An Alternative Platform-independent GUI For The BOINC Client

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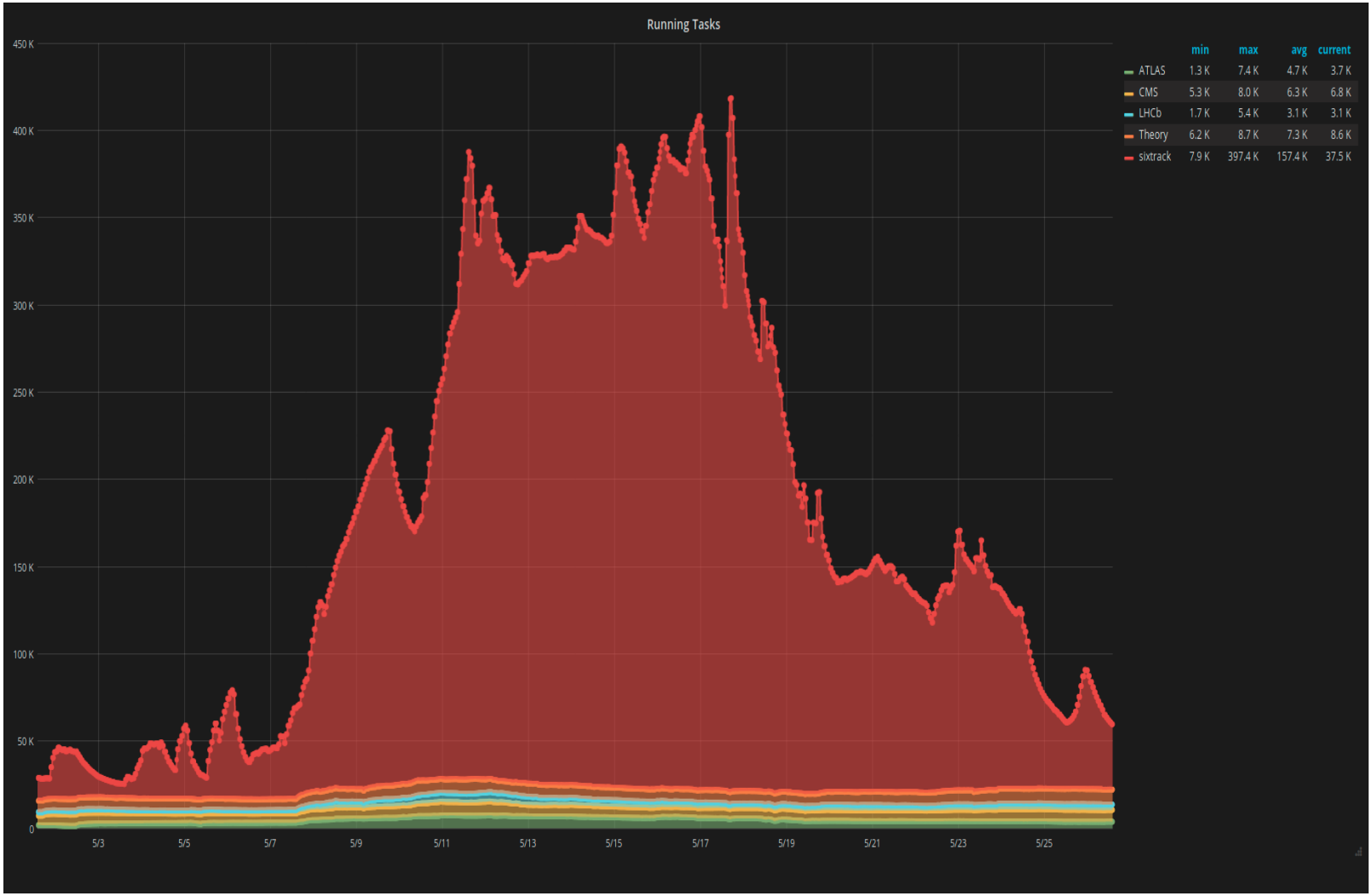
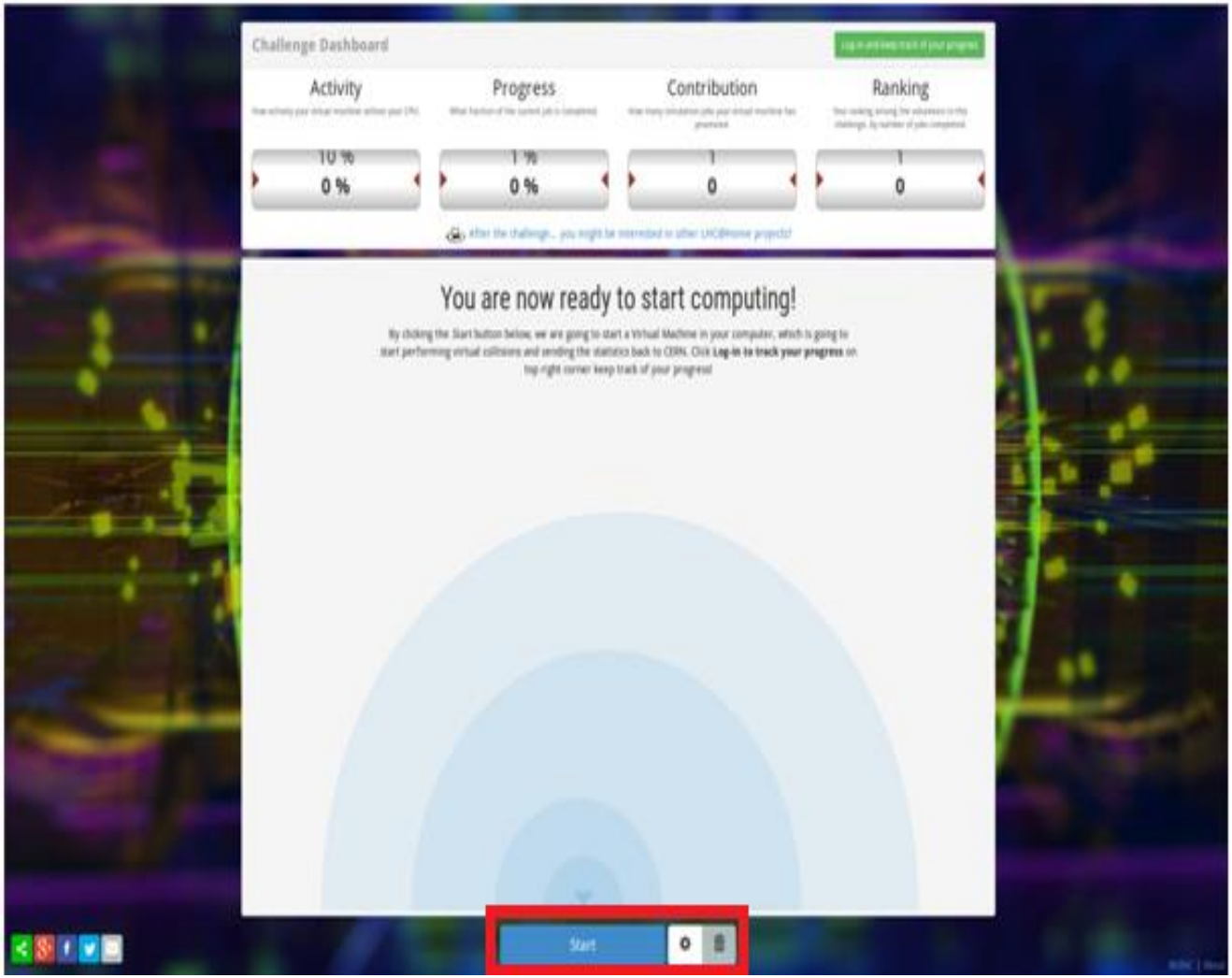
About Us

