Olog and Control System Studio: A Logging Environment

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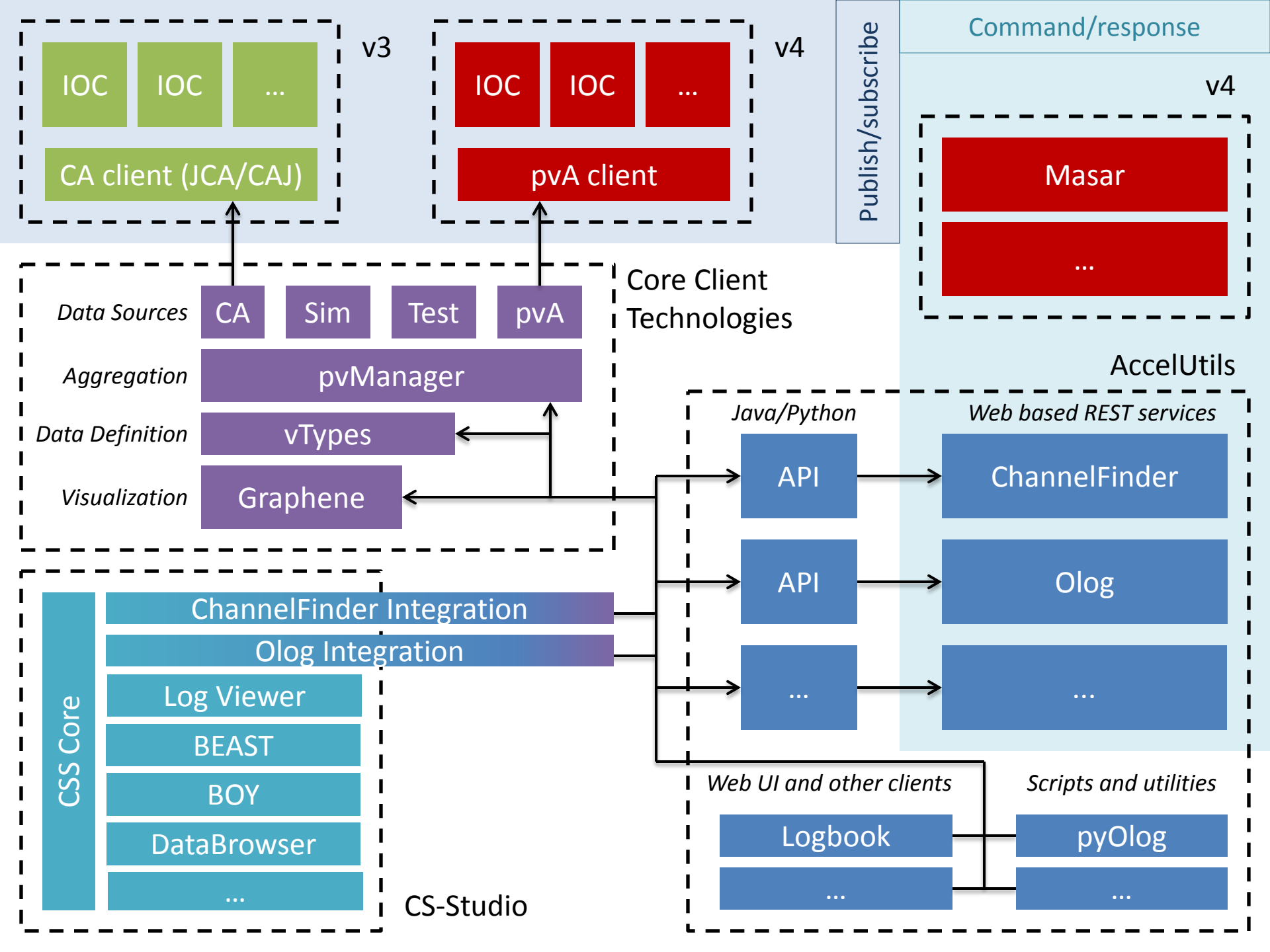
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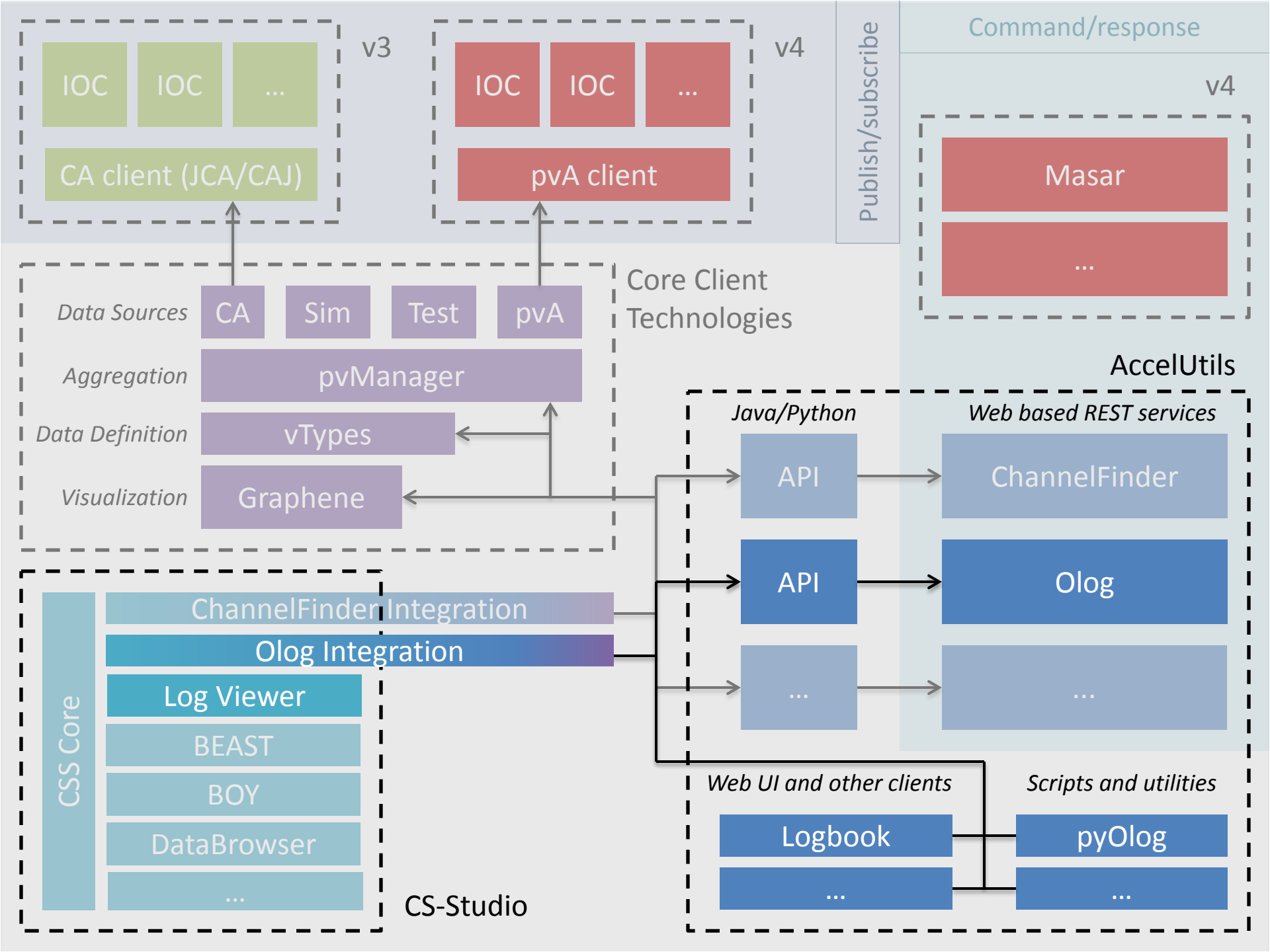
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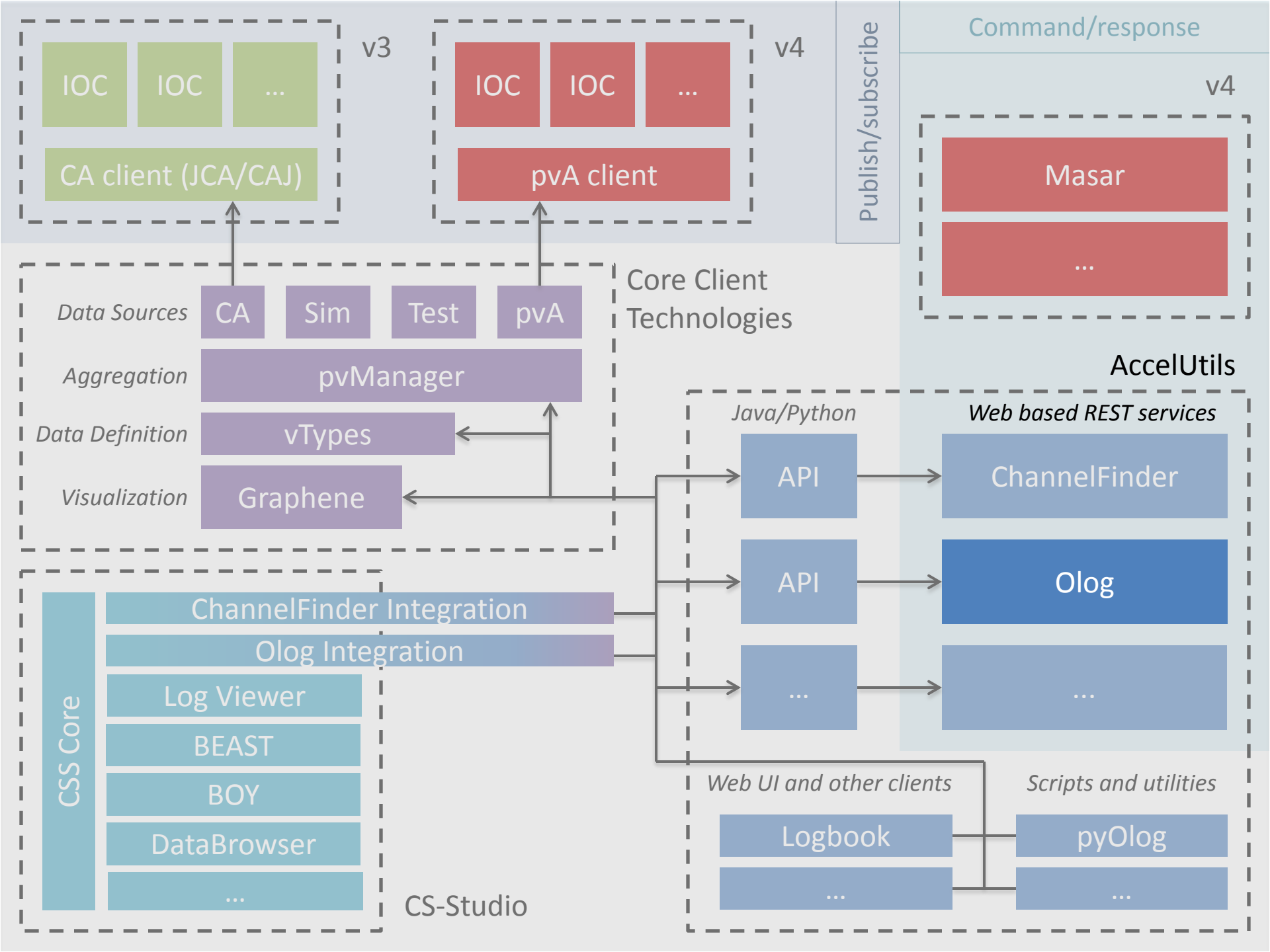
Log Entry

