Co-ordination & Harmonisation of Advanced e-Infrastructures for Research and Education Data Sharing

CHAIN-REDS bi-annual e-Newsletter

Foreword

Welcome to the 1st edition of the CHAIN-REDS bi-annual Newsletter!

Dear Readers,

The CHAIN-REDS project started on December 1, 2012 and is now at the turning point of month 6 of its duration: it is then time to reflect on what has been done so far.

This bulletin has thus two motivations: on one hand it is meant for disseminating the activities and results of the project to a wide audience and, on the other hand, it is a very good opportunity to make an assessment of these 6 months of activity.

As you will see, there are many fascinating topics in this issue that could be of interest for several categories of readers: from scientists and technical persons to people interested in knowing what e-Infrastructures can provide to research and education.

So, indipendently of who you are, I am confident you will find the reading stimulating and informative.

Best regards,

Federico Ruggieri
CHAIN-REDS
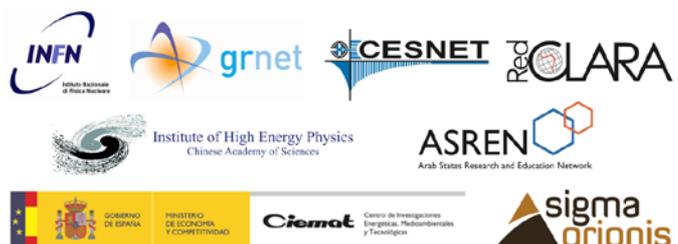Project Coordinator

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CHAIN-REDS partnership

CHAIN-REDS workshop at ISGC 2013

By Federico Ruggieri
INFN, Italy

The International Symposium on Grids and Clouds is a traditional date in March of every year in Taipei that gathers stakeholders, users and technical people from every region of the world. The Academia Sinica Grid Computing Centre (ASGC) hosts the conference with friendly efficiency and Simon Lin is the heart and soul that creates every year an opportunity for discussions on technical and policy aspects in the domain of e-Infrastructures. ISGC is thus a perfect stage for parallel workshops and meetings aiming at having intercontinental participation, but with a strong focus on the Asia-Pacific region. So it is no surprise that the CHAIN-REDS project decided to take the opportunity of co-locating a Workshop at ISGC.

The first two sessions were mostly dedicated to presentations from project's partners, highlighting the achievements of the previous CHAIN project, as well as activities planned and the results obtained so far by the new project. Project's activities are related to several topics selected as relevant in the context of intercontinental e-Infrastructures (Interoperability of Grids, Federation of Clouds for Research and Education, Data Infrastructures, Federations of Identity Providers) and which requires coordination and harmonisation efforts among different regions of the world. CHAIN-REDS has thus been conceived to support these efforts. During the second part of the workshop, Tiziana Ferrari presented EGI Operations and best practices, used as reference and compared with the existing operations of other regional Grid Infrastructures.

An user community perspective has been presented by Alexandre Bonvin, coordinator of the WeNMR project. The WeNMR portal has successfully used several regional Grid Infrastructures to run applications in the biology domain. The growing international community around WeNMR requires a significant availability of resources not only in term of computing, but also in terms of user support and maintenance. Gang Chen (IHEP) presented, on behalf of Chen Ping, the state of the art of Federation of Identity Providers in China showing that the approach of EduGain is very attractive and should be supported. An updated view of the e-Infrastructures in India was presented by Abey Jacob (C-DAC) with a specific focus on GARUDA, the Indian National Grid Infrastructure. Tiwonge Banda (Ubuntunet) closed the session presenting the eI4Africa project and the opportunities of collaboration with CHAIN-REDS.

During the final round table, the theme of data access and openness captured the attention of many participants. The necessity of a kind of rewarding for researchers that make their data open was raised and it was strongly recommended to reach agreements with other projects and initiatives in the field.

Trans-continental Data Infrastructures and Data Repositories

By Rafael Mayo Garcia
CIEMAT, Spain

CHAIN-REDS started on December 1, 2012 and focuses on promoting and supporting technological and scientific collaboration across different e-Infrastructures established and operated in various continents. A major step forward in this direction is to promote instruments and practices that can facilitate their inclusion in the community of users, i.e. the use of standards. Addressing basic issues such as data persistency, accessibility and interoperability is the related goal for Work Package 4 (WP4) "Data infrastructures".

During the first semester of the project, WP4 has defined a work plan where the following objectives are set: extend the CHAIN-REDS Knowledge Base with Data Infrastructures; support the study of data infrastructures for a few VRCs; promote trust building towards open scientific data infrastructures across the world regions; study the opportunities of data sharing across different e-Infrastructures and continents; and provide proof-of principle use-cases for data sharing across the regions. According to these objectives, a list of consecutive actions has been planned. Those actions are now on the way.

