Advanced Tools for AIX Performance Analysis

Course code: AN52G

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

Who is the course for

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

What we teach you

- 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 block and what causes a later wake 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
- Identify which segments are using the most 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

Required skills

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

- *Power Systems for AIX IV: Performance Management (AN510)*
- *Power Systems for AIX IV: Performance Management (ILO) (AX510)*

Course outline

Day 1
- Welcome
- Unit 1 - Trace Facilities
- Exercise 1 - Trace Facilities
- Unit 2 - Advanced Memory Topics - I
- 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 &3)

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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)

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