Iverson Associates Sdn Bhd (303330-M)
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Tel: 03-7726 2678   Fax: 03-7727 9737   Website: www.iverson.com.my

Course Outline :: AN15MY ::

Module Title	:	**Course AN15MY : Power Systems for AIX III: Advanced Administration and Problem Determination**
Duration	:	**5 days**

Course Overview

This course provides advanced AIX system administrator skills with a focus on availability and problem determination. It provides detailed knowledge of the ODM database where AIX maintains so much configuration information. It shows how to monitor for and deal with AIX problems. There is special focus on dealing with Logical Volume Manager problems, including procedures for replacing disks. Several techniques for minimizing the system maintenance window are covered. It also covers how to migrate AIX Workload Partitions to another system with minimal disruption. While the course includes some AIX 6.1 enhancements, most of the material is applicable to prior releases of AIX.

Audience

This is an advanced course for AIX system administrators, system support, and contract support individuals with at least six months of experience in AIX.

Pre-requisites

You should have basic AIX System Administration skills. These skills include:

* Use of the Hardware Management Console (HMC) to activate a logical partition running AIX**and** to access the AIX system console
* Install an AIX operating system from an already configured NIM server
* Implementation of AIX backup **and** recovery
* Manage additional software and base operating system updates
* Familiarity with management tools such as SMIT
* Understand how to manage file systems, logical volumes, **and** volume groups
* Understand basic Workload Partition (WPAR) concepts **and** commands (recommended for the WPAR Manager content)
* Mastery of the UNIX user interface including use of the vi editor, command execution, input**and** output redirection, **and** the use of utilities such as grep

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These skills could be developed through experience **or** by formal training. Recommended training courses to obtain these prerequisite skills are either of the following:

- *Power Systems for AIX III: Advanced Administration and Problem Determination (AN12)* **and**its prerequisites
- *AIX System Administration I: Implementation (AU14)* **and** its prerequisites. (Note that AU14 does not cover WPARs)

If the student has AIX system administration skills, but is not familiar with the LPAR environment, those skills may be obtained by attending either of the following:

- *System p Virtualization I: Planning and Configuration (AU73) / (Q1373)*
- *Power Systems Administration I: LPAR Configuration (AN11)*

Objective

- Perform system problem determination and reporting procedures including analyzing error logs, creating dumps of the system, and providing needed data to the AIX Support personnel
- Examine and manipulate Object Data Manager databases
- Identify and resolve conflicts between the Logical Volume Manager (LVM) disk structures and the Object Data Manager (ODM)
- Complete a very basic configuration of Network Installation Manager to provide network boot support for either system installation or booting to maintenance mode
- Identify various types of boot and disk failures and perform the matching recovery procedures
- Implement advanced methods such as alternate disk install, multibos, and JFS2 snapshots to use a smaller maintenance window
- Install and configure Workload Partition Manager to support WPAR management and to implement Live Application Mobility (LAM)

Key topics

Day 1 (est 5:27)

- (00:20) Welcome
- (00:55) Unit 1 - Advanced AIX administration overview
- (00:35) Exercise 1 - Problem diagnostic information
- (01:10) Unit 2 - The Object Data Manager
- (00:42) Exercise 2 - The Object Data Manager
- (01:35) Unit 3 - Error monitoring
- (00:45) Exercise 3 - Error monitoring

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Day 2 (est 5:13)

- (01:00) Unit 4 - Network Installation Manager basics
- (00:55) Exercise 4 - Basic NIM configuration
- (01:28) Unit 5 - System initialization: Part I
- (00:50) Exercise 5 - System initialization: Part I
- (00:18) (optional) Exercise 3 Part 3 - Using RMC to monitor resources on a system

Day 3 (est 5:20)

- (01:24) Unit 6 - System initialization: Part II
- (00:30) Exercise 6 - System initialization: Part: II
- (01:22) Unit 7 - Disk management theory
- (00:33) Exercise 7 - LVM metadata and problems
- (01:00) Unit 8 - Disk management procedures
- (00:20) Exercise 8 parts 1 and 2: Disk replacement techniques
- (00:23) (optional) Exercise 7 part 5 - Manually fixing an LVM ODM problem

Day 4 (est 5:23)

- (00:20) Unit 8, Part 2 - Export and import (to fix VGDA/ODM conflict)
- (00:35) Exercise 8 parts 3 and 4 - Disk management procedures
- (00:24) Unit 9 - Install and backup techniques
- (00:12) Exercise 9, part 1 - Alternate disk copy (pre-clone)
- (00:24) Unit 9, topic 2 - multibos
- (00:30) Exercise 9, part 1 - Wait for clone completion (30 min clone)
- (00:10) Exercise 9, part 1 - Alternate disk copy (post-clone)
- (00:10) Exercise 9, part 2 - multibos (pre-clone)
- (00:20) Unit 9, topic 3 - JFS2 snapshot
- (00:37) Exercise 9, part 2: wait for clone completion (37 min clone
- (00:18) Exercise 9, part 2: multibos (post-clone)
- (00:18) Exercise 9, part 3: JFS2 snapshot
- (00:10) Unit 10, topic 1 - Workload partitions review
- (00:50) Unit 10, topic 2 - WPAR Manager
- (01:03) Exercise 10 part 1 - Installing WPAR Manager
- (00:23) (optional) Exercise 7 part 3 - Using intermediate LVM commands

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Day 5 (est 3:08)

- (00:33) Exercise 10 part 2 - Create and activate a WPAR
- (01:15) Unit 10, topic 3 - Application mobility
- (00:13) Exercise 10 part 3 - Enhanced Live Application Mobility
- (00:28) Exercise 10 part 4- Working with static relocation
- (00:30) Unit 11 - The AIX system dump facility
- (00:15) Exercise 11 - System dump facility
- (00:28) (optional) Exercise 10 part 4 - Working with static relocation
- (00:30) Wrap up / Evaluations