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AGIS: Integration of new technologies used in ATLAS Distributed Computing

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The variety of the ATLAS Distributed Computing infrastructure requires a central information system to define the topology of computing resources and to store the different parameters and configuration data which are needed by the various ATLAS software components.

The ATLAS Grid Information System (AGIS) is the system designed to integrate configuration and status information about resources, services and topology of the computing infrastructure used by ATLAS Distributed Computing applications and services. Being an intermediate middleware system between clients and external information sources (like central BDII, GOCDB, MyOSG), AGIS defines the relations between experiment specific used resources and physical distributed computing capabilities.

Being in production during LHC Run1 AGIS became the central information system for Distributed Computing in ATLAS and it is continuously evolving to fulfill new user requests, enable enhanced operations and follow the extension of ATLAS Computing model.
ATLAS Computing model and data structures used by Distributed Computing applications and services are continuously evolving and trend to fit newer requirements from ADC community. In this note, we describe the evolution and the recent developments of AGIS functionalities, related to integration of new technologies recently become widely used in ATLAS Computing like flexible computing utilization of opportunistic Cloud and HPC resources, ObjectStore services integration for Distributed Data Management (Rucio) and ATLAS workload management (PanDA) systems, unified storage protocols declaration required for PandDA Pilot site movers and others.

The improvements of information model and general updates are also shown, in particular we explain how other Collaborations outside ATLAS could benefit the system as a computing resources information catalogue. AGIS is evolving toward a common information system not coupled to a specific experiment.

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