

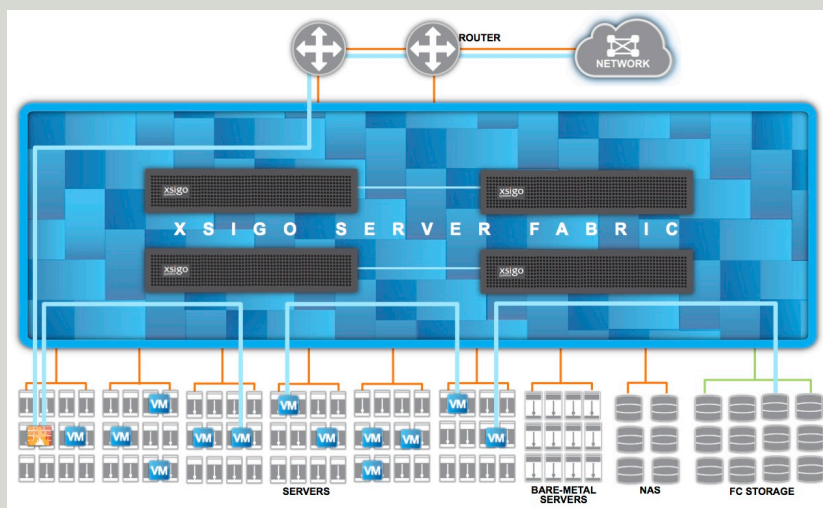
STORAGE SWITZERLAND BRIEFING NOTE

CONVERGE THIS! XSIGO ANNOUNCES SERVER FABRIC



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Convergence has been a top point of discussion lately but very few data centers have moved beyond that discussion to action. Much of the reason for this is many of the convergence strategies do not address the needs of the modern data center, they just combined legacy technology onto a single cable. [Xsigo](#) is out to provide convergence while addressing those needs with the result being a more dynamic, better utilized data center.



The single biggest problem facing the virtualized data center is that as much as 80% of network traffic is server to server. That means that a move of a virtual machine (VM) from a host has to go through the entire network infrastructure before it gets to the target host that may actually be located physically right next to the original host.

The Xsigo server fabric enables this host to host communication with a switched fabric that isolates communication between servers and their attached storage. It essentially is a private network (fabric) tailor made for server to server

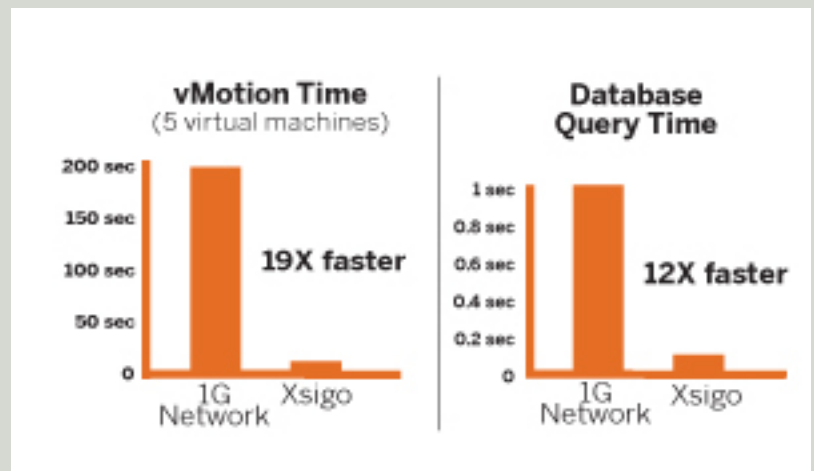
and server to storage communication. The Xsigo fabric switches handle the inter-server communication as well as provide access to the rest of the network infrastructure. Only the high speed Xsigo adapters are needed in the host, network access when needed can be shared via the Xsigo fabric switches.

This allows for the most performance sensitive communications (server to server and server to storage) to take place on a private fabric and not have to interact with the rest of the network. Cutting down on unnecessary network traffic will also increase the performance of it as well.

Complex multi-layer networking and virtual LANs are driven from the need to work around network limitations, a server fabric eliminates the need for the work arounds. A server fabric is going to make the design of the traditional network far less complex than it is today. It should result in a significant reduction in the number of networking layers and the number of VLANs.

The Xsigo fabric can support up to 40Gb bandwidth per server connection and can support up to 1,000 physical hosts and 64,000 virtual private interconnects (VPI). A VPI is a virtual adapter that can be assigned to and communicate directly with a Virtual Machine (VM). Unlike the traditional limitations of spanning tree protocol based networking the server fabric has automatic routing so that it is fully active and fully redundant.

This high speed server fabric also improves application performance as well. For example Xsigo claims that they can improve vMotion times by as much as 19X and database application times by 12X. The reason is that transfers now benefit from 40Gb communication vs. a 1GbE segment.



Storage Swiss Take

The Xsigo Server Fabric will initially be a top of rack solution supporting a rack of virtual hosts. Its job will be to optimize traffic within that rack, again working under the principle that 80% of the communication will be contained within that specific rack. In the past a new infrastructure idea faced a formidable challenge of having to rip out the incumbent. Xsigo should be able to be successful in allowing implementation one rack at a time.

This crawl, walk, run approach is going to be more acceptable to infrastructure managers. It allows them to leverage and extend their current infrastructure instead of ripping it out. At the same time it will provide a significant performance boost to servers when dealing with VM migrations or storage I/O communications.

About Storage Switzerland

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