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Experience in building heterogeneous cloud/grid infrastructure in BITP data centre

Printable summary: this is the only </br> section of the abstract that will
be published in the Book of Abstracts.

In this poster will be presented current installation of cloud platform in BITP data centre. The main reason to use the mix of cloud and physical resources is a variety of hardware families presented in data centres and job tasks for submission that require different quantity and type of CPU, RAM and storage capacity. Cloud can intelligently reallocate resources and organise more efficient management of available resources. In BITP we tried to create dynamic bridge between Torque scheduler that serves as a head of physical cluster and Openstack Havana (with Neutron) interacting by Openstack API requests (idea was based on usage of project Dynamic Torque); idea of package distribution for data analysis was based on usage of CVMFS: local NGI_UA s repository and ALICE experiment s repository managed by CERN. For authentication was selected keystone-voms plugin for managing VOMS authentication of grid users and compatible with usage in Federated Cloud. As a result we received stable, load balanced cloud/grid system, able to serve as data centre with dynamically allocation properties of resources and available for job submition and data analysis either between two parts of clouds (using availability zones) or directly to resources of EGI Federated Cloud or organise data analysis for LHC.

Description of content and intended audience</br>- the outcome you expect to achieve.

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Primary authors: SHADURA, Oksana (BITP); SVISTUNOV, Sergiy (Bogolyubov Institute for Theoretical Physics NAS Urkaine)

Presenter: SHADURA, Oksana (BITP)