35th Tango Community Meeting

Tuesday, 14 September 2021 - Wednesday, 15 September 2021

Book of Abstracts

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Welcome words

Corresponding Author: nicolas.leclercq@esrf.fr

Welcome to the 35th Tango Community Meeting

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Opening Address

Corresponding Author: andy.gotz@esrf.fr

Some words to open and set the scene of the Tango Community Meeting.

Projects Status / **6**

Implementation of Tango & Sardana in a Laboratory Scale at Max Born Institute

Corresponding Author: schick@mbi-berlin.de

With the ongoing simplification of installation and administration as well as with the improvements of documentations, complex control systems such as TANGO become also interesting and feasible for smaller institutions without dedicated IT support units. Especially the tight binding to Python enables an easy access for experimentalists already at the student level. At the same time, laser-driven light sources now routinely cover the XUV and X-ray photon ranges, which requires similar beamline setups as known from large-scale facilities. Here we present the current status of the implementation of Tango and Sardana at the Max Born Institute in Berlin, Germany, which covers rather small single machine as well as complex multi-server and client setups for the different types of experiments.

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Tango based data archiving for the CALA high power laser facility

Corresponding Author: leonard.doyle@physik.uni-muenchen.de

The Centre for Advanced Laser Applications (CALA) in Munich is home to the ATLAS-3000 high power laser dedicated to research on laser particle acceleration and applications thereof. We employ Tango as a control system for a growing number of hardware devices and specifically to record experimental data in an automated fashion. After a short overview of the facility, the talk will introduce the features and implementation of this archiving system.

Tango Ecosystem / **8**

PyTango Status Report

Corresponding Author: ajoubert@sarao.ac.za

Latest news from the PyTango project.

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SKAO Status Update

Corresponding Author: sonja.vrcic@skao.int

Latest news from SKAO project.

Tango Ecosystem / **10**

C++ Tango Kernel Status

Corresponding Authors: michal.liszcz@s2innovation.com, reynald.bourtembourg@esrf.fr, thomas.braun@byte-physics.de

Latest news from the C++ kernel core developers.

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S2Innovation community involvement and development

Author: Piotr Goryl[1]

Co-authors: Michal Liszcz [2]; Krystian Kędroń

[1] *S2Innovation Sp. z o. o,*

[2] *S2Innovation*

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From its beginning in 2017, the S2Innovation collaborates with Institutes and companies from the Tango Controls Community as well as actively participate in Tango Control maintenance and development. The presentation will give an update on the recent progress of its development and a summary of its involvement in Tango Controls development.

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Deployment of the alarm-handler system at Elettra and Fermi

Author: Graziano Scalamera[1]

Co-author: Lorenzo Pivetta [1]

[1] *Elettra Sincrotrone Trieste S.C.p.A.*

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A number of alarm-handler device servers and cumbia based GUIs have been deployed in both Elettra and Fermi control systems to handle thousands of alarms.

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IC@MS Status

Authors: Michal Gandor[1]; Mateusz Nabywaniec[1]

[1] *S2Innovation*

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IC@MS is an web application providing REST API for managing alarm system. During the presentation we will show progress of project development and
demonstrate application.

Tango Ecosystem / **14**

Taurus Status Report

Authors: Carlos Pascual Izarra[None]; Zbigniew Reszela[None]

Corresponding Authors: cpascual@cells.es, zreszela@cells.es

Taurus is a framework for creating GUIs and CLIs for a control system using python and Qt.

This talk is a quick status report of the latest developments in Taurus, among which we highlight a new major version (Taurus 5) involving large refactoring of the code to modernize and improve it.

Tango Ecosystem / **15**

TangoGQL and Vue.js web applications at SOLARIS

Author: Tomasz Noga[1]

Co-authors: Wojciech Zaremba [1]; Maciej Grębla [1]

[1] *SOLARIS*

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At SOLARIS, we mainly use Taurus GUIs to conduct experiments and check beamlines' statuses. Due to necessary and heavy customisation of the library modules (custom classes etc.), some of the applications began having performance problems. After TangoGQL had been released, we started

to use it as backend for our web applications that replace problematic GUIs. This talk will cover our modest accomplishments in TANGO web development.

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TUI for Tango devices

Author: Johan Venter[1]

[1] *SARAO*

Corresponding Author: aventer@sarao.ac.za

Wrote a simple TUI for navigating Tango devices as a Rust learning project.

See https://github.com/SKAJohanVenter/tango-controls-tui

Packages used:
- https://crates.io/crates/tango-client
- https://crates.io/crates/tui

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Embedding a debugger in your PyTango device (lightning talk)

Author: Anton Joubert[1]

Co-author: Matteo Di Carlo [2]

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[2] *INAF*

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A very quick look at how we embedded a debugger (debugpy) into all SKA PyTango devices. This allows us to attach a VS Code debugger to a running device and peek inside.

