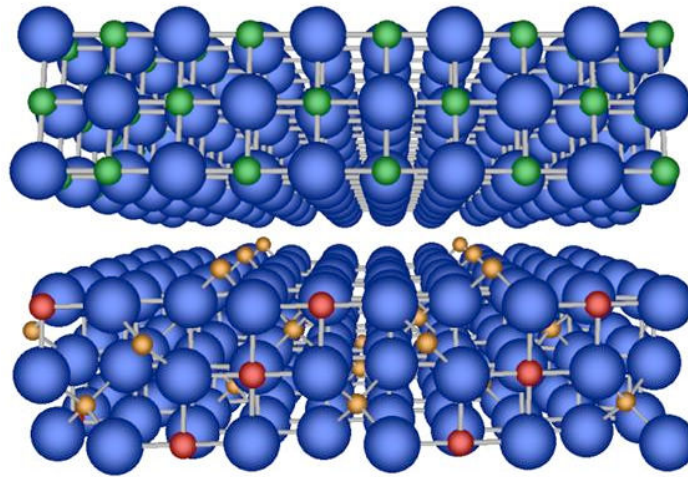
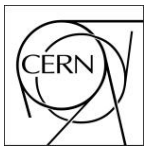


PROOF on the Grid



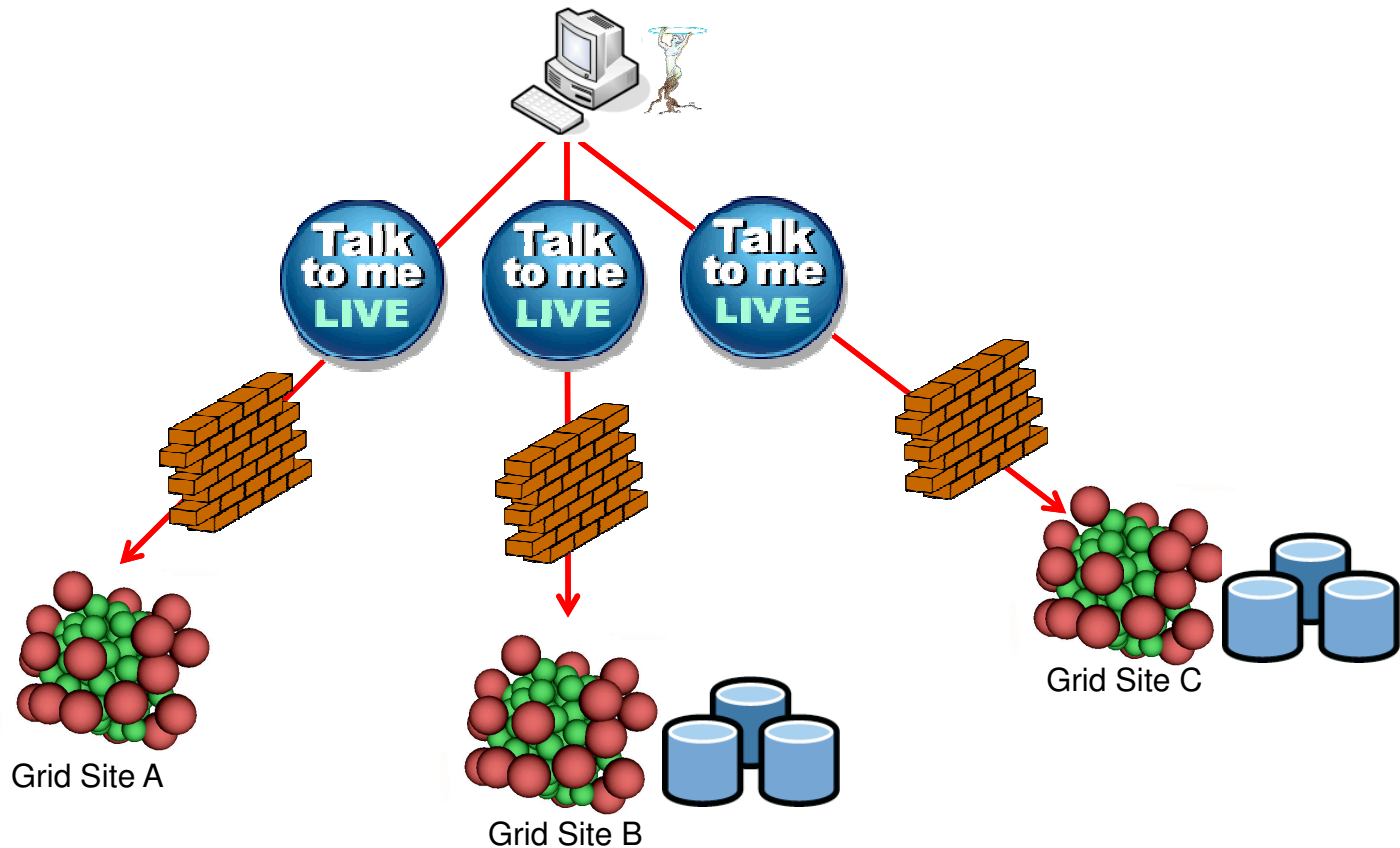
Marco MEONI

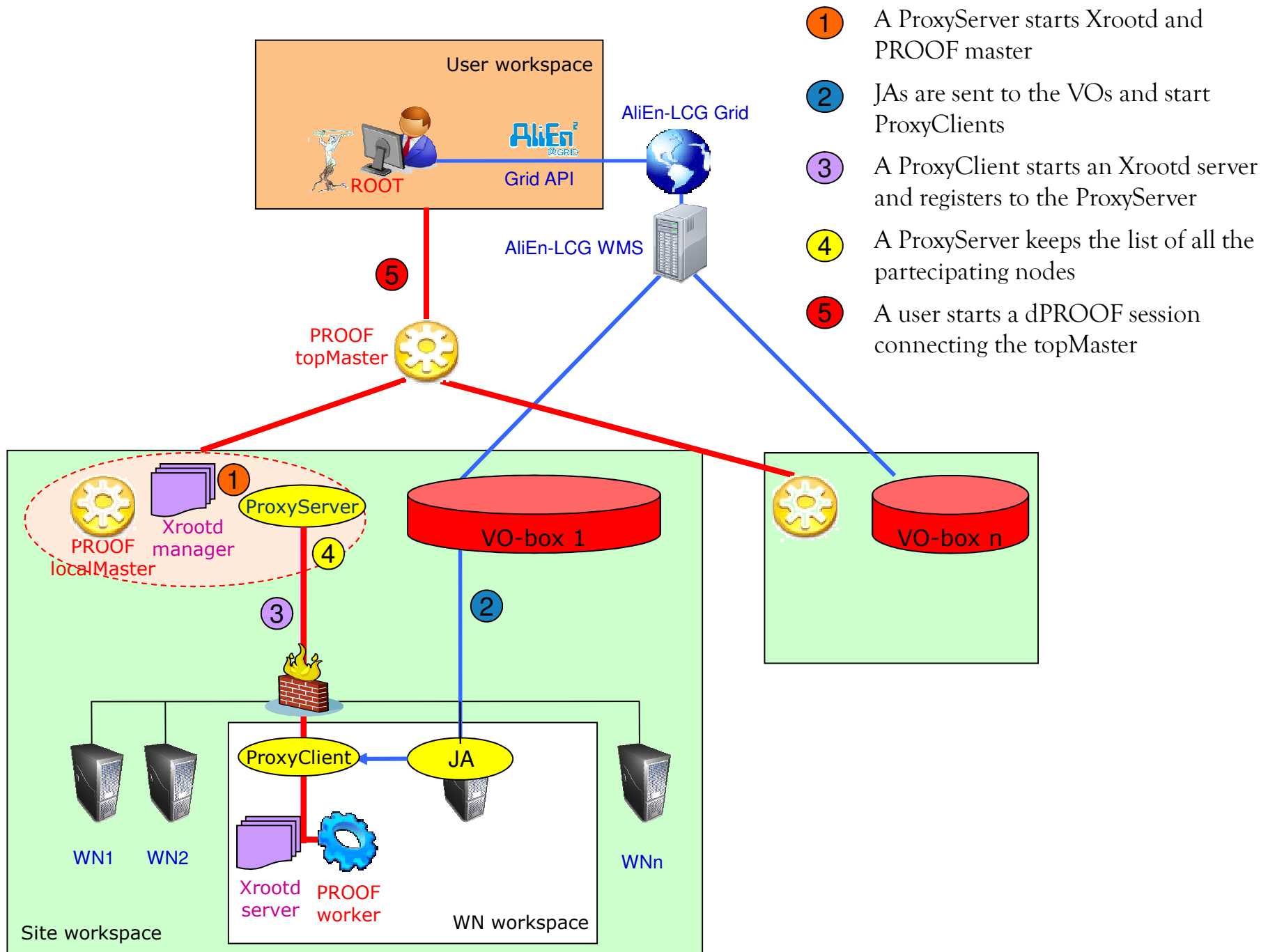
CERN - Offline Week - 28.10.2009



dPROOF

- distributed **PROOF** is an ongoing development
