

Advanced z OS Performance: WLM, Sysplex, UNIX Services, z Systems Information

Length: 4.5 Days
Ref: ES85G
Delivery method: Classroom
Price: EUR

Overview

Today, z/OS supports new workloads running as e-business servers, including the IBM Hypertext Transfer Protocol (HTTP) server and WebSphere. These workloads exploit the latest features of the z/OS runtime environments, including Parallel Sysplex, Workload Manager (WLM), and UNIX System Services (USS). New hardware technology, such as zAAP and zIIP processors, can be exploited for selected workloads, and the WLM Intelligent Resource Director balances workloads across clustered LPARs in a sysplex.

Examine the performance management and monitoring components of the Parallel Sysplex, USS, and WLM environment using extensive Resource Management Facility (RMF) reports and console displays to understand what is happening in the system. Based on this foundation, analyze case studies using z/OSMF Workload Management and Resource Monitoring functions to show how integrated performance data gatherers for Linux on System z/x, AIX, and Windows systems can be used to provide a consistent monitoring solution for zEnterprise ensembles.

Public

This advanced course is for z/OS systems programmers, experienced performance analysts and performance administrators, UNIX Services support personnel, and other experienced I/S professionals who want to update their RMF and performance management skills to include the latest z/OS e-business and zEnterprise ensemble runtime environments.

Prerequisites

A working knowledge of the z/OS operational environment is assumed, including a basic knowledge of WLM, UNIX System Services, **and** Parallel Sysplex. Previous experience **or** training in z/OS measurement **and** tuning **and** RMF are also assumed. Such training can be obtained by attending course: *Basic z/OS Tuning Using the Workload Manager (WLM) (ES540)*

Objective

- Describe the advanced performance components of current complex z/OS environment and identify the major performance factors for these components

- Identify coupling facility (CF) technologies and how they function in a Parallel Sysplex, including CF links and CF structures
- Monitor and analyze the service times and other performance indicators of the CF and other Parallel Sysplex components, including cross-system coupling facility (XCF)
- Predict and monitor effects of system managed CF duplexing on system performance
- Identify WLM services and their use by z/OS applications, including enclave services, routing services, and application environments
- Evaluate RMF enclave reports and understand enclave resource accounting
- Implement and control WLM optional features such as Intelligent Resource Director (IRD) and WLM defined capacity, and monitor LPAR performance when optimized by these features
- Describe the new functionality introduced by zAAP and zIIP specialty processors on z/OS systems and use appropriate tools to control and monitor specialty CP workload performance
- Monitor and control the USS program environment using RMF reports and System Management Facility (SMF) data along with USS console commands and displays
- Tune USS resource usage, shell performance, and file system performance for Hierarchical File System (HFS) and zFS
- Configure WLM's management of the USS environment, including BPXAS and classification of USS workloads
- Describe the purpose of the Unified Resource Manager and the various system layers that it can work across
- Describe what workload resource groups or workloads mean within the zEnterprise environment
- Describe what performance management capabilities Unified Resource Manager provides
- Describe the role Guest Platform Management Provider and Application Resource Measurement technologies play in the zEnterprise environment
- Explain how zEnterprise technologies cooperate with z/OS Workload Manager (WLM)
- Describe Unified Resource Manager performance functions
- Know how to use RMF XP the solution for Cross Platform Performance Monitoring (z/OS and distributed platforms)
- Use RMF XP for monitoring all operating systems running on the IBM
- zEnterprise Blade center Extension

Topics

Day 1

- Welcome
- Unit 1: z/OS advanced performance overview Unit 2: Tuning Parallel Sysplex
- Exercise 1: Introduction to your system Exercise 2: Tuning Parallel Sysplex

Day 2

- Unit 3: Workload Manager and performance

- Unit 4: zAAPs and zIIPs: Specialty processors
- Unit 5: Monitoring and tuning UNIX System Services

Day 3

- Unit 5: Monitoring and tuning UNIX System Services (continued)
- Exercise 3: USS batch performance Exercise 4: USS classification
- Unit 6: Advanced Workload Management and Resource Monitoring functions
- Exercise 5: z/OSMF and performance management

Day 4

- Exercise 5: z/OSMF and performance management (continued)
- Unit 7: zEnterprise Platform Performance Management
- Exercise 6: Cross platform monitoring with RMF XP

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