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Sardana overview and ongoing developments

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The Sardana suite is a community-driven, open-source SCADA solution that has been successfully used for over a decade in scientific facilities, including synchrotrons (ALBA, DESY, MAX IV, SOLARIS) and laser laboratories (MBI-Berlin). It comprises two main components: Sardana [1] and Taurus [2]. Sardana is an experiment orchestration framework that provides both low-level hardware interfaces and high-level abstractions through a powerful sequencing engine, following a client–server architecture built on top of the TANGO control system. Taurus is a Python framework for building graphical and command-line user interfaces.

Sardana has continuously evolved to meet new user requirements, adding new features that have been discussed and prioritized in community workshops. Recent efforts have focused on enhancing continuous scans, introducing multiple synchronization descriptions to handle passive elements (e.g., shutters) and detectors operating at different acquisition rates. Morover, to improve data accessibility and decouple acquisition from storage, the ESRF Blissdata library has been integrated, enabling scan data to be stored and retrieved from a Redis database.

Ongoing developments include the redesign and consolidation of the Continuous Scan API, improvements to the MacroServer environment and configuration tool, and extended support for motor trajectories and archiving events.

[1] https://sardana-controls.org/
[2] https://taurus-scada.org/

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