ProTech Professional Technical Services, Inc.

Veritas NetBackup 10.0: Administration

Course Summary

Description

Acquire the skills to make your data protection strategy successful with the Veritas NetBackup 10.0: 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 and restore operations, and ensure that the data recovery objectives are met.

Objectives

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

- Describe the functions of the Primary server, Media servers, and clients.
- Describe how NetBackup backs up and restores data.
- Use the NetBackup Administration Console, Web User Interface, and OpsCenter.
- Configure and manage NetBackup security certificates.
- Configure, manage, and Monitor BasicDisk and AdvancedDisk 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.
- Provision storage and configure MSDP.
- Manage NetBackup cloud backups and cloud storage.
- Optimize file system backups with NetBackup Accelerator.
- Backup, restore, and protect virtual environments like VMware.
- Configure Storage Lifecycle Policies (SLPs) and initiate jobs that use SLPs.
- Protect and manage the NetBackup catalog.
- Configure NetBackup WORM protection.
- Optimize NetBackup for performance.

Topics

- Introducing NetBackup
- Working with the NetBackup Web UI
- Performing NetBackup Certificate Administration
- Configuring Basic and Advanced Disk Storage
- Configuring NetBackup Policies and Schedules
- Protecting File Systems
- Configuring Media Server Deduplication
- Configuring Cloud Storage
- Optimizing Filesystem Backups
- Protecting VMware Environments

- Recovering VMware Environments
- Duplicating and Replicating Backups
- Protecting the NetBackup Catalog
- Mitigating Impact of Ransomware
- Generating NetBackup Reports
- Upgrading and Updating NetBackup
- Collecting Logs and Diagnostic Information
- Appendix A: Protecting NAS Data
- Appendix B: Configuring and Managing Tape Storage
- Appendix C: Performing Instant Recovery

Audience

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

Prerequisites

Students should be familiar with general network and storage concepts, and the administration and configuration of Windows or Linux operating systems. Knowledge of virtualization and cloud technologies is useful.

Duration

Five days

Course Outline

I. Introducing NetBackup
   A. Data Protection and the NetBackup Environment
   B. NetBackup and Flex Appliances: Overview
   C. NetBackup Integrated Solutions
   D. NetBackup Installation
   E. NetBackup Administration Interfaces
   F. Labs:
      1. Exercise A: Creating Users and Groups
      2. Exercise B: Installing the NetBackup Primary Server Software
      3. Exercise C: Installing the NetBackup Java Remote Administration Console
      4. Exercise D: Installing the NetBackup Media Server Software
      5. Exercise E: Installing the NetBackup Client Software
      6. Exercise F: Exploring the NetBackup Administration Console

II. Working with the NetBackup Web UI
   A. NetBackup Web User Interface
   B. Configuring NetBackup for Single Sign-On
   C. Protecting Workload Assets
   D. Managing Role-based Access Control
   E. Alerts and Notifications
   F. Managing User Sessions
   G. Labs:
      1. Exercise A: Accessing and Navigating the NetBackup Web User Interface
      2. Exercise B: Configuring Role-based Access Control
      3. Exercise C: Configuring NetBackup for Single Sign- On
      4. Exercise D: Viewing and Configuring Notifications
      5. Exercise E: Managing User Sessions

III. Performing NetBackup Certificate Administration
   A. Understanding Security Certificates
   B. Working with Certificate Revocation Lists
   C. Configuring NetBackup Security Certificates
   D. Managing NetBackup Security Certificates
   E. Using External Security Certificates with NetBackup
   F. Labs:
      1. Exercise A: Viewing NetBackup Certificates
      2. Exercise B: Manually Deploying NetBackup Certificates
      3. Exercise C: Revoking and Reissuing Host ID-based Certificates
      4. Exercise D: Using External Certificates with NetBackup

IV. Configuring Basic and Advanced Disk Storage
   A. NetBackup Storage Device Concepts
   B. Configuring a BasicDisk Storage Unit
   C. Configuring AdvancedDisk
   D. Managing AdvancedDisk Storage
   E. Configuring Storage Unit Groups
   F. Labs:
      1. Exercise A: Configuring a BasicDisk Storage Unit
      2. Exercise B: Configuring AdvancedDisk Storage
      3. Exercise C: Monitoring and Managing AdvancedDisk Storage
      4. Exercise D: Configuring a Storage Unit Group

