

**New Product Development Testing
iSCSI to Fibre Channel Bridge**



Issue:

Build and maintain a scalable and affordable environment that enables developers to test their new iSCSI to Fibre Channel bridge product. Connect the device to as many different SAN/Fibre Channel configurations as possible.

Solution:

SANBlaze VirtuaLUN is used in the place of multiple JBOD devices or a large storage array.

Benefits:

Cost: The cost of the VirtuaLUN was a fraction of the cost of the disk systems needed to simulate real world environments.

Time: With the VirtuaLUN, the test environment was easily and quickly scaled to simulate a large number of scenarios and error conditions. Developers were able to quickly understand when, where and why the device began to experience problems, saving weeks of test time. The VirtuaLUN significantly decreased the time to market for the product.

Reputation: The VirtuaLUN helped to identify an issue that may not have been found until after the device had been widely deployed to customers.

Developers working on an iSCSI to Fibre Channel bridge product are experiencing no issues in their current test environment. The test environment includes the iSCSI bridge, which is a device with 2 Gigabit Ethernet ports and one Fibre Channel port, as well as a 12 Disk Fibre Channel JBOD device.

The JBOD is attached to the Fibre Channel side of the bridge to test read/write/bridging to and from the Ethernet and the Fibre channel drives. Extensive tests using this environment show no issues with the bridge device.

However, the developers realized that the test environment was limited for several reasons. The bridge, deployed in the real world, is likely to be connected to much larger SANs with the capability for higher throughput and lower latency.

Testers wanted to understand the devices ability to perform properly as the complexity and size of the Fibre Channel scaled. To achieve this, multiple JBOD devices or a large storage array would be needed to simulate a larger SAN. The large amount of disks and related infrastructure represented a significant cost.

The team used the VirtuaLUN instead. The VirtuaLUN allowed them to test multiple targets as well as MAXLUN (large number of logical units) configurations. It also allowed for higher speed, lower latency testing. As a result of using the VirtuaLUN, the team discovered a critical error in the system. As the device count and speed increased the device began to drop packets.

The engineers tackled the problem, and were able to use the VirtuaLUN to rapidly test their changes. The ability of the VirtuaLUN to simulate error conditions and different LUN counts at wire speed allowed them to understand where the problem occurred, and provided a repeatable environment to test against.