

## CICS Command Level Application Programming

### Course Summary

#### Description

Class participants learn how to write on-line applications using the CICS/TS command level interface. The fundamentals of terminal I/O, program control, file processing and program testing/debugging are presented. Programming techniques that maximize CICS/TS performance and efficiency are discussed in detail throughout the class. This course can be taught at the current release of CICS/TS or any previous release based on the client's needs.

#### Objectives

Upon completion of this course the student should be able to:

- Understand the major CICS/TS management functions and their corresponding tables (PPT, PCT, TCT, FCT, DCT).
- Design and code application programs for the CICS/TS environment using the following CICS/TS functions:
  - \* Exception conditions (HANDLE CONDITION, IGNORE CONDITION)
  - \* Program control (LINK, XCTL, LOAD, RELEASE, RETURN)
  - \* Terminal control (SEND, RECEIVE, HANDLE AID)
  - \* File control (READ, REWRITE, WRITE, DELETE, STARTBR, EADNEXT, ENDBR, RESETBR)
  - \* Basic mapping support (MAPSETS, MAPS, SEND, RECEIVE, ATTRIBUTES, CURSOR POSITIONING)
  - \* Transient data control (READQ TD, WRITEQ TD, DELETEQ TD)
  - \* Temporary storage control (READQ TS, WRITEQ TS, DELETEQ TS)
  - \* Storage control (GETMAIN, FREEMAIN)
  - \* Access to other system information (ADDRESS, ASSIGN)
  - \* Abnormal termination and recovery (HANDLE ABEND, ABEND, DUMP)
- Use the CICS/TS diagnostic facility (CEDF) for testing and debugging application programs.

#### Audience

This course is designed for application level programmers who are required to code and maintain programs which utilize the CICS/TS Command Level Interface.

#### Prerequisites

The student should have knowledge of COBOL, PL/I, or Assembler Language coding techniques and a conceptual understanding of DASD file organizations.

#### Duration

Five days

*Due to the nature of this material, this document refers to numerous hardware and software products by their trade names. References to other companies and their products are for informational purposes only, and all trademarks are the properties of their respective companies. It is not the intent of ProTech Professional Technical Services, Inc. to use any of these names generically*

## CICS Command Level Applications Programming

### Course Outline

- I. CICS/TS Overview**
  - A. Batch vs. on-line
  - B. Real-time
  - C. Think-time
  - D. Transactions
  - E. Pseudo-conversational
  - E. Components, functions and features
  - F. Definitions
  - G. Tables.
- II. Command Language Interface**
  - A. Program characteristics
  - B. Interface with CICS/TS
  - C. EXEC CICS/TS command format
  - D. Execute interface blockand argument conventions translator
- III. Program Structure**
  - A. Language considerations and restrictions
  - B. Linkage section usage
- IV. Exception Processing**
  - A. Handle condition and Ignore condition
  - B. Resp and Nohandle
  - C. EIBRESP
- V. Program Control**
  - A. Modular structure using XCTL, LINK, CALL and RETURN
  - B. Pseudo-conversational tasks using transid and commarea
- VI. Terminal Control**
  - A. SEND and RECEIVE
  - B. Attention identifiers
  - C. DFIL AID
  - D. HANDLE AID
- VII. File Control**
  - A. Random processing commands (read, update, delete, add)
  - B. Browsing commands (start browse, read next, read previous, end or reset browse)
  - C. Move mode (INTO) versus locate mode (SET)
  - D. Exclusive control
  - E. Syncpoint
- VIII. Basic Mapping**
  - A. Overview of BMS facilities
  - B. Map creation (mapset definition macro, map definition macro, field definition macro)
  - C. Attribute modification
  - D. Cursor positioning
  - E. mapping commands (SEND, RECEIVE)
- IX. Transient Data and Temporary Storage**
  - A. Reading writing and deleting queues
- X. Programing Considerations**
  - A. Access to system information (ADDRESS, ASSIGN)
  - B. Abnormal termination and recovery (HANDLEABEND, ABEND, DUMP)
  - C. Debugging facilities (CEDF)

*Due to the nature of this material, this document refers to numerous hardware and software products by their trade names. References to other companies and their products are for informational purposes only, and all trademarks are the properties of their respective companies. It is not the intent of ProTech Professional Technical Services, Inc. to use any of these names generically*