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Testing as a Service with HammerCloud

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HammerCloud was designed and born under the needs of the grid community to test the resources and automate operations from a user perspective. The recent developments in the IT space propose a shift to the software defined data centers, in which every layer of the infrastructure can be offered as a service.

Testing and monitoring is an integral part of the development, validation and operations of big systems, like the grid. This area is not escaping the paradigm shift and we are starting to perceive as natural the Testing as a Service (TaaS) offerings, which allow to test any infrastructure service, such as the Infrastructure as a Service (IaaS) platforms being deployed in many grid sites, both from the functional and stress perspectives.

This work will review the recent developments in HammerCloud and its evolution to a TaaS conception, in particular its deployment on the Agile Infrastructure platform at CERN and the testing of many IaaS providers across Europe in the context of experiment requirements. The first section will review the architectural changes that a service running in the cloud needs, such an orchestration service or new storage requirements in order to provide functional and stress testing. The second section will review the first tests of infrastructure providers on the perspective of the challenges discovered from the architectural point of view. Finally, the third section will evaluate future requirements of scalability and features to increase testing productivity.

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