Sample Project: Scalable Hardware monitoring

Code	PH2390
Programme	TRAIN-PTES
Department	PH
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Title

Scalable Hardware monitoring

Description

The ATLAS TDAQ Sysadmin group manages and maintains the ATLAS online computing farm that is composed by ~3000 PCs.

Our team needs to monitor the status of operating system, service and hardware health of every PC in the farm, for triggering interventions and for later analysis.
The monitoring of the hardware status is done primarily via the IPMI protocol. Together with other experts in the team, the candidate is going to implement a distributed, highly scalable tool for gathering tens of parameters from each server, and feeding them to the Icinga and Ganglia monitoring systems, abstracting from the hardware and vendor peculiarities.

Previous knowledge of C programming, TCP/IP networks and PC hardware would constitute an advantage.

Skills

Databases: MySQL. Information Technologies: Developing distributed computing systems (e.g. clusters, batch systems), System administration (e.g. with GNU/Linux, Microsoft Windows, Networks), Using software development tools (e.g. Git, Jira, Trac). Programming Languages: C, Perl, Python TCP/IP, IPMI, Ganglia, Icinga

Disciplines

Information Technologies