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Software installation and condition data distribution via CernVM FileSystem in ATLAS

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The ATLAS Collaboration is managing one of the largest collections of software among the High Energy Physics Experiments. Traditionally this software has been distributed via rpm or pacman packages, and has been installed in every site and user's machine, using more space than needed since the releases could not always share common binaries. As soon as the software has grown in size and number of releases this approach showed its limits, both in terms of manageability, used disk space and performance. The adopted solution is based on the CernVM FileSystem, a fuse-based http, read-only filesystem which guarantees file de-duplication, scalability and performance. Here we describe the ATLAS experience in setting up the CVMFS facility and putting it into production, for different type of use-cases, ranging from single users' machines up to large Data Centers, for both Software and Conditions Data. The performance of CernVMFS, both with software and condition data access, will be shown, comparing with other filesystems currently in use by the Collaboration.

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