DeiC HPC-Forum
Meeting 2
22/02/21 @ 13 – 15
Zoom: https://deic.zoom.us/j/67666273479

Invited members and support that attended the meeting:	Members, absent (announced):
 - AU, Christian Storm Pedersen, Director of BiRC (CSB) - 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, Lektor, Computer Science (SK) - DTU, Thomas Bligaard, Professor, Dept. Of Energy (TB) - ITU, Philippe Bonnet, Professor, Computer Science (PB) - KU, Erik Bjørnager Dam, Lektor,Mashine Learning (EBD) - 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)	- AAU, Christian Nielsen,Head Business Dept.(CN) - RUC, Thomas Schrøder, Professor IMFUFA (TS) - DeiC, René Løwe Jacobsen, Specialist (RLJ) **Members, absent (not announced):** - KU, Piotr Jaroslaw Chmura, Research programmer (PJC) **Guests:** - None

Minutes from last meeting was approved on 10/11/2020 and can be found here: meeting notes HPC-forum kick off - 20201110

Minutes by: **Birgitte Vedel Thage.**

Item	Issue	Comments	Actions
1	**Approval of agenda** Include LUMI topics for discussion under item no. 8 (CP) - Call for pilot projects - Formation of LUMI working groups Denmark - Selection of thematic applications	→ Approved
2	**Information** Background: terms. Information items: A. Renewal of PRACE for 2021. Tier-0 calls 18-21 (for use in late 2019 and all 2020). Have awarded danish researchers with 220.900.000 CPU core hours. Data for calls from Teir-1 have not been updated since 2017. 3 times more than the national type 2 offers in 2021. Good hit rate – every second get funded. B. NeiC call for project. https://neic.no/news/2021/01/14/open-call/ Deadline 10.3.2021. Information sent to front-office with CC to this forum and CIO group. DeiC facilitates if requested. C. CASTIEL new gateway for training now online. https://www.eurocc-access.eu/. This is a course provider portal similar to what PRACE offers. D. The EuroHPC Summit Week (EHPCSW) 2021 from 22.3 to 26.3. https://eurohpc-ju.europa.eu/events/eurohpc-summit-week-ehpcsw-2021. E. Practical course on the CUDA to HIP porting 26.2.2021. HIP is AMD version of a CUDA replacement library for AMD GPUs as part of ROCm. Deadline at 15.2.2021. More information https://www.lumi-supercomputer.eu/events/practical-course-on-the-cuda-to-hip-porting/. As of this writing it is full.	→ No comments
3	**Expectations to HPC Forum members** Background: The handling of the question from the board regarding potential renewal of the PRACE 2021 membership clearly demonstrated a need to clarify what is expected of HPC Forum members. The handling of the item seemed to be done based on personal interests, opinions etc. rather than reflecting the opinion of the HPC Forum members university in broader terms. To note: A. In the future it is expected that the HPC Forum members in issues of expected broader university interest try to convey all available information. How and to what extent is decided by the HPC Forum member. A short memo could be passed to the DeiC HPC Director (Eske Christiansen) – this will make our decisions stronger. B. In the agenda, the chairman attempts to identify examples of items where a more university broad and solid opinion is demanded.	Additional communication comments: HJAJ: Mailing list managed by DeiC about LUMI activities would be a good idea. EC: Ad hoc communication material is sent from DeiC to Front Office at the 8 universities and their job is to disseminate the information through their local university communication channels. HJAJ: Also good idea to disseminate the information directly to the HPC users.

Item	Issue	Comments | Actions

4	**GPU Learning Academy**
	Background: With the LUMI supercomputer and other offerings in the international HPC community there is a need to educate and learn how to use GPUs in an efficient way. If HPC Forum decides to play a role in this facilitation some issues that could be considered are:
	   A. Form a 3-5 person task force to propose a setup of the activity.
	   B. Content of the initiative.
	   C. Time plan and work plan.
	
	As part of this Sven Karlsson from HPC Forum provides information on an initiative called "HPC Laboratory" With the following abstract: "*DTU is driving an HPC Laboratory for HPC research. The virtual laboratory aims to perform research and provide services and support broadly to both academia and industry, ranging from hardware design all the way to system operation as well as outreach and promotion of high performance computing research technologies. The laboratory is open for all to engage regardless of affiliation and currently several universities already interact. A brief overview and introduction to the laboratory is provided.*"
	
