



(MS) Microsoft SQL Server Database
Administration Training





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Introduction:

The comprehensive Microsoft SQL Server database administration training is a meticulously designed course for aspiring and experienced database professionals. This complete course offers an in-depth exploration of the SQL server database, covering all essential aspects to equip you with the skills necessary for successful database management.

In this Microsoft SQL server database training, you will explore various facets of SQL server database development and administration. It will provide hands-on experience and expert-led instruction, ensuring you master the intricacies of managing and maintaining SQL server databases.

This Microsoft SQL Server database administrator course is designed to prepare you for real-world challenges and equip you with the knowledge to efficiently handle SQL server database backup, recovery, and optimization. Whether you seek to enhance your SQL server database developer skills or attain an SQL server database administrator certification, it will cover all the essential topics and best practices.

Enrolling in our SQL server database certification program will give you the credentials to advance your career. The course prepares you for the SQL server database administrator certification, making you a valuable asset to any organization. Additionally, the Microsoft SQL server database administrator training is tailored to meet the needs of those pursuing a career in database administration, providing a clear path to becoming a certified MS SQL server database administrator.

Understanding SQL Server Database Administration Training:

This SQL server database administration training includes detailed installation, configuration, maintenance, and security modules. It ensures you acquire a comprehensive understanding of SQL server database administration. Moreover, our SQL server database administrator course emphasizes practical skills and knowledge, ensuring that you are well-prepared to handle the responsibilities of a database administrator.

Participants in this Microsoft SQL server database administration training will unlock their potential and achieve mastery in SQL server database management. They will aim to develop and administer SQL server databases, providing the tools and knowledge necessary to succeed. Take the first step towards becoming a certified Microsoft SQL Server Database Administrator and elevate your career to new heights.

Targeted Groups:

- Aspiring SQL Server Database Administrators.
- Current Database Administrators seeking certification.
- SQL Server Database Developers.
- IT Professionals specializing in database management.
- Database Analysts and Consultants.
- System Administrators looking to expand their skill set.
- Recent graduates in computer science or IT.
- Professionals are transitioning to database administration.
- Individuals preparing for SQL Server Database Certification.
- Corporate IT Teams and Staff.

Targeted Competencies:

Upon the end of this Microsoft SQL server database administration training, the target competencies will be able to:

- SQL Server Database Installation and Configuration.
- Database Backup and Recovery Techniques.
- SQL Server Security Management.
- Performance Tuning and Optimization.
- Data Migration and Upgrades.
- SQL Server High Availability and Disaster Recovery.
- Database Maintenance and Monitoring.
- SQL Server Reporting Services SSRS.
- Transact-SQL T-SQL Proficiency.
- Troubleshooting and Problem Resolution.
- SQL Server Integration Services SSIS.
- SQL Server Analysis Services SSAS.
- Database Design and Development
- Automation of Administrative Tasks.
- Compliance and Data Protection.

Course Objectives:

At the end of this Microsoft SQL Server Database Administration course, the participants will be able to:

- Learn SQL Server database installation and configuration.
- Master database backup and recovery strategies.
- Understand and implement SQL Server security measures.
- Develop skills in performance tuning and optimization.
- Gain proficiency in data migration and upgrades.
- Learn high availability and disaster recovery solutions.
- Monitor and maintain SQL Server databases effectively.
- Utilize SQL Server Reporting Services SSRS.
- Write and optimize Transact-SQL T-SQL queries.
- Troubleshoot and resolve database issues.
- Implement SQL Server Integration Services SSIS.
- Understand SQL Server Analysis Services SSAS.
- Design and develop robust databases.
- Automate routine administrative tasks.
- Ensure compliance and protect sensitive data.

Course Content:

Unit 1: Introduction to SQL Server:

- Overview of SQL Server editions and versions.
- Understand SQL Server architecture.
- Intro to SQL Server Management Studio SSMS.
- Navigate the SQL Server environment.
- Basics of database concepts and terminologies.

Unit 2: Installing and Configuring SQL Server:

- Pre-installation considerations and system requirements.
- Step-by-step installation guide.
- Configure SQL Server settings.
- Set up SQL Server instances.
- Manage SQL Server services.

Unit 3: SQL Server Security Management:

- Implement authentication modes.
- Configure logins, users, and roles.
- Manage permissions and securables.
- Implement encryption and data protection.
- Audit and compliance best practices.

Unit 4: Database Backup and Recovery:

- Importance of backups and recovery planning.
- Types of backups: Full, differential, and transaction log.
- Automate backup procedures.
- Restore databases from backups.
- Disaster recovery planning and implementation.

Unit 5: Performance Tuning and Optimization:

- Identify performance bottlenecks.
- Use SQL Server Profiler and Database Engine Tuning Advisor.
- Index strategies for performance improvement.
- Query optimization techniques.
- Monitor and analyze performance metrics.

Unit 6: High Availability and Disaster Recovery:

- Configure SQL Server Always On Availability Groups.
- Implement failover clustering.
- Setting up database mirroring.
- Configure log shipping.
- Plan and test disaster recovery strategies.

Unit 7: Data Migration and Upgrades:

- Plan for data migration.
- Using SQL Server Migration Assistant SSMA.
- Perform in-place and side-by-side upgrades.
- Migrate data with SQL Server Integration Services SSIS.
- Post-migration validation and testing.

Unit 8: SQL Server Maintenance and Monitoring:

- Setting up maintenance plans.
- Regular database integrity checks.
- Automating database maintenance tasks.
- Monitoring SQL Server with built-in tools.
- Using third-party monitoring solutions.

Unit 9: SQL Server Development:

- Intro to Transact-SQL T-SQL.
- Write and execute T-SQL queries.
- Develop stored procedures and functions.
- Work with triggers and views.
- Best practices for database development.

Unit 10: Business Intelligence and Reporting:

- Intro to SQL Server Reporting Services SSRS.
- Design and deploy reports.
- Implement SQL Server Integration Services SSIS for ETL.
- Use SQL Server Analysis Services SSAS for data analysis.
- Integrate SQL Server with Power BI for advanced analytics.