

Research Advances through European Computing and Data Technologies

Tuesday, 9 April 2013 12:00 (30 minutes)

Impact

The aim of the talk is to provide evidence in which scientific and partly commercial environments and projects products of the EMI product suite have made a difference over years.

Evidence is provided by product case studies in context of science, but also by scientific publications performed over the years.

While many scientific product case studies will be presented that show the impact in scientific environment, the talk will also provide more insights into case studies of commercial domains.

As big data is becoming more and more a hot topic in the world of IT, the survey of use cases will also have a close look on different methods and procedures used to manage existing scientific data in a distributed fashion.

The audience of the talk is able to get the insights of how EMI products can be clever re-used as core building blocks for various other products and how they could be combined with other powerful existing products in the wider open source market in order to create higher-level services.

As EMI being one of the major technology providers in the world, the talk also will review the contributions to the greater field of scientific computing and its advancements over years, including a view on how these advancements have made a difference.

URL

<http://www.eu-emi.eu/>

Summary

Europe is a major technology provider for a wide variety of IT infrastructures with geographically dispersed computational resources and data storages. The mature IT technologies developed, maintained, and deployed throughout the world from the European Middleware Initiative (EMI) serve the demands of those IT infrastructures since over a decade. This talk will present different case studies that demonstrate research advances in a wide area of scientific fields such as

physics, bio-medicine, neuro-science, fusion science.

This included the view on the scientific data that is used in these different case studies and how this data is used, preserved, and exchanged among scientific research groups world-wide.

In addition, the talk will outline potential case studies in commercial environments and provided one specific example how EMI products can be exploited by companies.

Description

The EMI project collected different case studies during the course of the project that provide numerous evidence that large-scale IT infrastructures and research advances in science rely on.

EMI currently develops and maintains products from four technical areas that are computing, data, information, and most notably security.

The many different services required need to be strongly interconnected while at the same time being easy and independently re-usable for various purposes and projects.

Detailed studies surveying the use of those EMI products in scientific setups have been performed in an illustrative and technical fashion and will be presented.

Related scientific publications are collected to augment the technical advancement with those that contributed to scientific research in discipline-specific setups.

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