

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		
11:00 - 12:00	Arrival - Workshops - NTNU, Realfagsbygget, Høgskoleringen 5	
12:00 - 13:00	LUNCH - Realfagskantinen	
13:00 - 15:00	Workshop: Data Services Session chair: Damien Lecarpentier	Workshop: Center Operations best practice Session chair: Bjørn Lindi
	Developing Global Data Infrastructures: Trends and Requirements Peter Wittenburg	Building and maintaining services for Sensitivity Gard Thomassen
	EUDAT: Towards a European Collaborative Data Infrastructure Damien Lecarpentier	Since 2009 the University Center for Informatics at the University of Oslo (UiO) has seen a

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

for sensitive data. This is mostly data covered by §2, point 8 (religion, sex, health, union membership). The increased usage of video, MRIs, and other data from humans has created an incredible need for resources for sensitive data, by far exceeding the classic "single offline computer dedicated to this demand". USIT has run a project called TSD since ~2008. This project will be implemented on virtual servers, storage, high performance computing within a secure environment in version 2.0, hosting virtual research servers behind an authentication gateway. All projects are provided by the new 7PB storage resource. A dedicated HPC resource is currently being implemented in the environment to meet the computational demands. For data harvesting we have enabled PGP encryption and a questionnaire "Nettskjema". Further, to ensure we can identify respondents correctly we have implemented a governmental ID-portal. As login to these services to offer these services to the research community.

From Old-School to New-School Operation

Anil Thapa

The concept of traditional system administration and performance computing operation, where system administrators and users are separated, has changed in recent years. High speed network connection between the users and the system administrators has become transparent to the system. National High Performance Computing centres of Denmark, Norway, Sweden and the Netherlands are operated jointly as a supercomputer in Iceland, sharing resources across country boundaries since the joint ownership is to make the investment more efficient without sacrificing service to users. The system administrators from four different countries have set an example of an international operation where technical administrators are separated from the world and yet the HPC operation is optimal. This presentation will give an overview of the

The energy cost of compressing sparse matrices

Jan Christian Meyer

r

Advanced User Support in the Swedish National e-Infrastructure

Torben Rasmussen

With the establishment of the strategic research infrastructure in Sweden, additional funding for advanced

available. Specifically, the Swedish e-Science prioritized funding of a number of so-called application experts are all affiliated with is affiliated with NSC and PDC, which a SeRC. In this talk, I will present some of application experts, as well as the coordinated application experts. I will also present e-performed by application experts in vari

15:00 - 15:30

BREAK

15:30 - 17:00

Workshop: Data Services, Cont'd.

Session chair: Damien Lecarpentier

Workshop: Center Operations best practices

Session chair: Bjørn Lindi

TTA – National Research Data Project in Finland

Jari Suhonen

Kajaani Data Center - case study

Juha-Pekka Partanen

NorStore – Managing Digital Research Data in Norway

Andreas Jaunsen

Workshop Data Services contribution

“CSC – IT Center for Science Ltd. is building the most efficient data centers in the world. The location is in Finland. The Kajaani Data Center is a powerful, modern, reliable infrastructure that meets the data needs in research and development. The Funet Network (Finnish University Research Network) has excellent networking capabilities around the world.

Research Data Initiatives in Sweden

Jacko Koster

Panel discussion

Erwin Laure

Moderator: Erwin Laure, KTH-PDC, Sweden

Meteorological Co-operation on Operational between Sweden and Norway

Solfrid Agersten

MetCoOp has run as a project since August 2007 to facilitate an operational organisation for the Norwegian Hydrological Institute (SMHI) and the Norwegian Meteorological Institute (met.no) for production of numerical weather forecasts. The vision for the project is to deliver the most accurate forecast for common areas. Numerical weather forecasts are getting better, and it is a challenge to produce a finer grid and on shorter timescale. I will present what is operational numerical weather forecasting and how to operate across the borders, share the hardware and software system and something about future plans.

ScalaLife Competence Center - Providing training for computational Life Science communities

Rossen Apostolov

The EU funded project ScalaLife has created a Competence Centre that provides one-to-one support for users (efficient usage) and developers (code development) such as the widely used codes GROMACS and NAMD provided also to resource providers (HP installation, benchmarking and second level support). Training events are regularly organized.

