

Veritas NetBackup 8.2: Administration

Course Summary

Description

Acquire the skills to make your data protection strategy successful with the Veritas NetBackup 8.2: Administration course. You will learn the general principles, configuration, and management of NetBackup, including how to best utilize the NetBackup tools and interfaces, effectively monitor backup operations, and ensure data recovery objectives are met.

Objectives

By the end of this course, students will be able to:

- Discuss the challenges of performing backups in today's enterprise computing environments.
- Describe the functions of the master server, media servers, and clients.
- Diagram the NetBackup product architecture.
- Define common terms used in the NetBackup product.
- Describe how NetBackup backs up and restores data.
- Identify NetBackup options and agents.
- Use the NetBackup Administration Console, Web Interface, and OpsCenter.
- Configure and manage basic disk storage units and storage unit groups.
- Configure file system backup policies and schedules.
- Perform manual backups and user-directed backups.
- Restore files using the Java or Windows BAR interface and OpsCenter Operational Restore.
- Monitor NetBackup backup and restore jobs and perform basic troubleshooting and information-gathering steps related to failing jobs.
- Configure and manage AdvancedDisk storage units and disk pools.
- Configure tape-based devices and volume pools; perform a robot inventory.
- Manage robot and tape drive settings, including media sharing.
- Monitor and manage media and media states.
- Configure, run, and manage virtual machine backups using VMware.
- Recover virtual machines, including using VMware Instant Recovery.
- Use the integrated NetBackup vSphere Web Client Plug-in for VMware.
- Configure, run, and manage virtual machine backups using Hyper-V.
- Describe the various methods of backup image duplication.
- Configure Storage Lifecycle Policies (SLPs) and initiate jobs that use SLPs.
- Manage the NetBackup catalog to search for, verify, duplicate, import, and expire backup images.
- Back up and recover the NetBackup catalogs.
- Optimize file system backups using incremental backups, True Image Restore, synthetic backups, NetBackup Accelerator, multiple data streams, and multiplexing.
- Identify and use resources for troubleshooting NetBackup, including the support information gathering tools related.

Topics

- Introducing NetBackup
- Configuring NetBackup Storage
- Configuring Policies
- Performing File System Backups
- Performing File System Restores
- Configuring Disk Pools

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Course Summary (cont.)

- Configuring Media Server Deduplication
- Configuring and Managing Tape Storage
- Performing VMware Backups
- Performing VMware Restores
- Protecting and Recovering Hyper-V Virtual Machines
- Duplicating Backups Using Storage Lifecycle Policies
- Managing and Protecting the NetBackup Catalog
- Collecting Logs and Diagnostic Information

Audience

This course is intended for technical professionals responsible for the design, configuration, operation, monitoring, or support of NetBackup.

Prerequisite

Students should be familiar with general network and storage concepts, and the administration and configuration of Windows or Linux operating systems.

Duration

Five Days

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Course Outline

I. *Introducing NetBackup*

- A. Data protection and the NetBackup environment
- B. NetBackup concepts
- C. NetBackup Appliance Overview
- D. Using the NetBackup Administration Console
- E. Using the NetBackup web interface
- F. Using NetBackup OpsCenter
- G. NetBackup Installation

- Labs:
 - Exercise A: Introduction to your Lab on Demand (LOD) lab environment
 - Exercise B: Installing NetBackup Software
 - Exercise C: Exploring the NetBackup Administration Console
 - Exercise D: NetBackup Host Properties
 - Exercise E: Accessing the NetBackup web interface
 - Exercise F: Exploring the NetBackup web interface
 - Exercise G: Configuring role-based access control
 - Exercise H: Creating and editing a custom rule (Optional)

II. *Configuring NetBackup Storage*

- A. NetBackup storage device concepts
- B. Configuring and managing a basic disk storage unit
- C. Configuring storage unit groups
 - Labs:
 - Exercise A: Viewing disk storage on a NetBackup server system
 - Exercise B: Configuring a Basic Disk storage unit
 - Exercise C: Configuring a storage unit group

