Highly Secure Corporate User Access Solution

Case Study Summary

CUSTOMER
Leading Cloud File-Share Hosting Provider

INDUSTRY
On-line Cloud Sharing

GOAL
Design and implement a secure VPN and wired access solution

PROJECT SCOPE
- Requirements
- Architecture and Design
- Implementation
- Documentation
- Training

BENEFITS
- **Highly** secure user access solution utilizing EJBCA PKI
- **Three-factor** authentication
- **Robust**, flexible and resilient architecture

TECHNOLOGIES
- PrimeKey EJBCA
- Cisco ISE
- Cisco ASA VPN Appliances
- RCDevs OpenOTP Server
- Cisco Catalyst Switches
- Digital Certificates
- Google Authenticator Application on iPhone and Android devices

Background

As a leading cloud file-share hosting provider this on-line services company allows their customers to bring their photos, docs, and videos anywhere while easily sharing them. Used by over 45 million people across every continent, users always have their items ready to share with family and friends, or collaborate on projects with co-workers. In an effort to provide secure network communication, the customer requested outside expertise to design, plan, and implement solutions to secure VPN access to their corporate networks and secure wired access ports within the corporate campus.

The Solution

C2 Company engineers assessed and helped define the scope of the project and recommended the technologies involved. The customer required high security combined with the need to make security transparent and baked-in to existing processes and practices. This required innovative approaches and solutions in order to meet the customers requirements.

Relying on C2 Company's security experience and leveraging best-practices, C2 Company implemented a solution for VPN that required three-factor authentication using certificates, Active Directory (AD) credentials, and Google Authenticator one-time-password. The certificates are securely generated and provisioned from an internal PKI root and intermediate certificate authority server. A RADIUS server was built that provided VPN servers with authentication via AD credentials and Google Authenticator soft tokens. These three factor authentication allowed users to be authenticated to the VPN using strong authentication that resulted in minimal impact to the user experience and satisfied the customers requirement for secure VPN access.

Solution (continued)

To address the customers requirements to secure wired network ports on the corporate campus, C2 Company implemented Cisco's Identity Services Engine (ISE) and integrated 802.1x configuration with Cisco switches. The solution put in place supported secure authentication of computers, VoIP phones, printers, and miscellaneous devices into the network. Computers are required to have certificates provisioned to each user in order to authenticate to the network. Printers, and phones leverage secure user/password authentication to gain access to the network.

On-Time and On-Budget

C2 Company engineers met and exceeded the client's expectations. By relying on broad and deep expertise in security and heterogeneous technologies, C2 Company successfully designed and implemented a highly secure VPN infrastructure. Recognizing the importance of choosing the right tools for the right job, C2 Company engineers relied, once again, on PrimeKey's EJBCA solution to implement the client's PKI infrastructure.

We Can Help

C2 Company has **_over 20 years experience_** in building and troubleshooting networks and are experts in network security.

Our team of certified experts have designed, built and managed thousands of complex networks and systems that enable enterprises to:

• Accelerate IT's speed and business impact

• Minimize costs and risks

To learn more about how we can help you too, contact us at 650.357.0100 or info@c2company.com.

> "Harry Haramis is the <u>best</u> engineer I've worked with from a security perspective and he also ranks among the top in routing and switching. His knowledge of firewalls is phenomenal. Add his IPSec, DMVPN, IPS, IDS along with others makes him my first choice any chance I get."
>
> **Omar Abuabara, SE, Cisco Systems**

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