

**Note:**

The objective of this Newsletter is to provide a regular update on the current activities of ETP4HPC.

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## ETP4HPC Newsletter – Sept – Dec 2015

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## General Assembly and EXDCI Workshop

ETP4HPC General Assembly, 29th September 2015, Rome

ETP4HPC held its third General Assembly on 29th September 2015 in Rome, followed by an EXDCI Workshop involving all of the eight Centres of Excellence and nineteen FETHPC projects funded by the EC in the first round of FETHPC and Infrastructure Calls of Horizon 2020.

All ETP4HPC members were invited to this General Assembly. The Chairman of our organisation presented an update on its activities. Then, the full members of ETP4HPC elected a new Steering Board, which will govern the association until the next elections in the first quarter of 2018.

The new Steering Board now consists of:

- Clustervision, Megware, ParTec, Allinea (SME)
- ARM, Bull, Eurotech, Seagate (EU Corporate organisations)
- IBM, Intel (Global organisations)
- BSC, CEA, CINECA, Fraunhofer, FZJ (Research organisations)

Allinea was co-opted as a fifteenth Board member.

An [EXDCI workshop](#) took place in the second half of the programme. This allowed the members of ETP4HPC to familiarise themselves with the work of the eight Centres of Excellence for Computing Applications. The workshop continued through to the following day and it included a presentation of the first round of FETHPC projects aiming to develop European HPC technologies.

Link: <http://www.etp4hpc.eu/news/etp4hpc-general-assembly-september-29/>

Following [ETP4HPC General Assembly](#), September 29<sup>th</sup> in Rome, ETP4HPC and PRACE joined forces at [EXDCI\\* HPC Workshop in Rome](#).

This first Workshop brought together the organisations representing the three pillars of European HPC: PRACE (infrastructure), as well as the [FETHPC projects](#) (technology) the [Centres of Excellence](#) (CoE - applications). The objective of the event was to begin the process of synchronising the activities of the entire European Eco-system by presenting the work of all the projects and organisations involved. EXDCI will continue to facilitate this coordination process, a process in which ETP4HPC will participate.

### **\* About EXDCI "Extreme Data and Computing Initiative"**

[EXDCI](#)'s objective is to coordinate the development and implementation of a common strategy for the European HPC Ecosystem. The two most significant HPC bodies in Europe, PRACE and ETP4HPC, join their expertise in this 30-month project with a budget of € 2.5 million, starting from September 2015. EXDCI aims to support the road-mapping, strategy-

making and performance-monitoring activities of the ecosystem, i.e.:

- Producing and aligning roadmaps for HPC Technology and HPC Applications
- Measuring the implementation of the European HPC Strategy
- Building and maintaining relations with other international HPC activities and regions
- Supporting the generation of young talent as a crucial element of the development of European HPC

EXDCI will complement the Horizon 2020 calls and projects in the achievement of a globally competitive HPC Ecosystem in Europe. Following the vision of the European Commission in HPC, this ecosystem is based on three pillars: HPC Technology Provision, HPC Infrastructure and HPC Application Resources.

A few more references on EXDCI:

- [EXDCI general presentation at ISC15 Frankfurt \(video\)](#)
- [Technical & Scientific Challenges for the EXDCI Initiative, ISC15 Frankfurt \(video\)](#)

Links: <http://www.etp4hpc.eu/news/exdci-workshop-in-rome-september-29-and-30/>  
<http://www.hpcwire.com/off-the-wire/etp4hpc-and-prace-join-forces-at-exdci-hpc-workshop-in-rome/>  
[http://www.megware.com/en/news\\_termine/etp4hpc\\_held\\_its\\_third\\_general\\_assembly-495.aspx](http://www.megware.com/en/news_termine/etp4hpc_held_its_third_general_assembly-495.aspx)  
<http://sesame.scai.fraunhofer.de/event/general-assembly-of-etp4hpc/>

## ICT15

The [ICT15](#) event in Lisbon took place over three days and attracted more than 5,700 participants. It was comprised of a number of parallel activities: a policy [conference](#) which presented the new Commission's policies and initiatives on Research & Innovation in ICT ([Horizon 2020 Programme](#)); an interactive [exhibition](#) showcasing the best results and impact of most recent EU ICT Research & Innovation; many [networking](#) opportunities to enhance quality partnerships, helping participants find partners, connect Research and Innovation and trigger collaboration; [Horizon 2020 Work Programme 2016-2017 thematic sessions](#), offering detailed information on the funding opportunities in ICT sector; and, the [Start-up Europe Forum](#), offering a set of activities profiling EU policy actions for start-ups and SMEs, innovators, private and public investors.