- Myself
  - Background Physics & Computer Science
  - CERN staff member since 2004
    - Distributed Computing
      - Worldwide LHC Computing Grid
      - Cloud Computing
      - Volunteer Computing
    - HTC/HPC Team
- Nikolas
  - Technical Student
  - BOINC development
- Aleksandra
  - CERN OpenLab/UNIGE Summer Student

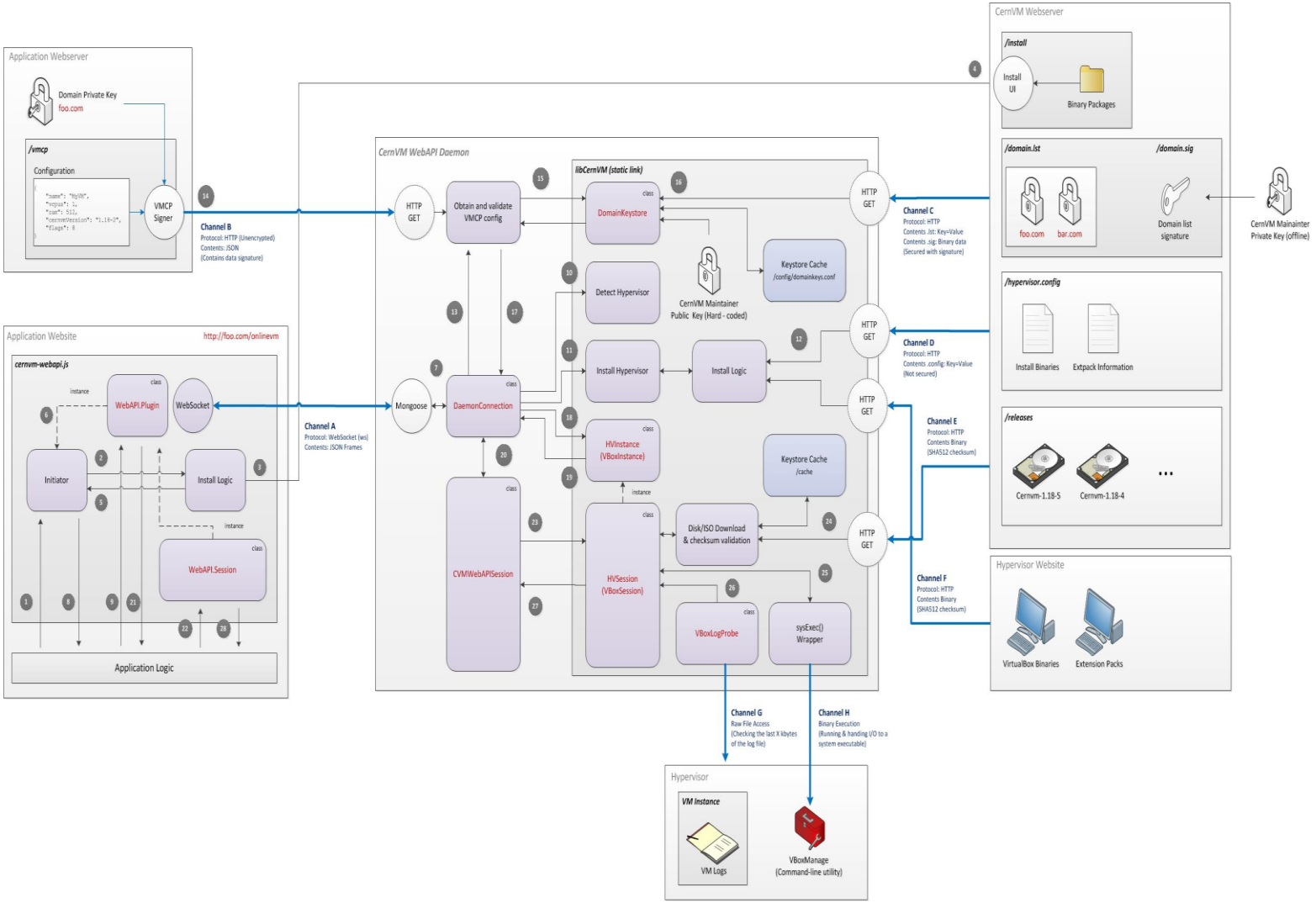
VM Capacity Gap



The Challenge Web Page

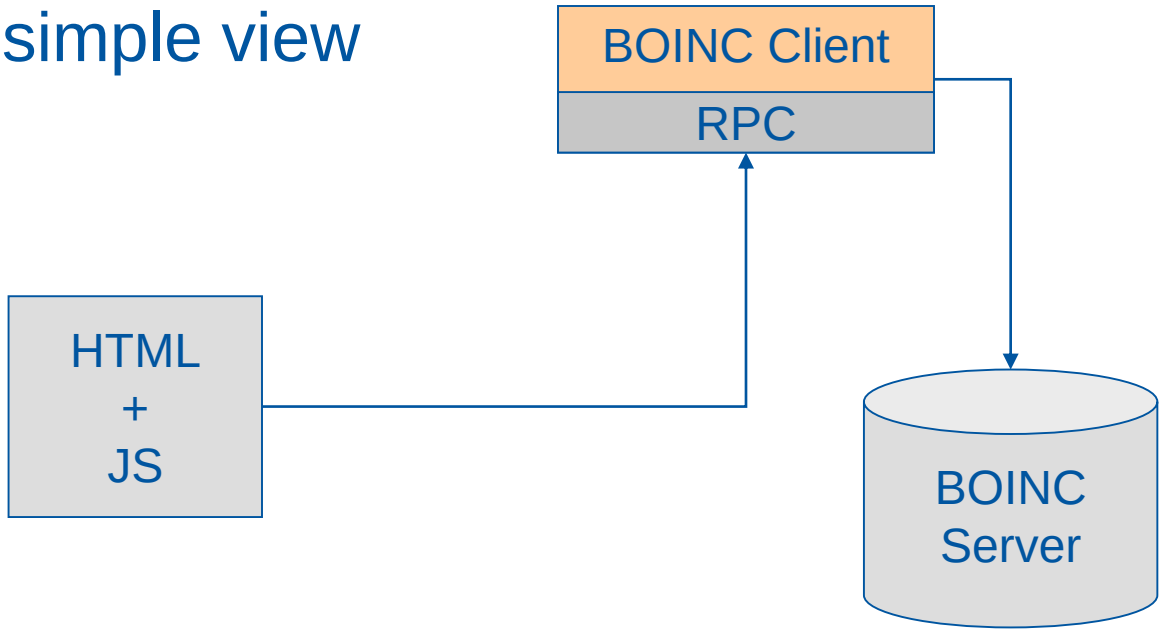


