StoRM Certification process

Content:
StoRM is an implementation of SRM interface version 2.2 used by all Large Hadron Collider (LHC) experiments (like ATLAS, ALICE, CMS and LHCB) and non-LHC experiments (like Babar, CDF, SuperB, VIRGO) as SRM endpoint at different Tiers of WLCG. The complexity of its services and the demand of experiments and users are increasing day by day. The high and increasing need in terms of service level by StoRM users communities makes it necessary to design and implement a more effective testing procedure to quickly and reliably validate new StoRM candidate releases both in code side (for example via test units, and schema valuator) and in final product software (for example via functionality tests, and stress tests).

Testing software services is a very critical quality activity, performed in a very ad hoc, informal manner by developers, testers and users of StoRM up to now. In this paper, we describe the certification mechanism adopted by StoRM team to increase the robustness and reliability of StoRM services. Various typologies of tests, such as quality (like the structure of database), installation, configuration, functionality, stress and performance, defined on the base of a set of use cases gathered as consequence of the collaboration among StoRM team, experiments and users, are illustrated. Each typology of test is either increased or decreased easily from time to time.

The proposed mechanism is based on a new configurable testsuite. This is executed by the certification team, who is responsible for validating the release candidate package as well as bug fix (or patch) package, given a certain testbed that considers all possible use cases. In correspondence of each failure, the package is given back to developers waiting for validating a new package.

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