ETP4HPC held a [booth at the exhibition](#) and organised a [networking session on Tuesday, October 20](#). This gave ETP4HPC the opportunity to present the progress of European HPC, the

European HPC Technology Roadmap towards exascale and to facilitate networking (Networking Sessions Programme) among the members of the European HPC ecosystem and other related areas. The objectives of ETP4HPC were to remind and illustrate: the development of world-class HPC technologies and applications, leading to exascale systems and their use in science and industry, facilitating academic excellence, innovation and job creation, contributing to the competitiveness of Europe and the addressing of the Grand Societal Challenges.



Our Networking session was set-up with three thematic stands: 1/ ETP4HPC, its goals, membership and activity areas; 2/ Strategic Research Agenda (the European HPC Technology Road-map towards exascale; and, 3/ETP4HPC Networking i.e. information on [ETP4HPC members](#).

This networking session resulted in: attracting potential new members to the organisation, maintained or created new relationships with other areas (projects, organisations), and, also allowed our members and other organisations or projects, to initiate contacts that might prove helpful in forming project teams. The overall objective being to continue to stimulate the growth of the European HPC Ecosystem and attract organisations and projects who would like to take part in the process of building a competitive European HPC Technology Value Chain and Application Expertise Base.



Links: <http://www.etp4hpc.eu/news/ict-2015-innovate-connect-transform-20-22-october-2015-in-lisbon-portugal/>  
<https://ec.europa.eu/digital-agenda/events/cf/ict2015/item-display.cfm?id=15184>

## cPPP Meeting

A meeting of the Partnership Board of the contractual Public-Private Partnership for HPC took place on 10<sup>th</sup> Nov 2016 in Brussels. For the first time the recently launched Centres of Excellence were invited to participate by having a representative present. The parties of cPPP reviewed the progress of the implementation of the European HPC strategy and set goals and future action items.

Link: <https://ec.europa.eu/digital-agenda/en/high-performance-computing-contractual-public-private-partnership-hpc-cppp>

## SC15

### Supercomputing'15 in Austin, Texas

This year's Supercomputing Conference (SC15) in Austin, Texas, broke exhibit and attendance records. [ETP4HPC](#) co-organised a Bird-of-a-Feather (BoF) Session on Thursday 19th November, 1 of 75 BoFs taking place throughout the conference. It was very successful with full house attendance of close to 100 people, leaving little standing room and people being turned away. ETP4HPC is growing in member numbers and over 30 of ETP4HPC [members](#) were exhibiting at the conference.

During the BoF The [European Exascale Projects](#), under the European Horizon 2020 projects, were presented, and invited speakers, who included: Dr. Mitsuhsa Sato (University of Tsukuba & RIKEN AICS), Franck Cappello (Argonne National Laboratory) and Eric Van Hensbergen (ARM) raised much interest during their presentations.

During Panos Tsarchopoulos' talk on the [European HPC Ecosystem](#) during the conference, he highlighted how the ETP4HPC Association, has identified research areas and topics in order to reach a stronger European HPC environment, which can benefit Europe and the rest of the world.



ETP4HPC is gaining momentum as an industry-led think tank and advisory group, whilst gaining visibility and interest throughout the European HPC community and in other continents.

Link: <http://www.etp4hpc.eu/news/supercomputing15-in-austin-texas/>

## Supercomputing'15 BOF

### Bird-of-a-Feather session on 19th Nov 2015 (Austin, Texas)

The popularity of this session exceeded the expectations of the organisers. Close to a hundred people attended this session. The main focus of the event was a presentation of the current European HPC Technology R&D landscape, including the details of the HPC technology projects and their potentiation for international collaboration. In the second part of the session, a discussion took place on the areas that could benefit from relationships with partners from other regions as well as the tools needed to facilitate this process. A Handbook including the details of the European HPC technology projects was made available at the event and has been sent to all those who submitted such a request. It is also available at: <http://www.etp4hpc.eu/european-exascale-projects-2/>.