CernVM WebAPI

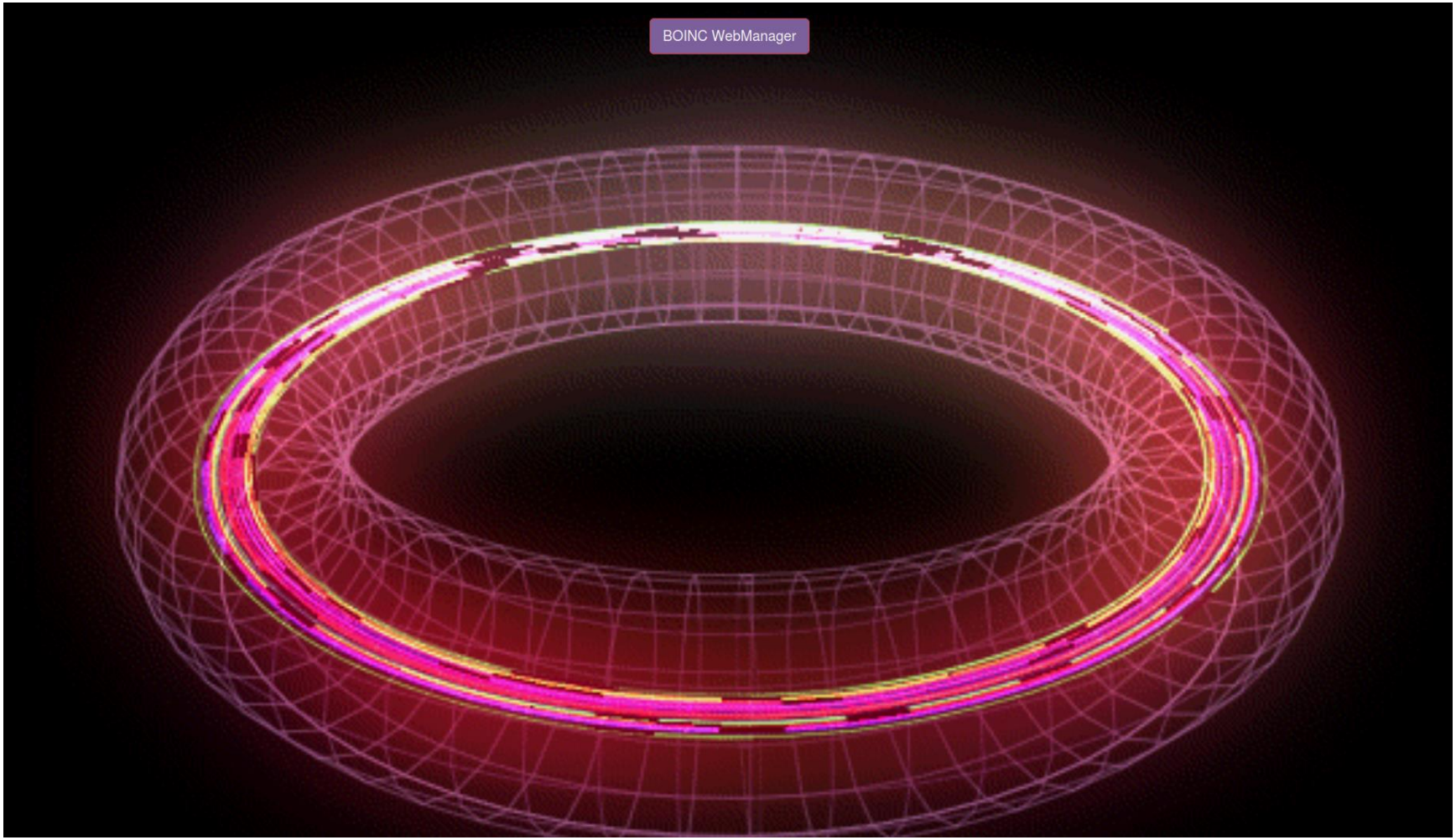


Framework

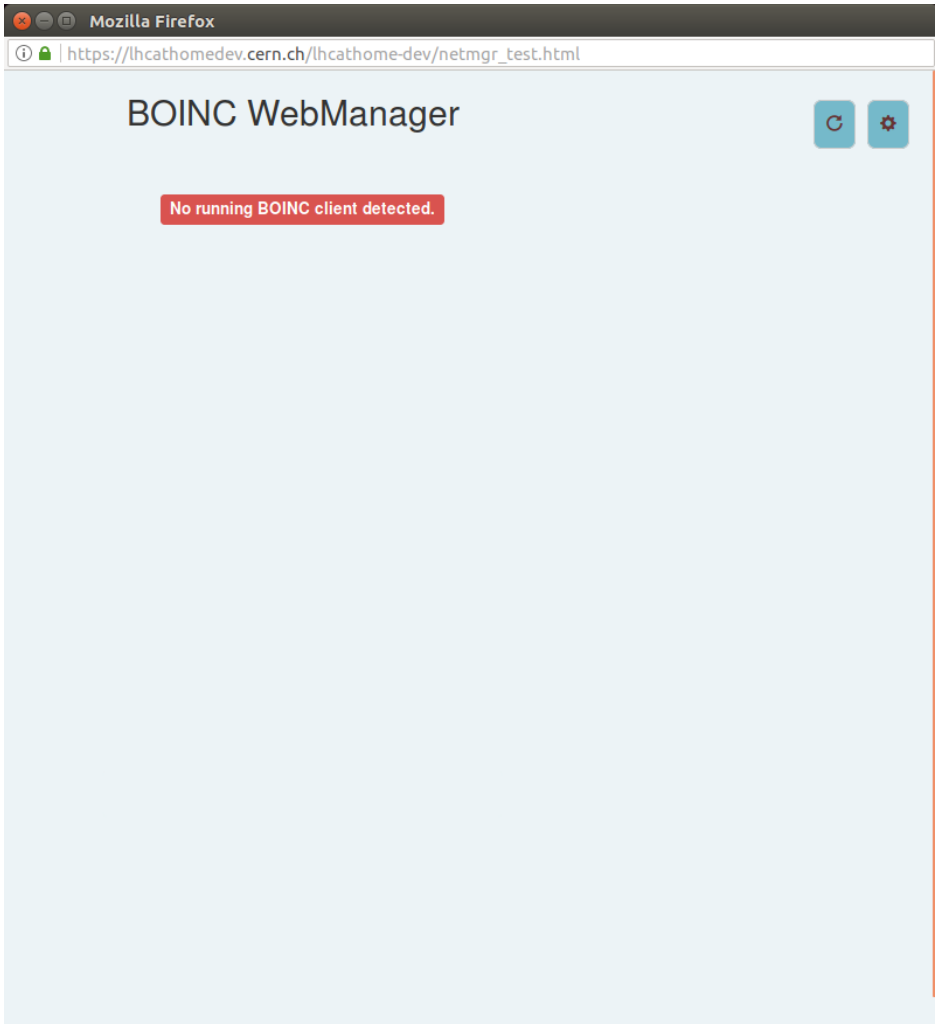
- Use the BOINC client
- RPC WebSocket
- HTML and Javascript
- BOINC GUI simple view



