Innovative Use of NLR and FLR Infrastructures by Florida State University

Foreword
The development of NLR and a regional optical network, Florida LambdaRail (FLR) has resulted in a very innovative, but practical, use by Florida State University. Larry Conrad, FSU Chief Information Officer and his colleagues are using this infrastructure to address the disaster recovery needs of that campus. It is an example of the diverse uses that can be made of your owned infrastructure. And, it does not present an obstacle to the research uses of NLR and FLR. - Tom West

For Florida State University (FSU), the prior two year hurricane seasons hammered home a realization that it's not really a matter of "if" the university will be hit by a major hurricane, but a matter of "when."
That's why FSU is leveraging it's participation in the Florida LambdaRail (FLR) and National LambdaRail (NLR) to address its disaster recovery and business continuity needs to preserve critical IT data and services in case of a regional disaster.

FLR is a private not-for-profit Limited Liability Corporation created by a consortium of public and private Florida research universities to advance research, education and economic development activities. FLR offers a 1,540-mile very high performance fiber optic network infrastructure which provides connection points for its member universities in 9 cities across the state. The underlying optical infrastructure is owned by the ten equity members who are each provided with a primary 10 Gbps and a secondary 1 Gbps connection to the network backbone. Access to the NLR capabilities is provide via interconnects located in Jacksonville and Pensacola. As a NLR equity participant, FLR utilizes a NLR 10 Gbps wavelength between Jacksonville and Atlanta, Georgia, to access Layer 3 networking services provided through Georgia Tech's Southern Light Rail (SLR) – Southern Crossroads (SoX) initiative.

The FLR - NLR model of equity ownership of networking infrastructure, coupled with Layer 3 services provided by SLR, allows for affordable end-to-end bandwidth at a scale making it economically feasible to perform high volume remote backups of critical data and to provide for continuity of essential IT services should a disaster occur at FSU's main campus in Tallahassee.

A 2 Gbps Ethernet connection links the FSU Tallahassee campus with a co-location facility in Atlanta. Across this link, remote copies of critical centralized tape backups are prepared as well as direct-to-disk synchronization of critical data files. In addition to remote storage, FSU servers housed in the remote facility provide warm standby capability for essential IT services. These include

the university's web presence, on-line course management system, directory services, e-mail, and ERP applications.

Remote-site resources and capabilities have allowed the university to establish a Recovery Point Objective (RPO) of 24 hours or less for all critical data and a Recovery Time Objective (RTO) of 48 hours or less for essential IT services.

At present, FSU is shipping an average of 2 terabytes of data per day to the remote site location. The unique NLR - FLR network capabilities essentially eliminates the issue of “place” in planning the location of this kind of innovative service. This is also the kind of service which was simply unthinkable a couple years ago and an example of the kind of added value for the U.S. higher education community which participation in the NLR makes possible.

For more information about IT emergency preparedness at Florida State University, contact Larry Conrad (larry.conrad@fsu.edu) or Carl Baker (carl.baker@fsu.edu).