

DeiC HPC-Forum

Meeting 6

24/09/21 @ 12.30 – 14.00

Zoom: <https://deic.zoom.us/j/67116146543?pwd=aG9DMmN5bno2cnBvQjFINKtzclZidz09>

<p>Invited members and support that attended the meeting:</p> <ul style="list-style-type: none"> - AU, Christian Storm Pedersen, Director of BiRC (CSP) - AU, Søren Vang, Leading clinical bioinformatician (SV) - AAU, Torben Larsen, Prodekan (TL) - CBS, Carsten Sørensen, Head of Finance Dept. (CS) - CBS, Lars Nondal, Chefkonsulent, Forskerservice (LN) - DTU, Sven Karlsson, Associate Professor, Parallel Computer Architecture (SK) - KU, Erik Bjørnager Dam, Lektor, Mashine Learning (EBD) - KU, Piotr Jaroslaw Chmura, Research programmer (PJC) - RUC, Thomas Schrøder, Professor IMFUFA (TS) - SDU, Claudio Pica, Head of eScience Centre (CP) - SDU, Hans Jørgen Aagaard Jensen, Prof., Physics (HJAJ) - DeiC, Eske Christiansen, HPC Chef (EC) - DeiC, Birgitte Vedel Thage, Chefkonsulent (BVT) 	<p>Members, absent (not announced):</p> <ul style="list-style-type: none"> - AAU, Christian Nielsen, Head Business Dept. (CN) - SDU, Himanshu Khandelia (HK) <p>Members, absent (announced):</p> <ul style="list-style-type: none"> - DTU, Thomas Bligaard, Professor, Dept. Of Energy (TB) - ITU, Philippe Bonnet, Professor, Computer Science (PB) <p>Guests:</p> <ul style="list-style-type: none"> - DeiC, Gitte Julin Kudsk, CEO (GJK) - DeiC, Anders Sparre Conrad, Leader of DM (ASC)
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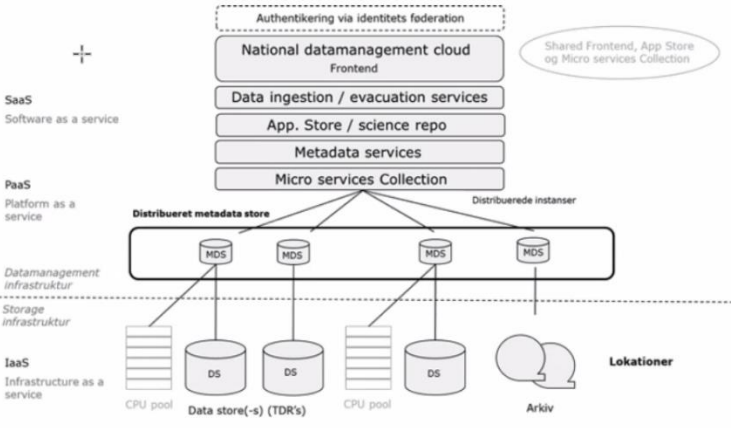
Minutes from last meeting (meeting 4, meeting 5 was cancelled) added to meeting invitation.

Minutes by: Birgitte Vedel Thage.

Item	Issue	Comments Actions
1	<p>Information and approval of minutes from last meeting</p> <p>Approval:</p> <p style="padding-left: 20px;">A. Minutes from meeting 4 (written comments/or important changes must be submitted directly to Birgitte Vedel Thage <birgitte.vedel.thage@deic.dk>).</p> <p>Information items:</p> <p>A) LUMI pilot projects. (Eske)</p> <ul style="list-style-type: none"> i. The four LUMI-C pilot projects from DK are well initiated. Performance problems in the file system have caused a week of delay. ii. GDPR problems have arisen as DeiC is not to be a self-governing organization anyway, however, an agreement between DTU and UFS is under negotiation for the data controller part. iii. A concern was addressed regarding the GDPR part for partners that do not work with research related GDPR data. It was emphasized that the GDPR challenges were related to user data only, and it needs to be in place legally before using LUMI. iv. LUMI resources assigned to DK for 2022 were presented. If a university cannot use their resources, they are encouraged to send an email to EC stating what resources can be reallocated to make the best use of them. It was suggested to reallocate foreseen unused resources to the HPC sandbox, and EC confirmed this model. v. It was suggested to have a system for exchange of CPU hour information. PUHURI will administer security and resources for LUMI, and EC has access to an overview from the system. vi. Hardware information was presented for LUMI, and questions about hardware configuration were discussed. It was noted that in addition to AMD GPUs, there are also NVIDIA GPUs. vii. It was addressed if early access to LUMI would be a possibility for Front Office (FO) to test the LUMI toolbox. It was agreed by the HPC forum members that it would be beneficial for FO to pre-test the LUMI 	<p>→ Comments from SK included in the minutes from meeting 4.</p> <p>See slides from EC</p> <p>iv: Contact EC if LUMI HPC resources can be reallocated to other universities to make the best use of it.</p>

