Wetlab Computer Paths:

Momentum sdf and log files can be found at:

C:/Users/Public/Public Documents/Thermo Scientific/…
Momentum/

EVO Computer Script Paths:

Accessible on Momentum computer via c(\\Tecan-HPD300)(Z:)

EVO scripts:
/ProgramData/Tecan/EVOware/database/scripts

D300 reports to load into EVO scripts:
/Users/Thermo/My Documents/HP D300/Reports

Infinite scripts:
/Momentum Protocols/Infinite

Infinite results output to Google Drive on Momentum computer:

/Users/Thermo/Google Drive/choderalab/wetlab/automation/…
protocols/infinite/results

Some things to know about Momentum:

Random names of things you run.

- First you need to write a 'Process'
- This then needs to be encompassed in an 'Experiment' that says where the containers in the process come from. Usually these start with 'E_'
- This can also be contained in a 'Campaign', but we haven't really used this so far.
- When you run something you need to load a 'WorkUnit'. This can be done either with the orange plus or the 'Load WorkUnit' button.
- When a 'WorkUnit' is running you can click on Run/Runtime Activity to watch things happen.
- After a 'WorkUnit' has run you need to remember to unload it so the next user doesn't have to deal with it.
- After a 'WorkUnit' is run you can look at any info about it using the History/Load Archive button.

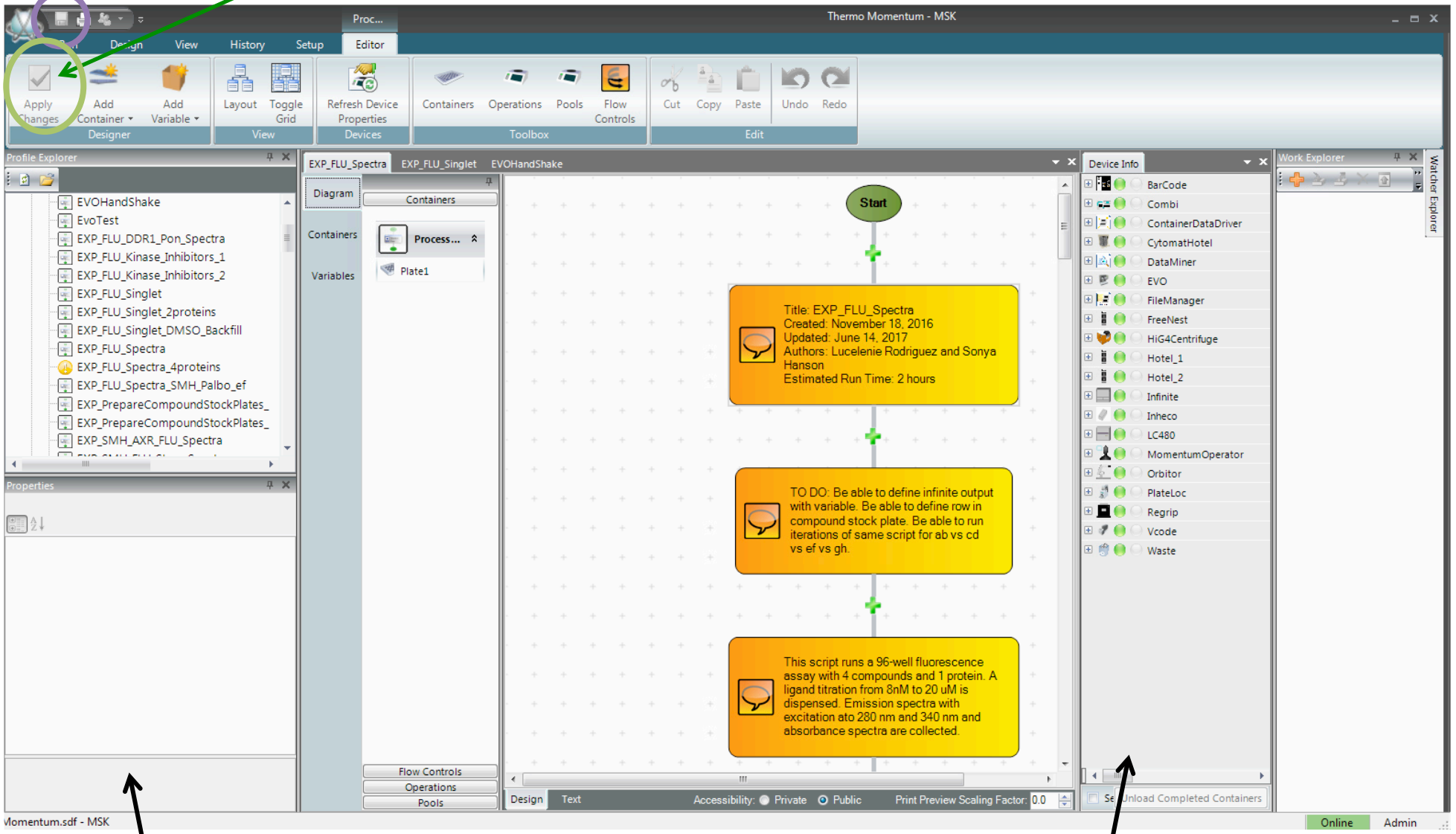
Updating Infinite and EVO scripts in Momentum

