LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

Tango Controls as control system for a university high power laser lab

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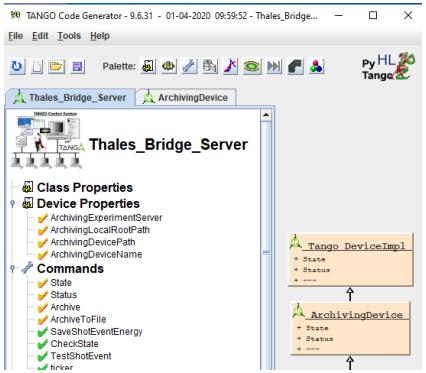
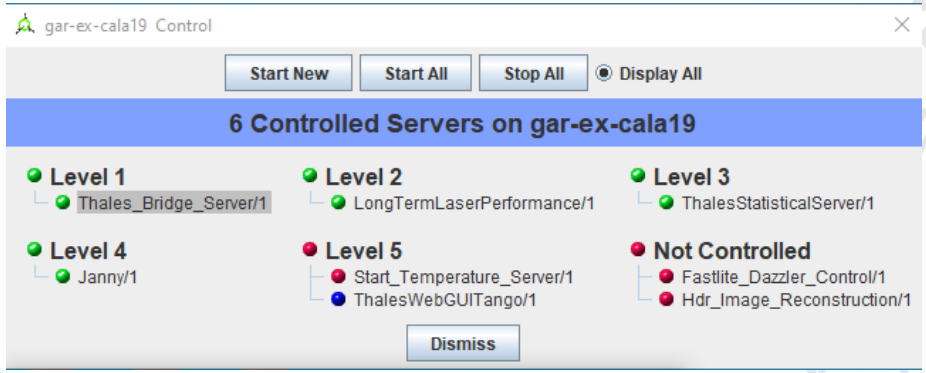
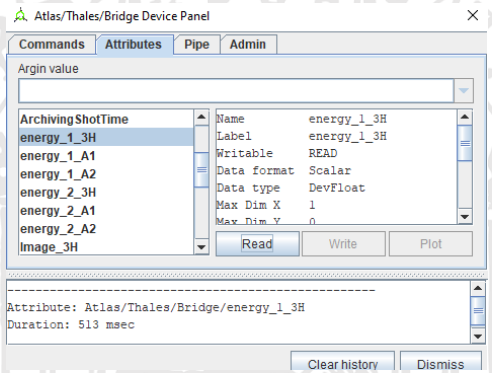




