z/OS & JES2 Operations Training

Duration: **2 Day**

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Overview

This two-day course provides a view of z/OS (with JES2 as the job entry subsystem) through the eyes of the operator and the operator console.
It goes through the system's functions by following a sequence which begins with the start-up of the system (IML and IPL) and then follows how the system controls the application workload coming through and exiting the system. The operator's ability to control this process is also examined and explained in detail.

This course is also available for one-company, on-site presentations and for live presentation over the Internet, via the Virtual Classroom Environment service.

Prerequisites

An understanding of the z/OS environment, as taught in the course **z/OS Concepts & Facilities**, and knowledge of TSO/ISPF and JCL.

What You Will Learn

- describe how z/OS & JES2 relate to each other
- use the console to issue commands
- interpret z/OS & JES2 messages
- use console control (K) commands
- describe the uses of the master console
- list the uses of the HMC
- invoke the IPL process
- explain the difference between 'cold' and 'warm' starts in z/OS
- start and stop JES2, and explain the process
- bring down (stop) the z/OS system
- list the different device types
- manage z/OS and JES2 devices
- describe the differences between batch, started tasks and TSO
- start and stop batch started tasks
- display & control job queues in JES2
- display and control active jobs in z/OS
- control Initiators
- control Started Tasks
- display and manage JES2 output queues
- describe the concept of system dumps
- manage system problem situations.

Outline

z/OS, JES2 & Other Products - How They Relate

What is an operating system; z/OS overview; JES2 overview; z/OS & JES2 Job Management; Operator roles; Operator communications; z/OS products; DFSMS/MVS; Network software; Application

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development tools.

Operator Communication - the Console

Console types; Master Console authority; Operating modes; Operator command types; Route codes; Message Levels; z/OS command syntax; Commonly used z/OS commands; JES2 command syntax; Console message format; Console screen layout; Control (K) command; DISPLAY command; VARY CN command; Syslog & Hardcopy; SEND command.

Starting & Stopping z/OS & JES2

IPLing z/OS; IPL messages; IPL flow; TOD clock; Starting JES2; Controlling JES2; JES2 cold & warm starts; Stopping JES2; JES2 errors; JES2 Error codes; Stopping z/OS.

Input/Output Devices

I/O overview; Device types; Channel subsystems; Channels; FICON; Control units; Device numbers; Shared DASD; Offline/online; DISPLAY U command; VARY device command; VARY PATH command; JES2 devices; $D U JES2 command.

z/OS Workload and the Active System

Program execution environments; Batch processing; Started Tasks; Time Sharing Option (TSO); Executing program requirements; Program identification with JCL; All the JCL statements; The most used JCL statements; JES2 information in the job stream; Relationships between JCL statements; One or more jobs in a JCL stream; Getting work into the system; Getting a Started Task into the system; Getting a TSO user into the system; Getting a batch job into the system; Batch job queues; Job initiation; Step initiation; The job schedule' Reports and listings; Standard reports; Job log example; The active system; A job's phases; What is a System Task?; What is a TSO logon?

Reading and Queue Management

Reading job streams; Stopping and starting a reader; Cancel ($C) and halt ($Z) of readers; Examples of reader commands; Reading to the job queue; Readers and job attributes; Job name and Job number; $T for a READER; Job queues; Display of queues - $DQ and $DN; Examples of $DQ and $DN; Information on specific jobs - $DQ; Examples of $D for individual jobs; To change queue attributes; Examples of changing job status; HOLD and RELEASE jobs on the job queue; Examples of $H and $A; Job Control: CANCEL, RESTART, PURGE; Example of job control.

Active Job Requirements

Executing in MVS - the address space; Batch Initiators; JES2 and Initiators; Controlling initiators; Example of initiator control; Jobs in z/OS; Active jobs; DISPLAY active jobs; Examples of $DA; Examples of DISPLAY activity in MVS; Cancelling job; Examples of CANCEL; The $C command; Examples of $C; Volume mounts; Examples of MOUNT messages; The REPLY command; Examples of REPLY; DISPLAY requests; Example of DISPLAY R.

Started Tasks

Started Tasks; The START command; Examples of the START command; The STOP command; Examples of the STOP command; The MODIFY command.

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Output Queue Management

Output listings; List attributes; Commands for list queue administration; Display forms - $DF; Examples of $DF commands; List job - $L; Examples of the $L command; Display details of job output - $DO; Example of the $DO command; To remove list output - $PO and $CO; Examples of using $L, $DF, $PO, $O and $CO commands; Held output; Release output - $O; Examples of the $O command; Actual printing of output

Problem & Dump Management

Non-system problems - ABEND; Job ABEND examples; System failure with recovery; SVC dumps; SVC dump management; Copying SVC dumps; Clearing a dump dataset; Full SYS1.DUMP datasets; 'Unusual' messages; 'WTO BUFFER SHORTAGE'; 'CHANNEL DETECTED ERROR'; 'AUXILIARY STORAGE SHORTAGE'; 'SMF DATA LOST'; Outstanding requests - D R; Examples of D R; The entire system hangs; Types of hung system; The Program Status Word; Displaying the PSW; The status in the PSW; Disabled WAIT; Disabled LOOP; Loop trace; Excessive spin loops; Message IEE331A; Default actions on excessive spin loops; Enabled LOOP; Enabled WAIT; Stand-Alone Dump; Taking an SA-Dump.