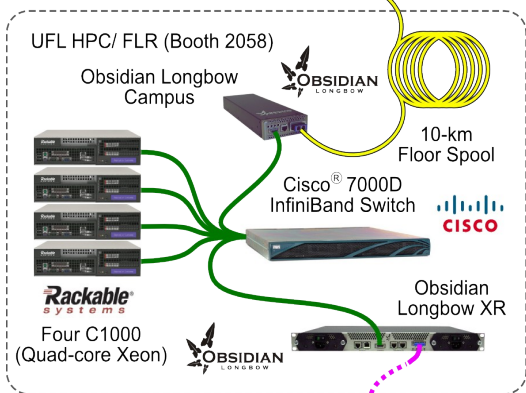
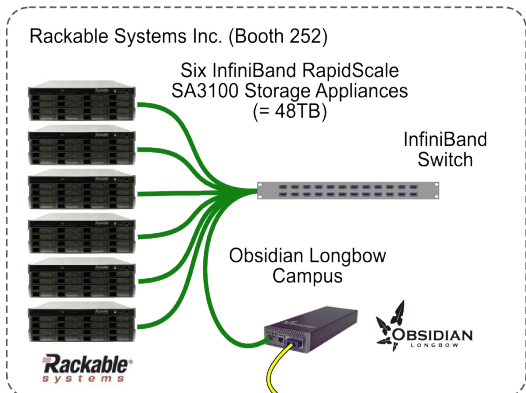
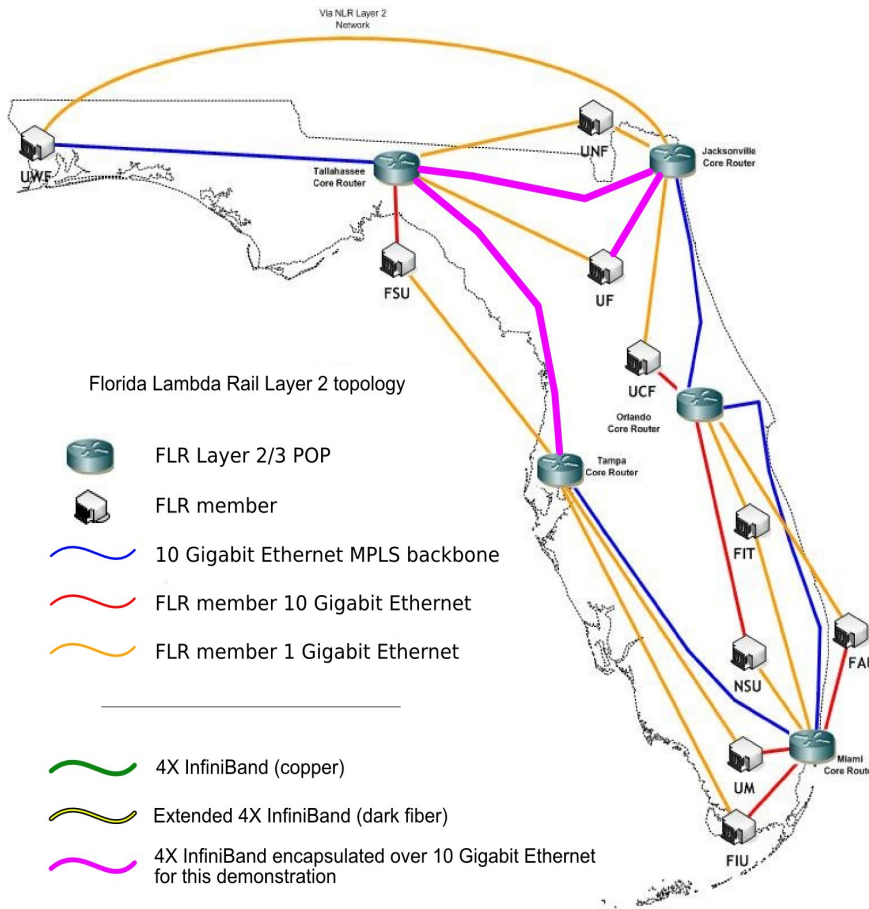


Native IB storage over Campus and Wide Area Networks

Rackable Systems' RapidScale™ parallel storage clusters offer scalable parallel I/O by aggregating native RapidScale SA3100 InfiniBand storage appliances. Obsidian's Longbow Campus and XR platforms deliver fast storage traffic across Campus and Wide Area Networks at full InfiniBand rates with very low latency.



1100km of 10 Gigabit Ethernet to UFL HPC and more Rackable InfiniBand storage...



The Demonstration

The Rackable Systems Linux servers and RapidScale storage appliances that are deployed in the High Performance Computing (HPC) facility at the University of Florida (UFL) use InfiniBand to achieve extremely high compute and I/O performance. RapidScale storage appliances leverage a truly parallel architecture to scale I/O performance linearly with storage capacity, enabling enhanced utilization of compute resources with reduction of I/O wait time. With the help of InfiniBand infrastructure from Cisco, network connectivity from Florida Lambda Rail (FLR) and Longbow InfiniBand range extension products from Obsidian, UFL is demonstrating remote InfiniBand storage, not only across Campus, but across 1,100km of Florida.

Transparent to all InfiniBand traffic, the Longbow Campus units carry the iSCSI protocol payload via InfiniBand/Sockets Direct Protocol (SDP) across up to 10km of dark fiber while the Longbow XRs span InfiniBand across global (Packet over SONET, ATM and 10 Gigabit Ethernet) WANs.

In this demonstration, Rackable Systems servers located in the UFL/FLR booth access large data sets located on RapidScale storage appliances in the Rackable Systems booth using InfiniBand native SRP. Identical applications software drives I/O traffic to/from additional storage appliances located at the University of Florida.

InfiniBand's bandwidth characteristics are preserved across the range-

extended connections, making this scheme a good choice for the efficient transport of very large data sets.

Campus Applications

Accelerate campus-wide storage – range-extended native InfiniBand storage is a high performance alternative to FibreChannel for storage area networks. Directly access a compute cluster's high-performance file system at InfiniBand rates from any point across a campus.

Consolidate distributed InfiniBand storage – islands of InfiniBand storage can be aggregated campus-wide to ease the configuration, access control, capacity balancing and management processes. Range-extended InfiniBand offers superior latency performance; even remote cache accesses are fast.

WAN Applications

GRID data transport – direct disk-to-disk exchange of very large data sets at high wire-efficiency without stack tuning. Faster data transport means better grid utilization and faster results.

Data center replication – streaming transfers across global networks at InfiniBand speeds facilitates the replication of increasingly large filesystems. Maximize utilization of 10 Gigabit network connections.

