About ATTO
For over 30 years, ATTO Technology, has been a global leader across the IT and media & entertainment markets, specializing in network and storage connectivity and infrastructure solutions for the most data-intensive computing environments. ATTO works with partners to deliver end-to-end solutions to better store, manage and deliver data.

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About Open-E
Open-E, Inc. is a pioneering leader and developer of IP-based storage management software with headquarters in the United States and Europe. Founded in 1998, the company sells its line of storage management software through a world-wide network of system integrator and reseller partners. The Open-E® JovianDSS and Open-E® DSS V7™ line of products enjoy a reputation for best-in-class performance, flexibility, reliability, scalability and return-on-investment.

Open-E storage management products are known throughout the storage industry for their robust architecture, ease-of-use and affordability. The products are also highly flexible, and have the ability to support a variety of protocols, such as iSCSI, Fibre Channel or Infiniband, in either file or block data transmission. Open-E works with technology industry leaders to deliver our software on a variety of industry-standard hardware platforms.

Open-E Benefits of ATTO XstreamCORE® intelligent Bridges with Stretch Clusters

Stretch Clusters 101
There are several methods, topologies and technologies that enable a stretched cluster. ATTO intelligent Bridges help many different vendors build stretch clusters by enabling low latency Fibre Channel connectivity using off-the-shelf SAS JBOD or JBOF storage and connecting this storage to multiple servers at multiple data center sites. ATTO intelligent Bridges connect up to 240 drives to multiple servers at one site while enabling reads and writes to servers at a second site.

High Availability and Reliability

Decoupling storage from servers
When storage is included inside the server it creates a potential point of failure that, when a server fails, cuts off access to on-site storage. This will cause an unnecessary failover to the second host site which reduces resiliency. A simple alteration to the topology using ATTO intelligent Bridges will virtually eliminate this undesirable scenario.

Use ATTO XstreamCORE to remotely separate storage from the server
When using a server attached to SAS JBOD or JBOF enclosures, the storage remains resilient when all servers on both sites have shared access to the same pool of storage. If one or any of the servers fail, there is no failover event that needs to occur because secondary on-site servers will retain communication with on-site storage.

Longer distances between sites with synchronous due to lower latency
With switched environments, synchronous mirroring between host sites can be up to 400km apart. While in unswitched environments, Fibre Channel allows up to a 10km distance between clusters allowing for a resilient solution on large campuses, manufacturing companies and other sites that don’t require extended distances. These companies may not have the ability to meet business continuity and production objectives with other technology.

ATTO intelligent Bridges Appliance

<table>
<thead>
<tr>
<th>Product</th>
<th>4K IOPS</th>
<th>Throughput</th>
<th>Host Ports</th>
<th>x4 SAS Ports</th>
<th>SKU</th>
</tr>
</thead>
<tbody>
<tr>
<td>XstreamCORE FC 7600</td>
<td>1.1M</td>
<td>6,400 MB/s</td>
<td>(2) - 32Gb Fibre Channel</td>
<td>4 (16 PHYs)</td>
<td>XCFC-7600-002</td>
</tr>
<tr>
<td>XstreamCORE FC 7550</td>
<td>1.1M</td>
<td>6,400 MB/s</td>
<td>(4) - 16Gb Fibre Channel</td>
<td>4 (16 PHYs)</td>
<td>XCFC-7550-004</td>
</tr>
</tbody>
</table>
Long Distance Stretch Cluster with Fibre Channel Switches

ATTO XstreamCORE® FC 7550
- 16Gb Fibre Channel to SAS

ATTO XstreamCORE® FC 7600
- 32Gb Fibre Channel to SAS

Switchless Stretch Cluster up to 10KM between sites

Host application servers attach to the HA servers via Ethernet

High Availability Servers with ATTO Celarity FC HBAs

ATTO XstreamCORE FC 7550 storage controllers

Site A

Site B

SAS/SATA

Fibre Channel

Business Critical Apps

Business Critical Apps

ATTO XstreamCORE® FC 7550 storage controllers

High Availability Servers with ATTO FC HBAs

ATTO XstreamCORE 7600

32Gb Fibre Channel to 12Gb SAS

Host application servers attach to the HA servers via Ethernet

High Availability Servers with ATTO FC HBAs

ATTO XstreamCORE 7600

32Gb Fibre Channel to 12Gb SAS

The Power Behind the Storage

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