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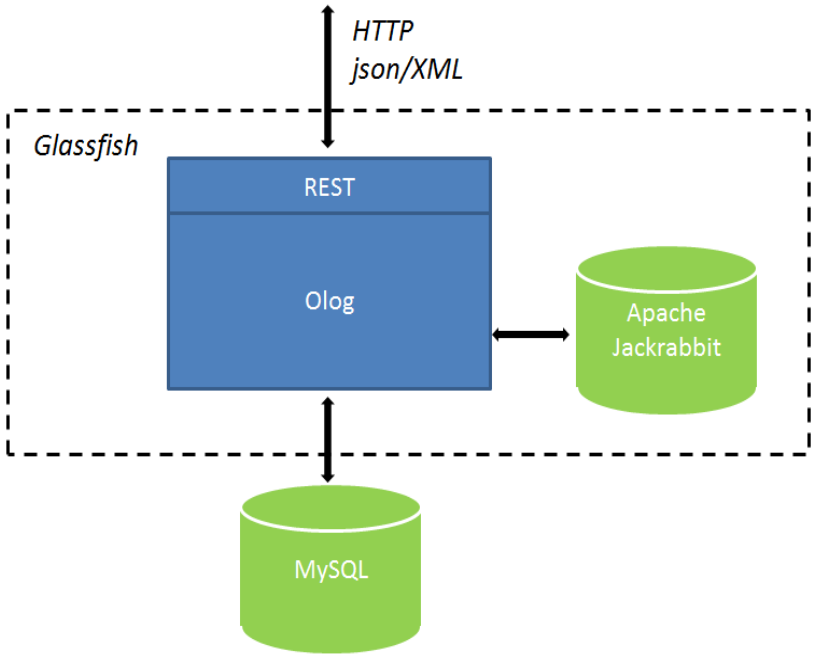
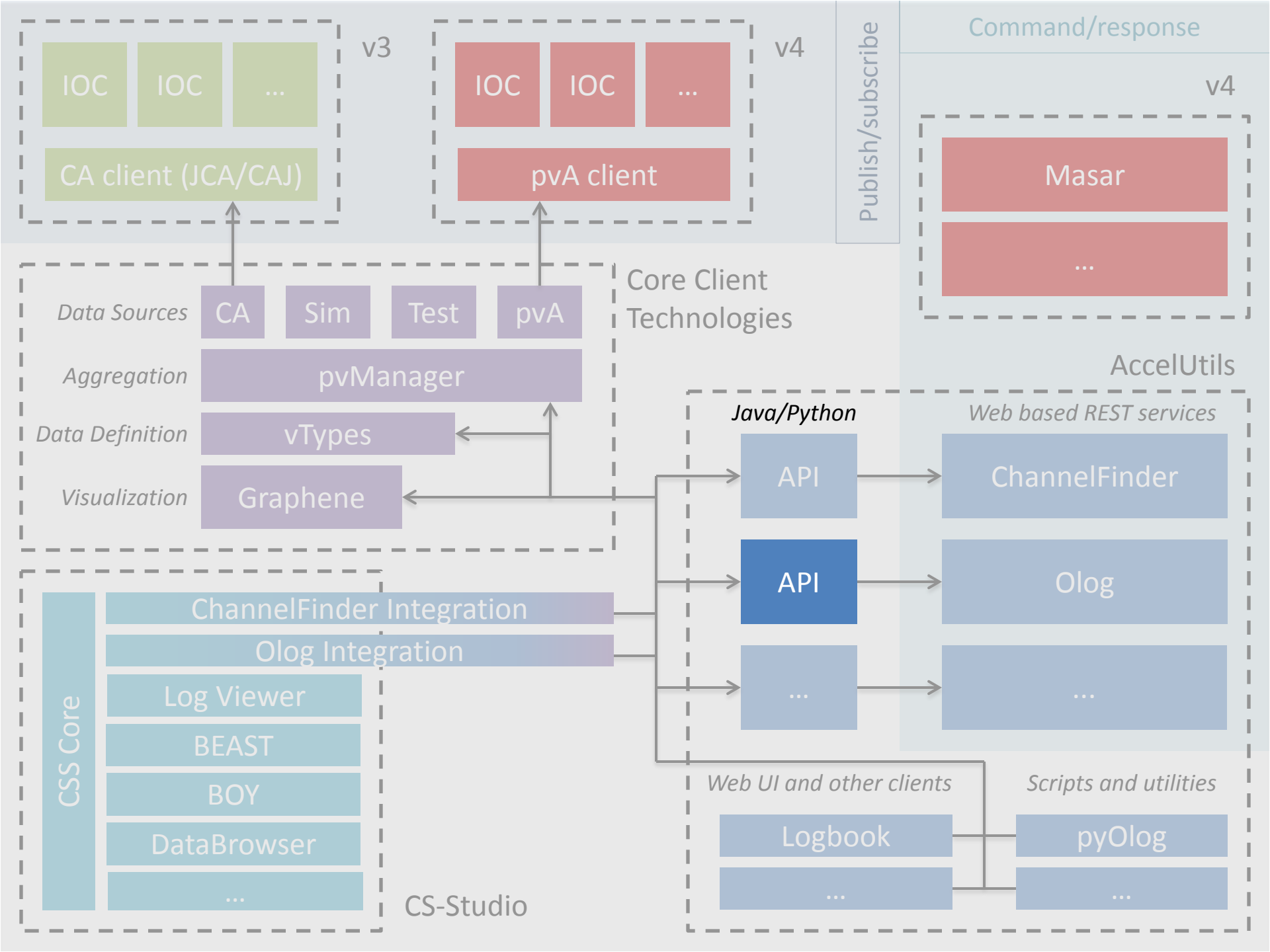
Olog Web service

