AIX 7 Jumpstart for UNIX Professionals

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

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Value = (Usable Capacity X Performance X Reliability) / COST

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

Purpose

This course is developed and designed for customers who are using or have migrated to IBM POWER platform running IBM AIX operating system. This course is based on AIX Version 7 under a standalone full partitioned environment. This is an excellent opportunity for experienced UNIX system administrators using HP-UX, Solaris, Linux or any other UNIX flavor. This course is appropriate for experienced UNIX system administrators who want to support AIX running on POWER processor based systems in a multiuser POWER (System p) partitioned or standalone environment.

Prerequisites

These skills can be acquired by attending AIX 6 or AIX 7 Basics (AN100) or through equivalent AIX/UNIX knowledge. You should also have experience administering a UNIX operating system (such as Solaris, HP-UX, and others) including:

- Execute basic AIX commands, manage files and directories
- Basic system administration tasks and using the vi editor
- Use redirection, pipes, find and grep commands
- Use command and variable substitution
- Set and change Korn shell variables
- Write simple shell scripts and familiar with shells and variables

Skills Taught

- Understand how to install AIX filesets and Technology levels.
- Use System Management Interface Tool and IBM Systems Director Console for AIX.
- Manage physical and logical devices.
- Understand Object Data Manager and managing devices.
- Discuss the purpose of the Logical Volume Manager.
- Perform logical volume and file system management.
- Understand how to use AIX backup and restore commands.
- Use the AIX error log as a tool in problem determination.
- Understand AIX Dump and how to recover from a failed system.

Unit 1: System Hardware Overview

- Define the terminology used by IBM Power Systems.
- RISC, AIX and Today – History.
- Choice of AIX OS and POWER Technology.
- Understand IBM Power system technology, virtualization, HMC, & AIX.
- Understand the job role of AIX system administrator.
- Accessing the "root" by using **su** command.
- Firmware problem in booting the system.
- Disk capacity requirement for AIX 7 installation.
- HMC – Classic Vs Enhanced User Interface.
- Unit 1 Assessment and Labs.

Unit 2: AIX System Management Tools

- UNIX system administration and management challenges.
- AIX Administration & Management Tools.
- AIX System Management Tools & ODM.
- System Management for AIX – The tasks.
- SMIT Files types and their descriptions.
- Discuss the functionality of traditional SMIT and IBM Systems Director Console for AIX (pconsole).
- Understanding and managing pconsole subsystem resource controller.
- Use IBM Systems Director Console to monitor systems overall health and file systems status.
- Unit 2 Assessment and Labs.

Unit 3: AIX Software Installation and Maintenance

- AIX Support Lifecycle Information
- Describe the package definitions and naming conventions.
- Speaking IBM Support Language.
- Managed Software products and updates.
- Fix and Patch Management – Software States.

- Software Installation and Maintenance.
- Cleaning up a failed software installation.
- Applying (TL & SP) patches to the system.
- Patch Management Best Practices.
- Recommendations for installing patches.
- Adopting Standard Operating Checklist – Firmware.
- Unit 3 Assessment and Labs.

Unit 4: System Configuration and Devices

- Describe AIX logical and physical devices.
- Device Types and Device Terminologies.
- Understand Single Root I/O Virtualization (SR-IOV).
- Explain the purpose of ODM with respect to Predefined and Customized databases.
- Understanding the role of Configuration Manager.
- Device Locations Codes.
- Physical and virtual location codes and examples.
- List all Supported Devices and Physical Volumes.
- Using "lsdev" commands with examples.
- AIX device renaming – A New Command.
- Using "lscfg" and "lspath" commands.
- Identifying devices paths with failed status.
- Using "lsslot", "lsparent" and "prtconf" commands.
- List all Defined Kernel Parameters and changing attributes.
- The role of cfgmgr and device configurations.
- Adding a new physical device.
- Adding and Removing a device from the ODM database and the role of Configuration Manager.
- Unit Assessment 4 and Labs.

Unit 5: 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.
- Manage kernel tunable parameters.
- Activating the system AIX partition.
- Managing LPAR by using HMC.
- How to shutdown AIX system.
- Unit 5 Assessment and Labs.

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Unit 6: Working with Logical Volume Manager

- 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 to move the contents of logical volumes with the Volume Group.
- Unit 6 Assessment and Labs.

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

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 and Defragmenting a filesystem.
- Reorganizing logical volumes.
- Monitoring filesystem growth.
- Unit 7 Assessment and Labs.

Unit 8: 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.
- Unit 8 Assessment and Labs.

Unit 9: Disk Management Procedures

- Storage management commands used for recovery.
- Replace a disk under different circumstances.
- Recover from a total volume group failure.
- Rectify problems caused by incorrect actions while changing disks.
- Export and import volume groups.
- Unit 9 Assessment and Labs.

Unit 10: Backup and Restore

- Identify issues which have to be considered when deciding which backup policies to implement.
- List the different backup methods supported through SMIT and on the command line
- Create a customized installable system image
- Execute other useful commands to for backups.
- Unit 10 Assessment ad Labs.

Unit 11: The Object Data Manager

- Describe AIX logical and physical devices
- AIX ODM - Predefined and Customized databases
- Understanding the role of configuration manager.
- Different states of a device and related commands
- Use AIX commands to configure/unconfigure Devices.
- Unit 11 Assessment and Labs.

Unit 12: Error Monitoring

- Analyze error log entries.
- Identify and maintain the error log components.
- Starting and stopping errdemon.
- Changing the ERRLOG file size and Initializing the Error Log.
- Understanding error notification class objects.
- Create/Verify/Delete Error Notification method.
- Unit 12 Assessment and Labs.

Unit 13: System Initialization Part 1

- Types of boot problems.
- Describe the boot process – Boot Logical Volume.
- Describe the contents of the boot logical volume.
- Interpret LED codes displayed during boot and at system halt.
- Fix the BLV on a system which is failing to boot.
- Fix corrupted jfslog (/dev/hd8).
- Unit 13 Assessment and Labs.

Unit 14: System Initialization Part II

- 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.
- Unit 14 Assessment and Labs.

Unit 15: The AIX System Dump Facility

- Understand dump and the contents of dump.
- Understand and explain system dump.
- Understanding flashing 888 code.
- 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.
- Unit 15 Assessment and Labs.

Unit 16: 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.
- Unit 16 Assessment and Labs.

Detail Information

Course Code	: TN140
Course Duration	: 4 Day
Course Fee	: Obtain upon request
Course Location	: TLC, 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