CS-Studio: Logging

Olog

Requirements

- Basic functionality
  - Web service
    - Authentication
    - Multiple logbooks, tags
    - Create log entry
    - Edit log entry
    - Attach files
    - Search
  - Simple Web client

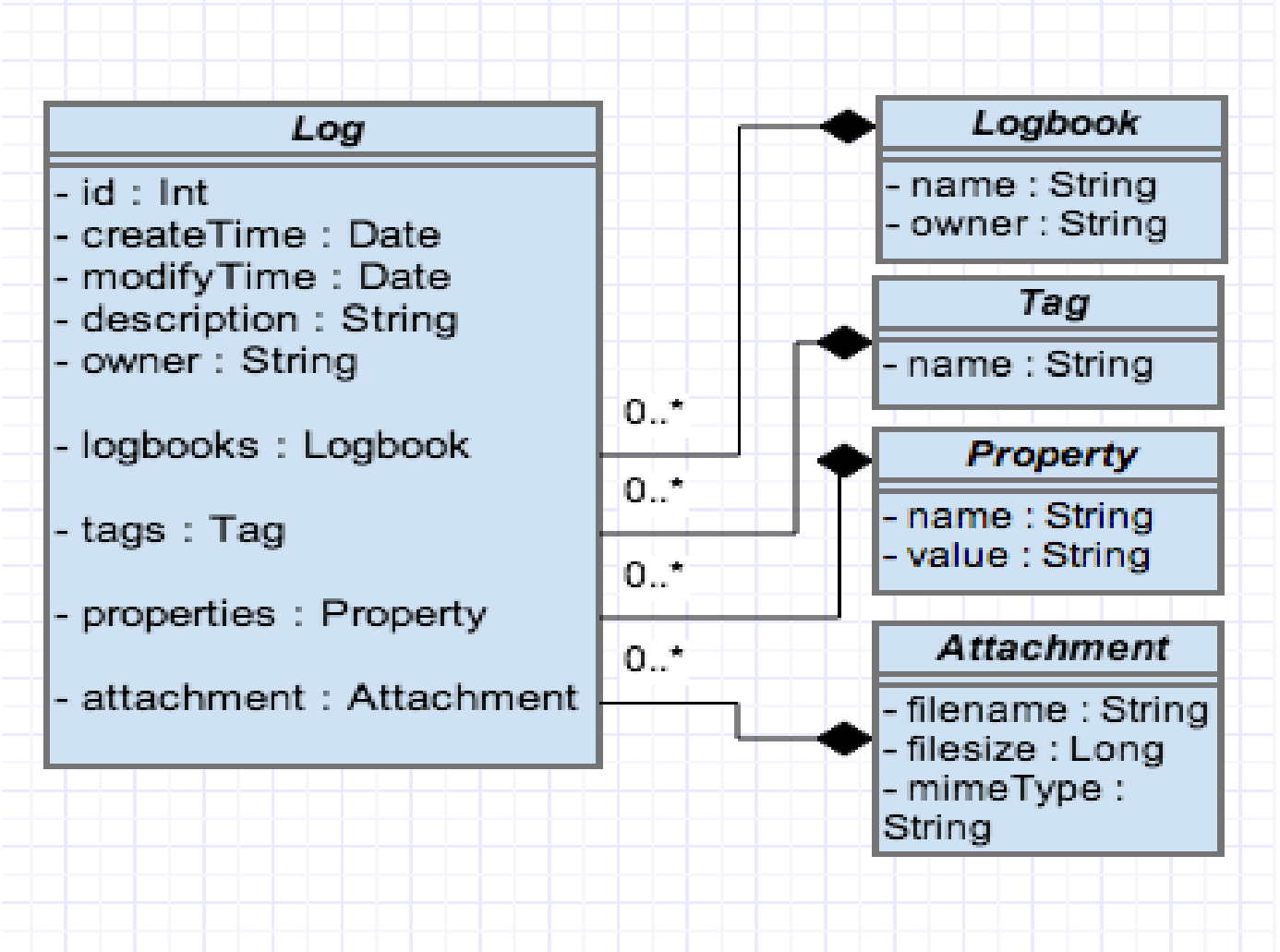
Requirements

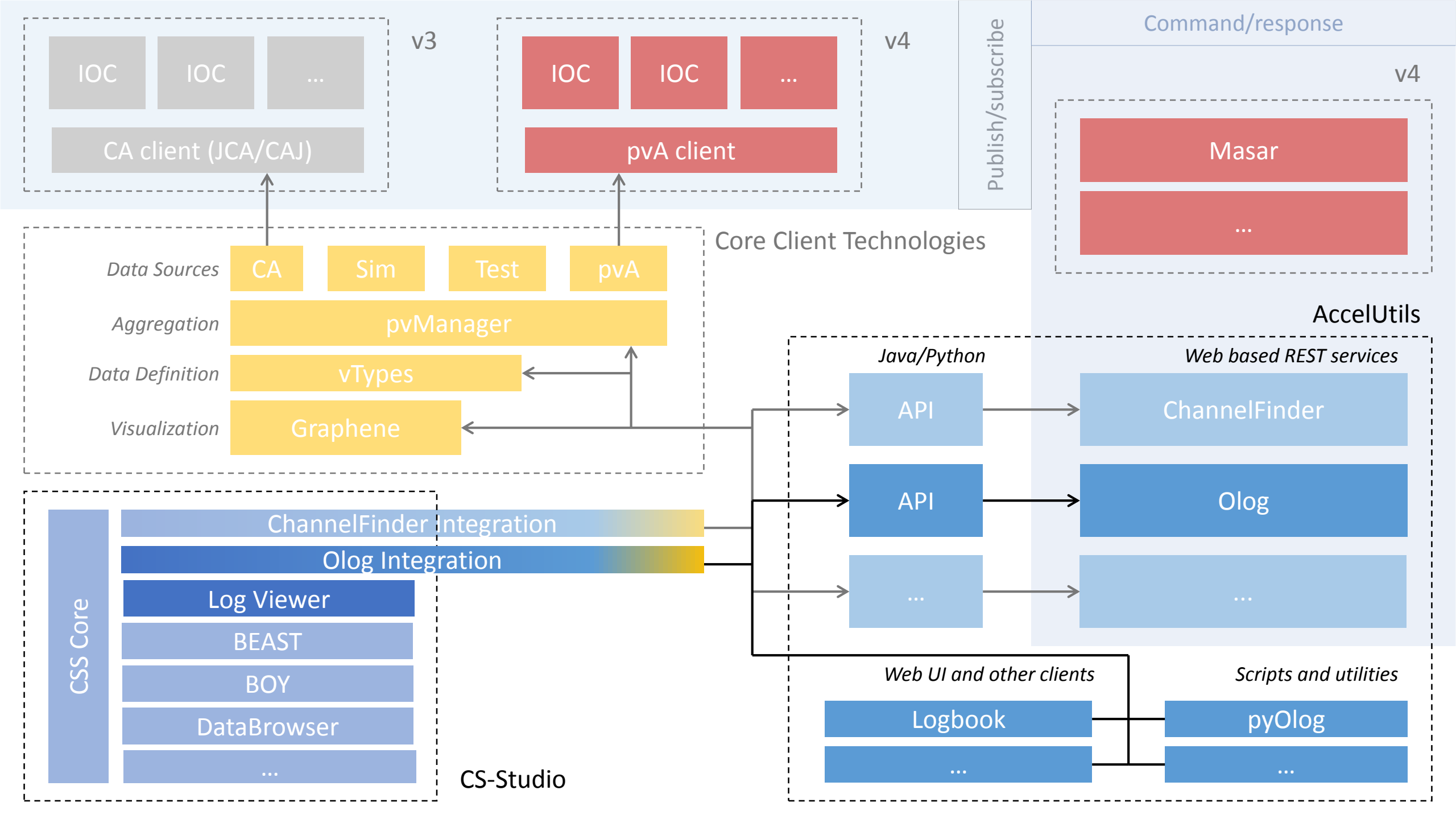
- Integration
  - IRMIS
    - »Component/Inventory
  - Physics data
  - Save/restore
  - CSS plug-in
  - Operations
    - »Beam statistics
    - »Down time/tuning time/beam on target
    - »Bypass records
    - »On shift records
    - »Trouble Reports
    - »Experiment records

Log Entry

- Time
- Owner
- Text
- Attachments
- Logbooks
- Tags
- Properties

Log Entry


Log
- id : Int
- createTime : Date
- modifyTime : Date
- description : String
- owner : String
- logbooks : Logbook
- tags : Tag
- properties : Property
- attachment : Attachment
0..*
0..*
0..*
0..*
Logbook
- name : String
- owner : String
Tag
- name : String
Property
- name : String
- value : String
Attachment
- filename : String
- filesize : Long
- mimeType : String


v3
IOC
IOC
...
CA client (JCA/CAJ)
v4
IOC
IOC
...
pvA client
Publish/subscribe
Command/response
v4
Masar
...
Core Client Technologies
Data Sources
CA
Sim
Test
pvA
Aggregation
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Data Definition
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Visualization
Graphene
AccelUtils
Java/Python
Web based REST services
API
ChannelFinder
API
Olog
...
...
CSS Core
ChannelFinder Integration
Olog Integration
Log Viewer
BEAST
BOY
DataBrowser
...
CS-Studio
Web UI and other clients
Scripts and utilities
Logbook
...
pyOlog
...

