

21st International Conference on Computing in High Energy and Nuclear Physics (CHEP2015)



Contribution ID: 407

Type: oral presentation

Integrating network and transfer metrics to optimize transfer efficiency and experiment workflows

Monday, 13 April 2015 15:15 (15 minutes)

The Worldwide LHC Computing Grid relies on the network as a critical part of its infrastructure and therefore needs to guarantee effective network usage and prompt detection and resolution of any network issues, including connection failures, congestion, traffic routing, etc. The WLCG Network and Transfer Metrics project aims to integrate and combine all network-related monitoring data collected by the WLCG infrastructure. This includes FTS monitoring information, monitoring data from the XRootD federation, as well as results of the perfSONAR tests. The main challenge consists of further integrating and analyzing this information so that it can be turned into actionable insight for optimization of data transfers and workload management systems of the LHC experiments. The presentation will include technical description of the WLCG network monitoring infrastructure as well as results of the analysis of the collected data. It will also highlight how results of this analysis can be used in order to improve efficiency of the WLCG computing activities.

Primary authors: BABIK, Marian (CERN); MC KEE, Shawn (University of Michigan (US))

Co-authors: FORTI, Alessandra (University of Manchester (GB)); DE SALVO, Alessandro (Universita e INFN, Roma I (IT)); PETZOLD, Andreas (KIT - Karlsruhe Institute of Technology (DE)); HOEFT, Bruno Heinrich (KIT - Karlsruhe Institute of Technology (DE)); WALKER, Christopher John (University of London (GB)); GRIGORAS, Costin (CERN); RAND, Duncan (Imperial College Sci., Tech. & Med. (GB)); MAZZONI, Enrico (Sezione di Pisa (IT)); LOPEZ MUNOZ, Fernando (PIC (ES)); CHOLLET, Frederique (Centre National de la Recherche Scientifique (FR)); DUCKECK, Guenter (Ludwig-Maximilians-Univ. Muenchen (DE)); Mr CHEN, HSIN YEN (ASGC); GABLE, Ian (University of Victoria (CA)); VUKOTIC, Ilija (University of Chicago (US)); ZURAWSKI, Jason (ESnet); CLOSIER, Joel (CERN); SHADE, John (CERN); DIAZ CRUZ, Jorge Alberto (Fermi National Accelerator Lab. (US)); FLIX MOLINA, Jose (Centro de Investigaciones Energ. Medioambientales y Tecn. - (ES)); DE, Kaushik (University of Texas at Arlington (US)); OCONNOR, Michael (E); SALICHOS, Michail (CERN); Dr CAMPANA, Simone (CERN); Dr WILDISH, Tony (Princeton University (US)); TIGERSTEDT, Ulf Bobson Severin (Helsinki Institute of Physics (FI)); GARONNE, Vincent (CERN); KOTLYAR, Volodymyr (Institute for Theoretical Physics, National Science Center Kharkov Institute of Physics and Technology, Nat. Acad. of Sciences of Ukraine (UA))

Presenter: MC KEE, Shawn (University of Michigan (US))

Session Classification: Track 6 Session

Track Classification: Track6: Facilities, Infrastructure, Network