It was agreed that this discussion should continue and another workshop should be organised at the next SC.

The presentations shown at the session are at: <http://www.etp4hpc.eu/european-exascale-projects-2/>



[European HPC Technology Handbook – SC15 BOF](#)

Supercomputing'15 Bird-of-a-Feather session on 19th Nov 2015 (Austin)

- [Main presentation during SC15 BoF Session](#)
- [Presentation by Mitsuhsa Sato during SC15 BoF Session](#)
- [Presentation by Franck Cappello during SC15 BoF Session](#)

[Report from SC15 BOF On European HPC Technology](#)

## Strategic Research Agenda

Strategic Research Agenda Update Released November 2015

ETP4HPC as an industry-led think tank and advisory group of companies and research centres involved in HPC (i.e. Supercomputing) technology research in Europe has just released [an update to the European High-Performance Computing \(HPC\) Technology Strategic Research Agenda \(SRA\)](#) issued for the first time in 2013 by ETP4HPC. This SRA update will be followed by a full issue in 2017. There will be a call for feedback which will be used in future issues.

ETP4HPC issues and maintains this SRA as a mechanism to provide contextual guidance to European Researchers and Businesses and also to guide EU priorities for research in the Horizon 2020 HPC programme. This SRA delineates a roadmap for the achievement of European exascale capabilities focusing on the following areas: HPC System Architecture and Components, Energy and Resiliency, Programming Environment, System Software and Management, Big Data and HPC Usage Models, Balance Compute, I/O and Storage Performance, Mathematics and algorithms for extreme scale HPC systems and Extreme-Scale Demonstrators.

This SRA Update will serve as a reference text for [FETHPC 16-17 recently published calls](#) and also suggests future paths for EsDs, CoEs, ISVs, end-users etc. for calls in 2018-19, when the implementation of Extreme-Scale Demonstrators should take place. Whilst this report points heavily towards the H2020 HPC program for its delivery, the primary objective is to develop Europe's HPC ecosystem and maximise its exploitation.

ETP4HPC would like to express their gratitude and thanks to those who contributed in the issuing of this SRA Update, which includes experts and ISVs to SMEs and end-users.

Links: <http://www.etp4hpc.eu/news/strategic-research-agenda-update/>  
<http://knowledgebase.e-irg.eu/>

<https://www.esiwace.eu/media-center/etp4hpc-strategic-research-agenda>  
<http://knowledgebase.e-irg.eu/>  
<http://primeurmagazine.com/flash/AE-PF-11-15-46.html>  
<http://www.kowi.de/Portaldata/2/Resources/horizon2020/coop/ETP4HPC-SRA-Update-2015.pdf>

## SRA 2 Public Call for Comments



The updated Strategic Research Agenda (SRA) of ETP4HPC is now available at the following location:

<http://www.etp4hpc.eu/strategic-research-agenda/>

Our organisation would like to receive feedback on this document from the HPC community. In this process, any organisation or individual is able to express their view on this document. We will use the comments collected in order to prepare the next full version of our SRA which is due to be published in Jul 2017 (the current document will not be amended). This call for comments will close when we start preparing the next SRA, i.e. the end of June 2016. In order to submit your comments, please use the following form:

<https://www.surveymonkey.com/r/ETP4HPC-SRA2-PUBLIC-CALL4COMMENTS>

If you wish to comment on specific parts of the document, please request an editable copy of it from ETP4HPC office by sending an email to [office@etp4hpc.eu](mailto:office@etp4hpc.eu).

## FETHPC 2016/17 Call

A new FETHPC call has been published. It reflects the guidelines included in the Strategic Research Agenda of ETP4HPC. Proposals submitted are expected to address the objectives identified in the SRA.

