Demystifying IBM Power Virtualization Technologies

Skills and expertise to help you increase the business value from your systems investment

TLC

Education and Training Services

Skills and expertise to help you increase the business value from your Power Systems investment.

Power Virtualization Technologies

Purpose:
Virtualization has become a pervasive means of consolidating workloads on fewer systems, controlling server sprawl and minimizing costs. With IBM Power Systems and PowerVM virtualization technologies, organizations can achieve virtualization with outstanding performance.

IBM Power Systems with PowerVM technology demonstrated superior performance and greater efficiency in using system capacity at higher utilization, as well as at higher resource contention (over-commit levels), and superior scaling with higher throughput performance.

Audience:

This course is intended for persons who are; System administrators, technical support individuals, and IT Managers who implement or are planning to implement virtualization on IBM POWER Systems.

The audience for this training may also include:

- System Architects
- Solution Architects
- System Integrators
- IT Consultants
- IBM Customers
- IT Managers
- IBM Business Partner
- IBM Competitors

This is a Face-to-Face instructor led workshop that allows the audience to understand IBM virtualization concepts and features offered by IBM POWER architecture and PowerVM technologies.

This workshop is equally ideal for vendors who are competing IBM Power architecture with their portfolio of server technologies.

A platform capable of running different operating systems and versions in parallel under a virtualized environment.

Today, virtualization is a standard practice in enterprise IT architecture. It is also the technology that drives cloud computing economics. Virtualization enables cloud providers to serve users with their existing physical computer hardware; it enables cloud users to purchase only the computing resources they need when they need it, and to scale those resources cost-effectively as their workloads grow.

Course Objectives

On completion, the participants should be able to:

- Describe the POWER family of hardware
- Discuss virtualization benefits
- Describe the POWER virtualization architecture and features Virtual I/O options
- CPU options
- Shared processor
- Simultaneous Multi-threading (SMT)
- Memory virtualization options
- Active Memory Sharing
- Active Memory Expansion
- Multiple Share Processor Pools
- Workload Partitions
- AIX WPARs - Application and System WPARs
- Identify PowerVM editions
- Use POWER virtualization terminology
- Discuss examples of Power virtualization use

Detail Information

Course Code	: TN160
Course Duration	: 2 Day
Course Fee	: Obtain upon request
Course Location	: Customer onsite (Karachi, Lahore and Islamabad), and Online on Zoom
Discount	: Discounts are available for a class of 5 and 8 students
Terms and Conditions:	: 100% Payment in Advance

For additional information please write to us at: info@tlcpak.com

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IBM has a 40-plus year history of virtualization. No other vendor can come close to making this claim. The fact is that virtually everything they have implemented on the mid-range, has already been done on the mainframe.

IBM offer one virtualization strategy, PowerVM, unlike the myriad of solutions available from Sun or HP. The technology itself uses a hypervisor-based solution (which IBM has finally implemented though XEN, but only on their x86 platform), which sits between the operating system and the hardware.

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or visit the following URL to see other courses available at TLC:
www.tlcpak.com/educ.html

Course Contents

- POWER architecture
- IBM POWER Systems
- Benefits of logical partitioning
- Introduction to PowerVM
- Partition Suspend and Resume
- Virtualization: Increase utilization
- Virtualization: Improve quality of service
- Virtualization: Improve flexibility and time to value
- IBM Power virtualization features
- POWER7 exploited by operating systems
- POWER7 modes: General
- POWER7 modes: Linux
- CPU virtualization
- Processors you can use with Micro-Partitioning
- I/O virtualization
- Virtual Ethernet – Shared Ethernet Adapter
- Virtual SCSI
- Virtual Fibre Channel – NPIV
- Memory virtualization
- Mobility solutions on Power Systems
- Differences between LAM and PowerVM LPM
- IBM POWER Systems virtualization advantages
- Hardware Management Console
- Integrated Virtualization Manager
- Comparing IVM and HMC features
- Virtual TTY and console support
- Introduction to POWER Hypervisor
- POWER virtualization architecture
- Processor concepts: Overview

- POWER Systems CPU virtualization architecture
- What is a Thread
- What is simultaneous multi-threading?
- Controlling simultaneous multi-threading in AIX
- Capped partitions
- Uncapped partitions
- Multiple shared processor pools
- Shared dedicated capacity
- Partition capacity and resources
- Virtual Input/Output Server – VIOS
- Virtual I/O architecture
- Virtual I/O Server redundancy
- Memory virtualization
- Active Memory Sharing
- Active Memory Expansion on POWER
- Active Memory Expansion and Active Memory Sharing
- Active memory Expansion operational considerations
- Comparison between Active Memory Sharing and Active Memory Expansion
- Workload PARtion – Software based system virtualization
- WPAR – How and when to use them
- Application Workload Partition
- System Workload Partition
- Administrative tools for managing WPARs
- PowerVM editions
- Virtualization in a nut shell
- Relevant Documentation & Information
- IBM Facts and Features Report