

Tango at Petra III

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Outlook

Petra III beam line computers

Sardana developments:

- What is being used
- Diffractometer
- Scan Server
- Controllers for Hasylab servers

Simple Scan Server

Further developments

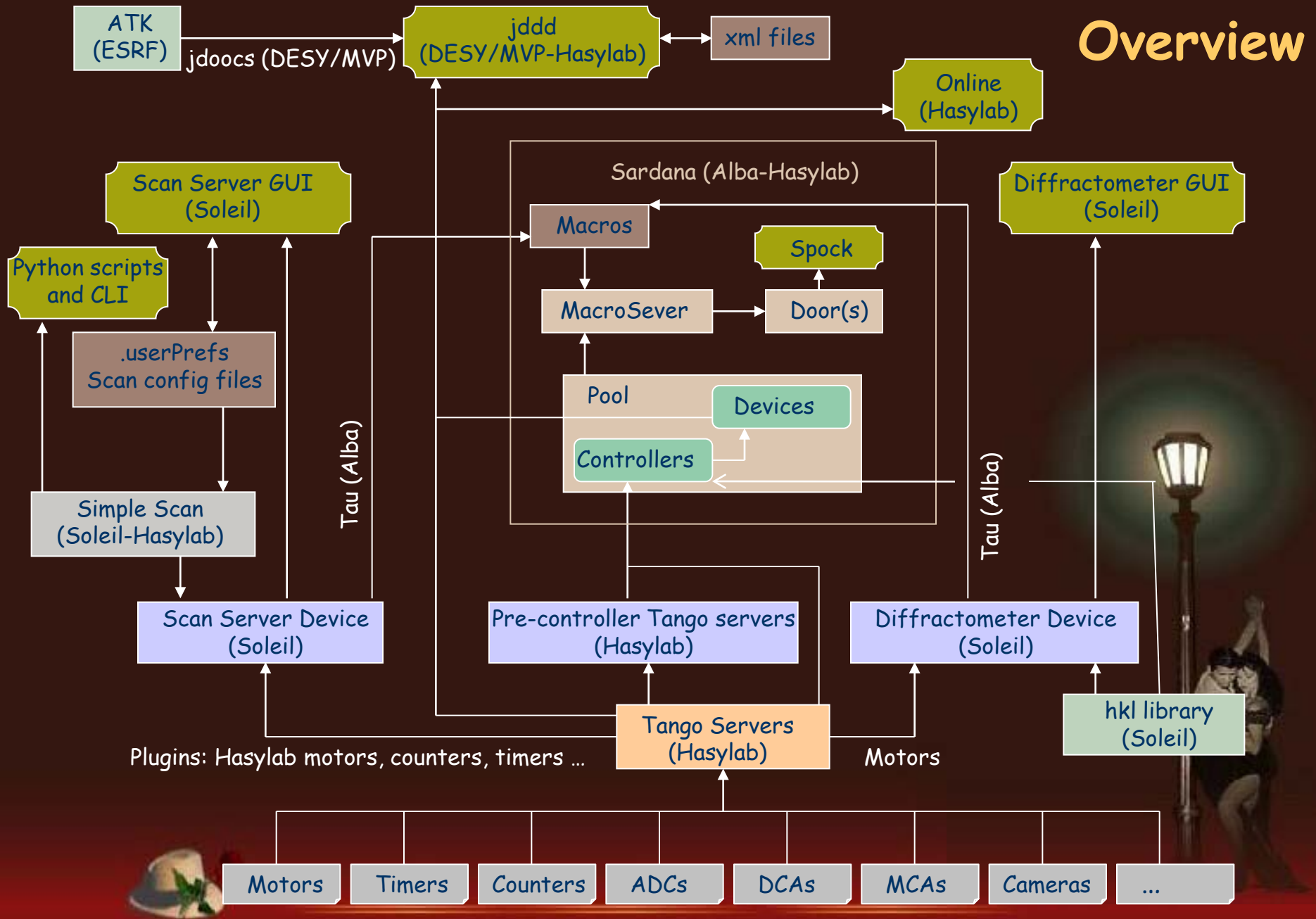


Petra III beamline computers

- Scientific Linux 5
- Installation via rpm package manager
- General user for Tango processes



Overview



Petra III beamline computers

- Scientific Linux 5
- Installation via rpm package manager
- General user for Tango processes

Default installation:

- Standard Tango installation
- Hasylab Tango Servers:
 - > in tango-ds svn (based on Releases)
 - > modified Makefile for direct compilation with:
 - Servers/util directory from svn
 - Servers/cppserver directory svn (in case of multiple classes)
 - Servers/hasy.opt file from svn
 - TANGO_HOME and TANGO_CLASSES global environment variables
 - > can be used in simulation mode (set by property)



Petra III beamline computers (ctd.)

