Joint Meeting
Trieste 2018

ISPyB

MXCuBE3 – Installation and User Experience

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First MXCuBE3@ELETTRA installation

- ✓ MXCuBE3 installation started in late August 2017 (almost no scientific activity during holidays around here…)
- ✓ Step by step:
    1. Installed a CentOS7 x64 virtual machine (with Tango)
    2. Downloaded MXCuBE3 from GitHub repository
    3. Followed “Installation and testing” instructions (GitHub wiki)
    4. It did not work: installed missing python packages
    5. mxcube3-server started !
    6. Strong help needed for the npm part (thanks Emiliano)
    7. MXCuBE3 login page works... and now?

MXCuBE3@ELETTRA customization

Personal notes for a DIY approach:

- There is not so much documentation for developers
- The analysis of Python console errors is a good starting point for investigating the underlying architecture and object connections
- Use extensivly “grep -r’: following log messages helps in discovering who is doing what
- The customization process should concern only the XML configuration files and the HardwareObjects, other stuff is part of the ‘core’
- An installation log file could be useful
- If you get stuck ask the MXCuBErs, they always help you

MXCuBE3@ELETTRA status

January 2018

- **Login** :
  - still mockup
- **Data Collection Tab**:
  - Machine Status (Tango)
  - Beamline Valves and shutters (Tango)
  - Detector Distance (Tango)
  - Beamline Actions
  - Energy
  - Wavelength
  - Resolution
  - Transmission
  - Cryo
  - Flux

  Diffractomer (MD2):
    - Motors (Tango)
    - Phase Control
    - Aperture Control
    - Lights (Tango)
    - Zoom (Tango)
    - Camera: MD2 JPG (Tango)
    - 3 Click centring: MD2 command (Tango)
    - Automatic centring
- **Sample Changer Tab**:
  - XRD2 sample changer under development
- **Sample Overview Tab**:
  - ISPyB: not yet installed
  - Tab content synchronized with SampleChanger Tab Info
  - Only Standard Data Collection
  - Other Data Collection modes

September 2018

- **Login** :
  - Rest authentication through ELETTRA VUO
- **Data Collection Tab**:
  - Machine Status (Tango)
  - Beamline Valves and shutters (Tango)
  - Detector Distance (Tango)
  - Beamline Actions
  - Energy (Tango)
  - Wavelength (Tango)
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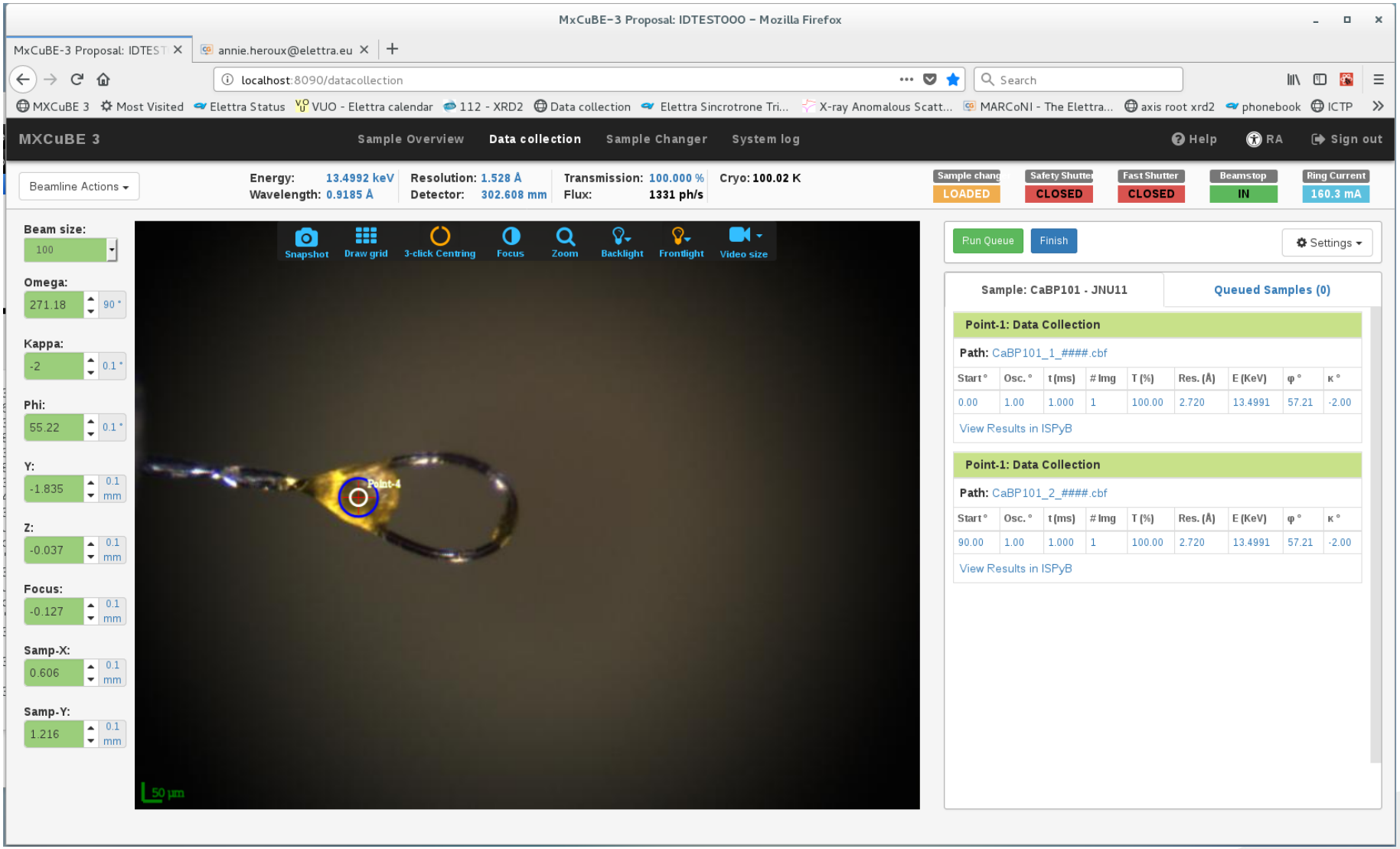
MXCuBE3@ELETTRA status