III. *Configuring Policies*

- A. Introduction to backup policies
- B. Creating and configuring policy attributes

- C. Creating a policy schedule
- D. Adding client to a policy
- E. Creating backup selections
- F. Managing policies

- Labs:
 - Exercise A: Configuring a NetBackup policy
 - Exercise B: Configuring a policy to use calendar-based schedules
 - Exercise C: Copying a policy to create a new policy
 - Exercise D: (Optional) Lab challenge

IV. *Performing File System Backups*

- A. Using and customizing the NetBackup Activity Monitor
- B. Performing manual backup operations
- C. Performing user-directed backups
- D. Backup job-related tips
 - Labs:
 - Exercise A: Using the Activity Monitor
 - Exercise B: Performing Manual backups
 - Exercise C: Viewing job details
 - Exercise D: Deactivating and activating policies
 - Exercise E: Performing user-initiated backups

V. *Performing File System Restores*

- A. Introduction to restores
- B. Performing restore operations using the BAR interface
- C. Performing restore operations using OpsCenter Operational Restore
- D. Restore job-related tips
 - Labs:
 - Exercise A: Becoming familiar with the key restore settings in the BAR interface.
 - Exercise B: Restoring client files to their original location

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Course Outline (cont.)

- Exercise C: Restoring files to an alternate file system location
- Exercise D: Restoring files to an alternate client system
- Exercise E: (Optional) Using the OpsCenter Operational Restore feature
- Exercise D: Configuring and using client-side deduplication
- Exercise E: Monitoring and managing NetBackup MSDP storage
- Exercise F: (Optional) Running Deduplication reports in OpsCenter

VI. *Configuring Disk Pools*

- A. Understanding disk pools and AdvancedDisk
- B. Configuring AdvancedDisk
- C. Managing AdvancedDisk storage
 - Labs:
 - Exercise A: Identifying AdvancedDisk storage
 - Exercise B: Configuring AdvancedDisk
 - Exercise C: Verifying AdvancedDisk configuration
 - Exercise D: Configuring a policy to write backup images to AdvancedDisk storage
 - Exercise E: Performing and monitoring backups to AdvancedDisk storage
 - Exercise F: Monitoring and managing AdvancedDisk disk pools

VII. *Configuring Media Server Deduplication*

- A. Introduction to NetBackup deduplication
- B. Configuring NetBackup media server deduplication
- C. Configuring client-side deduplication
- D. Managing NetBackup deduplication
 - Labs:
 - Exercise A: Configuring NetBackup Media Server Deduplication (MSDP)
 - Exercise B: Configuring a policy to use MSDP storage
 - Exercise C: Performing backups to MSDP storage

VIII. *Configuring and Managing Tape Storage*

- A. Understanding Media Manager storage units
- B. Configuring tape devices
- C. Verifying tape storage
- D. NetBackup media concepts
- E. Configuring media
- F. Managing robots and tape drives
- G. Monitoring media and media states
- H. Managing tapes
- I. Media- and device-related tips
 - Labs:
 - Exercise A: Verifying tape devices are visible to the operating system of media servers
 - Exercise B: Configuring tape devices and storage units using the Device Configuration Wizard
 - Exercise C: Configuring volume pools
 - Exercise D: Configuring volumes using the Robot Inventory user interface provided by NetBackup and, in the process, create barcode rules
 - Exercise E: Viewing tape drive and robot configuration settings
 - Exercise F: Using the Device Monitor to monitor and manage tape drives
 - Exercise G: Managing media
 - Exercise H: Running tape-based reports

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Course Outline (Cont.)

