PacketLight
PL-10/20/100

Testing Template:

This document will be used to describe, from a technical perspective, the elements that were included as part of the IBM TotalStorage Proven testing. It is intended to give an overall picture of the technical elements of the configuration, with a brief description of the results of the testing including any specific highlights of the interoperability results.

High-level architecture/description, include a list of products that meet the compatibility requirements ("Approved Product(s)") as well as a list of the IBM storage products with which the Approved Products meet the compatibility requirements ("Qualified IBM Storage Products"):

Tested products:
> PL-10 (FCS-155, MicroSAN-155) PL-20 (FCS-622, MicroSAN-622)/PL100 (MicroSAN-2500) - PacketLight Storage transport systems
> IBM interoperability equipment:
>> FAStT700 – Storage
>> xSeries 330 IBM Server
> Other vendor equipment:
>> Brocade SilkWorm 2400 Fibre channel fabric-switch

Level of TSP - standard

Test environment - description

In the test we simulated a typical Disaster-recovery storage environment, which consist of two sites located 25km from each other. In site A we placed the storage equipment (IBM FAStT700) and at Site B we located a remote server (x330 IBM Server). PacketLight system (consist of two PL-10/PL-20/PL-100) connected between the sites. We wanted to demonstrate the following:
- Interoperability with IBM equipment (server and storage)
- Complete solution that enables connection of two remote sites

Hardware/Software tested

Server Hardware Details:
  1. Vendor: IBM
  2. Model number: xSeries 330 IBM server
  3. Memory: 1GB RAM
  4. Operating System: Microsoft Windows 2000 Server 5.00.2195 + SP3
  5. HBA: Qlogic2340

Storage Details:
  1. Vendor: IBM
  2. Model Number: 1742 1RU
  3. Version: FAStT700
  4. Number of Drives: 14
  5. Drive Type: Fibre
  6. Capacity: 73.4GB
  7. Microcode Level: Storage Manager v8.21.G5.02
  8. Comments: EXP700 /1740 1RU with 2 loops

Switch:
  1. Vendor: Brocade
  2. Model Number: Silkworm 2400 (x2)
  3. Microcode Level: v2.4.1c / Kernel-5.3.1

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Transport System:

  1. Vendor: PacketLight
  2. Model Number: PL-10 (x2)
  3. Version: 0.5.0
  4. Microcode Level: PL10 FPGA: 000C

Transport System:

  1. Vendor: PacketLight
  2. Model Number: PL-20 (x2)
  3. Version: 0.5.0
  4. Microcode Level: PL10 FPGA: 000C

Transport System:

1. Vendor: PacketLight
2. Model Number: PL-100 (x2)
3. Version: 0.5.0
4. Microcode Level: PL100 MAC: 000D, PL100 Ingress: 0011, PL100 Egress: 100c

Software Details:

1. Software used: SurfLight (*PacketLight*)
2. Description: WebTool that manages PacketLight products configures connections, displays PM, displays faults and alarms, logs event
3. OS Version: Microsoft Windows2000 5.00.2135, SP2
4. Software used: IOmeter
5. Release level(s):   2003.02.15
6. Description: Tool that simulates traffic between server and storage
7. OS Version: Microsoft Windows 2000 Server 5.00.2195 + SP3

Test Results

Validation date: December 2004

Tested scenarios:

- *Physical System installation* - no issues, easy to install.
  To uninstall, the PL-10/PL-20/PL-1006000 would be shut down. It doesn't affect the existing FAStT and switch. However, the connected equipment aware that the "bridge" in the middle has been removed.
- *Installation steps (security)* - 1st time logon requires a serial connection to the PL-10/PL-20/PL-100. Utilizing the CLI through the serial connection, the administrator can change the pre-configured IP address, the user name and password. When the administrator initiates the included WebTool SurfLight, the new Ip address+User Name + Password must be used to manage/configure any of the PL-10/PL-20/PL-100in the environment.
- PL-10/PL-20/PL-100*Failure tests* - We tested power supply module failure on the PL-10/PL-20/PL-100while running 25km between the FAStT700 and the server. We had dual power supply modules in each PL-10/PL-20/PL-100 (for protection). The tests passed flawlessly.
- *Power-up tests* – we tested several scenarios: Brocade switch Power-up, PL-10/PL-20/PL-100Power-up, and Server Power-up. The system always recovered after the equipment became operational.
- *Data integrity and stress tests* – passed
- *Performance test* – In PL-100 We achieved above 90% BW utilization in sequential read transactions (IoMeter), In PL-10/PL-20 we achieved the maximum allocated BW that the device support
- *System management* – BrowseLight software

- *Helpful installation tips* – The PacketLight PL-10/PL-20/PL-100connects to any existing switches, and cannot connect directly to a FAStT700. We added a 1GB switch to the FAStT700, which must be changed to a 1GB speed at the SFPs going out to the hosts. This wouldn't be an issue with 2GB switches

FASt
storage

SilkWorm 2400

PL-10/PL-20/PL-100

20 KM fiber

PL-10/PL-20/PL-100

SilkWorm 2400

IBM @server
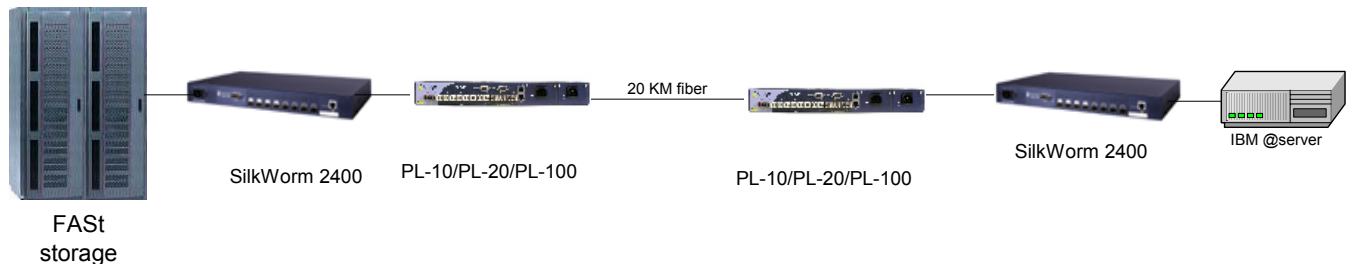
Test Configuration

Support Contacts

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