iXBlue MultiLogger

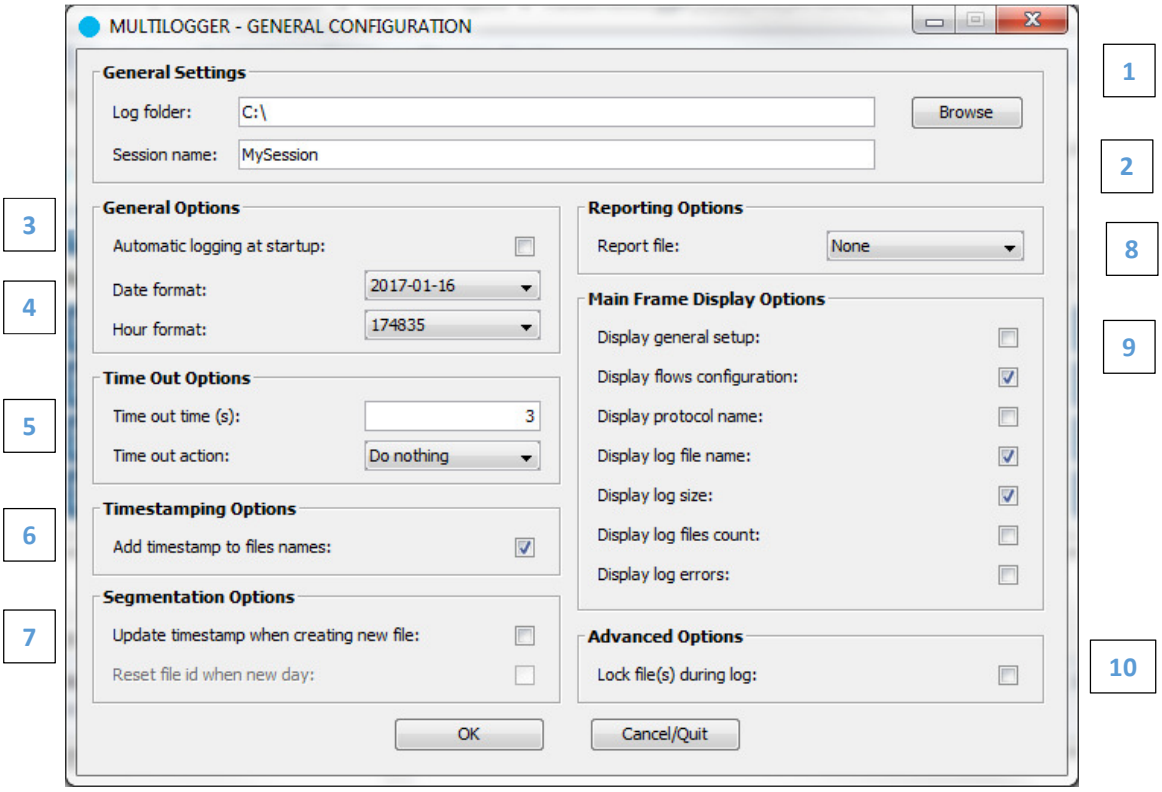
StartUp Guide

In a few words, the iXBlueMulitLogger has been designed to :

- Log several flows : up to 10
- From multiples inertial units
- In Ethernet or Serial
- Manage file segmentation and frames decimation
- Decode PHINS_STD and OCTANS_STD stream as the Web MMI datalogger do
- Check for flow errors in the stream (Postprocessing, PHINS_STD/OCT_STD, NMEA, ASCII)
- Get system configuration using repeater port or configuration file
- Save/restore configuration to/from XML file
- Manage report file
- Run on Windows and Linux (not for now) and PC or MAC (not tested for now)

General configuration

Use the configuration button to open general configuration frame.



1 : Log Folder : Select folder where to store log file and report

2 : Session Name : Used when building log file names

3 : Automatic log at startup : Automatically start log when executing tool

4 : Date and Hour format : Use in file names, history events date and report file name

5 : Timeout configuration

- Timeout value : 0 = no timeout
- Timeout action : Do nothing, Restart single flow, Restart All flows, Stop single flow, Stop all flows logs

6 : Timestamping : Use timestamp when creating log file name

7 : Segmentation general options :

