



Sardana Status

40th Tango Community meeting

8-10 June 2026, ALBA Synchrotron, Barcelona, Spain

Vanessa Da Silva, Johan Forsberg (MAXIV)

Michal Piekarski (SOLARIS)

Teresa Núñez (DESY)

Alexander Kessler (HI-JENA)

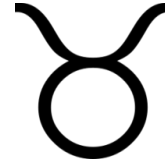
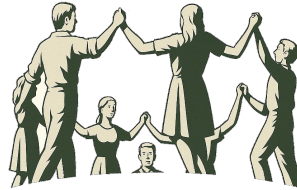
Daniel Schick, Michael Schneider (MBI-Berlin)

Oriol Vallcorba, Jordi Aguilar, Roberto Homs, Zbigniew Reszela (ALBA)

on behalf of the Sardana Community

Sardana - Scientific SCADA Suite

Sardana & Taurus projects



SOLARIS
NATIONAL SYNCHROTRON
RADIATION CENTRE



HI JENA
Helmholtz-Institut Jena



- 100% Python
- Open-source
- Modular
- Multi-platform
- Widely used
- Community-driven

Built on top of
TANGO
Control System

Hardware Integration: Sardana Controllers

- Generic controllers (e.g. Sardana Tango Controller, Lima controller)
- Custom controllers (e.g. direct hardware access)

Catalog of plugins

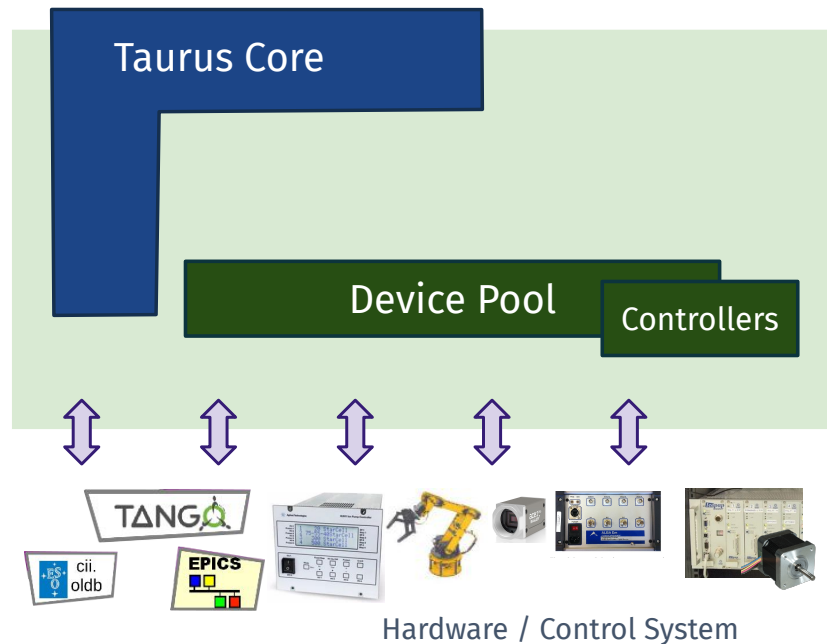
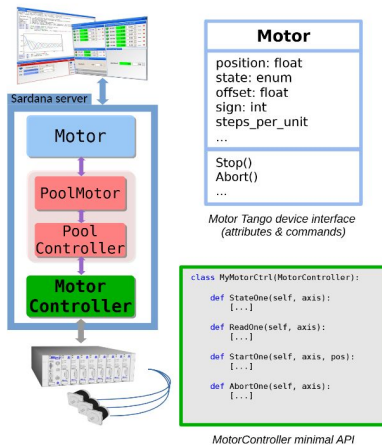
Sardana plugins for specific hardware

Below you will find a table with Sardana plugins for specific hardware like for example motion controllers, detectors, etc.

Name	Description	Link(s) to project
ADLINK	ADLINK-DAG-core1 v.g. 2005	sardana-adlink
AgiliaADP	Agilia Cones AGP motor mount	AgiliaADPMotorController
AgiliaADP	Agilia Cones AGP rotational mount	AgiliaADPMotorController
ALFA-EM	Low current electromotor	sardana-alfarem
AmplexOneD	AmplexFX3 Multi-channel analyzer as oneD	AmplexOneDCtrl
AmplexFX3	AmplexFX3 Multi-channel analyzer	AmplexFX3
CasFasEPS	CasFasEPS power supply	CasFasEPSMotorController
DO02	DO02 driver	DO02Ctrl
ElgerDectris	Elger Dectris	ElgerDectris
ElgerPSI	Elger PSI	ElgerPSI
EpicMotor	Epic Motor	EpicMotorController
EpicZeroD	Epic ZeroD	EpicZeroDController
Epoch	Epoch Timer	EpochCounterTimerController
Greateyes	Greateyes camera	GreateyesTangoDeviceController
HaryADC	TI9930 and TI9950 ADCs	HaryADCCtrl
HaryDAC	DAC as motor	HaryDACCtrl
HaryMotor	DESY motors (all motors controlled by Tango Servers) developed at DESY, ex. DmaVME53	HaryMotorCtrl

<https://gitlab.com/sardana-org/sardana-extra>

Controller API for custom developments. Generic interfaces.