Default installation (ctd.):

- Sardana (Alba-Hasylab):
 - > Pool device
 - > MacroServer
 - > Spock
- Version from 8-12-08:
 - > modified for Python2.4
 - > added ScanServer and Diffractometer interfaces
 - > controllers for Hasylab Servers



Petra III beamline computers (ctd.)

Default installation (ctd.):

- ScanServer (Soleil):
 - > Device Server (with Nexus option)
 - > ScanServer GUI (Salsa)

- Device Server ScanServerV2:
 - > modified Makefiles
 - > use tango.opt and common_tango.opt from Soleil
 - > created libsoleil(-devel) for running(compilation)
(YAT, YAT4Tango - NexusCpp, Nexus4Tango, GDShare)
 - > plugins for Hasylab devices
 - > scripts for reading Nexus files



Petra III beamline computers (ctd.)

Default installation (ctd.):

- ScanServer (Soleil):
 - > Device Server (with Nexus option)
 - > ScanServer GUI (Salsa)

- Scan Server GUI version 2.6:
 - > Salsa jar file
 - > Soleil Utilities jar file
 - > configuration in .java/.userPrefs (java Preferences API)



Petra III beamline computers (ctd.)

Default installation (ctd.):

- Diffractometer (Soleil):
 - > hkl library
 - > Diffractometer device
 - > Diffractometer GUI
- hkl library version 2.3.0
- Device Server compatible with hkl lib:
 - > eulerian 6C available
- GUI version 2.0.0:
 - > Soleil Utilities jar required



Petra III beamline computers (ctd.)

Default installation (ctd.):

- SimpleScan (Soleil/HASYLAB collaboration):
 - > Device Server
 - > Python scripts
- Soleil dependences loaded via maven
- Sources in tango-ds cvs repository
- Built jar file with server and dependencies
- Same java configuration files as Salsa



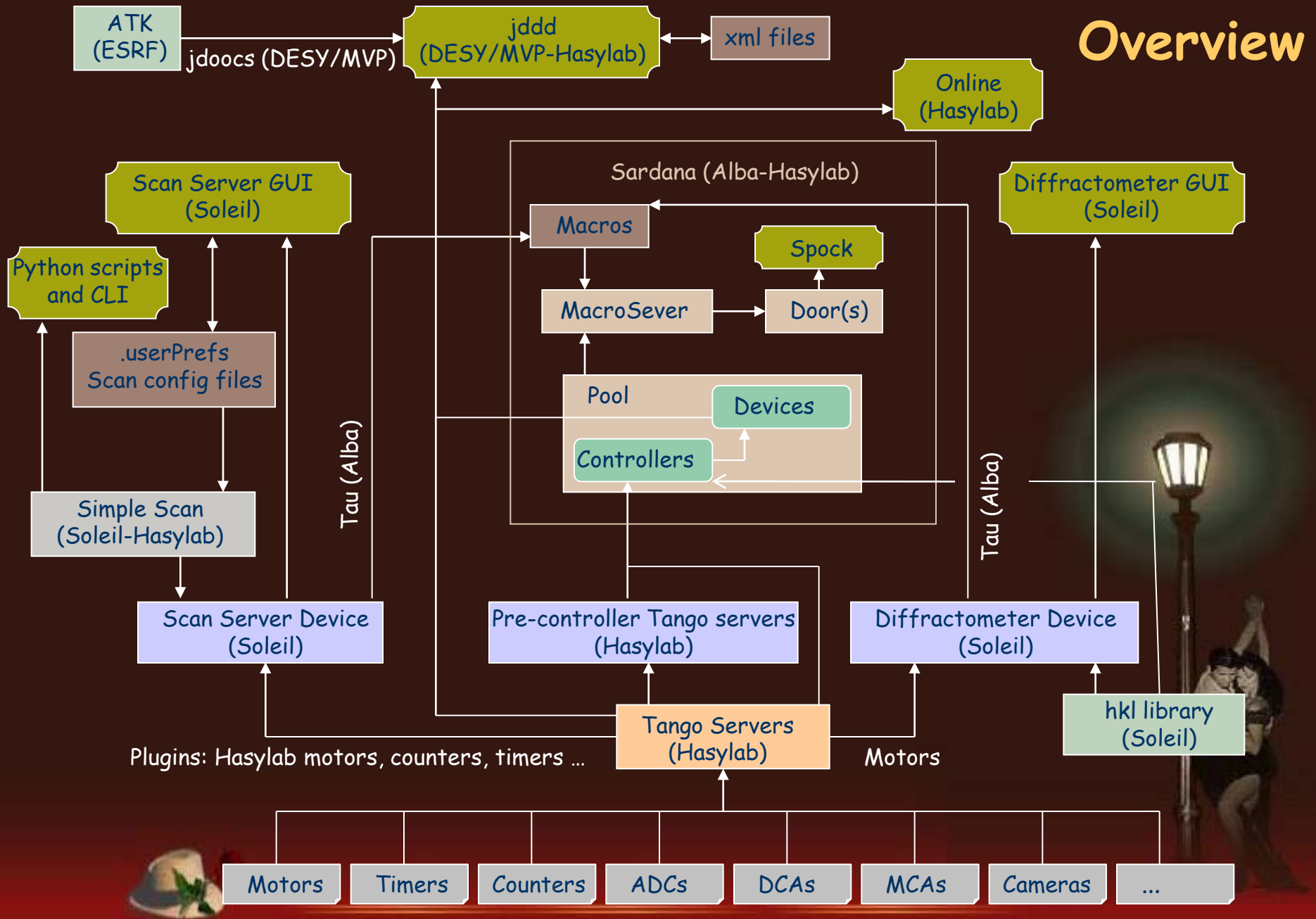
Petra III beamline computers (ctd.)

