



DELOITTE HIGHER EDUCATION

Client Success Story

University of Southern California Network Engineering

University of Southern California (USC) Network Engineering

The new network architecture utilizes industry-leading practices to greatly improve network performance, maintenance, reliability, and security across the campus and data center.

The University of Southern California (USC) is one of the world's leading private research universities. Home to 22 academic schools and units, USC is an anchor institution in Los Angeles and a global center for arts, technology, and international business. USC's diverse curricular offerings provide extensive opportunities for interdisciplinary study and collaboration with leading researchers in highly advanced learning environments.



Background

USC is one of the leading private research universities in the nation with 44,000+ students. It is the largest private sector employer in the city of Los Angeles, responsible for \$8B annually in economic activity in the region. USC's network had historically been structured as several flat networks that suffered from multiple performance and management issues. The technology environment had numerous gaps related to efficiency, effectiveness, and information security. With the desire to provide network and security services worthy of a top research university, USC selected Deloitte to plan, design, architect and implement a world class network solution and service.



Process

Deloitte proposed a two-phased approach, with Phase 1 focused on developing a high-level design for the new network architecture and planning for the implementation. Phase 2 includes the low-level design and implementation. The implementation project included upgrades to the data center, enterprise routing, network security, and network access across approximately 300 University buildings. Deloitte's team—comprising network architects, wired and wireless engineers, network security specialists, and project managers—both managed the project and implemented the next-generation network design. USC and Deloitte designed and deployed an industry-leading Spine-and-Leaf network architecture to provide flexibility, scalability, and higher performance.



Process

The implementation approach included:

- Understanding major pain points in the current network and address those first to rebuild trust in network services
- Directly partnering with local IT unit leaders to gather information and validate results for each building or colocation upgrade
- Lead with Organizational Change Management (OCM) by partnering with technology champions on campus to spread the message about the benefits and impacts of the new network design
- Forming key stakeholder task forces to quickly gather requirements and pilot changes
- Separating project and operational teams and workloads to avoid slowdowns in project delivery, and cycle client team members to avoid burnout and build project knowledge



Impact

The new network architecture utilizes industry-leading practices to greatly improve network performance, maintenance, availability, reliability, and security across the campus and data center. It allows USC to meet the demands of the next generation of students who are avid consumers of data and bring an average of 6-8 devices to campus. It is flexible to support emerging technologies, including cloud computing and Internet of Things. It also provides the network segmentation required to effectively separate and protect the University's diverse user population and assets.

For more information,
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