

Duration: 2 Days

Audience:

Delegates intending to work with IBM's flagship mainframe Operating System.

Pre-requisites:

An understanding of computer concepts is assumed.

Course Objectives

Each delegate will acquire an understanding of the z/OS environment and functionality.

Course Content

Module 1: Hardware Platform

Avoiding terminology confusion User Interaction devices; 3270 emulators and printers Cartridges, Cartridge Libraries and Virtual Tape Traditional disk technologies and their influence Modern RAID devices Configuration overview Memory and its use Physical Resource/System Management (PR/SM) and Logical Partitions (LPARS) z/Series Servers

Module 2: z/OS Overview

Hypervisors; z/VM and KVM, plus other mainframe Operating Systems A brief history of z/OS development z/OS Objectives Operating System Functions; controlling work and resources, communicating with the operator, supporting applications, performing I/O, and managing tasks What is z/OS? A review of the principal components



Module 3: z/OS Structure

Task Management; multi-tasking vs multi-processing, the despatcher and dispatching priorities Input/Output processing The virtual storage operation described Address space overview including common area descriptions Some key System Address Spaces described What constitutes a Sub-System, with key ones described Other address spaces such as Started Tasks and those required by Users The role of the Workload Manager (WLM)

Module 4: Data in z/OS

ASCII vs EBCDIC Packed Decimal notation z/OS data sets; what are they and how they are located? Catalogue Structure; Master vs user Catalogues Disks Volume Table of Contents (VTOC) The data organizations described The concept of Record Formats (RECFM) The effect of grouping records into blocks (LRECL vs BLKSIZE) The two types of Partitioned Data SET (PDS and PDSE) Virtual Storage Access Method (VSAM) overview, four types of clusters

Module 5: Running work in z/OS

Batch processing overview The stages of JES2 job processing A JES3 overview System Network Architecture (SNA) and Virtual Telecommunications Access Method (VTAM) TCP/IP Overview Time Sharing Option Extended (TSO/E) Overview Customer Control Information System / Transaction Server (CICS/TS) overview Database overview, DB2, IMS and SQL Application development; compilers including CICS and DB2 requirements Modern languages; C, C++, Java and Python



Module 6: JCL Overview

A sample job illustration The function of the JOB statement; CLASS, MSGCLASS, NOTIFY, REGION and TIME operands The function of the EXEC statement; PGM, REGION and TIME operands The function of the DD statement; BLKSIZE, DISP, DSN, LRECL, RECFM, SPACE, SYSOUT and UNIT operands The concept of in-stream data sets Using CREATE and REPLACE commands Condition execution; IF and ENDIF statements

Module 7: System Managed Storage (DFSMS)

DFSMS Product Family; DFSMStvs, DFSORT and Program Manager Data Facility Product family (DFSMSdfp); Access Methods, Catalogue Management, ISMF, Utilities and IDCAMS The aims of System Managed Storage (SMS) Automatic Class Selection (ACS) and its data set requirements Hierarchical Storage Manager (DFSMShsm) overview Data set level backup and availability management Removable Media Manager (DFSMSrmm) overview Data Set Service (DFSMSdss) overview Non-SMS device allocation

Module 8: z/OS Facilities

z/OS UNIX System Services overview, also known as OMVS Global Resource Serialization (GRS) overview Data in Memory; DLF, LLA and VLF System Management Facility (SMF) overview Authorized Program Facility (APF) overview Resource Access Control Facility (RACF) overview

Module 9: Diagnostic Aids

The various Console types SYSPLEX influence on Consoles Message handling and suppression The types of abnormal termination codes, Program Interrupts, System and User Dump Analysis and Elimination (DAE) overview Environmental Recording and Error Processing (EREP) overview



Module 10: z/OS Command Overview

Automatic commands; PARMLIB members vs Automation Software Using the Console vs SDSF Managing tasks; CANCEL, DISPLAY, FORCE, MODIFY, START and STOP commands Managing devices; DISPLAY UNITS and VARY commands Stopping z/OS; HALT command

Module 11: JES2 Command Overview

Starting JES Managing Initiators; \$DI, \$PI and \$SI commands Managing Jobs/Tasks; \$CJ and \$DJ commands Managing input queues; \$AJ, \$HJ and \$TJ commands Managing output queues; \$CO, \$OG, \$PO and \$R commands Stopping JES