Advanced z/OS Performance: WLM, Sysplex, UNIX Services and Web

Varighed: 5 Days       Kursus Kode: ES85G

Beskrivelse:

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 involving the HTTP Server in detail. Finish with an introduction to performance and tuning with WebSphere V6 for z/OS.

Målgruppe:

This 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 runtime environments.

Agenda:

- Describe the advanced performance components of current complex z/OS environment and identify the major performance factors for these components
- 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
- Identify Coupling Facility (CF) technologies and how they function in a Parallel Sysplex, including CF links and CF structures
- Monitor and control the USS program environment using RMF reports and System Management Facility (SMF) data along with USS console commands and displays
- Monitor and analyze the service times and other performance indicators of the CF and other Parallel Sysplex components, including Cross-system Coupling Facility (XCF)
- Tune USS resource usage, shell performance and file system performance for Hierarchical File System (HFS) and zFS
- Predict and monitor effects of system managed CF duplexing on system performance
- Configure WLM's management of the USS environment, including BPXAS and classification of USS workloads
- Identify WLM services and their use by z/OS applications, including enclave services, routing services, and application environments
- Set up WLM management of the HTTP Server and classify a Web workload in standalone mode
- Evaluate the performance implications of different network front-end options that can control access to z/OS web applications hosted in WebSphere
- Describe RMF enclave reports and understand enclave resource accounting
- Evaluate the basic steps for the performance tuning of this environment
- 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 a WebSphere Version 6 runtime on z/OS, and identify the basic steps for the performance tuning of this environment
- Describe the distributed monitoring functionality for WebSphere
Evaluate the use of Enterprise Workload Manager (EWLM) as an end-to-end workload management tool.

Forudsætninger:

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 and/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) (ES54).
# Indhold:

## Unit 1. z/OS Advanced Performance Overview
- The Sysplex Environment

## Unit 2. Tuning Parallel Sysplex
- CF Overview and Architecture

## Unit 3. Workload Manager (WLM) and Performance
- WLM Policy Management Refresh

## Unit 4. Tuning XCF
- CF Technology
- CF Links
- CF Performance and Service Times
- CF Monitoring and Reporting
- Sysplex Performance Miscellaneous
- Workload Management Services
- WLM Intelligent Resource Director
- WLM Defined Capacity
- EWLM: Enterprise Workload Management
- USS Workload Classification
- Monitor and Control USS Kernel and Shell Workload
- Monitor and Control USS Filesystems
- Building a Web Front End for WebSphere
- Introduction to ITCAM

## Unit 5. Tuning Parallel Sysplex CF Links
- CF Technology
- CF Links
- CF Performance and Service Times
- CF Monitoring and Reporting
- Sysplex Performance Miscellaneous
- Workload Management Services
- WLM Intelligent Resource Director
- WLM Defined Capacity
- EWLM: Enterprise Workload Management
- USS Workload Classification
- Monitor and Control USS Kernel and Shell Workload
- Monitor and Control USS Filesystems
- Building a Web Front End for WebSphere
- Introduction to ITCAM

## Unit 6. Tuning the Network "Front-end" for z/OS e-Business Applications
- Tuning XCF
- CF Technology
- CF Links
- CF Performance and Service Times
- CF Monitoring and Reporting
- Sysplex Performance Miscellaneous
- Workload Management Services
- WLM Intelligent Resource Director
- WLM Defined Capacity
- EWLM: Enterprise Workload Management
- USS Workload Classification
- Monitor and Control USS Kernel and Shell Workload
- Monitor and Control USS Filesystems
- Building a Web Front End for WebSphere
- Introduction to ITCAM

## Unit 7. WebSphere for z/OS V6 Introduction
- Tuning XCF
- CF Technology
- CF Links
- CF Performance and Service Times
- CF Monitoring and Reporting
- Sysplex Performance Miscellaneous
- Workload Management Services
- WLM Intelligent Resource Director
- WLM Defined Capacity
- EWLM: Enterprise Workload Management
- USS Workload Classification
- Monitor and Control USS Kernel and Shell Workload
- Monitor and Control USS Filesystems
- Building a Web Front End for WebSphere
- Introduction to ITCAM
Flere Informationer:
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