



## COURSE DESCRIPTION

Acquire the skills to make your data protection strategy successful with the *Veritas NetBackup 8.2: Advanced Administration* course. You will learn advanced NetBackup topics, including NetBackup performance, disaster recovery, application backups on physical and virtual machines, virtual machine accelerator backups, and security. This course also covers using NetBackup to manage Oracle, Microsoft Exchange, Microsoft SQL, Microsoft SharePoint database backups and restores along with other modern workloads.

### Delivery Method(s)

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

By the completion of this course, you will be able to:

- Improve NetBackup performance by addressing bottlenecks and becoming familiar with NetBackup performance enhancing features.
- Ensure your NetBackup environment and data is secure using security certificates, authentication, authorization, auditing, and encryption.
- Prepare for common disasters and plan for disaster recovery using optimized duplication and Auto Image Replication.
- Optimize NetBackup deduplication storage and use by understanding and managing performance enhancing features for backups and restores, and configuring MSDP catalog protection policies.
- Describe requirements for backing up third-party applications and databases.
- Configure NetBackup to back up and restore Oracle, Microsoft Exchange, Microsoft SQL, and Microsoft SharePoint databases.
- Discuss strategies for Oracle, Microsoft Exchange, Microsoft SQL, and Microsoft SharePoint database recovery.
- Configure, run, and manage backups for applications running in virtual machines.
- Configure accelerator for VMware virtual machines.
- Use NetBackup to protect modern workloads.
- Configure, run, and manage backups using NDMP filers with NetBackup.

### Who Should Attend

This course is intended for NetBackup system administrators, system engineers, technical support personnel, and system integration and development staff who are responsible for implementing new and advanced NetBackup 8.2 features and functions.

### Prerequisites

Students should be familiar with general network and storage concepts, and the administration and configuration of Windows or Linux operating systems. Students must also have one to three years of experience with basic NetBackup administration, configuration, and operation. These prerequisites can be met by attending any version of the NetBackup Administration course plus additional on-the-job experience.

### Hands-On

This course includes practical hands-on lab exercises to apply your new skills in a virtual NetBackup domain. At the start of class students will choose between Windows-based or Linux-based NetBackup servers to perform lab exercises.

## COURSE OUTLINE

### Improving NetBackup Performance

- NetBackup performance overview
- Addressing performance issues
- Managing True Image Restore and synthetic backups
- Managing FlashBackup backups
- Using Network Resiliency

#### Labs

- Exercise A: Calculating buffer wait percentages for backup jobs
- Exercise B: Optimizing backups using synthetic backups
- Exercise C: Configuring and using FlashBackup

### Securing the NetBackup Environment

- Understanding security concerns in a backup environment
- Securing NetBackup port communication
- Understanding security certificates
- Configuring NetBackup security certificates
- Configuring NetBackup with access control
- Auditing NetBackup

#### Labs

- Exercise A: Observing Security Events and Host Management behavior Linux
- Exercise B: Managing Host ID certificates and tokens Linux
- Exercise C: Configuring the auth conf file
- Exercise D: Configuring enhanced auditing
- Exercise E: View security events and audit logs
- Exercise F: Managing host ID certificates and tokens

### Securing Backup Data

- Understanding security concerns in a backup environment
- Encrypting NetBackup deduplication data
- Using NetBackup client encryption
- Using NetBackup Key Management Services

#### Labs

- Exercise A: Configuring MSDP encryption
- Exercise B: Performing a MSDP encrypted backup

### Auto Image Replication

- Introduction to Auto Image Replication
- Configuring trusted master servers
- Configuring Auto Image Replication
- Monitoring Auto Image Replication
- Restoring from a replicated and imported image
- Managing and maintaining Auto Image Replication

#### Labs

- Exercise A: Configuring the replication source and target
- Exercise B: Configuring an SLP in the target domain
- Exercise C: Configuring an SLP and policy in the source domain
- Exercise D: Configuring other settings that affect SLP behavior
- Exercise E: Performing and monitoring replication jobs
- Exercise F: Viewing the status of replication jobs
- Exercise G: Restoring data from a replicated and imported image

### Optimizing NetBackup Deduplication

- Understanding MSDP architecture
- Improving deduplication backup performance
- Optimizing deduplication restores and rehydration
- Protecting the MSDP backup data and catalog

#### Labs

- Exercise A: Configuring client direct restores
- Exercise B: Performing a client direct restore
- Exercise C: Configuring and performing MSDP catalog backups
- Exercise D: Simulating a MSDP catalog corruption
- Exercise E: Performing a recovery of a MSDP catalog

### Implementing NetBackup Cloud Solutions

- Using the cloud with NetBackup
- Configure NetBackup cloud storage
- Managing NetBackup cloud storage and cloud backups
- NetBackup CloudCatalyst overview

#### Labs

- Exercise A: Performing preliminary tasks
- Exercise B: Configuring NetBackup for backups to the cloud
- Exercise C: Performing backups to the cloud
- Exercise D: Viewing cloud-based storage
- Exercise E: Restoring client data from cloud-based storage

