter 8.6.7, page 181.

Run abort due to inability to pickup tips in non-reachable area (PWI 130912)

With the introduction of IPP there can be limitations in reachable positions on the worktable on the edges. The software currently doesn't evaluate the available and reachable tip positions properly considering the range restriction coming from IPP.

Remainig Startup issues:

vControl stalls in start-up sequence (PWI 130013)

There is a bug on Windows side, which can lead to problems at startup of vControl. There is no fix for Windows 10 IoT LTSC image. Cancel the startup and re-try.

vControl can't startup if mismatch in system config detected (PWI 130532)

In cases where some devices are not properly configured in SetupSW, vControl is not able to start-up due to mismatches in config files.

vControl crash at Startup (PWI 131208)

Problem with Journal file. AS workaround do the following:

Close vControl and delete content of Journaling folder: C:\ProgramData\Tecan\VisionX\Journaling\

Problems with Pipetting System Check and Inline Filter Test in 3DSim V4.0 (PWI 131250)

Due to mismatches in certain 3D sim config files, which are the following two:

- ARP-0.cfg3d

- X2Pipettor-0.cfg3d

Issues can appear during executing the pipetting system check and inline filter test in simulation mode.
Contact Expertline to get the updated files.

RGA Encoder Calibration Setups lost after power cycle (PWI 130860)

It might happen if there is a power cycle while the SetupSW is running. If this happens the mapsystem.config file can get invalid/incompatible. As workaround to resolve the issue replacing the mapsystems.config file with a backup, will resolve the issue. Or comparing a backup file with the current file and findout out the differences and then redo the actions in SetupSW to get a valid file again.

Executing direct command uses the last active worktable but showing the worktable from edit time (PWI 130864)

Executing direct commands after e.g. a run abort where the active worktable looks different than the one from edit time this is not reflected in the worktable of the direct command. This can cause problems and the active worktable contains labware at different locations which is not reflected in Direct command.

Tip Pickup problems with potential crash due to breakthrough error (PWI 130860)

It can happen in rare cases that during tip pickup there is a breakthrough error, i.e. the tip pickup move couldn't be executed properly mostly due to HW-related problems and SW reports this as breakthrough. If this happens, reteaching of the site shall be performed.

Potential problem with dispensing into adjacent plate of source plate in y due to not finding common X for all selected channels (PWI 131069)

Probably rare case, where IPP can't find a common X value for all selected channels when pipietting from a plate into another plate that stays adjacent to the source plate. Placing the plate further apart or selecting different channel pairs might resolve the issue.

The system tries to initialize with gripped plate when method is recovered after a collision (PWI 130696)

In some cases if there has been a collision with subsequent run abort, after which the system needs to execute a initialization and the system wants to recover the run, the precondition check to check if something is mounted on the channels or gripped is skipped and then the initialization is blocked. A restart of the software helps.

SW crashes if labware indexes are parametrized in Smart commands (PWI 131051, 131071)

If using a variable as labware index in Smart Commands the SW will crash. A Workaround is to use If-else statements in the script.

Failed IAM user login on vControl Startup (PWI 129247)

This is specific to the user, who tries to login, other users might work. Therefore, it is recommended to have more than one Admin user on the system, in case this happens with an Admin account.

VBScript Execution blocked on Veya PC (PWI 131073)

VB Script execution is blocked by default on Veya PC when trying to do an "Run Application" command. Just also note: VB scripts are getting deprecated by Windows anyway. Therefore it is recommended to use different ways.

Inheco Incubator and Teleshake continue to shake after restart and init (PWI 126365)

If a run gets aborted by a crash or alike, the Inheco Incubator and Teleshake keep shaking, even past software restart and/or initialization. To be able to restart a run, the devices need to be stopped by executing a direct command "Stop Shaking".

The Snapshot Tool sometimes does not include the most recent log file (ID 124877)

In very rare cases, the Snapshot Tool doesn't include the most recent log file.

**Manual Restart needed after configuring Sila2 Commands (ID 123430)**

When configuring the Sila2 Commands in the Configure System menu, vControl must be restarted manually when the configuration is saved.

Move to last or move to first in Vector teaching sometimes doesn't work (ID 122979)

It can happen that Move to Last with different waypoints in between works but then Move to First doesn't. Workaround is to move to the intermittent points.

Stopping a run when ODTC is running is not possible (PWI 127828)

If the ODTC is configured that it doesn't abort when run is aborted (i.e. checkbox is checked) a run can't be aborted while ODTC method is running.
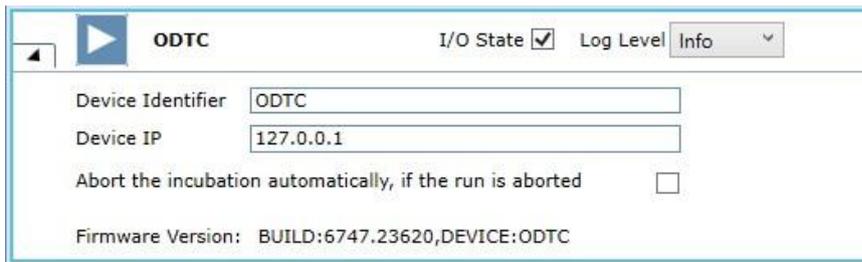
Additional known Issues

ID	Title
130016	Loading ID is cancelling current and previous loaded carrier without showing the reason
131038	[vControl]: Liquid Level Detection Repeats When "Refill Labware" Option Selected
130927	[vControl]: Teach Worktable Command Ignores Tip Selection
125858	[KomodoControl] [vControl] borderline liquid levels (required vol == usable vol) should not result in an exception
131067	Context check error for missing tip, although tip was already mounted elsewhere
130415	It is not possible to change the color for FCA and RGA commands
130162	"Move To" button for teaching does not give any feedback when there is a problem for the move
127673	Configure option to execute loadingID in simulation
122979	Vector teaching in Carriers: "Move Arm to" button not working
123430	Manual restart required after configuring SiLa2 commands
127599	Import from FluentControl

5. Known Issues in Setup SW 6.3

Login with Tecan FSE Authenticator only works on second attempt (129102)

After fresh start of PC, the first login to MAPlinx Setup with FSE Authenticator token doesn't work. Only at the second attempt the login is successful.

The same situation applies when signing in with a file certificate and then with a token. The first token sign in will fail.