Mid-level abstraction: Sequencing Engine

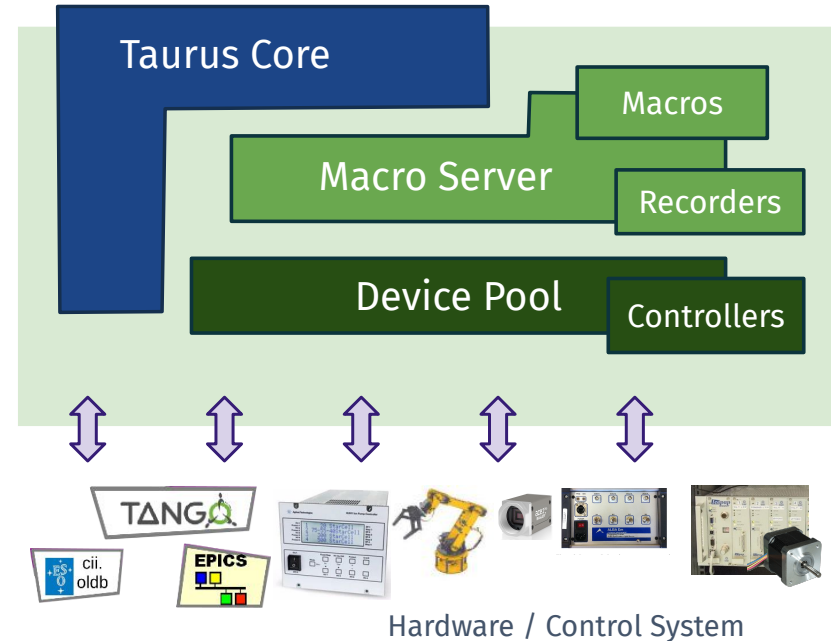
Macros: Python functions and procedures that can be executed at any time

```
@macro([[ "position", Type.Float, None, "absolute position" ]])
def move_theta(self, position):
    """This macro moves theta to the specified position"""
    th = self.getMotor("th")
    th.move(position)
    self.output("Motor ended at %s", moveable.getPosition())

@macro([[ "moveable", Type.Moveable, None, "moveable to get position" ]])
def fixed_ascan(self, moveable):
    """This does an ascan starting at 0 ending at 100, in 10 intervals
    with integration time of 0.1s"""
    self.ascan(moveable, 0, 100, 10, 0.1)
    scan_id = self.getEnv('ScanID')
    self.output("ScanID is now %d", scan_id)
```

API for accessing Sardana elements or environment

Parameters, result, hooks, data handler (recorders), ...



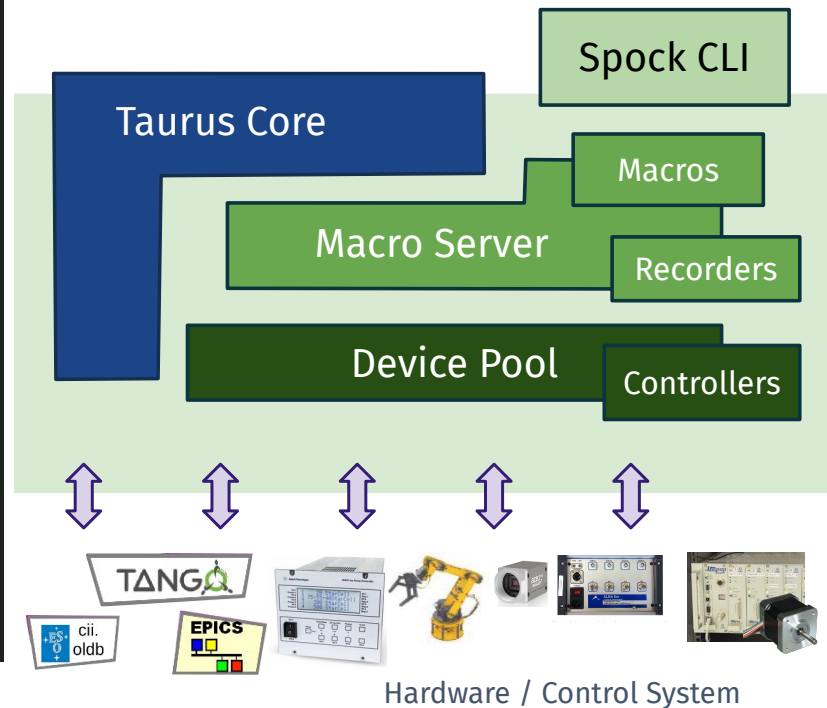
High-level CLI: Spock

IPython CLI to run macros, commands, open GUIs.

```
Door_macroserver_1 [ 1]: get_meas_conf
ActiveMntGrp = test_lima_sw
  Channel  Enabled  Output  PlotType  PlotAxes
-----
  ct01     True    True    Spectrum  <mov>
  fsm_sim1 True    True    No        n / a

Door_macroserver_1 [ 2]: lsenv
  Name          Value  Type
-----
  ScanDir       /tmp   str
  ScanFile      ['250922sar.h5'] list
  ScanID        117   int

Door_macroserver_1 [ 3]: ascan mot01 1 5 10 .1
Operation will be saved in /tmp/250922sar.h5 (HDF5::NXscan from
NXscanH5_FileRecorder)
Scan #119 started at Wed Oct 29 12:59:51 2025. It will take at least
0:00:03.171697
#Pt No  mot01  ct01  fsm_sim1  dt
0      1      0.1  file:///tmp/scan_0117/fsm_sim1_0001.edf
0.526816
1      1.4    0.1  file:///tmp/scan_0117/fsm_sim1_0001.edf
0.892816
...
9      4.6    0.1  file:///tmp/scan_0117/fsm_sim1_0001.edf  3.7573
10     5      0.1  file:///tmp/scan_0117/fsm_sim1_0001.edf
4.10957
Operation saved in /tmp/250922sar.h5 (HDF5::NXscan)
Scan #119 ended at Wed Oct 29 12:59:55 2025, taking 0:00:04.262743.
```

