

Course Code: AS5EG

Course Title: PowerVM on IBM i - I: Implementing Virtualization and LPAR

## Description:

Learn the concepts of Logical Partitioning (LPAR) for Power Systems with IBM i. In this course you begin with an overview of LPAR on Power Systems, followed with more detailed information on configuration planning and implementation using hands-on exercises to create and implement logical partitions.

Also, learn about partial processors, dynamic allocation and reallocation of memory, processors, interactive Commercial Processing Workloads (CPW), buses, Graical User Interface (GUI), Virtual Local Area Network (VLAN), Host Ethernet Adapters (HEA) and System Planning Tool (SPT). In this course you will use IBM Power Systems including the Hardware Management Console (HMC).

## Objectives:

- Describe the PowerVM features
- Identify, describe, and locate hardware components in the Power Systems, Flex System and Power Blade models
- Identify virtualization options available, reliability features and single points of failure for Power Systems
- Implement System Planning Tool in design or update your own system
- Explain Simultaneous Multithreading (SMT)
- Describe memory allocation and affinity concepts
- Describe and configure a partition profile, including shared processors:
  - Capped
  - Uncapped
  - Virtual processors
  - Weighting factor
  - Shared Processor Pools
- Explain virtual I/O: Serial, Ethernet and SCSI
- Understand and implement: IBM i installation through NFS, image virtual repository in VIOS, and assigning VSCSI disks to partitions in VIOS
- Understand base characteristics of IVM and how to implement IBM i on Power Blades
- Describe the NPIV PowerVM feature, how to configure virtual Fiber Channel adapters on the Virtual I/O Server and client partitions
- Discuss how to use the HMC GUI and commands to work with the World Wide Port Name (WWPN) pairs
- Identify commands used to examine the NPIV configuration

## Prerequisites:

You should have:

- some knowledge of Power Systems architectural concepts
- some experience with Power Systems
- attended Hardware Management Console (HMC) for Power Systems with IBM i (OL52G) **or** have the equivalent knowledge

Entry level knowledge of LPAR on current systems is helpful, but not required.

**Duration:**

24 Hrs

**Topics:**

- PowerVM for IBM i - Overview
- Power Systems for IBM i
  - Exercise - Lab introduction
- Introduction to System Planning Tool
  - Exercise - SPT introduction
- Virtualization of IBM i - Processor, Memory, Processor Pools
- Virtualization of IBM i - Virtual I/O
  - Exercise - Ethernet connection virtualization
- Virtualization of IBM i - Installation from NFS or VIOS repository
  - Exercise - Installation from NFS or VIOS repository
- Implementation of IBM i on Power Blades
- PowerVM for IBM i - NPIV
  - Exercise: IBM i client partition with NPIV connected disks

**Audience:**

This intermediate course is for technical specialists, support/services individuals, individuals implementing LPARs for Power Systems with IBM i. This course is also appropriate for IBM Business Partners who sell and plan for consolidated systems.