

## **CICS Transaction Server - Concepts & Facilities**

*introduces and explains CICS Transaction Server (CICS/TS) to those who have limited or no knowledge of CICS but who need a clear understanding of what CICS is, what it does and how it does it.*

**Duration: 1 day**

### **Contents:**

#### **Introduction to CICS**

CICS Transaction Server; What is CICS?; CICS terminology; What is a business transaction?; What is a CICS task /CICS transaction?; What is a CICS program?; CICS characteristics; On-line processing; IBM CICS Transaction Server for z/OS; Workload management; Access to CICS.

#### **CICS Architecture**

CICS organisation; Starting a CICS Region; Starting a transaction: Logging on, Message Input; Transaction validation; Program loading; Task execution; Program execution; Task Termination; Multi-tasking and multi-threading; The CICS Dispatcher; Multiple TCBS; Domains and components.

#### **The Master Transaction CEMT**

The functions of CEMT; CEMT Inquire menu; CEMT Inquire system; CEMT generic input; Inquiring on a resource specifying a property; Discarding a resource; CEMT I TASK.

#### **Resource Definition**

CICS resources; Resource Definition On-line (RDO); The CICS System Definition File CSD; The CICS Global Catalog; RDO Groups and Lists; Resource definition; Adding a GROUP to a LIST; The CSD Utility Program DFHCSDUP; Auto-installation of resources; Program Autoinstall; Terminal Autoinstall.

#### **CICS Application Programming**

Application services; EXEC CICS commands; Command Translation; Program preparation; Integrated translator; EXEC Interface Block EIB; Execution flow; Conversational and pseudo-conversational transactions; Conversational Design; Pseudo-conversational design; COMMAREA; Channels and Containers; API Commands; One program/one channel; One program/multiple channels; Program Logical levels; Three-tier application design; Basic Mapping Support (BMS); COBOL symbolic map; Command interpreter; CICS Messages and Codes Transaction (CMAC); Execute Diagnostic Facility (EDF); CEDF Working Storage; CEDF setting a Stop condition.

#### **Java Support in CICS**

Java Support in CICS; CICS and Enterprise Java Beans (EJBs).

## **File Access**

CICS file control; The file definition; EXEC CICS file commands; Programming for file errors; Shared Data Tables.

## **CICS and External Resource Managers**

CICS and DB2; CICS and IMS/DB (DL/1); CICS and Websphere Message Queuing Series (WMQ).

## **CICS Queuing Facilities**

Transient Data; INTRAPARTITION Queues; EXTRAPARTITION Queues; INDIRECT Queues; The CICS Supplied TD Queue definitions; Temporary Storage; The Temporary Storage Browse Transaction; Using CEBR.

## **CICS Intersystem Communication**

Introduction to Inter System Communications; Multi Region Operation (MRO); Inter Systems Communication (ISC); Inter System Communication over SNA; Intercommunication Using IP Interconnectivity; Transaction Routing; Function Shipping; Static Transaction Routing; Dynamic Transaction Routing with Cloned AORs; Distributed Program Link (DPL); Asynchronous processing; Distributed Transaction Processing (DTP); External CICS Interface (EXCI).

## **Introduction to CICSplex System Manager**

Terminology; CICS proliferation; CPSM components; Transaction Routing; Single-System Image (SSI); CPSM address space (CMAS); CMAS; Maintenance Point (MP); MAS; The Data Repository; Environment Services System Services (ESSS); Single Point Of Control (SPOC); CPSM major functions; CICSplex SM summary.

## **Web Services**

What is a web service?; Web Services Terminology; CICS Web Services; Creating a Web Service for an Existing CICS Application; Creating a Web Service from a Web Service description; The Web Service Binding File; CICS Web Support (CWS); CICS Transaction Gateway; CICS Universal Client (CUC).

## **CICS Storage**

The CICS Region; Dynamic Storage Areas; Start-up Operands in the SIT; Subsystem Storage Protection; Transaction isolation.

## **Startup & Shutdown**

CICS Initial and Cold Start; START=INITIAL; START=COLD; START=AUTO; Normal Shutdown; First Quiesce Stage; Second Quiesce Stage; Third Quiesce Stage.

## **Logging and Recovery/Restart**

Concept of Data Integrity; Recoverable Resources; Defining the CICS System Log; Recovery After a Failure.