

Solution Overview – Fibre Channel over Ethernet

- ▶ Validate FCoE implementations with full line rate 10Gb/s Ethernet network emulation
- ▶ Characterize the performance of new technologies required to support Fibre Channel transport over Ethernet
- ▶ Reduce risk and time to market by validating performance under real world network conditions prior to first customer shipment

Unique Challenges of FCoE

The imperative to achieve time-to-market advantage in the highly competitive Fibre Channel over Ethernet market creates significant challenges for companies that design and develop FCoE products. FCoE equipment manufacturers need to be able to:

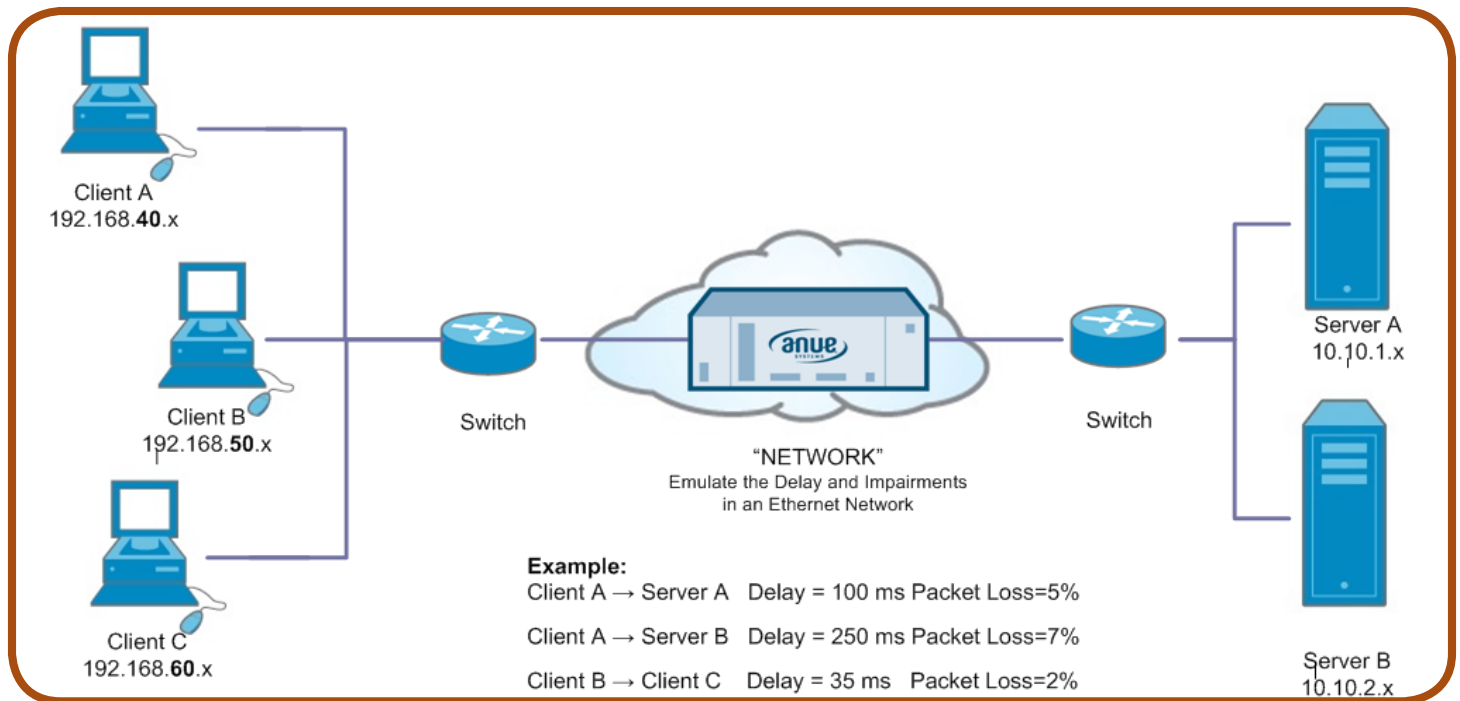
- Duplicate real-world network conditions dynamically in a reproducible and controlled environment
- Maintain flexibility to test standards-based or proprietary implementations while standards are not finalized
- Test FCoE links at full-line rate 10Gb/s full-duplex for comprehensive testing and validation of products
- Rapidly reproduce field issues in the test lab for swift troubleshooting and fast problem resolution

Anue Solution Highlights

Anue's XGEM Network Emulator offers an FCoE test solution that provides the flexibility and repeatability needed to ensure that performance issues can be readily tested and quickly addressed throughout the development process.

- Characterize Fibre Channel throughput in the presence of converged traffic and Ethernet impairments
- Operate at full line-rate 10 Gb/s performance
- Target specific packets for impairment based on Ethertype, FCoE, FCIP, FC and other header fields
- Filter on any data in the PDU for impairment or modification to facilitate functional testing and feature validation
- Verify QoS enforcement in the presence of congestion
- Stress the addressing scheme (SPMA or FPMA) by corrupting or modifying MAC addresses
- Analyze bidirectional responses to corrupted or dropped packets
- Validate proper enforcement for Fibre Channel lifetime requirements
- Ensure Fibre Channel lifetime requirements are not enforced on IP traffic
- Verify priority-based flow control, congestion management and enhanced transmission selection capabilities
- Validate support for Jumbo packets of 2.5KBytes and larger





The Win

Anue Systems' network emulation products allow system testing with varied and complex real-world FCoE link conditions prior to deployment, accelerating time to market, increasing customer satisfaction, and reducing support cost. Anue helps reduce risk by verifying product performance and the potential discovery of catastrophic design issues prior to deployment.

Anue Systems has a complete line of Network Emulators covering FC 2, 4, 8 and 10Gig as well as 1 and 10 Gigabit Ethernet.