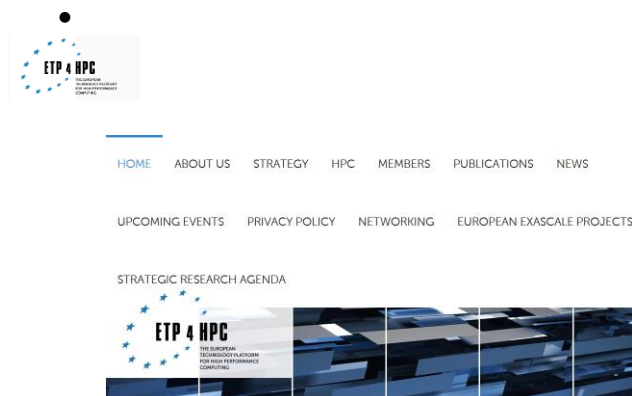
Links: <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-fethpc-2016-2017.html#;c,topics=callIdentifier/t/H2020-FETHPC-2016-2017/1/1/1&callStatus/t/Forthcoming/1/1/0&callStatus/t/Open/1/1/0&callStatus/t/Closed/1/1/0&+identifier/desc>

## Office expansion

Catherine Gleeson (based at BSC) and Maïke Gilliot (based at CEA, starting on 1<sup>st</sup> February) have joined the ETP4HPC Office team as Office Support Specialists.

## Communication activities

ETP4HPC is communicating its latest activities, upcoming events and HPC news, with its members and the HPC world, through:



## Upcoming events and activities

### ♦ [ETP4HPC General Assembly](#)

**Barcelona, March 15th, 2016**

Venue:- BSC-CNS, Barcelona Super Computing Center – Centro Nacional de Supercomputación (on the campus of UPC – Universitat Politècnica de Catalunya)

### ♦ [European HPC Summit](#)

**Prague, May 9th to 13th, 2016**

ETP4HPC will participate in the HPC Summit (9-13 May 2016, Prague), an event organised with the support of [EXDCI](#).

### ♦ [International Supercomputing Conference, ISC](#)

**Frankfurt, June 19th to 23rd, 2016**

We will be present at this event with a booth in the exhibition. ETP4HPC is also planning on organising a full-day workshop to discuss our SRA.

### ♦ [SC16, Supercomputing 2016](#)

**Salt Lake City, November 13th to 18th, 2016**

ETP4HPC will attend SC16, Supercomputing 2016 with the objective of continuing the presentation of the European HPC Technology Eco-system.

Link: <http://www.etp4hpc.eu/events/events-list/>

## General Assembly – 15 March 2016, Barcelona

ETP4HPC next General Assembly will be held on March 15th 2016 in Barcelona.

Venue:- BSC-CNS, Barcelona Super Computing Center - Centro Nacional de Supercomputación (on the campus of UPC - Universitat Politècnica de Catalunya)

All ETP4HPC members are invited to this meeting. Procedure for registration will be sent to all members, please contact: [office@etp4hpc.eu](mailto:office@etp4hpc.eu) for any further questions.

Link: [ETP4HPC General Assembly](#)

## European HPC Summit – 9-13 May 2016, Prague

ETP4HPC will participate in the HPC Summit (9-13 May 2016, Prague), an event organised by [EXDCI](#) (European eXtreme Data and Computing Initiative, a project coordinating the European HPC Strategy).

The objective of our organisation at this event is to synchronise with other members of the European HPC Eco-system (PRACE, Centres of Excellence for Computing Application and also the HPC Technology Projects) in the area of HPC Technology roadmap development. The details of this event and our involvement will follow in due course.

Link: [European HPC Summit](#)

## ISC16 - 19-23 June 2016, Frankfurt



We will be present at International Supercomputing Conference (ISC) with a booth in the exhibition. ETP4HPC is also planning on organising a full-day workshop to discuss our SRA with industrial end-users, ISVs, academic users and the Big Data community. This is subject to approval by the organisers. We will post more details in due course.

Link: [International Supercomputing Conference, ISC](#)

## SC16 - 13-18 November 2016, Salt Lake City

ETP4HPC will attend [SC16, Supercomputing 2016](#) (13-18 November 2016, Salt Lake City) with the objective of continuing the presentation of the European HPC Technology Eco-system, following the success of the [Bird-of-a-Feather session at SC15](#).

We will also be involved in an EXDCI intuitive presenting the entire HPC Eco-system in Europe. More details will follow.