	Comments:
	CP: Good initiative and real need for this. How does it interact with other national services and initiatives? Take into account the whole eco system.
	SK: Agree there is some overlap. However, the aim is development of new HPC technologies
	TL: Is there any link to what is going on in the competence center (NCC@DK)?
	SK: NCC cannot support users at this research level. Also, the NCC is being built up.
	EC: Should the Universities make a joint initiative that defines what one should be able to do in this field in the future?
	PB: T8.5 in EuroCC@DK looks at the convergence between HPC, AI and Big Data. We should examine what is needed for GPU learning within different user groups. Who needs what and how can their competences be lifted/enhanced?
	HJAJ: Important to have in mind the focus of national needs for future HPC. Useful with national workshops within national HPC and LUMI so that no parallel courses are made. Under the auspices of DeiC, national meetings were also to be held so that one could get to know each other within the development of HPC in DK.
	EBD: Discusses both research and courses around LUMI. Assuming that LUMI develops 80% of the material so we do not have to make it from scratch?
	SK: Also expect there will be LUMI tutorials and LUMI seminars via multiple initiatives. Could be an idea to keep track of activities. Also, the HPC laboratory has the "Friends of LUMI" initiative to collect info on LUMI and share experiences between users ramping up for LUMI.
	CP: Need more clear communication about LUMI activities. LUMI user support team across countries will also provide some information/material. We should not just wait for LUMI material but NCC can be good framework for these initiatives.
	EC: LUMI support DK is in the process of defining their tasks. There will also be a full-time employee to help users get on LUMI. All LUMI consortium partners are figuring out how to work together. There is information to be gathered.
	EBD: Would be great to collect some use cases. Can start preparing certain parts. The CUDA to HIP course is nice initiative for the "Bare Metal" user segment.
	CP: Comment to EBD. Wanted to discuss exactly the point of thematic applications in DK and wanted to bring up the LUMI questions to the agenda.
		Presentation by SK.
		
		Objective:
		Research on HPC techniques via "HPC Laboratory". Does also include seminar series.
		
		Are the various universities interested in participating and supporting the initiative? SK invites to a conversation about this.
		
		Summary (TL):
		It would be beneficial to do a mapping to clarify which activities take place at the various Universities and how far one is within the GPU area. Everyone is free to participate in the initiative from the HPC laboratory. DeiC will provide information to get the information started.

5	**Sharing of unused compute resources**
	Background: Should we create a process for share/lent/give away unused compute resource? If we decide to continue work on this, we could consider at least the following:
	   A. Make DeiC coordinate the effort?
	   B. Better internal promote of unused resources to researchers.
	   C. Promote unused resources to students?
	   D. Prepare for LUMI.
	
	Comments:
	SK: Consider whether it makes sense to be part of the international collaborations on sharing resources - it may make sense to give the resources to this and e.g. students?
	CP: Hard to get the users to use all resources. Good if DK universities could agree to allocate unused resources to other universities (Pay for something that is not used). Better to give time to research than not using the resources.
	HJAJ: Cannot transfer machine time from one period to the next. But within a period, a scheme was proposed for DK: when you have used your own quota, you could get a lower priority regarding HPC resources but still get / buy HPC resources from others.
	EBD: The goal must be to do amazing research using the HPC facilities. KU is a full supporter of other parties being able to use unused HPC resources. There must be freedom to be creative around this. Tried to encourage a KU user to use national HPC (Type 1). Main feedback was that it was not interactive. Stood in a job queue for over an hour and had then a 10 min time slot to get on and missed it. Super easy to register and get on the system. One opens a browser window and run immediately - is that not what is meant by "interactive"? Are job queues to be expected in this way?
	CP: Type 1 HPC should indeed be faster "plug and play" (Within 5-10 minutes). However, there is limited resources so all machines may have been used at the same time (Physical limitation). Important to contact support when problems are encountered.
	LN: CBS also supports that unused resources can be used by others.
	EC: The presentation was made to see how the HPC resource time was spent and allocated from the universities. DeiCs board encourage a model where the universities share the unused resource
		Presentation by EC.
		
		Objective:
		Should HPC Forum encourage the DeiC board how to use unused HPC resources?
		
		Summary (TL):
		EC makes a draft of a simple procedure for how this can be handled. Useful to have in writing and the draft will be circulated to HPC forum members for comments.
		
		Encouragement for a simple and unbureaucratic model (HJAJ).