Default installation (ctd.):

- jddd (DESY):
 - > jar file
 - > xml files
- Requires java1.6
- xml client files in svn tango-ds (Clients/jddd/[DeviceName])
- Online (Hasylab):
 - > with Tango interface
 - xml files for matching Tango devices
- Device configuration scripts



Overview



Sardana Developments

Current installed version:

- Based on trunk version from Dec-08
- Adapted in DESY to python2.4
- ScanServer/Diffractometer Server interface
- Controllers for Hasylab Servers

Current version under test:

- Based on trunk version from April-09
- Already adapted to python2.4
- ScanServer/Diffractometer Server interface
- New controllers for Hasylab servers added
- Pool runs
- MacroServer runs -> tau version 1.0.2 adapted to python2.4
- Spock runs
- Tool for excel configuration tested



Sardana Developments (ctd.)

Diffractometer:

- Implementation based on hkl_v2.3.0:
 - > direct implementation using hkl library (preliminary-Alba)
 - > direct connection to DiffractometerDevice (using PyTango or Tau depending on sardana version)

Spock like-SPEC macros:

ca, cal, ci, br, wh, pa, H, K, L, LAMBDA, calcA, calcHKL, setmode, setlat, or0, or1, orn, setor0, setor1, setorn, showUB

Implementation of new hkl/diffractometer versions as soon as ready



Sardana Developments (ctd.)

ScanServer:

Direct access to ScanServer device via Tau or PyTango

- All commands and attributes from the Server available in spock
- Additionally:
 - > save configuration file
 - > load configuration file
 - > perform list of scans



Sardana Developments (ctd.)

Controllers:

Optimization and development of controllers for Hasylab Servers

- Motors:
 - > OmsVme58
 - > Motors via PLC
 - > Hexapod
- Timer, counter, encoder, ioregister, DAC
- MCA (to be tested)
- Camera (to be tested and optimized)



SimpleScan Server

Tango Server for configuring ScanServer and performing scans

- Connects to ScanServer device
 - Shows available configurations (done by Salsa)
 - Loads selected configuration
 - Sends command to ScanServer for performing scan
 - Takes status from ScanServer device
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- Written in java
 - Requires jar files from Soleil (SoleilUtilities, Salsa -> maven)
 - Uses java configuration files from Salsa (.java/userPrefs)



SimpleScan Server (ctd.)

Allows performing list of scans in batch mode via scripts or CLI

- SimpleScanInterface 'library' available defining macros:
 - > python CLI
 - > python scripts



Further developments

Only remark some immediate needs:

- Tango Servers already in use in computers with Petra III installation
... but not all the tools were tested
- Implementation in Sardana of new diffractometer device:
 - > test it with Eulerian θ geometry
 - > check if all user requests are available
- Continue tests in new Sardana version:
 - > try new features
 - > install it in Petra III computers
- Match versions of all software blocks before updating installation

