

Evolution of monitoring, accounting and alerting services at INFN-CNAF Tier1

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CNAF is the national center of INFN for IT services. The Tier-1 data center operated at CNAF provides computing and storage resources mainly to scientific communities such as those working on the four LHC experiments and 30 more experiments in which INFN is involved.

In past years, every CNAF departments used to choose their preferred tools for monitoring, accounting and alerting. In particular, the teams at Tier-1 department

were using several software packages, such as Lemon (developed at CERN and customized to suit the needs of a datacenter managing scientific data), Nagios (mainly used for alerting purposes), a system based on Graphite database and a number of in-house developed services for web reporting.

In 2015, a task force started with the goal of defining and implementing a common infrastructure based on Sensu, InfluxDB and Grafana, to be adopted by the various CNAF departments.

Once the new infrastructure was deployed, a major task was to adapt the whole monitoring, accounting and alerting services.

In this paper we present the steps followed at the Tier-1 in order to fully complete the migration, having all the new services put into production and the old ones dismissed or no more needed. We describe how the monitoring sensors and alerting checks have been redesigned to be adapted to the Sensu platform. Furthermore, we explain the collection of accounting data for storage and computing. The design of web dashboards for data presentation on a common web portal is then reported. Finally, we outline the porting of historical data from Lemon and Graphite systems to InfluxDB.

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