Center establishes a long-term sustainable
collaborations with external communities

Design and implementation of an energy efficient
Mattias Wadenstein

Tuesday, 14 May 2013

09:00 - 10:30	<p>Workshop: Security I Session chair: Leif Nixon</p>	<p>Workshop: Science Gateways Session chair: Jacko Koster</p>
	<p>Co-chair for WS Security I Sven Gabriel</p>	<p>Reproduce and share: the key to the new gen on the Galaxy framework Nikolay Vazov Computation is entering more and more scientific method, right next to theory a computational tasks and resources are complex, moving in the opposite direction users. How can we bring computation to computing portals.</p> <hr/> <p>Fido - Providing a secure and convenient gateway Joel Hedlund</p>
10:30 - 11:00	BREAK	
11:00 - 12:30	<p>Workshop: Security II Session chair: Leif Nixon</p>	<p>Workshop: Science Gateways, Cont'd Session chair: Jacko Koster</p>
	<p>Co-chair for WS Security II Sven Gabriel</p>	<p>Science Gateways and their enabling technologies Robert Lovas Workshop presentation - Science Gateways</p> <hr/> <p>Science Gateways in climate research Hamish Struthers</p>
12:30 - 13:30	LUNCH	
13:30 - 15:00	<p>Workshop: Security III Session chair: Leif Nixon</p>	<p>Workshop: Infrastructure as a Service Session chair: Tommi Nyrönen</p>
	<p>Co-chair for WS Security III Sven Gabriel</p>	<p>Workshop Introduction to IaaS in Life Science in the 1.1 Lead in: Introduction to ELIXIR and service providers • Nordic ELIXIR community (Uppsala) 15 min • Cloud offering for Life Science (Tommi Nyrönen and Jarno Laitinen, CSC) 20 min • Cloud use cases: How ELIXIR FI cloud has been implemented (Technical Univ. Denmark) 20 min • Denmark ELIXIR NO Bioinformatics use case (Kjeller) 20 min Lead-in to Session 2. Setting up and delivering e-Infrastructure in the way out</p>
15:00 - 15:30	BREAK	
15:30 - 17:00	<p>Workshop: Security IV</p>	<p>Workshop: Infrastructure as a Service</p>

00

Session chair: Leif Nixon

Session chair: Tommi Nyrönen

Co-chair for WS Security IV

Sven Gabriel

WS Analysis and Actions

2.1 Strengths and Opportunities Task: [opportunities of the IaaS interplay between and e-Infrastructure providers in the national points can be technical! Write these on provided and tape them to the wall of the Choose a presenter and secretary (can (five) groups for 15 minutes in dedicated Present findings 5 min • Decide if the model needs to be changed 16.15 Short 5 min (rooms) 2.2. Weaknesses and proposed points and risks in the IaaS interplay between providers and e-Infrastructure providers suggest actions to mitigate them. • Choose (can be the same person) • Work in (five dedicated meeting rooms • Reassemble by short discussion

19:00 -
21:00

Opening Reception - Rockheim

Wednesday, 15 May 2013

08:00 -
09:00

Conference Registration -Clarion Hotel & Congress

Track 1

09:00 -
10:30

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 as well as 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 providing scientific excellence.

10:30 - 11:00

BREAK

11:00 -
12:30

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 NDGF 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 sustainable 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 plans.

12:30 - 13:30

LUNCH

13:30 -
15:00

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, even 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 high-level overview of the techniques used in a variety of language technologies, with special emphasis on their computational properties. Then I will describe that of my research group at the University of Oslo, in migrating from operating a dedicated server farm in the basement to taking advantage of a national 'throughput' supercomputer, the ABEL cluster at Oslo. As a direct consequence of this research profile of the group today is far more computation-heavy than would have been possible otherwise, and we are operating 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 field across both Humanities and ICT.