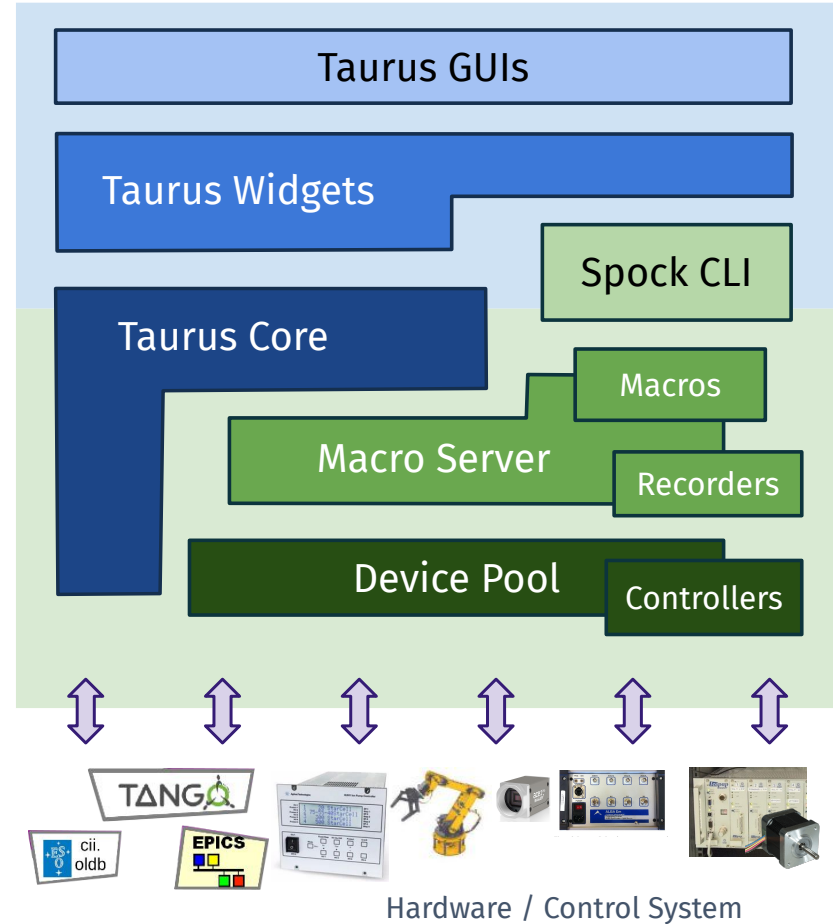


High-level GUIs: Taurus

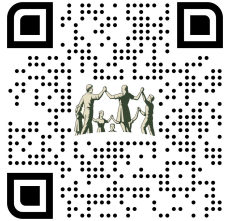
Experiment Configuration, MacroExecutor, Sequencer, Showscan Online plotting, Taurus Motor widgets, etc...

The image shows three overlapping windows from the Taurus software suite:

- sequencer: MacroServer/macroserver/1**: A window showing a list of macros and their parameters. The 'meshtest' macro is selected, showing parameters like 'motor1', 'motor2', and 'm1_nr_interv'.
- Experiment Configuration@pc281**: A window for configuring measurement groups and channels. It shows a table of channels (ct01-ct04) and a 'New Channel' dialog box.
- Plot Window**: A window displaying a plot of 't01' vs 'mot07'. The plot shows a smooth curve with red data points. A terminal window in the background shows statistics for the 'movable: mot07'.



Sardana Project and Community



<https://sardana-controls.org>
<https://gitlab.com/sardana-org>



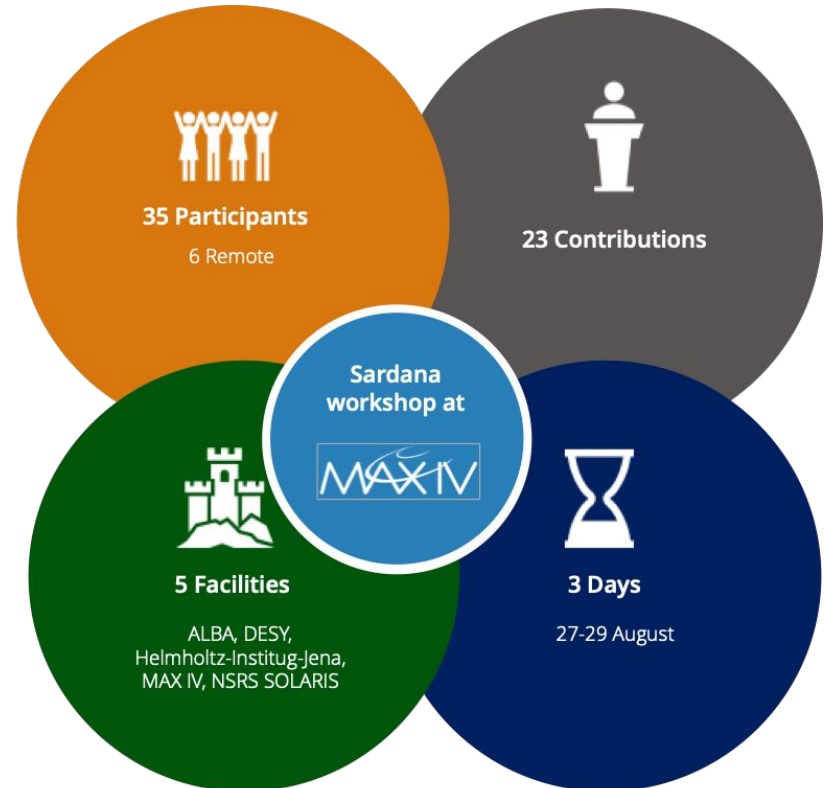
- Monthly follow-ups organized by ALBA, DESY, MAX-IV, SOLARIS.
<https://gitlab.com/sardana-org/sardana-followup>
- Community Workshops (~yearly)
 - 2023 Continuous Scans Workshop in SOLARIS <https://indico.solaris.edu.pl/event/5/>
 - 2024 Sardana workshop in Tango Meeting at SOLEIL
<https://gitlab.com/sardana-org/sardana-followup/-/blob/main/20240530-SOLEIL/AGENDA.md>
 - 2025 Sardana Workshop in MAX IV <https://indico.maxiv.lu.se/event/5634/>
 - **2026 Tango Meeting in BCN** <https://indico.tango-controls.org/event/737>














MAX IV workshop in August 2025

- ✓ Facilities use cases
- ✓ New Features on development
- ✓ Bug Squashing Party
- ✓ Community round table and Roadmap discussion









Roadmap





Sardana short-term roadmap:

- Redesign **Continuous Scan API**  
Lessons learned from custom scans, community *hackathon*
- User-friendly **multiple synchronization API** 
- **BlissData publishing** from Pool  
External data reconstruction (mixed-rate detectors). Scan progress reporting.
- Config tool: include **MacroServer environment** 
- **Shutter**: consolidate native support 
- Push **Motor archiving** events. Poll when idle. 
- Evaluate native **trajectory support** 