- 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

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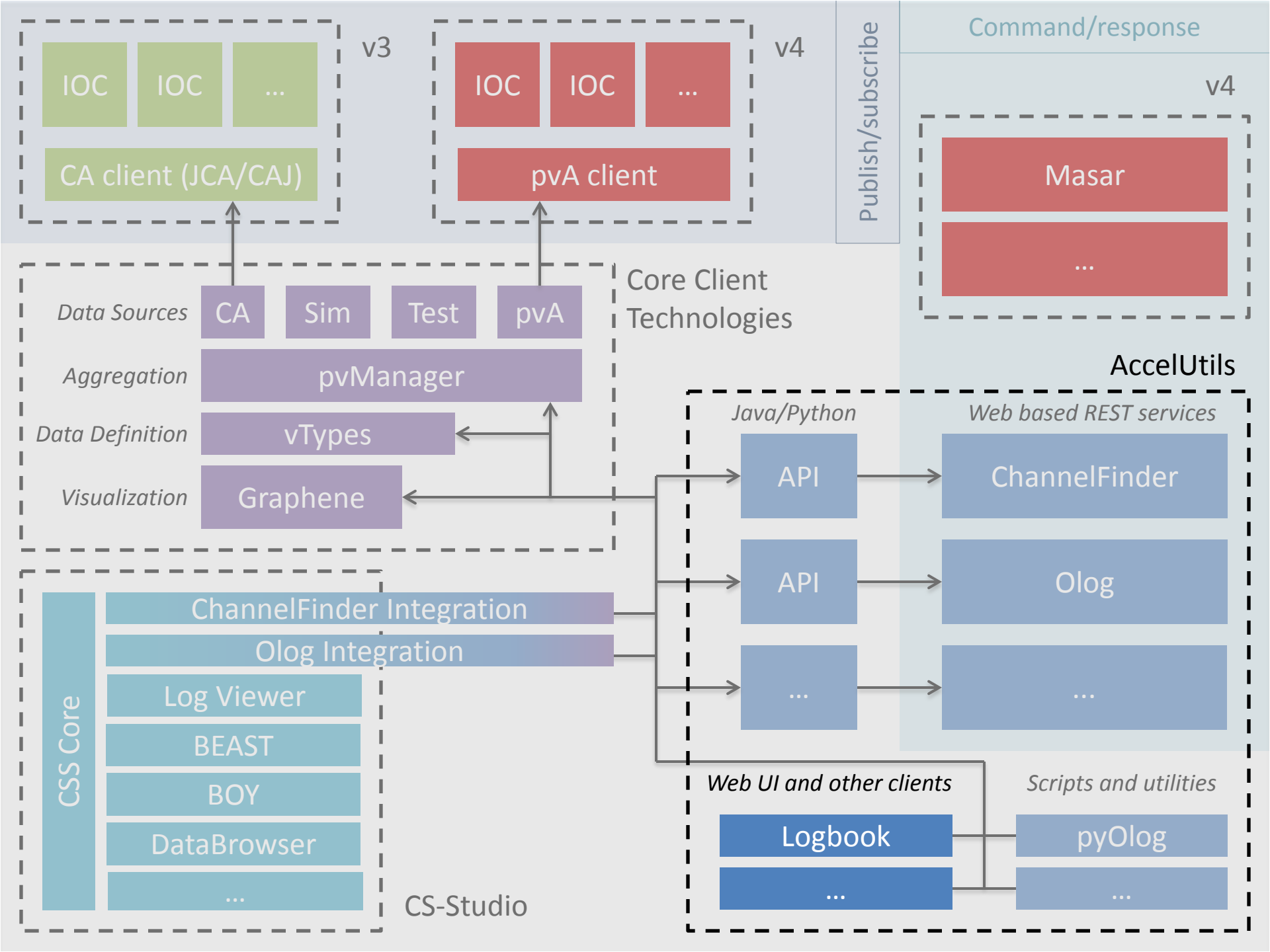
Olog Client Libraries

- 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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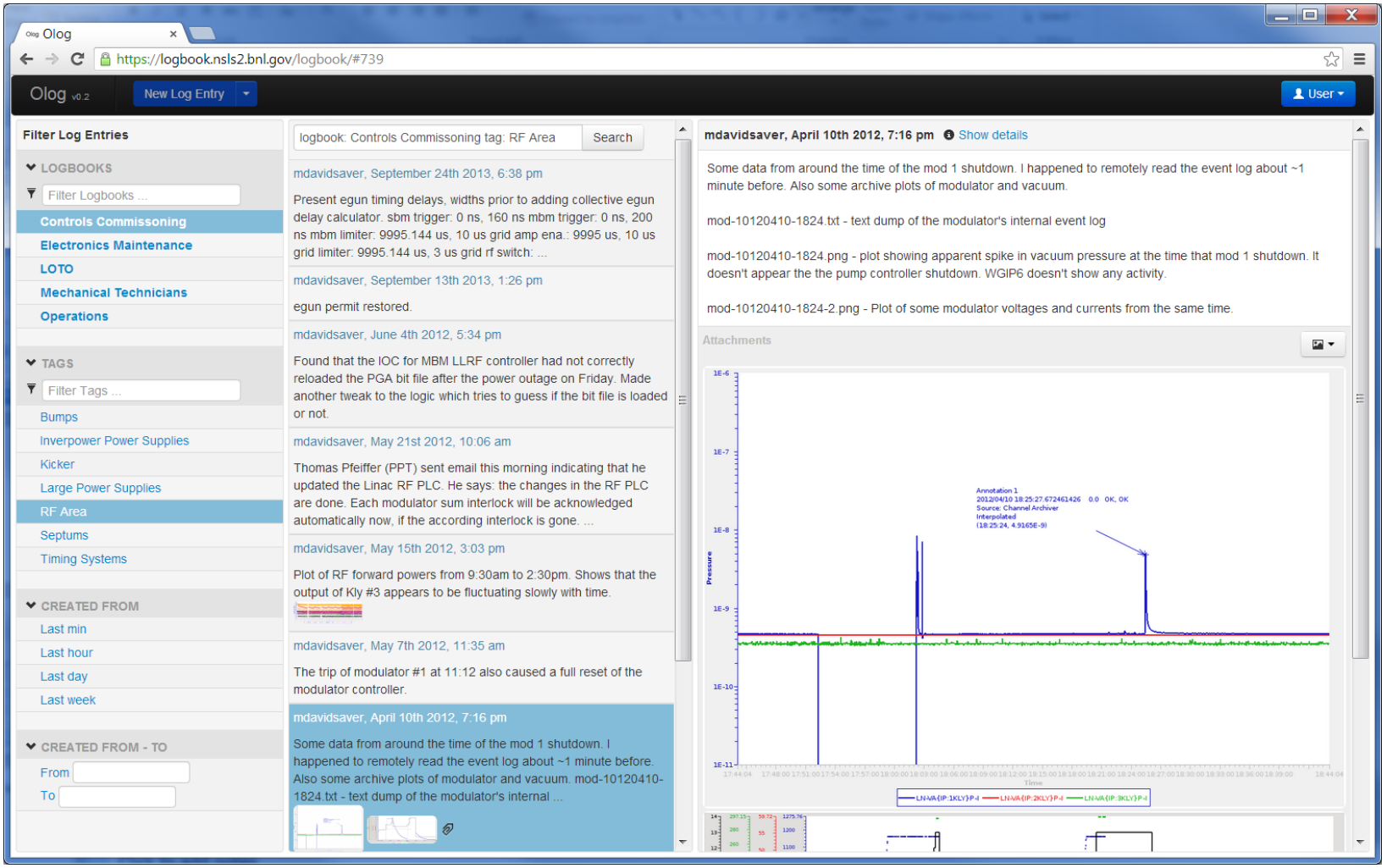
Olog Clients – Webclient