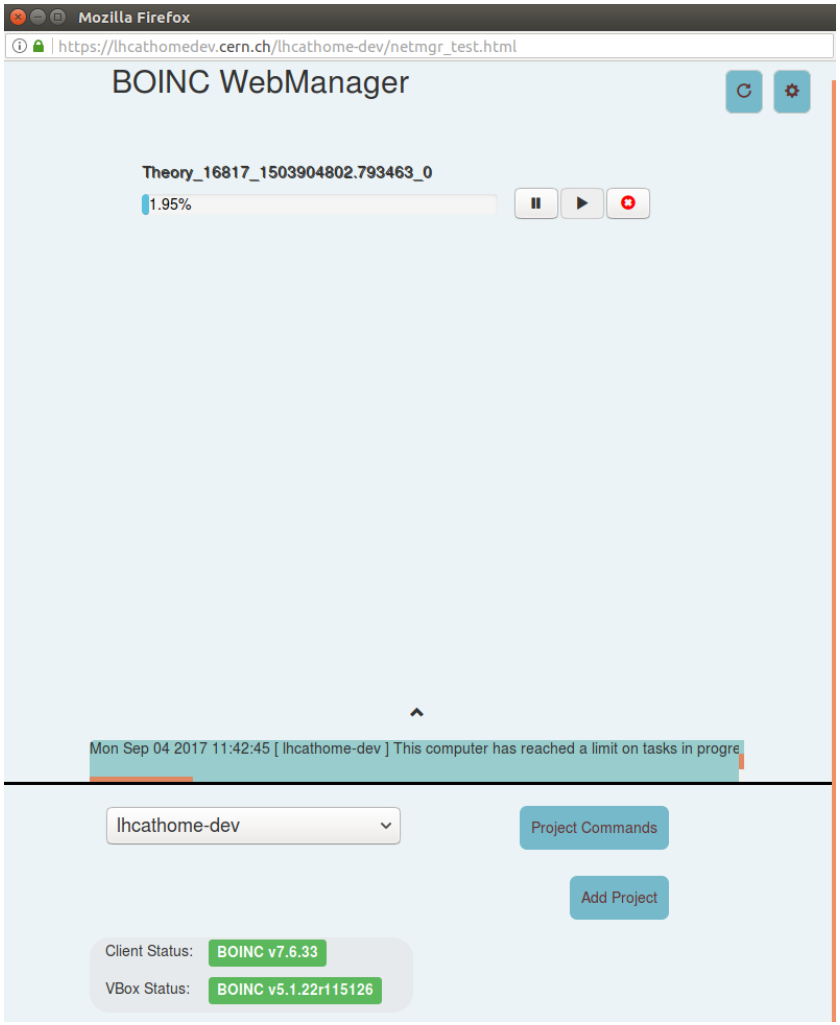
The Magic Button



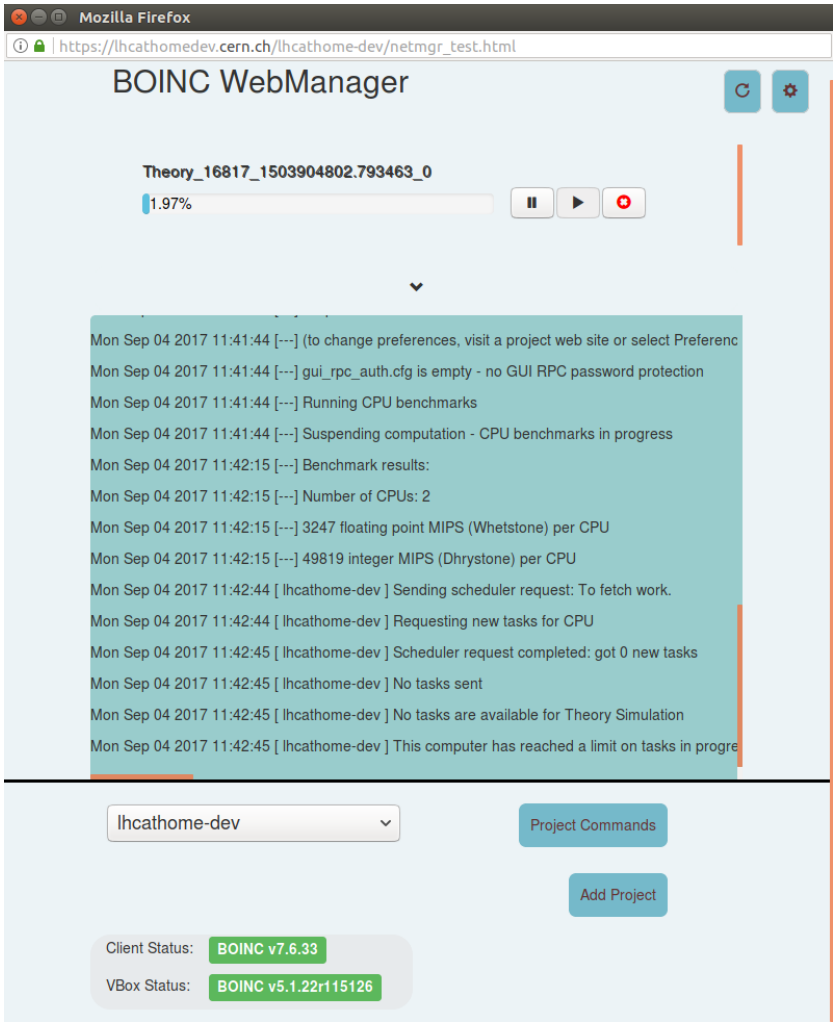
Connecting To The Client



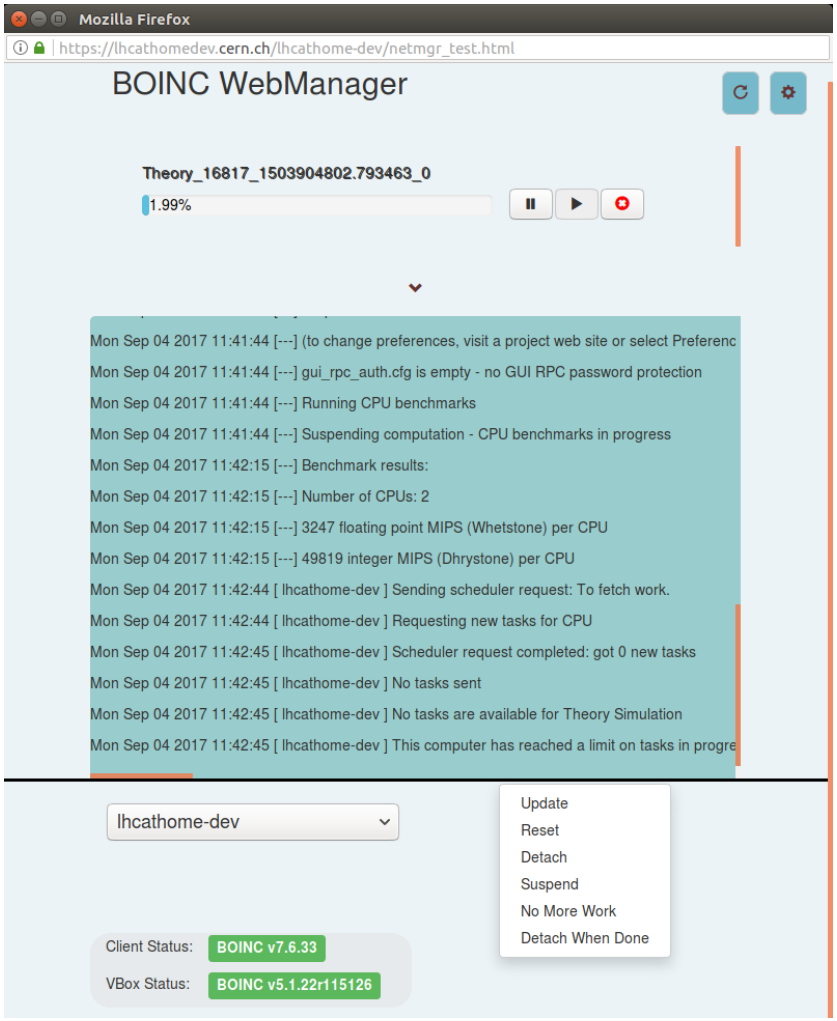
The Web Manager



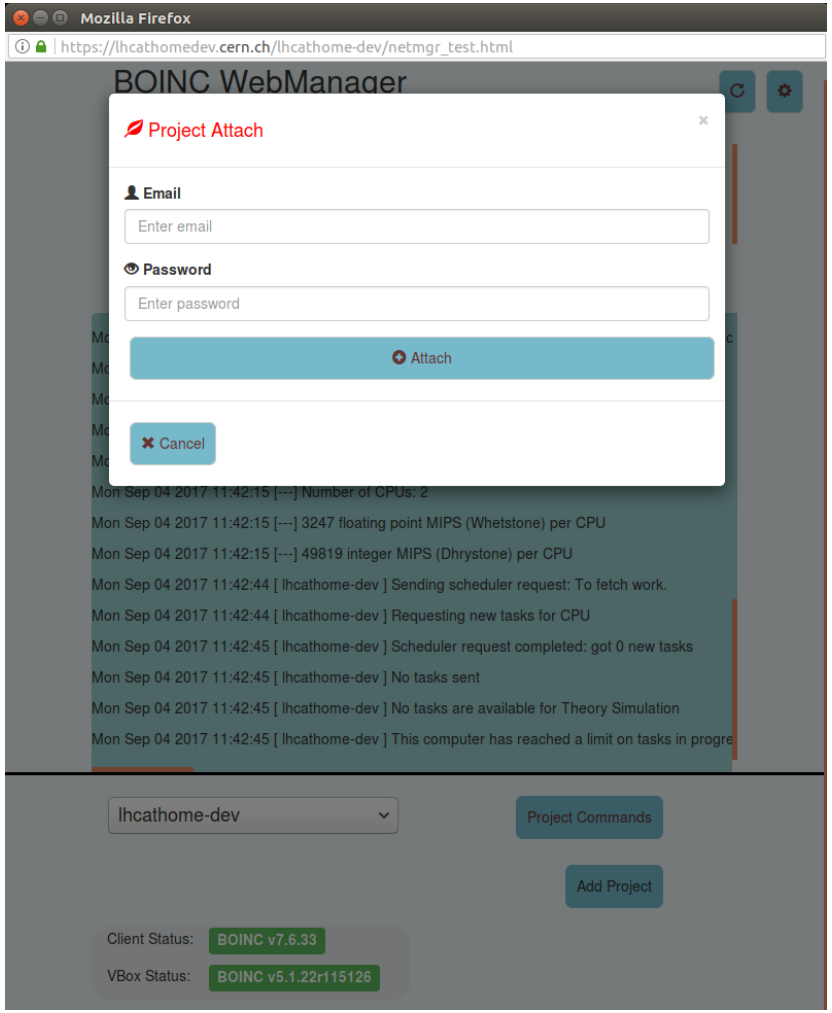
Event Log


Mozilla Firefox
https://lhcathomedev.cern.ch/lhcathome-dev/netmgr_test.html
BOINC WebManager
Theory_16817_1503904802.793463_0
1.97%
Mon Sep 04 2017 11:41:44 [---] (to change preferences, visit a project web site or select Preferenc
Mon Sep 04 2017 11:41:44 [---] gui_rpc_auth.cfg is empty - no GUI RPC password protection
Mon Sep 04 2017 11:41:44 [---] Running CPU benchmarks
Mon Sep 04 2017 11:41:44 [---] Suspending computation - CPU benchmarks in progress
Mon Sep 04 2017 11:42:15 [---] Benchmark results:
Mon Sep 04 2017 11:42:15 [---] Number of CPUs: 2
Mon Sep 04 2017 11:42:15 [---] 3247 floating point MIPS (Whetstone) per CPU
Mon Sep 04 2017 11:42:15 [---] 49819 integer MIPS (Dhrystone) per CPU
Mon Sep 04 2017 11:42:44 [lhcathome-dev] Sending scheduler request: To fetch work.
Mon Sep 04 2017 11:42:44 [lhcathome-dev] Requesting new tasks for CPU
Mon Sep 04 2017 11:42:45 [lhcathome-dev] Scheduler request completed: got 0 new tasks
Mon Sep 04 2017 11:42:45 [lhcathome-dev] No tasks sent
Mon Sep 04 2017 11:42:45 [lhcathome-dev] No tasks are available for Theory Simulation
Mon Sep 04 2017 11:42:45 [lhcathome-dev] This computer has reached a limit on tasks in progre
lhcathome-dev
Project Commands
Add Project
Client Status:
BOINC v7.6.33
VBox Status:
BOINC v5.1.22r115126

