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Course Code: AN52G

Course Title: Advanced Tools for AIX Performance Analysis

## Description:

Develop the skills to use kernel traces, trace based utilities, and svmon to measure and analyze CPU, memory, and I/O performance issues on IBM systems running AIX. Reinforce each lecture during extensive hands-on lab exercises and get practical experience applicable to their performance management requirements.

## Objectives:

- Use the trace facility to collect data and create a trace report
- Use the kernel trace facilities to analyze CPU performance issues
- Describe causes and impacts of high context switching rates
- Identify what causes a thread to be blocked and later woken up
- Explain the relationship between the output of svmon -G, svmon -P, and svmon -S
- Calculate the amount of memory in use on the system
- Explain the relationship between svmon, vmstat, and ipcs output
- Categorize the memory in use on the system by segment type
- Identify which processes are using the most memory or paging space
- Describe the characteristics of asynchronous I/O, synchronous I/O, direct I/O, and concurrent I/O
- Identify if the expected type of I/O is being executed
- Tune asynchronous I/O

## Prerequisites:

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

- AIX Power Systems for AIX IV: Performance Management (AN510) **or** have the equivalent extensive AIX skills

## Duration:

32 Hrs

## Topics:

### Day 1

- Welcome
- Unit 1: AIX trace facilities
- Exercise 1: AIX trace facilities
- Unit 2: Advanced memory topics - I
- Exercise 1: AIX trace facilities (Part 3)
- Exercise 2: Advanced memory topics - I

## Day 2

- Unit 3: Advanced memory topics - II
- Exercise 3: Advanced memory topics - II
- Unit 4: Advanced CPU topics - I
- Exercise 4: Advanced CPU topics - I
- (Optional) Exercise 4: Advanced CPU topics - I (Part 2)

## Day 3

- Unit 5: Advanced CPU topics - II
- Exercise 5: Advanced CPU topics - II
- Unit 6: Advanced I/O topics - I
- Exercise 6: Advanced I/O topics - I (Part 1)
- (Optional) Exercise 5: Advanced CPU topics - II
- (Parts 2 and 3)

## Day 4

- Exercise 6: Advanced I/O topics - I (Part 2)
- Unit 7: Advanced I/O topics - II
- Exercise 7: Advanced I/O topics - II
- (Optional) Exercise 7: Advanced I/O topics - II (Part 3)

## Audience:

The audience for this training includes AIX technical support personnel, performance benchmark personnel, and AIX system administrators.