

Programme

Conference & Workshop programmes

Conference

The format of the conference will be dynamic and interactive, engaging the audience and ensuring lively and animated discussions. The opening day includes plenary sessions on e-Infrastructure for high-energy physics, digital humanities, and cloud computing, some sessions will include panel discussions.

The second and final day includes sessions on data services and technologies, and bio- and medical sciences.

For easy viewing of the conference part you can collapse the workshop days by clicking the hexagon at the right-hand corner of the workshop day programme.

Workshops

In the days before the conference, workshops on center operations, data services, science gateways, security, and services for bioinformatics will be hosted by the Norwegian University of Science and Technology -

Monday	Tuesday
Data Services: Auditorium R5	Science Gateways: Auditorium R5
Centre of operations: Auditorium R9	Infrastructure as a Service for the Life Sciences Community: Auditorium R5
	Security: Auditorium R6

Below you will find the programme for both the workshops held on 13 - 14 May and the conference which will run on 15 - 16 May.

Workshop & Session descriptions

Click the links to read more about the workshops and the sessions.

Please note that all titles are tentative

Monday, 13 May 2013		
09:00 - 10:00	Arrival - Workshops - NTNU, Realfagsbygget, Høgskoleringen 5	
10:00 - 11:00	LUNCH - Realfagskantinen	
11:00 - 13:00	Workshop: Data Services Session chair: Damien Lecarpentier	Workshop: Center Operations best Session chair: Bjørn Lindi
	Developing Global Data Infrastructures: Trends and Requirements Peter Wittenburg	
	EUDAT: Towards a European Collaborative Data Infrastructure Damien Lecarpentier	
	BBMRI requirements and use of the e-Infrastructure Roxana Martinez	

EISCAT requirements and use of the e-Infrastructure

Mats Nylén

Panel discussion

Erwin Laure

Moderator: Erwin Laure, KTH-PDC, Sweden

Building and maintaining services for S Gard Thomassen

Since 2009 the University Center for the University of Oslo (UiO) has seen a demand for sensitive data. This is mostly data from the 2008 election (religion, sex, health, etc.). The increased usage of video, MRIs, and other data from humans has created an incredible demand for resources for sensitive data, by far exceeding the classic "single offline computer" model. In response to this demand, USIT has run a project (TSD) since ~2008. This project will virtualize servers, storage, and high performance computing within a secure environment in order to host virtual research servers behind an authentication gateway. All projects are provided by the new 7PB storage resource dedicated HPC resource is currently in a test environment to meet the computational demands. In order to harvest data we have enabled PGP encryption and a questionnaire "Nettskjema". Further to identify respondents correctly we have implemented a governmental ID-portal. As login to the portal we plan to offer these services to the researchers.

From Old-School to New-School Operations

Anil Thapa

The concept of traditional system administration and performance computing operation, and administrators, has changed in order to support speed network connection between users and systems. National centers of Denmark, Norway, Sweden, and the UK operated jointly a supercomputer in order to share resources across country boundaries. The joint ownership is to make the infrastructure efficient without sacrificing service to the users. The system has 3456 cores, 71TB storage, 7TB memory, and is managed by administrators from four different countries. The system has set an example of a new operation where technical administration is shared across the world and yet the HPC operation is efficient. The presentation will give an overview of the system.

The energy cost of compressing sparse matrices

Jan Christian Meyer

r

Advanced User Support in the Swedish

Torben Rasmussen

With the establishment of the strate Sweden, additional funding for adv available. Specifically, the Swedish prioritized funding of a number of sc application experts are all affiliated is affiliated with NSC and PDC, whi SeRC. In this talk, I will present son application experts, as well as the c application experts. I will also prese performed by application experts in

13:00 - 13:30

BREAK

13:30 - 15:00

Workshop: Data Services, Cont'd.