Link: [SC16, Supercomputing 2016](#)

## New ETP4HPC Members

ETP4HPC currently has 70 members. The following organisations have joined ETP4HPC since May 2015:

### Full members:

Luxembourg Institute of Science and Technology (LIST, Luxembourg - Research),  
Université de Versailles-Saint-Quentin (UVSQ, France - Research),  
Synelixis (Greece - SME)

### Associated members:

Scapos (Germany - SME),  
Asetek (Denmark - SME)



## HPC News

### Why do supercomputers matter for your everyday life?

High performance computing is a strategic tool for science, industry, and society.

There is an interesting [article published by authors: Roberto Viola, Director-General, DG Communications Networks, Content and Technologies, and, Robert-Jan Smits, Director-General, DG Research and Innovation](#). They argue that supercomputers can change our lives by: more competitive industry, direct benefits to our health, better forecasting, making possible more specific advances; and, more reliable decision-making.

High Performance computing in Europe has received funds from the European Commission, with a commitment of € 700 million from the Horizon 2020 programme. The private sector is providing the equivalent in funding. The Public-Private Partnership with the European Technology Platform on HPC, to develop HPC technologies and applications, was set-up by the EU last year, and, thus far, initial investments have resulted in the establishment of [eight Centres of Excellence in HPC applications](#), [nineteen projects in HPC technology](#), as well as [two coordination and support actions](#).

You can continue reading Roberta Viola and Robert-Jan Smits' article at:

<https://ec.europa.eu/digital-agenda/en/blog/why-do-supercomputers-matter-your-everyday-life>

### How to make High-performance computing happen in Europe

Horizon 2020 (The EU Framework Programme for Research and Innovation) writes about how to make High-performance computing happen in Europe.

'High-performance computing (HPC) is one of today's most important priorities. Europe can attain worldwide leadership in HPC, not for the sake of being the first to get the fastest machine, but to master this strategic technology and put it to the service of a more competitive and innovative Europe and to help address societal problems'. You can keep reading at: ['How to make High-performance computing happen in Europe'](#)

### How to make HPC happen in Europe

High-performance computing (HPC) is one of today's most important priorities.

There is an article written by [Leonardo Flores Añover and Dr. Augusto Burgueño Arjona from the European Commission](#) in [Scientific Computing World: HPC 2015-16](#) which they discuss how and why Europe should play a leading role globally in HPC.



They argue that Europe can attain worldwide leadership in HPC, not for the sake of being the first to get the fastest machine, but to master this strategic technology and put it to the service of a more competitive and innovative Europe and to help us address our societal problems.

They write that with a differentiated strategy, sufficient investment, and political will, Europe has what it takes to be a global player and to achieve this ambitious goal. We believe that, with a common effort by all public and private actors in HPC – including EU member states, industry, academia, and the European Commission – Europe can make it happen.

Their rationale for such a combined effort is that the ICT revolution will over the next few

years reach exascale computing; with forecasts suggesting that, by 2020, 25 billion devices will be connected to the Internet of Things (IoT)<sup>1</sup> generating more than 2 Zettabytes of IP traffic every year. By then, about 40 Zettabytes of data will be created, replicated, and consumed in a single year<sup>2</sup>.

They promote [HPC](#) as the engine to power to this massively connected digital economy as HPC pervades everyday life. Weather forecasts, movie animations, and new drugs tests all depend on supercomputers. HPC is a critical tool in decision-making; while electricity grids, water supply networks, transportation (for example, truck and flight scheduling), and defence applications all use HPC-based simulation.

They continue by writing on:

- Industrial competitiveness and the digital economy
- Scientific leadership
- Societal challenges
- Developing exascale technology: a strategic choice
- The European HPC strategy: They discuss how HPC governance in Europe has improved with the establishment of [Prace11](#) in 2010 and the industry-led European Platform on HPC ([ETP4HPC](#))<sup>12</sup> in 2011. Prace is building a pan-European HPC infrastructure for scientific and engineering research accessible to all EU researchers through a single peer-review process, while the ETP4HPC has defined the [Strategic Research Agenda](#) in this domain.

