



Case Study

Established, 35-year-old Pharmaceutical Research Organization Overhauls and Upgrades Entire Network Infrastructure

The client

The client is a contract research organization of more than 400 employees that provides services to leading pharmaceutical, biotechnology, and medical device companies as well as U.S. federal agencies. Founded in the 1980s, the organization offers expertise in clinical trials, product development, regulatory submissions, and numerous therapeutic specialties.

The challenge: Upgrade and improve security of entire network infrastructure as part of a relocation

It's not every day that a company gets the opportunity to start with a clean slate. It was with this mentality that the client approached an upcoming headquarters move from a leased facility to a brand-new site built exclusively for the client.

The IT organization aimed to upgrade its aging network infrastructure and add enhanced security capabilities. The client wanted to add 802.1X security to their wired and wireless infrastructure. Leveraging automation tools for their access network was a top priority. By shifting to a best practice authentication method for their access network using EAP-TLS (certificate-based authentication), the client also hoped to modernize and streamline key processes.

Industry:

Clinical research

CDCT provided:

- Thorough assessment of current network and use case requirements
- Review of current Active Directory and PKI infrastructure
- Templates for certificate issuance for 2,000+ user, server, BYOD, and computer certificates
- Configuration and deployment of Aruba Networks®, Cisco®, and Palo Alto Networks® technologies
- Network design and implementation that leveraged automation

CDCT services:

- Infrastructure Strategy Workshop
- Security Strategy Workshop
- Public Key Infrastructure (PKI) Workshop
- Consulting services
- Architecture and design
- Deployment services

The solution: Full-site, custom-designed network infrastructure built from the ground up

The engagement began with several assessments to ensure Cloud + Data Center Transformation (CDCT) project leads had a comprehensive understanding of the client's environment, challenges, and objectives. We reviewed their current network and use case requirements, and their current Active Directory and Public Key Infrastructure (PKI). We provided both an Infrastructure Strategy Workshop and a Security Strategy Workshop, which helped us to collaboratively evaluate performance and processes, identify gaps, review options for final state, and draft an actionable roadmap.

With a detailed plan and full buy-in, we began building the new infrastructure. The CDCT team configured and implemented: Aruba wireless infrastructure for employee, BYOD, and guest users and/or device use cases; Aruba switch infrastructure for employee, VOIP phone, printer, and several IoT use cases; Aruba ClearPass for wired and wireless authentication, guest sponsorship, and BYOD provisioning; and Cisco Core and Palo Alto Networks firewalls for routing and policy enforcement. Based on the PKI review, we also built templates for certificate issuance for 2,000+ user, server, BYOD, and computer certificates.

The benefits: Modernized, automated, and highly secure infrastructure

The new infrastructure is providing the client with numerous operational and business benefits. Client enrollment and configuration, as well as switch configuration have been fully automated. With network authentication, installs, moves, adds, and changes occurring autonomously, the IT organization can reallocate newly available internal resources for more strategic projects. EAP-TLS certificate subscriber use cases for an updated authentication methodology were essentially built out of the PKI-related work completed. A sophisticated segmentation engine and processes are also now in place to vastly improve the firm's security. This was a critical business move considering the demands they face from regulatory agencies to maintain standards of care, privacy, and compliance.

Benefits:

- Enabled to meet rigorous compliance requirements
- Reduced manual burden through automation



New, high-performance network infrastructure



Agile and flexible
infrastructure able to accommodate all user and device types that require access

Improved security
with segmentation for better visibility and control



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