Advanced Administration & Performance Management (AAPM)

Duration: *4 Day(s)*

Course Overview

If you are an experienced Nutanix administrator, this course will serve as a deep dive that gives you a rich, nuanced understanding of the Nutanix platform, and will help you get the most out of your Nutanix solutions. AAPM is divided into six major sections, each focused on performance improvements and advanced administration techniques for different aspects of your clusters:

Storage: Take a deep dive into AOS storage services, different aspects of Acropolis Distributed Storage, storage optimization, and storage best practices for application workloads. Networks: Learn how to optimize physical and virtual workloads, as well as how to implement Flow Virtual Networking and Virtual Private Clouds (VPCs). VMs: Learn about sizing the CVM and Prism Central VMs, alternate methods of VM provisioning (such as via CLI), how to work with GPUs, and how to improve VM storage and network performance. Security: Understand important features such as authentication, RBAC, IAM, and encryption. Learn how to use essential security products, such as Flow Security Central and Flow Network Security. Analyzing Problems: Explore ways to monitor and identify health issues, network performance, VM performance, and cluster performance. Business Continuity and Disaster Recovery: Learn about Nutanix data backup, web-scale data protection, protection from ransomware, self service restore, and third-party integrations. You will also learn how to use protection domains and Nutanix Leap for disaster recovery.

Review this course online at https://www.alta3.com/courses/AAPM-Nutanix

Objectives

- Deepen understanding of Nutanix platform services and storage optimization.
- Implement advanced networking and security strategies within Nutanix environments.
- Analyze and troubleshoot performance issues in Nutanix clusters.
- Execute business continuity and disaster recovery plans using Nutanix Leap and other tools.

Who Should Attend

- IT administrators managing Nutanix clusters
- Nutanix datacenter architects
- NCM-MCI certification candidates
- Experienced virtualization professionals

Prerequisites

Course Prerequisites Nutanix Enterprise Cloud Administration (ECA) classroom training or an NCP-MCI certification Basic knowledge of Nutanix datacenter administration techniques Familiarity with traditional virtualization storage architectures Comfort with Linux command-line interface To ensure AAPM is the right fit, we encourage you to complete our online Readiness Evaluation. Questions are based on topics covered in the ECA course and NCP-MCI exam that you should be familiar with before attending.

Course Outline

Exploring Nutanix Storage Features

1. Understanding Nutanix AOS Services and AOS Storage Services
2. Exploring Storage Components
3. AOS Storage Data Pathing
4. Hands-on Labs
5. Creating a Storage Container
6. Updating Reported Capacity
7. Creating a Highly Available, Performant, and Resilient Storage Layer
8. Creating Highly Available, Resilient Infrastructure
9. Storage Optimization and Data Efficiency
10. Optimizing and Planning for New Workloads
11. Storage Best Practices for Application Workloads
12. Hands-on Labs
13. Observing Nutanix Cloning Efficiency
14. Reserving Rebuild Capacity in AHV
15. Observing the Rebuild Process
16. Disabling Rebuild Capacity Reservation
17. Creating a Storage Container with Deduplication Enabled
18. Reviewing Deduplication Savings
19. Enabling Replication Factor 1 and Creating a Storage Container

Optimizing Physical and Virtual Networks in AOS

20. Optimizing Physical & Virtual Networks
21. Best Practices
22. Hands-on Labs
23. Managing Virtual Switches and Uplinks
24. Viewing Virtual Switches from Prism Element
25. Configuring CVM Network Segmentation
26. Configuring QoS Traffic Marking
27. Optimizing Overlay Networks Using Flow Networking
28. Optimizing Physical & Virtual Networks
29. Implementing Flow Networking
30. Implementing VPCs
31. Overlay Network Use Cases
32. Hands-on Labs
33. Enabling Flow Networking
34. Creating an External Subnet
35. Creating a VPC
36. Creating VMs using the Overlay Subnets
37. Configuring Local and Remote Gateways
38. Establishing a VPN Connection

39. Verifying VPN Connectivity

Optimizing VM Performance

40. Sizing the CVM & Prism Central
41. Alternate Methods of Provisioning User VMs
42. Working with GPUs in AHV
43. Improving VM Storage and Network Performance
44. Hands-on Labs
45. Creating VMs with the REST API
46. Configuring VirtIO Multi-Queue
47. Configuring Volumes Block Storage

Analyzing Nutanix Cluster Security Options

48. Nutanix Security Technologies
49. User Authentication and Permissions
50. Hardening AHV and the CVM
51. Using Flow Network Security & Flow Security Central
52. Data Encryption with Nutanix
53. Managing Log Files
54. Hands-on Labs
55. Configuring Cluster Lockdown
56. Replacing Default SSL Certificates
57. Configuring Syslog Integration
58. Managing User Permissions
59. Microsegmentation with Flow Network Security
60. Flow Policy Constructs
61. Security Policy Models and Types
62. Enabling Microsegmentation
63. Creating and Applying Policies
64. Hands-on Labs
65. Enabling Flow Microsegmentation
66. Creating Categories
67. Creating VMs and Assigning Categories
68. Configuring Isolation and Application Security Policies
69. Microsegmentation with Flow Network Security

Evaluating Cluster Health

70. Network Packet Capture and Inspection
71. Acropolis Service Failures
72. Ensuring Efficient Physical Resource Consumption with Machine Learning
73. Application Monitoring and Discovery
74. Monitoring Performance

75. Hands-on Labs
76. Creating a Prism Central Performance Monitoring Dashboard
77. Creating Charts to Analyze Metrics Using Prism Central
78. Creating Charts to Analyze Entities Using Prism Element

Business Continuity

79. Assessing Business Continuity and Disaster Recovery
80. High Availability and Data Protection
81. Third Party Backup Integrations
82. Best Practices
83. Hands-on Labs
84. Configuring Self Service Restore
85. Implementing Disaster Recovery
86. Replicating Data with AOS
87. Disaster Recovery Orchestration
88. Disaster Recovery with Protection Domains
89. Getting Started with Nutanix Leap
90. Protecting Against Ransomware
91. Hands-on Labs
92. Enabling Nutanix Leap
93. Configuring an Availability Zone
94. Configuring a Protection Policy
95. Creating Production and Test VLANs
96. Preparing VMs for Nutanix Leap
97. Configuring a Recovery Plan
98. Performing Test and Planned Failover