Beat Jost, David Francis, Frans Meijers, Niko Neufeld, Pierre Vande Vyvre

- A few organisational points ... Petya
- Aims of workshop
- Agenda overview
Second DAQ @ LHC: Introduction

• Technical scope of the workshop
  o All aspects of Data Acquisition for LHC experiments

• Anticipated audience
  o Contributors to the DAQ and HLT infrastructure of the LHC experiments
    • ALICE: 16
    • ATLAS: 39
    • CMS: 25
    • LHCb: 11
    • Other: 13

• Assumption
  o Participants have a working knowledge of the DAQ systems of the LHC experiments

• Aim at providing a forum to:
  o Share experiences on operating data acquisition systems at the LHC
  o Share vision(s), ideas and plans for the evolution of these systems
  o Exchange ideas and status of ongoing R&D
  o Explore scope for synergies

• Go beyond what is offered in existing conferences
  o More detailed technical exchange across experiments
  o Bring colleagues working on similar topics together
  o More discussion of a technical nature … this is your role
Second DAQ @ LHC: Introduction

ATLAS Phase–I Upgrade, CERN-LHCC-2011-012
Technical Proposal for the upgrade of the CMS detector through 2020, CERN-LHCC-2011-006
LHCb Phase-1 LoI
Phase I Upgrade of the ALICE Experiment, CERN-LHCC-2012-012
ATLAS Phase–II Upgrade LoI, CERN-LHCC-2012-022
CMS Phase–II Technical proposal, CERN-LHCC-2015-010
LHCb Phase–I Framework TDR, CERN-LHCC-2012-007
LHCb Trigger and Online Upgrade TDR, CERN-LHCC-2014-016
ALICE Upgrade of Online-Offline computing, CERN-LHCC-2015-016
ATLAS TDAQ Phase–I TDR, CERN-LHCC-2013-018
CMS Phase–I Trigger TDR

First DAQ@LHC
Today

ATLAS TDAQ Phase-2 TDR
CMS TDAQ Phase-2 TDR
Second DAQ @ LHC: Introduction

• Agenda overview
  • No programme committee beyond DAQ project leaders
    o i.e. all the agenda short comings are the fault of the project leaders
  • Similar overall “look and feel” to first DAQ@LHC
    o Run 2 Systems
    o Topical presentations on evolutions/upgrades made in LS1
    o Status of the designs of Run 3 systems
    o R&D towards Run 3
    o Control, Monitoring and Data analytics
    o Status of the designs of Run 4 systems
    o R&D towards Run 4

• Session titles not matching session content … don’t panic :-)

• The view of CERN/IT view on selected topics

• Presentations on specific topics from:
  o CERN/IT, CERN/BE, JCOP & Openlab

• Invited technical presentations from industry
  o Interesting technologies appearing … major impact on the way we think about upgrading our systems
  o Many ad-hoc “vendor” meetings at CERN, but present to relatively small communities
  o Intel, Seagate, IBM & Arista
Second DAQ @ LHC: Introduction

- **Agenda summary**

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<tr>
<td>Tuesday</td>
<td>Run 2 systems</td>
<td>Changes in LS1</td>
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<td>Wednesday</td>
<td>Run 3 systems</td>
<td>R&amp;D for Run 3</td>
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<td>Thursday</td>
<td>Control, Monitoring and data analytics</td>
<td>R&amp;D for Run 3/4</td>
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- Run 2  ~5 hrs
- Phase-1 (i.e. Run 3)  ~8 hrs
- Phase-2 (i.e. Run 4)  ~3 hrs
- Company technology presentations  ~3 hrs
- Discussion … this depends on you  ~x hrs
  
  o i.e. ask questions
Enjoy your Second DAQ @ LHC Workshop

Beat, Frans, Pierre, Niko & David