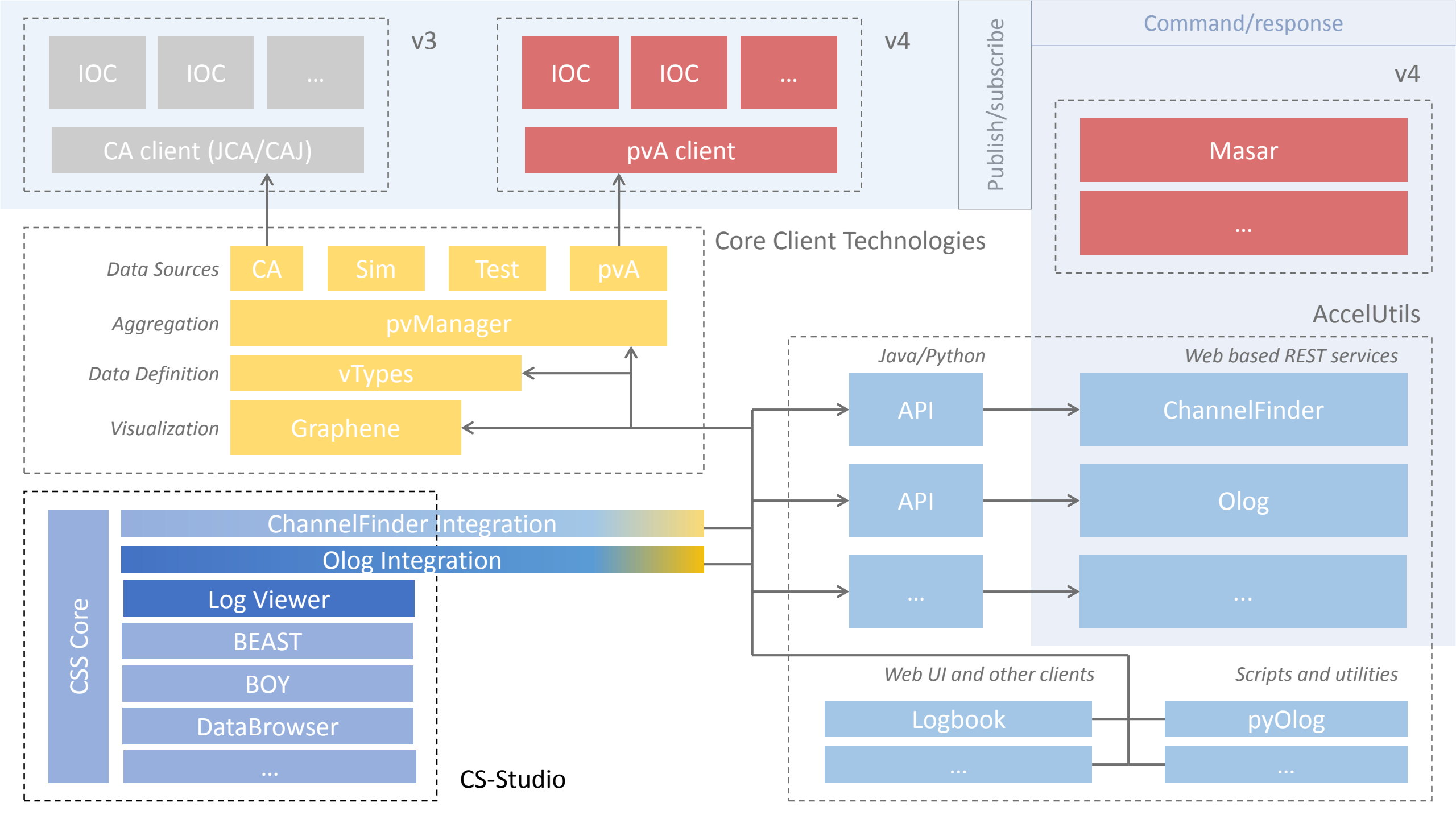
Olog Web service

- 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 Client Libraries

- Currently there is support for 2 languagues
  - Python
  - Java
- Manage network communication
  - Creating HTTP request
  - Setting up connection and Authorization
- Parsing json/XML into java or python objects
- Provide Utility Methods

CS-Studio & Olog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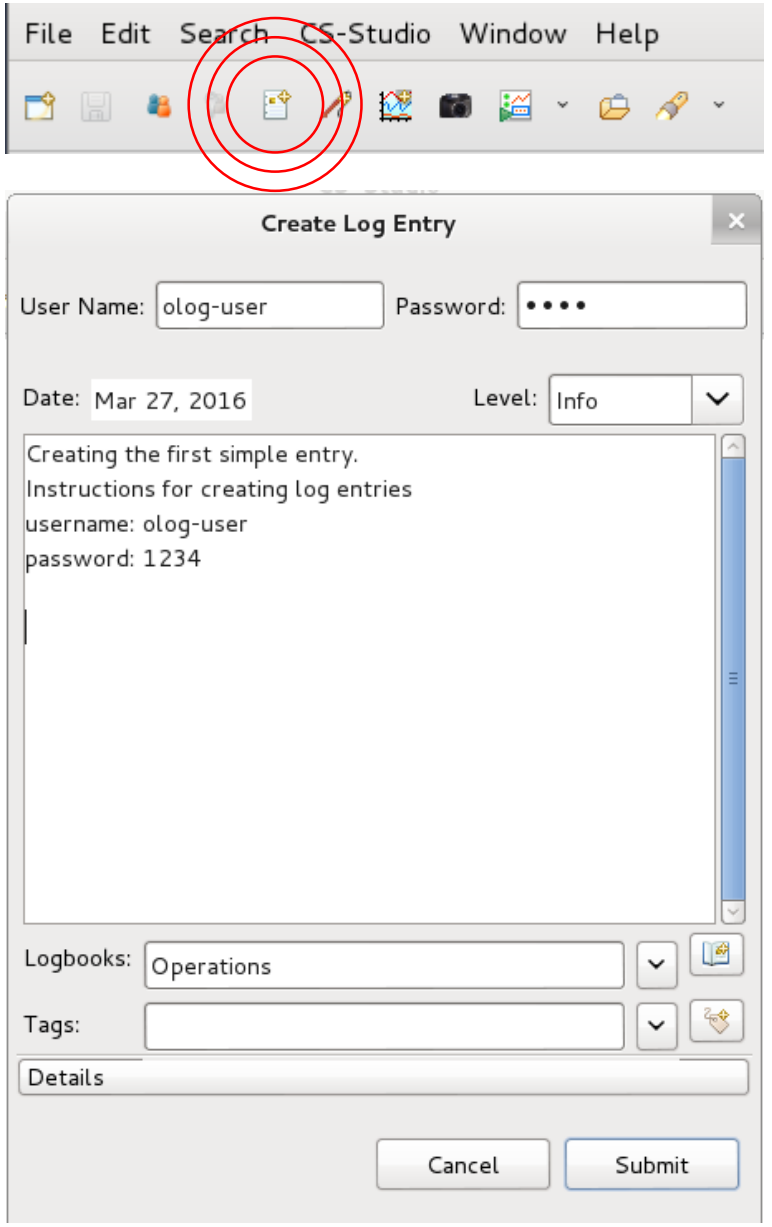
Creating simple log entries

- Create log entry
  - Toolbar
  - Context Menu
- Create log entry dialog
  - Required
    - Authentication/Authorization info
    - Log description
    - Logbook
    - Level
  - Optional
    - Tags
    - Attachments
    - Properties