With regards to the standards adoption in the field of data preservation, access and use, four standards have been selected: OAI-PMH; Dublin Core; SPARQUL; and XML.

Bearing them in mind, the CHAIN-REDS Knowledge Base is being improved. Now, it includes Distributed Computing Infrastructures information, as in CHAIN project lifetime, but also Open Access Data Repositories and Data Repositories. These repositories can be semantically searched by means of web enrichment and the implementation of a semantic engine. With this functionality, it is now possible to extract new knowledge from a single semantic search. In the coming months, a tool for extracting the data associated to the repositories will be implemented too.

Some of the repositories appearing in the Knowledge Base have been obtained from an international survey carried out by WP4 during the months of February and March 2013. Also, CHAIN-REDS is now aware of some interesting data related initiatives thanks to the survey, so further interaction is expected.

Last but not least, CHAIN-REDS has identified several fields in which further collaboration on data aspects will be mutually beneficial: document repositories, agriculture, Earth sciences, e-government and astrophysics. Leading role projects in these fields have been contacted for closer collaboration.

In this regard, it has been also very useful to count on references such as "Riding the wave - How Europe can gain from the rising tide of scientific data", a report of the High Level Expert Group on Scientific Data, submitted to the European Commission; "e-IRG White Paper 2011", which contains a specific chapter for Data Infrastructures, and "Science as an open enterprise", published by the Royal Society.

Interoperation Model and Plan

By Ognjen Prnjat
GRNET, Greece

Brainstorming meeting on interoperability of Distributed Computing Infrastructures (DCIs) took place during the CHAIN-REDS Project Management Board meeting in Taipei in March 2013.

The event was co-located with the International Symposium on Grids and Clouds (ISGC) 2013 held at Academia Sinica in Taipei from March 17-22, 2013 and was a distinct milestone of the CHAIN-REDS project.

The topic of the meeting was expanded to also include issues on interoperation of Distributed Computing Infrastructures (DCIs).

Focus of the interoperation discussion was on interoperation of intercontinental Grids among the regions addressed by CHAIN-REDS. The status of the operational solutions in all regions was presented by Dr Ognjen Prnjat of GRNET, Manager of Work Package 3 (WP3) - based on data provided by the regions as part of preparation of deliverable D3.1 "Interoperation model and plan".

The operational solutions were presented per region and a plan for interoperation with EGI was introduced, with interactive discussion contribution by regional representatives. Initial "hot topics" on HPC and cloud interoperation were also debated.

Next, the brainstorming meeting continued with discussion on interoperability. The Science Gateway presented by Dr Roberto Barbera (INFN), is seen as a tool facilitating interoperability between different middlewares (UMD, Garuda, CNGrid).

The Science Gateway paradigm can also cater for job submissions on cloud and HPC resources and can thus also facilitate cross-technology interoperability to some extent.

Dr Barbera presented then a set of issues related to interoperability of cloud implementations in different regions, and proposed a draft version of the CHAIN-REDS vision on cloud interoperability.
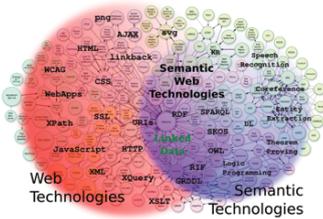
The discussion on cloud concluded by creating a CHAIN-REDS task force on interoperability of clouds with the short term objective of setting up a demo at the next EGI Technical Forum in September 2013 in Madrid.

Globalisation of Grid Infrastructures

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CHAIN-REDS semantic search on Linked Data tool

The CHAIN-RED project has released the first public version of its semantic search tool on linked data. The tool allows to search among the semantically-enriched metadata coming from the Open Access Document Repositories (OADRs) and Data Repositories (DRs) included in the CHAIN-REDS Knowledge Base. Going to the above link, you can either enter a keyword in the search window or select a language and get the list of available subjects in that language. If you spot OADRs and DRs which are not included in the CHAIN-REDS Knowledge Base and you'd like them added to the semantic search tool, please feel free to contact us.

CHAIN-REDS Memoranda of Understanding

CHAIN-REDS has signed a Memorandum of Understanding (MoU) with several related projects. A MoU is a bilateral agreement indicating an intended common line of action and common interests in close cooperation in order to strengthen synergies in the e-Infrastructure field. So far CHAIN-REDS has already signed a MoU with the following EU-funded FP7 projects: EarthServer, eI4Africa, ELCIRA, ENGAGE and agINFRA. Signed MoUs are available on CHAIN-REDS website.

Mark your calendar: CHAIN-REDS Workshops!

