

# TANGO



Connecting things together

## SequencerConf

To create configurable sequences of read/write attributes, commands execution combined with logic

**Elettra-Sincrotrone Trieste S.C.p.A**

<http://www.tango-controls.org/>

# SequencerConf

- Sequences defined as list of steps that are formulas with:
  - mathematical, logical and conditional operators
  - reading/writing of attributes, execution and reading of results from commands
  - some math functions (abs, max, min) + special functions **sleep** and **goto** to jump to another step
- Configuration via device properties:
  - `step1;read(a/b/c/d) == 1 ? sleep(1) && goto(2) : sleep(5) && command(e/f/g/h) && goto(1);MsgOK1;MsgErr1`
  - `step2;write(i/j/k/l) = command(m/n/o/p) && goto(3);MsgOK2;MsgErr2`
  - `step3;(read(a/b/c/state) == ON || read(a/b/c/state) == RUNNING) ? goto(4) : goto(-1);MsgOK3;MsgErr3`
- Has commands to Start, Stop, Pause the sequence
- Has attributes to see the progress (step), log and errors

# SequencerConf

- Used at Elettra to switch ON/OFF/STANBY lasers:
  - < 10 steps
  - ~ 10 device servers
  - logic consists mainly in checking states, writing setpoints, executing commands
- Based on Boost.Spirit for the parser
- What's missing:
  - Supporting every Tango type as command argin (till now needed just DEV\_VOID and DEV\_DOUBLE)
  - Documentation
- Where to get it:
  - <https://github.com/ELETTA-SincrotroneTrieste/servers/tree/master/sequencerconf>