

End Host

- **Application protocols**
 - File transfer: FTP vs. HTTP, Secure Shell (SSH), BitTorrent, GridFTP
 - Interactive Applications
 - Multimedia - Voice over IP (VoIP), Videoconferencing
 - Multiplayer games and other collaborative environments
 - Media Streaming
 - Digital Video Transport System (DVTS)
 - Happy Eyeballs
- **Application Development**
 - Avoiding "chatty" protocols
 - Performance-friendly I/O interfaces
- **End-system (host) tuning**
 - Operating system independent: Bugs, Hardware
 - Operating system specific: BSD, Linux (InterfaceQueueLength), Mac OS X, Solaris, MS-Windows
 - Adapters and drivers: Large Send Offload (LSO), InterruptCoalescence, Large Receive Offload (LRO), ChecksumOffload, TCP Offload Engines (TOEs), large MTUs ("jumbo frames")
- **Virtual Machine**
 - Virtualization Techniques: Emulation, Paravirtualization, HardwarePass-through