MVS Skill Pack for z/OS (TSO/ISPF & JCL)

Course Summary

Description

This course is designed to help programmers, operations staff and managers new to the z/OS environment gain an understanding of MVS concepts, a working knowledge of TSO, ISPF and JCL. The lecture components and hands-on labs will give each student the opportunity to understand and use the basic facilities of an MVS environment.

Topics

- MVS operating system terminology
- Introduction to DASD, Tape, and Systems Managed Storage
- Intro to Catalogs, VTOCs, and Tape Labels
- MVS Networking: TCP/IP and SNA
- JES2 vs JES3
- MVS Security Overview
- What is a Parallel Sysplex
- What is UNIX System Services
- Program Product Overview: CICS, DB2, IMS, WebSphere MQ
- Third-party Program Product Overview
- TSO/ISPF introduction
- ISPF hierarchy
- ISPF commands
- Using SDSF to view job output
- Coding the JCL JOB and EXEC statements
- Coding JCL DD statements
- IF/THEN/ELSE/ENDIF JCL statements
- JOBLIB, STEPLIB, and JCLLIB JCL statements
- OUTPUT JCL statements
- SET and INCLUDE members
- Using cataloged and in-stream JCL procedures with symbolic overrides
- Using the IBM SORT program

Audience

This course is intended for personnel who are new to the MVS operating system or those who are seeking a refresher course in basic to intermediate JCL programming execution.

Prerequisites

There are no prerequisites for this course.

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.

Course Outline

I. MVS Overview
   A. zSeries & S/390 Operating Systems
   B. A Typical zSeries Data Center
   C. Real & Virtual Memory
   D. Multiprogramming vs. Multiprocessing
   E. Interrupts
   F. Bits and Bytes
   G. EBCDIC vs. ASCII
   H. The CPU (Central Processing Unit)
   I. MVS in a TCP/IP Network
   J. Understanding the Network Controllers
   K. Understanding the 3270 Terminal
   L. S/390 Printer Hardware Categories
   M. Storage Devices: DASD
   N. Storage Device Connections
   O. Storage Subsystems
   P. MVS Address Spaces
   Q. MVS Data Spaces
   R. z/OS 64 Bit Address Space
   S. MVS HiperSpaces
   T. MVS Dispatching
   U. MVS Customization
   V. The MCS Console
   W. MVS Data Management
   X. MVS Data Set Types
   Y. Sequential Datasets
   Z. Partitioned Datasets
   AA. VSAM Datasets
   BB. Systems Managed Storage (SMS)
   CC. Catalogs
   DD. VTOC: Volume Table of Contents
   EE. Tape Labels
   FF. Recovery / Termination Mgmt
   GG. SMF - System Management Facilities
   HH. Serialization: ENQ / DEQ
   II. Shared DASD & Reserve/Release
   JJ. Security Overview
   KK. JES Overview
   LL. Job Life Cycle Phases
   MM. Job Execution Phase
   NN. JES2 vs. JES3
   OO. A Parallel Sysplex
   PP. UNIX System Services
   QQ. The UNIX Hierarchical File System
   RR. The UNIX Shell
   SS. Using the OMVS TSO Command
   TT. File Mgmt using the ISPF Shell
   UU. Program Products: CICS
  VV. Program Products: DB2
   WW. Program Products: IMS
   XX. Today's Application Architectures
   YY. Program Products: WebSphere MQ
   ZZ. What is a Job Scheduler?

II. TSO/E and ISPF Overview
   A. TSO/E Overview: Features
   B. TSO Operating Modes
   C. Interactive TSO Commands
   D. TSO/E Logon and Logoff
   E. TSO/E Line Mode
   F. ISPF/PDF Option 6
   G. Issuing TSO cmd from ISPF Panel
   H. TSO/E Command Syntax
   I. TSO/E PROFILE
   J. TSO/E REXX & CLIST
   K. Example REXX EXEC
   L. REXX Language Features
   M. Languages: Compiled vs. Scripting
   N. ISPF Overview
   O. What is a Panel?
   P. Menu Panel
   Q. List Panel
   R. EDIT PANEL
   S. ISPF Primary Option Menu
   T. Standard CUA Format
   U. ISPF Panel Terminology
   V. ISPF Hierarchy
   W. ISPF Panel Hierarchies
   X. ISPF Navigation
   Y. ISPF Line and Primary Commands
   Z. ISPF Primary Commands
   AA. ISPF Split Screen
   BB. ISPF Help

III. Navigating MVS Documentation
   A. IBM Library Reader on CD
   B. IBM Internet Library
   C. MVS/QuickRef Overview
   D. Abend Code Display
E. Select Information By Category
F. Sample JCL Information: NOTIFY
   Keyword
G. Looking up an Error by Message ID
H. Example Error Message Info: IOS0001
I. Selecting Vendor, Product, Release
J. Selecting DASD Free Space Information
K. Displaying DASD Hardware Characteristics