- If you make a new Infinite or EVO script that you want to run through Momentum you will need to take that instrument offline and 'Refresh Properties'.
- To 'Refresh Properties' for the Infinite you will need to take the whole system offline by clicking Run/Normal.
- Then your new script should appear in the Script name or Protocols list under 'Values' 'Edit...'.

If you update the EVOware password, you can update this in View/Editors/Profile and double click on 'EVO'. System needs to be offline to edit the password.

Momentum Layout:

If you change a ‘Process’
this will turn green
this will turn purple
click them in that order to Save
and be able to load a new ‘Work unit’



This is where you
actually write things

Take devices offline
to ‘Refresh Properties’

wetlab-protocols / automation / EVO_Chodera_Lab_Setup.md

We have three standard EVO deck layouts, they are all very similar. The only difference is what is on grid 12:

- Layout 1 : `MP 3Pos 2015` on grid 12
- Layout 2 : `DiTi 3Pos` for hanging tips on grid 12
- Layout 3 : `Te-VacS` for vacuum filtration on grid 11

Working examples that use these layouts are saved as worktable-only templates in EVOware:

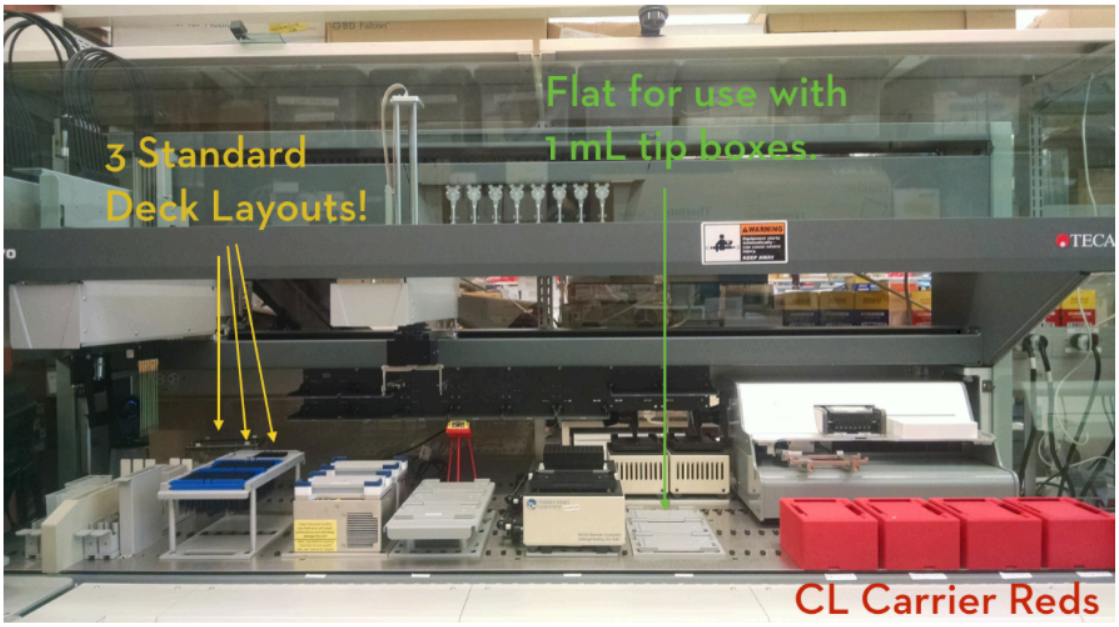
- `Chodera_Template_1_MP3Pos`
- `Chodera_Template_2_HangingTips`
- `Chodera_Template_3_Vacuum`

If you select `New` to make a new script in EVOware, these templates should pop up as options.