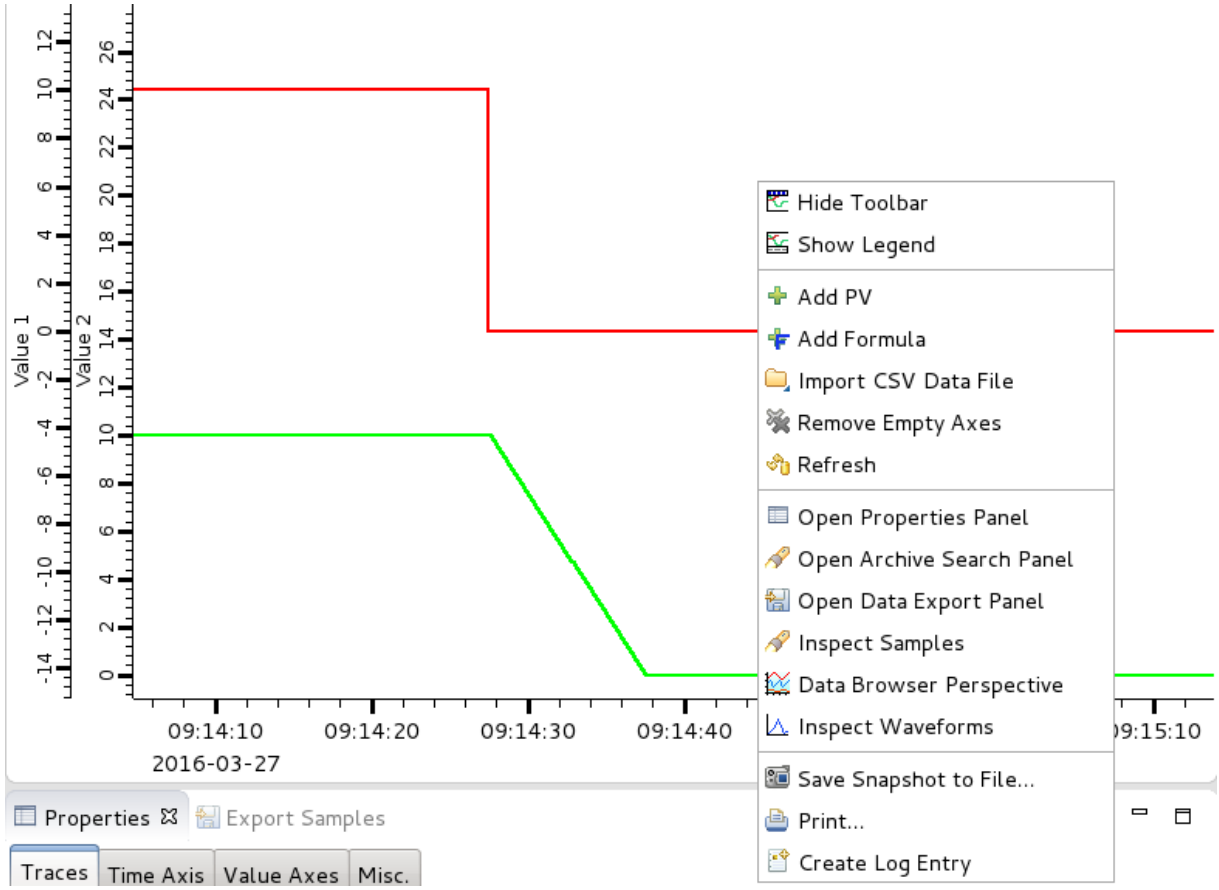


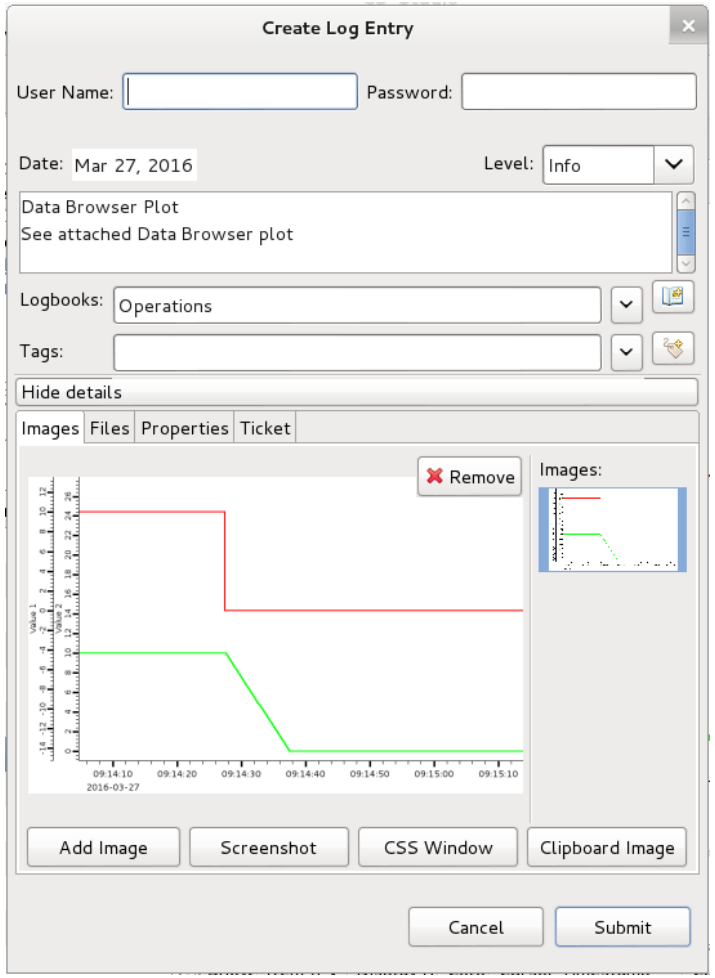
Olog Clients – CS-Studio

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

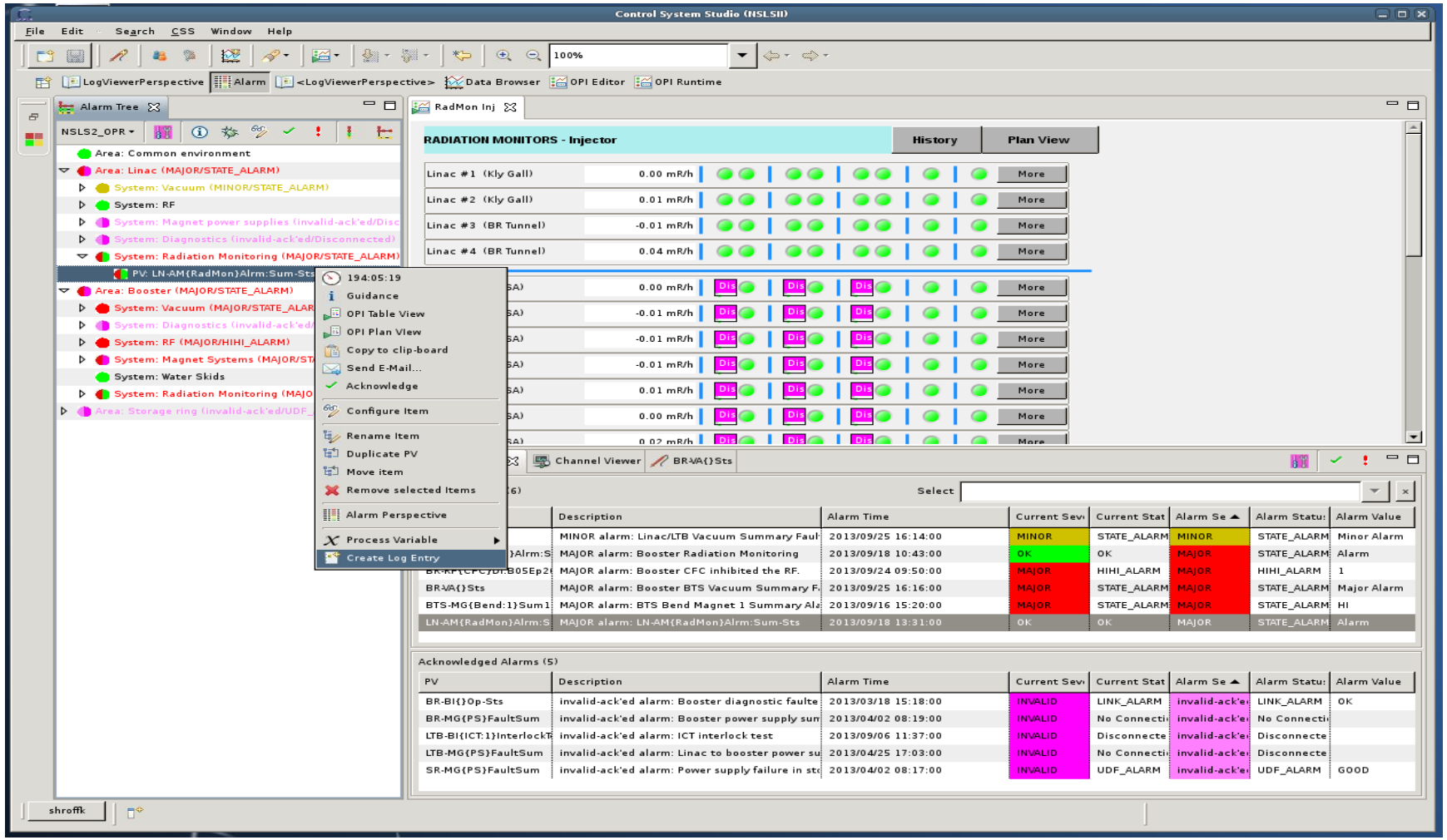
- Seamless integration with applications
  - Log Entries initialized with application specific information

Creating log entries from applications (Databrowser)



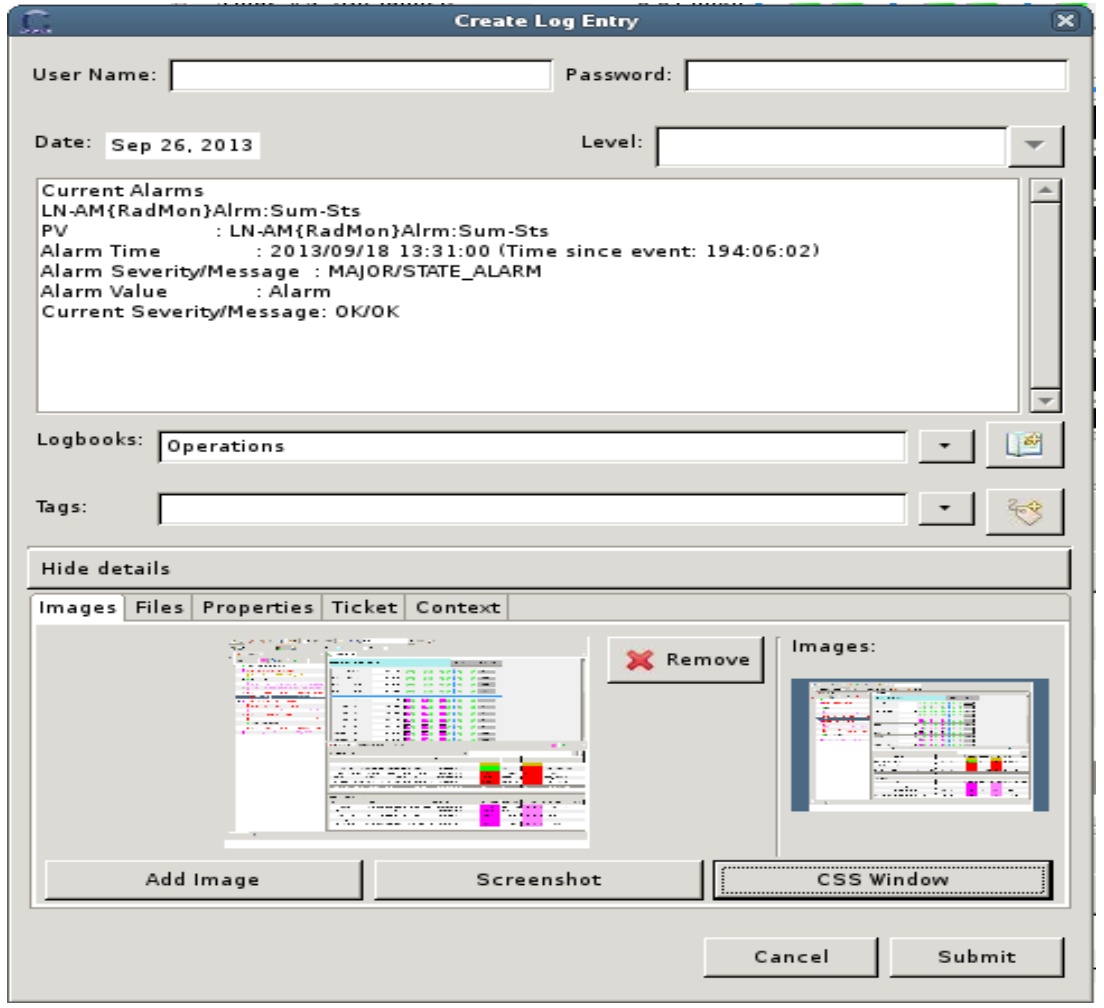


Creating log entries from applications (Alarm)



