Contribution ID: **14** Type: **Lightning talks**

Design and deployment of a self-managed infrastructure for large-scale medical image analisys

Thursday, 11 October 2018 17:10 (10 minutes)

Large-scale analysis of medical images using biomarkers requires an infrastructure which commonly exceeds the resources available for research groups. Besides, some biomarkers can benefit from specific hardware accelerators. Additionally, medical data analysis may require using only certified environments in specific countries, due to legal constraints. Cloud platforms enable medical institutions to use, paying by utilisation, several services like powerful machines, specific hardware and the guarantee of the execution in certified environments. This work describes the designed architecture for large-scale medical images analysis using biomarkers in Cloud platforms. Docker containers provide the developers with a way to encapsulate and deliver their applications and its dependencies for convenient distribution, so the biomarkers are encapsulated into Docker containers. The architecture involves all process of biomarker distribution pipeline: from updating the biomarker in the code repository, building the Docker image of the biomarker and executing it on a Cloud infrastructure. This infrastructure includes dynamic horizontal elasticity according to the jobs queue. Moreover, the infrastructure uses a large-scale distributed storage for accessing the data to be analysed.

Presenter: LÓPEZ HUGUET, Sergio (Universitat Politècnica de València)

Session Classification: Lightning talks