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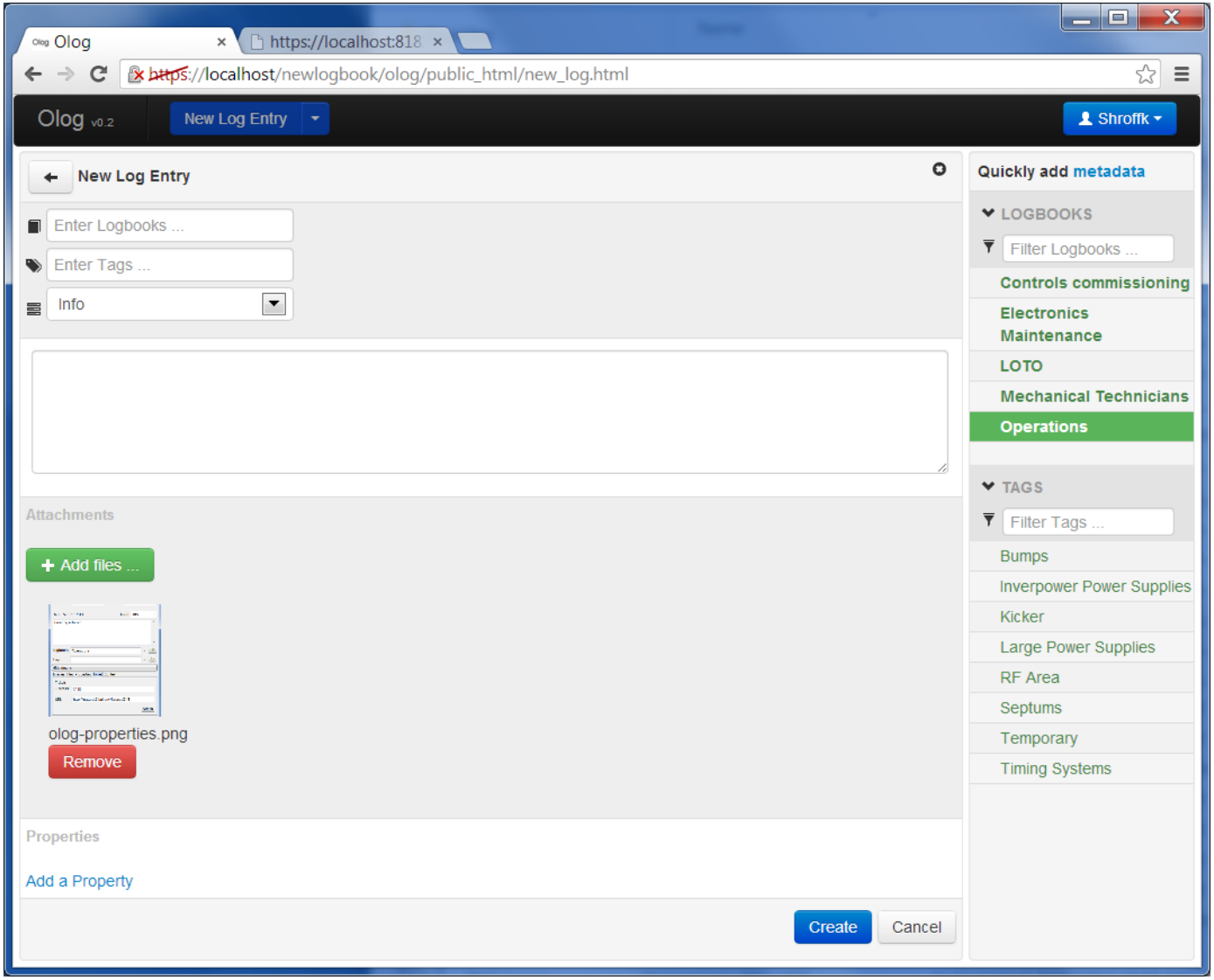

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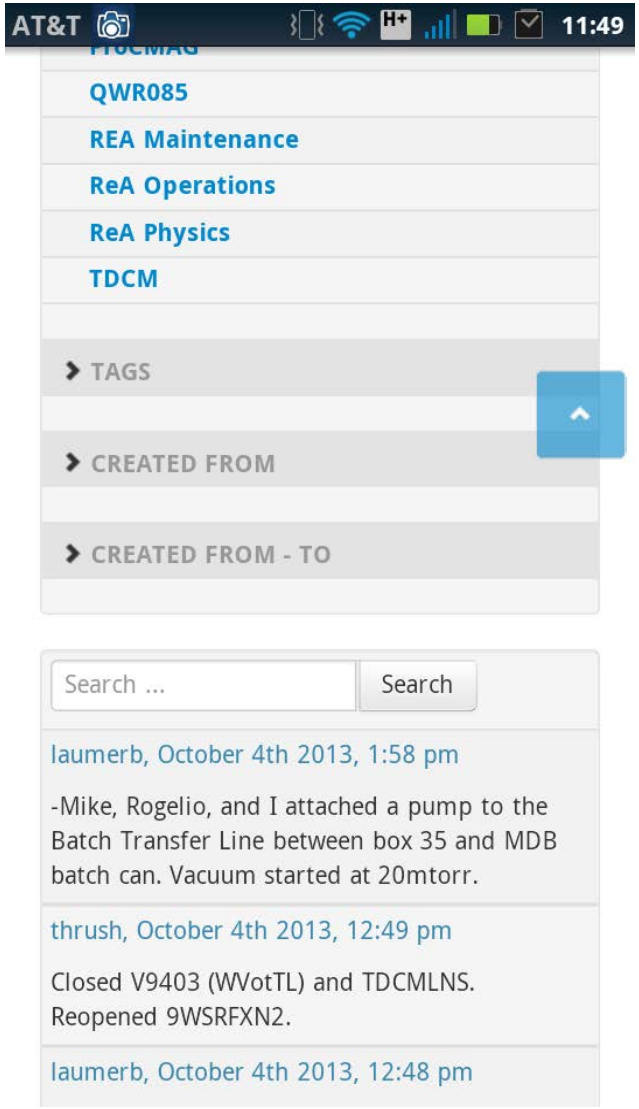

