

Energy Company | CCVOSSSEL GmbH

Design Of A Secure Active Directory Structure



Requirements

Since the Active Directory is the heart of a company's IT infrastructure, it was particularly important for us and our customer to consider all relevant aspects with a focus on IT security. A special requirement of our customer in the secure rebuild of all Active Directory domains was the design and implementation of the tier model. This segments the different security areas (tiers) and secures them against being compromised. In addition to hardening the domain controllers, our customer's other requirements included securing the network traffic to the domain controller via LDAPS using a PKI infrastructure.

Implementation

To ensure maximum security at all levels, the systems and user accounts were divided into different areas according to the extended tier model. Each area is given dedicated administrator access so that, for example, a successful hacking attack on an administrator can only access the clients, but not the servers. This limits the reach of a hacker attack and minimizes the risk of an enterprise-wide compromise.

Since Microsoft does not support a simple implementation of the tier model, the experts at CCVOSSSEL implemented the customer's requirement via the use of structured OU structures, group policies and group structures.

As a result of this requirement, it became necessary to set up several separate zones, for

each of which a separate Active Directory was designed. This in turn improved the security of the entire IT infrastructure.

Furthermore, the IT security consultants of CCVOSSSEL GmbH planned and built the structure of the DNS and ensured a secure integration of it into the Active Directory. In addition, an Azure site was connected and several AD sites were conceptualized. A hybrid approach was taken to position domain controllers (on prem and cloud) in Azure.

Extensive hardening policies were implemented to harden the domain controllers. Policies were also conceptualized for powerful accounts such as administrative and service accounts, which was also done for Group Managed Service accounts. CCVOSSSEL's project staff also designed the group policies to fundamentally secure the infrastructure.

An individual schema extension in the Active Directory was implemented especially for our customer.

Finally, all necessary objects could be migrated from the previous AD to the new, secured AD.

Conclusion & Outlook

Thanks to eye-to-eye cooperation between the experts at CCVOSSSEL and the project participants on the customer side, the Active Directory structure was securely conceptualized and implemented so that it now functions smoothly and, above all, securely.



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of your IT security



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CCVOSSSEL – well known for professional IT services for over 25 years

We are committed to our customers and to an open minded society. Our focus is on the protection and operation of IT systems with a main emphasis on IT security. Our interdisciplinary teams consisting of administrators, consultants, data analysts and software developers are habituated to finding efficient and modern solutions even for complex requirements.

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