Creating log entries from applications (Alarm)

- Alarm server
  - PV name
  - Alarm status
  - Alarm time

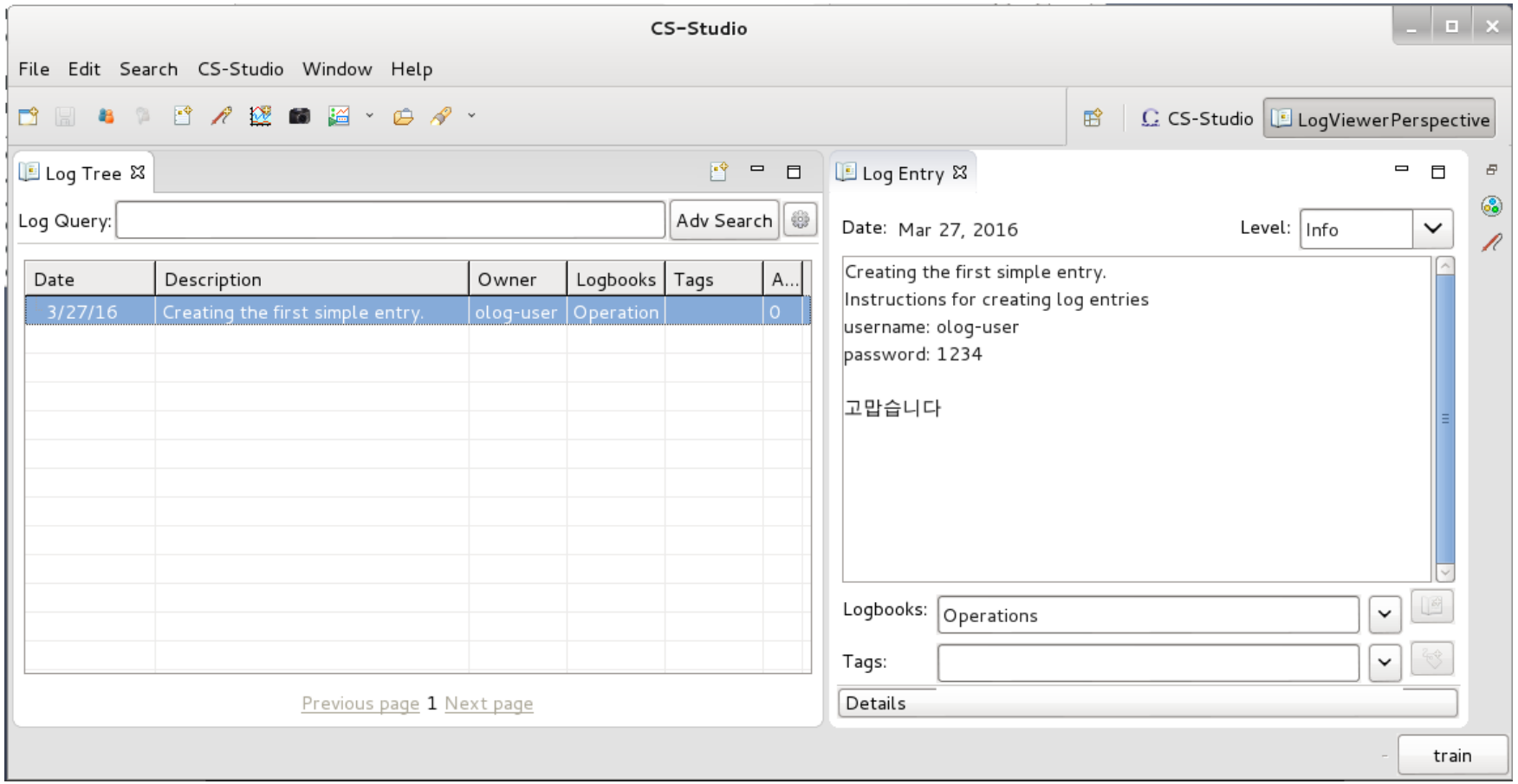


Logviewer

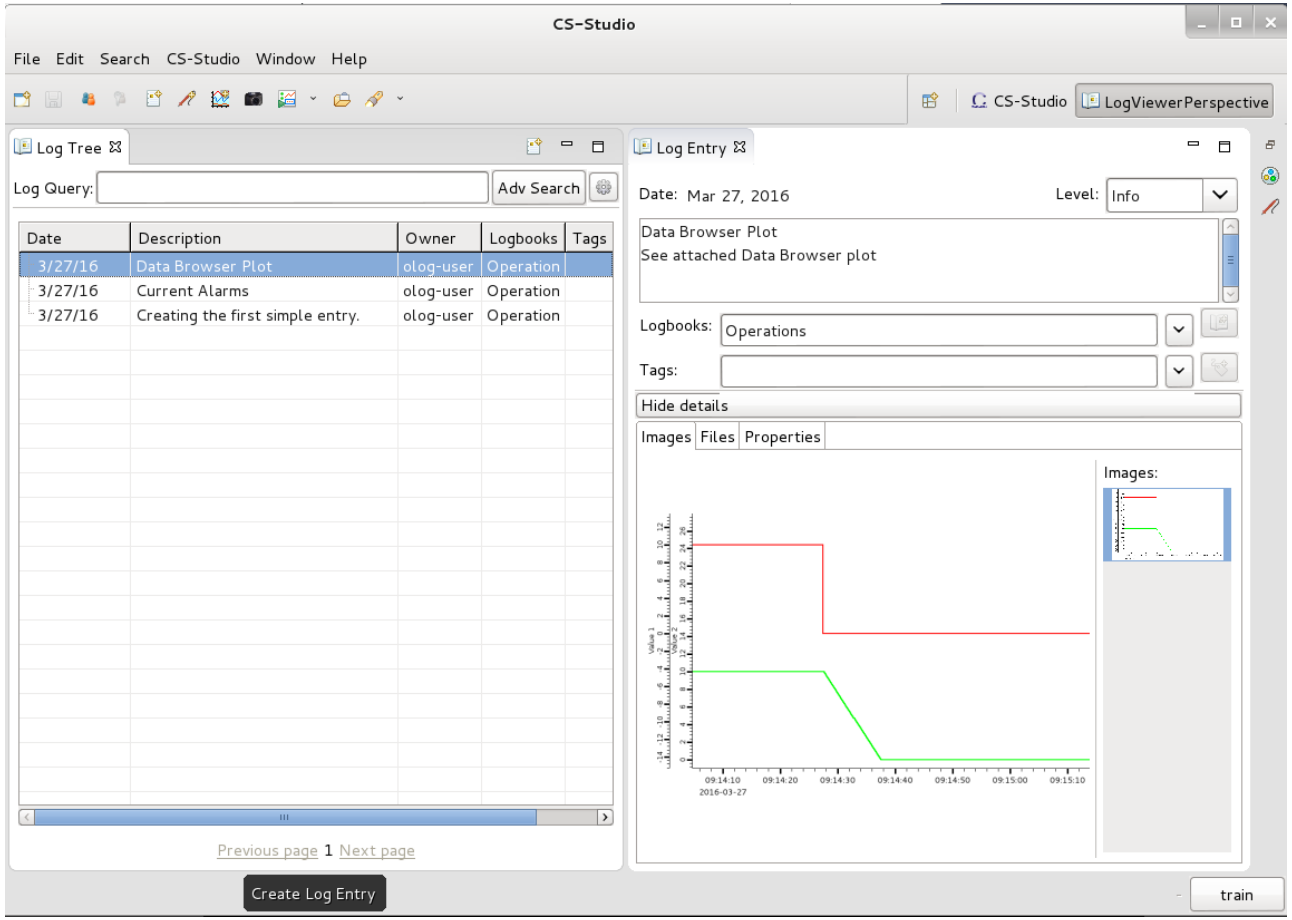
- Search and view log entries from the Olog server

LogViewer

- Menu: Window → New Perspective → LogViewer Perspective



LogViewer


CS-Studio
File Edit Search CS-Studio Window Help
CS-Studio
LogViewerPerspective
Log Tree
Log Query:
Adv Search
Date Description Owner Logbooks Tags
3/27/16 Data Browser Plot olog-user Operation
3/27/16 Current Alarms olog-user Operation
3/27/16 Creating the first simple entry. olog-user Operation
Previous page 1 Next page
Create Log Entry
Log Entry
Date: Mar 27, 2016
Level: Info
Data Browser Plot
See attached Data Browser plot
Logbooks: Operations
Tags:
Hide details
Images Files Properties
Images:
train

