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The ATLAS Software Installation System v2: a highly available system to install and validate Grid and Cloud sites via Panda

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The ATLAS Installation System v2 is the evolution of the original system, used since 2003. The original tool has been completely re-designed in terms of database backend and components, adding support for submission to multiple backends, including the original WMS and the new Panda modules. The database engine has been changed from plain MySQL to Galera/Percona and the table structure has been optimized to allow a full High-Availability (HA) solution over WAN. The

servlets, running on each frontend, have been also decoupled from local settings, to allow an easy scalability of the system, including the possibility of an HA system with multiple sites. The clients can also be run in multiple copies and in different geographical locations, and take care of sending the installation and validation jobs to the target Grid or Cloud sites.

Moreover, the Installation DB is used as source of parameters by the automatic agents running in CVMFS, in order to install the software and distribute it to the sites.

The system is in production for ATLAS since 2013, having as main sites in HA the INFN Roma T2 and CERN AI. The LJSFi2 engine is directly interfacing with Panda for the Job Management, AGIS for the site parameter configurations, and CVMFS for both core components and the installation of the software itself.

LJSFi2 is also able to use other plugins, and is essentially VO-agnostic, so can be directly used and extended to cope with the requirements of any Grid or Cloud enabled VO.

In this work we'll present the architecture, performance, status and possible evolutions to the system for the LHC Run2 and beyond.

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