

Tutorial S2 Outline

- I. Review of current Transport Protocols (1 hour, Steve Wallace)
 - (1) Short review of IP addressing
 - (2) Overview of TCP
 - (3) TCP performance issues
 - (4) Improvements to TCP (SACK, ETEN, large windows, etc.)
 - (5) Performance of current TCPs
 - (6) Managing Congestion (RED)
 - (7) Overview of UDP Examples of UDP (why not use TCP)
 - (8) Slammers use of UDP
- II. Striped TCP (1 hour, Bill Allcock)
 - (1) Why Striped TCP?
 - (2) Advantages of striped TCP
 - (3) Disadvantages of striped TCP
 - (4) Performance results from GridFTP and iperf
- III. UDP data channels/TCP control channels (1 hour, Robert L. Grossman)
 - (1) The basic idea - UDP for data; TCP for control
 - (2) Performance results
 - (3) Rate Control
 - (4) Congestion Control
 - (5) Making it friendlier
 - (6) Survey of the implementations
- IV. Beyond TCP (1 hour, Steve Wallace)
 - (1) Different assumptions in R&E networks
 - (2) Beyond TCP with many TCPs
 - (3) The story of the cable
 - (4) Hybrid Protocols
 - (5) The special case of the file transfer
 - (6) Huge MTUs
 - (7) What's in the future.
- V. Protocols for moving attribute based data (1 hour, Robert L. Grossman)
 - (1) Why data is different than bits
 - (2) SOAP/XML
 - (3) When SOAP/XML breaks
 - (4) Streaming protocols
 - (5) OGSA DAIS protocols
 - (6) Data web protocols
- VI. Data Transport and OGSA (1 hour, Bill Allcock)
 - (1) What is OGSA and OGSi
 - (2) What does it mean to be OGSi compliant
 - (3) The GGF Data Access and Integration Effort
 - (4) Reliable File Transfer Service
 - (5) How does another OGSi compliant service access transport?