Nutanix Enterprise Cloud Administration (ECA)

COURSE OVERVIEW

If you already have experience with administering a Nutanix environment, this course will extend, deepen, and broaden your knowledge as you grow in your career as a Nutanix administrator.

Designed with Prism Central as the focal point, this course illustrates the breadth and depth of Nutanix's centralized management capabilities, and allows you to explore the wide variety of features that are available in this one, single web console.

ECA is divided into four topic areas:
- Understanding core Nutanix concepts, such as hyperconverged infrastructure (HCI) and the various Nutanix cloud solution packages. Also, the basic configuration of a cluster and the components that are needed to create and manage VMs – namely, networks and images.
- Creating and managing VMs, how to protect VMs and their data, how to apply storage optimization features at the VM level, and how to migrate your workloads to a Nutanix environment.
- Learn about alerts, events, log collection, reporting, and how to use various features in Prism Central to identify, analyze, and remediate performance issues.
- Learn how to set up a cluster for maintenance activities – such as starting and stopping nodes and clusters – and how to manage and upgrade licenses and installed software with just a few clicks.

WHO WILL BENEFIT FROM THIS COURSE?
- Administrators, engineers, and others who manage Nutanix clusters in the datacenter
- Managers and technical staff seeking information to drive purchase decisions
- Anyone seeking the Nutanix Certified Professional - Multicloud Infrastructure (NCP-MCI) certification

COURSE OUTLINE

Getting Started with a Nutanix Cluster
- Understand three-tier and hyperconverged infrastructure
- Understand Nutanix Cloud Solution Packages
- Understand nodes, blocks, clusters, and cluster services
- Get Started with Prism Central and Prism Element
- Understand when to use Prism Central and when to use Prism Element

Hands-on-Labs
- Connecting to and exploring the Prism Web Console
- Adding data services IP, an NTP server, and a name server
- Configuring Active Directory authentication
- Exploring Prism Central
- Prism Central initial configuration

Securing a Nutanix Cluster

- Understand Nutanix's approach to security
- Use Prism Central to configure authentication, users, and RBAC
- Understand Policies in Flow Network Security
- Use Prism Element to configure Data-at-Rest Encryption

Hands-on-Labs

- Adding a local user
- Verifying a new user account

Configuring Cluster Networking

- Understand AHV networking terminology
- Use Prism Central to monitor cluster networks
- Use Prism Element to explore the Network Visualizer
- Create and update subnets and virtual switches
- Understand subnet extension and network segmentation

Hands-on Labs

- Creating unmanaged and managed networks
- Exploring the AHV network configuration
- Managing virtual switches and uplinks
- Viewing virtual switches from the Prism Web Console

Managing Images

- Understand the image service
- Use Prism Central to monitor, upload, import, and manage images

Hands-on Labs

- Uploading and importing images to Prism Central
- Configuring an image placement policy

Creating Virtual Machines

- Use Prism Central to create VMs
- Use Prism Central's self-service capabilities to create VM templates
- Install and enable Nutanix Guest Tools

Hands-on Labs

- Creating Windows and Linux VMs
- Installing Windows and Linux operating systems
- Installing Nutanix Guest Tools on Windows and Linux

Managing Virtual Machines

- Update, clone, customize, export, and apply placement rules to VMs
- Create and apply storage policies to VMs
- Create playbooks to automate common VM administrative tasks

Hands-on Labs

- Updating a VM
- Creating a template and a clone
- Exporting a VM as an OVA

- Creating and running a playbook
- Creating a storage policy

Protecting VMs and Their Data

- Understand data protection terms and concepts
- Understand synchronous and asynchronous replication capabilities
- Use Prism Element to configure local and remote backup and DR
- Use Prism Central to create protection policies with Leap

Hands-on Labs

- Creating protection domains and local VM restore
- Creating containers for replication
- Configuring remote sites and creating protection domains
- Performing VM migration and migrating back to primary

Configuring and Managing Cluster Storage

- Understand AOS Distributed Storage
- Understand key storage concepts such as storage pools, storage containers, redundancy factor, replication factor, capacity reservation, and snapshots
- Understand fault tolerance and failure handling mechanisms
- Create and update storage containers
- Use various capacity optimization features

Hands-on Labs

- Exploring the Storage dashboard
- Creating containers with and without compression
- Comparing data in a compressed vs uncompressed container
- Migrating vdisks between storage containers

Migrating Workloads with Nutanix Move

- Understand, install, and upgrade Nutanix Move
- Use Move to migrate VMs
- Download Move logs

Hands-on Labs

- Preparing a VM for migration
- Deploying a Move VM
- Configuring Move and a migration plan

Monitoring Cluster Performance

- Understand performance monitoring features in Prism Central
- Create sessions, charts, and reports
- Create custom dashboards in Prism Central

Hands-on Labs

- Creating a Prism Central performance monitoring dashboard
- Creating charts to analyze metrics using Prism Central
- Creating and managing reports

Monitoring Cluster Health
- Understand health monitoring features in Prism Central and Prism Element
- Get summarized and detailed health information from Prism
- Use Nutanix Cluster Check
- Collect logs

Hands-on Labs
- Using Nutanix Cluster Check health checks
- Collecting logs for Support
- Creating and managing reports

Investigating and Remediating Performance Issues
- Understand alerts and events and the associated dashboards in Prism Central
- Identify problematic or inefficient VMs
- Potential methods of remediating problematic VMs

Hands-on Labs
- Working with Alerts
- Exploring Events

Performing Cluster Maintenance
- Performing health checks
- Using maintenance mode
- Starting and stopping nodes and clusters
- Adding nodes to or removing nodes from clusters

Hands-on Labs
- Verifying cluster health
- Putting a node into maintenance mode & removing it

Upgrading Licenses, Software, and Firmware
- Understanding LCM and the LCM workflow
- Performing an upgrade using LCM
- Licensing a cluster and managing licenses

Hands-on Labs
- Use Life Cycle Manager to upgrade NCC

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