Course Code: ES20G

Course Title: z/OS System Services Structure

Description:

This course presents the structure and control blocks of the z/OS BCP and system services. It prepares the new z/OS system programmer to identify potential bottlenecks and performance problems, perform initial error symptom gathering, and identify opportunities and requirements for tailoring a z/OS system. This course also provides prerequisite information needed for further training in specialized areas such as system measurement and tuning and system problem determination.

Objectives:

- Explain the MVS functions and control blocks necessary to support a task in a multitasking and multiprocessing environment
- Describe the software and hardware functions that allow a program to interact with programs running in other address spaces, use data in other address spaces, and use data in data spaces
- Trace the flow of an I/O operation from the initial request in the application program through the completion of data transfer
- Identify the control blocks that describe the current status of an I/O request
- Describe the functions of the z/OS BCP Virtual, Real, and Auxiliary Storage Managers
- Describe the functions performed by the Recovery Termination Manager and recovery management components to minimize failure impact and enhance error correction
- Select the appropriate IBM publication to provide further technical information (SRLs, Technical Bulletins, Self-study and other z/OS courses)
- Describe the services provided by cross system extended services (XES)
- Identify and explain the purpose of the cache, list, and lock structures
- Plan the implementation of the global resource serialization STAR environment.0.2 pref

Prerequisites:

You should be able to:

- Describe the following z/OS BCP (MVS) characteristics:
  - multiprocessing
  - multiprogramming
  - virtual storage **and** paging
  - **and** multiple address space/data space architecture

- Explain how paging **and** swapping are accomplished through the interaction of real/central, expanded, auxiliary, **and** virtual storage in a z/OS system
- Explain the role of the dispatcher, interrupts, SVCs, the program manager, **and** serialization in managing work in a z/OS system
- State the role of z/OS software **and** hardware components in handling an I/O request for data on a direct access storage device

These prerequisites can be met through on the job training **or** completion of z/OS Facilities.

Note: A fundamental knowledge of hexadecimal notation, assembler language, **and** z/Architecture instruction execution will enhance your understanding of the course material. Completion of Assembler Language Coding Workshop **or** Assembler Language Series is recommended.

Duration:

36 Hrs

Topics:

Day 1

- Welcome
- Unit 1 - z/OS system introduction

Day 2

- Unit 2 - Operating environment initialization
- Unit 3 - Task management

Day 3

- Unit 4 - Addressability
- Unit 5 - Input/Output supervisor

Day 4

- Unit 6 - Storage management
- Unit 7 - Recovery termination manager

Day 5

- Unit 7 - Recovery termination manager (Continued)

Audience:

The primary audience for this intermediate course are z/OS system programmers who are new to z/OS installation, customization, measurement and tuning, or problem determination. Subsystem programmers will also benefit from this class.