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The ATLAS Distributed Computing project for LHC Run-2 and beyond.

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The ATLAS Distributed Computing infrastructure has evolved after the first period of LHC data taking in order to cope with the challenges of the upcoming LHC Run2. An increased data rate and computing demands of the Monte-Carlo simulation, as well as new approaches to ATLAS analysis, dictated a more dynamic workload management system (ProdSys2) and data management system (Rucio), overcoming the boundaries imposed by the design of the old computing model. In particular, the commissioning of new central computing system components was the core part of the migration toward the flexible computing model. The flexible computing utilization exploring the opportunistic resources such as HPC, cloud, and volunteer computing is embedded in the new computing model, the data access mechanisms have been enhanced with the remote access, and the network topology and performance is deeply integrated into the core of the system. Moreover a new data management strategy, based on defined lifetime for each dataset, has been defined to better manage the lifecycle of the data. In this note, the overview of the operational experience of the new system and its evolution is presented

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