Power Systems for AIX – Virtualization II: Advanced PowerVM and Performance

Kód kurzu: AN31G

Students in this course will learn how to implement advanced IBM PowerVM features, such as Active Memory Expansion, shared dedicated processors and multiple shared processor pools. Students will also be exposed to new availability and performance management features such as Simplified Remote Restart, Hybrid Network Virtualization and enhanced VIOS administration using the HMC. Additionally, students will learn skills to implement, measure, analyze and tune PowerVM virtualization features for optimal performance on IBM Power servers. This course focuses on two main areas. First, the features that relate to the performance of IBM Power servers, AIX, VIOS and the special monitoring, configuring, and tuning needs of logical partitions (LPARs). This course does not cover application monitoring and tuning. Second, the course will explore advanced features for availability and managing and monitoring virtualization and PowerVM virtualized workloads on IBM Power. Students 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 servers. Hands-on lab exercises reinforce each lecture and give the students practical experience.

Pro koho je kurz určen

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

Co Vás naučíme

Describe the effect of the POWER6 virtualization features on performance and monitoring, such as:

- Simultaneous Multithreading (SMT)
- Micro-Partitioning
- Multiple Shared Processor Pools (MSPP)
- Shared dedicated capacity
- Active Memory Sharing (AMS) and other virtualization features

Interpret the outputs of AIX 6.1performance monitoring and tuning tools used to view the impact of SMT, Micro-

Partitioning, additional shared processor pool activations and device virtualization. The tools include:

- vmstat
- iostat
- sar
- topas
- trace
- curt
- mpstat
- lparstat
- smtctl

List various sources of information and support related to AIX 6.1 performance tools, system sizing, system tuning, and

AIX 6.1 enhancements and new features

Perform a Live Partition Mobility between two different POWER6 servers

Describe the New features available with the Virtual I/O Server version 2.1 and version 2.2 such as:

- N_port ID Virtualization
- Heterogeous Multi-threading
- Virtual Tape devices

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- Active Memory sharing

Describe and implement the Active Memory Sharing feature

Požadované vstupní znalosti

You should have taken:

- *Power Systems for AIX I: LPAR Planning and Configuration (AN11)*
- or
- *(AX11)*
- or
- *Power Systems for AIX - Virtualization I: Implementing Virtualization (AN30)*
- or
- *(AX30)*
- or
- have equivalent LPAR skills

Studijní materiály

Studijní materiál IBM

Osnova kurzu

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: Multiple shared processor pools and donating dedicated processors
- Exercise 3: 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: Suspend and Resume Exercise 5: Suspend and Resume Unit 6: Active Memory Expansion Exercise 6: Active Memory Expansion

Day 4

- Unit 7: Virtual storage performance
- Exercise 7: Virtual storage performance Unit 8: Virtual network performance

Day 5

- Exercise 8: Virtual network performance
- Unit 9: Virtualization monitoring and performance management tools Exercise 9: Using the Virtual I/O Server Performance Analysis Reporting Tool
- Wrap up/Evaluations

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