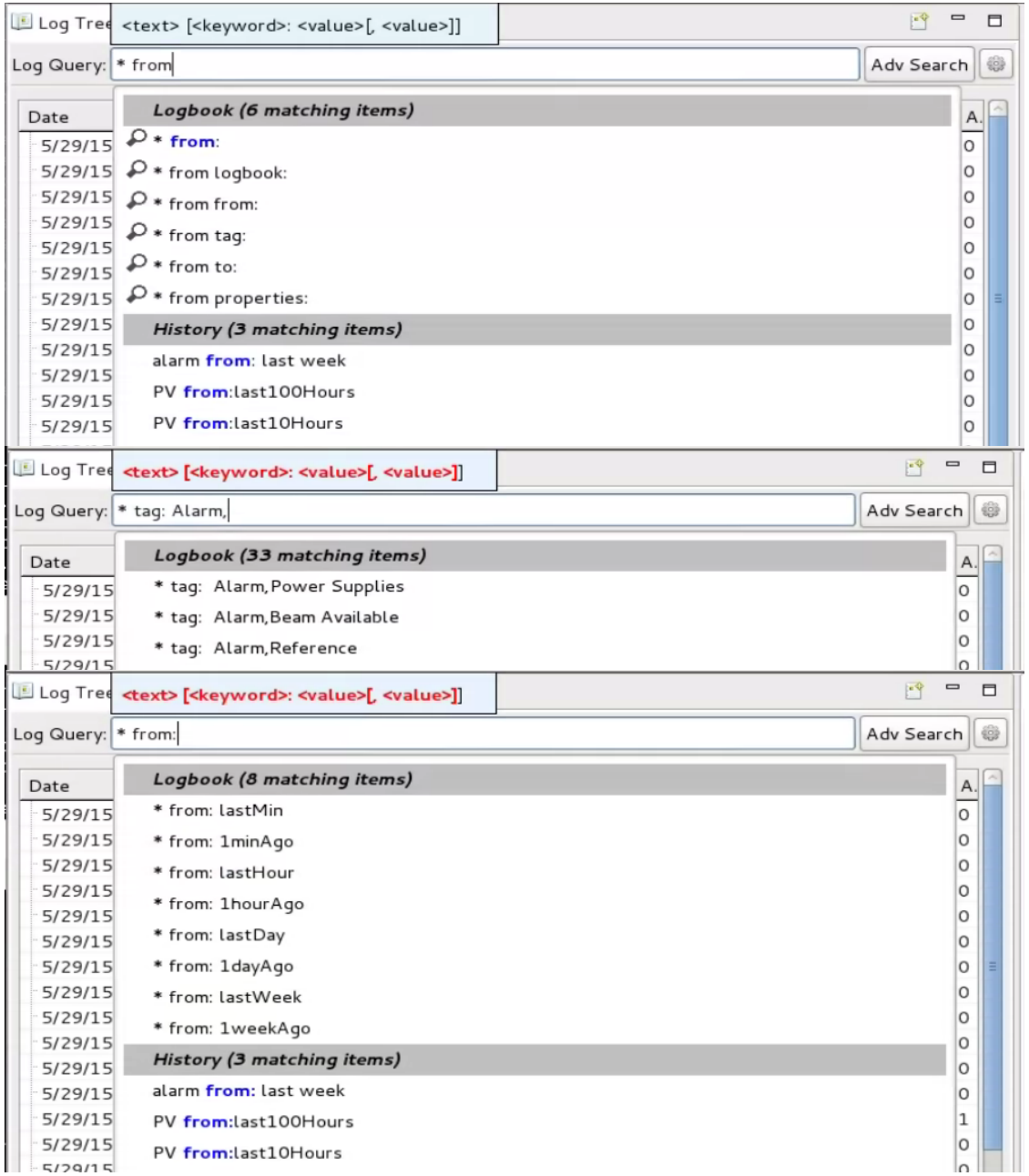
LogViewer: Search

- Text search from the description or any text file attachments by simply typing the words
- Keywords
  - logbook, tag, to and from
- History
- Wildcards
  - * and ?

e.g.

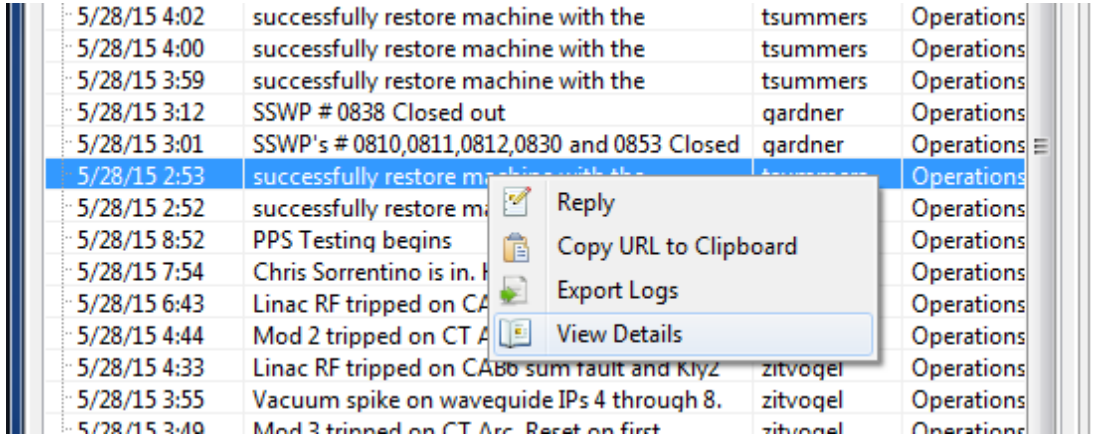
“Alarm from:last8Hours”

- Adv Search dialog



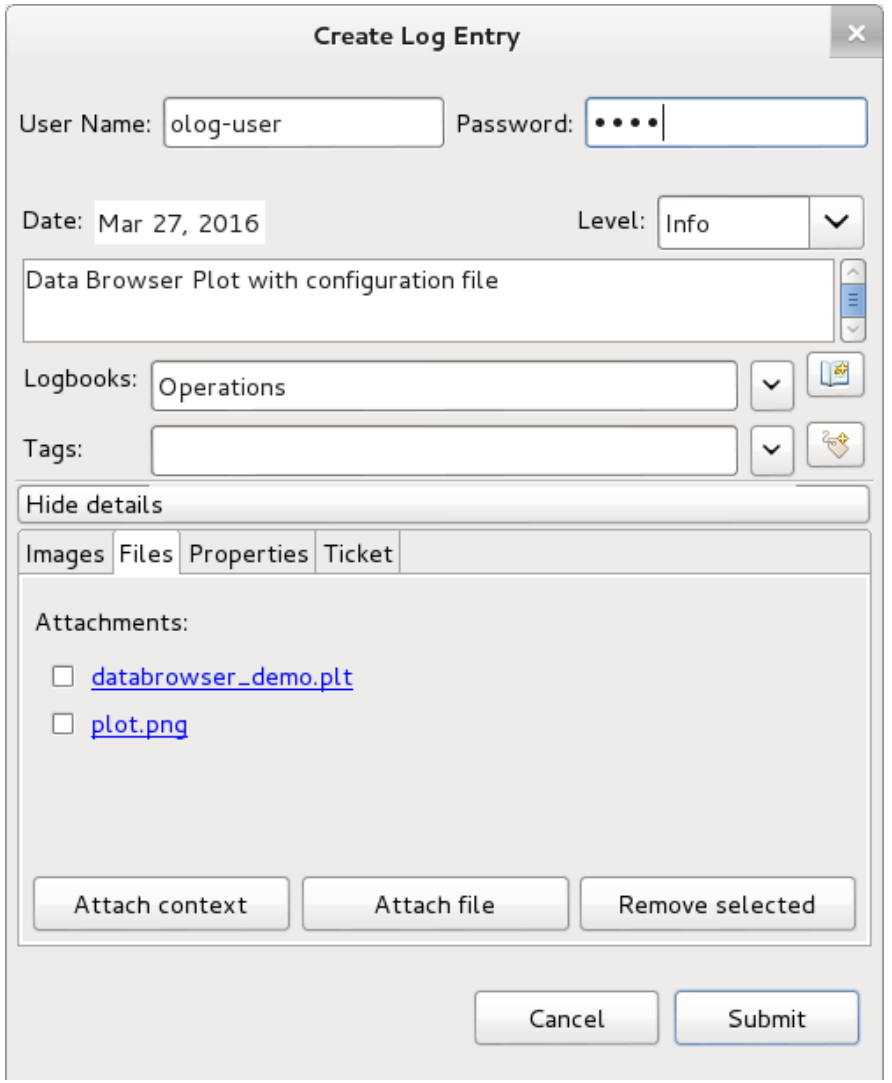
Log Entry context menu

- Reply:
  - Open a dialog allowing you to edit a log entry
- Copy URL to clipboard:
  - Provides the externally visible URL to access this specific log entry
- Export Logs:
  - Export parts of the log entry to a .csv file
- View Details:
  - Opens the log entry in the log entry details view (same as double click)