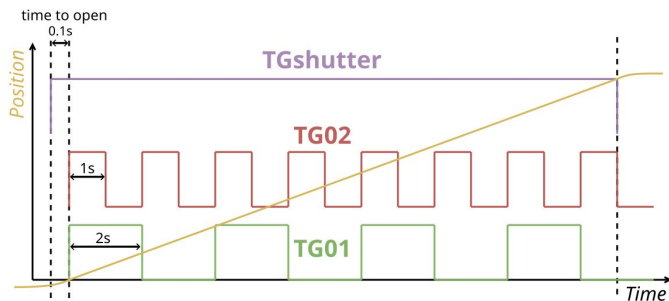
Sardana Mid-term/backlog:

- Review **Macro API** - Type hints, more *Pythonic* macro writing  
- Simplify **ExpConf GUI** - Channel selection, trigger relations 
- **Sequencer** - hooks in plain text, dry-run, retry/resume 
- **Reliability** & error-handling tools
- Support flexible workflows for laser facilities 
Custom controller commands
- Linting, standardization & documentation 
Merge-request checklist. Docs reorganization & tutorials



-  Design
-  Implementation
-  Revision
-  Finished

Multiple synchronization descriptions

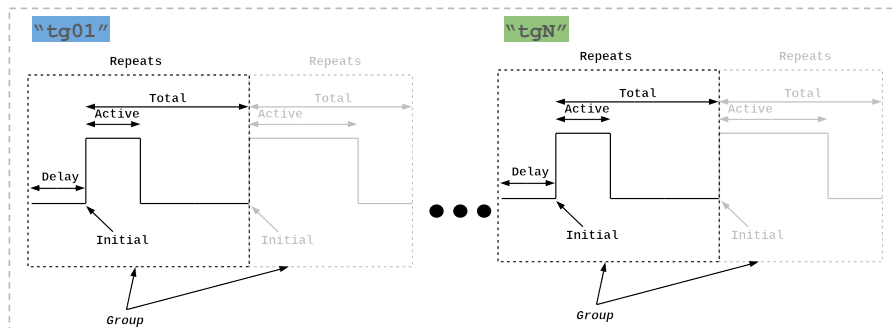


Synchronization description

Synchronizer	Delay (s)	Active (s)	Total (s)	Nr Points
TG01	0,1	2	4	8
TG02	0,1	1	2	4
TGshutter	0	16,1	16,1	1

Measurement Group configuration

Channel	Synchronizer	Synchronization
twod01	TG01	gate
ct01	TG02	trigger
shutter	TGshutter	trigger



✓ Available in **Sardana 3.7**

Now work is focused in improving the API and the tools to use this feature in a user-friendly way

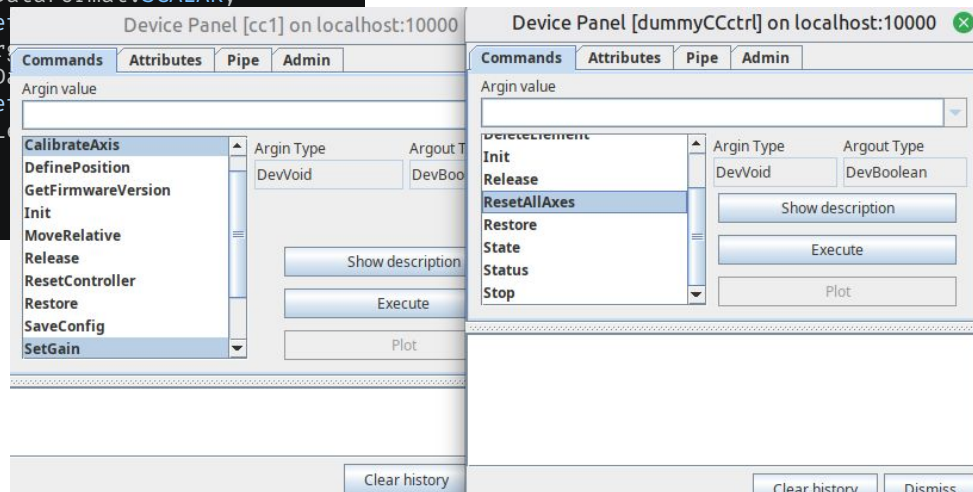
Custom controller commands

Added support for controller-defined custom Tango commands, exposed on both axis elements and controller devices

✓ Available in **Sardana 3.7**

```
axis_commands = [
    (
        "CalibrateAxis",
        CmdArgType.DevVoid,
        AttrDataFormat.SCALAR,
        "Calibrate this axis",
        CmdArgType.DevBoolean,
        AttrDataFormat.SCALAR,
        "Calibration success",
        DispLevel.OPERATOR,
    ),
    (
        "SetGain",
        CmdArgType.DevDouble,
        AttrDataFormat.SCALAR,
        "Gain value to set",
        CmdArgType.DevDouble,
        AttrDataFormat.SCALAR,
        "Gain that was set",
        DispLevel.EXPERT,
    ),
]
```