	<p>access gate and there is work in progress for assigning access through LUMI-LUST for the pilot projects. Work is being done to make it a general option.</p> <p>viii. A question was raised regarding how new test projects that include the use of GPUs will be selected and by who. Answer: the projects are already chosen and approved by the DeiC board. SDU addressed that they had re-started ABACUS2.0 to meet their needs.</p> <p>ix. CP: Need for capacity that is not available through the DeiC access. Scavenger que access was recommended. Opportunity to use the time that otherwise would be wasted.</p> <p>B) PRACE call 24. (Eske) A 10% of HPC resources are dedicated for industry in the new PRACE call, and Troels Haugbølle can be consulted in the application process if needed. See more: https://www.deic.dk/en/news/2021-09-14/Apply-for-HPC-resources-from-PRACE</p> <p>C) EuroHPC calls. (Eske) It is possible to apply monthly and there is fast response and fast allocation of access to EuroHPC facilities. A short application is required and there is a high success rate for getting HPC resources assigned. Industry is also an important part of these calls.</p> <p>i. There was a request for access model(s) for industry partners, and it was highlighted that companies must apply just like everyone else. The next research call for euroHPC is being worked on (September/October).</p> <p>ii. A question was addressed if community access for specific groups would be possible or planned in DK? (e.g. Data science academy). It was highlighted that there is a need for discussion if other requests are needed that are different from the National model.</p> <p>iii. It was highlighted that it is important to have a procedure in place to be ready to assign HPC resources that are available from LUMI in January. It was referred to again that the legal part concerning GDPR must be in place before anyone from DK can access the system and that also includes the part of being able to allocate resources in a timely manner.</p> <p>D) EuroCC v2. (Eske) A mail will be sent to the HPC forum to find candidates for a fast-working committee that will participate in outlining a EuroCC version2. People with knowledge and skills must be found for the task. The DeiC board has asked for a committee consisting of:</p> <ul style="list-style-type: none"> - One candidate from each university - 1-2 from UFS - 1 from "Danske universiteter" - 1-2 from DeiC - The chairman from HPC forum 	<p>B: See link.</p> <p>C: No actions.</p> <p>D:TL send mail to HPC forum for appointment of candidates</p>
2	<p>Status of national HPC facilities. An update on the status of the national HPC facilities by the DeiC HPC director. (Eske)</p> <p>Data collection is expected 4 times annually. The spent HPC resources for the first year was presented. There was an underconsumption of HPC resources (30%) looking at the available data.</p> <ul style="list-style-type: none"> • The members expressed that it was important to be careful with interpretation of the data. For type 1 the experience is full utilization of the facilities during working hours, and the number of unique users is around 1500, and constantly increasing with 100 users/ month. Students also use it in education. Furthermore, at CBS there are voices that advocate for using Type 1 HPC for undergraduates. • The members expressed that there is a ramp-up period for the HPC facilities, and that the communication around FO has been handled very differently at the universities. This may have made the PR around national 	

