Olog and Control System Studio: A Logging Environment

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Log Entry

- Time
- Owner
- Text
- Attachments
- Logbooks
- Tags
- Properties
Olog Web service

- Create and modify log entries
- Search
- Organize entries using multiple logbooks, tags and properties.
- Integration with other tools/service
  - Control System (epics v3, v4)
  - CS-Studio
  - Physics Data
  - Save Restore
  - .....
Olog Web service

• REST style webservice
  – Uniform interfaces
  – Separation of concern
  – Stateless
• RDB backend
• Apache jackrabbit for Attachments
Olog Client Libraries

- Currently there is support for 2 languages
  - Python
  - Java
- Manage network communication
  - Creating HTTP request
  - Setting up connection and Authorization
- Parsing json/XML into java or python objects
- Provide Utility Methods
Olog Clients – Webclient
nash, October 1st 2013, 2:42 pm  ⚒ Hide details

REAs Maintenance
Vacuum
Problem
October 1st 2013, 2:43 pm

Found box 19 vacuum station with cold cathode reading 2E-03 Torr. Evidently, the turbo pump had been unplugged (possibly due to a magnet water leak?, buckets were beneath the beamline stand). In this state, the turbo pump channels show the on command, the at-speed signal, and the fault signal. This needs to be addressed in the logic for the turbo gate valve as it stayed open.

Attachments
Olog Clients – CS-Studio

• CS-Studio is an eclipse based framework for developing controls and physics applications

• Seamless integration with applications
  – Application specific initialized log entries
Olog Clients – CS-Studio
Olog Clients – CS-Studio

• Log Entries initialized with application specific information
• Alarm server
  – PV name
  – Alarm status
  – Alarm time
Olog Clients – CS-Studio

• Save Context
  – Configuration files for cs-studio applications (.plt)
  – Controls system data (List of process variables)
  – Information related to other services (Trac tickets, ChannelFinder queries)
Olog Clients – CS-Studio
Olog Clients – CS-Studio

• Restore Context
  – Launch applications initialized to the state as described while making the log entry
  – Open archived data for associated pv’s
  – Run OPI screens
  – Query other services
Olog Clients – CS-Studio

• Adapters
  – Provide dynamic runtime integration with cs-studio applications
  – Maintain loose coupling

• Extensions
  – Pluggable UI
Olog Clients – Scripts

- python scripts for running experiment
- Logging data acquisition and data analysis steps.
  - Programmatic
  - Process specific logbooks, tags and properties
- Example use case

Integration with experimental processes and data

name: \textit{scanProcess}

attributes

- type: \textit{XPD}
- id: \textit{1234}
- description: \textit{save reduced dataset}
- location: \textit{pyPXD.nsls2.bnl.gov/resources}
- attachments: \textit{reducedData.json}
Olog Clients – pyOlog
Olog Clients – pyOlog
References

- http://controlsystestudio.github.io/
- https://github.com/Olog
Questions?