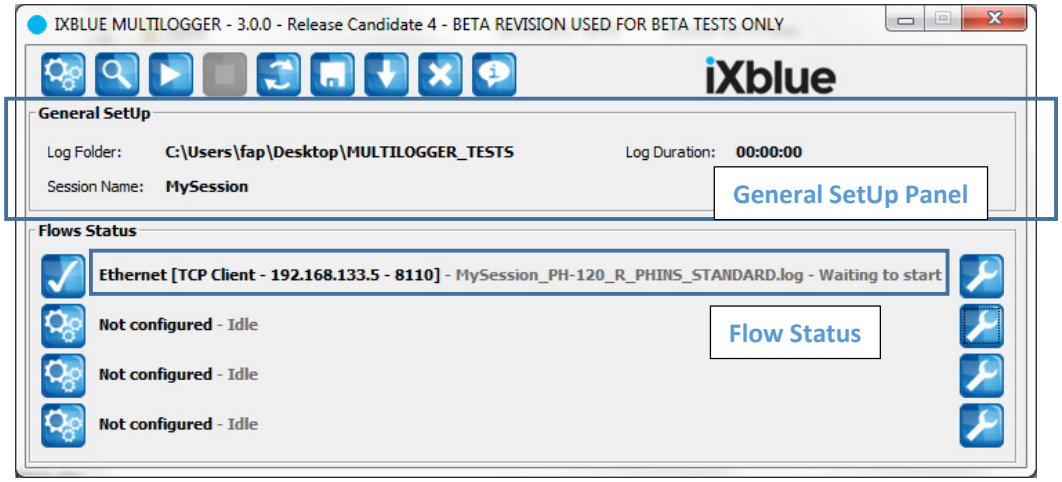
- Update timestamp when creating new file: If used, next file used new timestamp. In both cases (set or not), a number is added to file name
- Reset File id when new day

8 : Log report : The tool can generate a log report file

- One per session
- The same for all session

9 : Display options : Applies to main tool frame

- « General setup « concerns General setup panel (Log folder, Session, log duration)
- Others options are used to configure flow display status

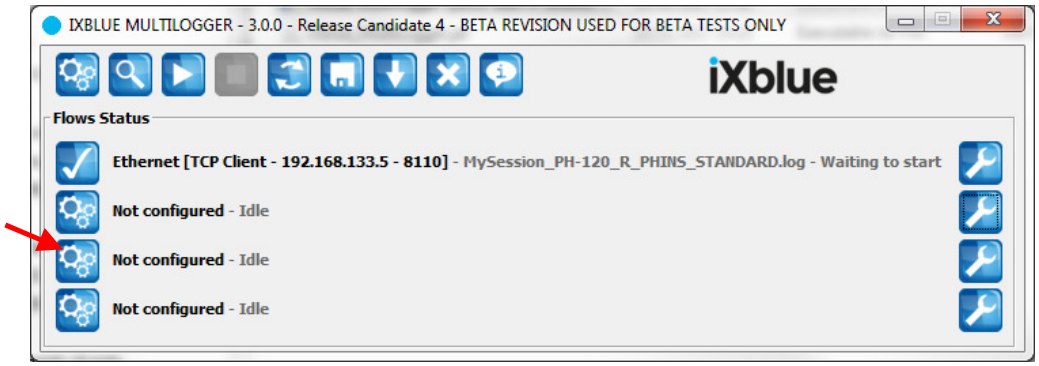


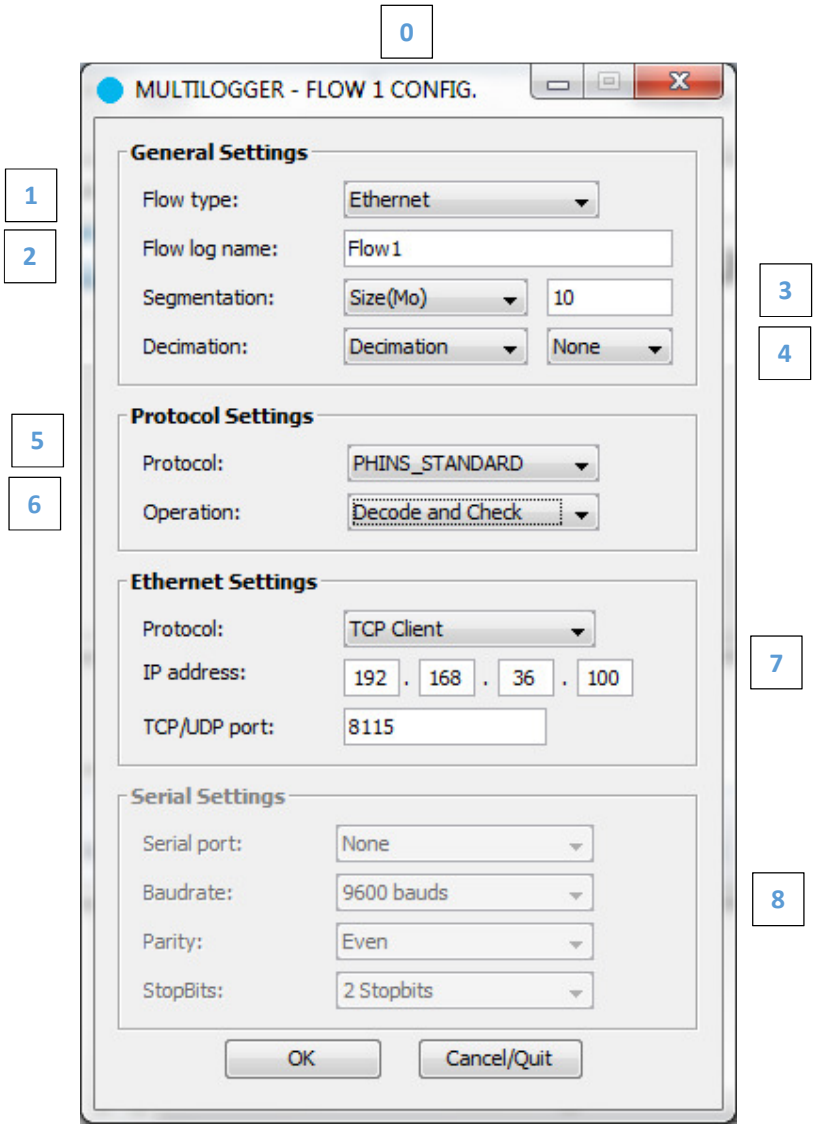
10 :Files lock : Enable or disable file lock during log.