	<p>HPC difficult. Information flow is particularly important – via FO or via other communication channels internally at the individual universities.</p> <ul style="list-style-type: none"> • It was suggested to evaluate if there has been made the right PR push compared to the users that are wanted to be attracted to National HPC. • The HPC utilization data was discussed by HPC forum, and they found it important to indicate that it still is a “building” phase for the new HPC landscape, and that the data may not be what one might expect it to look into in the future. It is only recently that many of the FOs were fully operational. The belief from the members was that this first year cannot draw a picture of the expected national HPC consumption. Furthermore, it has been a difficult year (COVID-19), and it has been difficult to hire the right personnel to lift the tasks at hand. • It was highlighted that it is difficult to argue for more money on the “finansloven” when there is an underconsumption of the national HPC resources that has been requested. • It was noted that there is little accessible GPU time in the National HPC setup, and it may not be up to par with what is currently being used at universities. 	
3	<p>The general direction of DeiC and HPC for 2022 and forward. Gitte Julin Kudsk gitte.kudsk@deic.dk (CEO, DeiC) provides a short presentation on the general status of DeiC. This includes a look into what potentially could happen from 2022 and forward.</p> <ul style="list-style-type: none"> • The suggested (not approved) budget for DeiC 2022 was presented. • DeiC will not be a self-governing institution anyway. UFM will aim at DeiC becoming a self-governing center or institute at DTU. • “Forskningsnettet” will be separated from DeiC as of January 1st 2022, and a person will be hired with the responsibility for this area (An infrastructure architect). • The first National HPC call from the resource committee will most likely be announced in February with a deadline in March and HPC resource allocation in July 2022. <p>Discussion:</p> <ul style="list-style-type: none"> • There was expressed concern about the distribution of the overall budget for DeiC 2022 that is similar to 2021 in size, but the HPC area has a reduced budget. • Reduction of the budget for HPC and up-ramping of DM was considered worrying by several HPC members, and it may potentially introduce a substantial risk for instability of the HPC centers regarding what has been built up so far. It was suggested to address the concerns to the DeiC board. • The HPC forum consists of experts that manage many types of HPC installations - it was suggested to establish a process where feedback and sparring can be submitted in a constructive way to DeiC. • It was highlighted that there is a consequence of a reduced budget to HPC. If the budget is reduced by 50% you will get a machine that is half the size, when the national model is “HPC as a service”. 	→ It was decided to address the concerns about the HPC budget to the DeiC board. See section 5 for action points.
4	<p>The future of a DeiC supported DM infrastructure. Anders Sparre Conrad anders.conrad@deic.dk (Leader of DM in DeiC) provides a short presentation on the new call for DM infrastructure. He covers how this play into building a coherent digital research infrastructure at a national level.</p> <p>The intention is to build a national storage capacity that can be integrated with e.g., HPC in the future (The figure below was shown). The current open call covers two services with individual specifications:</p> <ul style="list-style-type: none"> • Open system for data storage • Trusted data repository <p>There are still technical elements that need to be clarified. Furthermore, an element of trust for using services across universities needs to be backed-up in</p>	→ No action points

	<p>the right way legally. Data processor agreements shall be simple and used across universities in order to minimize the administrative burden. The DM infrastructure call is open until November 30th with a developing phase starting March 1st 2022. Data wall, FAIRification tools and AI could also be projects to consider within the economic framework.</p> <p>It was addressed that in EU there are forces working with architectures for data spaces in order to share data across Europe. The understanding was that the National infrastructure shall be aligned with EU initiatives (e.g., EOSC and FAIR) – however, the integration part on an International level is to be anchored in other projects.</p>  <p>Figur 7 - Forslag til nationalt datamanagement- og storage-landskab.</p> <p>From: "Datamanagement i Danmark, Notat DeiC (2019).</p>	
5	<p>Around the Table</p> <p>What happens at the universities related to HPC? This is both for research and teaching but also for usage and resource allocation etc.</p> <ul style="list-style-type: none"> It was discussed if HPC forum should contact the DeiC board regarding the considerable cut in finances for the HPC area that is on the agenda in October for next year. A unanimous committee decided to pass clear and well-formulated arguments to the board. There was a sense of being excluded in the decision process giving input as experts, and it is now time for input before the board makes its final decision. <p>The note will contain an encouragement to use the HPC forum as the advisory board it was intended to be, and HPC-forum will elaborate on the HPC consumption data submitted. Furthermore, a recommendation for the 2022 budget will be made and why it is important to maintain the budget level for HPC.</p>	<p>→ TL has sent a mail Sep 25th with ideas on how to proceed in making a draft with recommendations from HPC forum. Contributors: CP, SK, LN and EBD (sparring). TL is also available. Deadline is ASAP with submission before Oct 8th 2021.</p>
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