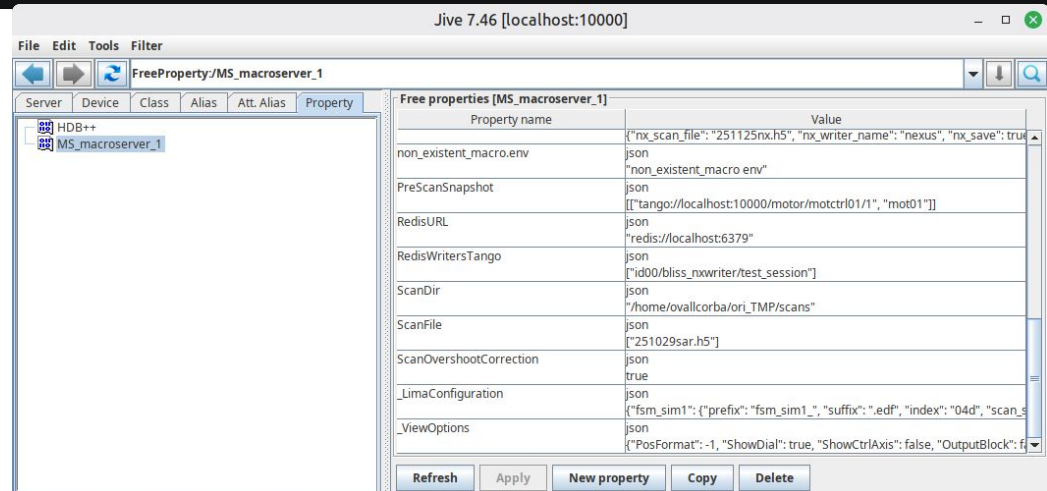
```
ctrl_commands = [
    (
        "ResetAllAxes",
        CmdArgType.DevVoid,
        AttrDataFormat.SCALAR,
        "Reset all axes",
        CmdArgType.DevBoolean,
        AttrDataFormat.SCALAR,
        "Reset success",
        DispLevel.OPERATOR,
    ),
]
```



Add MacroServer Environment backends: Redis and TangoDB

- Global space to store variables persistently to be accessed during macro execution.
- Can be set on different scope: Global, Door, Macro, Door.Macro
- Modified via macros: `senv` and `usenv`
- Before only python shellve backend (file)
- ✓ Available in **Sardana 3.7**

```
Door_macroserver_1 [3]: dumpenv
Name                                     Value                                     Type
-----
ActiveMntGrp                             test_ct                                  str
DataCompressionRank                       1                                       int
JsonRecorder                              True                                    bool
NexusExperimentInfo                       {'beamline': 'beamline_id', 'exp_id': 'identifier for the experiment', 'ex [...]} dict
NexusWriterOpts                            {'nx_scan_file': '251125nx.h5', 'nx_writer_name': 'nexus', 'nx_save': True [...]} dict
non_existent_macro.env                    non_existent_macro env                 str
PreScanSnapshot                           [['tango://localhost:10000/motor/motctrl01/1', 'mot01']] list
RedisURL                                   redis://localhost:6379                  str
RedisWritersTango                          ['id00/bliss_nxwriter/test_session'] list
ScanDir                                    /home/ovallcorba/ori_TMP/scans         str
ScanFile                                    ['251029sar.h5']                       list
ScanOvershootCorrection                   True                                    bool
_LimaConfiguration                        {'fsm_sim1': {'prefix': 'fsm_sim1_', 'suffix': '.edf', 'index': '04d', 'sc [...]} dict
_ViewOptions                              {'PosFormat': -1, 'ShowDial': True, 'ShowCtrlAxis': False, 'OutputBlock': [...]} dict
```



Property name	Value
non_existent_macro.env	json "non_existent_macro env"
PreScanSnapshot	json [['tango://localhost:10000/motor/motctrl01/1', 'mot01']]
RedisURL	json "redis://localhost:6379"
RedisWritersTango	json ["id00/bliss_nxwriter/test_session"]
ScanDir	json "/home/ovallcorba/ori_TMP/scans"
ScanFile	json ["251029sar.h5"]
ScanOvershootCorrection	json true
_LimaConfiguration	json {"fsm_sim1": {"prefix": "fsm_sim1_", "suffix": ".edf", "index": "04d", "scan_s [...]}
_ViewOptions	json {"PosFormat": -1, "ShowDial": true, "ShowCtrlAxis": false, "OutputBlock": f [...]}

Last release: **Sardana 3.7** (May 13th, 2026)

- ✓ Added and applied Ruff as linter and formatter of Sardana code
- ✓ Inspector tool in showscan
- ✓ Improvements in expconf (add ScanID control, multiple channel addition, show offline channels)
- ✓ Pixi configuration

<https://gitlab.com/sardana-org/sardana/-/blob/develop/CHANGELOG.md>

🎯 Simplify ExpConf GUI - Channel selection, trigger relations

- Measurement group **start trigger tree**
- Experiment Configuration GUI v2

to define trigger/gate execution order and parent-child relationships

```
Door_macroserver_1 [2]: get_meas_start_trigger
ActiveMntGrp = mntgrp
Parent      Child
-----
tg01       tg02
```

Experiment Configuration

View mode Edit mode You started editing experiment configuration. External changes will show a pop-up dialog.

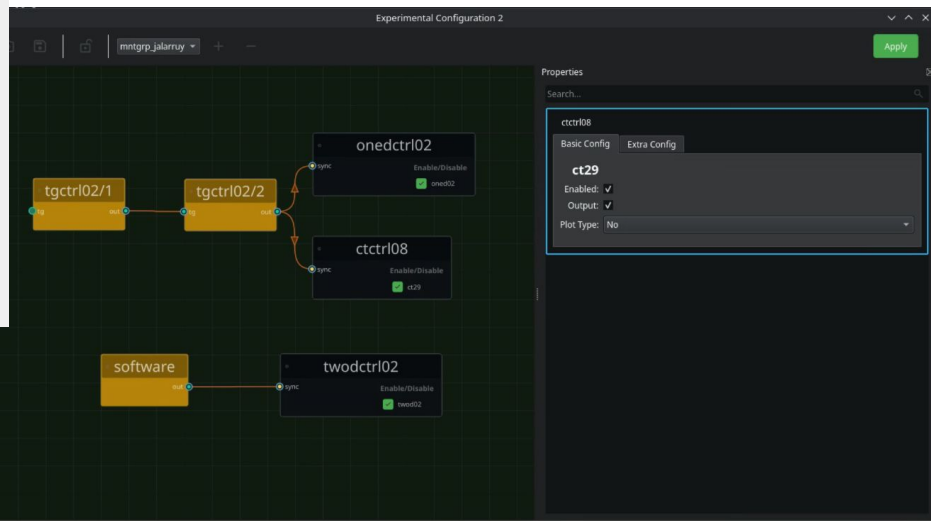
Measurement Group Snapshot Group Storage

