

# Data Management in the Multiuser Geodatabase

*Three Days*

## Overview

ArcSDE technology is an integrated part of ArcGIS Server and is used to access multiuser geographic databases stored in relational database management systems (RDBMS). This course prepares GIS and database administrators to implement an ArcSDE geodatabase by teaching how to load and manage ArcSDE data. The course presents concepts applicable to both workgroup and enterprise ArcSDE geodatabases but focuses primarily on the enterprise ArcSDE geodatabase. You learn the basic architecture of a multiuser geodatabase and are introduced to ArcSDE connection types. The course focuses on loading and managing vector and raster data and emphasizes best practices for interacting with a multiuser geodatabase. You explore multiuser geodatabase design strategies and editing options for data stored in a multiuser geodatabase, including versioning.

## Audience

This course is designed for GIS and database administrators who want to implement a workgroup or enterprise ArcSDE geodatabase. This course pairs well with the ArcGIS Server Enterprise Configuration and Tuning for Oracle and ArcGIS Server Enterprise Configuration and Tuning for SQL Server courses.

## Prerequisites and recommendations

Students should have completed ArcGIS Desktop II: Tools and Functionality or Learning ArcGIS Desktop or have equivalent knowledge. Students should also be familiar with basic RDBMS concepts.

## Goals

- Describe the multiuser geodatabase architecture.
- Create connections to an enterprise ArcSDE geodatabase.
- Understand and manage user permissions.
- Design, load, and manage vector and raster data.
- Describe client optimization practices.
- Understand editing options in a multiuser geodatabase.
- Understand the basic architecture and workflow of multiuser editing.

## Topics Covered

**Defining geodatabase architecture:** Multitier architecture; Geodatabase options; Elements of a workgroup and enterprise installation.

**Geodatabase administration:** User roles and privileges; Management tools.

Connecting to the geodatabase: Direct and application server connections; OLE DB connections.

**Data loading and management:** Configuring dbtune parameters for spatial data storage; Tools for data creation; Vector storage; Raster storage and organization; Managing spatial and attribute indexes; Associating spatial and non spatial data; Geodatabase design considerations.

**Multuser editing:** Overview of available options; Versioning concepts including reconcile, post, and conflict detection.

**Maintaining performance:** Compressing the geodatabase; Recommendations for maintaining performance; Tips and tricks for data managers.