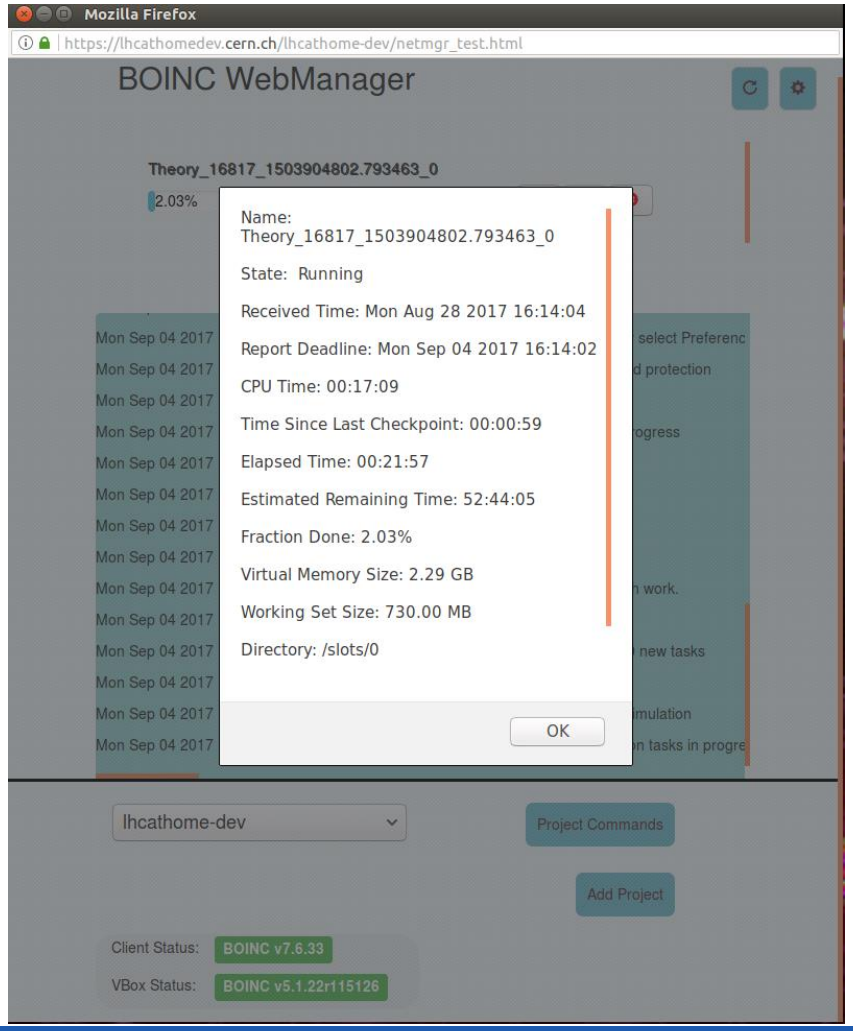
Main Actions



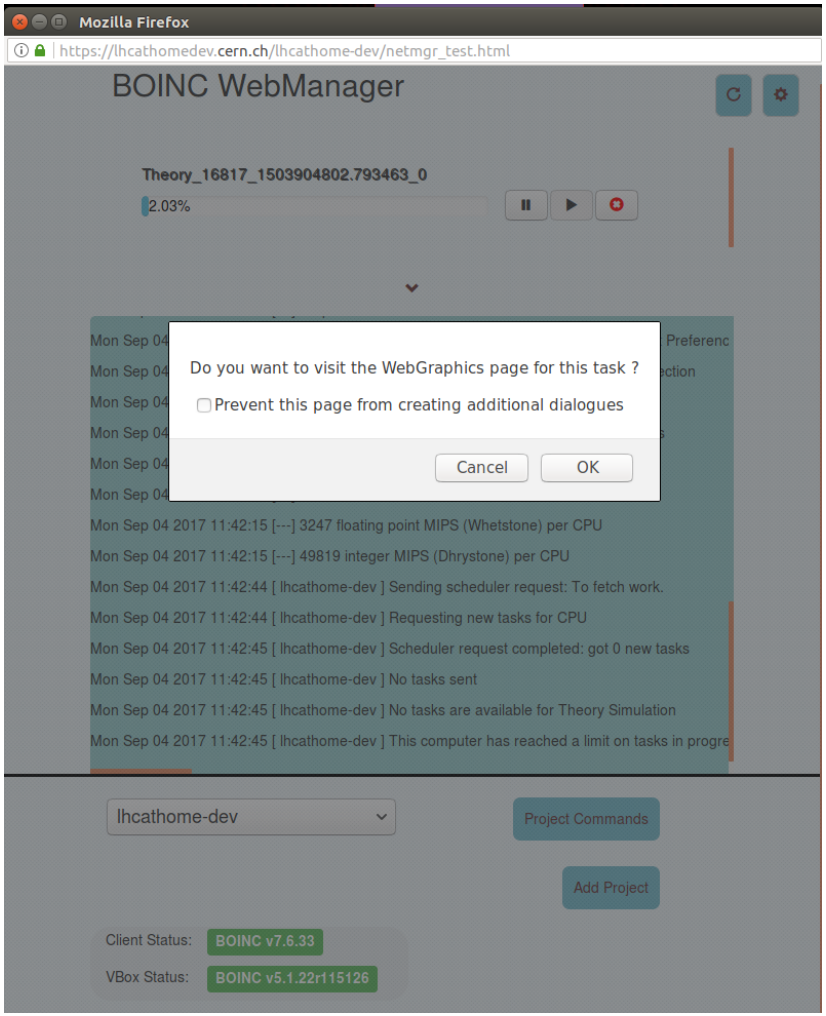
Join Project



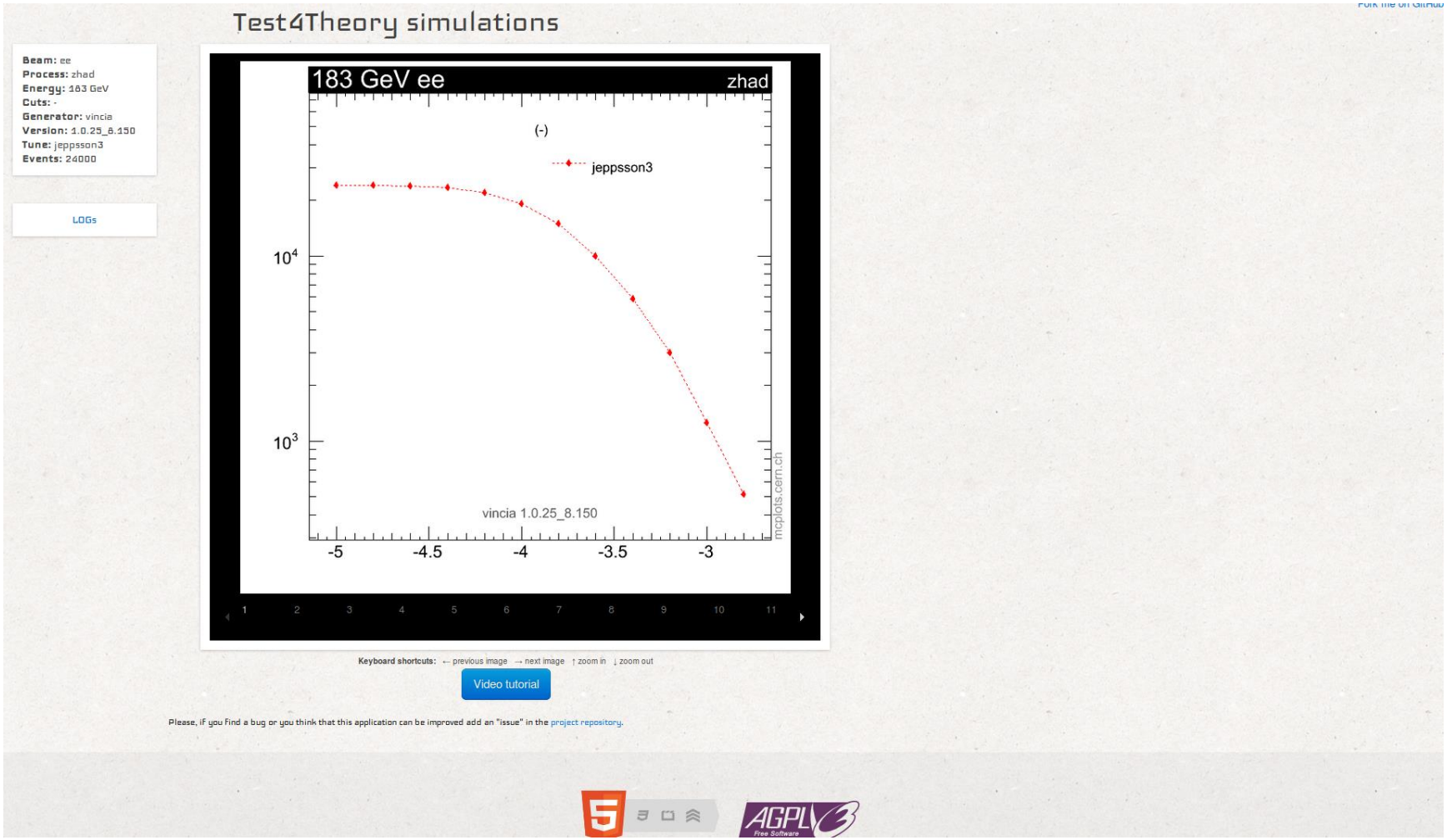
Task Details



VM Web Port Detection



The VM Internal View



Summary

- Prototype client GUI
  - Based on JavaScript and Web Sockets
- Replicated the simple view
  - As a proof-of-concept
- Aiming for "*one click to start*"
  - With VM applications
- Feedback
  - Is this a direction that is interesting?
  - Is anyone else wanting to contribute?