

High Performance Network Monitoring Challenges for Grids

Les Cottrell

cottrell@slac.stanford.edu

SLAC, USA

This talk will identify why we need network monitoring in particular focusing on the needs and capabilities of the Large Hadron Collider (LHC) - Optical Private Network (OPN). We will present the capabilities and limitations of the various active end-to-end measurement tools such as ping, traceroute, pathload, iperf for modern high-speed networks such as LHC-OPN. We will also illustrate the types of results obtained and how they may be used for forecasting and detection of network performance problems (events). We will also show the capabilities of the complementary passive monitoring including characterizing network traffic, the possibilities for forecasting, and for problem identification.