DB204 DB2 For Application Developers

Course description This course is designed to provide application developers with the comprehensive knowledge required to design, develop and maintain efficient DB2 applications. Each stage of the program development cycle is discussed in detail, and supported with practical case studies.

Who Should Attend Application developers, programmers and analyst programmers responsible for developing and/or supporting DB2 applications.

Pre-Requisites A general programming background in the host language is assumed, but no previous DB2 knowledge is required.

Duration 5 Days

DB2 Introduction

The Relational Database
DB2 Host Environments
Subsystem Architecture
DB2 Object Architecture
SQL Overview

Data Definition Language

Creating Tables
DB2 Data Types
Creating Views
Creating Indexes
Converting Indexes
Creating Synonyms
Drop & Alter Overview

Data Loading Tables

The Insert Statement
The LOAD Utility

Basic Data Manipulation Language

The Basic Select
Where
And, Or
In, Between, Like
Nulls
User Defined Defaults
Order By
Not
Case
Insert
Update
Delete

Advanced SQL

Expressions
Special Registers
Built-In Functions
Group By
Having
Joins (Inner, Outer)
Union
Sub-Selects

Application Programming

Embedding SQL
Declaring Tables
The DCLGEN
The SQLCA
Host & Indicator Variables
Using Cursors
Error Handling
The Development Stages
Precompiling
Binding & Rebinding
Plans & Packages
The Optimiser & Access Paths
Compiling DB2 Programs
Link Editing DB2 Programs
Executing DB2 Programs
DB2I Preparation

The DB2 Catalog

Functional Overview
Major Catalog Tables
The Catalog & DDL
The DB2 Optimiser
Runstats

DB2 Security

Grant / Revoke Privileges
Authorisation Id's
Object Ownership

Data Integrity

Logging
Commit & Rollback
Locking
Isolation Levels CS, RR, RS, UR)

Access Mechanisms & Performance

Indexes
Index Types
Tablespace Scans
Matching Index Scan
Non-Matching Index Scan
Clustered / Non-Clustered Indexes
Index Only Access
Multi-Index Access
Sequential Prefetch
List Prefetch
Merge Scan Join
Nested Loop Join
Hybrid Join
Optimize For ...
Predicate Types
Explain

Referential Integrity

RI Functional Overview
Primary Keys
Foreign Keys
Adding Referential Constraints
Delete Rules
DBMS vs Non-DBMS RI

User Facilities

QMF Overview
SPUFI
DSNTIAUL
DSNTEP2