

Cluster architecture for java web hosting at CERN

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Over the last years, we have experienced a growing demand for hosting java web applications. At the same time, it has been difficult to find an off-the-shelf solution that would enable load balancing, easy administration and a high level of isolation between applications hosted within a J2EE server.

The architecture developed and used in production at CERN is based on a linux cluster. A piece of software developed at CERN, JPSManager, enables easy management of the service by following the self-management paradigm. JPSManager also enables quick recovery in case of hardware failure. The isolation between different clients of the service is implemented using multiple instances of Apache Tomcat, but the architecture is open and a different J2EE server can be incorporated if necessary. This paper describes this architecture in detail and analyses its advantages and limitations. Examples of HEP related applications, which make use of this architecture, are also given.

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