Active Measurement Group mntgrp

Channel	enabled	output	Data Type	Plot Type	Plot Axes	Timer	Monitor	Synchronizer	Synchronizer
ct29	true	true	float64	No		ct29	ct29	tg02	Trigger
oned02	true	true	float64	No		oned02	oned02	tg02	Trigger
twod02	true	true	float64	No		twod02	twod02	software	Trigger

no way to set/see if another tg is starting tg02

Reload Keep editing Apply

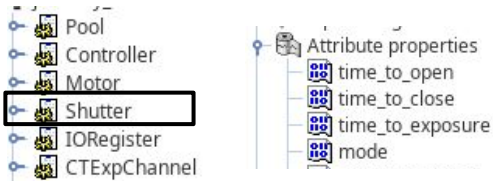


✓ Partially available in develop branch

Shutter: consolidate native support

Calculations added in Sardana Generic Scan Framework so it is compatible with all types of scans and synchronizaiton domains

Sardana device with configuration attributes

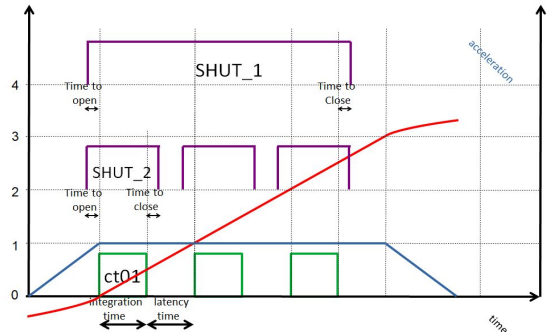


Measurement Group member

Active Measurement Group: mntgrp02

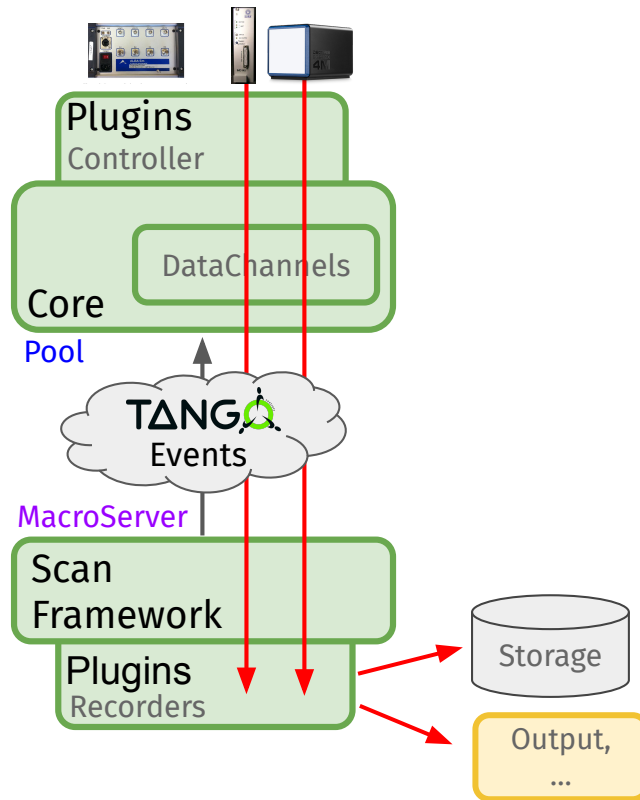
Channel	enabled	output	Plot Type	Plot Axes
ct01	true	true	No	
SHUT_1	true	true	No	
SHUT_2	true	true	No	

Native software and hardware control using Multiple Synch. Description



✓ Reviewed, tested and ready to be integrated in develop

Data publication to Redis database



🎯 Data publication to Redis database



Integrate ESRF **Blissdata** in Sardana

Minimize the stress on the MacroServer

Real-time data available for external consumers

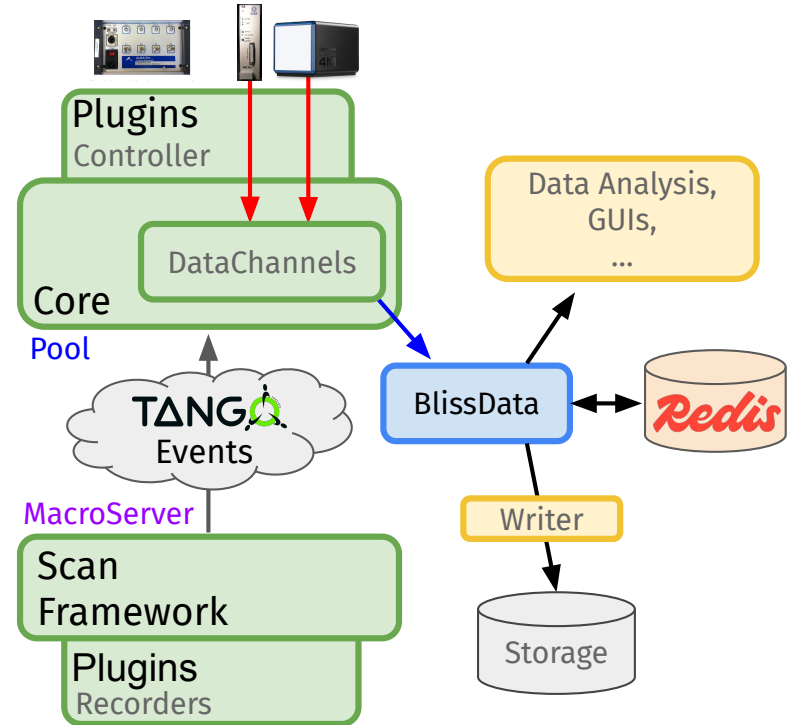
Avoid potential bottlenecks in Tango events

Enable external data composition

Also testing implementation via controller capability and publishing data via Tango Device Server

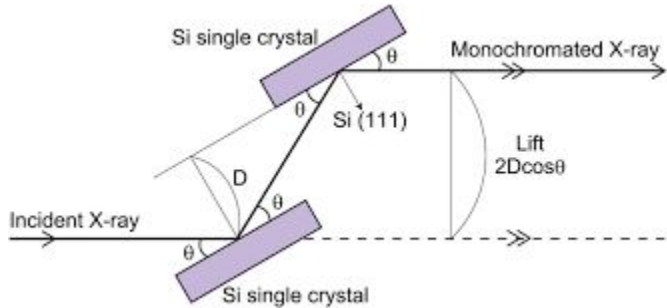
✓ In development & testing

PoC results in Vanessa and Wojciech talk in Sardana Workshop (Thursday)