- Exercise I: (Optional) Using the robtest utility
- Exercise J: (Optional) Running NetBackup reports from the command line
- Exercise K: (Optional) Performing Media state management using the command line

IX. *Performing VMware Backups*

- A. Introduction to virtual machine backups
- B. Configuring VMware backups
- C. Protecting VMware Assets using the web UI
- D. Performing and Monitoring VM Backups
 - Labs:
 - Exercise A: Verifying the VMware environment
 - Exercise B: Configuring NetBackup servers to access the VMware vCenter server
 - Exercise C: Installing the NetBackup Plug-in for VMware vSphere Web Client
 - Exercise D: Configuring a VMware policy in NetBackup
 - Exercise E: Performing and monitoring NetBackup VMware virtual machine backups
 - Exercise F: Excluding disks from a VMware virtual machine backup
 - Exercise G: Managing VMware credentials using the web UI
 - Exercise H: Managing VMware Assets using the web UI

X. *Performing VMware Restores*

- A. Managing virtual machine restores
- B. Managing VMware restores

- C. Using VMware Instant Recovery
- D. VMware Agentless Restore
 - Labs:
 - Exercise A: Recovering virtual machine files
 - Exercise B: Recovering a VMware virtual machine disk
 - Exercise C: Recovering an entire VMware virtual machine
 - Exercise D: Performing non-NetBackup pre-requisites tasks for IRV
 - Exercise E: Performing NetBackup pre-requisite tasks for Instant Recovery for VMware (IRV)
 - Exercise F: Performing Instant Recovery for VMware (IRV) using the vSphere Web Client
 - Exercise G: Using NetBackup Web UI to recover a virtual machine to alternate location

XI. *Protecting and Recovering Hyper-V Virtual Machines*

- A. Introduction to NetBackup for Hyper-V
- B. Configuring Hyper-V backups
- C. Performing and Monitoring Hyper-V backups
- D. Performing Hyper-V restores
- E. Performing Hyper-V restores with the NetBackup Add-in for SCVMM
 - Labs:
 - Exercise A: Configuring NetBackup communication with Hyper-V
 - Exercise B: Configuring a Hyper-V Intelligent Policy and backing up Hyper-V virtual machines
 - Exercise C: Restoring individual files
 - Exercise D: Restoring the full Hyper-V machine

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Course Outline (cont.)

- Exercise E: Performing Hyper-V backups and restores in an SCVMM environment

XII. Duplicating Backups Using Storage Lifecycle Policies

- A. Backup duplication concepts
- B. Storage lifecycle policy concepts
- C. Using storage lifecycle policies
- D. Additional Storage Lifecycle Policy features and benefits
 - Labs:
 - Exercise A: Configuring a Storage Lifecycle Policy
 - Exercise B: Configuring a NetBackup policy to use a Storage Lifecycle Policy
 - Exercise C: Modifying SLP Host Properties
 - Exercise D: Viewing and monitoring SLP operations

XIII. Managing and Protecting the NetBackup Catalog

- A. Introduction to NetBackup catalogs
- B. Managing images
- C. Configuring a catalog backup policy
- D. Disaster recovery strategies
 - Labs:
 - Exercise A: Running NetBackup catalog-related reports
 - Exercise B: Verifying, expiring, and importing backup images
 - Exercise C: Configuring and running NetBackup catalog backups
 - Exercise D: Recovering the catalogs using the NetBackup Catalog Recovery wizard

XIV. Optimizing File System Backups

- A. File system backup challenges
- B. Optimizing file system backups
- C. Optimizing file system backups with NetBackup Accelerator

- D. Using multiple data streams
- E. Optimizing tape drive performance using multiplexing
- F. Handling busy files on UNIX and Windows file systems
 - Labs:
 - Exercise A: Optimizing backups using the NetBackup Accelerator
 - Exercise B: Configuring for and using multiple data streams
 - Exercise C: (Optional) Configuring and performing multiplexed backups

XV. Collecting Logs and Diagnostic Information

- A. Performing basic NetBackup troubleshooting
- B. Identifying NetBackup processes, services, and daemons
- C. NetBackup logging overview
- D. Using the support utilities
- E. Using NetBackup support resources
 - Labs:
 - Exercise A: Viewing the NetBackup services
 - Exercise B: Running NetBackup reports for troubleshooting
 - Exercise C: Using the nbsu and nbclogs commands
 - Exercise D: (Optional) Viewing and setting debug logging properties
 - Exercise E: (Optional) Enabling NetBackup legacy debug logging
 - Exercise F: (Optional) Viewing debug logging levels for unified logs