# Sardana Documentation - top level

(User's Guide and Developers Guide will be discussed in more details later on)

- User's Guide
  - o <u>Overview</u>
  - Getting started
  - o Spock
  - o Sardana-Taurus Widgets
  - o Scans
  - Diffractometer control
  - Adding real elements
  - Macro environment
  - Macro Hooks
  - Macro logging and report
  - o Standard macro catalog
  - Environment variable catalogue
  - Configuration
  - Screenshots
  - o FAQ
- Developer's Guide
  - o Overview
  - Writing macros
  - o Writing controllers
  - Writing recorders
  - Sardana core development
  - Sardana Testing
  - o API
  - o Migration quide
  - o <u>Examples</u>
  - o <u>Development quidelines</u>
- Sardana Enhancement Proposals

- Glossary
  - Nice chapter
- <u>To do</u>
  - o It lists missing documentation (TODOs).
  - o It is autogenerated.
- History of changes
  - o Competes with CHANGELOG.md
  - o It could be removed
  - o <u>History of modifications</u>
  - o <u>Version history</u>
  - Index
  - Module Index
  - Search Page

#### Color guide:

- Highlight color:
  - green more or less fine
  - yellow requires work
  - red completely missing or wrong
  - violete new contents
- Text color:
  - Links from documentation
  - Zibi's comments

# User's Guide

# Overview

- Requires review and small corrections. But in general OK
- What do we "sell" to our users
- Starting a procedure
- o Taurus as a toolkit for applications
- o Configure don't program
- o How to write your own procedure
- How to adapt it to your own hardware
- o Symbolic Sketch

#### Getting started

Installing

#### Upgrade installation instructions on Windows

- Working directly from Git
- Dependencies
- o Running the server
- o Running the client

## Spock

- Starting spock from the command line
- Starting spock with a custom profile
- Spock IPython Primer
- Executing macros

- Normal and Advanced spock syntax
- Stopping macros
- Exiting spock
- o Getting help
- Moving motors
- Counting
- Scanning
- Accessing macro data
- Editing macros (edmac)
- Debugging problems (debug, www, post\_mortem)
- Using spock as a Python console
- Using spock as a Tango console
- Sardana-Taurus Widgets
  - o <u>MacroExecutor</u>
  - o <u>Sequencer</u>
    - Load from file with spock syntax
  - MacroButton
  - Experiment Configuration
    - Snapshot Group
    - Storage
  - ShowScan
  - Sardana Editor
- Scans
- Step scans
- o Continuous scans
- Scan snapshot
- Configuration
  - Environment variables are defined here. This should be a link to environment variables
- Diffractometer control
- Adding real elements
- Macro environment

#### Hooks

# Macro logging and report

#### Standard macro catalog

- How to generate the catalogue automatically from the Sardana macros?
- motion related macros
- o counting macros
- o <u>diffractometer related macros</u>
- o environment related macros
- o <u>list related macros</u>
- o measurement configuration macros
- o general hooks macros
- o advanced element manipulation macros
- reload code macros
- scan macros

#### Environment variable catalogue

### Screenshots

- could be updated but not priority
- Sardana oriented graphical user interfaces
- o Graphical user interface screen shots

#### FAQ

- are very poorly explained, missing links
- What is the Sardana SCADA and how do I get an overview over the different components?
- o How do I install Sardana?
- How to work with Taurus **GUI?**
- How to produce your own Taurus <u>GUI</u> panel?
- How to call procedures?
- Output Description
  Output Descript
- How to write scan procedures?
- How to adapt SARDANA to your own hardware?

- How to add your own file format?
- o How to use the standard macros?
- How to add conditions in macros?
- How to write your own Taurus application?
- Which are the standard Taurus graphical GUI components?
- How to write your own Taurus widget?
- How to work with the graphical GUI editor?
- What are the minimum software requirements for sardana?
- How to configure the system?
- How to write your own Taurus schema?
- What are the interfaces to the macro server and the pool?
- What are the data file formats used in the system and how can I read them?
- What is the file format of the configuration files?
- Output Description
  Output Descript

# Developer's Guide

- Overview
  - Each of the elements contains links to the Reference (description of each of the concepts), Sardana API, Tango API
  - Global overview
  - Macro Server
  - Pool
  - Controller
  - Motor
  - Pseudo motor
  - IO register
  - Trigger/gate
  - Counter/timer
  - OD experiment channel

- 1D experiment channel
- 2D experiment channel
- Pseudo counter
- Measurement Group
- Motor Group
- Instrument
- Writing macros
  - General macro developmen
    - Macro result
    - Stopping/aborting a macro
  - Scan macro development
- Writing controllers
  - What is a controller
  - How to write a motor controller
  - How to write a counter/timer controller
  - How to write a 0D controller
  - How to write a 1D controller
    - Better document them after SEP2
  - How to write a 2D controller
    - Better document them after SEP2
  - How to write a trigger/gate controller
  - How to write an I/O register controller
  - How to write a pseudo motor controller
  - How to write a pseudo counter controller
- Writing recorders
  - Overview
  - What is a recorder?
  - Type of recorders
  - Writing a custom recorder
  - Configuration
- Developing core
- Sardana Testing

- o General test documentation
- o Run Sardana tests from command line
- o <u>Test-driven development example</u>
- o Sardana Unit Test examples

### API

- o Macro API
- o Controller API
- o Motor API
- o <u>I/O register</u>
- o Counter/timer API
- o <u>OD experiment channel API</u>
- 1D experiment channel API
- o 2D experiment channel API
- Trigger/gate API
- o Pseudo motor API
- o Pseudo counter API
- o Measurement group API
- Pool tango API
- Macro server tango API
- Library
  - Macros documentation is duplicated here!
- o Test API

#### Migration guide

- Some part of it competes with CHANGELOG.md.
- But it would be an interesting chapter for eventual future migration guides.
- How to migrate your macro code
- How to migrate your controller code

#### Examples

- o <u>Macro examples</u>
- o Controller examples

- <u>Development guidelines</u>
  - o <u>Overview</u>
  - o How to contribute to sardana
    - Competes with CONTRIBUTING.md

  - o <u>Documentation</u>
  - o Coding conventions