

Course Code: AN15G

Course Title: Power Systems for AIX III: Advanced Administration and Problem Determination

## Description:

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. While the course includes some AIX 7.2 enhancements, most of the material is applicable to prior releases of AIX.

## Objectives:

- Perform system problem determination and reporting procedures that include analyzing error logs, creating memory 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 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 installation, multibos, and JFS2 snapshots to use a smaller maintenance window

## Prerequisites:

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

- Use of the Hardware Management Console (HMC) to activate a logical partition to run 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
- Mastery of the UNIX user interface, which include use of the vi editor, command execution, input and output redirection, **and** the use of utilities such as grep

These skills can be developed through experience **or** by formal training. The recommended training course to obtain these prerequisite skills is:

- Power Systems for AIX II: AIX Implementation and Administration (AN12G) **and** prerequisites

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

- Power Systems for AIX I: LPAR Configuration and Planning (AN11G)

**Duration:**

40 Hrs

**Topics:****Day 1**

- Welcome
- Unit 1: Advanced AIX administration overview
- Exercise 1: Problem diagnostic information
- Unit 2: The Object Data Manager
- Exercise 2: The Object Data Manager
- (optional) Exercise 2: Object Data Manager, Part 3
- Unit 3: Error monitoring

**Day 2**

- Exercise 3: Error monitoring
- Unit 4: Network Installation Manager basics
- Exercise 4: Basic Network Installation Manager configuration
- Unit 5: System initialization: Accessing a boot image
- Exercise 5: System initialization: Accessing a boot image

**Day 3**

- Unit 6: System initialization: rc.boot and inittab
- Exercise 6: System initialization: rc.boot and inittab
- Unit 7: LVM metadata and related problems
- Exercise 7: LVM metadata and related problems
- (optional) Exercise 7: LVM metadata and related problems, Part 6
- Unit 8: Disk management procedures, Topic 1
- Exercise 8: Disk management procedures, Part 1

**Day 4**

- Unit 8: Disk management procedures, Topic 2
- Exercise 8: Disk management procedures, Parts 2 and 3
- Unit 9: Install and cloning techniques, Topic 1
- Exercise 9: Install and cloning techniques, Part 1
- Unit 9: Install and cloning techniques, Topic 2
- Exercise 9: Install and cloning techniques, Part 2
- Unit 10: Advanced backup techniques, Topic 1
- Exercise 10: Advanced backup techniques, Part 1
- (Optional) Exercise 10: Advanced backup techniques, Part 2
- Unit 10: Advanced backup techniques, Topic 2
- Exercise 10: Advanced backup techniques, Parts 3 and 4

**Day 5**

- Unit 10: Advanced backup techniques, Topic 3
- Unit 11: Diagnostics
- Exercise 11: Diagnostics
- Unit 12: The AIX system dump facility
- Exercise 12: The AIX system dump facility
- Wrap up / Evaluations

**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.