



Enterprise Computing Solutions - Education Services

## TRAINING OFFERING

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# Basic z/OS Tuning Using the Workload Manager

CODE:	LENGTH:	PRICE:
ES54G	4.5 days	\$4,000.00

## Description

Do you need to know how to establish a practical performance management program for your z/OS system? This course is designed for new performance analysts to learn to work with the Workload Manager (WLM) in goal mode. Learn concepts of WLM and performance management in the z/OS system using the WLM.

Learn how to analyze Resource Monitoring Facility (RMF) reports and implement service definitions using the WLM Interactive System Productivity Facility (ISPF) application. The course uses z/OS hands-on lab exercises to reinforce the concepts and techniques discussed in lecture.

### Hands-on labs

This course includes hands-on lab exercises. Each student team, working on their own z/OS system, will configure RMF, analyze RMF reports to find bottlenecks, and utilize the WLM dialogs to create goals and classification rules in a service definition that manages a supplied z/OS workload.

## Objectives

- Describe a performance and tuning methodology
- Develop a systematic z/OS performance and tuning plan
- Describe the factors which could affect the performance of an z/OS system
- Use the WLM ISPF application
- Describe the components of a service definition
- Define workloads and service levels and classification rules
- State which z/OS commands affect WLM operation
- Identify the major WLM services for z/OS, including enclaves and application environments, and how they are used by DB2, WebSphere, and CICS
- Analyze CPU performance when running in a shared LPAR environment
- Utilize and monitor zIIP and zAAP specialty engines
- Measure and tune z/OS DASD, processor storage, and coupling facility configurations
- Explain the functions and facilities of RMF and SMF
- Analyze performance bottlenecks using RMF
- Use Workload License Charges (WLC), defined capacity and soft capping to manage software costs
- Describe advanced z/OS environments that utilize Intelligent Resource Director (IRD), HiperDispatch, z/OSMF Workload Management, and I/O Priority Manager
- Use the z/OSMF Workload Management (WLM) task
  - Use Performance Monitoring with z/OSMF
  - Modify a WLM service definition to meet the requirements for monitoring a specific system workload
  - Create and customize Monitoring Desktops
  - Review any issues by using the Monitoring Desktops options displays
  - Assess the performance of the workloads running on the z/OS

## Audience

This is an intermediate course for z/OS system programmers, z/OS performance analysts, and z/OS performance administrators new to performance management for their z/OS system.

**Note:** ES54 is intended for individuals new to WLM and the z/OS performance area

## Prerequisites

You should:

- Understand basic MVS **and** z/OS operation, such as job flow through JES, job scheduling paging, swapping, dispatching controls, and I/O scheduling
- Have a basic knowledge of the purpose of the Workload Manager's function in managing system workloads
- Be familiar with using TSO **and** ISPF to manage data sets **and** run batch jobs

## Programme

### Day 1

- Welcome
- Unit 1 - Tuning methodology
- Unit 2 - Using SMF and RMF to monitor performance
- Lab 1 - Introduction to your system
- Lab 2 - Using RMF Monitor I and Monitor II

### Day 2

- Unit 3 - Performance impacts when running in a shared LPAR environment
- Unit 4 - Basic system workload management (part 1)
- Lab 3 - Implementing a WLM environment on z/OS (part 1)

### Day 3

- Unit 4 - Basic system workload management (part 2)
- Lab 3 - Implementing a WLM environment on z/OS (part 2)

### Day 4

- Unit 5 - WLM commands, internals, and service
- Lab 4 - Using RMF Monitor III to solve performance problems

### Day 5

- Unit 6 - z/OS DASD performance topics
- Unit 7 - Tuning processor storage
- Unit 8 - Miscellaneous performance topics
- Lab 5 - z/OSMF and performance management

## Further Information

Prior to enrolling, IBM Employees must follow their Division/Department processes to obtain approval to attend this public training class. Failure to follow Division/Department approval processes may result in the IBM Employee being personally responsible for the class charges.

GBS practitioners that use the EViTA system for requesting external training should use that same process for this course. Go to the EViTA site to start this process: <http://w3.ibm.com/services/gbs/evita/BCSVTEnr1.nsf>

Once you enroll in a GTP class, you will receive a confirmation letter that should show:

- The current GTP list price
- The 20% discounted price available to IBMers. This is the price you will be invoiced for the class.

## Session Dates

On request. Please [contact us](#)

## Additional Information

[This training is also available as onsite training. Please contact us to find out more.](#)