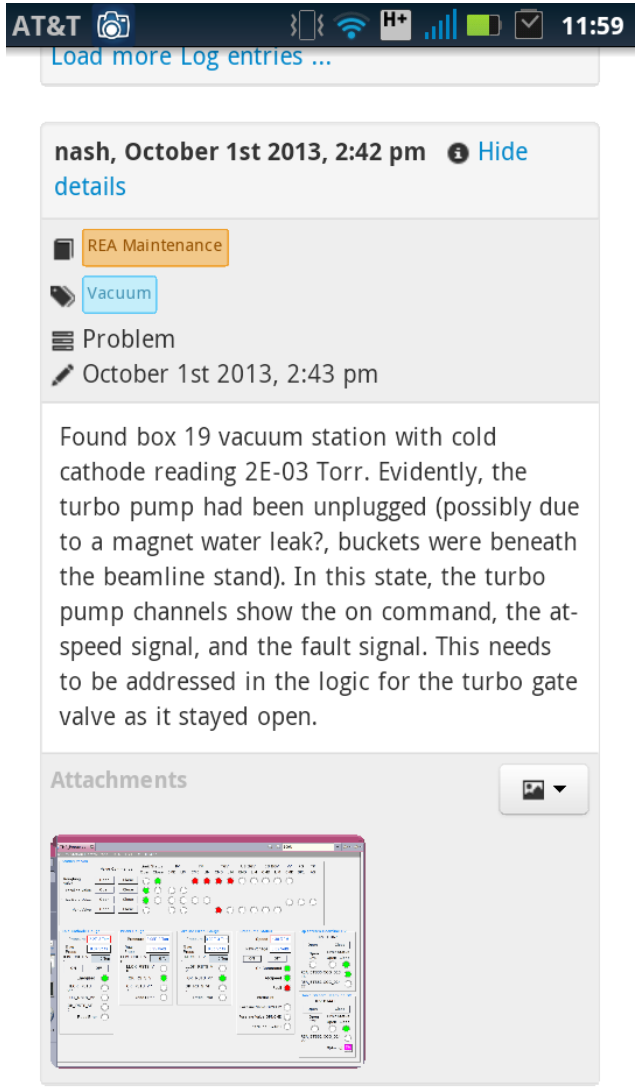

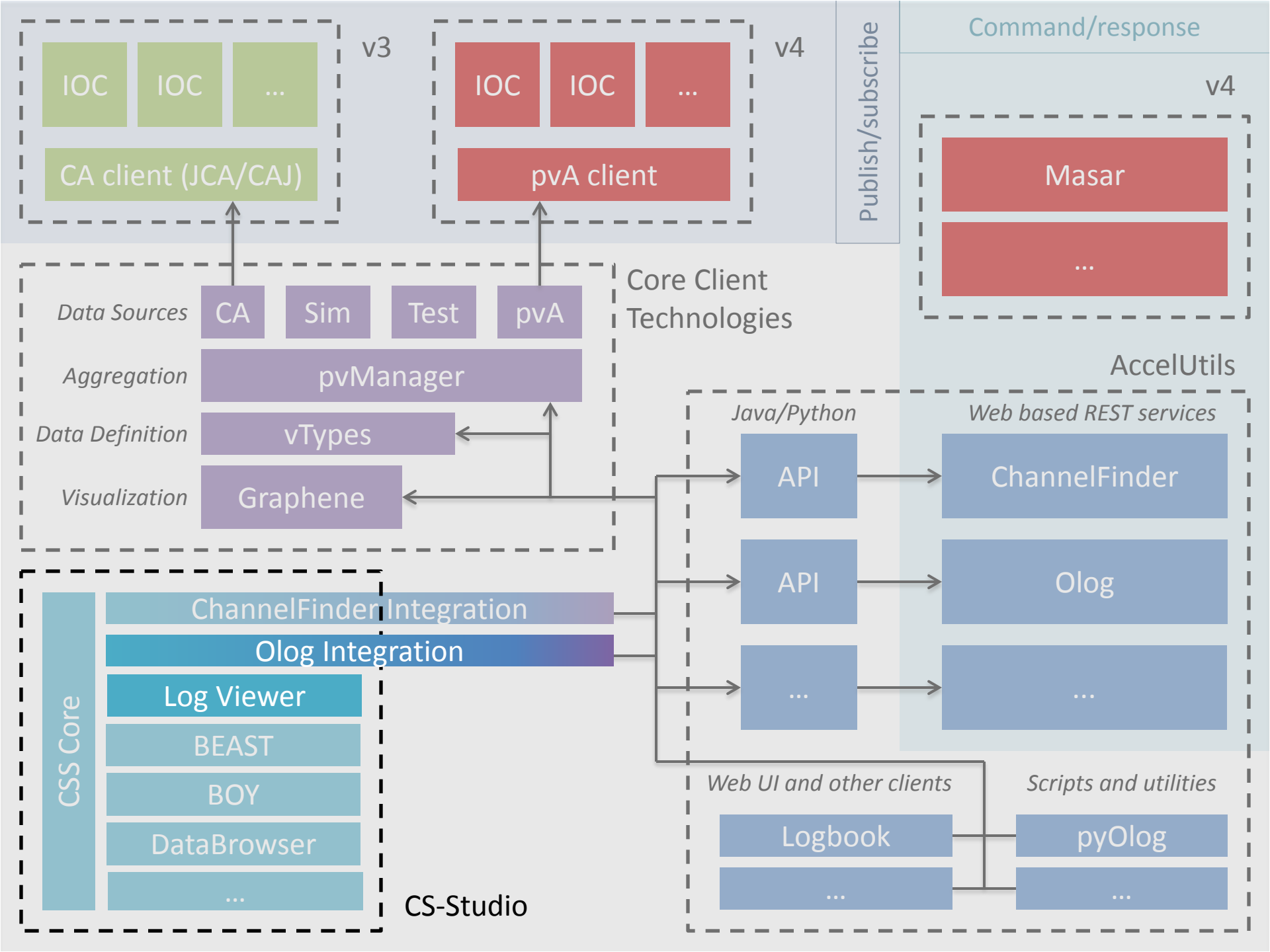
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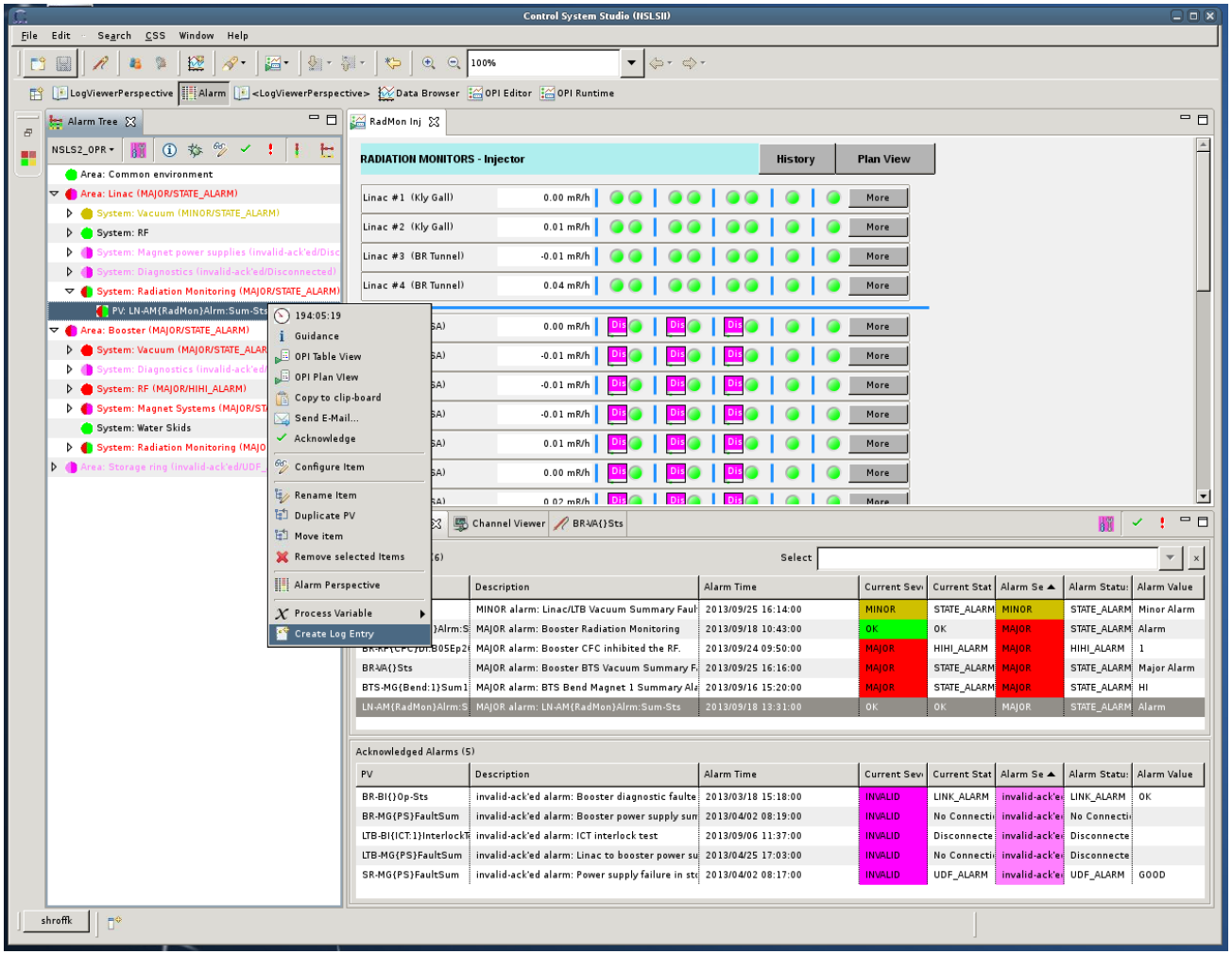
Olog Clients – CS-Studio

