



Sample Project: Improve monitoring agents of CERN data centre

Code	IT2482
Programme	TRAIN-PTES
Department	IT
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Title

Improve monitoring agents of CERN data centre

Description

CERN is running a large data centre that constitutes a central part of the Worldwide LHC Computing Grid (WLCG). The Agile Infrastructure (AI) Monitoring project is working on the modernisation of the tools used to monitor CERN data centre to cope with the planned 15,000 servers and over 100,000 virtual machines within three years. The new monitoring solutions are being developed around modern open source technologies such as Hadoop, ElasticSearch, etc. The AI monitoring team is now looking at new solutions to replace the monitoring agent (lemon-agent) running in all data centre nodes and responsible for the orchestration of hundreds of monitoring sensors. This core component of the monitoring architecture is responsible for the continuously sampling of metrics and publication of log at a high frequency. As a trainee, you will be working in the AI monitoring team in the implementation of this new tool. Your work will involve the design and architecture of the new tool, the analysis of open source technologies, software development and testing, and the collaboration in the day-to-day management and operation of a large data centre.

Skills

Databases: MySQL, NoSQL. Information Technologies: Using software development tools (e.g. Git, Jira, Trac), Using web application frameworks (e.g. Django, GWT, APEX). Programming Languages: C, Java, Python Hadoop, ElasticSearch

Disciplines

Information Technologies

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