Panel discussion

15:00 - 15:30

BREAK

15:30 -
17:00

Cloud Computing - Opportunities and Challenges

Session 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 Research a huge opportunities. The cloud empowers users to select and use the services they really want, in an easy and often flexible way. Cloud services offer higher education and research organisations the opportunity to become more agile and provide relevant IT services, at a faster pace. IT departments can use the instant availability and elasticity of cloud services (scalability and capacity) to reduce development time and modify their expenditure profile. Thus reducing the need for periodic and large investments (CAPEX), and moving to a smoother more predictable operational expenditure (OPEX, pay-per-use model). The star model used by commercial organizations however, is often incompatible with the requirements of higher education and research.

on trust, security, privacy, legislation and regulation. These issues have different implications between cloud services compared to services used within a research environment, where the ownership of data and the need to ensure stor paramount. There are also issues regarding data portability and interoperability. Vendors have a commercial imperat churn within their user base and so have little incentive to collaborate with competitors on these issues. These are cr have a major impact on the research and education community. It is therefore essential that higher education and res level, so that the benefits of the cloud can be fully realised and the attendant risks are fully understood and appropria united front, the R&E community can work to guide and influence cloud service providers in these areas. This preser risks can be mitigated and managed through a coordinated approach and implementation of a range of Best Practice addition, through developing a range of procurement guidelines, collaboration can reduce the learning curve for brok minimise duplication of standards and policies. About GÉANT As the pan-European data network dedicated to the re community, GÉANT connects 40 million users to the internet. Through its innovative access and authentication servi GÉANT has long experience in the fields of user access services and federated service authentication and delivery. I and Education Network organizations collaborate on the cloud and address topics like cloud strategy, standards, inte cloud brokerage and procurement, vendor management and integration. The presenter will share how GÉANT supp research on both a strategic and practical level to:

- Get a better understanding of the full range of cloud computing s limitations.
- Incorporate cloud activities in their roadmaps and portfolios including developing service models for acc

Facilitate their user-base in adopting the cloud with the right conditions of use, through development of a range of Ca The audience will be invited to comment on these initiatives and relate these to the situation in their institution. Attenc instruments, and the approach to help their institute respond to and benefit from the cloud. The presenter will reserve gather input for the joint European cloud activities in GÉANT.

Nordic Opportunities for Cloud Software Collaboration

Ivan Porres

~oceanos 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 ~oceanos public delivering advanced compute, network and storage services to the Greek research and academic community, since : experiences with building and running a large-scale production public cloud, focusing on:

- * Open source vs. commer
- scale, production cloud infrastructure
- * Building on commodity hardware vs. vendor solutions
- * Current open source :
- blocks of an IaaS cloud, and re-using existing opensource components wherever possible
- * Why Synnefo?
- * Genera
- components used
- * Running robust, fault-tolerant VMs without a Storage Area Network
- * Using a content-addressabl
- Image repository
- * Unified storage of files, VM Images and live VM disks, independently of the backend storage tech
- with zero data copy and live VM migration
- * Current Industry and Open Source Community use cases of Synnefo
- * P
- /Maintainability on commodity hardware

Panel discussion

19:00 -
22:00

Dinner- Clarion Hotel & Congress

Thursday, 16 May 2013

Track 1

09:00 -
10:30

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 look at research and research communication. The kinds of services that are needed to support this will be surveyed, and then 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: S' 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 information will need to be combined and processed in real-time, requiring the provision of significant computing and data transport at remote locations. In this talk, we will briefly review the current design of the EISCAT_3D system, with a particular emphasis on networking requirements at each data processing level and how the various challenges are likely to be resolved. In the final part of the talk, the potential implications for e-infrastructure provision in the Nordic region, in particular with regard to networking and

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 there €

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 that provides services to a broad range of scientific disciplines. The key to achieving this is to describe and share the data. Discovering and providing open access to meta-data. The launch of a national research data archive is one important step in this direction and public data is provided via autonomous technologies. The challenges and lessons learned will be discussed with the Nordics 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 high performance computing (HPC) centers, technology providers, and funding agencies from 13 countries. EUDAT provides a 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 highlights the contribution of the Nordic partners as well as possible further Nordic communities in this pan-European initiative.

10:30 - 11:00

BREAK

11:00 -

12:30

Closing Plenary

Session chair: Bjørn Lindi

Bioinformatics

Tommi Nyrönen

Closing Keynote

Erik Lindahl

Conference conclusions and closing

Pentti Pulkkinen

12:30 - 14:00

LUNCH

