Veritas NetBackup 10.x: Maintenance and Troubleshooting

COURSE DESCRIPTION

The *NetBackup 10.x: 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, cloud, OST, deduplication, and virtualization.

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: 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

After completing this course, you will be able to:

- Explain the core processes and functions of the NetBackup Primary server, Media server, and clients.
- Summarize the process flow for a backup, tape-based restore, and disk-based restore operation.
- Understand the core functions and use of legacy and unified logging.
- Track the relevant debug logs for backups and restores, resource allocation, and network communication.
- Recognize common debug logs messages related to a successful and failed backup job.
- Troubleshoot Certificate Revocation List configuration and expired certificate issues.
- Explain the VxUpdate error codes and their corresponding resolution.
- Resolve common NetBackup Web UI access issues.
- Describe the methodology to troubleshoot OpenStorage Technology plug-in backup logging and NetBackup Cloud storage configuration.
- Describe various issues related to NetBackup Snapshot Manager.
- Work with tools to maintain and troubleshoot NetBackup deduplication.
- Troubleshoot common VMware, Hyper-V, and RHV backup and restore issues.
- Configure and troubleshoot Storage Lifecycle Policies, data classification, and Auto Image Replication.
- Categorize the components of the NetBackup catalog.
- Backup, recover, and protect the NetBackup Relational database.
- Identify and resolve common NetBackup media and device issues.
- Use tools to maintain and troubleshoot BasicDisk and AdvancedDisk issues.
- Diagnose and resolve Kubernetes issues.

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 operations. These prerequisites can be met by attending any version of the NetBackup Administration courses 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
- Troubleshooting Procedures
- Additional Troubleshooting Resources

Labs:

- Exercise A: Introduction to the Lab Environment
- Exercise B: Navigating the NetBackup Administration Console
- Exercise C: Viewing NetBackup Configuration
- Exercise D: Testing Backup and Restore Operations

- Exercise E: Identifying Tools for Analyzing Backup and Restore Problems

Understanding the NetBackup Process Flow

- Core Process Functions
- Backup Process Flow
- Tape Restore Process Flow
- Disk Restore Process Flow
- Viewing Process Flow Information

Labs:

- Exercise A: Tracing the Backup Process Flow for Tape Based Storage
- Exercise B: Tracing the Backup Process Flow for Disk Based Storage
- Exercise C: Tracing the Restore Process Flow
- Exercise D: Tracing the Process Flow for a Failed Job

Working with Debug Logs

- 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

Analyzing NetBackup Logs

- Preparing for Debug Log Analysis
- Viewing Debug Logs
- Analyzing Debug Logs for a Successful Backup Job
- Analyzing Debug Logs for Failed Backup Jobs

Labs:

- Exercise A: Creating Log Directories on the Primary, Media, and Client Servers
- Exercise B: Setting the Logging Levels on the Primary, Media, and Client Servers
- Exercise C: Running Manual Backups
- Exercise D: Analyzing a Successful Backup Job
- Exercise E: Analyzing a Failed Backup Job

Troubleshooting Communication Issues

- Understanding NetBackup Communication
- Configuring NetBackup and Network Communication
- Troubleshooting Network and NetBackup Communication Problems
- Common NetBackup Communication Issues
- Understanding Security Certificates
- Working with Certificate Revocation Lists
- Configuring NetBackup Security Certificates
- Troubleshooting NetBackup Security Certificates
- Using External Security Certificates with NetBackup

Labs:

- Exercise A: NetBackup Communications: Problem Scenario 1
- Exercise B: NetBackup Communications: Problem Scenario 2
- Exercise C: NetBackup Communications: Problem Scenario 3
- Exercise D: Viewing NetBackup Certificates
- Exercise E: Manually Deploying NetBackup Certificates
- Exercise F: Revoking and Reissuing Host-ID Based Certificates
- Exercise G: Using External Certificates with NetBackup

Troubleshooting NetBackup Installation and Upgrade Issues

- NetBackup 10.x Installation Updates and Troubleshooting
- Working with VxUpdate

