Advanced Assembler Language

Course Summary

Description

This class is an advanced level course in Assembler Language programming. Topics include an introduction into 31-bit and 64-bit programming, dataspaces and memory objects, and other advanced techniques.

Topics

- Storage Usage Options
- GETMAIN/FREEMAIN storage management
- Introduction to 31-bit addressing
- Modal instructions and basic operations
- Advanced Instructions
- 64-bit mode operations
- IARV64 services
- Introduction to dataspaces
- Access register mode
- Integrating 24-bit, 31-bit, and 64-bit programs
- Baseless programming considerations

Lab Exercises

- 31-bit bimodal program
- Using dataspaces
- Using advanced z/series instructions
- 64-bit mode programming – (addressing mode and ASC mode considerations)
- Using IARV64 services to create memory objects
- Integrating 24,31, and 64-bit programs to exploit data spaces and memory objects
- Eliminate base register program
- Additional labs may be used if time permits

Audience

This class is intended for experienced programmers.

Prerequisites

Students should have a good understanding of basic z/OS architecture and have completed Assembler Language Introduction or have equivalent experience as well as a minimum of 6 months Assembler experience. Students should also be familiar with using TSO/ISPF and JCL.

Duration

Five days

Course Outline

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I. Storage Usage Options

A. GETMAIN/FREEMAIN
B. STORAGE service
C. IARV64 considerations

II. Introduction to Dataspaces

A. Introduction to access registers.
B. Access List

III. Introduction to 31-bit Addressing

IV. Modal Instructions and Basic Operations

A. z/OS 64-bit programming considerations

V. Advanced Instructions

A. New z/OS instructions

VI. Coding baseless programs

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