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AIX SAN Management I: Administration
Information

Length:	2.0 Days
__Ref:	AN49G-X
Delivery method:	ClassroomInstructor Led Online
Price:	EUR

Overview

AIX SAN Management I: Administration (AN490) is designed to bridge the knowledge gap between AIX/PowerVM education and Storage Management courses. The overall objective is to provide you a description of how AIX interacts with Fibre Channel storage devices. Along with this general view, we will look at common operational issues such as performance and problem solving from the perspective of an AIX administrator.

This course provides lectures and hands on labs in an instructor lead course environment, either in a face-to-face classroom or in a live virtual classroom environment (ILO - Instructor Led Online).

Public

This intermediate course is intended for persons who:

- Manage AIX servers that utilize SAN backed storage

The audience for this training includes:

- AIX technical support individuals
- System administrators
- System architects

Prerequisites

You should have:

- basic AIX administration experience.

The AIX prerequisite may be met by attending one **or** both of the two following classes**or** having equivalent AIX skills:

- *UNIX / AIX Basics (AN10G)*

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

Objective

- Describe common interaction of AIX within a Fibre Channel (FC) environment
- Interpret AIX boot strategies using SAN
- Select key FC related performance characteristics to monitor
- Use AIX commands for performance monitoring
- Navigate Virtual IO server FC devices
- Initialize virtual FC resources
- Define basic strategy for FC Problem determination under AIX
- Provide suggested solutions to common FC SAN problems under AIX

Topics

Unit 1: AIX in a SAN Environment

- Describe IBM SAN product offerings
- Discuss basic aspects of SAN interaction with Power systems
- Describe course lab environment
- Use AIX commands to identify system resources

Unit 2: AIX Device Management

- Discuss VIO server architecture as it relates to Fibre Channel
- Describe how to configure virtual Fibre Channel adapters
- Utilize VIO server commands to identify Fibre Channel resources
- Differentiate between physical and virtual Fibre Channel resources

Unit 3: SAN Boot

- Interpret AIX boot strategies using SAN
- Identify resources required to complete a SAN boot
- Configure a SAN attached hdisk as a boot device

Unit 4: Storage Server Design Concepts

- Define storage server architecture models
 - Active/Passive
 - Active/Active
- Discuss common terminology used with storage servers
- Identify storage manager functions

Unit 5: SAN Fabric Concepts and Operations

- Summarize SAN fabric design elements
- Describe SAN addressing
- Discuss virtual FC resources

Unit 6: Fibre Channel Switching Configuration

- Describe basic FC switch configuration elements
- Navigate switch environment
- Define zoning process

Unit 7: Virtual I/O Server

- Discuss VIO server architecture as it relates to Fibre Channel
- Describe how to configure virtual Fibre Channel adapters
- Utilize VIO server commands to identify Fibre Channel resources
- Differentiate between physical and virtual Fibre Channel resources

Unit 8: SAN Performance Monitoring Considerations

- Identify the I/O layers where queuing is handled
- View and change a FC disk and FC disk adapter's tuning attributes
- Monitor and tune the queue depth of disks and disk adapters
- Identify the filemon reports that display I/O activity
- Test I/O throughput using:
 - The time and dd commands
 - The ndisk program (part of the nstress package)

Unit 9: SAN Problem Determination

- Describe the FC problem determination process
- Identify the FC path selection algorithms
- Use the iostat -m command to display path priorities
- List the attributes that are used for FC health checking
- Define the FC reservation policies that can be used
- Explain the purpose of fast I/O failure and dynamic tracking