

## Power Systems for AIX IV: Performance Management

**Duration: 5 Days    Course Code: AN51G**

### Overview:

Develop the skills to measure, analyze, and tune common performance issues on IBM POWER systems running AIX6. Learn about performance management concepts and techniques and how to use of 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 nfsd. The course also covers how 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.

### Target Audience:

This course is for: AIX technical support personnel Performance benchmarking personnel AIX system administrators

### Objectives:

- Define performance terminology
- Describe the methodology for tuning 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

### Prerequisites:

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 (AU14)
- or Power Systems for AIX II: Implementation and Administration (AN12)

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 ( AU07 )
- or TCP/IP for AIX Administrators (AN21)

It is also very helpful to have a strong background in PowerVM (particularly 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 (AU73)
- or Power Systems for AIX - Virtualization I: Implementing Virtualization (AN30)

## Content:

- Unit 1 - Performance Analysis and Tuning Overview
- Exercise 3
- Unit 5 - Physical and Logical Volume Performance
- Unit 7 - Network Performance
- Unit 8 - NFS Performance

- Exercise 1
- Unit 2 Data Collection
- Exercise 2
- Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage
- Day 2
- Unit 4 - Virtual Memory Performance Monitoring and Tuning
- Exercise 4
- Day 3
- Exercise 5
- Unit 6 File System Performance Monitoring and Tuning
- Exercise 6
- Day 4
- Exercise 7
- Day 5
- Exercise 8
- Unit 9 - Performance Management Methodology
- Exercise 9

- Exercise 1
- Unit 2 Data Collection
- Exercise 2
- Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage
- Day 2
- Unit 4 - Virtual Memory Performance Monitoring and Tuning
- Exercise 4
- Day 3
- Exercise 5
- Unit 6 File System Performance Monitoring and Tuning
- Exercise 6
- Day 4
- Exercise 7
- Day 5
- Exercise 8
- Unit 9 - Performance Management Methodology
- Exercise 9

- Exercise 1
- Unit 2 Data Collection
- Exercise 2
- Unit 3 - Monitoring, Analyzing, and Tuning

- Exercise 1
- Unit 2 Data Collection
- Exercise 2
- Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage
- Day 2
- Unit 4 - Virtual Memory Performance Monitoring and Tuning
- Exercise 4
- Day 3
- Exercise 5
- Unit 6 File System Performance Monitoring and Tuning
- Exercise 6
- Day 4
- Exercise 7
- Day 5
- Exercise 8
- Unit 9 - Performance Management Methodology
- Exercise 9

- Exercise 1
- Unit 2 Data Collection
- Exercise 2
- Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage
- Day 2
- Unit 4 - Virtual Memory Performance Monitoring and Tuning
- Exercise 4
- Day 3
- Exercise 5
- Unit 6 File System Performance Monitoring and Tuning
- Exercise 6
- Day 4
- Exercise 7
- Day 5
- Exercise 8
- Unit 9 - Performance Management Methodology
- Exercise 9

- Unit 1 - Performance Analysis and Tuning Overview
- Exercise 3
- Unit 5 - Physical and Logical Volume Performance
- Unit 7 - Network Performance
- Unit 8 - NFS Performance

- Exercise 1
- Unit 2 Data Collection
- Exercise 2
- Unit 3 - Monitoring, Analyzing, and

- Exercise 1
- Unit 2 Data Collection
- Exercise 2
- Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage
- Day 2
- Unit 4 - Virtual Memory Performance Monitoring and Tuning
- Exercise 4
- Day 3
- Exercise 5
- Unit 6 File System Performance Monitoring and Tuning
- Exercise 6
- Day 4
- Exercise 7
- Day 5
- Exercise 8
- Unit 9 - Performance Management Methodology
- Exercise 9

- Exercise 1
- Unit 2 Data Collection
- Exercise 2
- Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage
- Day 2
- Unit 4 - Virtual Memory Performance Monitoring and Tuning
- Exercise 4
- Day 3
- Exercise 5
- Unit 6 File System Performance Monitoring and Tuning
- Exercise 6
- Day 4
- Exercise 7
- Day 5
- Exercise 8
- Unit 9 - Performance Management Methodology
- Exercise 9

- Unit 1 - Performance Analysis and Tuning Overview
- Exercise 3
- Unit 5 - Physical and Logical Volume Performance
- Unit 7 - Network Performance
- Unit 8 - NFS Performance

- Exercise 1
- Unit 2 Data Collection
- Exercise 2
- Unit 3 - Monitoring, Analyzing, and Tuning

CPU Usage  
■ Day 2  
■ Unit 4 - Virtual Memory Performance Monitoring and Tuning  
■ Exercise 4  
■ Day 3  
■ Exercise 5  
■ Unit 6 File System Performance Monitoring and Tuning  
■ Exercise 6  
■ Day 4  
■ Exercise 7  
■ Day 5  
■ Exercise 8  
■ Unit 9 - Performance Management Methodology  
■ Exercise 9

■ Exercise 1  
■ Unit 2 Data Collection  
■ Exercise 2  
■ Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage  
■ Day 2  
■ Unit 4 - Virtual Memory Performance Monitoring and Tuning  
■ Exercise 4  
■ Day 3  
■ Exercise 5  
■ Unit 6 File System Performance Monitoring and Tuning  
■ Exercise 6  
■ Day 4  
■ Exercise 7  
■ Day 5  
■ Exercise 8  
■ Unit 9 - Performance Management Methodology  
■ Exercise 9