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

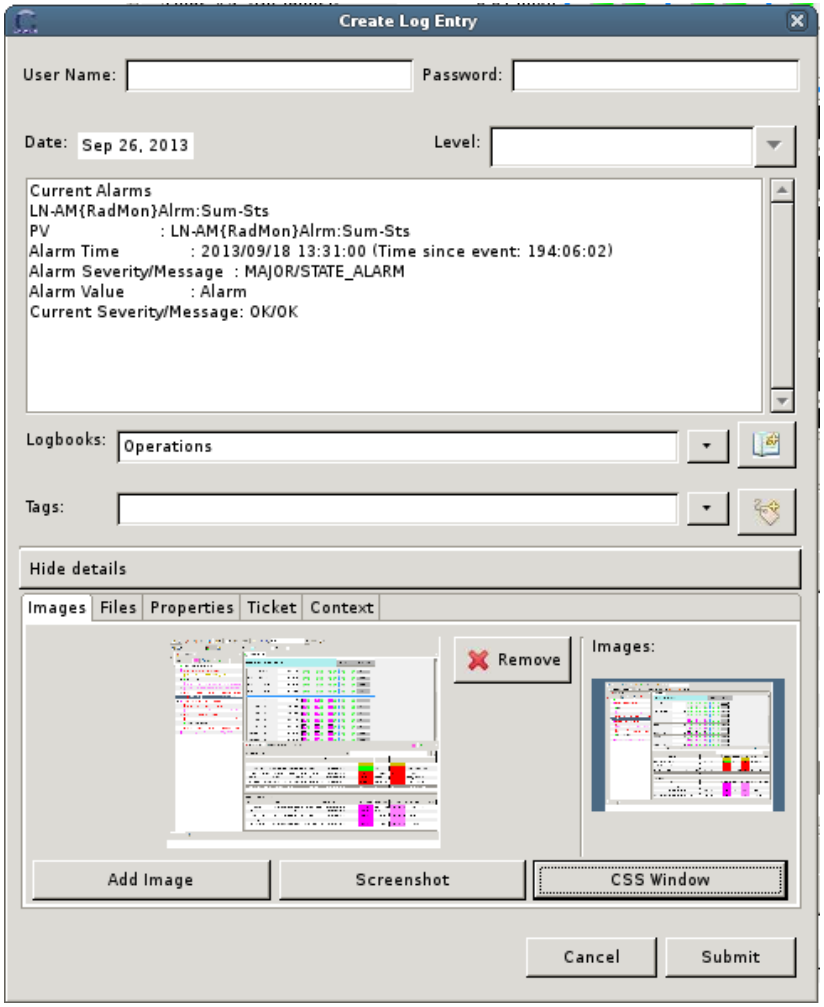
- Seamless integration with applications
  - Application specific initialized log entries

Olog Clients – CS-Studio



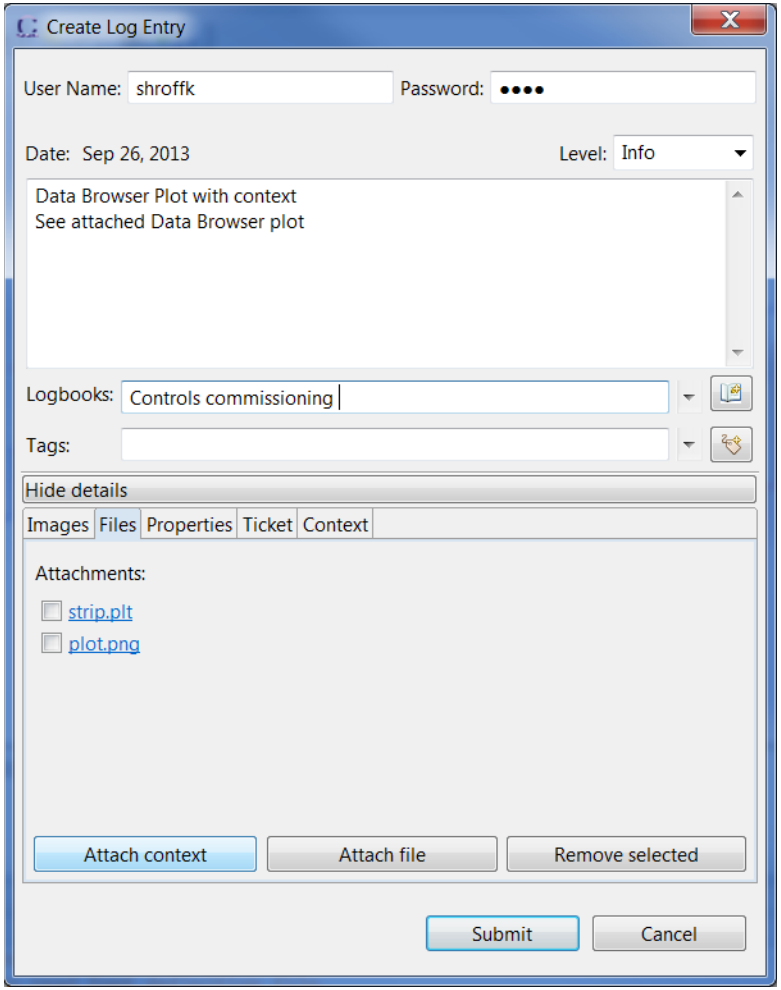
Olog Clients – CS-Studio

- 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)



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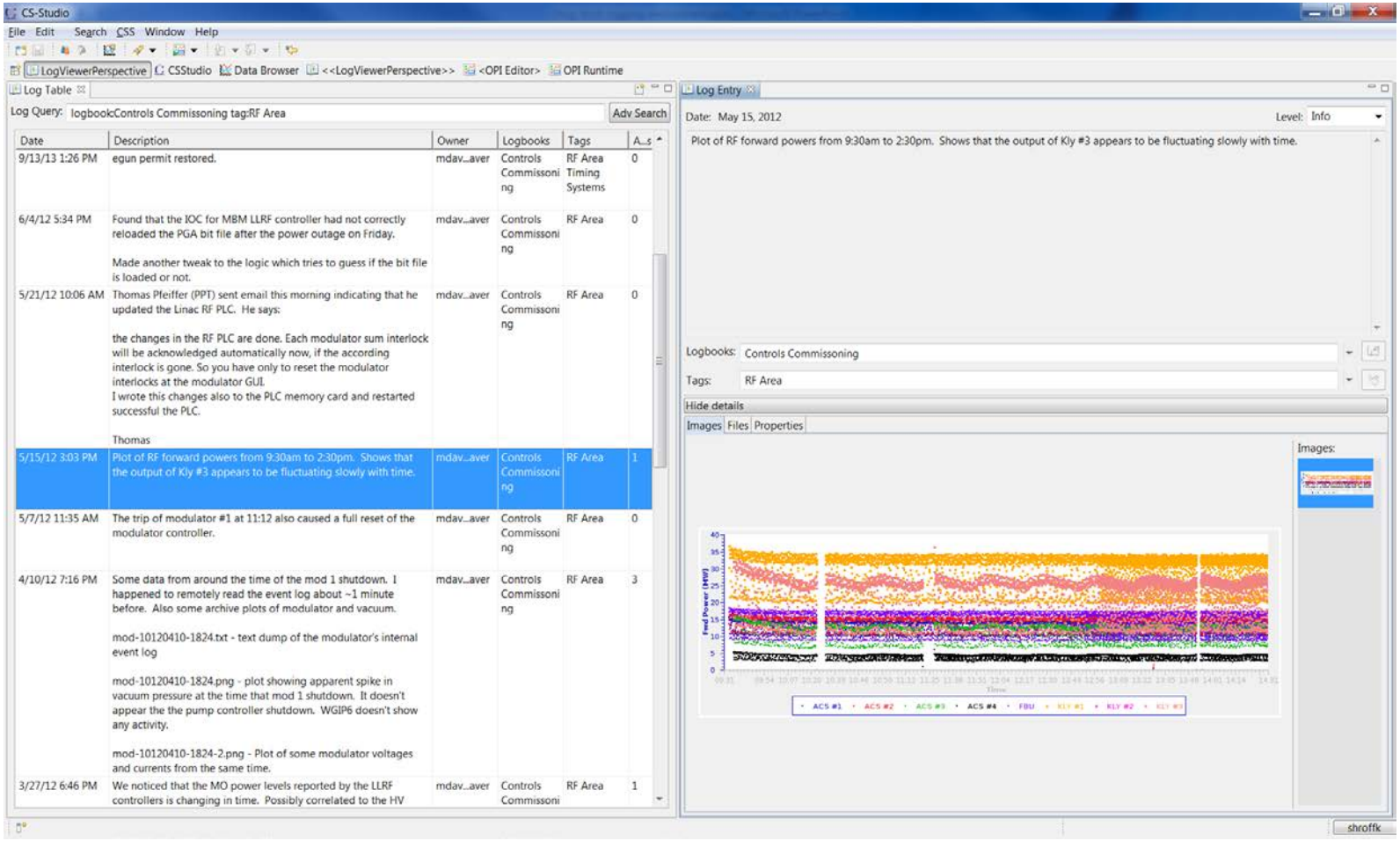
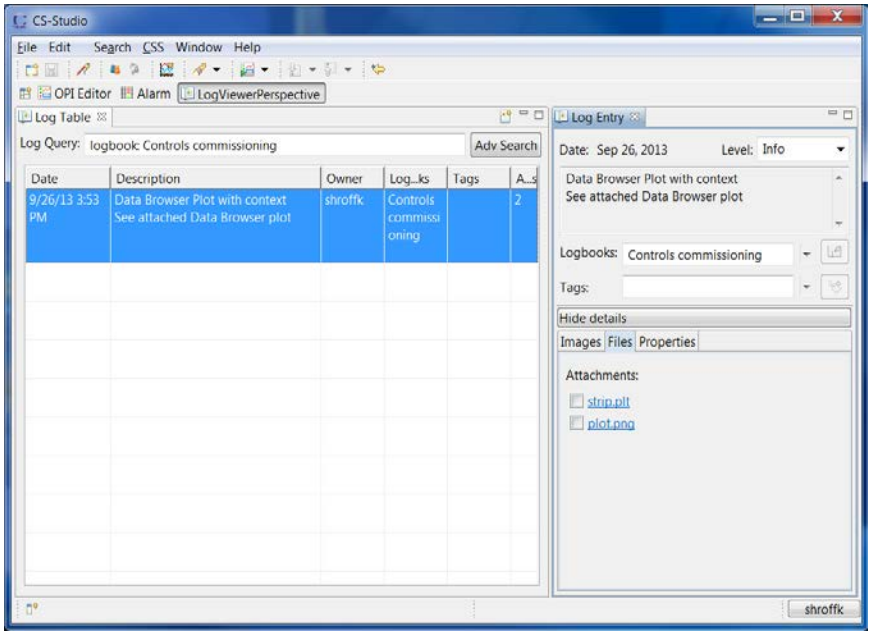


