TSO CLIST Programming in z/OS (3 Days)

Version

TSO/E REXX.

Benefits

Students who complete this course will be able to accomplish work using native TSO commands and the powerful CLIST capability of TSO. CLISTs are developed that can be immediately useful in day-to-day work.

Audience

Applications and systems programmers, who need to know how to use TSO commands hand how to create or maintain TSO CLISTs. Anyone who will be creating or maintaining applications written to run under the Dialog Manager.

Prerequisites

At the very least, the student entering this course should have experience in using ISPF/PDF, especially the editor. Additionally, experience submitting jobs to run in the batch and some programming background are helpful.

Course Objectives

On successful completion of this course, the student, with the aid of the appropriate reference materials, should be able to:

1. Describe the TSO environment, and describe the distinctions between TSO commands and CLIST statements
2. Write CLISTs to accomplish useful functions
3. Use TSO commands to work with datasets, either in native mode or in CLISTs
4. Use CLIST statements to work with records in files
5. Include Error and Attention routines in CLISTS
6. Pass parameters and nest CLISTs
7. Use subprocedures as a coding technique for CLISTs
8. Use TSO and CLISTs to run programs in the Foreground or the Background (batch)
9. Use TSO commands to send and receive datasets between users

TSO CLIST Programming in z/OS - Topical Outline

Day One

Introduction
- Review of TSO LOGON command and parameters
- TMP - The Terminal Monitor Program
- Basic TSO commands: SEND, LISTBC, TIME, HELP, LOGOFF
- Computer Exercise: A First Encounter with TSO

CLISTs - Command Procedures
- Symbolic Variables
- Basic CLIST Statements: READ, WRITE, WRITENR
- TSO EXEC command
- Computer Exercise: A First CLIST

Concatenation of symbolic variables
- SET statement
- Expressions
- Control Variables and Built-in Functions
- TSO PROFILE command
- CONTROL CLIST statement and Control Symbolic Variables
- Computer Exercise: Symbolic Variables & Manipulation

Clearing the Screen
- TSO Commands: LISTCAT, LISTDS
- CLIST Statements: GOTO, IF-THEN-ELSE, EXIT, DO-Sequences, SELECT
- Logic structures in CLIST
- Computer Exercise: The TSOUTIL CLIST

Day Two

TSO END Command
CLIST Attention Routines
- CLIST RETURN, ATTN statements
- Computer Exercise: An Attention Routine

TSO Commands for working with files:
- ALLOCATE, FREE, ALTLIB, LISTALC, RENAME, REPRO, DELETE, DEFINE CLUSTER
- Computer Exercise: Creating Data

SMS - Storage Management Subsystem
- ALTER, PRINT, PRINTDS, SMCOPY
- Computer Exercise: Printing and Copying

LISTDSI CLIST statement
- Computer Exercise: The RENFILES CLIST

Error Handling Routines
Nesting CLISTs
CLIST Statements READDVAL, TERMIN
Computer Exercise: The WFILES CLIST

Parameters and the PROC statement
Computer Exercise: The BACKUP CLIST

Day Three

GLOBAL statement
Subprocedures, SYSCALL, NGLOBAL, and SYSREF

CLIST Statements for working with records in files
OPENFILE, GETFILE, PUTFILE, CLOSFILE
Computer Exercise: The LISTEX CLIST

Trapping Output from a command
Running programs in Foreground
TSO CALL Command
Computer Exercise: Running a Program in the Foreground

Running jobs in the Background
TSO Commands: SUBMIT, STATUS, CANCEL, OUTPUT
Running CLISTs in the batch
TSO EDIT Command
EDIT Modes and Subcommands
Computer Exercise: TSO EDIT

TSO TRANSMIT and RECEIVE Commands
LOG and NAMES data sets

Exercises

There are thirteen hands-on exercises.