SANBlaze Technology, Inc.

SANBlazter
Fibre Channel Initiator Emulator

Preliminary Feature Specification

Overview:

The SANBlaze SANBlazter Initiator Emulator is a unique Fibre Channel test solution that provides simulation of a single to hundreds of Fibre Channel Initiator ports. The software operates on existing SANBlaze VirtuaLUN and GargantuLUN 4G Fibre Channel systems, and runs standalone or in conjunction with SANBlaze Target Emulation software.

Available in 2, 4, 12 or 24 port 4G Fibre Channel systems, the SANBlazter software behaves as a real initiator, not just a traffic generator or protocol tester, providing real login and command control. Features such as Read/Write/Compare testing, error injection and a custom command builder provide an environment to simulate Initiator test cases via script or an easy to use Web interface. The Patent Pending Blazter Mode allows for all ports to run at full line rate.

Director Class Switch Testing

The SANBlazter solution provides a single initiator simulation per port, allowing a SANBlaze GargantuLUN system to provide 24 ports in a 3U chassis. Multiple 24 ports systems can be combined to provide a very high density solution in a compact form factor, effectively replacing racks and racks of 1U PC's used to provide the same functionality. In addition to benefits such as smaller footprint, lower power consumption and lower cost of ownership, coordinated events such as simulating hundreds of simultaneous logins via script or a single mouse click provide a level of automation unavailable in existing solutions.

Device Under Test

The SANBlazter Initiator software can be added to or combined with any SANBlaze Target Emulation system, allowing ports on the system to be configured for either target or initiator emulation. For example, a device under test (DUT) can be connected to 2 ports on a SANBlaze system, one configured as initiator, one configured as a target. The DUT can then be exercised and tested using one system, with traffic generated and/or errors injected on either side with the ability to generate custom commands and responses. An innovative timestamp method allows for throughput, delay and latency testing as well as performance verification.

Specification:

Hardware:

- Fibre Channel Ports: 2, 4, 12 or 24 Fibre Channel Ports running at 1, 2 or 4 Gbps
- Auto Link Speed and Auto Topology Negotiation
- One Initiator per port (Initial Release)
- Multiple Initiators per port (Virtual NPort) (Spring 2007)

Software Features:

- Blazter Mode
  - Full speed setting, allowing read/write testing to run at full 4G line rates across all ports

- Command Builder - Build/send custom or predefined commands including:
  - Test Unit Ready
  - ModeSense
  - ModeSelect
  - ReportLuns
  - Inquiry and Inquiry VPD
  - ReadCapacity
  - Read (6,10, 12,16)
  - Write (6,10, 12,16)
  - WriteSame
  - Standard Reserve Operations (Reserve6, Release6)
  - PersistentReserve Operations
  - Variable Block Size (512 or 520 Byte)

- Configurable Initiator/HBA identity
  - WWNN
  - WWPN

- Data Testing
  - Read/Write
  - Read/Write/Compare
  - IOMeter Integration

- Discovery Methods
  - ReportLuns
  - Scan LUN0
  - Scan All LUNS

- Trace Mode
  - A viewable, time-stamped log of all IO’s sent or received, including errors

Error Capabilities:

- Customizable Error Handling:
  - Retry on Error
  - Stop on Error
  - Adjustable IO timeouts

- Error Conditions:
  - Bad CRC
  - Read Over/Read Under
  - WriteOver/Write Under
  - Data Corruption
  - LIP
  - Offline/Online
  - Logout
  - Process Logout

- Task Management Commands
  - Abort Task
  - AbortTaskSet
  - ClearTaskSet
  - ClearACA
  - LunReset
  - TargetReset

System Features:

- Web Based Interface
  - Quickly and easily set up, run and save multiple test configurations
  - View Statistic and performance in real time
  - Generate Errors
  - View Error Counters and Statistics
  - Build, Edit and execute Scripts
  - Online Documentation

- Command Line Interface
  - Run Individual or Looped Commands
  - Build and Execute Scripts
  - Execute Remote Scripts