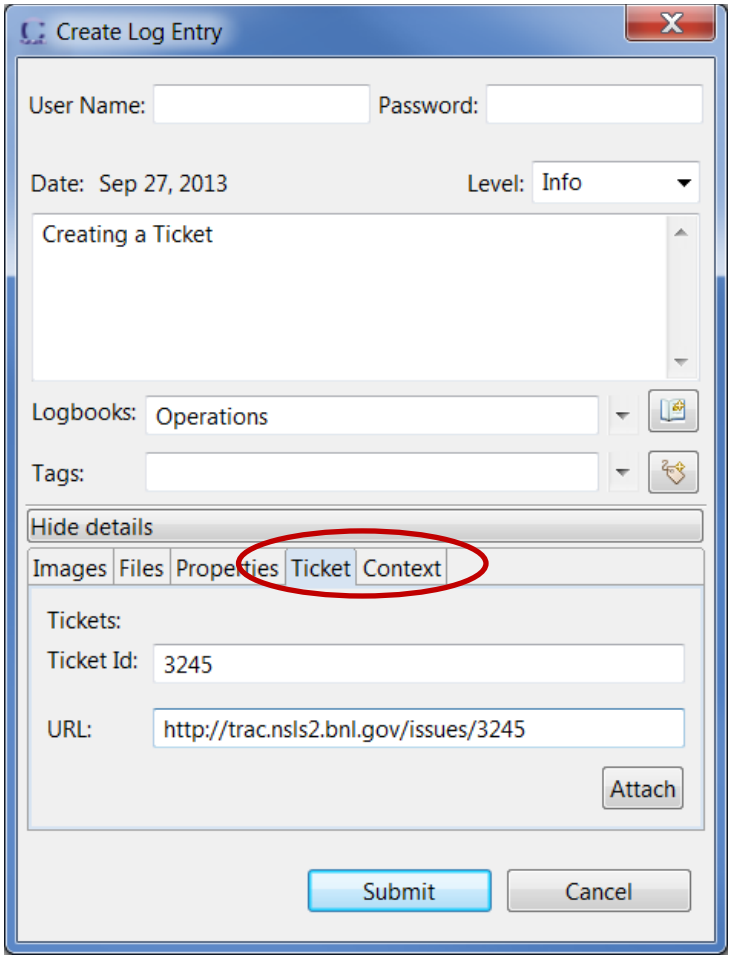
Olog Clients – CS-Studio

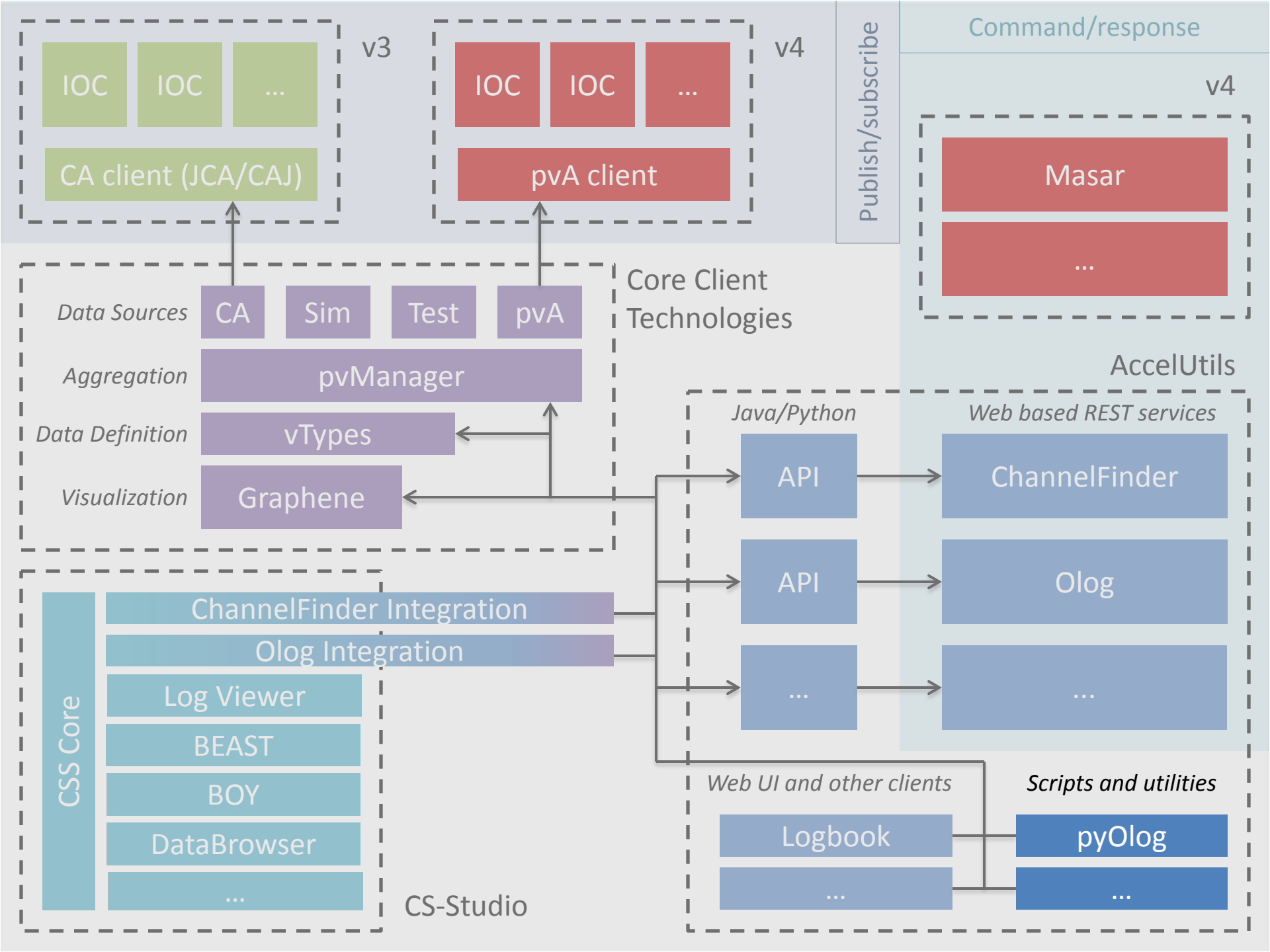
- Restore Context
  - Launch applications initialized to the state as described while making the log entry
  - Open archived data for associated pv's
  - Run OPI screens
  - Query other services



