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The Role of EU-T0 in the European e-Infrastructure ecosystem

The EU-T0 will federate several major European e-Infrastructures for research funded by the partners, into a virtual Tier-0 center, enabling and coordinating development of research computing services for many disciplines of physics, and beyond.

The EU-T0 vision is to create a hub of knowledge and expertise that optimises the investment of the funding agencies in proven e-infrastructure by broadening, simplifying and harmonising access, driven by well defined user requirements.

The EU-T0 partners:



Other agencies are joining

The partners federated in EU-T0 have built considerable knowledge in data archiving, data management and scientific user support, which has been beneficial to other fields of research, such as space physics, medical physics, earth science as well as pharmaceutical, neuroscience and other life sciences research.

CERN and the EIROforum members have published a vision for the evolution of the European e-Infrastructure aiming to create a sustainable IT environment open to all science communities. The vision capitalizes on the investments in computing infrastructure made over the last decade, and the facilities in place to support the major European Research Infrastructures (RIs).

The priorities are to create a European data-infrastructure, built upon a substantial existing and well proven physical infrastructure:

- Advanced, high speed, high capacity international networks;
- Common Authorisation, Authentication and Accounting (AAA) system;
- A coherent set of data services, and being driven by a well-defined set of user requirements from a range of science disciplines.

The major objectives are:

- a) To acknowledge and build upon the already well proven, successful, federated e-Infrastructures that are owned or funded by the EU-T0 partners;
- b) To extend the existing e-Infrastructure to be more accessible to more of the astronomy, astrophysics, astro-particle physics, cosmology, nuclear physics, and particle physics scientific communities;
- c) To develop new services and software tools as required and provide repositories for sharing data and software;
- d) To Integrate with other forms of e-infrastructure and to work towards convergence of the HPC and HTC paradigms;
- e) To broaden existing collaborations beyond Europe;
- f) To collaborate with industry and commercial service evaluation and brokerage;
- g) Creation of a training network to contribute to the develop of a new profile of “data scientist”.

During the EU-T0 workshop at the end of April was discussed and agreed a plan of action for the next H2020 calls:

deadline Sept. 2nd, 2014

- **"DataCloud"** project in response to the e-infra-1-2014 call sub-topic 4&5
It aims at building a data/computing platform targeted at scientific communities, deployable on multiple hardware provisioned over hybrid (private or public) e-infrastructure. The platform will be built by leading European developers, resources providers, e-infrastructures and scientific communities
- **"Data backbone, ZEPHYR"** project in response to the e-infra-1-2014, sub-topic 7
It will develop a prototypes and proof of concept to enable the agile handling of the scientific data from future large scale facilities and research communities at the Zetabyte-Exascale level

deadline January, 2015

VRE and software: organization, repositories and provision of services, preserving data, and new software programming test-bed provision across communities;

“data scientist” to build a new profile and to promote careers

Further discussions with EGI.eu, EUDAT, Helix Nebula and PRACE to coordinate in view of future H2020 calls.

Evaluating the possibility to establish an European e-infrastructure that could provide permanent computing and data management services to a wide Scientific community.