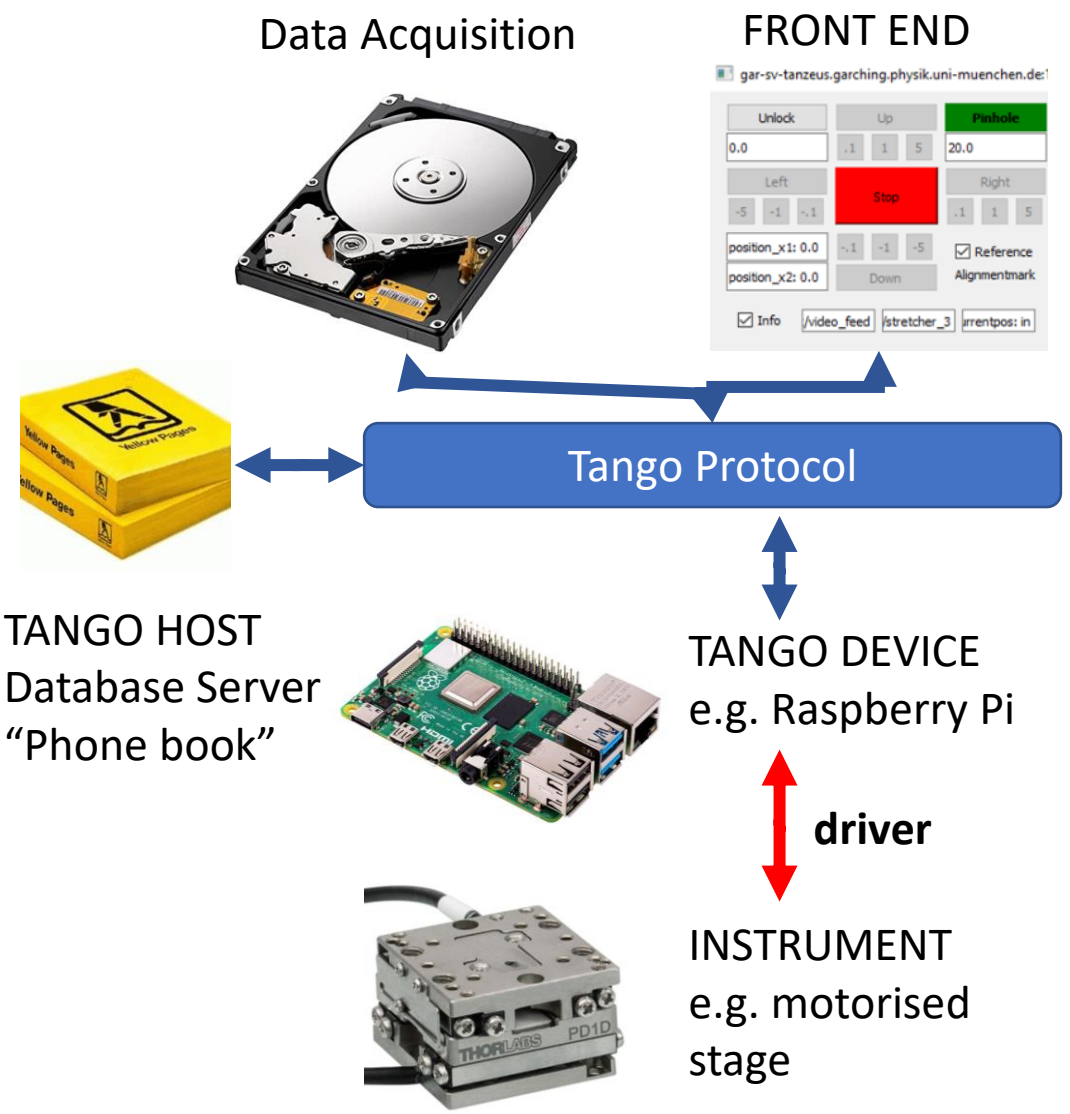


CALA

Overview of Tango Controls

Why Tango Controls?

- OS and software independent
- Communication between all computers and instruments in the network
- Automatic data acquisition
- Implementation of security features
- Automation of experimental procedures
- Data source for Real-Time batch machine learning



Tango as control system at CALA…

… at the Laser …

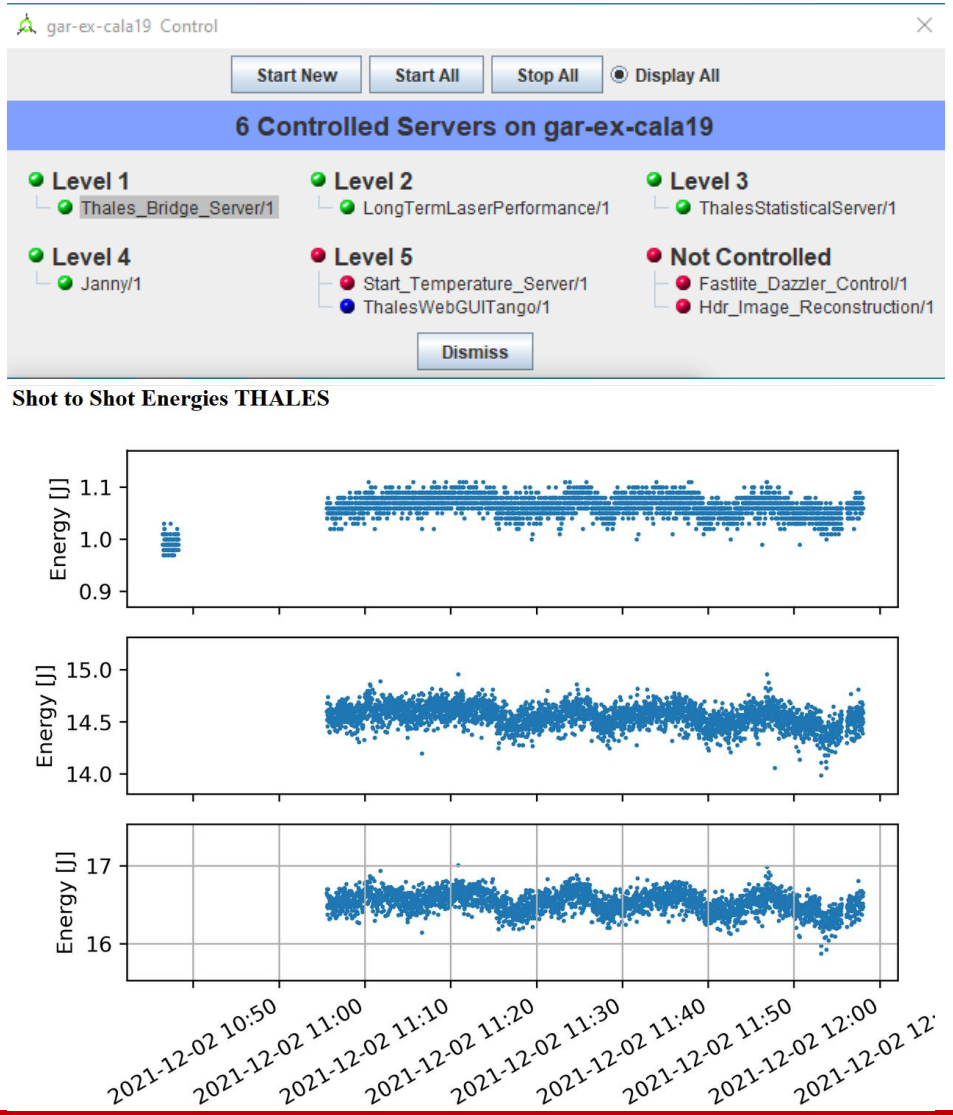
… as an upgrade to manufacturer software:

- Connection with THALES amplifier system allows **long term** as well as **triggered** data acquisition

… as basis for new diagnostic, correlation techniques and new physical insight

… as an replacement for manufacturer software

… for laser automation



Tango as control system at CALA…

… at the experimental caves …

… for the automation of data acquisition

… as a software trigger for instruments (see Leonard Doyle)

… to control and implement safety features by making use of the device attributes

… as basis for new instruments and diagnostics

… for Real-Time batch machine learning