■ Exercise 1  
■ Unit 2 Data Collection  
■ Exercise 2  
■ Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage  
■ Day 2  
■ Unit 4 - Virtual Memory Performance Monitoring and Tuning  
■ Exercise 4  
■ Day 3  
■ Exercise 5  
■ Unit 6 File System Performance Monitoring and Tuning  
■ Exercise 6  
■ Day 4  
■ Exercise 7  
■ Day 5  
■ Exercise 8  
■ Unit 9 - Performance Management Methodology  
■ Exercise 9

Tuning CPU Usage  
■ Day 2  
■ Unit 4 - Virtual Memory Performance Monitoring and Tuning  
■ Exercise 4  
■ Day 3  
■ Exercise 5  
■ Unit 6 File System Performance Monitoring and Tuning  
■ Exercise 6  
■ Day 4  
■ Exercise 7  
■ Day 5  
■ Exercise 8  
■ Unit 9 - Performance Management Methodology  
■ Exercise 9

■ Exercise 1  
■ Unit 2 Data Collection  
■ Exercise 2  
■ Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage  
■ Day 2  
■ Unit 4 - Virtual Memory Performance Monitoring and Tuning  
■ Exercise 4  
■ Day 3  
■ Exercise 5  
■ Unit 6 File System Performance Monitoring and Tuning  
■ Exercise 6  
■ Day 4  
■ Exercise 7  
■ Day 5  
■ Exercise 8  
■ Unit 9 - Performance Management Methodology  
■ Exercise 9

■ Exercise 1  
■ Unit 2 Data Collection  
■ Exercise 2  
■ Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage  
■ Day 2  
■ Unit 4 - Virtual Memory Performance Monitoring and Tuning  
■ Exercise 4  
■ Day 3  
■ Exercise 5  
■ Unit 6 File System Performance Monitoring and Tuning  
■ Exercise 6  
■ Day 4  
■ Exercise 7  
■ Day 5  
■ Exercise 8  
■ Unit 9 - Performance Management Methodology  
■ Exercise 9

CPU Usage  
■ Day 2  
■ Unit 4 - Virtual Memory Performance Monitoring and Tuning  
■ Exercise 4  
■ Day 3  
■ Exercise 5  
■ Unit 6 File System Performance Monitoring and Tuning  
■ Exercise 6  
■ Day 4  
■ Exercise 7  
■ Day 5  
■ Exercise 8  
■ Unit 9 - Performance Management Methodology  
■ Exercise 9

■ Exercise 1  
■ Unit 2 Data Collection  
■ Exercise 2  
■ Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage  
■ Day 2  
■ Unit 4 - Virtual Memory Performance Monitoring and Tuning  
■ Exercise 4  
■ Day 3  
■ Exercise 5  
■ Unit 6 File System Performance Monitoring and Tuning  
■ Exercise 6  
■ Day 4  
■ Exercise 7  
■ Day 5  
■ Exercise 8  
■ Unit 9 - Performance Management Methodology  
■ Exercise 9

■ Exercise 1  
■ Unit 2 Data Collection  
■ Exercise 2  
■ Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage  
■ Day 2  
■ Unit 4 - Virtual Memory Performance Monitoring and Tuning  
■ Exercise 4  
■ Day 3  
■ Exercise 5  
■ Unit 6 File System Performance Monitoring and Tuning  
■ Exercise 6  
■ Day 4  
■ Exercise 7  
■ Day 5  
■ Exercise 8  
■ Unit 9 - Performance Management Methodology  
■ Exercise 9

- Unit 1 - Performance Analysis and Tuning Overview
- Exercise 3
- Unit 5 - Physical and Logical Volume Performance
- Unit 7 - Network Performance
- Unit 8 - NFS Performance

- Exercise 1
- Unit 2 Data Collection
- Exercise 2
- Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage
- Day 2
- Unit 4 - Virtual Memory Performance Monitoring and Tuning
- Exercise 4
- Day 3
- Exercise 5
- Unit 6 File System Performance Monitoring and Tuning
- Exercise 6
- Day 4
- Exercise 7
- Day 5
- Exercise 8
- Unit 9 - Performance Management Methodology
- Exercise 9

- Exercise 1
- Unit 2 Data Collection
- Exercise 2
- Unit 3 - Monitoring, Analyzing, and Tuning CPU Usage
- Day 2
- Unit 4 - Virtual Memory Performance Monitoring and Tuning
- Exercise 4
- Day 3
- Exercise 5
- Unit 6 File System Performance Monitoring and Tuning
- Exercise 6
- Day 4
- Exercise 7
- Day 5
- Exercise 8
- Unit 9 - Performance Management Methodology
- Exercise 9

- Unit 1 - Performance Analysis and Tuning Overview
- Exercise 3
- Unit 5 - Physical and Logical Volume Performance
- Unit 7 - Network Performance
- Unit 8 - NFS Performance

## Further Information:

For More information, or to book your course, please call us on 00 20 (0) 2 2269 1982 or 16142

[training@globalknowledge.com.eg](mailto:training@globalknowledge.com.eg)

[www.globalknowledge.com/en-eg/](http://www.globalknowledge.com/en-eg/)

Global Knowledge, 16 Moustafa Refaat St. Block 1137, Sheraton Buildings, Heliopolis, Cairo