- A combination of PROOF and AliEn...
... to achieve **interactive parallel** analysis on **distributed** clusters exploiting **data locality**





Execution (CERN)

PROOFAgent Management Console - v 1.0.5

Server

AliEn² @ GRID
Alien Job Manager

PROOF Workers

Preferences

CERN [S] [K] JobID: 36917294 **99 JAs running**

GSI [S] [K] JobID: 36917066 **99 JAs running**

NIHAM [S] [K] JobID: JobID: **0 JAs running**

CNAF [S] [K] JobID: JobID: **0 JAs running**

ISS [S] [K] JobID: JobID: **0 JAs running**

Start dPROOF session

Femto Analysis

Pt cut: 0.15 0.50 TPC entrance [0..50cm]

Event Characterization Analysis

PROOF Query Progress: alicesgm@voalice06.cern.ch

Executing on PROOF cluster "voalice06.cern.ch" with 99 parallel workers:
Selector: AliAnalysisSelector
196 files, number of events 19600, starting event 0

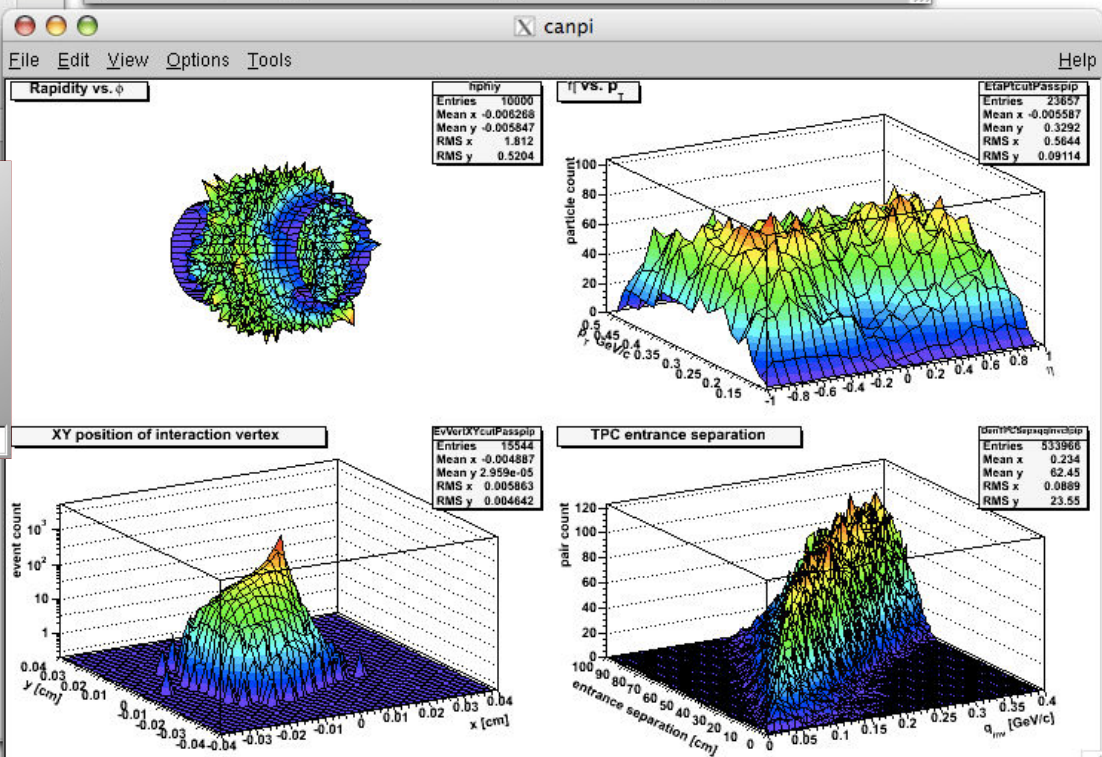
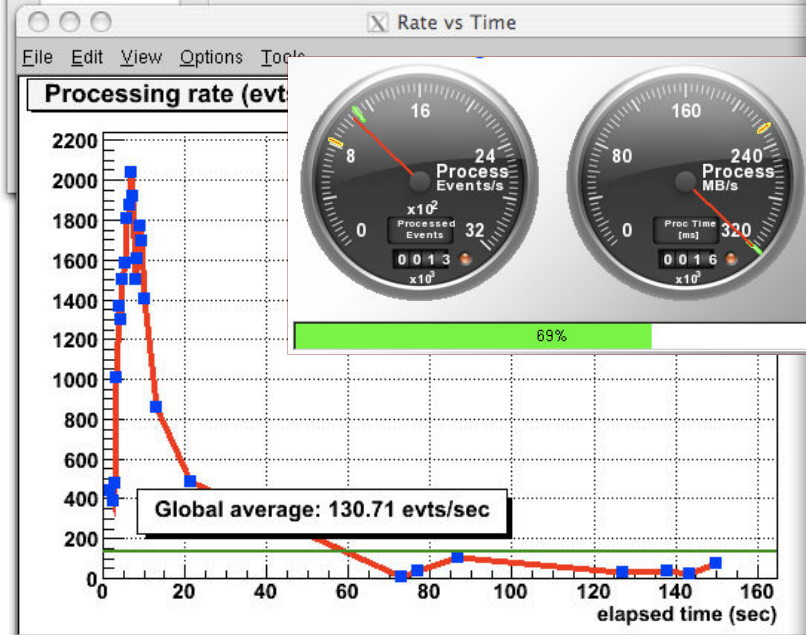
100%