V. Configuring NetBackup Policies and Schedules
   A. Backup Policies: Overview
   B. Creating and Configuring Policy Attributes
   C. Creating a Policy Schedule
   D. Adding Clients to a Policy
   E. Creating Backup Selections
   F. Exclude and Include Lists
   G. Managing Policies
   H. Labs:
      1. Exercise A: Configuring a Policy to Use a Frequency- based Schedule
      2. Exercise B: Configuring a Policy to Use a Calendar- based Schedule
      3. Exercise C: Managing NetBackup Policies

VI. Protecting File Systems
   A. Performing Manual Backup Operations
   B. Using and Customizing the NetBackup Activity Monitor
   C. Performing User-directed Backups
   D. Backup Job-related Tips
   E. Introduction to Restores
   F. Performing Restore Operations Using the NetBackup Web UI
   G. Performing Restore Operations Using the BAR interface
   H. Labs:
      1. Exercise A: Using and Customizing the Activity Monitor
      2. Exercise B: Performing Manual Backups
      3. Exercise C: Performing User-initiated Backups
      4. Exercise D: Restoring Client Files to their Original Location
      5. Exercise E: Restoring Client Files to an Alternate File System Location
      6. Exercise F: Restoring Client Files to an Alternate Client System

Course Outline (cont'd)

VII. Configuring Media Server Deduplication
A. Introduction to MSDP
B. Variable-Length Deduplication
C. MSDP Architecture
D. Planning a Deployment
E. Provisioning Storage and Configuring MSDP
F. Labs:
1. Exercise A: Configuring NetBackup Media Server Deduplication
2. Exercise B: Configuring a Policy to Use MSDP Storage
3. Exercise C: Performing Backups to MSDP Storage
4. Exercise D: Configuring and Using Client-side Deduplication
5. Exercise E: Managing and Monitoring NetBackup MSDP Storage

VIII. Configuring Cloud Storage
A. Using the Cloud with NetBackup
B. MSDP Cloud Support
C. Memory-efficient Dedup Service
D. MSDP Cloud Immutable (WORM) Storage
E. Image Sharing using MSDP Cloud
F. Labs:
1. Exercise A: Performing Preliminary Tasks
2. Exercise B: Configuring Cloud Storage in NetBackup
3. Exercise C: Configuring and Performing Backups to the Cloud
4. exercise D: Restoring Client Data from Cloud-based Storage

IX. Optimizing Filesystem Backups
A. File System Backup Challenges
B. Optimizing File System Backups
C. Optimizing File System Backups with NetBackup Accelerator
D. NetBackup FlashBackup
E. Using multiple Data Streams
F. Handling Busy Files on UNIX/Linux and Windows File Systems
G. Labs:
1. Exercise A: Configuring and Performing Synthetic Backups
2. Exercise B: Optimizing Backups Using NetBackup Accelerator
3. Exercise C: Optimizing Backups Using NetBackup FlashBackup
4. Exercise D: Configuring and Using Multiple Data Streams

X. Protecting VMware Environments
A. Introduction to Virtual Machine Backups
B. Configuring VMware Backups
C. Continuous Data Protection for VMware
D. Performing and Monitoring VMware Backups
E. Labs:
1. Exercise A: Configuring NetBackup for VMware Backups
2. Exercise B: Configuring a VMware Policy
3. Exercise C: Performing and Monitoring VMware Virtual Machine Backups
4. Exercise D: Excluding Disks from a VMware Virtual Machine Backup
5. Exercise E: Configuring Continuous Data Protection

XI. Recovering VMware Environments
A. Performing VMware Restores
B. Instant Access and Instant Rollback for VMware
C. VMware Agentless Restores
D. Labs:
1. Exercise A: Recovering Virtual Machine Files (Agent- based)
2. Exercise B: Recovering a VMware Virtual Machine Disk
3. Exercise C: Recovering the Entire VMware Virtual Machine
4. Exercise D: Using VMware Agentless Restore
5. Exercise E: Downloading Files and Folders from a Virtual Machine Backup Image
6. Exercise F: Creating an Instant Access Virtual Machine from a NetBackup Backup Image
7. Exercise G: Performing Instant Rollback for Virtual Machines
8. Exercise H: Performing Restores from a Continuous Data Protection Backup

