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# **AIX Jumpstart for UNIX/Linux Professionals**

**5 days**

## **AIX Jumpstart for UNIX/Linux Professionals Course Overview**

This IBM AIX Jumpstart for Experienced UNIX/Linux Administrators training course is targeted at cross-training experienced HP-UX, SUN Solaris and other UNIX Administrators who wish to implement and manage systems capable of running the AIX Operating System. Students attending this course should therefore have a good understanding and experience of managing and running UNIX like systems.

Reference will be made to the AIX commands required to administer the system, although practical work will concentrate on using the System Management Interface Tool (SMIT) to achieve the course objectives. Although the course is based on AIX Version 6.1 it is also appropriate for prior releases of AIX.

## **Skills Gained**

The delegates will have knowledge and practise in:

- Introduction to the RS6000 (PSERIES) Hardware
- AIX 6 V6.1 Installation and Initial Configuration
- System Startup and Shutdown Procedures
- Using the System Management Interface Tool (SMIT)
- The Visual System Management Tools
- Using Web Based Information Browser
- AIX Filesystems and Storage
- Configuring Filesystems
- Looking after Filesystems
- Logical Volume Manager (LVM)
- Journaled Filesystems
- Paging Space
- Adding and Removing Users
- Managing Groups
- AIX Security Features
- Devices
- The ODM
- Terminal Configuration
- Create Backup and Restore Routines
- mksysb and savevg Commands
- Software Installation and Maintenance
- TCP/IP Network Configuration
- Problem Solving Using Error logs and syslogd

## **Who will the Course Benefit?**

Experienced System Administrators and other Technical IT staff who need to cross-train to be able to implement and manage systems capable of running the AIX Operating System. Some shell programming experience will also prove advantageous; this can be gained on the AIX Shell Programming Course.

## **Course Objectives**

On completion of the AIX Jumpstart for UNIX/Linux Professionals course the delegate will have practical experience of the Systems Management Interface Tool (SMIT), allowing them to administer an AIX System.

## **Pre-Requisite Courses**

- AIX Basics
- AIX Shell Programming

## **Follow-On Courses**

- AIX System Administration - Part II
- AIX Advanced Shell Programming Tools
- Oracle SQL
- Apache Web Server
- Perl Programming
- Oracle Overview Seminar

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# **AIX Jumpstart for UNIX/Linux Professionals Training Course**

## **Course Contents - DAY 1**

### **Course Introduction**

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

### **Session 1: INTRODUCTION TO THE P-SERIES**

- The P-SERIES Product Line
- RISC Technology
- MCA and PCI Bus Systems
- P-SERIES Configurations and Model Types
- The AIX Operating System

## **Session 2: AIX INSTALLATION**

- Installation for Classical and PCI Models
- Console and Language Definitions
- Other Installation Settings
- Configuration Assistant Menu

## **Session 3: STARTUP AND SHUTDOWN**

- RS/6000 Key Positions
- The Boot Sequence
- Standalone Mode for PCI Systems
- Booting from Hard Disk for Maintenance
- Booting from Removable Media
- The /etc/init Procedure
- Startup Modes
- The /etc/inittab File and the rc Startup Scripts
- Inittab Commands
- Using the alog Program
- System Resource Controller Commands
- The /etc/shutdown Script

## **Session 4: SYSTEM MANAGEMENT TOOLS**

- System Management Commands
- Using SMIT
- SMIT Special Characters and Keys
- Smit.log and smit.script Files
- The smit Command
- Distributed System Management
- Web Based System Manager

## **Session 5: AIX ON-LINE DOCUMENTATION**

- The man Command
- InfoExplorer
- Web Based Documentation Browser
- Setting up the Web Based Browser

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# **AIX Jumpstart for UNIX/Linux Professionals Training Course**

## **Course Contents - DAY 2**

### **Session 6: SOFTWARE INSTALLATION AND MAINTENANCE**

- Units of Installation

- Filesets, Packages and Licensed Program Products
- Bundles
- Update and Maintenance Bundles
- Software States
- Installing Patches and Fixes

