Power Systems for AIX IV: Performance Management

Course code: AN51G

Develop the skills to measure, analyze, and tune common performance issues on IBM POWER systems running AIX 6. Learn about performance management concepts and techniques and how to use basic AIX tools to monitor, analyze, and tune an AIX6 system. The course covers how virtualization technologies such as the PowerVM environment and workload partitions affect AIX performance management. Monitoring and analyzing tools discussed in this course include vmstat, iostat, sar, tprof, svmon, filemon, netstat, lvmstat, and topas. Tuning tools include schedo, vmo, ioo, no, and nfso. Also learn to use Performance Problem Reporting (PerfPMR) to capture a variety of performance data for later analysis. Each lecture is reinforced with extensive hands-on lab exercises which provide practical experience.

Who is the course for

This is an advanced course for AIX technical support personnel, performance benchmarking personnel, and AIX system administrators.

What we teach you

Define performance terminology

Describe the methodology for managing performance on a system

Identify the set of basic AIX tools to monitor, analyze, and tune a system

Use AIX tools to determine common bottlenecks in the Central Processing Unit (CPU), Virtual Memory Manager (VMM), Logical Volume Manager (LVM), internal disk Input/Output (I/O), and network subsystems

Use AIX tools to demonstrate techniques to tune the subsystems

Required skills

You are expected to have basic AIX system administration skills. These skills can be obtained by attending the following courses:

- *AIX System Administration I: Implementation (*
- *AU140*
- *)*

or

- *Power Systems for AIX II: Implementation and Administration (*
- *AN120*
- *)*

It is very helpful to have a strong background in TCP/IP networking to support the network performance portion of the course. These skills can be built or reinforced by attending:

- *AIX 5L Configuring TCP/IP (*
- *AU070*
- *)*

or

- *TCP/IP for AIX Administrators (*
- *AN210*
- *)*

It is also very helpful to have a strong background in PowerVM (paricularly micropartitioning and the role of the virtual I/O server). These skills can be built or reinforced by attending:

- *System p LPAR and Virtualization I: Planning and Configuration (*
- *AU730*
- *)*

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or

- *Power Systems for AIX - Virtualization I: Implementing Virtualization (*
- *AN300*
- *)*

Course outline

Day 1

- Unit 1 - Performance analysis and tuning overview
- Exercise 1
- Unit 2 - Data collection
- Exercise 2
- Unit 3 - Monitoring, analyzing, and tuning CPU usage
- Exercise 3 parts 1 and 2

Day 2

- Exercise 3 parts 3, 4 and 5
- Unit 4 - Virtual memory performance monitoring and tuning
- Exercise 4
- Student's choice optional exercise from Ex 3 or Ex 4

Day 3

- Unit 5 - Physical and logical volume performance
- Exercise 5
- Unit 6 File system performance, topic 1
- Exercise 6, parts 1, 2, and 3

Day 4

- Unit 6 File system performance, topic 2
- Exercise 6, part 4
- Unit 7 - Network performance
- Exercise 7
- Student's choice optional exercise from exercises 3, 4, 5, or 6

Day 5

- Unit 8 - NFS performance
- Exercise 8
- Unit 9 - Performance management methodology
- Exercise 9
- Student's choice optional exercises from exercises 3, 4, 5, 6, or 7

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