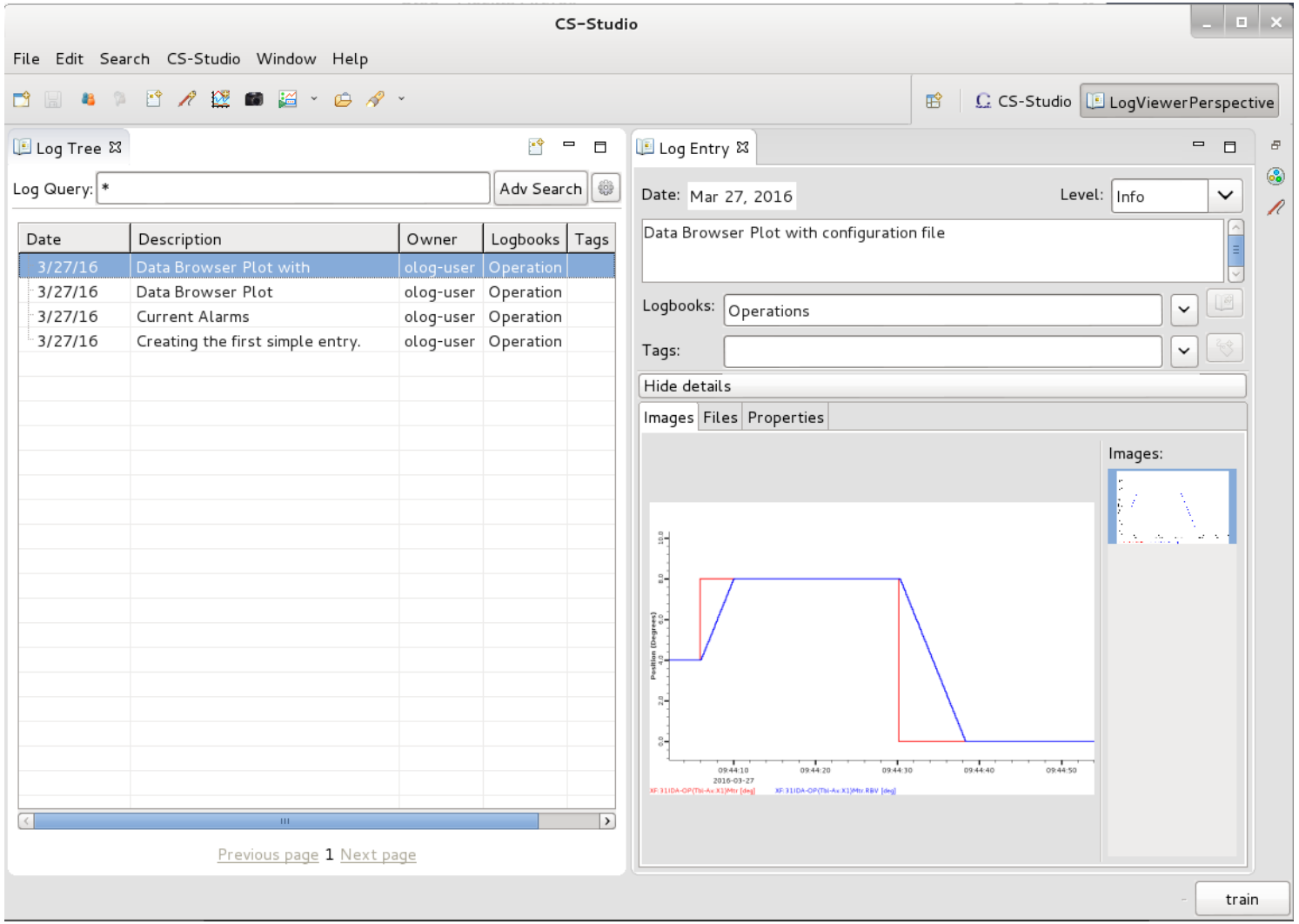


Rich Log Entries

- 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)

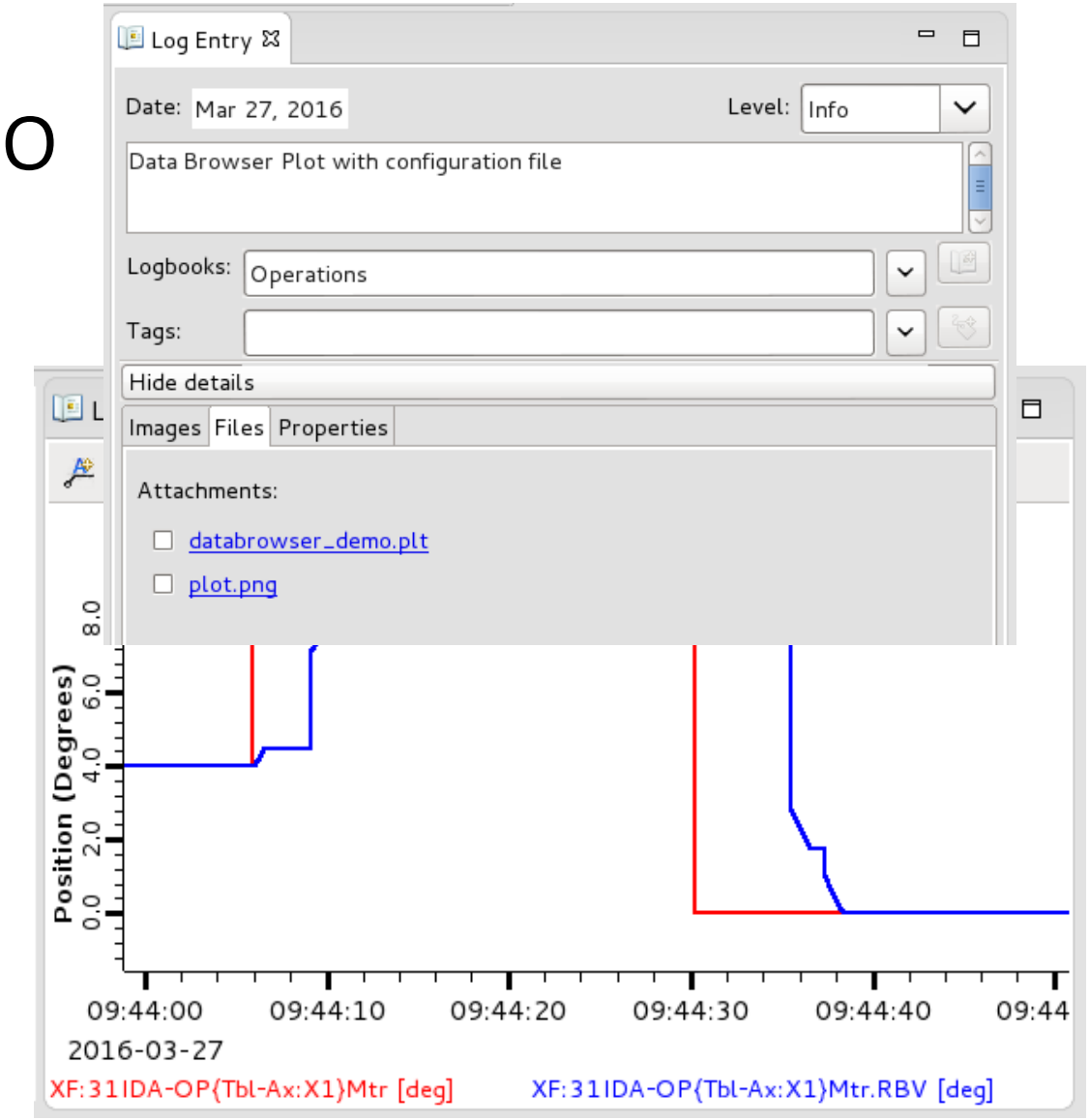


Olog Clients – CS-Studio



Olog Clients – CS-Studio

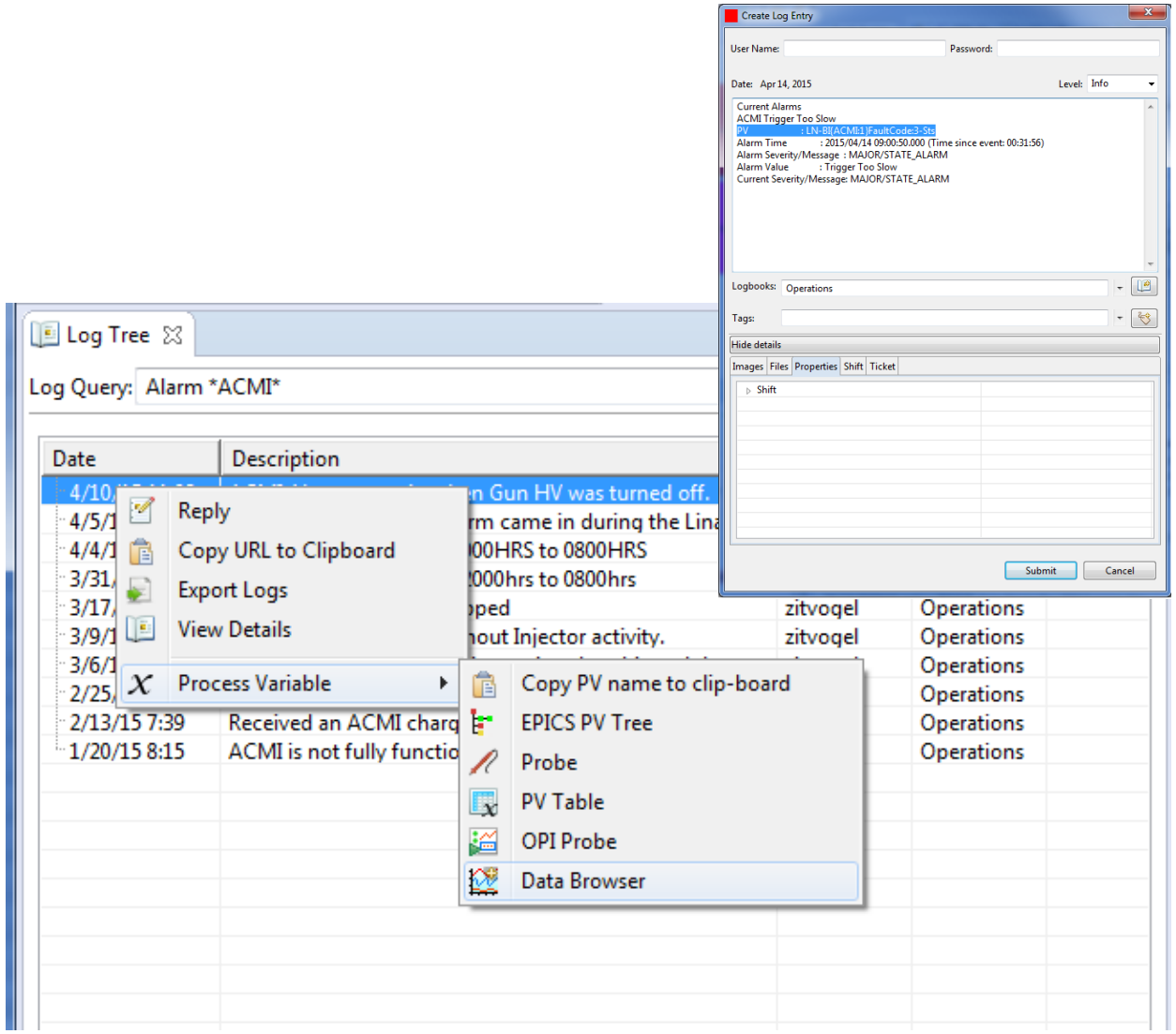
- Restore Context
  - Launch applications initialized to the state as described while making the log entry
  - Open archived data for associated pv's
  - Run OPI screens
  - Query other services