Labs:

- Exercise A: Troubleshooting Primary Server Installation Issues
- Exercise B: Troubleshooting Primary Server Upgrade Issues
- Exercise C: Working with VxUpdate

Troubleshooting the NetBackup Web User Interface

- NetBackup Web User Interface: Synopsis
- NetBackup Web User Interface and Role Based Access Control
- Troubleshooting NetBackup Web User Interface Issues

Labs:

- Exercise A: Accessing the NetBackup Web User Interface - Problem Scenario 1
- Exercise B: Accessing the NetBackup Web User Interface - Problem Scenario 2
- Exercise C: Editing a Custom Role

Troubleshooting Cloud Storage and OST Plug-ins

- Troubleshooting OpenStorage Technology (OST) Logging
- Using Cloud with NetBackup
- Troubleshooting NetBackup Snapshot Manager Issues

Troubleshooting NetBackup Deduplication Issues

- NetBackup Deduplication Process Flow
- Maintaining and Troubleshooting NetBackup Deduplication
- Recovering from MSDP Server Failure
- Multi-Domain and VLAN Support for MSDP
- Certificate Configuration

Labs:

- Exercise A: Monitoring and Troubleshooting MSDP
- Exercise B: Verifying the MSDP Backup Image
- Exercise C: Discovering and Fixing Orphan MSDP Data

Troubleshooting Virtual Environment Issues

- Troubleshooting VMware Backups
- Troubleshooting Hyper-V Backups
- Troubleshooting RHV Backups

Labs:

- Pre-configuration Lab Task
- Exercise A: Troubleshooting VMware Backups
- Exercise B: Troubleshooting VMware Restores

Troubleshooting Storage Lifecycle Policies

- Storage Lifecycle Policies: Overview
- Troubleshooting Storage Lifecycle Policies
- Troubleshooting Data Classification
- Understanding Auto Image Replication
- Troubleshooting Auto Image Replication

Labs:

- Exercise A: Storage Lifecycle Policies - Problem Scenario 1
- Exercise B: Storage Lifecycle Policies - Problem Scenario 2

Understanding the NetBackup Catalog

- NetBackup Catalog: Overview
- NetBackup Relational Databases (NBDB)
- Catalog Backup and Recovery
- Maintaining the NetBackup Relational Database

Labs:

- Exercise A: Reviewing the NetBackup Catalog Structure
- Exercise B: Configuring and Running NetBackup Catalog Backups
- Exercise C: Recovering the Catalogs Using the NetBackup Web UI
- Exercise D: Using the cat_convert Command
- Exercise E: Corrupting the NBDB
- Exercise F: Recovering the NBDB from Staging
- Exercise G: Configuring a Policy for Catalog Archive
- Exercise H: Recovering the Catalogs Using the bprecover Command

Appendix A - 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
- Exercise B: Tape Devices and Media - Problem Scenario 2

Appendix B - Troubleshooting Disk Backup Resources

- Disk-based Backups: Overview
- Maintaining and Troubleshooting BasicDisk
- Maintaining and Troubleshooting AdvancedDisk

Labs:

- Exercise A: Disk Devices - Problem Scenario 1
- Exercise B: Disk Devices - Problem Scenario 2

Appendix C - Troubleshooting Containerized Applications

- Container Technology: Overview
- Troubleshooting Kubernetes issues

About Veritas

Veritas Technologies is a global leader in data protection and availability. Over 80,000 customers— including 87 percent of the Fortune Global 500—rely on us to abstract IT complexity and simplify data management. The Veritas Enterprise Data Services Platform automates the protection and orchestrates the recovery of data everywhere it lives, ensures 24/7 availability of business-critical applications, and provides enterprises with the insights they need to comply with evolving data regulations. With a reputation for reliability at scale and a deployment model to fit any need, Veritas Enterprise Data Services Platform supports more than 800 different data sources, over 100 different operating systems, more than 1,400 storage targets, and more than 60 different cloud platforms. Learn more at www.veritas.com. Follow us on Twitter at @veritastechllc.

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