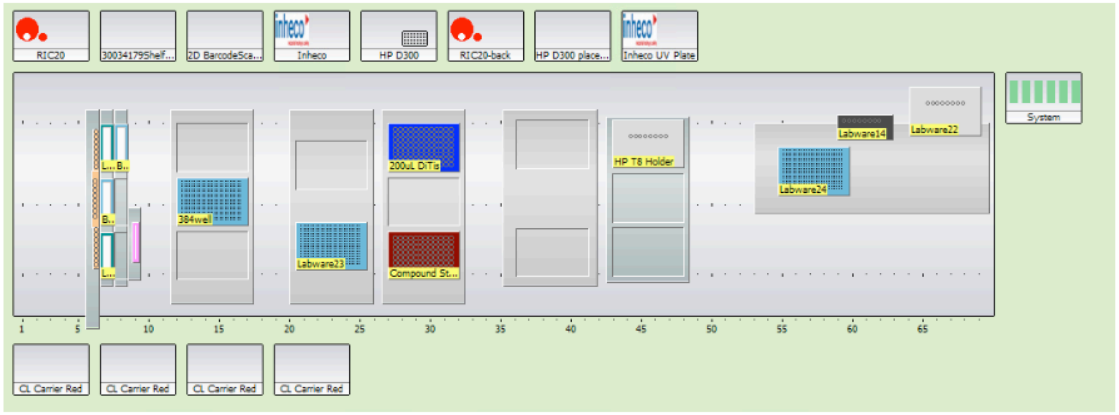
A couple things to note about carriers and containers:

- 1 mL tip boxes can only go on the flat MP3Pos, otherwise the LiHa2 (with fixed tips) will hit it.
- Be careful where you put the vial holders and the eppendorf tube holder, as the RoMa can run into when it is moving plates to the Inheco's if this is not done with careful planning.

Picture:



Screencap:



Training new plates and carriers on the EVO:

Training the LiHa's

- Right click on a plate.
- Select 'Edit Labware Type'.
- Select 'Right LiHa' as 'Device to be used for teaching'
- Click 'move to' well #1, adjust with keypad, & 'transfer'
- Repeat for well #96
  (make sure you didn't reduce y distance of wells to less than 9.0)
- OK

Training the RoMa

- Right click on a carrier.
- Select 'Edit Carrier'.
- Click 'Edit…' button by Robot/Robot vectors
  (make sure you are using the relevant vector, usually 'Move Narrow')
- Make sure you have selected the right site in the upper right hand corner. (EVO numbering starts from left/back.)
- Make sure 'Safe position' is highlighted. Click 'move to'.
- Highlight 'Position' and click 'move to'.
- Adjust with keypad to place plate into final position. Transfer coordinates when appropriate.

It is best to train carriers by picking up a plate from an already trained carrier, and setting it down using a series of 'move to' commands onto your new carrier. It is best to try this several times to be sure this can be done successfully, and only then try a real scripted 'Transfer' operation. (Once you've picked up a plate using 'edit carrier' from an already trained carrier you can hit cancel and the RoMa will not drop the plate, then you can right click and click 'Edit Carrier' on your new carrier.)

DO NOT RETRAIN ANYTHING USED BY ANOTHER SCRIPT. IF SOMETHING SEEMS OFF, REHOME.

Scripts that run good:

Demo scripts

- Nest Cycling
  - This is a Momentum Experiment that takes an LC480 plates and moves through every nest on the automation system.
- Tecan_Demo_Mar7_17_Vacuum
  - This is an EVO script that we call 'Rainbow Script' because it dispenses dyes into plates from vials. It also uses the vacuum manifold. There are also older versions of this script with various modifications.

Anything in wetlab-protocols

(These are all fully working Momentum Protocols and Experiments with EVO scripts, DMSO scripts, and Infinite scripts.)

- DMSO_sealtest
  (May be an old layout: someone can fix as an exercise!)
- Compound_Stock_Plate_Preparation
- Fluo_Inhibitor_Spectra_Assay
- Fluo_Singlet_Assay

An EVO script with D300 example using *DispensePlateNonBlocking* part of driver:

- WIP_SMH_Competition_Assay_082615

Always run MAINT_ReHome and MAINT_Wash before you run anything.

