Contribution ID: **40** Type: **Oral Presentation**

CernVM-FS - status and latest developments from RAL Tier-1 perspective

Friday, 23 March 2018 09:30 (30 minutes)

The CernVM File System (CernVM-FS) was developed to assist WLCG High Energy Physics (HEP) collaborations to deploy software on the worldwide distributed computing infrastructure used to run data processing applications. CernVM-FS has been the primary method for distributing WLCG experiment software and condition data for the last 7 years, and in the same period the use of CernVM-FS outside WLCG has been growing steadily and an increasing number of Virtual Organizations (VOs), both within the HEP and in other communities (i.e. Space, Natural and Life Sciences), have identified this technology as a more efficient way of maintaining and accessing software across Grid and Cloud computing environments.

This presentation will give an overview of the CernVM-FS infrastructure deployed at RAL Tier-1 as part of the WLCG Stratum-1 network, but also as the facility provided to setup a complete service - the Release Manager Machine, the Replica Server and a customized uploading mechanism - for the non-LHC communities within EGI and that can be used as a proof of concept for other research infrastructures and communities looking to adopt a common software repository solution.

The latest developments to widen and consolidate the CernVM-FS infrastructure as a global facility (with main contributors in Europe, North America and Asia) are reviewed, such as the implementation of the 'confidential' CernVM-FS repositories, a requirement for academic communities willing to use CernVM-FS technology. The presentation will include a case study of a Life Science research community, describing the design of their production models around 'public' and 'confidential' CernVM-FS repositories and we examine how a common mechanism to access the latter is developed using Robot X.509 Grid certificates.

Primary author: Mr CONDURACHE, Catalin (STFC Rutherford Appleton Laboratory)

Presenter: Mr CONDURACHE, Catalin (STFC Rutherford Appleton Laboratory)

Session Classification: Networking, Security, Infrastructure & Operation Session

Track Classification: Networking, Security, Infrastructure & Operations