

Power Systems for AIX II – AIX Implementation & Administration



Education and Training
Services

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

This course is designed for delegates who are responsible for system administration duties on an AIX system running on IBM System p hardware. This course enables delegates to install, customize and administer the AIX operating system in a multi-user environment.

Audience:

Anyone responsible for the system administrative duties implementing and managing AIX operating system on IBM System p and POWER hardware.

Prerequisites

Participants should be familiar with basic information technology. They should be able to login to an AIX system and set a user password, execute basic AIX commands, manage files and directories, use the vi editor, use redirection, pipes and tees, use utilities find and grep, use command and variable substitution and set Korn Shell variables.

To view complete list of our courses, please visit.
<https://www.tlc-pak.com>

Objectives

On successful completion of this course, students should be able to:

- Installation of AIX Version 7.1 software updates and filesets.
- Perform system startup and shutdown
- Understand and use the system management tools
- Manage physical and logical devices
- Perform file system management
- Create and manage user and group accounts
- Perform and restore system backups
- Utilize administrative subsystems, including cron to schedule system tasks
- Customize system security to implement customized access of files and directories.

Unit 1: Introduction to IBM Power System and System Administration

- Father of POWER Architecture.
- Understand IBM System p and RISC Architecture.
- RISC, AIX and Today – History.
- Choice of AIX OS and POWER Technology.
- Understand concepts of IBM Power system servers, virtualization, HMC, and AIX.
- The role of AIX system administrator.
- Accessing the “root” by using su command.
- Firmware problem in booting the system.
- Disk capacity/requirement for AIX installation.

Unit 2: AIX System Administration and Management Tools

- UNIX system administration challenges
- Discuss the functionality of traditional SMIT
- SMIT deep diving

Unit 3: System Startup and Shutdown

- Describe the system initialization process.
- Describe how to shutdown the system.
- Understand the contents of the /etc/inittab file.
- Understand AIX System Resource Controllers.
- Starting system maintenance mode.

- Using virtual console.
- Manage kernel tunable parameters.
- Activating the system AIX partition.
- Explain how to shut down the system and AIX partitions.

Unit 4: System Configuration and Devices

- Describe AIX logical and physical devices
- Explain the purpose of ODM with respect to Predefined and Customized databases
- Understanding the role of configuration manager.
- Understand different states of a device.
- Device related AIX commands
- Use AIX commands to configure/unconfigure/customize device database.

Unit 5: System Storage Overview

- Explain the terminology and concepts, Physical Volumes, Volume Groups, Logical Volumes Physical Partitions and Logical Partitions.
- Different Volume Group types in AIX
- Relationship between file systems and logical volumes.
- Mounting over files and directories.

Unit 6: Working with the Logical Volume Manager

- Understand Logical Volume Manager details.
- Add/Change/Delete AIX Volume Groups
- Add/Change/Delete AIX Logical Volumes
- Add/Change/Delete AIX Physical Volumes
- Learn how to activate and deactivate a volume group.
- Understand importvg and exportvg commands.
- Understand AIX Disk Mirroring
- migratepv command is used to move the contents of logical volumes with the Volume Group.

Unit 7: File Systems Administration

- Classify the components of an AIX file system.
- Add an enhanced journaled file system.
- Change characteristics of a file system.
- Reducing JFS2 filesystem.
- The skulker command.
- Defragmenting a filesystem.
- Reorganizing logical volumes.
- Monitoring filesystem growth.



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Unit 8: Paging Space

- The importance of paging space in AIX.
- Paging space VS swapping
- Paging space and general guidelines
- List, monitor and administrating AIX paging space utilization.
- Add, change, and delete paging space.
- Making the hd6 paging space smaller.
- Perform remedial procedures to fix paging space problems.

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

Unit 10: Backup and Restore

- Identify issues which have to be considered when deciding which backup policies to implement:
 - Media to be used
 - Frequency of the backup
 - Type of backup
- List the different backup methods supported through SMIT and on the command line.
- Create a customized installable system image backup.
- Execute other useful commands to manipulate the backed-up data on the media.

Unit 11: Security and User Administration

- Understand the concepts of users and groups.
- Define ways of controlling root access on the system.
- Define the uses of SUID, SGID and SVTX permission bits.
- Add/Change/Delete user and group accounts.
- Assigning users with ADMIN rights.
- Implementing AIX Role Base Access Control.
- Documenting Security Policy and Setup.
- AIX security files associated with Users and Groups.

Unit 12: Scheduling

- Use crontab files to schedule jobs on a periodic basis.
- Understand and use the at command to schedule a job to be run at a specified.
- Use the batch command to submits a job to cron daemon that runs when the system load level permits.

*An outsider's perspective can
bring unexpected value to your
organization*

After completing this course, you will learn how to:

- Install and manage AIX operating system filesets.
- Perform system startup and shutdown.
- Discuss and use system management tools such as System Management Interface Tool (SMIT) and IBM systems director console for AIX.
- Manage physical and logical devices.
- Discuss the purpose of the logical volume manager.
- Perform logical volume and file system management.
- Create and manage user and group accounts.
- Perform and restore system backups.
- Utilize administrative subsystems, including cron to schedule system tasks, and security to implement customized access of files and directories.
- Configure TCP/IP networking.
- Define and run basic Workload Partitions (WPAR).

Detail Information

Course Code :TN120

Course Duration : 4 Day

Course Fee : Obtain upon request

Course Location : TLC, Customer onsite (Karachi, Lahore and Islamabad)

Discount : Discounts are available for a class of 5 and 8 students

Terms & Conditions :100% payment in advance

Unit 9: AIX 7 Software Installation and Maintenance

- Describe the package definitions and naming conventions.
- Speaking IBM Support Language.
- Learn how software products and updates are installed and managed on the systems running critical applications.

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