When starting a new EVO script, start from something that already works and use those plate types and carriers.

NEVER adjust plate types or carriers used by another script. If you need to make a new plate type, make sure you only adjust THAT plate type and not the carrier it sits on.

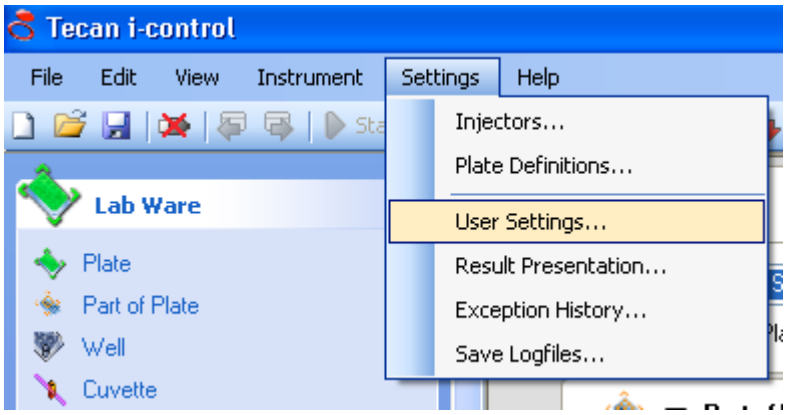
Resetting M1000 Counter

If a customer gets the “you need service” message, but there does not seem to be anything wrong, it could be that they have reached the 6 month timer that R& D programmed into then FW to prompt for a service call.

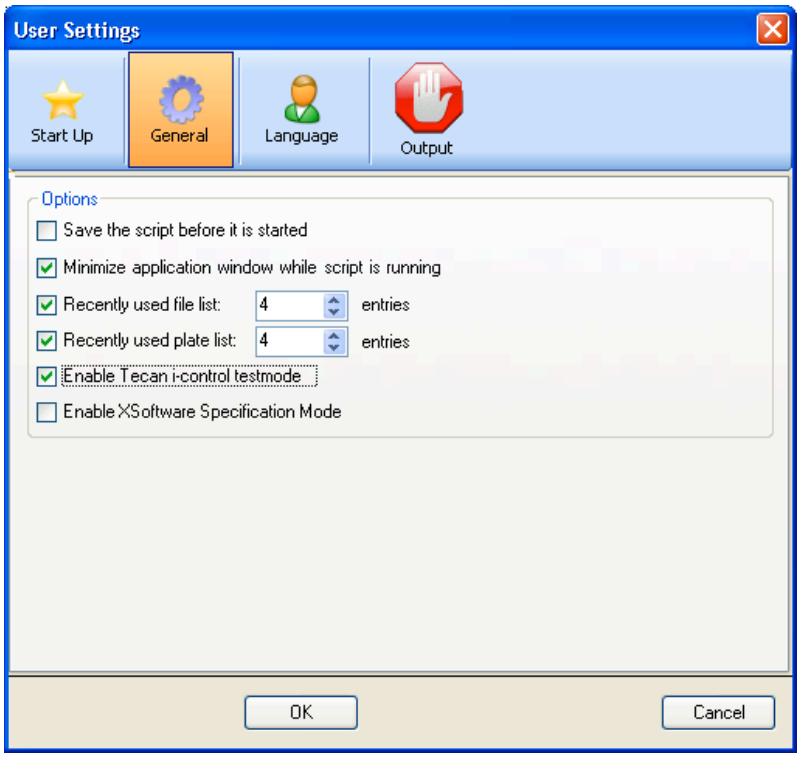
If there is no real need for service this counter can be reset. This issue was fixed with newer FW and SW, but if a FW upgrade is not feasible then this fix can be used to reset the timer.

