

ReferenceFiles

**A small Tango device to store
references on files**

Graziano Scalamera

Motivation

- Save different reference curves of laser spectrometers (DevSpectrum attributes)
- Reference curves should be persistent and saved with a description and date
- It should be possible to browse and retrieve saved references
- It should be possible to delete saved references
- Feature required for all of laser spectrometers available at Elettra (Solar, Avantes, Oceanoptics)

Design

- Avoid implementing same feature in multiple devices
- Avoid putting (too much) logic into the GUI
- Tango based solution (not a library)
- Keep it simple (no dependence from external tools, DBs, etc., minimal configuration)
- Be generic (others will likely have similar needs)



- Design a Tango Device Server that stores references on files

Implementation - commands

- Use commands with JSON@DevString argins and argouts
 - **Save**({"Attribute":"<fqdn>","Name":"<name>","Data":<data*>})
 - **GetList**({"Attribute":"<fqdn>"})
-> {"Name":[<names_array>],"Time":[<times_array>]}
 - **Read**({"Attribute":"<fqdn>","Name":"<name>"})
-> {"Time":"<time>","Data":<data*>}
 - **Remove**({"Attribute":"<fqdn>","Name":"<name>"})

* <data> can be any valid JSON data

Implementation - files

- Make it persistent saving Attribute and Name in device properties and Data on files
- Save in properties/files only in delete_device and read from properties/files only in init_device
- Configure FilePath as a device property
- Use Name as a file name, Attribute fqdn as a path
 - Es: tango://tango_host/name/of/device/attr
 - -> <FilePath>/tango_host/name/of/device/attr/Name

Comments

- It is still a prototype in test, sources at:
<https://gitlab.elettra.eu/cs/ds/reference-files>
- No constraints on Data field in JSON, so that information related to Attributes can be saved (e.g. attribute properties)
- Waiting for DevDict

Questions ?