IV. ISPF Hierarchy & Settings
   A. Primary Option Menu
   B. Utility Selection Panel (=3)
   C. Library Utility 3.1
   D. Data Set Utility 3.2
   E. Move Copy Utility 3.3
   F. Data Set List Utility 3.4
   G. ISPF Jump Function
   H. Allocating Data Sets w/ ISPF
   I. Data Set Allocation
   J. Allocation Suggestions
   K. ISPF Settings
   L. PF Key Definitions and Labels
   M. Keylist Utility
   N. FKA / PFSHOW Example
   O. Other ISPF Settings: Color, Environ

V. ISPF Edit and View
   A. ISPF Edit, View, Browse
   B. Edit Panel: Action Bar Choices
   C. ISPF Edit Primary Commands
   D. ISPF Edit Scroll Commands
   E. Browse and Edit FIND command
   F. Edit Change Command
   G. Change Command Examples
   H. FIND command: Advanced topics
   I. Edit Session: Sequence Numbers
   J. Special Editing Keys: Insert, Delete, & EOF
   K. Line Edit Commands
   L. Advanced Edit Line Commands
   M. Text Entry mode
   N. Text Flow Line Command
   O. MASK and TS Line Command
   P. Column and Data Shifting

Q. ISPF Edit Primary Commands
R. Locate Primary Commands
S. Delete Primary Commands
T. SORT Primary Command
U. COPY & MOVE Primary Commands
V. CUT & PASTE Primary Commands
W. Data Movement Commands
X. Nesting Edit

VI. SDSF Overview & Features
   A. SDSF Primary Option Menu
   B. SDSF Key End-User Commands
   C. SDSF Input Queue Display
   D. SDSF Input Action Characters
   E. SDSF Active Display
   F. SDSF Held Output Queue Display
   G. SDSF Output Queue Display Cmd
   H. More SDSF Commands

VII. MVS Job Control Language
   A. JCL Overview and Syntax
   B. JCL Statement Types Covered
   C. JCL Statement Categories
   D. JCL Syntax: Fields
   E. JCL Syntax: Parameters
   F. JCL Syntax: Comments
   G. JCL Syntax: Continuation
   H. JES JCL Statements
   I. JOB Statement
   J. JOB Statement: Jobname
   K. JOB Statement: Accounting Info
   L. JOB Statement: Programmer-Name
   M. JOB Statement: Apostrophe Rules
   N. JOB Statement: Keyword Parameters
   O. JOB Statement: CLASS Keyword
   P. JOB Statement: MSGCLASS Keyword
   Q. JOB Statement: MSGLEVEL Keyword
   R. JOB Statement: NOTIFY Keyword
   S. JOB Statement: TYPRUN Keyword
   T. JOB Statement: RESTART Keyword
   U. JOB Statement: Other Keywords
   V. MVS Utilities: IEFBR14
   W. EXEC Statement
   X. Big Picture: Compile & Link Process
   Y. EXEC Statement: PGM Keyword

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.
MVS Skill Pack for z/OS (TSO/ISPF & JCL)

Course Outline (cont’d)

Z. EXEC Statement: PROC Keyword
AA. EXEC Statement: PARM Keyword
BB. Using PARM in a COBOL Program
CC. EXEC Statement: TIME Keyword
DD. EXEC Statement: REGION Keyword
EE. EXEC Statement: COND Keyword
FF. DD Statement
GG. DD Statement: DDNAME
HH. Referring to the DDNAME in COBOL
II. DD Statement: SYSOUT=
JJ. DD Statement: *
KK. DD Statement: DATA
LL. DD Statement: DUMMY
MM. MVS Utilities: IEBGENER
NN. DD Statement: DSN=
OO. DD Statement: DISP=
PP. DD Statement: UNIT=
QQ. DD Statement: VOL= & VOL=SER=
RR. DD Statement: DCB=
SS. DD Statement: SPACE=
TT. DD Statement: AVGREC=
UU. DD Statement: LIKE=
VV. DD Statement: Generation Data Sets
WW. DD Statement: Backward Reference
XX. IF / THEN / ELSE / ENDIF
YY. Data Set Concatenation
ZZ. Special DD Names
AAA. JOBLIB Statement
BBB. STEPLIB DD Statement
CCC. JCLLIB Statement
DDD. OUTPUT Statement
EEE. INCLUDE Statement
FFF. Procedures: Symbolic Parameters
GGG. Procedures: Statement Overrides
HHH. Procedures: Adding In-stream data
III. SET Statement
JJJ. SORT Overview
KKK. Example Sort JCL
LLL. SORT DD Statements
MMM. SORT control statements

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.