Bringing Experiment Software to the Web with VISPA

http://vispa.physik.rwth-aachen.de

Architecture

**Client**
- JavaScript/HTML
- Standard web browser
- Latest web technologies
  - AMD/RequireJS, WebGL, WebSockets, Bootstrap

**VISPA Server**
- Python
- Dispatches resources
- Provides extensions
- Code open-source

**Workspaces**
- Any unix machine with Python
- Created by user via GUI
- Authentication with user login
  - Transparent access and permissions

**Project:**
- Homework Extension

**Permission:**
- hand in
- assign grades
- manage course

**Student**
- ✔
- ✗
- ✗

**Tutor**
- ✗
- ✔
- ✗

**Manager**
- ✗
- ✔
- ✔
**Extensions**

**Analysis Designer**
- Event-by-event data flow through chain
- Reusable C++ and Python modules
- Based on Physics eXtension Library

**Data Browser**
- Interactive browsing of HEP event content
- Multiple data formats possible (e.g. LHE)
- Based on Physics eXtension Library (PXL)

**JSROOT**
- ROOT file browser, interactive visualization
- Embedded JSROOT within thin code layer
- Benefits from dynamic resources (Workspaces)

*also: FileBrowser, CodeEditor, Terminal, JobDashboard, …*