The CHAIN-REDS consortium is pleased to invite you to the following events:

- The CHAIN-REDS workshop on Cloud Computing and Data Repositories in Beijing, China on October 22, 2013, in co-location with the 9th International Conference on e-Science (IEEE2013, October 23-25, 2013)

- The CHAIN-REDS/eI4Africa Workshop in Kigali, Rwanda, on November 13, 2013, organised in cooperation with the eI4Africa project and in co-location with the UbuntuNet-Connect Annual Conference (November 14-15, 2013).

Mark your calendar and stay tuned on CHAIN-REDS website!

MARK YOUR CALENDAR !

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CHAIN-REDS tutors at the SAGrid All-Hands Meeting (March 25-28, 2013 - Pretoria, SAR)
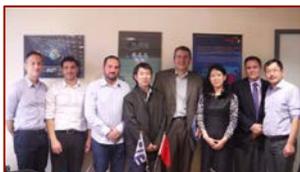
An All-Hands Meeting organised by the South African national Grid (SAGrid) and the South African National Research Network (SANReN), took place in Pretoria, SAR, on March 25-28, 2013. CHAIN-REDS partners GRNET and INFN participated as tutors in this training and development workshop. The aim of this workshop was to update the knowledge of site administrators in Africa and Arabia Regional Operations Centre (ROC). The agenda of the event and presentations are available on CHAIN-REDS website.

The CHAIN-REDS BoF session at TNC2013 (June 4, 2013 - Maastricht, Netherlands)

The CHAIN-REDS Birds-of-a-feather session (BoF) entitled "Federated Identities in global context" will take place on June 4, 2013 in Maastricht, Netherlands, at the TERENA Networking Conference 2013 (TNC2013, June 3-6, 2013). Success stories of setting up identity federation in regions like Latin America and Asia will be presented and problems specific for each region will be discussed. Presentations will be followed by a targeted discussion dealing with open questions related to the power of individual researchers or small and emerging research communities to influence the setup of federated identities, and to the options they have if a national (academic) identity federation is not yet available. The BoF targets all stakeholders interested in Federated Identities and their use in the widest global context, as well as those interested in the actual deployment of the Federated Identity systems to support small and emerging scientific communities in the access to grid and data infrastructures. For more information and registrations please visit TNC2013 website.

Enhancing Collaboration in High-Performance Computing for EU and Chinese Research Communities

The Greek Research & Technology Network (GRNET) organized and hosted a bilateral meeting with the National Supercomputer Center in Tianjin (NSCC TJ), on April 11, 2013. NSCC is the leader in HPC activities in China, its supercomputer having been the largest in the world in 2010, and now ranking number 8. GRNET is currently procuring a similar HPC facility for Greek R&E. The meeting took place at GRNET premises in Athens, under the auspices of CHAIN-REDS and HP-SEE projects, and provided an excellent opportunity for both sides to find common grounds and to explore ways for further collaboration at national, regional and intercontinental level in the field of HPC.
The full text is available on GRNET website.

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CHAIN-REDS debated at the High-level Conference on "Promoting Africa-EU Research Infrastructure Partnerships" (March 7-8, 2013 - Brussels, Belgium)

A high-level conference on "Promoting Africa-EU Research Infrastructure Partnerships" took place on March 7-8, 2013 in Brussels, Belgium. This conference presented the outcomes of the EU-funded FP7 PAERIP project, which, over the past two years, undertook an extensive analysis of Africa-EU research infrastructure partnerships. One of the highlights of the conference was the presentation of PAERIP's recommendations on how research infrastructure partnerships could best be promoted as part of the Joint Africa-EU Strategy (JAES). CHAIN-REDS has also been formally presented to the audience by Kostas Glinos (Head of Unit, GEANT and e-Infrastructures, DG CONNECT, European Commission) in the framework of a overview presentation introducing the role of e-Infrastructures and 4 specific support actions: AfricaConnect, eI4Africa, CHAIN-REDS and iMentors. More information here.

CHAIN-REDS Science Gateway session at the Technical Workshop on Building Federated Identity Infrastructures (June 17-19, 2013 - Amman, Jordan)

The Arab States Research and Education Network (ASREN) in cooperation with the Trans-European Research and Education Networking Association (TERENA), EUMEDCONNECT3 project, and CHAIN-REDS project, has the pleasure to invite you to attend the workshop "Building Federated Identity Infrastructure" in Amman, Jordan on June 17-19, 2013. This technical training event will be of particular interest for Campus IT and Library Resource teams looking for solutions to effectively manage and scale their identity providing and consuming services, as well as for National Research and Education Networks (NRENs) exploring identity federation infrastructure for their country and wanting to promote identity federation to their connected campuses. More information can be found here.

Join CHAIN-REDS on Facebook and Twitter!

The CHAIN-REDS consortium kindly invites you to join the related CHAINScience Gateway Community on Facebook and to follow @ChainREDS on Twitter to stay updated on CHAIN-REDS activities and events and promote your project / initiative to the community!

More news / events...