
Implementing a PKI Infrastructure with Windows Server 2008/2012

Dauer: 2 Tage Kursnummer: GKWINPKI

Überblick:

Noch mehr als bei anderen IT-Projekten kommt bei der Implementierung einer CA-Infrastruktur der Designphase eine fundamentale Bedeutung zu. In diesem Training erfahren Sie, wie Sie eine zukunftssichere CA Infrastruktur in Ihrem Unternehmen implementieren können um für Projekte wie z.B. Smartcard Authentifizierung, 802.1x oder Festplattenverschlüsselung optimal gerüstet zu sein.

IHR GLOBAL-BONUS: 1-2-3 PROMO

Mehr Teilnehmer = Höherer Rabattsatz

Sparen Sie bis zu 25% bei Anmeldung mehrerer Teilnehmer!

[So funktioniert's...](#)

Wer soll teilnehmen?:

Netzwerkadministratoren oder Security-Verantwortliche, die die Implementierung einer CA-Infrastruktur für ihr Unternehmen planen oder sich allgemein über das Thema informieren wollen.

Kursziel:

- Nach der Teilnahme an diesem Kurs können Sie eine PKI Infrastruktur für Ihr Unternehmen planen und implementieren.
-

Voraussetzungen:

Grundkenntnisse der Windows Server Administration.

Detaillierte Kursbeschreibung:

Introduction into Cryptography:

This introduction gives a brief introduction into the most important aspects of cryptography in general, Public Key Infrastructure (PKI) and how Windows deals with certificates and the related standards.

■ Introduction into Cryptography

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

This chapter explains the topic of certificate templates in detail.

■ Overview

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

Designing and installing a CA Hierarchy:

This chapter explains in detail how to design and install a CA hierarchy.

- Certification Authority Hierarchies

- The X.509 Standard

- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

Issuing Certificates:

This chapter explains how the process of certificate enrollment works in detail. All manual and automatic enrollment methods, as well as the process of certificate renewal are covered.

- Windows Certificate Stores

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory

- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation

- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys

- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal

- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

CA Management Roles and Private Key Archival:

Security and manageability of a CA infrastructure can be even improved by organizing administrators into separate, predefined CA roles, each with its own set of tasks. This can be achieved by implementing Common Criteria role separation.

Implementing role separation is highly recommended when it comes to private key archival, which allows for creating backups of privates keys for certificates enrolled by a CA, in the CA's database.

Both topics are covered in this module.

- Common Criteria'Role Separation

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions
- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Privale Key Archival

- The X.509 Standard
- Terms and Definitions
- Constrains ; Cross Certification
- Integration of PKI into Active Directory
- Installing an Offline Root CA
- Installing an Online Enterprise Issuing CA
- Backup and Recovery
- Implementing High Availability
- Certificate Template Versions

- Manual Certificate Enrollment
 - Automatic Certificate Enrollment
 - Certificate Renewal
 - Certificate Revocation Lists (CRLs)
 - The Online Certificate Status Protocol (OCSP)
 - Certificate Verification and Revocation
 - Implementing the OCSP Responder
 - Performance and Troubleshooting
 - Private Key Archival
 - Implementing Private Key Archival
-
- The X.509 Standard
 - Terms and Definitions
 - Constrains ; Cross Certification
 - Integration of PKI into Active Directory
 - Installing an Offline Root CA
 - Installing an Online Enterprise Issuing CA
 - Backup and Recovery
 - Implementing High Availability
 - Certificate Template Versions
 - Version 1 Certificate Templates
 - Version2 Certificate Templates
 - Version3 Certificate Templates
 - Protection of Private Keys
 - Manual Certificate Enrollment
 - Automatic Certificate Enrollment
 - Certificate Renewal
 - Certificate Revocation Lists (CRLs)
 - The Online Certificate Status Protocol (OCSP)
 - Certificate Verification and Revocation
 - Implementing the OCSP Responder
 - Performance and Troubleshooting
 - Private Key Archival
 - Implementing Private Key Archival

Certificate Templates:

- Certificate Revocation Lists (CRLs)
 - The Online Certificate Status Protocol (OCSP)
 - Certificate Verification and Revocation
 - Implementing the OCSP Responder
 - Performance and Troubleshooting
 - Private Key Archival
 - Implementing Private Key Archival
-
- The X.509 Standard
 - Terms and Definitions
 - Constrains ; Cross Certification
 - Integration of PKI into Active Directory
 - Installing an Offline Root CA
 - Installing an Online Enterprise Issuing CA
 - Backup and Recovery
 - Implementing High Availability
 - Certificate Template Versions
 - Version 1 Certificate Templates
 - Version2 Certificate Templates
 - Version3 Certificate Templates
 - Protection of Private Keys
 - Manual Certificate Enrollment
 - Automatic Certificate Enrollment
 - Certificate Renewal
 - Certificate Revocation Lists (CRLs)
 - The Online Certificate Status Protocol (OCSP)
 - Certificate Verification and Revocation
 - Implementing the OCSP Responder
 - Performance and Troubleshooting
 - Private Key Archival
 - Implementing Private Key Archival

Certificate Verification and Revocation:

Certificate verification and revocation is the trickiest part in a PKI project and is therefore covered down to the last detail in this module.

- Authority Information Access (AIA)

- Version 1 Certificate Templates
- Version2 Certificate Templates
- Version3 Certificate Templates
- Protection of Private Keys
- Manual Certificate Enrollment
- Automatic Certificate Enrollment
- Certificate Renewal
- Certificate Revocation Lists (CRLs)
- The Online Certificate Status Protocol (OCSP)
- Certificate Verification and Revocation
- Implementing the OCSP Responder
- Performance and Troubleshooting
- Private Key Archival
- Implementing Private Key Archival

Änderungen einer PKI Infrastruktur auf Windows Server 2012

Weitere Informationen:

Für weitere Informationen oder Buchung kontaktieren Sie uns bitte unter 01/66 55 655 3000

info@globalknowledge.at

www.globalknowledge.at

Global Knowledge Network GmbH, Gutheil-Schoder Gasse 7a, A-1101 Wien