



COURSE DESCRIPTION

The *NetBackup 8.1.2: Maintenance and Troubleshooting* course provides IT professionals with instructions on troubleshooting Veritas NetBackup software. This course covers general error detection tools and troubleshooting methodologies. It enables students to learn how to resolve issues related to the NetBackup database, devices, media, disk, deduplication, and networking. In addition, students study the functions of key NetBackup processes and learn how to enable, view, and manage the associated logs.

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: 4 days, including 6 months of lab access
- Virtual instructor-led training - VILT: 4 days, including 6 months of lab access
- Learning Lab – Self-paced lesson guide plus 6 months of lab access

Course Objectives

After completing this course, you will be able to:

- Detect problems using tools such as the NetBackup reports, NBSU, and administrative commands.
- Correct problems and verify these corrections.
- Understand the functions of services, daemons, and processes that drive NetBackup operations.
- Back up, recover, and troubleshoot the NetBackup catalog, including the NBDB database.
- Rapidly and accurately isolate the root cause of a backup failure.
- Troubleshoot a wide variety of tape device, media, disk, deduplication, and communication-related problems.
- Enable and use legacy, unified, and robust logging to troubleshoot problems.
- Run backups and restores with a higher rate of success and efficiency.
- Troubleshoot important features such as VMWare and Hyper-V backups and Storage Lifecycle policies (SLP).

Who Should Attend

This course is for NetBackup administrators, operators, system engineers, and technical support personnel who want to broaden their NetBackup advanced troubleshooting knowledge and skills on a Windows or UNIX platform.

Prerequisites

Students should be familiar with general network and storage concepts, and 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

Troubleshooting Methods and Tools

- Troubleshooting situations and methodology
- Gathering symptoms and information
- Additional troubleshooting resources

Labs:

- Exercise A: Introduction to the lab environment
- Exercise B: Navigating the NetBackup Administration Console
- Exercise C: Viewing the NetBackup configuration
- Exercise D: Testing backups and restores
- Exercise E: Identifying tools for analyzing backup and restore problems

NetBackup Process Flow

- Core process functions overview
- Backup process flow
- Tape restore process flow
- Disk restore process flow
- Viewing process flow information

Labs:

- Exercise A: Tracing backup process flow to tape-based storage
- Exercise B: Tracing backup process flow to tape-based storage
- Exercise C: Tracing restore process flow
- Exercise D: Tracing process flow for a failed job

Troubleshooting Communication Issues

- Understanding NetBackup communication
- Configuring NetBackup and network communication
- Troubleshooting network and NetBackup communication problems
- Common NetBackup communication issues

Labs:

- Exercise A: NetBackup communications – problem scenario 1 (Windows)
- Exercise B: NetBackup communications – problem scenario 2 (Windows)
- Exercise C: NetBackup communications – problem scenario 3 (Windows)
- Exercise D: NetBackup communications – problem scenario 1 (Linux)
- Exercise E: NetBackup communications – problem scenario 2 (Linux)

- Exercise F: NetBackup communications – problem scenario 3 (Linux)

Troubleshooting Tape Devices and Media

- NetBackup device troubleshooting
- Common NetBackup device issues
- Media and device selection
- Media-related status codes
- Troubleshooting frozen and suspended media

Labs:

- Exercise A: Tape devices and media – problem scenario 1 (Windows)
- Exercise B: Tape devices and media – problem scenario 2 (Windows)
- Exercise C: Tape devices and media – problem scenario 1 (Linux)
- Exercise D: Tape devices and media – problem scenario 2 (Linux)

Troubleshooting Disk Backups Resources

- Overview of disk-based backups
- Maintaining and Troubleshooting Basic Disk
- Maintaining and Troubleshooting Advanced Disk
- Maintaining and Troubleshooting OpenStorage

Labs:

- Exercise A: Disk devices – problem scenario 1 (Windows)
- Exercise B: Disk devices – problem scenario 2 (Windows)
- Exercise C: Disk devices – problem scenario 1 (Linux)
- Exercise D: Disk devices – problem scenario 2 (Linux)

Troubleshooting NetBackup Deduplication

- Understanding NetBackup deduplication and deduplication process flow
- Maintaining and troubleshooting NetBackup deduplication
- Protecting from MSDP server failure

Labs:

- Exercise A: Monitoring and troubleshooting MSDP
- Exercise B: Verifying a MSDP Backup Image
- Exercise C: Discovering and fixing orphan MSDP data

Additional Backup and Restore Troubleshooting

- Troubleshooting file system backups
- Troubleshooting snapshot-based backups
- Troubleshooting VMware backups
- Troubleshooting Hyper-V backups
- Troubleshooting restores

Labs:

- Exercise A: Backup and restore – problem scenario 1 (Windows)
- Exercise B: Backup and restore – problem scenario 2 (Windows)
- Exercise C: Backup and restore – problem scenario 3 (Windows)
- Exercise D: Backup and restore – problem scenario 1 (Linux)

- Exercise E: Backup and restore – problem scenario 2 (Linux)
- Exercise F: Backup and restore – problem scenario 3 (Linux)

Troubleshooting Storage Lifecycle Policies

- Understanding Storage Lifecycle Policies
- Troubleshooting Storage Lifecycle Policies
- Troubleshooting data classification
- Understanding Auto Image Replication
- Troubleshooting Auto Image Replication

Labs:

- Exercise A: Storage Lifecycle Policies – problem scenario 1 (Windows)
- Exercise B: Storage Lifecycle Policies – problem scenario 2 (Windows)
- Exercise C: Storage Lifecycle Policies – problem scenario 1 (Linux)
- Exercise D: Storage Lifecycle Policies – problem scenario 2 (Linux)

Debug Logging

- Preparing to gather debug logs
- Enabling debug logs
- Performing log management
- Capturing debug logs

Labs:

- Exercise A: Enabling Debug Logs
- Exercise B: Setting the logging levels
- Exercise C: Enabling legacy logging
- Exercise D: Running manual backups
- Exercise E: Collecting logs and copying them to the file share

Introduction to Log Analysis

- Preparing for debug log analysis
- Viewing debug logs
- Analyzing debug logs for a successful backup job
- Analyzing debug logs for a failed backup job

Labs:

- Exercise A: Locating backup information in the Activity Monitor
- Exercise B: Locating collected log files
- Exercise C: Viewing and analyzing logs

Understanding the NetBackup Catalog

- The NetBackup catalog
- The NetBackup relational databases (NBDB)
- Catalog backup and recovery
- Maintaining the NBDB

Labs:

- Exercise A: Reviewing the NetBackup catalog structure
- Exercise B: Configuring, performing, and analyzing catalog backups
- Exercise C: Using the cat_convert command
- Exercise D: Corrupting the NBDB
- Exercise E: Recovering the NBDB

- Exercise E: Option 1 – Recovering the NBDB from a backup
- Exercise E: Option 2 – Recovering the NBDB from staging