

Power Systems for AIX III – Advanced Administration & Problem Determination

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

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A trainer who have developed IBM AIX V6 and V7 courseware and built AIX Certification papers seven times.

Purpose

Learn advanced AIX system administrator skills focusing on availability and problem determination. Learn detailed knowledge of the ODM database where AIX maintains configuration information. Learn to monitor for and deal with AIX problems with emphasis on Logical Volume Manager problems, including procedures for replacing disks. Learn how to configure AIX Workload Partitions as a part of software virtualization with no disruption.

Audience

This course is targeted for system administrators with at least six months experience in AIX and with other relevant education.

For additional details on all courses offered by TLC, please visit:
<https://www.tlcpak.com/educ.html>

Prerequisites

Participants should be familiar with various system administration tasks.

- Can use Hardware Management Console (HMC) to activate a logical partition running AIX and to access the AIX system console.
- Able to install AIX OS from a standalone server.
- Understand AIX backup and recovery procedures including mksysb, savevg, and restvg.
- Manage additional software and base operating system updates including AIX Technology Levels and Service Packs.
- Use management tools such as SMIT and pConsole
- Understand how to manage file systems, logical volumes, and volume groups.
- Understand basic performance monitoring tools and filesystem fragmentation problems
- Understand basic Workload Partition (WPAR) concepts and commands.
- Should be well familiar with using tools like vi editor, command execution, input and output redirection, and the use of utilities such as grep.

Skills Taught

On completion, students should be able to:

- Able to 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.
- Understand how to examine and manipulate AIX Object Data Manager databases.
- Identify and resolve conflicts between the Logical Volume Manager (LVM) disk structures and the Object Data Manager (ODM).
- Identify various types of boot and disk failures and perform the matching recovery procedures.
- Implement advanced methods such as alternate disk install, and features of JFS2 file system.
- Install and configure Workload Partition Manager to support WPAR management.

Unit 1: Advanced AIX administration overview

- List the steps of a basic procedure for problem determination.
- Identify methods for unfolding a problem and gathering relevant information to take best possible action to minimize planned and unplanned downtime.
- Able to collect maximum information from the system and user and refer to documentation and other key resources needed for problem resolution.
- Speaking IBM Support Center's language.
- Understand Live Application Mobility.
- IBM Fix Central.
- AIX Service Strategy.

Unit 2: The Object Data Manager

- Understand the structure of the ODM.
- Describe the role of ODM in device configuration database.
- Working with the ODM by using command line interface.
- Understand the function of the most important files within ODM.
- The role of Configuration Manager.
- Understand device states.

Unit 3: Error Monitoring

- Analyze error log entries.
- Identify and maintain the error log components.
- Starting and stopping errdemon.
- Changing the ERRLOG file size.
- Initializing the Error Log.
- Understanding error notification class objects.
- Dynamic Processor Deallocation.
- Create/Verify/Delete Error Notification method.

Unit 4: System Initialization Part 1

- Types of boot problems.
- Describe the boot process to loading the boot logical volume.
- Describe the contents of the boot logical volume.
- Interpret LED codes displayed during boot and at system halt.
- Fix the boot logical volume on a system which is failing to boot.
- Fix corrupted jfslog (/dev/hd8).



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Unit 5: System Initialization Part 2

- General overview of the boot process.
- Understand the process involved in system initialization from loading of the boot image to a successful completion of boot.
- Describe how devices are configured during the boot initialization process.
- Study and resolve boot related problems.
- Boot problem diagnostics.
- Study cfgmgr with the help of alog command.
- System critical files and Hang Detection.



This course will be delivered by IBM Certified and experienced trainer imparting IBM AIX courses globally for over 25 plus years.

Unit 6: Disk Management Theory

- Review LVM terminologies.
- Illustrate and understand where AIX LVM information resides.
- Study the contents of the VDA.
- Describe Logical Volume Control Block.
- Fixing the ODM-related LVM problems.
- Setting up LTG – Logical Track Group Size.
- Implementing AIX Disk Mirroring.
- Understand Mirror Write Consistency.
- Understand Quorum Mechanism.
- Activating and Deactivating AIX Volume Group.
- Describe Physical Volume States.

Unit 7: Disk Management Procedures

- List the steps of a basic procedure for problem determination.
- Identify methods for unfolding a problem and gathering relevant information to take best possible action to minimize planned and unplanned downtime.
- Able to collect maximum information from the system and user and refer to documentation and other key resources needed for problem resolution.
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Unit 8: Install and Backup Techniques

- Why backup and successful recovery is important.
- The role of mkszfile command.
- Create, verify, and restore mksysb images.
- Setup cloning using mksysb images
- Shrink file systems and logical volumes.
- Understand alternate disk installation techniques.
- Backup and restore non-rootvg volume groups.

Unit 9: The AIX System Dump Facility

- Understand dump and the contents of dump.
- Understand and explain the meaning of a system dump.
- Understanding flashing 888 code.
- How a system dump is invoked.
- Dump Devices size in AIX 7.
- Collect information that helps in analyzing Dump.
- Determine and change the primary and secondary dump devices.
- Create and extend a system dump size.
- Dump device compression.
- Execute the snap command.
- Use the kdb command to check a system dump.

After completing this course, you will learn how to:

In a nut-shell, this course provides users an advanced AIX system administrator skills with a focus on availability and problem determination which is an essential objective for any mission critical data center running 24x7 business operations.

At the end of this four day session, you will be provided a detailed knowledge of the ODM database, which is an heart of IBM AIX operating system, where AIX maintains vital system wide configuration information. You will be taught how to monitor for and deal with AIX problems and how to solve them.

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.

This is an advanced course for AIX system administrators, system support, and contract support individuals with at least six months of experience in AIX. These skills can be developed through experience or by formal training.

Detail Information

Course Code	:TN150
Course Duration	: 4 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 & Conditions	:100% payment in advance

*For additional information please write to us at: info@tlcpak.com
or send us your nominations at www.tlcpak.com/nomination1.html*