You can continue reading Leonardo Flores Añover and Dr. Augusto Burgueño Arjona's article in PDF at:

[http://www.scientific-computing.com/features/feature.php?feature\\_id=474](http://www.scientific-computing.com/features/feature.php?feature_id=474)

## HPC News Links

### Open Innovation, Open Science, Open to the World

[http://www.prace-ri.eu/IMG/pdf/jean\\_francois\\_-\\_etp.pdf](http://www.prace-ri.eu/IMG/pdf/jean_francois_-_etp.pdf)

<http://www.connect2sea.eu/project/technologyplatforms/etp4hpc-european-technology-platform-for-high-performance-computing.html>

<http://www.ictic.org/h/v/hpc25314/mm.pdf>

<http://www.appentra.com/appentra-march-2105-member-etp4hpc/>

<http://e-irg.eu/news-blog/-/blogs/etp4hpc-exdci-and-sesame-net-new-hpc-initiatives-in-europe-s-horizon-2020>

[https://www.linkedin.com/company/etp4hpc-european-technology-platform-for-hpc/notifications?goback=&trk=hb\\_ntf](https://www.linkedin.com/company/etp4hpc-european-technology-platform-for-hpc/notifications?goback=&trk=hb_ntf) AGGREGATED COMPANY

<https://aburguenoeu.wordpress.com/tag/etp4hpc/>

[http://www.etinternational.com/files/4913/7244/7874/Gonnord\\_CEA.pdf](http://www.etinternational.com/files/4913/7244/7874/Gonnord_CEA.pdf)

<http://slideplayer.com/slide/4546434/>

## **A digital Single Market: The Key to Europe's Industrial Readership in the Digital Economy**

<http://content.yudu.com/web/tzly/0A3xnrl/HPCYEARBOOK2015/flash/resources/index.htm?referrerUrl=http%3A%2F%2Fcontent.yudu.com%2Fweb%2Ftzly%2F0A3xnrl%2FHPCYEARBOOK2015%2Findex.html>

## **How to make HPC happen in Europe**

<http://ec.europa.eu/programmes/horizon2020/en/news/high-performance-computing-europe>

<http://ec.europa.eu/programmes/horizon2020/en/news/how-make-high-performance-computing-happen-europe>



[http://e-irg.eu/newsletter/-/asset\\_publisher/D22s0of7BSuZ/document/id/298054?\\_101\\_INSTANCE\\_D22s0of7BSuZ\\_redirect=http%3A%2F%2Fe-irg.eu%2Fnewsletter%3Fp\\_p\\_id%3D101\\_INSTANCE\\_D22s0of7BSuZ%26p\\_p\\_lifecycle%3D0%26p\\_p\\_state%3Dnormal%26p\\_p\\_mode%3Dview%26p\\_p\\_col\\_id%3Dcolumn-2%26p\\_p\\_col\\_count%3D1&redirect=http%3A%2F%2Fe-irg.eu%2Fnewsletter%3Fp\\_p\\_id%3D101\\_INSTANCE\\_D22s0of7BSuZ%26p\\_p\\_lifecycle%3D0%26p\\_p\\_state%3Dnormal%26p\\_p\\_mode%3Dview%26p\\_p\\_col\\_id%3Dcolumn-2%26p\\_p\\_col\\_count%3D1](http://e-irg.eu/newsletter/-/asset_publisher/D22s0of7BSuZ/document/id/298054?_101_INSTANCE_D22s0of7BSuZ_redirect=http%3A%2F%2Fe-irg.eu%2Fnewsletter%3Fp_p_id%3D101_INSTANCE_D22s0of7BSuZ%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3Dcolumn-2%26p_p_col_count%3D1&redirect=http%3A%2F%2Fe-irg.eu%2Fnewsletter%3Fp_p_id%3D101_INSTANCE_D22s0of7BSuZ%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3Dcolumn-2%26p_p_col_count%3D1)

<https://www.youtube.com/watch?v=gSQrW0yBI9A>

<https://www.youtube.com/watch?v=C1Cnz5IQe7w>

<https://www.youtube.com/watch?v=q-n56eNG250>

## **Why do Supercomputers matter for your everyday life?**

<http://ec.europa.eu/programmes/horizon2020/en/news/european-supercomputing-research-programme-presented-supercomputing-conference>