Session chair: [Damien Lecarpentier](#)

Workshop: Center Operations best

Session chair: [Bjørn Lindi](#)

TTA – National Research Data Project in Finland

Jari Suhonen

NorStore – Managing Digital Research Data in Norway

Andreas Jaunsen

Workshop Data Services contribution

Research Data Initiatives in Sweden

Jacko Koster

Panel discussion

Erwin Laure

Moderator: Erwin Laure, KTH-PDC, Sweden

Kajaani Data Center - case study

Juha-Pekka Partanen

“CSC – IT Center for Science Ltd. is efficient data centers in the world. T Finland. The Kajaani Data Center is technology, modern, reliable infrast data needs in research and develop The Funet Network (Finnish Univer: excellent networking capabilities are

Meteorological Co-operation on Operati prediction) between Sweden and Norway

Solfrid Agersten

MetCoOp has run as a project since facilitate an operational organisation Hydrological Institute (SMHI) and th (met.no) for production of numerica 2014. The vision for the project is to forecast for common areas. Numeri demanding and the quality of the fo are getting better, and it is a challer finer grid and on shorter timescale. (what is operational numerical weat operate across the borders, share t system and something about future

ScalaLife Competence Center - Providir computational Life Science communities

Rossen Apostolov

The EU funded project ScalaLife ha Competence Centre that provides c (efficient usage) and developers (cc such as the widely used codes GR(provided also to resource providers installation, benchmarking and secc centers. Training events are regular Center establishes a long-term sust collaborations with external commu

Design and implementation of an energy

Mattias Wadenstein

Tuesday, 14 May 2013

07:00 - 08:30	Workshop: Security I Session chair: Leif Nixon	Workshop: Science Gateways Session chair: Jacko Koster
	Co-chair for WS Security I Sven Gabriel	Reproduce and share: the key to the new on the Galaxy framework Nikolay Vazov Computation is entering more and more scientific method, right next to the computational tasks and resources complex, moving in the opposite direction for users. How can we bring computational computing portals. <hr/> Fido - Providing a secure and convenient Joel Hedlund
08:30 - 09:00	BREAK	
09:00 - 10:30	Workshop: Security II Session chair: Leif Nixon	Workshop: Science Gateways, Continued Session chair: Jacko Koster
	Co-chair for WS Security II Sven Gabriel	Science Gateways and their enabling technologies Robert Lovas Workshop presentation -Science Gateways <hr/> Science Gateways in climate research Hamish Struthers
10:30 - 11:30	LUNCH	
11:30 - 13:00	Workshop: Security III Session chair: Leif Nixon	Workshop: Infrastructure as a Service Session chair: Tommi Nyrönen
	Co-chair for WS Security III Sven Gabriel	Workshop Introduction to IaaS in Life Science 1.1 Lead in: Introduction to ELIXIR service providers • Nordic ELIXIR center (Uppsala) 15 min • Cloud offering for CSC (Tommi Nyrönen and Jarno Lehto) scientific use cases: How ELIXIR Finland operations • ELIXIR DK Bioinformatics (Rapacki, CBS Technical Univ. Denmark) • ELIXIR NO Bioinformatics (Univ. Bergen) 20 min Lead-in to Session 1: analysis of delivering e-Infra Session 1.
13:00 - 13:30	BREAK	

13:30 - 15:00	<p>Workshop: Security IV Session chair: Leif Nixon</p> <p>Co-chair for WS Security IV Sven Gabriel</p>	<p>Workshop: Infrastructure as a Ser Session chair: Tommi Nyrönen</p> <p>WS Analysis and Actions 2.1 Strengths and Opportunities Ta opportunities of the IaaS interplay b and e-Infrastructure providers in the points can be technical! Write these provided and tape them to the wall Choose a presenter and secretary (5 (five) groups for 15 minutes in dedic Present findings 5 min • Decide if th needs to be changed 16.15 Short 5 (rooms) 2.2. Weaknesses and prop points and risks in the IaaS interpla providers and e-Infrastructure provi suggest actions to mitigate them. • (can be the same person) • Work in dedicated meeting rooms • Reasse followed by short discussion</p>
17:00 - 19:00	Opening Reception - Rockheim	

Wednesday, 15 May 2013

06:00 - 07:00

Conference Registration -Clarion Hotel & Congress

Track 1

07:00 - 08:30

Opening Session

Session chair: [Ebba Hvannberg](#)

Welcome

Petter Kongshaug

Placeholder

Official opening

Pål Sørgaard

Welcome from NTNU

Torbjørn Digernes

welcome

A Vision for Nordic e-Infrastructure Collaboration

Gudmund Høst

The Nordic collaboration on e-Infrastructures will be presented. The background of the collaboration will be described and emerging opportunities.

Enabling excellent science through High-Performance Computing

Kenneth Ruud

By using examples from my own field of research in chemistry, from recent advances in PRACE Tier-0 projects and HPC in Europe, I will demonstrate the potential for high-quality research made possible by the use of High-Performance Computing. I will also give an overview of the needs of scientists in terms of how HPC infrastructure is organized and utilized in terms of scientific excellence.