Log Entries with PVs

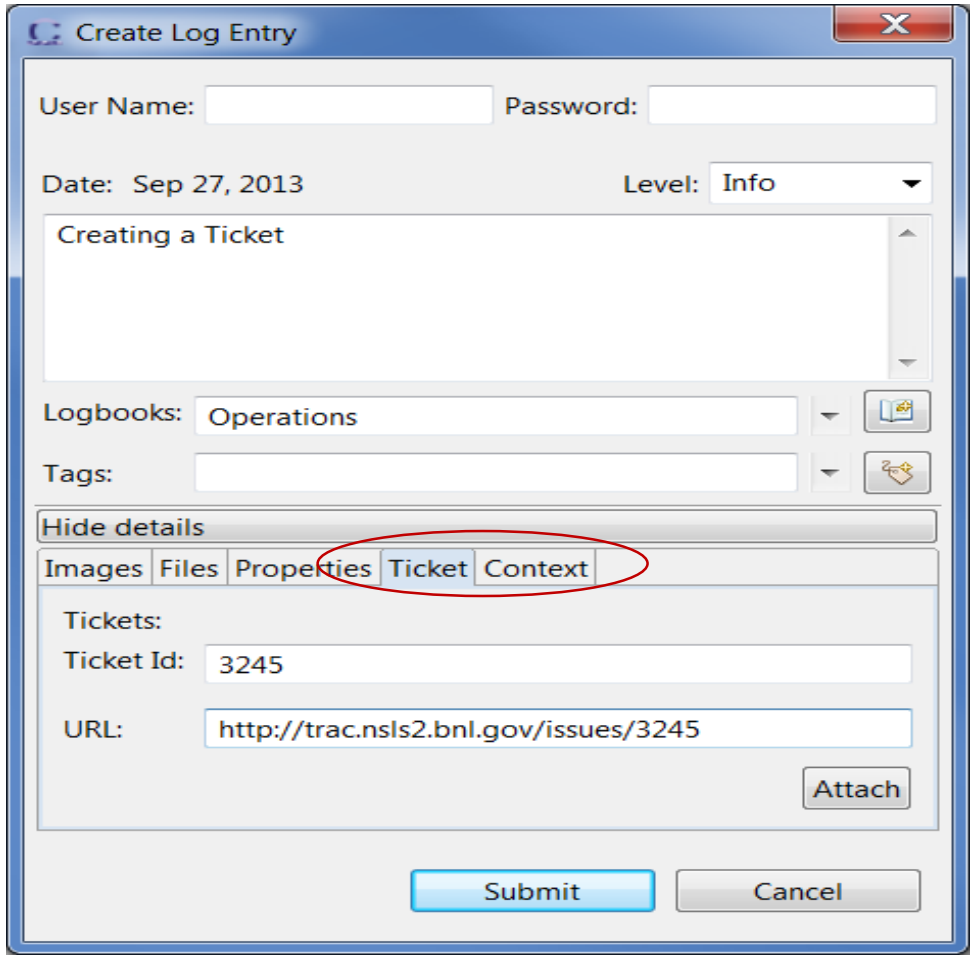
- If log entries contain pv names defined with a specified format, cs-studio is able to extract that pv information from the log entry.
- CS-Studio will add the “Process Variable” sub menu to the context menu when it can extract a PV.
- The default syntax is PV:<PVName >/n, however we can define any regular expression for recognizing pv names.
- e.g.

  PV: *XF:31IDA-OP{Tbl-Ax:X1}Mtr*

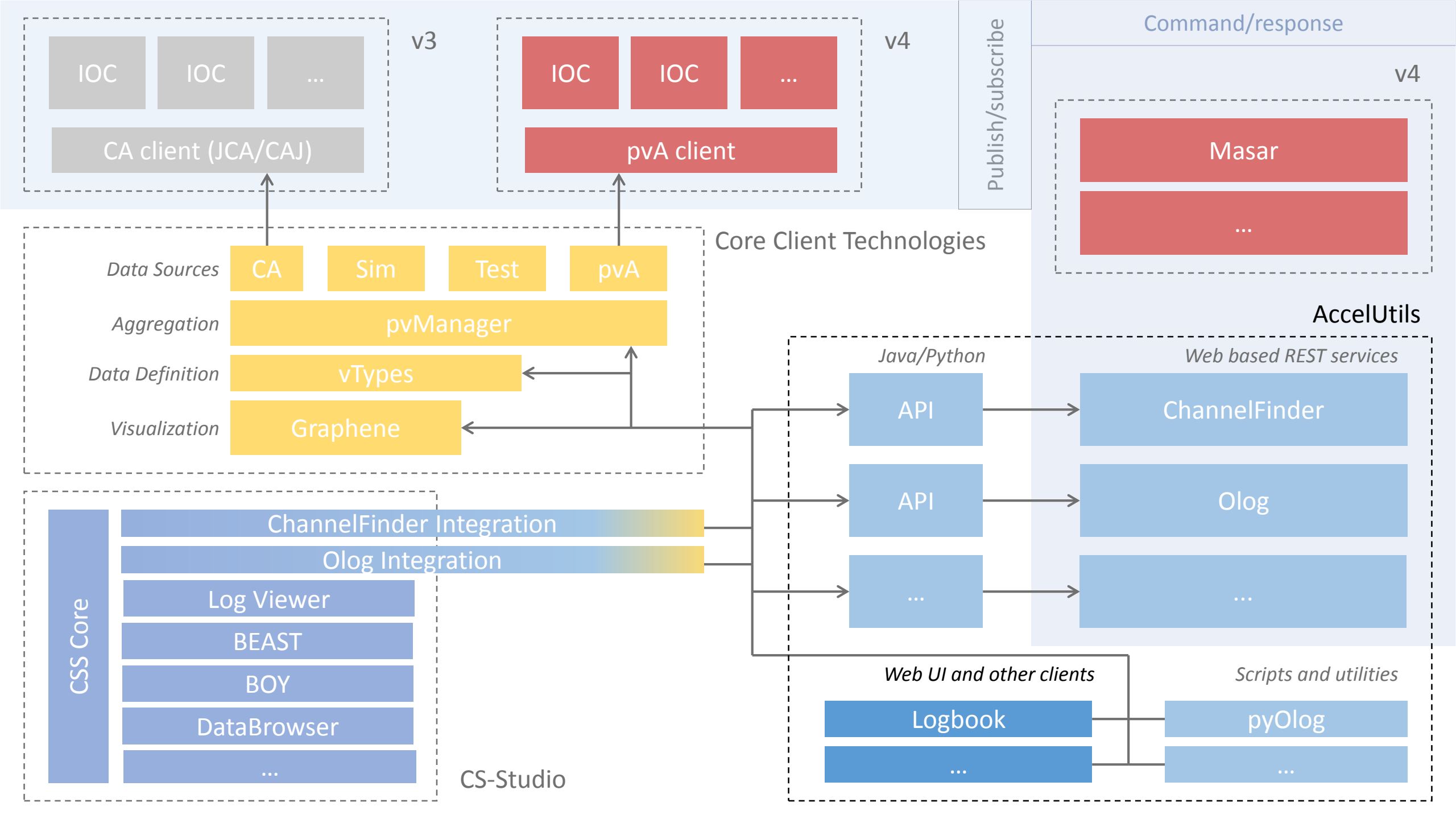


Olog Clients – CS-Studio

- Adapters
  - Provide dynamic runtime integration with cs-studio applications
  - Maintain loose coupling
- Extensions
  - Pluggable UI



