

## SQL Server 2000 Administration and Support

### Course Description

This course is intended for attendees responsible for the installation and day-to-day administration of SQL Server 2000. It is also intended as an aid for those students preparing to take the Microsoft Certified Professional exam 70-228 – *Installing, Configuring and Administering Microsoft SQL Server 2000 Enterprise Edition*.

### Prerequisites

In order to gain the most from the course, students should ideally possess the following:

- ◆ Experience of the Windows 2000 Professional and Server Operating Systems.
- ◆ Knowledge of basic networking concepts such as LANs and TCP/IP.
- ◆ Although not essential, an understanding of Windows 2000 Domains and Directory Services would be beneficial.

### List of Contents

#### Module 1 Introduction to Microsoft SQL Server 2000

SQL Server Overview  
Platform Support for SQL Server  
Windows 2000 Integration  
BackOffice Integration  
Client-Server Communication  
SQL Server Services  
SQL Server Databases  
SQL Server Database Objects  
SQL Server Object Naming  
SQL Server Database System Tables  
SQL Server Security  
SQL Server 2000 Roles  
SQL Applications  
Tiered Applications  
SQL Implementation Considerations  
SQL Server Administration  
SQL Administration Tasks  
Additional Features

#### Module 2 Installation of SQL Server 2000

Pre-requisites To Installing SQL Server 2000  
Editions of SQL Server

SQL Server Installation  
Installation Method  
Selecting the Type of Installation  
Choosing the Installation Components  
Choosing the Collation and Sort Rules  
Choosing the Network Library  
Using a SQL Service Account  
Choosing a Licensing Mode  
Performing an Unattended Installation  
Upgrading SQL Server  
Reviewing the Installation  
Verifying a Connection to the Server  
SQL Server Configuration Settings  
Troubleshooting a Failed Installation

#### Module 3 Managing SQL Server 2000 Security

Authentication Modes  
Creating and Managing Login Accounts for SQL Server  
Assigning Login Accounts to Databases  
Assigning Access and Management Permissions  
Fixed Database Roles  
Using Fixed Server Roles  
Using Fixed Database Roles

Creating User-defined Database Roles  
Understanding Permissions  
Granting Permissions  
Denying Permissions  
Revoking Permissions  
Security Considerations  
Additional Permission Issues

#### **Module 4 Databases and Transaction Logs**

Database Files  
Transactions  
Creating Databases  
Setting Database Options  
Expanding Database Files  
Transaction Log Expansion  
Shrinking Databases  
Dropping Databases  
Using RAID with SQL Server  
Filegroups  
Sizing Databases  
Improving SQL Server Performance

#### **Module 5 SQL Server Backup**

The Need for Backups  
SQL Server Recovery Models  
The SQL Server Backup Process  
Backing Up Databases  
Restricted Activities During Backup  
Creating and Using Backup Devices  
Multiple Backup Files  
Backup Options  
Backup Methods  
Differential Backup  
Transaction Log Backup  
Filegroup Backup  
Using a Full Backup Strategy  
Using a Differential Backup Strategy  
Using a Full Backup and Transaction Log Backup Strategy

Using a Full Backup and Filegroup Backup Strategy  
Improving Backup Performance

#### **Module 6 SQL Server Database Restore**

SQL Server Recovery  
Restore Safety Checks  
Carrying Out Pre-Restore Tasks  
Database Recovery  
Restoring from a Full Backup  
Restoring from a Differential Backup  
Transaction Log Restore  
File or Filegroup Restore  
Standby Servers  
Restoring with Standby  
Restoring System Databases

#### **Module 7 Automating Administrative Tasks**

Automating Tasks  
Automation Components  
Configuring Automation  
Jobs  
Job Steps  
Scheduling Jobs  
Operators  
Job History  
Alerts  
SQL Server Alerts  
User-defined Errors  
Performance Condition Alerts  
Fail-Safe Operator  
Troubleshooting  
Multi-server Jobs  
Web Publishing  
Managing the Web Jobs  
Web Security

#### **Module 8 Data Handling**

Overview of Data Transformation

Data Transformation Tools  
DTS Package Flow  
DTS Wizard  
DTS Designer  
DTS Package Workflows  
Transforming Data  
Saving DTS Packages  
Running DTS Packages

### **Module 9 Maintaining SQL Server 2000**

The Need To Monitor SQL  
Monitoring Performance  
Event Viewer  
Performance Monitor  
SQL Enterprise Manager  
Deadly Embrace  
Transact-SQL  
SQL Server Profiler  
Query Management  
Maintaining Databases

### **Module 10 Replication**

Overview of Distributed Data  
Distributed Data – Techniques  
Publisher – Distributor – Subscriber  
Metaphor  
Publications and Articles  
Data Filtering – Publishing Subsets of Data  
Subscriptions – Push and Pull  
SQL Server Replication  
SQL Server Replication Agents  
SQL Server Replication Types  
Snapshot Replication  
Transactional Replication  
Merge Replication  
Physical Replication Models  
Central Publisher/Distributor  
Central Publisher/Remote Distributor  
Central Publisher/Remote Subscribing  
Publisher

Central Subscriber/Multiple Publishers  
Multiple Publishers/Multiple Subscribers  
Replication Planning  
Logical Design Requirements  
Determining the Replication  
Implementation  
Data Issues  
Managing Replication  
Monitoring Replication  
SQL Server Replication Monitor  
Maintaining Replication  
Replication Agent Histories  
Troubleshooting Replication  
Performance Issues  
Replication in Heterogeneous Environments  
Replicating Data using ODBC  
Publishing to Heterogeneous Subscribers  
Subscribing to Heterogeneous Publishers  
Internet Publishing

