

IT Systems: Identity and Access Management

Düsseldorf (Germany) 20 - 24 October 2025



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IT Systems: Identity and Access Management

Code: IT28 From: 20 - 24 October 2025 City: Düsseldorf (Germany) Fees: 4900 Pound

Introduction

This course is highly interactive and includes group discussions, case studies and syndicate work. It also includes practical exercises and role playing that allow all participants to use the knowledge they gained to demonstrate their skills in identity and access management.

Course Objectives

- Illustrate the identity and access management architecture framework and discuss the security risks associated with its various deployment options.
- Discuss the different mechanisms for establishing strong authentication e.g. OTP, certificate based authentication, device authentication, etc.
- Explain the principles of key public infrastructure and certification authorities, and demonstrate their value in mitigating the security risks facing modern societies.
- Explain the most well-known access control mechanisms and the roles of oauth, OATH, SAML and OpenID standards in the IAM domain and apply the concepts of federated SSO.
- Demonstrate the building of IAM using selected industrial tools and practical case studies e.g. e-passport and boarder gate, mobile-banking, EMV scheme, and e-movement services.

Course Outlines:

Day 1: Introduction and principles of information security:

- · Identity and access management IAM overview.
- · Attributes of information security.
- · Confidentiality.
- Integrity.
- Availability.
- Non-repudiation.
- Accountability.
- Auditability.
- Symmetric and asymmetric cryptography.
- · Hashing and digital signature.
- · Key management.

Day 2: Public Key Infrastructure PKI

• Architecture: certification and registration authority.





- Life cycle management.
- Types of certificates and usage patterns.
- Encryption.
- Digital signature.
- · Client certificate.
- SSL server certificate.
- · Attribute based certificate.
- Case studies e.g. email protection, mobile banking, and document signing.

Day 3: Identification and authentication

- Identification, verification and authentication overview.
- · Mechanisms of identification and authentication.
- One time password.
- Biometric.
- · Digital signature.
- Smartcard.
- Soft/hard tokens.
- · Mobile device.
- Risk based authentication.
- Step-up authentication.
- Single-sign on and federated single-sign-on.
- OATH, OpenID, BorwserID, and SAML.
- · Architecture framework and industrial tools.
- Trusted computing role in identity assurance.
- Security risks associated with the discussed mechanisms.

Day 4: Access control

- Principles of authorization.
- · Access control schemes.
- OAuth protocol.
- · Enterprise rights management and digital rights management.
- Privileged account management.
- Governance and compliance.

Day 5: IAM framework and use cases

- IAM architecture framework.
- IAM echo system.
- IAM and cloud computing.
- Illustrative use cases.
- Border control.
- E-passport.
- National ID.
- E-banking.
- · E-health system.





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