08:30 - 09:00

BREAK

09:00 - 10:30

WLCG - quo vadis?

Session chair: [Jacko Koster](#)

Plans for the Large Hadron Collider

Ian Fisk

NDGF - lessons learned

Michael Grønager

This talk is a tour through more than 10 years of Grids, e-Science and e-Infrastructure. What was the rationale behind Tier-1. What are the possibilities for broadening its success to other sciences and what are the greatest future potential collaborations.

ATLAS Computing: status and plans

Oxana Smirnova

ATLAS experiment at LHC has been the key user of the Nordic computing and storage resources ever since NDC requirements drive the development of the distributed Nordic Tier1 and Tier2 centers. This talk gives an overview of ATLAS, and plans for operations after the re-start of LHC in 2015.

EGI: Going beyond support for WLCG

Steven Newhouse

The European Grid Infrastructure was established in 2010 as a result of a community consultation to provide a service and storage in Europe based on the prototyping experiences of the previous 10 years. The presentation will provide activities in support of WLCG and how the experiences of the last three years of operation are informing our future

10:30 - 11:30

LUNCH

11:30 - 13:00

Digital Humanities - A New Era?Session chair: [René Belsø](#)**Tidying up the Basement: A Tale of Large-Scale Parsing on National eInfrastructure**

Stephan Oepen

Language is the fabric of the Web, and language technologies arguably provide the grease for the weaving loom, automated on-line translation, spoken-language interfaces to mobile devices, or the advertising and content recommendation monetization of Web services, and thus availability at no charge to the end user. In this presentation, I will give a talk about techniques used in a variety of language technologies, with special emphasis on their computational properties. I will share my experience, and that of my research group at the University of Oslo, in migrating from operating a dedicated server department, to taking advantage of a national 'throughput' supercomputer, the ABEL cluster at Oslo. As a direct consequence of this development, the research profile of the group today is far more computation-heavy than would have been possible experimentally and empirically on a scale that would have been impossible to imagine five years ago.

Nordic Contributions to Developing a European Digital Services Infrastructure for Social Sciences and Humanities

Hans Jørgen Marker

DASISH

Nordic Opportunities for Digital Humanities

Erik Champion

I will describe Digital Humanities, achievements in the field, current challenges, and opportunities for researchers in the area across both Humanities and ICT.

Panel discussion

13:00 - 13:30

BREAK

13:30 - 15:00

Cloud Computing - Opportunities and ChallengesSession chair: [Per Öster](#)

Towards the clouds, together. Collaboration on cloud services in research and education

Andres Steijaert

Towards the Clouds, Together Collaboration on cloud services in research and education Cloud services offer the huge opportunities. The cloud empowers users to select and use the services they really want, in an easy and off Cloud services offer higher education and research organisations the opportunity to become more agile and prov relevant IT services, at a faster pace. IT departments can use the instant availability and elasticity of cloud service capacity) to reduce development time and modify their expenditure profile. Thus reducing the need for periodic ar (CAPEX), and moving to a smoother more predictable operational expenditure (OPEX, pay-per-use model). The : by commercial organizations however, is often incompatible with the requirements of higher education and resear on trust, security, privacy, legislation and regulation. These issues have different implications between cloud serv compared to services used within a research environment, where the ownership of data and the need to ensure s paramount. There are also issues regarding data portability and interoperability. Vendors have a commercial imp churn within their user base and so have little incentive to collaborate with competitors on these issues. These ar have a major impact on the research and education community. It is therefore essential that higher education anc level, so that the benefits of the cloud can be fully realised and the attendant risks are fully understood and appro united front, the R&E community can work to guide and influence cloud service providers in these areas. This pre risks can be mitigated and managed through a coordinated approach and implementation of a range of Best Prac addition, through developing a range of procurement guidelines, collaboration can reduce the learning curve for b minimise duplication of standards and policies. About GÉANT As the pan-European data network dedicated to th community, GÉANT connects 40 million users to the internet. Through its innovative access and authentication s GÉANT has long experience in the fields of user access services and federated service authentication and delive and Education Network organizations collaborate on the cloud and address topics like cloud strategy, standards, cloud brokerage and procurement, vendor management and integration. The presenter will share how GÉANT su research on both a strategic and practical level to: • Get a better understanding of the full range of cloud computir limitations. • Incorporate cloud activities in their roadmaps and portfolios including developing service models for : Facilitate their user-base in adopting the cloud with the right conditions of use, through development of a range of The audience will be invited to comment on these initiatives and relate these to the situation in their institution. At instruments, and the approach to help their institute respond to and benefit from the cloud. The presenter will res gather input for the joint European cloud activities in GÉANT.

