EOFS
European Open File System

LUG2014
EOFS Update

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2014

EOFS European Open File System

Overview

- EOFS activities
- ETP4HPC update and Horizon2020
- Current participation in projects
  - ➢ National and EU funded projects

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The Lustre Open Source Community

Activities in 2013

- **LUG 2013 in San Diego**
- **ISC 2013 in Leipzig**
  Joint Booth, BoF(‘s)
- **LAD’13, Lustre Workshop 2013 in Paris**
  Two day’s session
- **3rd Lustre Developers Summit in Paris**
- **SC 2013 in Denver**

Activities in 2014

- **LUG 2014 in Miami**
- **ISC 2014 in Leipzig**
  Joint Booth, BoF(‘s)
- **LAD’14, Lustre Workshop 2014 in Paris**
  Two day’s session
- **4rd Lustre Developers Summit in Paris**
- **SC 2014 in New Orleans**

2013 EU Events

- LAD'13
  - Over 100 attendees (more than 20 as last year)
- 3rd Lustre Developers Summit
  - Very good/technical discussions
- ISC'13
  - Breakfast panel was successful (120+ attendees)
  - Tendency quite good
  - Lustre BOF

ISC'14 in Leipzig

- from June 23th until June 26th, 2014
- EOFS/OpenSFS Lustre joint booth (# 820)
- EOFS/OpenSFS Breakfast panel on June 25th, 2014 from 7:30 until 8:45 am

ISC'14 in Leipzig

ISC'14 I Leipzig, Germany I June 23-25, 2014

LAD'14 and Summit

LUSTRE ADMINISTRATOR & DEVELOPPERS WORKSHOP 2014

Like in 2013, Paris will be
the place of a 2-day event dedicated
to Lustre administration and
Development.

- September 2014

+ 4rd Lustre Developers Summit

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Europe achieving leadership in HPC

- ***Importance and impact of HPC***
- ***3 axes :***
  - Development of HPC technology
  - Existence of world-class HPC e-infrastructure
  - Development of HPC application and use
- ***3 key success factors***
  - Coordination
  - Education and training
  - Focus on SMEs
- ***(c)PPP could leverage all the stakeholder actions***
- ***Budget for HPC technology R&D of 150 M€/year***

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What are the main topics covered?

- Architecture evolution
- Energy driven HPC
- Extreme parallelism
- Resiliency
- System Software
- Scaling I/O and storage with processing
- New storage solutions for big data
- Evolution of HPC workloads

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Organization of the ETP4HPC

- Meeting of the „Founding Fathers“ of the Joint ETP on October 18th 2011
- Incorporated as a Dutch association on December 12th 2012
- Open membership for organizations having R&D based in Europe
- **Managed by a Steering board with 15 members representing:**
  - Research centres (5)
  - European SMEs (3)
  - European controlled corporations (5)
  - International companies with R&D in Europe (2)
- **Steering board organization**
  - Chairman
  - 2 Vice chairmen for PRACE coordination and HPC development
  - Secretary-Administrator
  - Treasurer
- **Virtual office**
  - BSC, CEA, Cineca+Eurotech, ParTec

Election of the new Steering Board

- **on September 20th 2013 in Paris**
  - Research Organizations (5):
    - BSC, CEA, CINECA, FHG, FZJ/JSC
  - Global Organisations (2):
    - IBM, Intel
  - European Corporate Organizations (5):
    - ARM, Bull, Eurotech, STMicroelectronics, Xyratex
  - SMEs (3):
    - Allinea, CAPS, ParTec
  - LRZ as non-voting member of the SB

- **Current number of members: 52**

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Activities of the ETP4HPC

- **Vision Paper**
- **Strategic Research Agenda**
- **cPPP proposal**
- **Working groups:**
  - Education & Training
    - Led by Xyratex
  - SMEs
    - Led by ParTec
  - Exploiration and IP rights
    - Led by Intel
  - KPIs
    - Led by Fraunhofer/scapos
  - CoEs
    - Led by Research Centres (JSC and BSC)
  - Work programme 2016/2017
    - To be set up very soon

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What is in it for European HPC?

cPPP day in Paris

- Organized by ETP4HPC and the European Commission (DG CONNECT)
  - on behalf of the Public-Private Partnership (cPPP) on HPC
  - with the local support of TERATEC

- Wednesday, April 9th, 2014 – Paris
- Venue : Institut de Physique du Globe - 1 Rue Jussieu, 75005 Paris

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cPPP day in Paris

This Info Day is the first public event within the charter of the PPP on HPC. The Programme includes the PPP's objectives, the European HPC strategy, and the Calls for Proposals related to HPC in the Work Programme 2014-2015 of the Excellent Science pillar of Horizon 2020 (Future and Emerging Technologies (FET) and e-infrastructures).

Horizon2020

- ***Work programme 2014 – 2015***

  Call FET-Proactive - towards exascale high performance computing

  - FETHPC 1 - 2014: HPC Core Technologies, Programming Environments and Algorithms for Extreme Parallelism and Extreme Data Applications
    - *94 Mio €*
  - FETHPC 2 - 2014: HPC Ecosystem Development
    - *4 Mio €*
  - FETHPC 3 - 2014: Targeted Opening with Russia
    - *2 Mio €*

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Activities in national funded projects

- ***FAST***
  - Find a Suitable Topology for Exascale Applications – Dynamische Topologien in höchstskalierenden Umgebungen
  - Coordinated by André Brinkmann, Johannes Gutenberg-Universität Mainz
  - Duration 3 years
  - Started in January 2014
  - 7 partners

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Participation in EU funded projects

- ***DEEP www.deep-project.eu***
  - Dynamical Exascale Entry Platform
  - One of the three Exascale projects funded by the EU 7th framework programme
  - Coordinated by Forschungszentrum Juelich
  - Duration 36 months
  - Funding from the European Commission 8.03 Mio €
  - 16 partners

The DEEP consortium will develop a novel, Exascale-enabling supercomputing architecture with a matching SW stack and a set of optimized grand-challenge simulation applications.

Participation in EU funded projects

- ***DEEP-ER www.deep-er.eu***
  - DEEP – Extended Reach
  - Coordinated by Forschungszentrum Juelich
  - Duration 36 months
  - Funding from the European Commission 6.43 Mio €
  - 14 partners (Exascale 10 = formerly EIOW as one of the partners involved)

The proposed project DEEP-ER (DEEP-Extended Reach) addresses two significant Exascale challenges:
the growing gap between I/O bandwidth and compute speed, and
the need to significantly improve system resiliency.

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Thank you!