

IBM Z Workload Scheduler (ZWS) Programming Language Training

OEM: IBM • Duration: 2 Days (16 hrs) • Code: V010017G

COURSE MODULES & TOPICS

Objectives

- Learn to build, modify, and troubleshoot ZWS Programming Language (PL) scripts to automate application descriptions, recovery logic, and event-driven scheduling.
- Gain hands-on experience linking JCL, using ISPF panels, and integrating ZWS with CICS, DB2, and MQ for enterprise batch automation.

Day 1 - Foundations of Z Workload Scheduler on z/OS

1. Introduction to Automation Programming in ZWS on z/OS

- Z Workload Scheduler (ZWS) architecture
- JES2/JES3 interaction
- Daily Plan, Current Plan, Long Term Plan
- Batch architecture & mainframe resource management
- Understanding OPC datasets: EQQPARM, EQQJBLIB, EQQMLIB, EQQMLOG
- IBM ZWS Terminology (JOB, APPLICATION, WORKSTATION, OPERATIONS)

2. Understanding Application Descriptions & JCL Integration

- What is an Application Description (AD)?
- How Operations are linked to JCL
- How OPC/ESA interprets: JOBNAME, JOB CLASS, SCHEDLIB, APPLID
- Creating and managing Applications in ISPF Panels (EQQ* Panels)
- Linking JCL: Using JCL libraries, Using symbolic parameters, Using workstation routing, Triggering jobs in the CP (Current Plan)

3. Basic Programming Language (PL) for ZWS

- What is ZWS Programming Language (PL)?
- Structure of a PL script
- Typical use cases: Modifying AD/OP, Bulk updates, Automated initializations, Modifying CP entries
- Syntax basics: IF / THEN / ELSE, SELECT logic, Variable usage, Error trapping

4. ZWS Operator Commands & ISPF Panels

- EQQ* ISPF panel navigation
- Monitoring and controlling workflows: EQQMOP Monitor, EQQYCP Current Plan Display, EQQAD Application Description Panel

- Operator commands: F OPC,NEWPLAN, F OPC,REPLAN, F OPC,SHUT/START, EQQEVPGM (event programmer)

Day 1 – Labs

- Lab 1 – Create an Application (AD) using ISPF Panel
- Lab 2 – Link AD operations to JES2/JES3 JCL

Day 2 – ZWS PL Automation, Variables, Events & Advanced Scheduling

1. Using Variables in ZWS Application & PL Scripts

- Symbolic parameters in JCL
- ZWS variable resolution
- Passing variables through: AD fields, JCL PARM, EQQPARM members
- Automating variable substitution in PL scripts

2. Workflow Logic & Recovery Procedures in ZWS

- How ZWS handles success/failure
- Automated recovery actions: Automatic retry, Re-submission, R/Y status handling
- Conditional dependencies
- Using print/punch datasets in recovery workflows
- On-Error routing in ZWS

3. Automation Patterns Using PL (Mainframe-specific)

- Holding/Freeing Applications using PL scripts
- Rerunning operations conditionally
- Automatically resolving late jobs (LDT/MDT analysis)
- Bulk updates for AD/OP using PL
- Using PL to modify: Calendar definitions, Periods, Planning objects
- Calling EQQEVPGM for event-based automation

4. Event Triggering and Integration

- External triggers using EQQEVPGM
- Interfacing ZWS with: CICS, DB2, MQ
- Event-driven automation in ZWS
- Creating batch processes to trigger ZWS events
- Understanding Submit/Track Exit routines

Day 2 – Labs

- Lab 3 – Create an Application with variables and symbolic JCL
- Lab 4 – Add a recovery action & rerun logic