



Published on *CERN openlab* (<http://test-static-05.web.cern.ch>)

[Home](#) > Log Analysis and Classification of CERN Control Systems

---

## Log Analysis and Classification of CERN Control Systems

[1]

### **Date published:**

Monday, 1 September, 2014

### **Document type:**

Summer student report

### **Author(s):**

Z. D. Kassabov

**Project Specification:** CERN is running several large WinCC OA distributed systems, each of them counting ~100-150 computers and several thousands of processes. The log files currently produced by these processes are only looked at very seldom to debug problems. The project will consist of introducing a modern log analysis tool to analyze these log files in real time and inform the operators/experts of possible problems. The tools will also be used to extract statistics and produce reports about the control systems. The selected tool will be Elastic Search with Kibana. **Abstract:** This project has consisted in examining different alternatives for monitoring and analyzing the log messages produced by the control system software using at CERN. Its main accomplishments have been a performance measurement of the Logstash tool under both realistic and extreme load scenarios, the development of a flexible and powerful performance testing tool, and the proposal of a system that automatically determines the importance that a given log message might have for an operator based on a Bayesian filter.

### **Report on ZENODO:**

[Document on ZENODO](#) [2]

- [Visit Us](#)
- [RSS Feeds](#)

DISCLAIMER: This Web page contains pointers to material related to the management of CERN openlab in the Information Technology Department at the European Organization for Nuclear Research (CERN). Their use and distribution are regulated by the [CERN copyright notice](#).



---

**Source URL:** [http://test-static-05.web.cern.ch/publications/technical\\_documents/log-analysis-and-classification-cern-control-systems](http://test-static-05.web.cern.ch/publications/technical_documents/log-analysis-and-classification-cern-control-systems)

**Links**

[1] [http://test-static-05.web.cern.ch/publications/technical\\_documents/log-analysis-and-classification-cern-control-systems](http://test-static-05.web.cern.ch/publications/technical_documents/log-analysis-and-classification-cern-control-systems)

[2] <https://zenodo.org/record/15075>