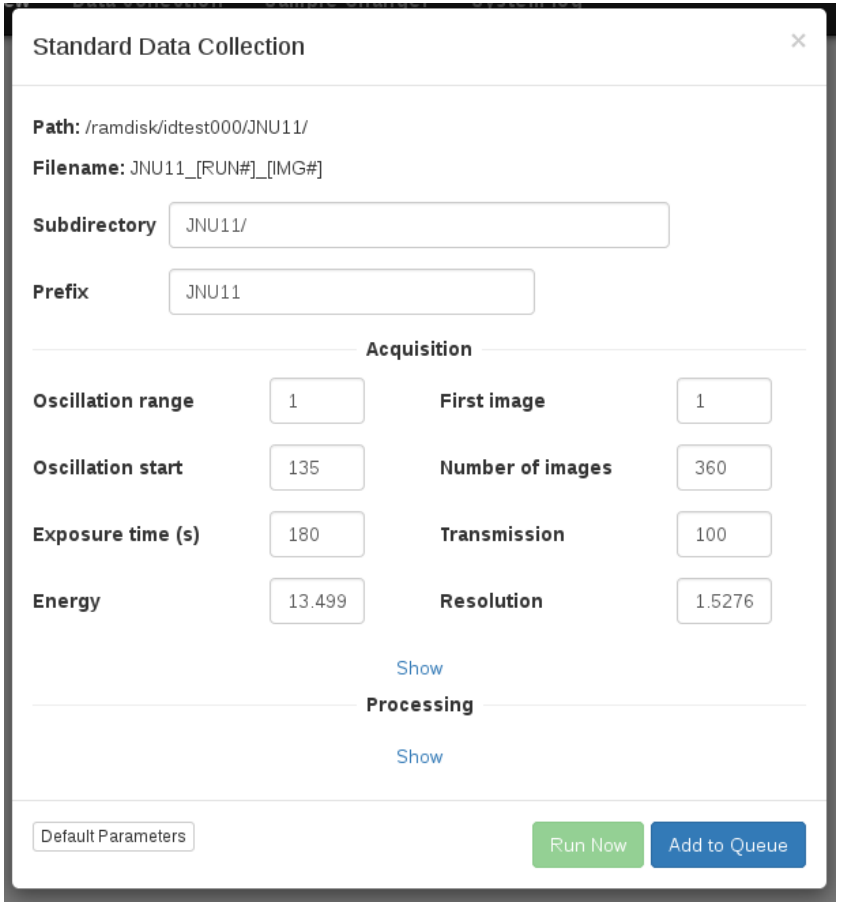


MXCuBE3@ELETTRA authentication

- ISPyB not yet available
- 1st stage: the user logs in using a dedicated interface to setup the current investigation (info from the VUO)
- 2nd stage: the user logs in MXCuBE3 and can select only the current investigation

MXCuBE3@ELETTRA open questions

- **Filenames**:
  - is it possible to modify current default naming (Sample XX:YY) ?
- **Data Collection**:
  - more info in the web gui (units, params meaning,…)
  - is it possible to modify the right-click menu when a sample is selected? (less options)
  - Is it possible to raise a popup box?
- **3-Click Centering**:
  - is it possible to customize it? (no multiple points)
- **Stop/Abort**:
  - is not clear to us which actions are triggered
- **Final installation**:
  - does exists a standard installation (Linux service?)



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MXCuBE3@ELETTRA

Fist external user experience

- Period: 1-3 September 2018
- Samples mounted using the XRD2 samplechanger (used a CSV descriptor file)
- Only standard Data Collection on the samples
- Data stored and shared on the ELETTRA central storage
- Data analysis pipeline implented manually
- Pilatus communication errors (under investigation)
- Abort actions raised problems with some instrumentation