When the FRM­2 neutron source went into operation (2002) and many instruments were moved from the closed-down Jülich reactor to the new facility, it was agreed on a choice of front-end hardware and the TACO middleware from ESRF. To keep up with software standards, it was decided recently to switch to TACO’s successor - the TANGO control software. For a unified "user experience", new graphical user interface software "NICOS-2" is being developed by the software group at FRM2.

While general semantics of TACO and TANGO don’t look very different at a first glance, and adaption of device servers seemed to be straightforward at first, various problems in practical operation were found. The problems were due to differences in state handling, timing behavior and error reporting. These problems, and the changes that had to be made to ensure reliable operation again, will be described.

Problems seen:
- High load on frontend computers, permanent hard disk activity
- Random command execution errors, showing patterns depending on usage history
- Command timeouts even when TANGO timeout was increased
- "Sluggish" user interface behavior

Device server for Detector
Structure of our device servers which histogram data in real time. The "Histogramming" part has been a standalone process, for easy commissioning and debugging.

Analysis and Solutions:
- NICOS-2 is a Python and Python-Qt based control software. It supports TACO and TANGO for device access.
- NICOS and TANGO are used on BIODIFF, DNS, ANTARES, MIRA, POLI and others. Use on more instruments is planned.
- Front end computers and operating systems have been unified on most instruments. (CentOS)