Web client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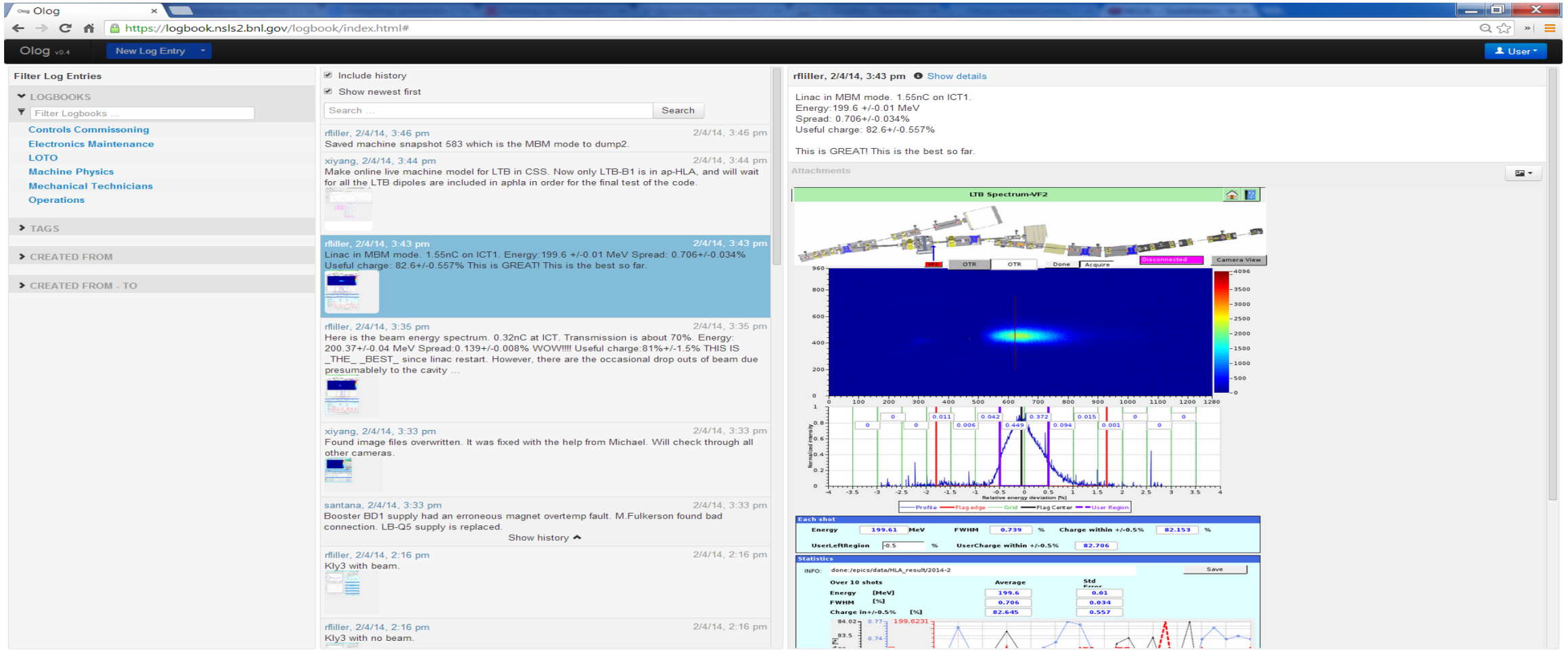
Olog Clients – Webclient



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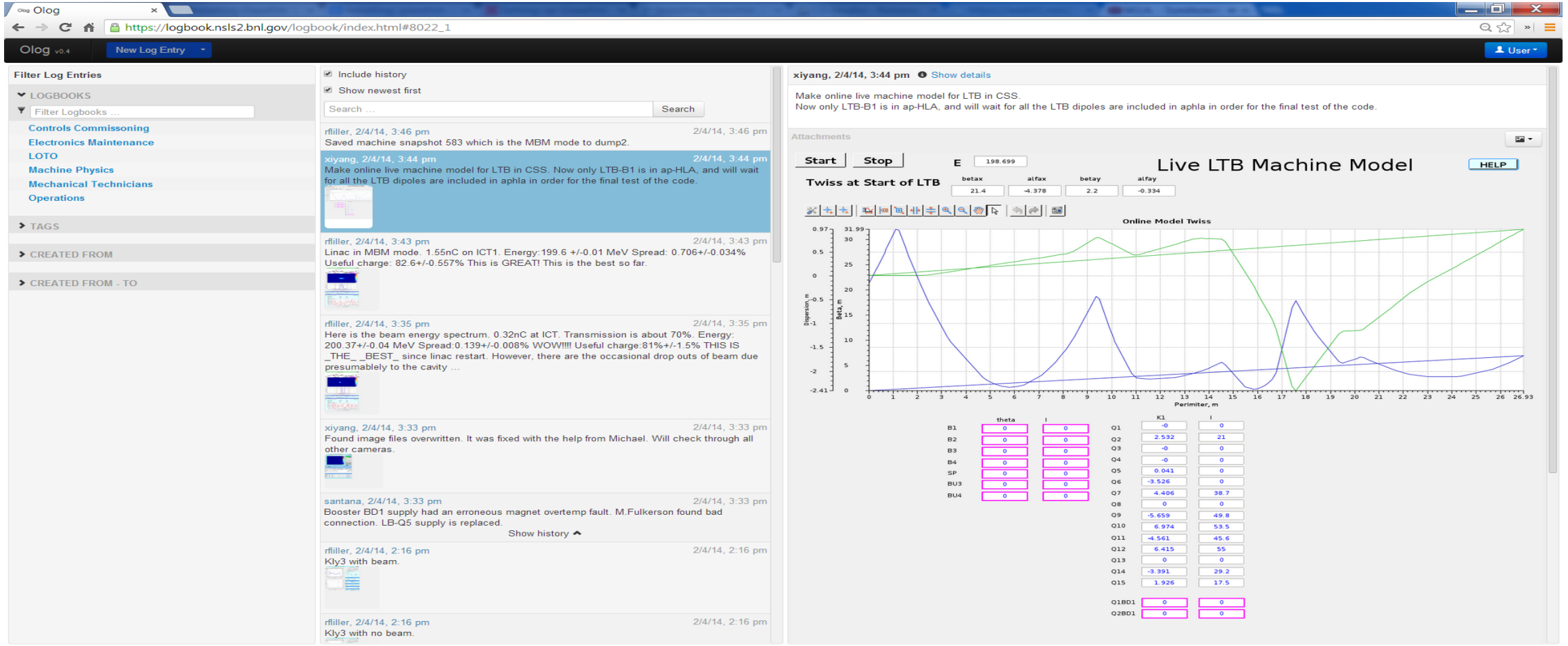

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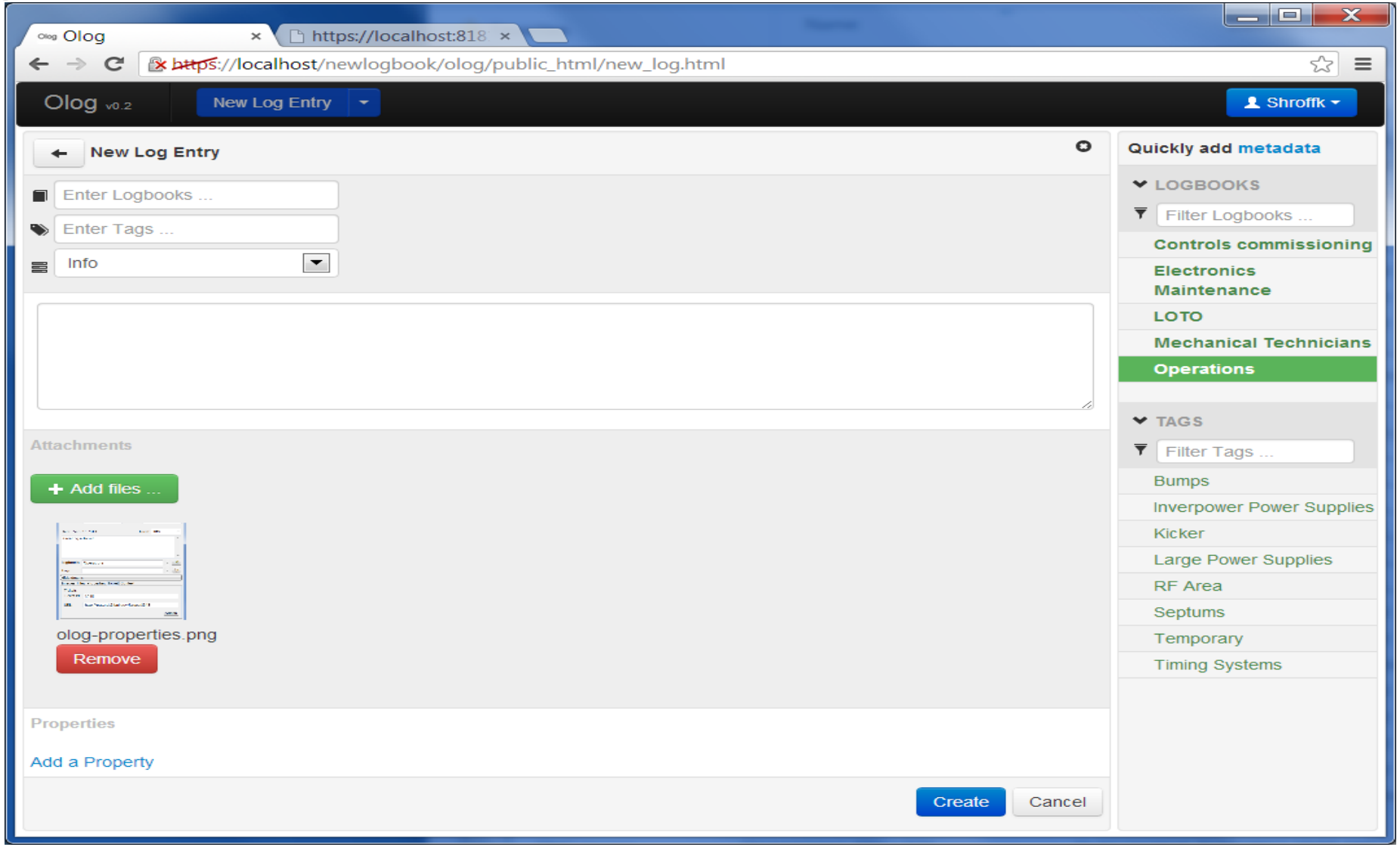

Olog Clients – Webclient