

SALSA - Scalable Adaptive Large Structures Analysis

Fedor M.¹, Mayorov A.², Butenko Y.², Vala M.^{2,3}

¹SPSEKE, Kosice, Slovakia

²LIT, Joint Institute for Nuclear Research, Dubna, Russia

³FEI, Technical University of Kosice, Kosice, Slovakia

Data environments are growing exponentially and the complexity of data analysis is becoming critical issue. The goal of SALSA project is to provide tools to make connection between human and computer to understand and learn from each other. Analysis of different parameters in N-dimensional space should be made easy and intuitive. Task distribution system has to be adaptive to the environment where analysis is done and has provide easy access and interactivity to the user. SALSA contains distribution network system that can constructed at level of clusters, nodes, processes and threads and will be able to build any tree structure. User interface is implemented as web service that can connect to SALSA network and distribute tasks to workers. Web application is using latest web technologies like Angular, WebSockets to provide interactivity and dynamism. JavaScript ROOT (JSROOT) package is used as analysis interface. EOS storage support with JSROOT is included to provide possibility to browse files and view results on web browser. Users can create, delete, start and stop tasks. The web application has several templates for different types of user tasks that makes it possible to quickly create new task and submit it to the SALSA network.