Olog Clients – CS-Studio

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

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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: *scanProcess*

  attributes

  type: *XPD*

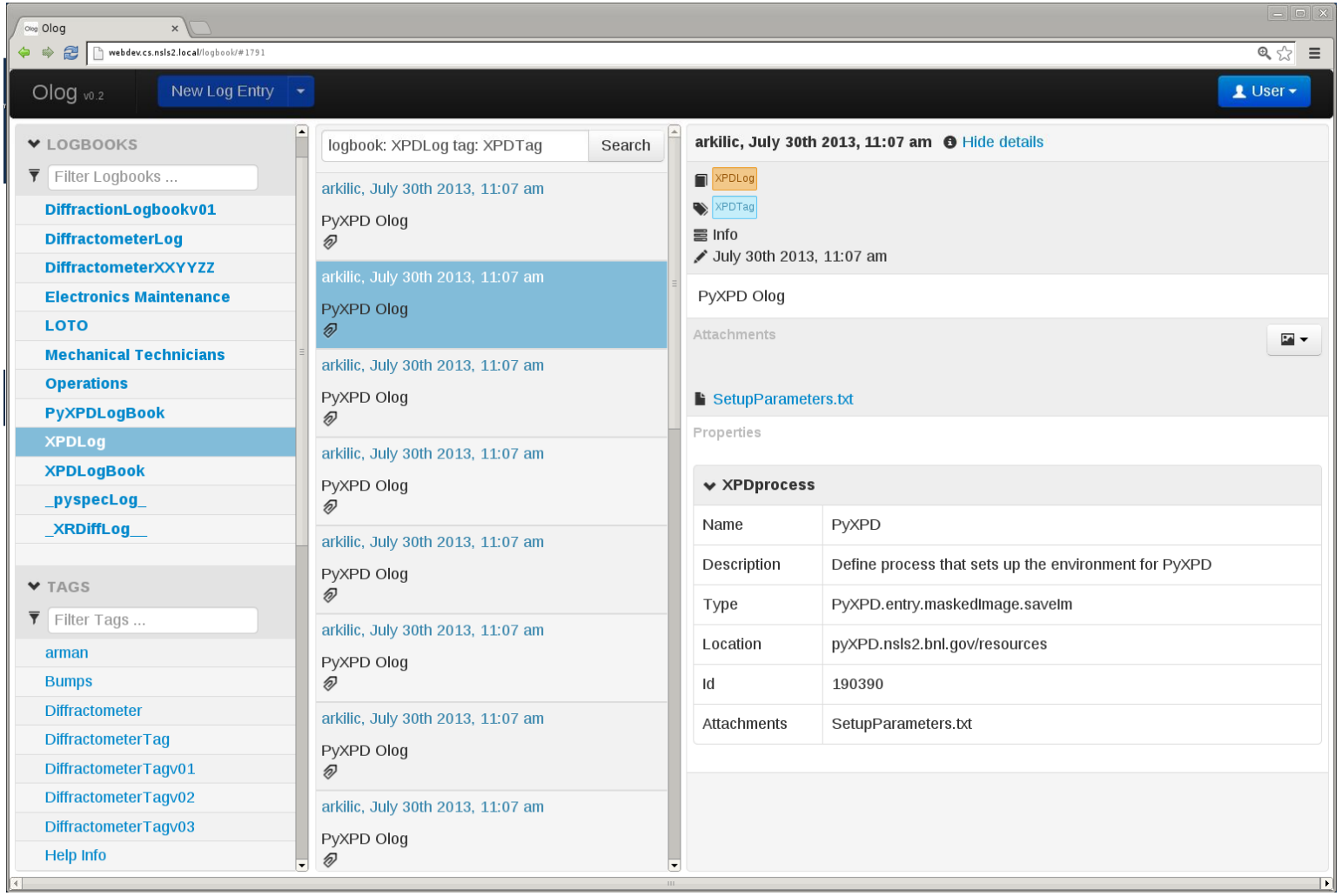
  id: *1234*

  description: *save reduced dataset*

  location: *pyPXD.nsls2.bnl.gov/resources*

  attachments: *reducedData.json*

Olog Clients – pyOlog



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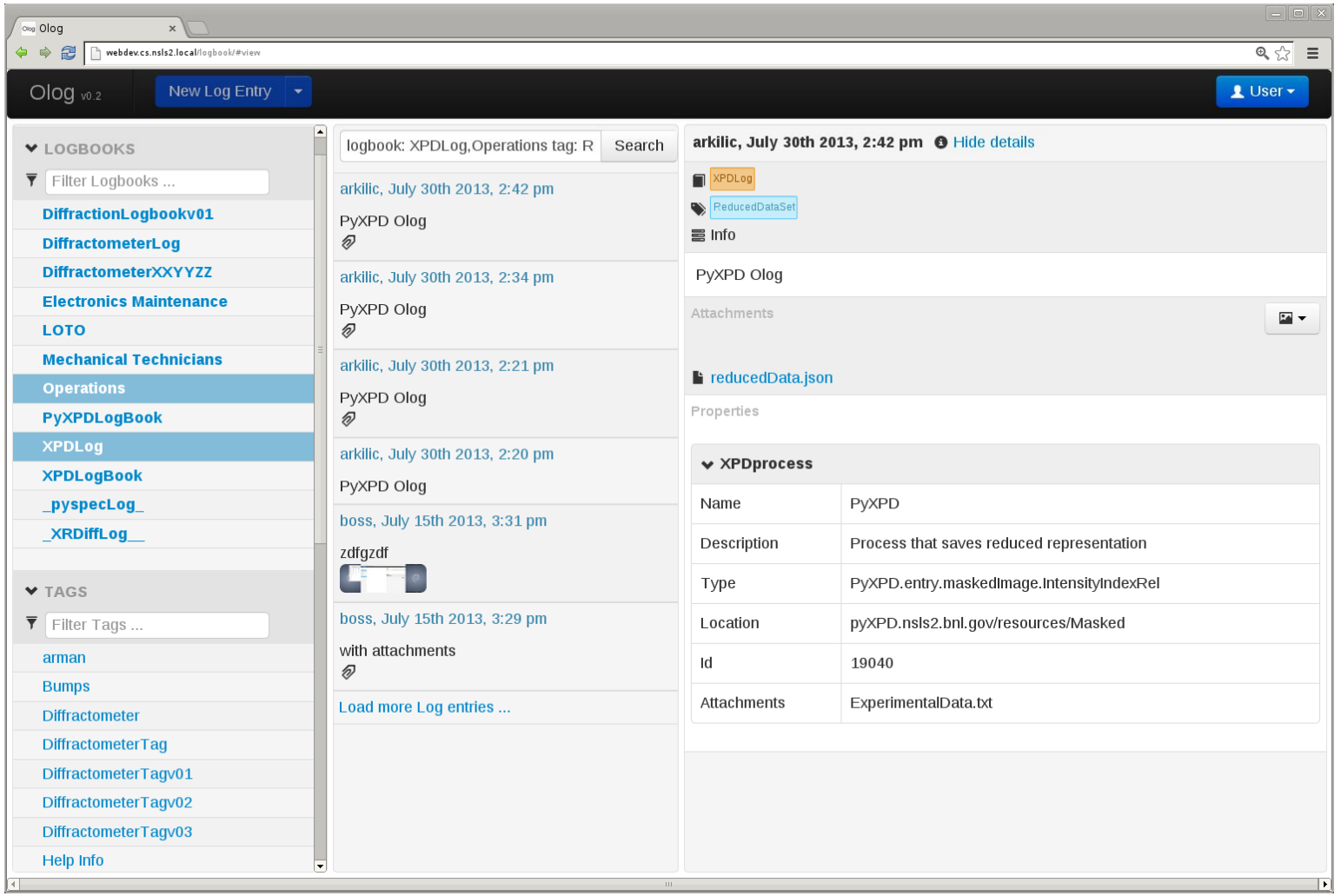

References

- http://controlsystemstudio.github.io/
- https://github.com/Olog

Questions?