SECURING DATABASES: PRACTICAL DATABASE SECURITY SKILLS FOR SAFER SYSTEMS (TT8700)

Course Code: 1140

Explore Database Security: Learn how to spot risks, fix vulnerabilities, and create safer, more secure database environments

Securing Databases: Practical Skills for Safer Systems is an expert-led course designed for database administrators, developers, technical leaders, and stakeholders who are responsible for protecting data in enterprise environments. As organizations place greater reliance on data to drive operations and decision-making, and as compliance requirements grow more demanding, securing your databases is no longer optional. This two-day course will provide you with the knowledge and practical skills needed to identify threats, reduce vulnerabilities, and protect the confidentiality, integrity, and availability of your data systems. This is lecture, follow-along demo style class where our security expert will walk you through practical skills and techniques you can mirror in real time, hands-on, on your machine.

You will begin by exploring the foundations of bug hunting, including how and why to identify vulnerabilities in a safe, ethical, and effective manner. You will gain a solid grounding in core information security principles as they apply to databases and learn how to fingerprint database systems, understand data flow paths, and evaluate data validation practices.

Throughout the course, you will examine key database security concerns and build hands-on skills to secure data at rest and in motion. You will learn how to classify and inventory assets, manage privileges based on business value, and apply boundary defenses to help contain potential threats. You will also gain strategies to ensure continuity of service in the event of disruptions or attacks.

The course will help you recognize and respond to a wide range of database-specific vulnerabilities. You will analyze injection attacks, weak authentication and access control, insider threats, and the dangers of insecure data handling. You will also explore how malware and ransomware can target database systems and how inadequate third-party security practices can open new risks. Cryptography fundamentals and compliance alignment will be covered to help you strengthen your defenses and meet internal and external security expectations.

By the end of this class, you will have the tools and perspective to approach database security with confidence. You will learn to identify and prioritize risks, implement layered security models, detect vulnerabilities, and respond to incidents using structured and sustainable methods. Whether your goal is to meet compliance mandates or to build a more secure data environment, this course will help you make smart, security-focused decisions that support your mission and protect what matters most.

NOTE: While the focus of this course is on securing databases, it is important to understand that databases are rarely targeted in isolation. Most real-world attacks begin with applications that connect to the data. This class is application framework agnostic, but in order to demonstrate how vulnerabilities like injection actually unfold in context, we use a simple ASP.NET (C#) web application as the example environment. You do not need to know C# or be a developer to follow along. What you do need is a basic understanding of how websites and web servers work, so you can see how database flaws show up in the bigger picture, and how to stop them.

What You'll Learn

By the end of this course, you will be able to confidently identify risks, secure sensitive data, and take effective steps to protect your database environments. This class is designed to provide you with practical tools and techniques that can be immediately applied in real-world scenarios. Below are some of the key skills you will develop during the course:

- **Hunt for vulnerabilities safely and responsibly**. Learn how to identify security flaws in databases using ethical bug hunting techniques without putting your systems at risk.
- **Understand and apply core database security principles**. Get comfortable with the fundamentals of data security and how they translate into smarter, safer database practices.
- **Protect data at rest and in motion**. Use proven strategies to secure your data during storage and transmission, reducing the chances of leaks or breaches.
- **Spot and defend against common attack vectors**. Recognize threats like SQL injection, malware, ransomware, and insider misuse—and know what to do about them.
- **Implement strong privilege and access controls**. Manage who can access what, and limit exposure with practical, role-based privilege management techniques.
- **Build a proactive, layered security approach**. Learn how to combine tools and strategies to create a resilient defense that helps keep your databases safe over time.

If your team requires different topics, additional skills or a custom approach, our team will collaborate with you to adjust the course to focus on your specific learning objectives and goals.

Who Needs to Attend

This course is designed for those who are new to database security and want to build foundational skills that can be applied right away. Ideal attendees include DBAs, developers, technical leaders, and business stakeholders responsible for data protection or compliance. A general understanding of how databases work will help you get the most out of the course.

Prerequisites

This course is designed for those who are new to database security and want to build foundational skills that can be applied right away. Ideal attendees include DBAs, developers, technical leaders, and business stakeholders responsible for data protection or compliance. A general understanding of how databases work will help you get the most out of the course.

Before attending, you should be comfortable with:

- Basic database concepts and how they are used in your organization
- Reading or writing simple SQL queries
- Understanding how applications interact with databases

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VIRTUAL CLASSROOM LIVE	$2,464 CAD	2 Day

Virtual Classroom Live Outline

Bug Hunting Foundation

- Why Hunt Bugs?
- Safe and Appropriate Bug Hunting/Hacking

Principles of Information Security

- Fingerprinting Databases
- Data Flows and Validation

Database Security Concerns

- Securing Data at Rest and in Motion
- Assets
- Privilege Management
- Boundary Defenses
- Continuity of Service

Vulnerabilities and Databases

- Injection Attacks
- Authentication and Access Control
- Data Breaches
- Malware and Ransomware
- Insider Threats
- Cryptography
- Insecure Data Handling
- Inadequate 3rd Party Security
- Asset Inventory
- Non Compliance

Apr 6 - 7, 2026 | 10:00 AM - 6:00 PM EDT

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PRIVATE GROUP TRAINING	2 Day

Visit us at www.globalknowledge.com or call us at 1-866-716-6688.