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# On StoRM performance and scalability

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StoRM is a Storage Resource Manager (SRM) service adopted in the context of WLCG to provide data management capabilities on high performing cluster and parallel file systems as Lustre and GPFS. The experience gained in the readiness challenges of LHC Grid infrastructure proves that scalability and performance of SRM services are key characteristics to provide effective and reliable storage resources.

In this paper, the methodology for testing the scalability and performance of the StoRM service is presented, and tests results are analyzed and evaluated to provide guidelines for sites to build right scaled StoRM based storage system.

This article presents a service performance analysis approach for web based Storage Resource Manager as StoRM. The possible metrics adopted for realistic performance evaluation are presented together with analysis of service configuration parameters and data flow for different SRM calls.

Following the proposed approach, a report analysis and results of performance tests on StoRM service is presented and compared with typical use cases from real high energy physic experiments. Results show how the system behaves changing service configurations and deployment layouts. Evaluations of results define important guidelines for Grid sites to proper scale the capacity of the StoRM installation depending on sizes and experiment requirements.

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