

Access to WLCG resources: The X509-free pilot

Thursday 13 October 2016 12:00 (15 minutes)

Access to WLCG resources is authenticated using an X509 and PKI infrastructure. Even though HEP users have always been exposed to certificates directly, the development of modern Web Applications by the LHC experiments calls for simplified authentication processes keeping the underlying software unmodified.

In this work we will show an integrated Web-oriented solution (code name Kipper) with the goal of providing access to WLCG resources using the user's home organisation's credentials, without the need for user-acquired X.509 certificates. In particular, we focus on identity providers within eduGAIN, which interconnects research and education organisations worldwide, and enables the trustworthy exchange of identity-related information.

eduGAIN has been integrated at CERN in the SSO infrastructure so that users can authenticate without the need of a CERN account.

This solution achieves "X.509-free" access to Grid resources with the help of two services: STS and an online CA. The STS (Security Token Service) allows credential translation from the SAML2 format used by Identity Federations to the VOMS-enabled X.509 used by most of the Grid. The IOTA (Identifier-Only Trust Assurance) CA is responsible for the automatic issuing of short-lived X.509 certificates.

The IOTA CA deployed at CERN has been accepted by EUGridPMA as the CERN LCG IOTA CA, included in the IGTF trust anchor distribution and installed by the sites in WLCG.

We will also describe the first example of Kipper allowing eduGAIN access to WLCG, the WebFTS interface to the FTS3 data transfer engine, enabled by integration of multiple services: WebFTS, CERN SSO, CERN LCG IOTA CA, STS, and VOMS

Primary Keyword (Mandatory)

Security and policies

Secondary Keyword (Optional)

Tertiary Keyword (Optional)

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Session Classification: Track 8: Security, Policy and Outreach

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