Arctera InfoScale 9.0 Fundamentals for UNIX/Linux: Administration

Course Description

COURSE DESCRIPTION

The Arctera InfoScale 9.0 Fundamentals for UNIX/Linux Administration course is designed for the IT professional who requires an overview of the Arctera InfoScale Storage and Arctera InfoScale Availability products.

This five-day class is a condensed version of the five-day Arctera InfoScale Storage 9.0 for UNIX/Linux: Administration course and the five-day Arctera InfoScale Availability 9.0 for UNIX/Linux: Administration course. This course is a subset of the two courses, and it covers the basics of Arctera InfoScale Storage 9.0, and Arctera InfoScale Availability 9.0.

This course will NOT prepare you for the certification exams or the Advanced courses of both the products.

Delivery Methods

This course is available in the following delivery methods:

- Instructor-led training (ILT)
- Virtual instructor-led training (VILT)
- Learning Lab

Duration

- Instructor-led training - ILT: 5 days, including 6 months of lab access
- Virtual instructor-led training - VILT: 5 days, including 6 months of lab access
- Learning Lab – Self-paced lesson guide plus 6 months of lab access

Course Objectives

After completing this course, you will be able to:

- Provide an overview of the InfoScale product suite and InfoScale support for cloud environments.
- Install and configure the InfoScale Storage environment.
- Create, configure, and manage disks, disk groups, and volumes.
- Administer file systems and manage components in the VxVM architecture.
- Administer Mirrored Volumes
- Resize a Volume and a File System
- Create a cluster and configure service groups and resources.
- Outline the different VCS cluster communication mechanisms.
- Explain InfoScale support for multi-version clusters.
- Perform common administrative cluster operations.
- Summarize VCS user and agent account passwords encryption standards.
- Outline online and offline configuration procedures.
- Configure notifications and triggers to customize VCS behaviour in response to events.
- Explain how VCS responds to resources faults.
- Describe how the Intelligent Monitoring Framework improves fault detection.
- Describe VCS response to common system and cluster interconnect failures.

Who Should Attend

This course is designed for UNIX/Linux system administrators, system engineers, technical support personnel, network/SAN administrators, and systems integration/development staff, who will install, configure, manage, and integrate InfoScale Storage and InfoScale Availability.

Prerequisites

Knowledge of and hands-on experience with UNIX/Linux systems administration is required.

Hands-On

This course includes practical hands-on exercises and demonstrations that enable you to test your new skills and begin to use those skills in a working environment.

COURSE OUTLINE

PART 1: Arctera InfoScale Storage 9.0 for UNIX/Linux: Administration

Storage Foundation Basics

Installing and Licensing InfoScale

- Introducing the Arctera InfoScale Product Suite
- Tools for Installing InfoScale Products
- InfoScale Cloud Offerings
- Installing Arctera InfoScale Storage
- Installing Arctera InfoScale Availability
- Upgrading Arctera InfoScale Enterprise

Labs: Introduction

- Exercise A: Viewing the Virtual Machine Configuration
- Exercise B: Displaying Networking Information

Labs: Installation of InfoScale Storage

- Exercise A: Verifying that the System Meets Installation Requirements
- Exercise B: Installing InfoScale Storage and Configuring Storage Foundation
- Exercise C: Performing Post-Installation and Version Checks
- Exercise D: (Optional) Visualizing InfoScale Information in AI Browser

Virtual Objects

- Operating System Storage Devices and Virtual Data Storage
- Volume Manager (VxVM) Storage Objects
- VxVM Volume Layouts and RAID Levels
- Arctera InfoScale Operations Manager (IOM): Overview

Labs

- Exercise A: Using Text-based VxVM Menu Interface
- Exercise B: Accessing CLI Commands
- Exercise C: Adding Managed Hosts to the IOM Management Server
- Exercise D: Working with the IOM GUI Dashboard and Inventory Information
- Exercise E: Exploring the IOM GUI Licensing Option
- Exercise F: Working with the IOM GUI Settings Option

Creating a Volume and File System

- Preparing Disks and Disk Groups for Volume Creation
- Creating a Volume and Adding a File System

- Displaying Disk and Disk Group Information
- Displaying Volume Configuration Information
- Removing Volumes, Disks, And Disk Groups

Labs

- Exercise A: Creating Disk Groups, Volumes, and File Systems (CLI)
- Exercise B: Removing Volumes and Disks (CLI)
- Exercise C: Destroying Disk Data Using Disk Shredding (CLI)
- Exercise D: (Optional) Creating Disk Groups, Volumes, and File Systems (IOM)
- Exercise E: (Optional) Removing Volumes, Disks, and Disk groups (IOM)

Working with Volumes with Different Layouts

- Volume Layouts
- Creating Volumes with Various Layouts
- Allocating Storage for Volumes

Labs

- Exercise A: Creating Volumes with Different Layouts (CLI)
- Exercise B: (Optional) Creating Volumes with User Defaults (CLI)

Making Configuration Changes

- Administering Mirrored Volumes
- Resizing a Volume and a File System
- Moving Data Between Systems
- Renaming VxVM Objects
- InfoScale Support for Protection Against Ransomware

Labs

- Exercise A: Administering Mirrored Volumes
- Exercise B: Resizing a Volume and File System
- Exercise C: Renaming a Disk Group
- Exercise D: Moving Data Between Systems
- Exercise E: (Optional) Resizing Only the File System

Administering File Systems

- Arctera File System: Benefits
- Using Arctera File System Commands
- Arctera File System: Logging
- Controlling File System Fragmentation
- Using Thin Provisioning Disk Arrays

