

HTTP as a Data Access Protocol: Trials with XrootD in CMS' AAA Project

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The main goal of the project to demonstrate the ability of using HTTP data federations in a manner analogous to today's AAA infrastructure used from the CMS experiment. An initial testbed at Caltech has been built and changes in the CMS software (CMSSW) are being implemented in order to improve HTTP support. A set of machines is already set up at the Caltech Tier2 in order to improve the support infrastructure for data federations at CMS. As a first step, we are building systems that produce and ingest network data transfers up to 80 Gbps. In collaboration with AAA, HTTP support is enabled at the US redirector and the Caltech testbed. A plugin for CMSSW is being developed for HTTP access based on the libdavix software. It will replace the present fork/exec or curl for HTTP access. In addition, extensions to the Xrootd HTTP implementation are being developed to add functionality to it, such as client-based monitoring identifiers. In the future, patches will be developed to better integrate HTTP-over-Xrootd with the OSG distribution. First results of the transfer tests using HTTP will be presented together with details about the setup.

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Network systems and solutions

Primary Keyword (Mandatory)

Distributed data handling

Tertiary Keyword (Optional)

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