



## The Online College of 4D

### 4D Dev 201:

## Administering and Maintaining 4D Server Databases

### Lesson 1 - Installing and Configuring 4D Servers and 4D Clients

This lesson will take the Developer or DBA through the basic steps involved in setting up and configuring a 4D Server database. The topics covered in this lesson:

- What you need: files, utilities, and applications
- Installing 4D Server
- Installing Licenses
- Installing 4D Client
- Understanding Client/Server Technology
- Launching 4D Server
- Connecting to 4D Server with 4D Client
- Running Multiple Instances of 4D Server
- Troubleshooting Connection Problems

### Lesson 2 - Special Considerations for a Cross-Platform 4D

#### Environment

This lesson will build on what the user learned in Lesson 1, enhancing the student's ability to set up, configure, and troubleshoot cross-platform 4D Server installations. The topics covered in this lesson include:

- File Types on Mac and Windows
- Understanding 4D Transporter
- Converting the Structure and Data
- Converting Other Files and Templates
- Techniques for Copying Files Across Platforms
- Network Components on Mac and Windows
- 4D Server on a Macintosh
- 4D Server on Windows
- 4D Server as an NT Service
- 4D Server on OS X?

## **Lesson 3 - Special Considerations for 4D WebServer**

### **Installations**

This lesson will build on what the user learned in Lesson 1, enhancing the student's ability to set up, configure, and troubleshoot 4D WebServer installations. The topics covered in this lesson include:

- WebServer Licensing Issues
- WebServer Configuration Options
- Managing Webserver Files and Directories
- Memory Considerations for 4D WebServer
- Fine-Tuning and Configuring for Web Serving
- Separating the Web Server and the Data Server: Pros and Cons

## **Lesson 4 - Fine-Tuning Part 1: Using 4D Customizer**

Every professional database developer and DBA knows that fine-tuning a server installation can make the difference between a slow server and a fast one - a server that is stable and a server that crashes. This lesson is the first in a three-part series on fine-tuning a 4D Server and 4D WebServer. The topics covered in this lesson include:

- Customizing a 4D Structure
- Customizing 4D, 4D Runtime, and 4D Engine
- Customizing 4D Server
- Calculating Memory Requirements
- FineTuning Memory Settings
- Customizing 4D Client
- Customizing Network Components

## **Lesson 5 - Fine-Tuning Part 2: Setting Database Properties**

This lesson is the second in a three-part series on fine-tuning a 4D Server and 4D WebServer. The topics covered in this lesson include:

- Understanding Database Properties
- Database Properties and 4D Server Fine-Tuning
- Database properties in Version 6.0.
- Database Properties in Version 6.5.
- Database Properties in Version 6.7

## **Lesson 6 - Fine-Tuning Part 3: Using the Runtime Explorer**

Professional database developers and DBA's know that fine-tuning a server installation can make the difference between a slow server and a fast one - a server that is stable and a server that crashes. This lesson is the third in a three-part series on fine-tuning a 4D Server and 4D WebServer. The topics covered in this lesson include:

- The Watch Tab
- Watching a Specific Process
- Watching Tables and Fields
- Watching Semaphores, Sets, Named Selections
- Watching Cache Statistics to Evaluate Performance
- The Process Tab: Monitoring Process Performance

## **Lesson 7 - Data File Analysis and Repair - Part 1**

Unfortunately, computers are not perfect; things sometimes go wrong. One of the most frequent things that can go wrong with a 4D database is "data file corruption." This is Part 1 of a two-part lesson. In this lesson, the student will learn how to detect data file corruption, and how to repair it. Among the topics covered:

- How to Detect Data Corruption
- Possible Causes of Data Corruption
- Using 4D Tools

## **Lesson 8 - Data File Analysis and Repair - Part 2**

This is Part 2 of a two-part lesson. In this lesson, the student will learn how to detect data file corruption, and how to repair it. Among the topics covered in Part 2:

- Using DataCheck
- Special Techniques for Corrupted Indexes
- Being Pro-active: Preventing Data Corruption

## **Lesson 9 - Backup and Recovery Strategies Part 1**

In the previous lesson, we talked about data file analysis and repair, in the case of a partial corruption of the data file. But what do you do if the entire hard disk crashes? This lesson will take you through the entire backup and recovery process. Among the topics covered:

- What is a hard disk crash?
- The Principle of Incremental backups
- The Monthly tune-up
- Using 4D Backup with 4D Server

## **Lesson 10 - Backup and Recovery Strategies - Part 2**

This is a continuation of the lesson on Backup and Recovery. In this lesson, we continue the discussion:

- Using 4D Backup with 4D Server

## Lesson 11 - Four Weeks of Hands-on Experience

The course is almost over, but not quite. For the next four weeks, the students will improve and streamline their 4D Server administration, applying all the strategies and techniques that were learned in this course. During this 4-week period, the students will be able to continue to communicate with the instructor, getting advice about specific database administration issues.

### General Information About the Course

- Special introductory price \$299.00 (regular price \$349)
- New lessons on twice a week, total 5 weeks plus a 4-week 'coaching period'
- Lesson materials are posted to a password-protected Forum.
- Students study the materials, then ask the instructor questions.
- Students are encouraged to exchange ideas with each other in the Online Forum.
- There is a Review session at the end of each lesson.
- No Travel expenses.
- Pick your own study time.
- Enroll in a course, no matter where you are in the world.

The instructor, Walt Nelson, has been a 4D developer & consultant since 1987, including four years in technical management positions at 4D Inc. (USA): Director of Technical Support, Director of Partner Services, and High-level 4D Trainer. Walt has mentored – in person and electronically – hundreds of 4D developers; he is also the owner and webmaster of the web site <http://www.4dmentor.com/>.

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