## **Session 7: DEVICE CONFIGURATION**

- Introduction to the Object Data Manager (ODM)
- Listing Devices
- Interpreting Location Codes
- Self-configuring Devices
- Adding, Changing and Removing Devices

## **Session 8: SERIAL DEVICES**

- Terminal Attributes
- Terminal Configuration
- The stty Command
- The terminfo Database
- Exercise: Setting up a Terminal
- Exercise: Removing and Reconfiguring a Device

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# **AIX Jumpstart for UNIX/Linux Professionals Training Course**

## **Course Contents - DAY 3**

### **Session 9: USERS AND GROUPS**

- Users and Groups in AIX
- Administrator Commands
- Structure of the /etc/passwd File
- Adding a New User
- Changing User Characteristics
- The Configuration Files
- Passwd and pwdadm Commands
- Removing a User
- Adding, Changing and Removing a Group
- Account Validation
- Exercise: Adding Users and Groups with Defined Attributes

### **Session 10: AIX SECURITY FEATURES**

- The SECURITY Directory
- The /etc/security/passwd File
- The /etc/security/user File
- The /etc/security/login.cfg File

- The /etc/security/group File
- Auditing Files
- Losing Root User Password
- Exercise: Implement AIX Security Features

## **Session 11: THE LOGICAL VOLUME MANAGER**

- The AIX Approach to Disk Storage
  - Volume Groups, Physical Volumes and Logical Volumes
  - Volume Group Descriptor Areas
  - Mirroring
  - Striping
  - Disk Placement Policies
  - Migrating Physical Volume Data
  - Useful Commands
  - Exercise: Creating, Extending and Mirroring a Logical Volume
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# **AIX Jumpstart for UNIX/Linux Professionals Training Course**

## **Course Contents - DAY 4**

### **Session 12: THE JOURNALED FILESYSTEM**

- The AIX Native File System
- Superblocks and I-nodes
- Journaling of File System Data
- Creating a File System
- Mounting of Filesystems
- Managing Filesystems
- The /etc/filesystems File
- Removing Filesystems
- Using the fsck Command
- Exercise: Creating, Extending and Removing a Filesystem

### **Session 13: PAGING SPACE**

- Define Paging Space
- Paging Space Location
- List System Memory
- List Paging Space
- Monitor Paging Space Usage
- Calculate Paging Space Requirements
- Add/Remove Paging Space
- Exercise: Monitor, Add and Remove Paging Space

## **Session 14: BACKUP AND RESTORE**

- Backup Devices
  - mksysb and savevg Commands
  - The backup Command
  - The restore Command
  - Tape Control Commands
  - Exercise: Use of Backup And Restore
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# **AIX Jumpstart for UNIX/Linux Professionals Training Course**

## **Course Contents - DAY 5**

### **Session 15: TCP/IP CONFIGURATION**

- Define TCP/IP Terminology
- Define Routing (Static and Dynamic)
- TCP/IP Commands and Utilities
- Configure TCP/IP for a Network Interface
- Configure a Static Route
- Test Network Connectivity
- Test Route Connectivity
- Basic TCP/IP Applications
- Exercise: Configure TCP/IP
- Exercise: Use TCP/IP Commands to:
  - Login to a Remote System
  - Transfer Files To/From a Remote System

### **Session 16: PROBLEM SOLVING TOOLS**

- Error Log Facility
  - Error Log Input Components
  - Error Reporting from SMIT
  - The errpt Command
  - Sample Summary/Intermediate/Detailed Report Output
  - Interpreting LVM Error Log Entries
  - Error Log Maintenance
  - Error Notification Facility
  - Notification Methods
  - The syslogd Daemon
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## **Pre-Requisite Courses**

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  - AIX Shell Programming
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## **Follow-On Courses**

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  - Perl Programming
  - Oracle Overview Seminar
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