Flow Configuration

Configuration button state depends on Flow status: idle  , not configured  logging error  , in progress  .

Use this button to open flow configuration frame.





0 : Flow Id from 1

1 : Select Flow type : Ethernet, Serial, None

2 : Flow log base name

3 : Segmentation : Log file segmentation

- In size : parameter in Mo
- In Time : parameter in Hours

4 : Decimation : Only available if known protocol or Ethernet media

- Frequency : Data frame are logged in the given frequency even if input frequency is higher.
- Decimation : Keep 1 frames for N frames received

5 : Protocol selection :

- PHINS STD, OCTANS STD : Tool can check format and decode
- PostProcessing : Tool can check format
- NMEA, ASCII : Tool can check format
- None : No check or decode feature : Tool can just log

6 : Operation : Permitted operations depend on protocol

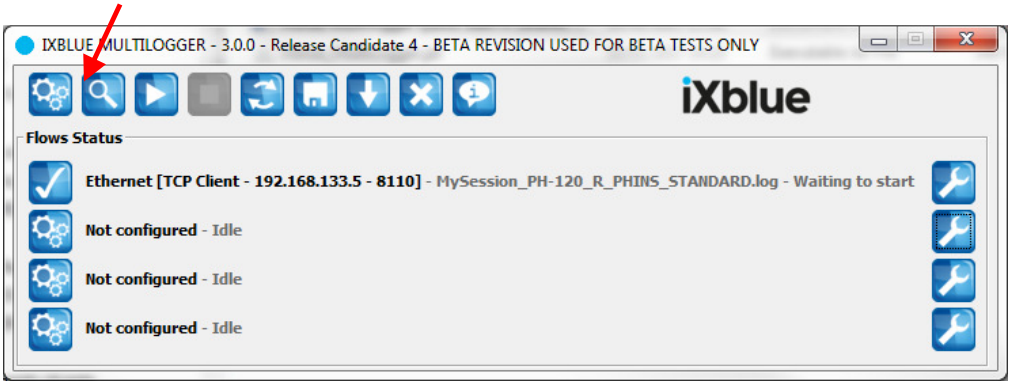
- Check Format : All protocols
  - PHINS_STD, OCTANS STD, NMEA, ASCII : Tool check format
  - PostProcessing : Tool check Format, IMU loss or timestamping error, alignment phase included in the log (warning if log started during navigation), navigation speed >0.5m/s during alignment.
- Decode :
  - PHINS_STD and OCTANS STD only
  - Same format as current Web MMI datalogger

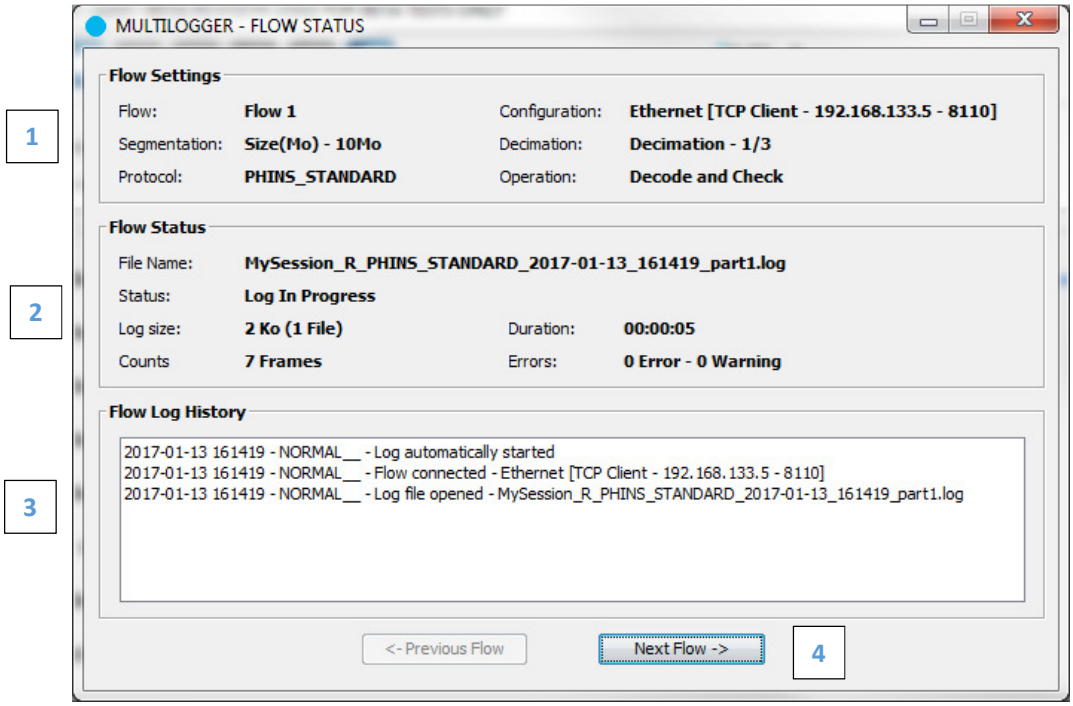
7 : Ethernet parameters used when flow configured in Ethernet

8 : Serial parameters used when flow configured in Serial

Flow Status

Flow Status view is used to see the whole flow status.





1 : Flow settings summary

2 : Flow Status

- Current file name
- Log status
- Log total size and duration
- Frames count (only when one protocol is selected)
- Errors number or warning

3: Flow History : Log events (Normal, Warning and Errors)

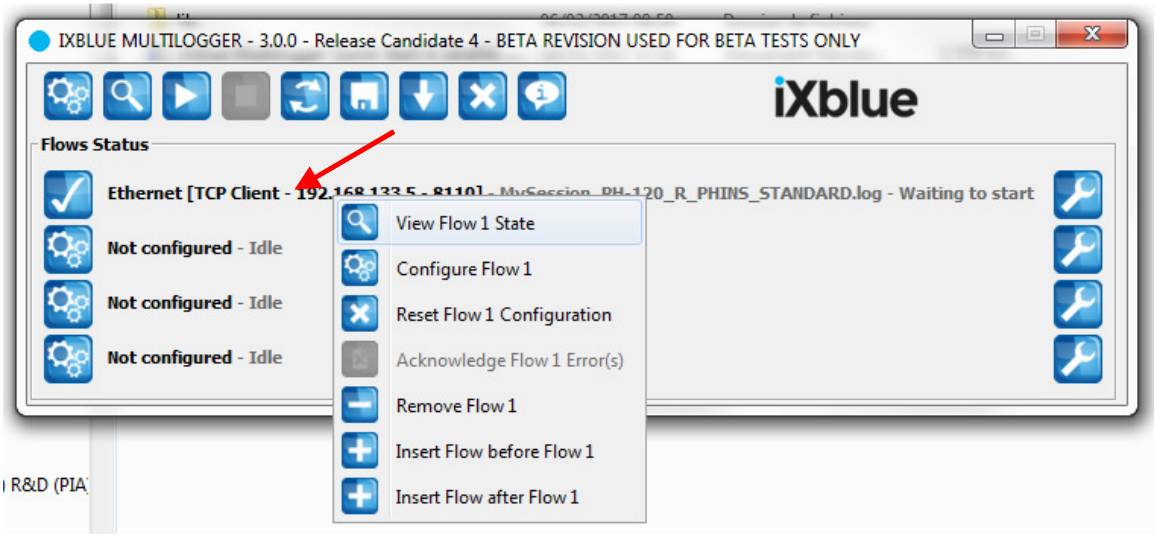
4 : Buttons to navigation from one flow to next or previous

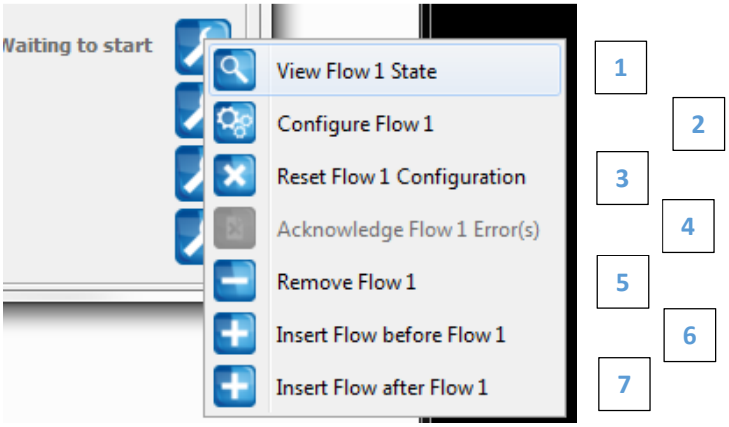
Flows management

Flows management menu is accessible using flow button on the right side.

Use can also clic on the flow status label for the same menu.

Or





1 : Used to open View Flow Status frame.

2: Used to configure flow : Open the flow configuration frame described before

3 : Reset the selected flow configuration

4 : Acknowledge errors :

- Available if errors or warnings present
- A popup will ask for acknowledge or reset :
    - Acknowledge : Errors remain but error status disappears
    - Erase : Erase error counter

5 : Remove Flow : Remove flow from the list

6 and 7 : Used to insert flow in the flow list, before or after selected flow: wonderful

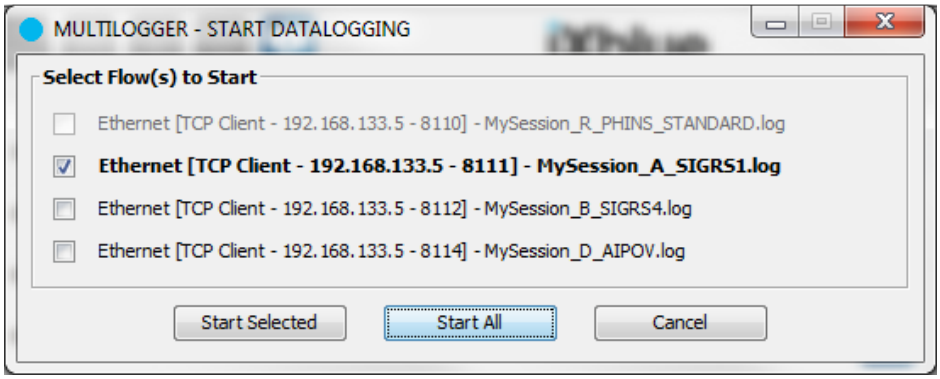
Start/Stop Flow log process

Use Start/Stop button to start or stop log process.

Start is enabled when at least one flow is configured.

Stop is enabled when at least one flow is logging.

User will be asked to select flow(s) to start or to stop. When starting, flow already started are not selectable.



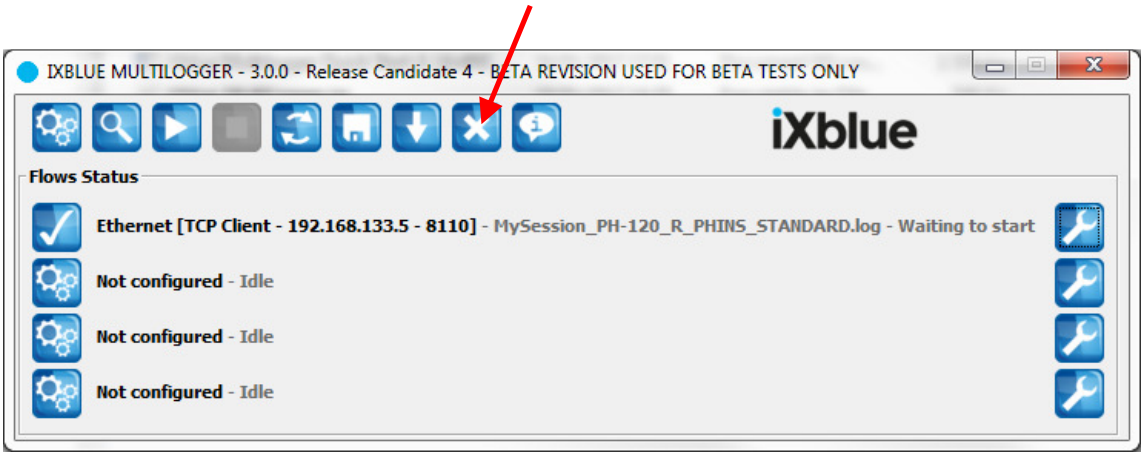
User can :

- Select flow(s) to start
- Start All

Configuration Reset

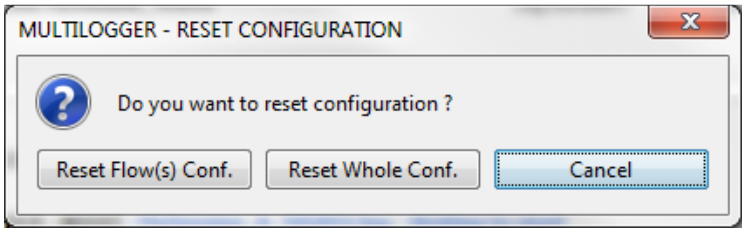
User can use flow management menu to reset or remove one flow.

User can use reset button to reset the configuration

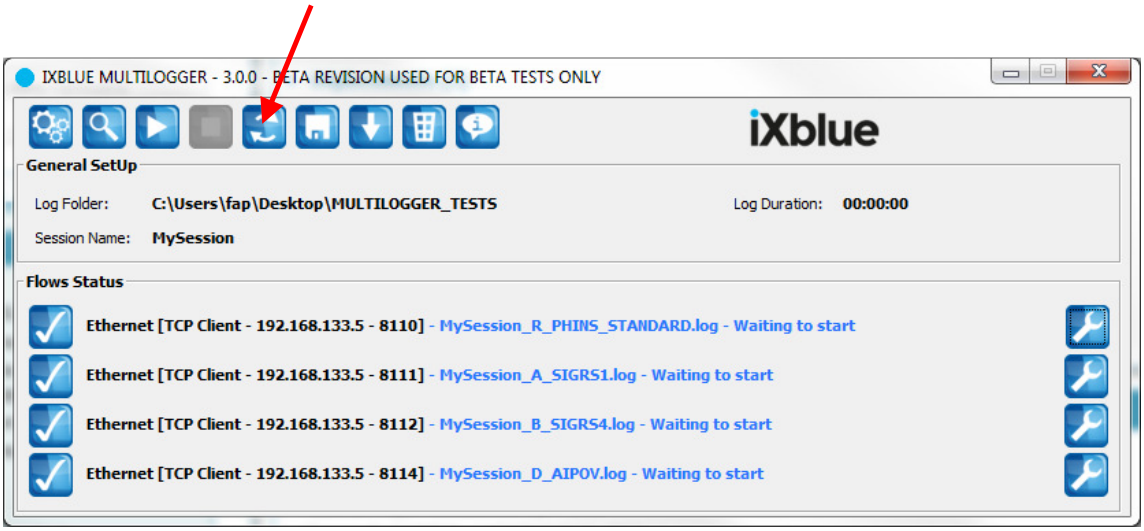


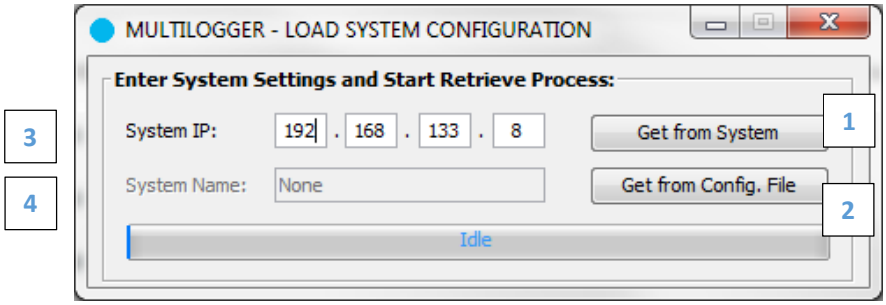
User will be asked for

- Reset the whole configuration (flow conf + general conf)
- Just reset all flows configuration



Retreive configuration From the INS/AHRS





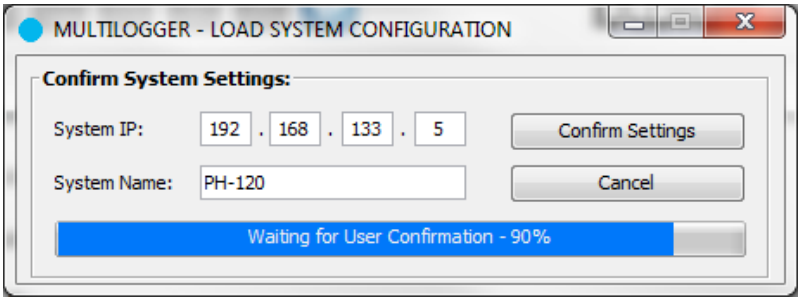
1 : Used to retrieve configuration from the system using Ethernet connection on the repeater port

2 : Used to load system configuration file (configuration file from the Web MMI)

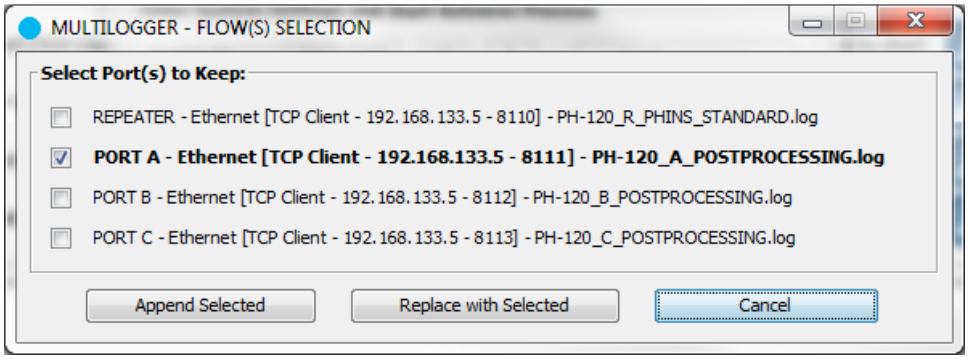
3 : System IP is used to connect to the system or when the configuration is retrieve from a configuration file (which does not include system IP @)

4 : System Name is used to build log file name (Asked during retrieve process)

After loading configuration file or getting configuration through Ethernet, the tool will ask for System IP and System Name confirmation:



Then, in both cases (get from repeater or configuration file), the tool will ask the user which flows to append or replace with:



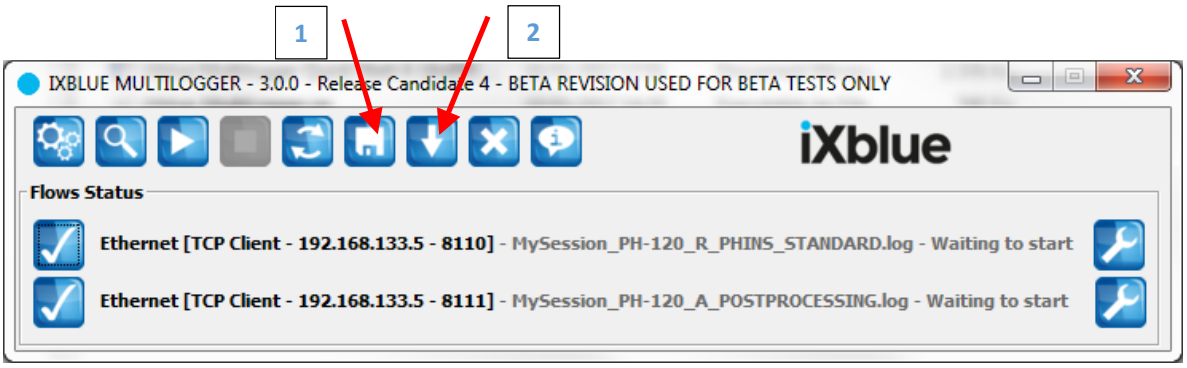
First, the use has to select flows to use.

Then the user has to select action:

- Replace : tool configuration replaced by system one
- Append : system configuration appends to the current configuration (it enables multiples system configuration load)

Export/Import Tool Configuration

User can export configuration to an XML file and import configuration from this XML file. This XML includes guidelines to fill or modify it.



1 : Export : Open file selection with .xml filter. The tool manages file overwrite…

2 : Import : Open file selection with .xml filter. The tool manages file validity…

Log file names

Each log file name is build as follow :

- SessionName
- Port (A to E) if configuration retrieved from the system
- Protocol name if used
- TimeStamp if configured
- File number if segmentation used

Warnings and Errors Management

Error events are :

- Flow read error (low level)
- Unused characters when checking flow format
- Format error when checking flow format
- Checksum error when checking format
- PostProcessing : IMU ID or Timestamp error

Warning events are:

- Timeout issue
- Postprocessing : Log without alignment step
- Postprocessing : speed during alignment

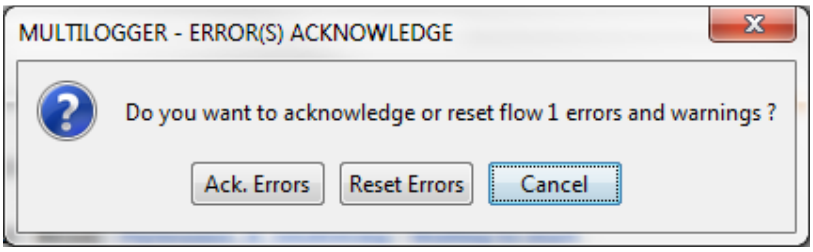
When an error is raised:

- Flow error counter is updated
- Flow status is in error : Main status line blinking in red
- Flow event history is updated

When a warning is raised:

- Flow warning counter is updated
- Flow status is in warning : Main status in orange
- Flow event history is updated

Errors/Warning can be acknowledged or reset using flow management menu.



Report File

If configured report file is created in the log folder.

Report name format is `SessionName_Report_Date.txt`

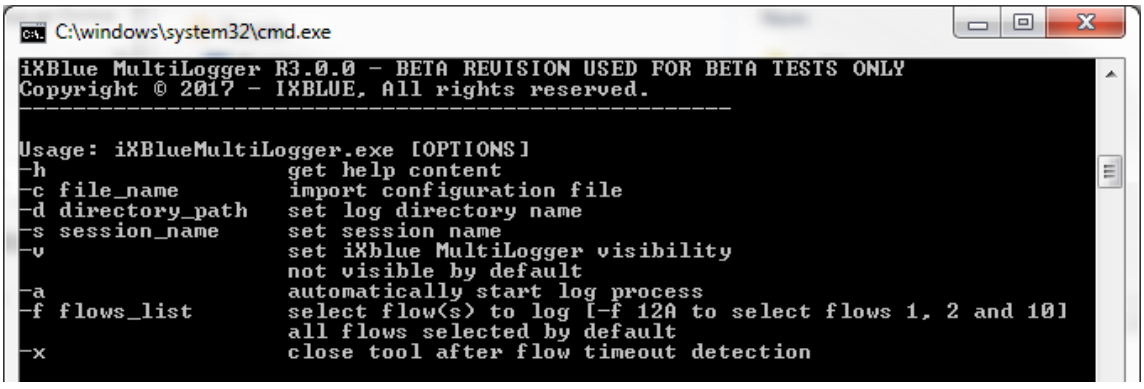
It contains all tool and flows events.

Here is an example

```
------------------------------------------------------------
*** IXBLUE MULTILOGGER - Revision 3.0.0 - Report file ***
------------------------------------------------------------
2017-01-13 163058 - General - NORMAL__ - New session started at 2017-01-13 163058
2017-01-13 163058 - General - NORMAL__ - Log folder set to
"C:\Users\fap\Desktop\MULTILOGGER_TESTS"
2017-01-13 163058 - General - NORMAL__ - Log session set to "MySession"
2017-01-13 163058 - General - NORMAL__ - Log timeout set to 3s and action set to "Do
Nothing"
2017-01-13 163058 - Flow_01 - NORMAL__ - Log automatically started
2017-01-13 163058 - Flow_02 - NORMAL__ - Log automatically started
2017-01-13 163058 - Flow_03 - NORMAL__ - Log automatically started
2017-01-13 163058 - Flow_04 - NORMAL__ - Log automatically started
2017-01-13 163058 - Flow_01 - NORMAL__ - Flow connected - Ethernet [TCP Client -
192.168.133.5 - 8110]
2017-01-13 163058 - Flow_01 - NORMAL__ - Log file opened - MySession_R_PHINS_STANDARD_2017-
01-13_163058_part1.log
2017-01-13 163058 - Flow_03 - NORMAL__ - Flow connected - Ethernet [TCP Client -
192.168.133.5 - 8112]
2017-01-13 163058 - Flow_02 - NORMAL__ - Flow connected - Ethernet [TCP Client -
192.168.133.5 - 8111]
2017-01-13 163058 - Flow_02 - NORMAL__ - Log file opened - MySession_A_SIGRS1_2017-01-
13_163058.log
2017-01-13 163058 - Flow_03 - NORMAL__ - Log file opened - MySession_B_SIGRS4_2017-01-
13_163058.log
2017-01-13 163058 - Flow_04 - NORMAL__ - Flow connected - Ethernet [TCP Client -
192.168.133.5 - 8114]
2017-01-13 163058 - Flow_04 - NORMAL__ - Log file opened - MySession_D_AIPOV_2017-01-
13_163058.log
2017-01-13 163106 - Flow_04 - CRITICAL - Timeout detected
2017-01-13 163107 - Flow_01 - CRITICAL - Timeout detected
2017-01-13 163107 - Flow_02 - CRITICAL - Timeout detected
2017-01-13 163107 - Flow_03 - CRITICAL - Timeout detected
2017-01-13 163110 - Flow_01 - NORMAL__ - Log manually stopped
2017-01-13 163110 - Flow_02 - NORMAL__ - Log manually stopped
2017-01-13 163110 - Flow_03 - NORMAL__ - Log manually stopped
2017-01-13 163110 - Flow_04 - NORMAL__ - Log manually stopped
```

Command mode

The tool can be used in command mode :



- -c is used to import tool (.xml) configuration file

- -d is used to set log folder
- -s is used to set session name
- -v is used to set tool visible
- -a used to automatically start log process
- -f to limit activated flow(s)
- -x used to automatically close tool when a timeout or connection issue is rised

Example :

ixBlueMultiLogger –v : simply open multilogger interface

ixBlueMultiLogger –c configfile.xml –a –f 1 –x : open log tool in unvisible mode, start log on flow1 and close if issue detected.

Tool configuration

The whole tool configuration is saved on the computer register base and reloaded at tool startup.