6	**HPC Funding**	Objective: Is there an interest in scouting the funding area together in

	Background: The Novo Nordisk foundation earlier announced a call for applications for Data Science Research Infrastructure 2021 at https://novonordiskfonden.dk/en/grants/data-science-research-infrastructure-2021/. The deadline in early May is likely too short this year but it does give reason among HPC Forum members to discuss if we jointly should follow upcoming calls and circulate these among its members for possible collaborations between some or all of the participating universities. Thus, HPC Forum could potentially facilitate upcoming projects to enhance the HPC infrastructure. Comments: PB: Not an assignment for HPC Forum. ITU has made application. Was rejected. If it is facilitation at the national level, it may make sense but not at local HPC facility level. SK: We have a number of instruments (EuroHPC,…) but no allocated budget in Denmark. Can the HPC Forum argue for NFAs to prioritize co-funding budgets for relevant calls in their budgets? HJAJ: Do not think this is an assignment for the HPC Forum. EC: Agree with PB - The consortia should apply for these calls. CP: NeiC calls could maybe be more on point for HPC Forum where it requires a national provider. Good to have a role in that context.	HPC Forum or leave it to individual universities? Facilitating role of HPC Forum across universities (Not executive role). Summary (TL): No harm done by gathering information to the knowledge of the HPC Forum. Therefore, if something has to be done in connection with an application, it can be discussed at a meeting that sets out close to the specific "call" deadline. Evaluate again after six months.
7	**Information round** 2-3 min pr university of relevant HPC information from each university. • AU: Type 2 is up and running (Genome DK at AU is a co-player). Representatives from the 5 faculties has made a "HPC forum"-like Counsil at AU. No other activities to report. • SDU: Type 1 running and expanding. Working on new Type 3 machine – able to buy more nodes than originally planned. Final testing internally ongoing. Central organization for HPC in the eScience center. New webpage. Involved in other projects with DTU and AU (Project 5). Access to Type 3 will be different than from Type 1. At the moment, the procedure is similar to Type 2. • DTU: Front Office in place. Creating a LUMI precursor with a few nodes for test that looks like what will be ready at LUMI. More activities in the area of HPC and quantum computing e.g. application via NeiC primo March. • RUC: Not present. • KU: Novo Nordic e-infratructure funding for the Life Science Area (Sensitive data) was received. Front Office runs as expected. • ITU: Front Office in place. Hiring a person for EuroCC and internal HPC (full time). Participating in EU project Daphne. • AAU: Collaboration AU, SDU, Royal Library and AAU is good. Going for a ISO 27001 certification on CLAAUDIA. Running according to schedule. • CBS: Hired a data scientist as of April 1st and will be in RDM support (=Front Office). The person is from NNIT. Primary focus is Type 1 HPC and presented to all institutes. Large interest in the HPC possibilities. Focus on R, Matlab, JupiterLab and STATA (economy, multiprocessor version on UCloud). Type 1 changes from March – will the user experience be different? How to access Type 2 HPC is unclear – a guide is required in order to disseminate it to the researchers.	→ No other comments

8	**AOB.**
	LUMI related topics (CP)
	    A. Call for pilot projects
	    B. Formation of LUMI working groups Denmark
	    C. Select thematic applications
	
	A. EC: DK have 2+2 pilot project "seats". One C- and one G- part. DeiC has chosen the strategy that two very mature projects have been found for the GPU part and an open call is made regarding the CPU project part.
	    TL: It was a quick process, and therefore it was decided to find two mature projects, although there have also been opposing messages from LUMI regarding the time frame. It was important to get a Danish contribution.
	    CP: On LUMI webpage primo february – open call for interest where researchers can apply – good idea to coordinating this more broadly. Need to have higher awareness of this. CPU in August and late fall it is GPUs (experienced users).
	    PB: It will be great to obtain more information about LUMI.
	
	B. Six LUMI working groups – have representatives from DK:
	    1) AI interest group, 2) Training and education coordinators interest group,
	    3) User program coordinators interest group, 4) Security interest group,
	    5) Tech lead interest group, and 6) PR interest group
	
	C. Identify applications that we want to focus on that can be forwarded to the LUMI center of excellence in order to make it happen. The sooner we send it we can have support on this matter. Make a process in order to make a prioritazion around this?
	
	AJAJ: Information about the National Committee (e-ressource udvalget) on how the application process works will be great.
	EC: It was discovered that the process complies with the "Forvaltningsloven", and therefore much more is required for documentation of the application process. The next application deadline is autumn.
		Summary (All):
		It was decided that information about activities in LUMI will be a recurring fixed item on the agenda going forward.
		
		A. and B.
		TL: Gather a team of the people involved in LUMI who will take on the task of sending something like a newsletter informing about what is happening (CP, TL, Brian Vinter, EC). A shared responsibility to lift this task.
		
		C. LUMI HPC forum group (See above) is established, the participants familiarize them-selves with the requirements of LUMI and on this basis come up with a concrete proposal for how to identify applications and present it in HPC Forum. This was accepted by all.

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