



Realtime Service Challenge Monitoring for SC|05

Goals and Challenges

- Visualize the Service Challenge with frequent updates in a visually attractive manner
- MonALISA has excellent visual appeal and is able to handle frequently updated data
 - In map-based overview form
 - In detailed timeseries form
- Summer student work enabled communication between MonALISA and R-GMA (the LCG/gLite monitoring data store)
- MonALISA is not deployed at all LCG sites
 - Even if it were, there are some issues with collecting the required data

Approaches

- SNMP information from network devices
 - **PRO**: Gathered by LCG, supported by ML
 - **PRO**: Dante/Esnet perfSONAR allows access to endpoints
 - **CON**: We don't have access to all necessary network devices (the remote end of sites that traverse Géant - FZK, CNAF, IN2P3, PIC, NDGF)
 - **CON**: Details of which data is actually SC3 are not available -- all network traffic counted
- ➔ Get access as close to the endpoints as possible, display summary data

Approaches

- GridFTP Logs
 - **PRO**: Easily available from R-GMA interface
 - **PRO**: Accurate details of SC activity
 - **CON**: Only generated after the transfer completes -- not very dynamic
- ➔ Display GridFTP information with the understanding that it is historical. The display will change so this might not be critical

Approaches

- NetFlow information from network devices
 - PRO: Represents exact performance
 - PRO: Gathered at a small number of data sources (all at CERN)
 - CON: Only generated after the transfer completes -- not very dynamic
 - CON: Not currently implemented by CERN
- ➔ Get NetFlow information from all available sources and display similarly to GridFTP

Approaches

- Host-based monitoring
 - **PRO**: Represents exact performance
 - **PRO**: Supported by MonALISA
 - **CON**: MonALISA not installed on all relevant hosts
 - **CON**: Intrusive to collect details from each machine only to summarize at a high level
- ➔ Gateway R-GMA data on LCG

Approaches

- Specific Source-Destination information from network devices
 - **PRO**: Represents exact performance in realtime
 - **PRO**: Easy installation (2 network devices at CERN)
 - **CON**: Not supported by MonALISA (yet)
 - **CON**: Not tested
- ➔ Pursue in parallel with other options

Status

- No demo yet
- Moving forward on all fronts
- ML <-> R-GMA gateway working
 - Good news for LCG/OSG interoperation as well