



IBM: Power Systems for AIX Virtualization II: Advanced Power VM and Performance (AN31G)

Course ID#: 0376-120-00-W

35 Hrs

Course Content

Course Description:

You will learn how to implement advanced IBM PowerVM features, such as Active Memory Sharing, Active Memory Expansion, shared dedicated processors, multiple shared processor pools, and Live Partition Mobility. Additionally, you will learn skills to implement, measure, analyze, and tune PowerVM virtualization features for optimal performance on IBM Power Systems servers. This course focuses on the features that relate to the performance of POWER6 and POWER7 processors, AIX, and the special monitoring, configuring, and tuning needs of logical partitions (LPARs). This course does not cover application monitoring and tuning. You will also learn AIX performance analysis and tuning tools that help an administrator take advantage of shared processors and other virtualization features of the IBM Power Systems servers.

Audience:

This advanced course is for anyone responsible for implementing and managing virtualization features on a System p server including:

- AIX technical support individuals
- System administrators
- Systems engineers
- System Architects

Prerequisites:

- Power Systems for AIX I: LPAR Planning and Configuration (AN11G) or
- Power Systems for AIX - Virtualization I: Implementing Virtualization (AN30G)

or have equivalent LPAR skills

Objectives:

- Describe the effect of the IBM PowerVM virtualization features on performance and monitoring, such as:
 - Simultaneous multithreading (SMT), shared processors, multiple shared processor pools (MSPP), shared dedicated capacity, Active Memory Sharing (AMS), Active Memory Expansion (AME), Live Partition Mobility (LPM), and other virtualization features



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- Interpret the outputs of AIX performance monitoring and tuning tools used to view the impact of features such as SMT, shared processors, additional shared processor pool activations, and device virtualization.
- Perform a Live Partition Mobility between two Power Systems servers
- Configure and monitor Active Memory Expansion
- Configure the Suspend and Resume and Active Memory Sharing features available with the Virtual I/O Server
- Implement the deduplication feature of Active Memory Sharing

Topics:

Day 1

- Welcome
- Unit 1: PowerVM features review
- Exercise 1: Introduction to the lab environment
- Unit 2: Shared processors and virtual processor tuning
- Exercise 2: Shared processors and virtual processor tuning

Day 2

- Unit 3: Configuring multiple shared processor pools and donating dedicated processors
- Exercise 3: Configuring multiple shared processor pools and donating dedicated processors
- Unit 4: Active Memory Sharing
- Exercise 4: Active Memory Sharing

Day 3

- Exercise 4: Active Memory Sharing (continued)
- Unit 5: Active Memory Expansion
- Exercise 5: Active Memory Expansion
- Unit 6: I/O device virtualization performance and tuning

Day 4

- Unit 6: I/O device virtualization performance and tuning (continued)
- Exercise 6: I/O device virtualization performance and tuning
- Unit 7: Live Partition Mobility
- Exercise 7: Live Partition Mobility

Day 5

- Unit 8: Suspend and resume
- Exercise 8: Suspend and resume
- Unit 9: Virtualization management tools
- Wrap up/Evaluations