

WLCG Monitoring

Consolidation and further evolution

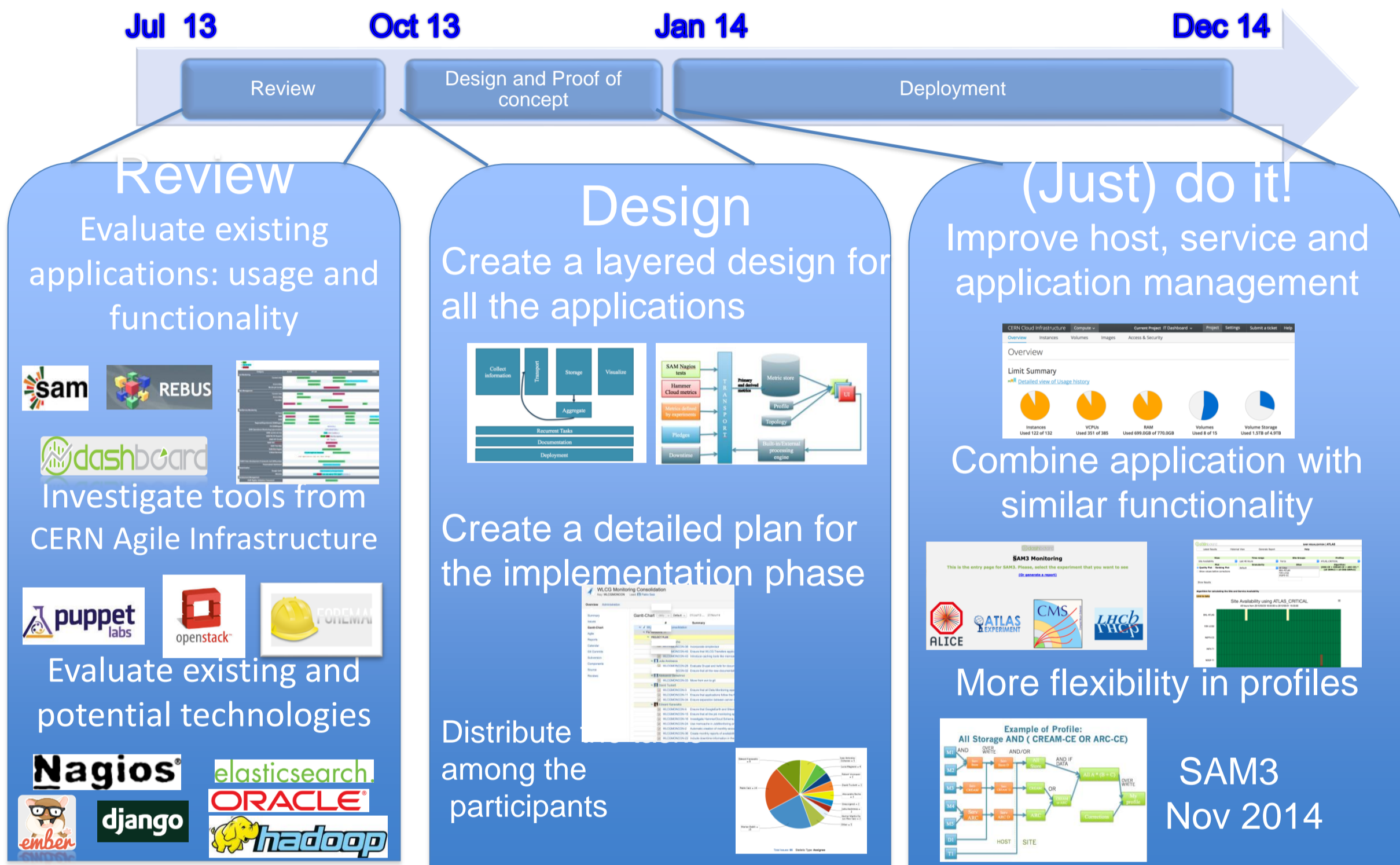
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Introduction

The WLCG monitoring system solves the challenging task of keeping track of the LHC computing activities on the WLCG infrastructure, ensuring health and performance of the distributed services at more than 170 sites. The current challenge consists of decreasing the effort needed to operate the monitoring service and to satisfy the constantly growing requirements for its scalability and performance. This contribution describes the recent consolidation work aimed to reduce the complexity of the system, and to ensure more effective operations, support and service management. This was done by unifying where possible the implementation of the monitoring components. The contribution also covers further steps like the evaluation of the new technologies for data storage, processing and visualization and migration to a new technology stack

We know we can monitor the WLCG

How can we do it with **less resources?**



Achievements

- Reduced effort on service management and support
- Reduced number of applications supported while maintaining all the functionality
 - Moving all monitoring services to the CERN Agile Infrastructure
 - Concentrate on WLCG monitoring
 - SAM3 in production, with much more flexibility
 - Layered designed in the system architecture
- Evaluation of other technologies: ElasticSearch and Hadoop



Conclusions

- ✓ The WLCG Monitoring consolidation project achieved, after 18 months, a significant reduction in the effort needed to monitor the WLCG
- ✓ The project evaluated all the areas of monitoring: Job Processing, Data Management, Infrastructure and Dissemination, and adopted a layered design for all of them
- ✓ The project identified different technologies worth following up

Future work

- There are several areas identified by the WLCG Monitoring Consolidation project that should be further investigated to keep reducing the effort. In particular:
- Using NoSQL frameworks, like Hadoop or ElasticSearch
 - Improve the Nagios deployment model
 - Automate the creation of accounting reports
 - Adapt the SAM3 profiles to reflect better the site performance

