

Implementing Replication Using Microsoft SQL Server 2000

Course 2591—Three days—Instructor-led

Introduction

This three-day instructor-led course provides students with the knowledge and skills to plan, deploy, administer, manage, and troubleshoot complex replication designs over a variety of communication topologies. The course reviews SQL Server replication and then focuses in detail on snapshot, transactional, and merge replication as well as topics related to Enterprise-level replication.

Audience

This course is intended for experienced database administrators and system architects who want to improve their skills and the replication capabilities of their systems. Students should be proficient in the design and administration of SQL Server 2000 systems.

At Course Completion

After completing this course, students will be able to:

- Describe replication.
- Implement replication.
- Implement snapshot replication.
- Implement transactional replication.
- Implement merge replication.
- Implement replication in an Enterprise environment.

Prerequisites

Before attending this course, students must have:

- Completed Course 2071—Querying Microsoft SQL Server 2000 with Transact-SQL, or equivalent knowledge.
- Completed Course 2072—Administering a Microsoft SQL Server 2000 Database, or equivalent knowledge.
- Knowledge of Microsoft Windows 2000 basics.
- Knowledge of Windows networking fundamentals.

In addition, it is recommended, but not required, that students have completed, or have equivalent knowledge of:

- Course 2073—Programming a Microsoft SQL Server 2000 Database

Microsoft Certified Professional Exams

There are no Microsoft Certified Professional Exams associated with this course.

Student Materials

The student kit includes a comprehensive workbook and other necessary materials for this class.

Course Outline

Module 1: Exploring Replication

This module provides an overview of replication, replication setup, describes the function of replication agents, and replication security.

Lessons

- Understanding SQL Server Replication
- Setting up Replication
- Understanding Agents in Replication
- Securing Replication

After completing this module, students will be able to:

- Define replication.
- Set up replication.
- Describe the functions of replication agents.
- Security-enhanced replication.

Module 2: Implementing Replication

This module describes the SQL Server platform for replication and discusses how to replicate data and objects, and design and troubleshoot a replication type.

Lessons

- Understanding the SQL Server Platform for Replication
- Replicating Data and Objects
- Replicating and Executing Objects
- Designing a Replication Topology
- Troubleshooting a Replication Implementation

Lab 2: Implementing Replication

- Determining the Replication Type
- Implementing Snapshot Replication
- Implementing Transactional Replication
- Implementing Merge Replication
- Removing Subscriptions and Publications

After completing this module, students will be able to:

- Describe the SQL Server platform for replication.
- Replicate data and objects.
- Replicate and execute objects.
- Design the best replication type for a given business problem.
- Monitor, troubleshoot, and tune replication.

Module 3: Implementing Snapshot Replication

This module explains how to plan, deploy, administer, and troubleshoot snapshot replication.

Lessons

- Understanding Snapshot Replication Architecture
- Replicating Snapshot Publications Efficiently

- Troubleshooting Snapshot Replication

Lab 3: Implementing Snapshot Replication

- Using Snapshot Replication with Custom Properties

After completing this module, students will be able to:

- Describe the architecture of snapshot replication.
- Replicate snapshot publications efficiently.
- Troubleshoot snapshot replication.

Module 4: Implementing Transactional Replication

This module explains how to plan, deploy, and troubleshoot and tune transactional replication.

Lessons

- Understanding Transactional Replication Architecture
- Replicating with Transactional Replication
- Implementing Updatable Transactional Replication
- Facilitating Transactional Replication by Using Stored Procedures
- Troubleshooting Transactional Replication
- Tuning Transactional Replication

Lab 4: Implementing Transactional Replication

- Designing a Transactional Replication Solution

After completing this module, students will be able to:

- Describe transactional replication.
- Replicate with transactional replication.
- Implement updatable transactional replication.
- Facilitate transactional replication using stored procedures.
- Troubleshoot transactional replication.
- Tune transactional replication.

Module 5: Implementing Merge Replication

This module explains how to plan, deploy, and troubleshoot and tune merge replication.

Lessons

- Understanding Merge Replication Architecture
- Implementing Conflict Resolution
- Planning and Deploying Merge Replication
- Troubleshooting Merge Replication
- Tuning Merge Replication

Lab 5A: Implementing Merge Replication

- Using Dynamic and Join Filters with Merge Replication

After completing this module, students will be able to:

- Describe the architecture of merge replication.
- Implement conflict resolution.
- Plan and deploy merge replication.

- Troubleshoot merge replication.
- Tune merge replication.

Module 6: Implementing SQL Server Replication in an Enterprise Environment

This module explains how to design replication for heterogeneous database systems and implement Enterprise replication scenarios, including backing up and restoring database systems.

Lessons

- Planning for Disaster Recovery in a Replicated Environment
- Upgrading and Applying Service Packs in a Replicated Environment
- Understanding Enterprise Options in a Replicated Environment
- Understanding Replication with Heterogeneous Database Systems

After completing this module, students will be able to:

- Plan disaster recovery for replication.
- Upgrade and apply service packs in a replicated environment.
- Understand key options concerning replication in some enterprise environments.
- Understand replication with heterogeneous database systems.