Masterclass: Hacking & Securing SQL Server

Duration: 5 Days **Course Code: HSS** **Delivery Method: Virtual Learning**

Overview:

In this course you will analyze, learn and practice critical tasks for implementing highly secure SQL Server infrastructure. We'll start with identifying security needs regarding database servers and look at the most common attack types and use them on 'out of the box' installation. In simple words we will hack our systems!

Then we will discuss impact of system and network security on databases server. Next we will go through every layer of protection offered by SQL Server with lots of real life examples and hands on labs. At the end we will look at the monitoring and auditing our infrastructure to detect threats and react to them. Additionally we'll play with security of other SQL Services and Azure SQL Databases. Our goal is to show and teach you how to protect your precious data in SQL Server environment and how database security mechanisms work. After the course you will be able to test and secure your SQL Server infrastructure. And to get more practice we offer three extra weeks of labs online!
Delivered by a highly skilled SQL and database enthusiast with practical knowledge, multiple successful projects, many years of real-world experience.
You should leave this class with scripts, checklists and practical, ready-to-use knowledge of how to hack, test and secure your SQL Server infrastructure.
The course runs as an intense workshop with a deep dive on the SQL Server. All exercises are based on SQL Server 2016 and Windows Server 2016.

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

Database administrators, infrastructure architects, security professionals, system engineers, advanced database developer, IT professionals, security consultants and other people responsible for implementing databases security.

Objectives:

- **After completing this courses you should be able to:**
- Hack, test and secure your SQL Server Infrastructure

Prerequisites:

Attendees should meet the following prerequisites:

- Good hands-on experience in administering Microsoft SQL Server infrastructure. At least 5 years in the field is recommended.

Testing and Certification

Recommended as preparation for the following exams:

- No exams are currently aligned to this course

Content:

Module 1: Overview of SQL Server Security (SQL Server 2022 ; 2025)

- New Security Features in SQL Server 2022 and 2025, including enhanced encryption and cloud integration.
- SQL server architecture and how it impacts security.
- Integration with Azure SQL Database, Azure Defender, and Azure Active Directory for improved security in hybrid environments

Module 2: SQL Server security baseline concepts

- Defining security objectives
- Configuring service accounts
- Auditing database permissions
- Implementing physical protection
- Configuring firewall
- Securing client-server communication

Module 3: SQL Server Instance security

- Limiting permissions
- Securing CLR
- Implementing protection for extended procedures
- Protecting linked servers (OPENROWSET)
- Securing by using policies
- Hiding instance metadata

Module 4: Managing Logins and Passwords

- Authentication options
- Implementing password policies
- Securing connection strings
- Customizing login / user authorization

Module 5: Encryption in SQL Server

- Key management
- Code and data encryption
- Managing certificates
- Transparent database encryption
- Encryption in HA and Disaster Recovery

Module 6: Protecting database backups

- Securing backup files
- Setting backup file passwords and encryption
- Handling keys and certificate backups
- Security considerations while restoring to another SQL Server instance

Module 7: Monitoring and auditing

- Login auditing options
- Data access auditing
- Data Manipulation Language custom auditing
- Policy-based management
- Forensics case study

Module 8: Securing other SQL Server services

- SQL Server Agent
- SQL Server Analysis Services
- SQL Server Reporting Services
- Azure SQL Database

Further Information:

For More information, or to book your course, please call us on 00 20 (0) 2 2269 1982 or 16142

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