Windows Server Certificate Services Training

Duration: **2 Day**

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- **Learn to deploy and administer Active Directory Certificate Services across Windows Server environments.**
- **Designed for IT professionals responsible for implementing and maintaining certificate infrastructure.**
- **Strengthen your technical knowledge through hands-on labs and practical, real-world scenarios.**

Windows Server Certificate Services Training is a **two-day technical course** intended for IT professionals with previous experience working with Windows Server who are responsible for the **deployment and administration of certificate servers**.

The programme focuses on **Active Directory Certificate Services (AD CS)**, introducing the role of certificate solutions within an organisation and explaining how certificate services can be deployed, configured and managed in a Windows Server environment.

Participants explore the **installation of certificate infrastructure**, **certificate template deployment and administration**, additional AD CS role services, and **troubleshooting and maintenance procedures**.

The course combines **instructor-led training** with **practical laboratory exercises** based on realistic IT scenarios. This approach helps learners understand both the initial deployment of certificate services and the tasks involved in their ongoing operation.

The training is applicable to professionals using the following Windows Server versions:

- **Windows Server 2016**
- **Windows Server 2019**
- **Windows Server 2022**
- **Windows Server 2025**

Prerequisites

Participants should have foundational knowledge and practical experience in the following areas:

- Familiarity with **Active Directory Domain Services (AD DS)** concepts and technologies
- Experience configuring and working with **Windows Server 2016, 2019, 2022 or 2025**
- Understanding of essential networking concepts, including **IP addressing** and **name resolution**
- Knowledge of **Microsoft Hyper-V** and basic **server virtualisation** principles

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- Awareness of fundamental **security best practices**
- Hands-on experience with Windows client operating systems, such as **Windows 7, Windows 8, Windows 8.1, Windows 10 or Windows 11**
- Basic experience using the **Windows PowerShell command-line interface**

Who Should Attend

This course is designed for **IT professionals with some Windows Server experience** who want focused training on the features and administration of **certificate services**.

It is particularly relevant to technical personnel responsible for **deploying, configuring, managing or maintaining Active Directory Certificate Services infrastructure**.

What You Will Learn

By completing the **Windows Server Certificate Services Training**, participants will develop the knowledge and practical skills required to deploy, administer and maintain **Active Directory Certificate Services** in a Windows Server environment.

By the end of the course, learners will be able to:

- Understand the core capabilities of **Active Directory Certificate Services (AD CS)** and deploy the infrastructure.
- **Deploy and manage certificate templates**.
- Explain the purpose and functionality of **additional AD CS role services**.
- **Troubleshoot and maintain Active Directory Certificate Services**.

This training helps participants build practical confidence in managing **Windows Server certificate infrastructure**, with hands-on activities supporting the deployment, administration and maintenance of certificate services.

Training Outline

Module 1: Introducing and Deploying Active Directory Certificate Services

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This module explains why organisations need **digital certificate solutions** and introduces the deployment of **Active Directory Certificate Services (AD CS)**.

Participants examine the main components of certificate services in Windows Server and become familiar with the tools used for everyday administration.

Topics Covered:

- **The purpose of certificate solutions in organisations**
- Introduction to **Active Directory Certificate Services (AD CS)**
- **Deploying AD CS infrastructure**
- **Day-to-day certificate services administration**
- Introduction to **certificate management tools**

Module 2: Deploying and Managing Certificate Templates

This module explores how **digital certificates are used within an organisation** and the different methods available for making certificates accessible to users and devices.

Participants learn how **certificate templates** support certificate deployment and how individual certificates can be administered.

Topics Covered:

- **Organisational uses of digital certificates**
- **Deploying certificate templates**
- **Managing certificate templates**
- Methods for making certificates available to **users and devices**
- **Managing individual certificates**

Module 3: Additional AD CS Role Services

This module introduces the **additional role services** that extend the capabilities of Active Directory Certificate Services.

Participants examine the functions of services that support certificate enrolment and certificate status verification.

Topics Covered:

- **Web Enrollment**
- **Certificate Enrollment Web Service**
- **Certificate Enrollment Policy Web Service**

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- **Network Device Enrollment Service (NDES)**
- **Online Responder**

The module provides an understanding of how these supporting services can be used to address different certificate management requirements across an organisation.

Module 4: Troubleshooting and Maintaining Active Directory Certificate Services

The final module focuses on identifying and resolving **common issues affecting certificate services** and performing essential maintenance tasks.

Participants explore the processes involved in renewing **Certification Authority (CA)** certificates, backing up a CA and moving certificate authority infrastructure when required.

Topics Covered:

- **Common Active Directory Certificate Services issues**
- **Troubleshooting certificate services**
- **Renewing CA certificates**
- **Backing up a Certification Authority**
- **Migrating a CA**
- **Certificate services maintenance procedures**