

DB2 and CICS Interface (2 Day)

Benefits

Students who complete this course will be able to code SQL statements to access DB2 objects in CICS pseudo-conversational programs. The student also learns the performance tradeoffs inherent in specific design alternatives, and how to administer the DB2 / CICS attachment facility.

Audience

Experienced CICS or DB2 application programmers who need to work with DB2 data in CICS, or technical support staff who need to understand the ways in which DB2 and CICS work together.

Prerequisites

The student should have experience in using ISPF/PDF, CICS, DB2, SQL, and SPUFI

Major Topics Include

- Cursors
- Pseudo-conversational programming
- Units of work
- Scrolling data
- Updating data
- DB2 and CICS logging
- Referential integrity issues
- Two-phase commit
- Application plans
- BIND options
- Plan exits
- Plan maintenance
- Threads
- DB2CONN, DB2ENTRY, and DB2TRAN definition
- DSNB command
- Administrative issues
- Batch concurrency
- DB2 and CICS security
- Authorization exits

DB2/CICS Interface - Topical Outline

Introduction

Computer Exercise: Course Setup

Application Programming with DB2 in CICS

Program Preparation
Pseudo-conversational programming
SQL cursor review
Logical units of work

Browsing data in CICS

DB2 Cursors and browse logic
CICS temporary storage
Computer Exercise: Compile, Bind and Test a Browse Program

On-line Updating

Major Considerations

Dealing with the Concurrent Update Problem
Global Updates
Cursor Repositioning
Updating Read-only Cursors
Referential Integrity Issues
Update Granularity
Computer Exercise: Compile, Bind, and Test an Update Program

DB2 Logging

Log Contents
Log Processing
CICS Backup and Recovery
Dynamic Transaction Backout

Syncpoint

Two-Phase Commit

Application Plan Strategies

Dynamic Plan Selection
Packages and Plan Maintenance
Computer Exercise: A Multiple DBRM Application Plan

The DB2 / CICS Connection

Threads
DB2 / CICS Communication Protocols
DB2 System Parameters

CICS DB2 Resource Definition – CEDA

DB2CONN
DB2ENTRY

DB2TRAN

The DSNB Transaction

DB2 Commands

Attachment Facility Commands

The CEMT Transaction

Computer Exercise: Using DSNB, CEDA, and CEMT

Administrative issues

Operations

Monitoring

Problem detection/resolution

Installing new versions of
system software
application software

Security

Network control/help desks

Concurrency with batch

Bind parameters

Commit frequency

Scheduling

Backup concerns

DB2 and CICS Security

CICS security

Plan security

Table security

Authorization IDs and exits

Optional Computer Exercise: CICS Security