



QoS monitoring and SLS auditing

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Optical networking



Outline

- Cooperation...
- Metric...
- Infrastructure design...
- Measurements...



Cooperation

- QoS workgroup (Internet2)
 - CfT fellowship on defining application needs
 - Discussion of QoS related subjects
- PMA initiative (Internet2)
 - Passive test boxes



Metric

- One-way delay (OWD)
- IP delay variance (ipdv)
- One-way packet loss
- Burstiness of packet error loss
- Available bandwidth



Infrastructure design Part I

- Accurate time available
GPS, PPS?
- Distributed structure
- Multi management domain
- End-to-end, edge-to-end-edge-to-edge



Infrastructure design

Part II

- Measurement protocol
- Active and passive measurements
- SSL access
- Measurement script
- OS independent
- Common database (RRD?)



Measurements

- NTP accuracy on LAN
- Bandwidth measurements...