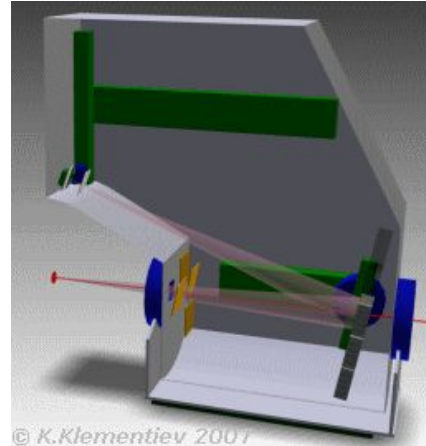


Native trajectory Support

- **Avoid collisions**
- **Increase scan velocity**
- **Dynamic:** meshct, aXscanct, helical, etc
- **Static:** Pseudo-motors



Double Crystal Monochromator



CLEAR Spectrometer Core Level Emission Analyzer and Reflectometer (by K. Klementiev)

✓ In design.

PoC in Roberto's talk in Sardana Workshop (Thursday)

Hardware orchestrated, multi-dimensional, continuous scans with the Icepap motion controller

THRD092 THRD007

Marcelo J.P. Alcocer, Vanessa Da Silva, Magnus Klingberg, Vincent Hardion, Peter Sjöblom

Many experiments have historically required long detector integration times due to limited photon Flux. Scans that therefore typically been carried out in a step-wise fashion: move, wait, integrate, repeat, leading to long total experimental durations.

Scan-positions of high Flux sources is concentrated around the reaction line.

For a larger detector arrangement, larger detector could be used to meet detector points more quickly. This can be only achieved by computing a hybrid trajectory.

The requirements to perform high quality continuous scans are:

- A well defined integration profile $X_1(t)$
- A well defined detector position profile $X_2(t)$

The recent advent of fourth-generation synchrotron sources significantly increased available photon Flux. Experiments can be carried out much faster now, but detector integration times no longer decrease as scan duration.

An alternative approach is to include a detector integration **during motion**.

Advantages of parallel resolution:

- An on-the-fly mode of experiments with short integration times & many integrations.
- This is most usually achieved by concatenating scans from the same synchrotron.

Hybrid profiles can be implemented in Icepap using pair-wise parametric positional look-up tables ("position" as a function of arbitrary parameter). Points to point motion can be reserved in this parametric space, enabling non-linear motion profiles in multiple dimensions.

Motor	Position	Velocity	Acceleration	Force	Backlash	Backlash
33.00	-1134.427	-35.00	888.478	-1134.627	20.000	0
34.00	-1133.333	-35.00	888.478	-1134.627	20.000	0
35.00	-1132.239	-35.00	888.478	-1134.627	20.000	0
36.00	-1131.145	-35.00	888.478	-1134.627	20.000	0
37.00	-1129.051	-35.00	888.478	-1134.627	20.000	0
38.00	-1127.957	-35.00	888.478	-1134.627	20.000	0
39.00	-1126.863	-35.00	888.478	-1134.627	20.000	0
40.00	-1125.769	-35.00	888.478	-1134.627	20.000	0

The introduction of a hybrid mode of motion in Icepap has the potential to reduce scan duration **up to 50% in many cases**.

For the continuous scan implementation, we choose to parameterize with the cumulative Encoder distance between high frequency points (i.e. distance along trajectory). With this parameterization, point-to-point motion parametric space results in a **constant spatial velocity**. Integration profiles are also continuous in this parameterization.

```

1. time      0.00  0.00  0.00
2. position  0.00  0.00  0.00
3. velocity  0.00  0.00  0.00
4. acceleration  0.00  0.00  0.00
5. force      0.00  0.00  0.00
6. backlash   0.00  0.00  0.00
7. backlash   0.00  0.00  0.00
8. backlash   0.00  0.00  0.00
9. backlash   0.00  0.00  0.00
10. backlash  0.00  0.00  0.00
11. backlash  0.00  0.00  0.00
12. backlash  0.00  0.00  0.00
13. backlash  0.00  0.00  0.00
14. backlash  0.00  0.00  0.00
15. backlash  0.00  0.00  0.00
16. backlash  0.00  0.00  0.00
17. backlash  0.00  0.00  0.00
18. backlash  0.00  0.00  0.00
19. backlash  0.00  0.00  0.00
20. backlash  0.00  0.00  0.00