### Understanding Application Backup Concepts

- Application protection concepts
- Database backup and restore concepts
- Customizing generic application backups

#### Labs

- Exercise A: Copying the NetBackup notify scripts
- Exercise B: Configuring a policy to run a cold Oracle backup
- Exercise C: Performing a cold Oracle backup

### Managing Oracle Backups

- Introduction to the Oracle database
- Configuring Oracle database backups
- Monitoring and maintaining Oracle database backups
- Oracle database disaster recovery considerations

#### Labs

- Exercise A: Viewing the initial configuration of Oracle
- Exercise B: Registering the Oracle instance with NetBackup
- Exercise C: Creating an Oracle Intelligent Policy
- Exercise D: Performing a backup using an Oracle Intelligent Policy
- Exercise E: Simulating a failure of an Oracle database
- Exercise F: Restoring an Oracle database

### Managing Microsoft SQL Backups

- Introduction to Microsoft SQL Server
- Configuring NetBackup for SQL Server Intelligent Policies
- Monitoring SQL Server database backups
- SQL Server disaster recovery considerations

#### Labs

- Exercise A: Introducing the SQL Server environment
- Exercise B: Registering the SQL instance with NetBackup
- Exercise C: Creating a NetBackup SQL Intelligent Policy
- Exercise D: Performing a manual SQL Server backup using an Intelligent Policy
- Exercise E: Deleting a SQL database
- Exercise F: Restoring a SQL database

### Managing Microsoft SharePoint Backups

- Introduction to Microsoft SharePoint Server
- Configuring NetBackup for SharePoint policies
- SharePoint disaster recovery considerations

#### Labs

- Exercise A: Configuring a Microsoft SharePoint policy in NetBackup
- Exercise B: Performing non-NetBackup tasks to enable SharePoint Granular Recovery
- Exercise C: Performing NetBackup tasks to enable SharePoint Granular Recovery
- Exercise D: Performing a manual backup using a SharePoint policy
- Exercise E: Deleting a document from a SharePoint site
- Exercise F: Performing a SharePoint document restore

### Managing Microsoft Exchange Backups

- Introduction to Microsoft Exchange Server
- Configuring NetBackup for Exchange
- Exchange and high availability environments
- Monitoring and maintaining Exchange database backups
- Exchange disaster recovery considerations

#### Labs

- Exercise A: Configuring a Microsoft Exchange backup policy
- Exercise B: Performing non-NetBackup pre-requisite tasks for Exchange GRT (Required, but pre-configured)
- Exercise C: Performing NetBackup tasks to enable Exchange Granular Recovery (GRT)
- Exercise D: Performing a Microsoft Exchange database backup
- Exercise E: Performing a Roll-Forward recovery
- Exercise F: Performing an Exchange GRT database backup
- Exercise G: Recovering a deleted e-mail message
- Exercise H: (Optional) Performing Point-in-Time recovery
- Exercise I: (Optional) Performing full and differential backups of an Exchange database
- Exercise J: (Optional) Restoring the Exchange database from full and differential backup images

### Enhancing Virtual Machine Protection

- Protecting virtual machines with applications
- Using NetBackup Accelerator for virtual machine backups
- Restoring individual VDMK files

#### Labs

- Exercise A: Verifying that the Exchange Server is powered on
- Exercise B: Performing prerequisite tasks to enable VMware Application Protection backups of Exchange (Required, but pre-performed)
- Exercise C: Configuring a VMware policy for MS Exchange application protection
- Exercise D: Viewing application protection backup for MS Exchange information
- Exercise E: Performing a GRT restore from an application protection backup image

### Disaster Recovery and NetBackup

- Disaster recovery strategies
- Controlling media servers used for restores

#### Labs

- Exercise A: Configuring and running a NetBackup catalog backup
- Exercise B: Recovering the NetBackup catalogs with a missing DR file
- Exercise C: Performing post recovery checks

### Managing NDMP Backups

- Introduction to NetBackup for NDMP
- Preparing for NDMP backups
- Configuring local NDMP backup

- Configuring remote NDMP backups
- Accelerator for NDMP filers
- Protecting a NetApp cDOT NDMP filer

### Modern workload protection

- Parallel Streaming Framework
- Protecting Big Data
- Protecting Hyper Converged Infrastructures
- Protecting Open Source Data

#### Labs

- Exercise A: Starting Hadoop services
- Exercise B: Configuring Credentials for Hadoop in NetBackup
- Exercise C: Configuring the NetBackup policy
- Exercise D: Performing Hadoop backup
- Exercise E: Restoring Hadoop data

### Appendix A: Managing NDMP Three-way backups

- Understanding NDMP three-way backups
- Configuring NDMP three-way backups

### Appendix B: Managing Oracle backups using legacy policies

- Configuring NetBackup with legacy Oracle policies
- Monitoring and maintaining Oracle database backups from legacy policies

### Appendix C: Managing Microsoft SQL backups using legacy policies

- Using the NetBackup Microsoft SQL Client console
- Using SQL server batch files in NetBackup policies

### Appendix D: NetBackup API

- Introduction to NetBackup API