1. Open i-Control and connect to the reader.

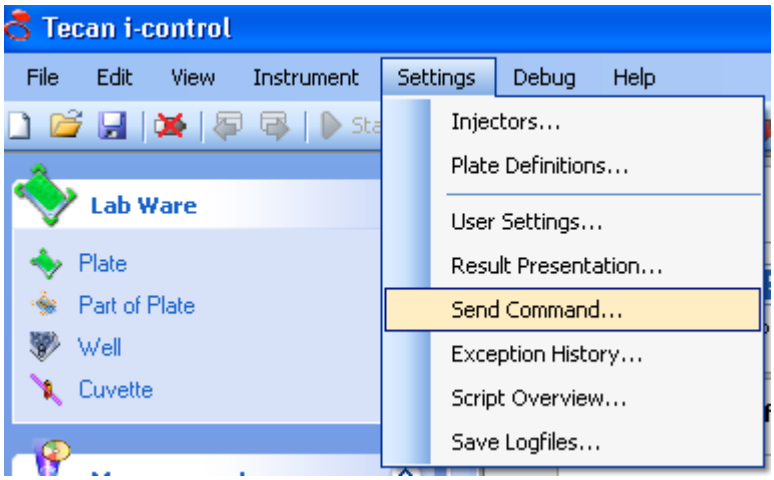
2. **Press and hold the SHIFT + CTRL keys**, while clicking on the Settings>User Settings menu item.



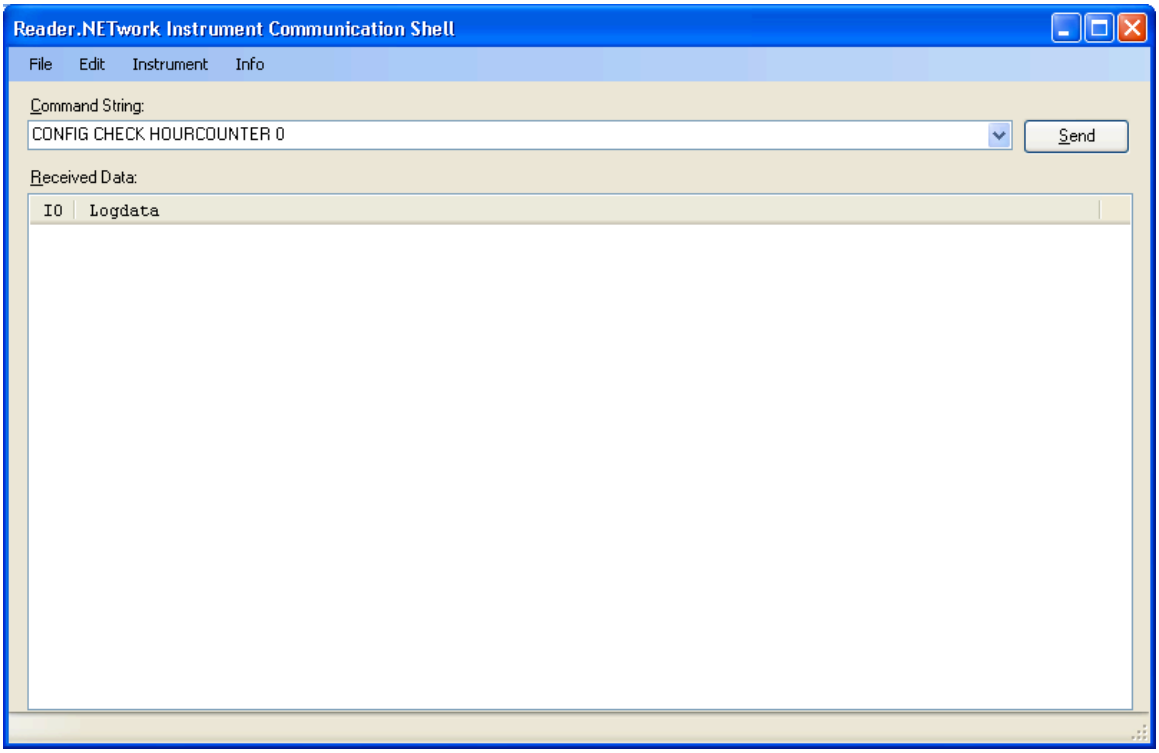
3. This puts iControl in service mode and adds some items to the resulting dialog box. On the **General** tab check the box for **Testmode**.



4. Now under the Settings you see **Send Command.**



5. Now you send the Command :CONFIG CHECK HOURCOUNTER 0



6. To get out of the Service mode you do the following:

- Hold **SHIFT + CTRL** click on **Settings> User Settings**
- Go to the General tab and uncheck **Enable Tecan i-control testmode**
- Click on **OK**
- Now the service mode options should be gone from the drop down menus.