Nordic Opportunities for Cloud Software Collaboration

Ivan Porres

~okeanos and Synnefo: The public cloud service and the open source software that powers it

Vangelis Koukis

This talk will introduce Synnefo, a complete open source cloud platform. Synnefo powers GRNET's ~okeanos pul delivering advanced compute, network and storage services to the Greek research and academic community, sin experiences with building and running a large-scale production public cloud, focusing on: * Open source vs. comr scale, production cloud infrastructure * Building on commodity hardware vs. vendor solutions * Current open sour blocks of an IaaS cloud, and re-using existing opensource components wherever possible * Why Synnefo? * Gen components used * Running robust, fault-tolerant VMs without a Storage Area Network * Using a content-address: Image repository * Unified storage of files, VM Images and live VM disks, independently of the backend storage t with zero data copy and live VM migration * Current Industry and Open Source Community use cases of Synnefo /Maintainability on commodity hardware

Panel discussion

17:00 - 20:00

Dinner- Clarion Hotel & Congress

Thursday, 16 May 2013

Track 1

07:00 - 08:30

Data Services and Technologies

Session chair: [Gudmund Høst](#)

What business are we in? Data-centric research, service requirements and national responses

Andrew Treloar

This presentation will first consider the underlying driver (yes, just one!) for e-Research infrastructure. It will then research and research communication. The kinds of services that are needed to support this will be surveyed, an examining how one might provide these at a national or regional level.

Future e-Infrastructure Requirements for the EISCAT facilities

Ian McCrea

The EISCAT_3D project: Data and processing challenges and implications for Nordic e-infrastructure Ian McCrea Laboratory, UK The EISCAT_3D project (www.eiscat3d.se) will be a large, distributed research infrastructure located at facilities in Norway, Sweden and Finland. EISCAT_3D will be a new type of radar facility for studies of the upper atmosphere, replacing the current generation of dish-based EISCAT radars by a network of phased array antenna fields, offering improvements in terms of power, resolution and experimental flexibility. Realising such a system, however, presents several challenges that the system will produce several orders of magnitude more data than the present radars. In order to extract the maximum value from this data, the system will need to be combined and processed in real-time, requiring the provision of significant computing and data transfer capabilities at remote locations. In this talk, we will briefly review the current design of the EISCAT_3D system, with a particular focus on the networking requirements at each data processing level and how the various challenges are likely to be resolved. We will also discuss the potential implications for e-infrastructure provision in the Nordic region, in particular with regard to networking.

Nordic Storage Opportunities

Gerd Behrmann

Challenges in shared storage resources for large scale e-science projects are highlighted by exploring the different solutions found in different communities, dCache and iRods. Is there common ground? Are they exclusive? Is the

A national archive for digital research data

Andreas Jaunsen

The objective of the NorStore initiative is to develop and operate a persistent, nationally coordinated infrastructure providing services to a broad range of scientific disciplines. The key to achieving this is to describe and share the data. This includes providing open access to meta-data. The launch of a national research data archive is one important step in this process and public data is provided via autonomous technologies. The challenges and lessons learned will be discussed and how they among the Nordics exist and the link to initiatives like EUDAT.

EUDAT - Towards a Collaborative Data Infrastructure - A Nordic Perspective?

Damien Lecarpentier

EUDAT is a new pan-European data initiative bringing together a unique consortium of 25 partners, including research and high performance computing (HPC) centers, technology providers, and funding agencies from 13 countries. It is a cross-disciplinary and cross-national data infrastructure providing a set of shared services to access and preserve research data. This presentation provides an overview of the status and plans of the project and highlight the contribution of the Nordic partners as well as how to further Nordic communities in this pan-European initiative.

08:30 - 09:00

BREAK

09:00 - 10:30	<p><i>Closing Plenary</i> Session chair: Bjørn Lindi</p> <hr/> <p>Bioinformatics Tommi Nyrönen</p> <hr/> <p>Closing Keynote Erik Lindahl</p> <hr/> <p>Conference conclusions and closing Pentti Pulkkinen</p>
10:30 - 12:00	LUNCH