Initialization time: 12.4 secs
Processed: 19600 events (3913.20 MBs) in 2 min 29 sec
Processing rate: 130.7 evts/sec (26.1 MBs/sec)

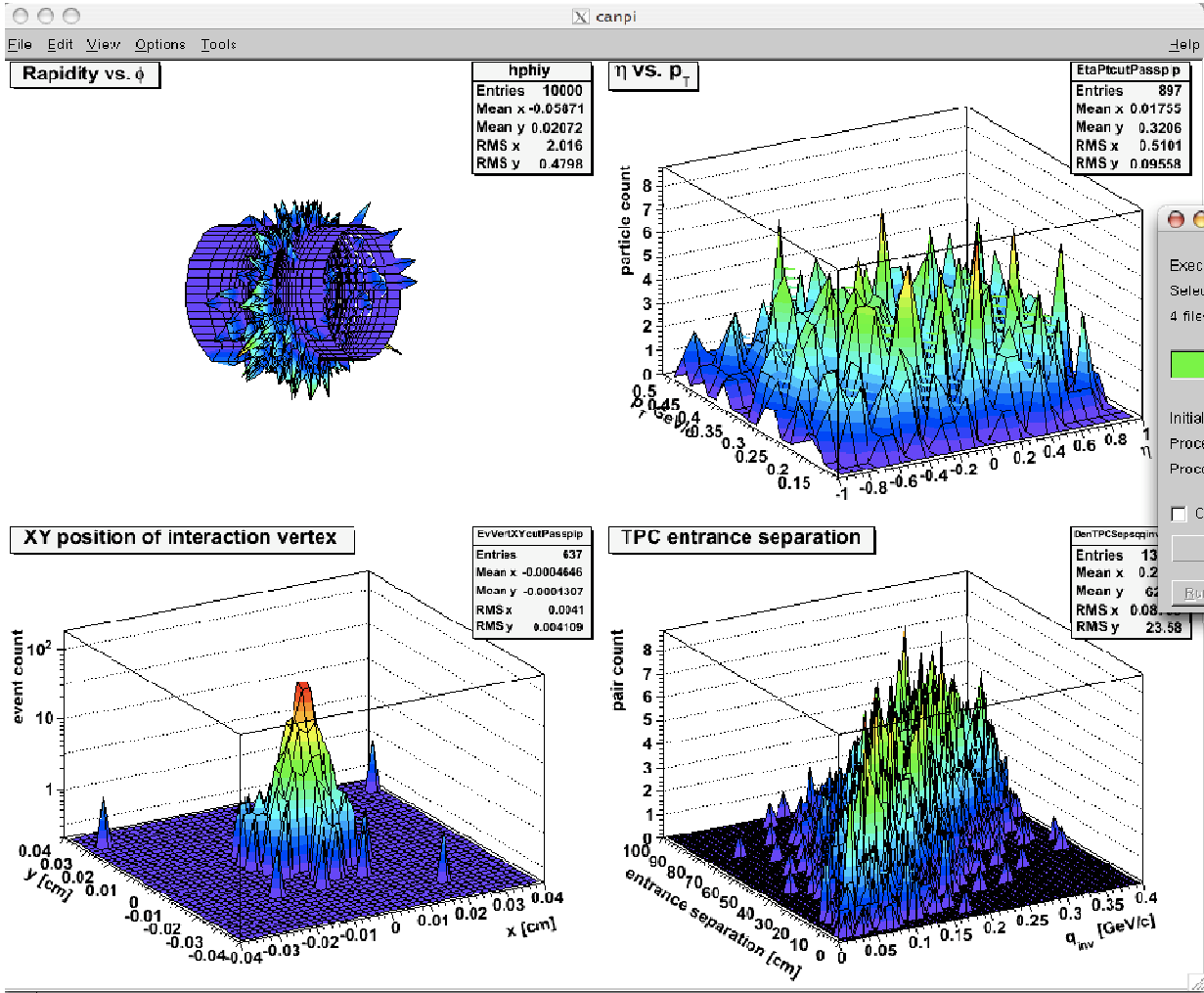
Close dialog when processing is complete

Show Logs Rate plot Memory Plot

Run in background Stop Cancel Close



Execution (GSI)



PROOF Query Progress: alicesgm@sclxgrid1.gsi.de

Executing on PROOF cluster "sclxgrid1.gsi.de" with 10 parallel workers:
 Selector: AliAnalysisSelector
 4 files, number of events 800, starting event 0

100%

Initialization time: 3.8 secs
 Processed: 600 events (123.15 MBs) in 3 min 4 sec
 Processing rate: 4.3 evt/s (0.7 MB/s)

Close dialog when processing is complete

Show Logs Gate plot Memory Plot

Run in background Stop Cancel Close

Participating Sites

<http://pcalimonitor/dproof/>

dPROOF clusters					
VoBox hostname	Workers	xrootd port	xproofd port	ProofAgent port	Options
login2.tlc2.uh.edu	0	20094	21093	19999	<input type="button" value="(Re)start"/> <input type="button" value="Stop"/>
sclxgrid1.gsi.de	100	20094	21093	19999	<input type="button" value="(Re)start"/> <input type="button" value="Stop"/>
voalice06.cern.ch	98	20094	21093	19999	<input type="button" value="(Re)start"/> <input type="button" value="Stop"/>
TOTALS	0				

- CNAF (by the end of the week)
- Kosice
- NIHAM

<http://cern.ch/mmeoni/dproof/>

4 steps to enable dPROOF on a VObox

Overview

- ALICE is adapting PROOF to the Grid
 - The framework is under test at 3 sites
 - 3 sites will most likely join within the next week
 - The multi-master PROOF architecture is under test and improvement
 - There is room for changing/improving the policy of JA submission
 - Workgroup meets twice a week since a month
 - Stress test per-site works steadily for hours and keep the PROOF workers busy
 - Test with up to 100 workers on a single site (CERN), processing rate peak 400MB/s
- Acknowledgement
 - Adam, Anar, Andreas, Andrei, Axel, Bellenot, Costin, Cvetan, Jan Fiete, Latchezar, Federico, Mariella, Matevz, Pablo, Peter