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High-speed data streaming at MAX IV

Author: Emil Rosendahl[None]

Corresponding Author: emil.rosendahl@maxiv.lu.se

MAX IV has seen an explosion in high-rate detectors. In order to cope with this amount of data we decided to change how the data acquisition should work. In this context a new paradigm has been developed to use data streams and a dedicated data acquisition cluster based on Kubernetes.

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ESRF-EBS Status

Author: Nicolas Leclercq[1]

[1] *ESRF*

Corresponding Author: nicolas.leclercq@esrf.fr

The ESRF-Extremely Brilliant Source (ESRF-EBS) is the first-of-a-kind fourth-generation high-energy synchrotron. After only a 20-month shutdown, scientific users were back to carry out experiments with the new source. This talk gives an overview of the EBS status from its Accelerator Control Unit (ACU) point of view. It also offers the opportunity to present some of the projects currently under development.

Tango Ecosystem / **20**

Managing distributed systems with fandango

Author: Sergio Rubio Manrique[None]

Corresponding Author: srubio@cells.es

This talk will make an overview of the current scripts and devices used to manage distributed systems using fandango as an alternative to Jive/Astor. It will also open some discussions regarding the evolution of distributed-event systems.

Tango Ecosystem / **21**

Sardana Status Report

Authors: Teresa Núñez[None]; Abdullah Amjad[None]; Henrik Enquist[None]; Johan Forsberg[None]; Michał Piekarski[1]; Carlos Pascual Izarra[None]; Zbigniew Reszela[None]

[1] *NSRC SOLARIS*

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Sardana is a software suite for Supervision, Control and Data Acquisition in scientific installations. Here we present a yearly status report of the latest developments in Sardana as the result of the Sardana Community collaboration.

Projects Status / **22**

Tango based GMRT Control System : An Exploratory Prototype for the SKA Telescope Manager

Author: Jitendra Kodilkar[1]

[1] *National Centre for Radio Astrophysics - Giant Metrewave Radio Telescope, Pune, India*

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The Giant Metrewave Radio Telescope (GMRT), built and operated by the NCRA (India) is a SKA path-finder facility. The Monitor & Control system of GMRT is upgraded using the TANGO software framework. It is developed in synergy with the SKA-TM work package by considering similar design ideas and technology choices. The Tango based GMRT Control (TGC) System is composed of specification driven generic control nodes which are organized hierarchically. The configuration defined in the Tango database, and custom RDBMS schema is used to identify the role of control nodes in the control hierarchy. The TGC system has been operational since the last couple of years. This talk will cover the learning and experiences from the Tango based Next Generation GMRT M&C System, such as implementation of the Tango framework, specification driven system to promote loose coupling, aggregation node implementation for antenna array and sub-arrays, and the context based fully featured GUIs using the Taurus etc.

Tango Ecosystem / **23**

PUMA framework achieves load balancing and failover

Author: Giacomo strangolino[1]

[1] *Elettra Sincrotrone Trieste*

Corresponding Author: giacomo.strangolino@elettra.eu

Latest developments in the PUMA framework for the design of reliable, secure, scalable and user-oriented multi platform user interfaces have targeted the load balancing and failover objectives.
A multi host environment has been set up to test the features, that are currently of service to the clients.

Tango Ecosystem / **24**

Pogo Roadmap

Authors: Damien Lacoste[1]; Krystian Kędroń[None]

[1] *ESRF*

Corresponding Author: damien.lacoste@esrf.fr

Proposal for a roadmap for pogo in the coming year.
All the items presented are open for discussion.

News from the Steering Commity / **25**

About IK Compagny

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News from the Steering Commity / **26**

About Byte Physics

Corresponding Author: thomas.braun@byte-physics.de

News from the Steering Commity / **27**

About S2 Innovation

Corresponding Author: piotr.goryl@s2innovation.com

News from the Steering Commity / **28**

About Observatory Science

Corresponding Author: ajg@observatorysciences.co.uk

News from the Steering Commity / **29**

Latest news from the Tango Steering Committee

Corresponding Author: andy.gotz@esrf.fr

The Tango Steering Committee is made up of the sites who have signed a common collaboration to maintain and further develop Tango Controls by co-financing developments. Strategic decisions about the roadmap are discussed in the TSC meetings and guide the choice of developments to finance. This talk will present the latest news from the TSC, specifically the outcomes of the tendering process which was carried out in 2021.

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Q&A

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Taranta Status

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