XII. Duplicating and Replicating Backups
A. Duplication Strategies
B. Storage Lifecycle Policy: Concepts
C. Using Storage Lifecycle Policies
D. Additional Storage Lifecycle Policy Features and Benefits
E. Labs:
1. Exercise A: Configuring a Storage Lifecycle Policy
2. Exercise B: Configuring a Policy to Use a Storage Lifecycle Policy
3. Exercise C: Customizing Storage Lifecycle Policy Settings
4. Exercise D: Viewing and Monitoring Storage Lifecycle Policy Operations

Course Outline (cont'd)

5. Exercise E: Using Storage Lifecycle Policies to Perform MSDP Optimized Duplication
6. Exercise F: Configuring Storage Lifecycle Policies for Replicating Backup Images

XIII. Protecting the NetBackup Catalog
A. Understanding the NetBackup Catalog
B. Managing Images
C. Protecting the NetBackup Catalog
D. Performing NetBackup Catalog Recovery
E. Maintaining the NetBackup Catalog
F. Labs:
1. Exercise A: Verifying Catalog Configuration Files
2. Exercise B: Configuring and Running NetBackup Catalog Backups
3. Exercise C: Recovering the Catalogs Using the NetBackup Catalog Recovery Wizard
4. Exercise D: Performing Catalog Operations
5. Exercise E: Configuring a Policy for Catalog Archive

XIV. Mitigating Impact of Ransomware
A. Ransomware Overview
B. NetBackup Protect Against Ransomware
C. Backup Anomaly Detection
D. NetBackup Malware Tool
E. Labs: Part A (Using Flex Appliance)
1. Exercise A: Configuring a Disk Pool and WORM Storage Unit
2. Exercise B: Configuring a NetBackup Policy
3. Exercise C: Understanding Catalog Operations on the WORM Image Copy
4. Exercise D: Configuring and Identifying Backup Anomaly
5. Labs: Part B (Using AWS S3)
6. Exercise A: Configuring a Disk Pool and WORM Storage Unit
7. Exercise B: Configuring a NetBackup Policy
8. Exercise C: Understanding Catalog Operations on the WORM Backup Image
9. Exercise D: Configuring and Identifying Backup Anomaly
10. Exercise E: Configuring and Using NetBackup Malware Scanner

XV. Generating NetBackup Reports
A. Generating Reports in NetBackup
B. NetBackup OpsCenter
C. Generating NetBackup Reports in OpsCenter

D. Generating Reports Using NetBackup IT Analytics
E. Labs:
1. Exercise A: Using the NetBackup Reports Utility
2. Exercise B: Configuring OpsCenter Data Collection for NetBackup
3. Exercise C: Generating Reports Using OpsCenter

XVI. Upgrading and Updating NetBackup
A. NetBackup Upgrades: Overview
B. VxUpdate: Overview
C. Deployment Policy Management
D. Initiating Upgrades Using VxUpdate
E. VxUpdate: Error Codes
F. Labs:
1. Exercise A: Populating the Repository with NetBackup Packages
2. Exercise B: Configuring a Deployment Policy
3. Exercise C: Manually Initiating Upgrades from the Primary Server Using VxUpdate
4. Exercise D: Initiating Upgrades from the Client Using VxUpdate
5. Exercise E: Viewing the Deployment Job Status

XVII. Collecting Logs and Diagnostic Information
A. Performing Basic NetBackup Troubleshooting
B. Identifying NetBackup Processes, Services, and Daemons
C. NetBackup Logging: Overview
D. Using Support Utilities
E. Using NetBackup Support Resources
F. Labs:
1. Exercise A: Viewing NetBackup Services
2. Exercise B: Using the nbsu and nbcplogs Commands
3. Exercise C: Viewing and Setting Debug Logging Properties
4. Exercise D: Enabling NetBackup Legacy Debug Logging
5. Exercise E: Viewing Debug Logging Levels for Unified Logs
6. Exercise F: Using the Logging Assistant
7. Exercise G: Using the NetBackup Smart Diagnostics Utility

Course Outline (cont'd)

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