gUSE verification in the EGI Cloud Federation

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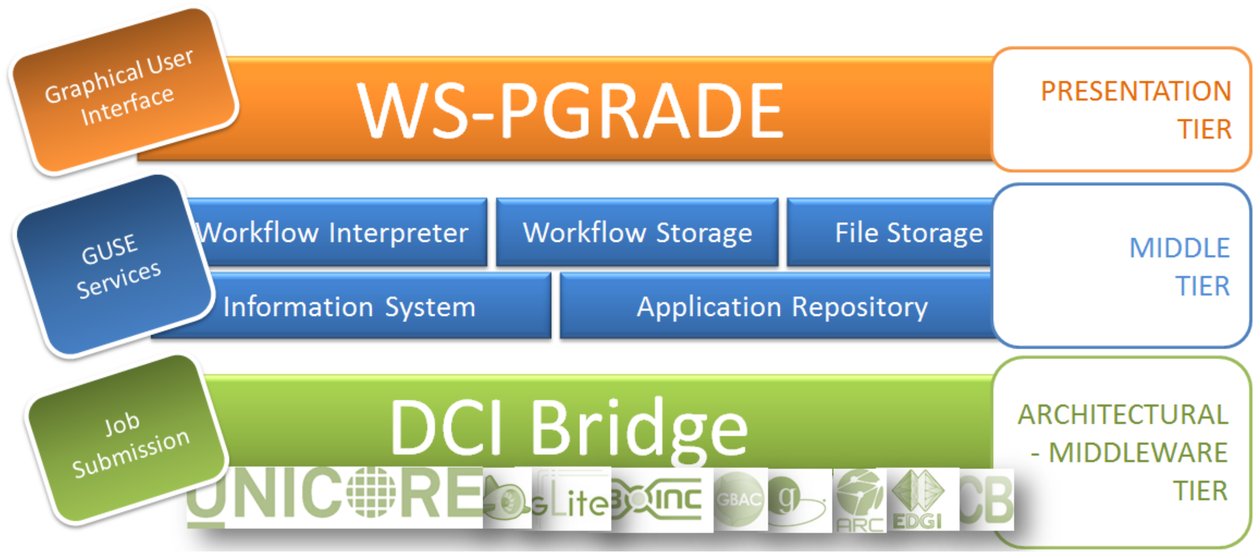
WS-PGRADE/gUSE

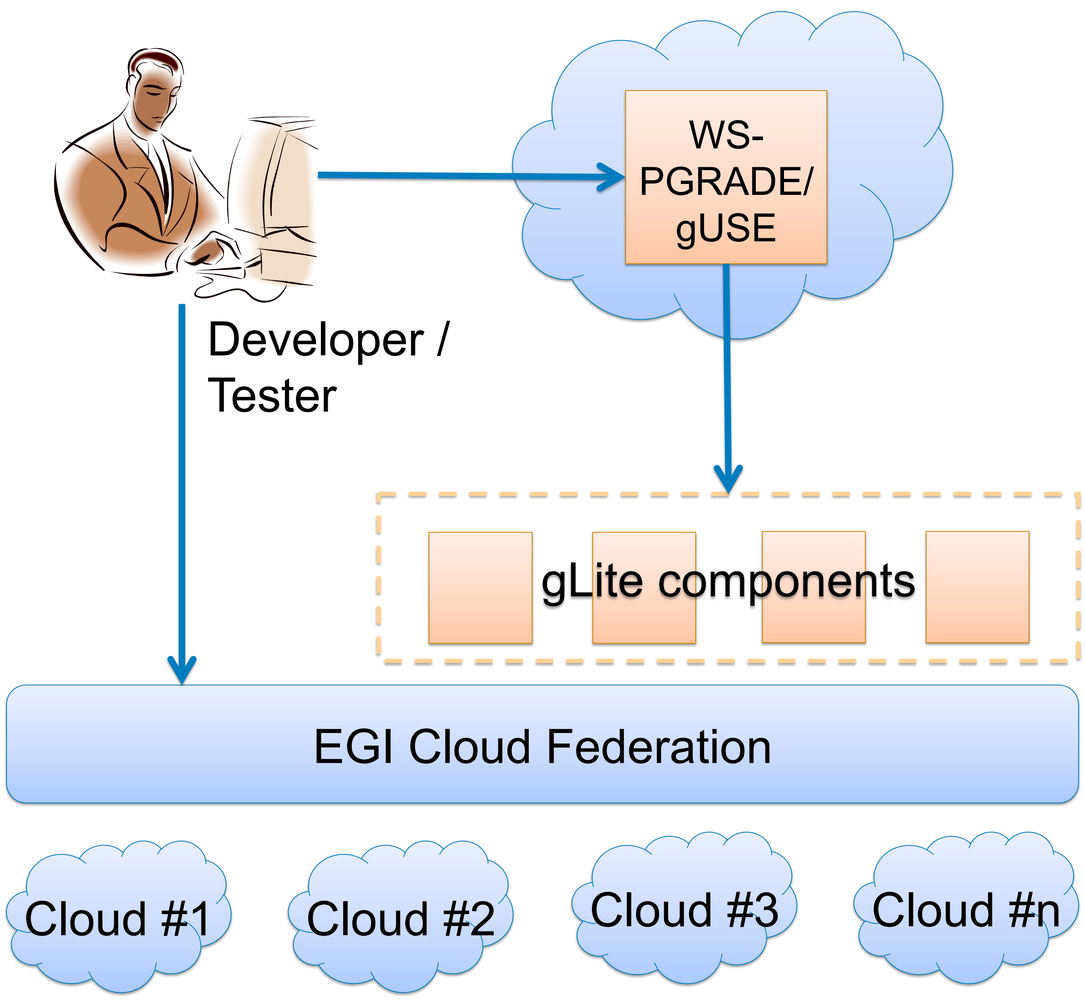
gUSE (grid and cloud User Support Environment) is a well-known and permanently improving open source DCI (Distributed Computing Infrastructure) gateway framework developed by the Laboratory of Parallel and Distributed Systems (LPDS). It enables users the convenient and easy access to grid and cloud infrastructures.

The **WS-PGRADE** portal provides the high-level representation of the gUSE system. This portal is the graphical user interface of the gUSE/WS-PGRADE framework. WS-PGRADE supports simple development and fast submission of distributed applications executed on the computational resources of various DCIs including clusters, service grids (ARC, gLite, Globus, UNICORE), BOINC desktop grids, clouds (via CloudBroker Platform and Google App Engine).

The problem

The testing and debugging of new releases of **WS-PGRADE** and **gUSE** is a significant challenge for the developer team. The DCIs underpinning WS-PGRADE/gUSE are in a constant evolution and change, planned and unplanned downtimes within them are frequent. These disturbances make WS-PGRADE/gUSE test scenarios hard, often impossible to repeat, causing significant overhead on planning, developing and executing test cases.





The envisaged solution

The WS-PGRADE developer team is seeking for a solution that provides stable DCIs for the testing team in order to run pre-defined test scenarios in a repeatable way. The DCIs participating in these tests are envisaged as small scale environments built from virtual images predefined and validated for WS-PGRADE tests.

The environments should replicate the functional capabilities of large scale DCIs that are used by WS-PGRADE for production runs, but without the disturbances in availability and configuration. The SZTAKI collaborates in the "Federated Clouds Task Force" of the European Grid Infrastructure (EGI) in order to create and operate virtualised DCI infrastructures for WS-PGRADE tests.