JES3 Operation
Course Summary

Description
This course is designed to get MVS Operators familiar with JES3 concepts, monitoring, control, and troubleshooting. Hands-on labs are used to reinforce presented topics.

Objectives
At the completion of this course, the student will be able to:

- Describe the interactions between JES3 and MVS
- List the stages in the life of a JES3 job
- Diagnose why a job is not running
- Control JES3 devices
- Describe the different JES3 start types and when to use each one
- Control and manage JES3 output devices and queues
- Monitor and diagnose JES3 NJE problems

Topics

- MVS Overview
- Functions of the JES3 Global
- JES3 in a Parallel Sysplex
- JES3 Spooling
- Controlling JES3 Main Services
- JES3 Dynamic Support Programs
- JES3 Job Flow
- JES3 input service
- JES3 Converter Interpreter
- JES3 GMS processing

Audience
This course is designed for MVS operations personnel.

Prerequisites
There are no prerequisites for this course.

Duration
Two days
"Charting the Course ..."

JES3 Operation Course Outline

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

2. JES3 Overview
   A. JES2 vs. JES3
   B. A Typical JES3 Configuration
   C. A JES3 Complex
   D. Functions of the JES3 Global
   E. JES3 in a Parallel Sysplex
   F. JES3 Multiprocessing
   G. JES3 Spooling
   H. JES3 Dynamic Support Programs
   I. JES3 Job Flow: Input, Conversion
   J. JES3 Job Flow: Scheduling thru Purge
   K. JES3 input service
   L. JES3 Converter Interpreter
   M. JES3 GMS processing
   N. Output processing
   O. Purge processing
   P. Standard vs. Non-standard Jobs
   Q. Unique JES3 functions (not in JES2)
   R. JES3 Console Support
   S. JES3 Command Overview
   T. JES3 Naming Conventions
   U. JES3 Documentation Bookshelf
   V. JES3 Release Chart
   W. Third-Party JES3 Management
   X. Using the MCS Console
   Y. Uses of MCS Consoles
   Z. MVS Command Aliases
   AA. Command Groups
   BB. Setting Console Authority w/ VARY
   CC. The INFO Command Group
   DD. The SYS Command Group

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JES3 Operation Course Outline

G. The IO Command Group
H. The CONS Command Group
I. The MASTER Command Group
J. MVS Route code (ROUTCDE) Info
K. Controlling Route Codes
L. Controlling Message Levels
M. Controlling Msg Roll Mode & Rate
N. Roll Delete Mode Example
O. Non-roll Mode Example
P. Conversational Delete Mode Example
Q. Wrap Mode Example
R. MPF – Console Color Example
S. Using Console Display Areas
T. Two Display Area Example
U. Using Console PF Keys
V. Display PFK Example
W. Activating Console PF Keys
X. Conversational PFK Example
Y. Defining PF Key Tables
Z. Message Processing Facility
AA. Displaying Console Status
BB. Managing Console Buffers
CC. Example: WTO Buffer Shortage
DD. Console Failure Recovery

4. Navigating MVS Documentation
A. IBM Library Reader on CD
B. IBM Internet Library
C. MVS/QuickRef Overview
D. QuickRef Main Menu: Request by Category
E. Select Information By Category
F. Selecting a Specific Release
G. Selecting an Abend Code
H. Abend Code Display
I. QuickRef Main Menu: Request by Name
J. Select Information By Category
K. Selecting From Multiple Matches
L. Sample JCL Information: NOTIFY Keyword
M. Looking up an Error by Message ID
N. Example Error Message Info: IOS0001
O. Language Syntax Info: REXX Parse
P. QuickRef Main Menu: List Vendors, etc.
Q. Selecting Vendor, Product, Release
R. Selecting by Vendor
S. Selecting DASD Free Space Information
T. DASD Free Space – Selection Details
U. DASD Free Space – Sample Display
V. Displaying DASD Hardware Characteristics

5. Managing JES3 Input Services
A. JES3 input service
B. Monitoring and Controlling Readers
C. Canceling a Reader
D. Starting a Disk Reader

6. Controlling JES3 Main Services
A. JES3 Setup Options
B. JES3 Main Device Scheduling
C. Initiator Concepts
D. A Typical JES3 Initiator Structure
E. How Many Initiators?
F. WLM-Managed Initiators
G. Enhanced Batch Initiator Balancing
H. Displaying & Controlling Job Classes
I. Example: Job Class Displays
J. The Job Inquiry Command
K. Example: Job Inquiry Commands
L. JES3 Commands for WLM

7. Controlling JES3 Job Execution
A. Dimensions of Job Execution
B. JES3 Job Modify Command
C. Examples: Job Modify Commands

8. Controlling JES3 Output Services
A. JES3 Output Queue Inquiry
B. Example: Output Inquiry Commands
C. Job Output Modify Command
D. Example: Output Modify Commands
E. JES3 Device Inquiry
F. Example: Device Inquiry Commands
G. JES3 Printer Line Limits
H. Displaying Strings of Devices
I. JES3 Device Vary
J. Halting & Resuming JES3 Devices
K. Restarting JES3 Devices
L. Built-in Writer - Syslog
M. External Writers
N. Controlling an External Writer

9. JES3 Networking
A. Overview of NJE
B. NJE Nodes
C. Starting NJE Nodes
D. Controlling JES3/VTAM

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E. Controlling JES3/TCPIP
F. Controlling NJE Netserv's

10. JES3 Scheduling and DJCL
   A. Deadline Scheduling
   B. Dependent Job Control (DJC)
   C. Example DJC Network
   D. Example DJC Network JCL
   E. Successful DJC run; Error DJC Run
   F. Cleaning Up After DJC Error

11. JES3 DSP Utilities
   A. JES3 Utility DSP Overview
   B. JES3 JCT Utility

12. JES3 Shutdown, Initialization, and Recovery
   A. Stopping JES3 on a Local
   B. Stopping JES3 on the Global
   C. JES3 INISH Deck
   D. Example JES3 Initialization Deck
   E. Example JES3 Start Proc
   F. JES3 Start Types
   G. More JES3 Start Types
   H. JES3 Local Start
   I. JES3 Startup
   J. JES3 Messages Following *S JSS
   K. JES3 Recovery Management
   L. JES3 Program Failure Recovery
   M. MVS Failure Recovery
   N. Recovery From SPOOL Failures
   O. Dynamic System Interchange (DSI)
   P. Miscellaneous DSI Notes
   Q. Three Possible DSI Scenarios
   R. Example DSI Procedure
   S. Reconnecting SNA/RJP after DSI