



*Training Course:
Security and Privacy in Central Bank Digital
Currencies (CBDC)*

*21 - 25 April 2025
Liverpool (UK)*

Training Course: Security and Privacy in Central Bank Digital Currencies (CBDC)

Training Course code: SC234991 From: 21 - 25 April 2025 Venue: Liverpool (UK) - Training Course Fees: 5775 € Euro

Introduction

The Security and Privacy in Central Bank Digital Currencies CBDC training program is designed to equip employees with the knowledge and skills to effectively manage the security and privacy challenges specific to CBDCs. CBDCs represent a new frontier in digital currencies, and with their potential to revolutionize the financial system, there is a need to ensure that they are secure and private. This training program aims to provide a comprehensive overview of the security and privacy challenges in CBDCs and the best practices for managing them.

Objectives

The objectives of this training program are to:

- Provide an understanding of the security and privacy challenges specific to CBDCs.
- Equip employees with the knowledge and skills to manage security and privacy challenges in CBDCs effectively.
- Enhance the competencies of employees to handle security and privacy concerns in CBDCs.
- Ensure compliance with regulatory and legal requirements specific to CBDCs.

Competencies

Upon completion of this training program, employees should be able to:

- Understand the security and privacy challenges specific to CBDCs.
- Understand the best practices for managing security and privacy concerns in CBDCs.
- Apply encryption and key management techniques to ensure the security of CBDC transactions.
- Understand the regulatory and legal requirements specific to CBDCs.
- Educate users on the security and privacy considerations specific to CBDCs.
- Analyze and mitigate potential security and privacy risks in CBDCs.

Methodologies

The training program is delivered through a combination of lectures, presentations, case studies, group discussions, and hands-on exercises.

The program can be delivered in person or remotely, depending on the needs and preferences of the organization.

Target Audience

The target audience for this training program includes employees in central banks, financial institutions, and other organizations involved in the development, implementation, and management of CBDCs. The program is suitable for IT professionals, cybersecurity professionals, legal professionals, compliance officers, and other employees who are involved in the design, development, and management of CBDCs. Additionally, this training program can

benefit researchers, policymakers, and other professionals interested in CBDCs and their implications for the financial system.

Course Outlines

Introduction to CBDC

- Definition and types of CBDC
- Benefits and risks of CBDC

Security challenges in CBDC

- Key management: private and public keys, key generation and storage, digital signatures
- Transaction security: validation, confirmation, double-spending attacks, 51% of attacks
- Network security: consensus mechanisms, network nodes, mining, forks
- Storage security: hot vs. cold storage, multi-signature wallets, hardware wallets, paper wallets

Privacy challenges in CBDC

- Pseudo-anonymity vs. anonymity: blockchain analysis, de-anonymization attacks, privacy features in CBDCs
- Data privacy: protecting user data, GDPR compliance, data breaches
- Transaction privacy: confidentiality features in CBDCs

Encryption in CBDC

- Cryptography: symmetric and asymmetric encryption, hashing, salting
- Encryption protocols: SSL/TLS, PGP, AES, RSA
- Decentralized encryption: homomorphic encryption, secure multiparty computation MPC

Best practices for security and privacy in CBDC

- Multifactor authentication
- Regular software updates and security patches
- Backup and recovery procedures
- Compliance with AML/KYC regulations
- User education and awareness specific to CBDCs

CBDC-specific security and privacy considerations

- CBDC issuance and distribution
- Integration with existing payment systems
- Role of the central bank in CBDC management
- CBDC-specific regulatory and legal considerations

Registration form on the Training Course: Security and Privacy in Central Bank Digital Currencies (CBDC)

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