# WUVN

### **Enterprise Computing Solutions - Education Services**

## **TRAINING OFFERING**

You can reach us at:

Arrow ECS, Nidderdale House, Beckwith Knowle, Harrogate, HG3 1SA

Email: educationteam.ecs.uk@arrow.com Phone: 0870 251 1000

### VERITAS Veritas NetBackup 9.1: Administration

CODE:	LENGTH:	PRICE:
VER_NB-9.1 A	40 Hours (5 days)	£2,800.00

#### Description

Acquire the skills to make your data protection strategy successful with the Veritas NetBackup 9.1: 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

After completing this course, you will be able to:

- Describe the functions of the Primary/Master 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 and Hyper-V.
- · 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.
- · Generate NetBackup reports in NetBackup, OpsCenter, and APTARE IT Analytics.
- · Initiate NetBackup upgrades using VxUpdate.
- Identify and use resources for troubleshooting NetBackup, including the support information gathering tools.

#### 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.

#### Programme

Introducing NetBackup • Data Protection and the NetBackup Environment • NetBackup and Flex Appliances: Overview

- NetBackup Integrated Solutions NetBackup Installation NetBackup Administration Interfaces Labs:
- Exercise A: Creating Users and Groups Exercise B: Installing the NetBackup Primary/Master Server Software
- Exercise C: Installing the NetBackup Java Remote Administration Console
- Exercise D: Installing the NetBackup Media ServerSoftware Exercise E: Installing the NetBackup Client Software
- Exercise F: Exploring the NetBackup Administration Console Working with the NetBackup Web UI
- NetBackup Web User Interface 
  Configuring NetBackup for Single Sign-On 
  Protecting Workload Assets
- Managing Role-based Access Control Alerts and Notifications Managing User Sessions Labs:
- Exercise A: Accessing and Navigating the NetBackup Web User Interface Exercise B: Configuring Role-based Access Control

- Exercise C: Configuring NetBackup for Single Sign-On Exercise D: Viewing and Configuring Notifications
- Exercise E: Managing User Sessions Performing NetBackup Certificate Administration Understanding Security Certificates
- Working with Certificate Revocation Lists 
  Configuring NetBackup Security Certificates
- Managing NetBackup Security Certificates Using External Security Certificates with NetBackup Labs:

Exercise A: Viewing NetBackup Certificates 
 Exercise B: Manually deploying NetBackup Certificates

• Exercise C: Revoking and Reissuing Host ID-based Certificates • Exercise D: Using External Certificates with NetBackup

Configuring Basic and Advanced Disk Storage • NetBackup Storage Device Concepts • Configuring a BasicDisk Storage Unit

Configuring AdvancedDisk 
 Managing AdvancedDisk Storage 
 Configuring Storage Unit Groups Labs:

• Exercise A: Configuring a BasicDisk Storage Unit • Exercise B: Configuring AdvancedDisk Storage

• Exercise C: Monitoring and Managing AdvancedDisk Storage • Exercise D: Configuring a Storage Unit Group

Configuring NetBackup Policies and Schedules • Backup Policies: Overview • Creating and Configuring Policy Attributes

Creating a Policy Schedule • Adding Clients to a Policy • Creating Backup Selections • Exclude and Include Lists
 Managing Policies Labs: • Exercise A: Configuring a Policy to Use a Frequencybased Schedule

• Exercise B: Configuring a Policy to Use a Calendarbased Schedule • Exercise C: Managing NetBackup Policies

Protecting File Systems • Performing Manual Backup Operations • Using and Customizing the NetBackup Activity Monitor

Performing User-directed Backups • Backup Job-related Tips • Introduction to Restores

• Performing Restore Operations Using the NetBackup Web UI • Performing Restore Operations Using the BAR interface Labs:

• Exercise A: Using and Customizing the Activity Monitor • Exercise B: Performing Manual Backups

• Exercise C: Performing User-initiated Backups • Exercise D: Restoring Client Files to their Original Location

• Exercise E: Restoring Client Files to an Alternate File System Location • Exercise F: Restoring Client Files to an Alternate Client System Configuring Media Server Deduplication • Introduction to MSDP • Variable-Length Deduplication • MSDP Architecture • Planning a Deployment • Provisioning Storage and Configuring MSDP Labs: • Exercise A: Configuring NetBackup Media Server Deduplication • Exercise B: Configuring a Policy to Use MSDP Storage • Exercise C: Performing Backups to MSDP Storage • Exercise D: Configuring and Using Client-side Deduplication • Exercise E: Managing and Monitoring NetBackup MSDP Storage

Configuring Cloud Storage • Using the Cloud with NetBackup • Configure NetBackup Cloud Storage

Managing NetBackup Cloud Backups and Cloud Storage Labs: 
 Exercise A: Performing Preliminary Tasks

• Exercise B: Configuring Cloud Storage in NetBackup • Exercise C: Configuring and Performing Backups to the Cloud

Exercise D: Restoring Client Data from Cloud-based Storage Optimizing Filesystem Backups 
 File System Backup Challenges
 Optimizing File System Backup Challenges

Optimizing File System Backups 
 Optimizing File System Backups with NetBackup Accelerator
 NetBackup FlashBackup
 Idea attraction of the structure of the structu

Using multiple data streams 
 Handling Busy Files on UNIX and Windows File Systems Labs:
 Eversing Automatic Resolution and Reference Systems Labs:

• Exercise A: Configuring and Performing Synthetic Backups • Exercise B: Optimizing Backups Using the NetBackup Accelerator

• Exercise C: Optimizing Backups Using NetBackup FlashBackup • Exercise D: Configuring and Using Multiple Data Streams Protecting VMware Environments • Introduction to Virtual Machine Backups • