

SILECS – How to diagnose the FEC/PLC communication?

(SILECS team, April 2015)

The SILECS C++ library embeds a logging mechanism to help the user to diagnose his FEC/PLC connections and data transmission at run-time.

- In order to monitor the PLC communication process you have to enable the SILECS Diagnostic logging. This can be done using the '**plcLog**' argument.
- With the diagnostic logging, you can monitor different topics depending on what you want to trace:

DIAG : special topic sent to the console (if enable) and to the syslog (in any cases)
ERROR: standard topic to trace the SILECS processing errors, sent to the console (if enable)
DEBUG: standard topic to trace the SILECS debug info, sent to the console (if enable)
SETUP : standard topic to trace details of SILECS client start-up, sent to the console (if enable)
ALLOC: standard topic to trace allocation memory, sent to the console (if enable)
LOCK: standard topic to trace resources lock details, sent to the console (if enable)
COMM: standard topic to trace PLC communication, sent to the console (if enable)
RECV: standard topic to trace transaction from PLC, sent to the console (if enable)
SEND: standard topic to trace transaction toward PLC, sent to the console (if enable)
DATA: standard topic to trace transaction details, sent to the console (if enable with **SEND/RECV**)

Example:

From FESA-3 server: `run_M.sh -usrArgs -plcLog,ERROR,COMM,SEND,RECV,DATA`

From FESA-2 or any C/C++ application: `SILECSTutor_M -plcLog ERROR,COMM,RECV`

Remarks:

- . Do not insert any space or extra characters in the list of topics
- . With FESA3 '**plcLog**' is an argument of '**-usrArgs**' option. *Additional comma is required after **plcLog** !*
- . By default, all topics are disabled.
- . **DIAG** is a special topic used to trace the main sequences of the communication mainly for SILECS Expert post-diagnostic. Indeed, only **DIAG** messages are stored in the syslog file.
- . **DIAG** sys-logging cannot be disabled.
- . **DATA** topic must be used in conjunction with **SEND** and/or **RECV** topics
- . **DEBUG** topic increases the level of detail when used in conjunction with **ALLOC** and **COMM**.

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