Labs

- Exercise A: Preparing to Defragment the Arctera File System
- Exercise B: Defragmenting a Arctera File System
- Exercise C: Working with SmartMove
- Exercise D: Observing Thin Reclamation

PART 2: Arctera InfoScale Availability 9.0 for UNIX/Linux: Administration Cluster Server Basics

High Availability Concepts

- High Availability Concepts
- Clustering Concepts
- High Availability Applications
- Clustering Prerequisites

Labs: Introduction

- Exercise A: Viewing Virtual Machine Configuration Details
- Exercise B: Verifying Network Connectivity

Labs:

- Exercise A: Performing a CPI Pre-installation Verification
- Exercise B: Performing a SORT Pre-installation Verification
- Exercise C: (Optional) Visualizing InfoScale Information in AI Browser

Installing and Licensing InfoScale

- Introducing the Arctera InfoScale Product Suite
- Tools for Installing InfoScale Products
- InfoScale Cloud Offerings
- Installing Arctera InfoScale Storage
- Installing Arctera InfoScale Availability
- Upgrading Arctera InfoScale Enterprise

Labs:

- Exercise A: Installing InfoScale Enterprise Using the Common Product Installer (CPI)
- Exercise B: Running a Post-installation Check
- Exercise C: Adding Managed Hosts to the IOM Management Server

VCS Building Blocks

- VCS Terminology
- Cluster Communication
- VCS Architecture
- Multi-version Cluster
- InfoScale Operations Manager (IOM): Overview

Labs:

- Exercise A: Working with the IOM GUI Dashboard and Inventory Information
- Exercise B: Exploring the IOM GUI License Options
- Exercise C: Working with the IOM GUI Settings Option

VCS Operations

- Common VCS Tools and Operations
- Service Group Operations
- Resource Operations
- VCS Custom Scripts: Operations

Labs:

- Exercise A: Displaying Cluster Information
- Exercise B: Displaying Status and Attributes
- Exercise C: Performing Service Group Operations
- Exercise D: Manipulating Resources

VCS Configuration Methods

- Starting and Stopping VCS
- Configuration Methods: Overview
- Online Configuration
- Controlling Access to VCS
- VCS Password Encryption

Labs:

- Exercise A: VCS Configuring the State and Stopping VCS
- Exercise B: Configuring Automatic Backup of VCS Configuration
- Exercise C: Setting Non-default VCS Stop Options

Preparing Services for VCS

- Preparing Applications for VCS
- Performing One-time Configuration Tasks
- Testing the Application Service
- Stopping and Migrating a Service
- Collecting Configuration Information

Labs:

- Exercise A: Configuring and Examining Storage for a Service
- Exercise B: Examining the Application
- Exercise C: Manually Starting and Stopping the Application

Online Configuration

- Online Service Group Configuration
- Adding Resources
- Solving Common Configuration Errors
- Testing the Service Group

Labs:

- Exercise A: Creating a Service Group for the Loopy Application
- Exercise B: Configuring Resources for the Loopy Application
- Exercise C: Performing a Virtual Fire Drill (VFD) on the Service Group
- Exercise D: Testing the Service Group
- Exercise E: Setting Resources to Critical
- Exercise F: (Optional) Examining Arctera File System Locking by VCS

Offline Configuration

- Offline Configuration Examples
- Offline Configuration Procedures
- Solving Offline Configuration Problems
- Testing the Service Group

Labs:

- Exercise A: Editing a Copy of the main.cf File Using a System Editor
- Exercise B: Stopping VCS
- Exercise C: Restarting VCS Using the Edited main.cf File

Configuring Notification

- Notification: Overview
- Configuring Notification
- Triggers: Overview

Labs:

- Exercise A: Configuring and Testing Notifier Using IOM
- Exercise B: Configuring Trigger Scripts

Cluster Server Additions

Handling Resource Faults

- VCS Response to Resource Faults
- Determining Failover Duration
- Controlling Fault Behavior
- Recovering from Resource Faults
- Fault Notification and Event Handling

Labs:

- Exercise A: Observing Non-Critical Resource Faults
- Exercise B: Observing Critical Resource Faults
- Exercise C: (Optional) Observing Faults in Frozen Service Groups
- Exercise D: (Optional) Observing ManageFaults Behavior
- Exercise E: (Optional) Observing RestartLimit Behavior

Intelligent Monitoring Framework

- Intelligent Monitoring Framework: Overview
- Intelligent Monitoring Framework: Configuration
- Faults and Failover with Intelligent Monitoring

Labs:

- Exercise A: Examining IMF Monitoring on a Resource
- Exercise B: (Optional) Examining IMF Default Configuration

Cluster Communications

- VCS Communications: Overview
- Cluster Interconnect Configuration
- Cluster Startup
- System and Cluster Interconnect Failure
- Changing the Interconnect Configuration

Labs:

- Exercise A: Reconfiguring LLT
- Exercise B: Observing Jeopardy Membership

About Arctera

Arctera helps organizations around the world thrive by ensuring they can trust, access, and illuminate their data from creation to retirement. Created in 2024 from Veritas Technologies, an industry leader in secure multi-cloud data resiliency, Arctera comprises three business units: Data Compliance, Data Protection, and Data Resilience. Arctera provides more than 75,000 customers worldwide with market-leading solutions that help them to manage one of their most valuable assets: data. Learn more at www.arctera.io. Follow us on X @arcteraio.

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