

## **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

## 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
3. Using the MCS Console
  - A. Uses of MCS Consoles
  - B. MVS Command Aliases
  - C. Command Groups
  - D. Setting Console Authority w/ VARY
  - E. The INFO Command Group
  - F. The SYS Command Group

## 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: IOS000I
  - 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

## **JES3 Operation Course Outline**

- 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