Contribution ID: **35** Type: **Oral Presentation**

Recent Developments and Plans on CernVM-FS at RAL

Wednesday, 3 April 2019 14:40 (20 minutes)

Firmly established as an extremely effective mechanism for providing scalable, POSIX like, access to experiment software and conditions data for the LHC experiments and many other research groups at Grid sites, the CernVm File System (CernVM-FS) continued to present increased interest to many other High Energy Physics (HEP) and non-HEP (i.e. Space, Natural and Life Sciences) communities activating within and making use of various Cloud computing environments.

This presentation will give an overview of the CernVM-FS infrastructure deployed at RAL Tier-1 as part both of the WLCG Stratum-1 network and the CernVM-FS facility that provides a complete service for the non-LHC communities within EGI and that can be used as a proof of concept for other research infrastructures and organizations looking to adopt a common software repository solution.

Focus of the presentation will be on the latest developments to widen the scope of the CernVM-FS technology usage within various research communities. The status of implementing the 'confidential' CernVM-FS repositories - a requirement for academic communities willing to use CernVM-FS technology - is reviewed, including a case study that describes the design of a production model around 'standard' and 'protected' repositories.

We will also describe the recent work undertaken at RAL with Large Scale CernVM-FS and DynaFed. Large Scale CernVM-FS is an extension of data distribution mechanism developed by Open Science Grid collaboration that allows access to files from any storage offering http access. DynaFed (Dynamic Federation) is a system that can federate http storage endpoints and is able to present a huge distributed repository as a single one and the presentation will discuss the steps taken to prototype and build a global file system for data access using Large Scale CernVM-FS and DynaFed.

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Session Classification: Networking, Security, Infrastructure & Operations

Track Classification: Network, Security, Infrastructure & Operations