```

Control system code is based on motor controller that has been developed to compute and configure the motor position look-up tables from user input. This can be done easily in individual projects.

```

000 parameter motor_motor_0 "Motor1" "motor1"
001 parameter motor_motor_1 "Motor2" "motor2"
002 parameter motor_motor_2 "Motor3" "motor3"
003 parameter motor_motor_3 "Motor4" "motor4"
004 parameter motor_motor_4 "Motor5" "motor5"
005 parameter motor_motor_5 "Motor6" "motor6"
006 parameter motor_motor_6 "Motor7" "motor7"
007 parameter motor_motor_7 "Motor8" "motor8"
008 parameter motor_motor_8 "Motor9" "motor9"
009 parameter motor_motor_9 "Motor10" "motor10"
010 parameter motor_motor_10 "Motor11" "motor11"
011 parameter motor_motor_11 "Motor12" "motor12"
012 parameter motor_motor_12 "Motor13" "motor13"
013 parameter motor_motor_13 "Motor14" "motor14"
014 parameter motor_motor_14 "Motor15" "motor15"
015 parameter motor_motor_15 "Motor16" "motor16"
016 parameter motor_motor_16 "Motor17" "motor17"
017 parameter motor_motor_17 "Motor18" "motor18"
018 parameter motor_motor_18 "Motor19" "motor19"
019 parameter motor_motor_19 "Motor20" "motor20"
020 parameter motor_motor_20 "Motor21" "motor21"
021 parameter motor_motor_21 "Motor22" "motor22"
022 parameter motor_motor_23 "Motor24" "motor24"
023 parameter motor_motor_24 "Motor25" "motor25"
024 parameter motor_motor_25 "Motor26" "motor26"
025 parameter motor_motor_26 "Motor27" "motor27"
026 parameter motor_motor_28 "Motor28" "motor28"
027 parameter motor_motor_29 "Motor29" "motor29"
028 parameter motor_motor_30 "Motor30" "motor30"
029 parameter motor_motor_31 "Motor31" "motor31"
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033 parameter motor_motor_35 "Motor35" "motor35"
034 parameter motor_motor_36 "Motor36" "motor36"
035 parameter motor_motor_37 "Motor37" "motor37"
036 parameter motor_motor_38 "Motor38" "motor38"
037 parameter motor_motor_39 "Motor39" "motor39"
038 parameter motor_motor_40 "Motor40" "motor40"
039 parameter motor_motor_41 "Motor41" "motor41"
040 parameter motor_motor_42 "Motor42" "motor42"
041 parameter motor_motor_43 "Motor43" "motor43"
042 parameter motor_motor_44 "Motor44" "motor44"
043 parameter motor_motor_45 "Motor45" "motor45"
044 parameter motor_motor_46 "Motor46" "motor46"
045 parameter motor_motor_47 "Motor47" "motor47"
046 parameter motor_motor_48 "Motor48" "motor48"
047 parameter motor_motor_49 "Motor49" "motor49"
048 parameter motor_motor_50 "Motor50" "motor50"
049 parameter motor_motor_51 "Motor51" "motor51"
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056 parameter motor_motor_58 "Motor58" "motor58"
057 parameter motor_motor_59 "Motor59" "motor59"
058 parameter motor_motor_60 "Motor60" "motor60"
059 parameter motor_motor_61 "Motor61" "motor61"
060 parameter motor_motor_62 "Motor62" "motor62"
061 parameter motor_motor_63 "Motor63" "motor63"
062 parameter motor_motor_64 "Motor64" "motor64"
063 parameter motor_motor_65 "Motor65" "motor65"
064 parameter motor_motor_66 "Motor66" "motor66"
065 parameter motor_motor_67 "Motor67" "motor67"
066 parameter motor_motor_68 "Motor68" "motor68"
067 parameter motor_motor_69 "Motor69" "motor69"
068 parameter motor_motor_70 "Motor70" "motor70"
069 parameter motor_motor_71 "Motor71" "motor71"
070 parameter motor_motor_72 "Motor72" "motor72"
071 parameter motor_motor_73 "Motor73" "motor73"
072 parameter motor_motor_74 "Motor74" "motor74"
073 parameter motor_motor_75 "Motor75" "motor75"
074 parameter motor_motor_76 "Motor76" "motor76"
075 parameter motor_motor_77 "Motor77" "motor77"
076 parameter motor_motor_78 "Motor78" "motor78"
077 parameter motor_motor_79 "Motor79" "motor79"
078 parameter motor_motor_80 "Motor80" "motor80"
079 parameter motor_motor_81 "Motor81" "motor81"
080 parameter motor_motor_82 "Motor82" "motor82"
081 parameter motor_motor_83 "Motor83" "motor83"
082 parameter motor_motor_84 "Motor84" "motor84"
083 parameter motor_motor_85 "Motor85" "motor85"
084 parameter motor_motor_86 "Motor86" "motor86"
085 parameter motor_motor_87 "Motor87" "motor87"
086 parameter motor_motor_88 "Motor88" "motor88"
087 parameter motor_motor_89 "Motor89" "motor89"
088 parameter motor_motor_90 "Motor90" "motor90"
089 parameter motor_motor_91 "Motor91" "motor91"
090 parameter motor_motor_92 "Motor92" "motor92"
091 parameter motor_motor_93 "Motor93" "motor93"
092 parameter motor_motor_94 "Motor94" "motor94"
093 parameter motor_motor_95 "Motor95" "motor95"
094 parameter motor_motor_96 "Motor96" "motor96"
095 parameter motor_motor_97 "Motor97" "motor97"
096 parameter motor_motor_98 "Motor98" "motor98"
097 parameter motor_motor_99 "Motor99" "motor99"
100 parameter motor_motor_100 "Motor100" "motor100"

```

Example 1: Icepap enhanced 2D motor scan configured in a matrix.

Example 2: Icepap enhanced 2D motor scan configured in a matrix.

Example 3: Icepap enhanced 2D motor scan configured in a matrix.

Example 4: Icepap enhanced 2D motor scan configured in a matrix.

Example 5: Icepap enhanced 2D motor scan configured in a matrix.

Example 6: Icepap enhanced 2D motor scan configured in a matrix.

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Example 99: Icepap enhanced 2D motor scan configured in a matrix.

Example 100: Icepap enhanced 2D motor scan configured in a matrix.



Add support for dynamic device level (not class) attributes [cppTango#814](#), [cppTango!1652](#)

() byte physics

- Sardana exposes many different hardware objects through the same Tango class, for example `Motor`.
- Today, Tango dynamic attributes are added at **class** level.
- This creates conflicts when different devices of the **same class** need attributes with the **same name** but **different configuration** (`WriteType`, `DataFormat`, ...).
- Sardana currently works around this by removing conflicting attributes from the class when each device starts, but this is fragile and can affect other devices.
- The proper solution is **support for device-level dynamic attributes**: attributes valid only for one specific device, just like Tango already allows device-level commands.
- This would allow Sardana devices to expose controller-specific capabilities without changing the whole Sardana/Tango class model.



Sardana workshop Thursday and Friday



<https://indico.tango-controls.org/event/737>

- Facilities reports, dicussion on new features/current WiP, documentation and roadmap
- Sardana Bug Squashing Party – work on open issues (334) and Merge Requests (53).
- Learn from others, contribute to the project and have fun!

Big thanks to all contributors (issues, MRs, commits in last 3y, alphabetical order)

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Thank you for your attention!

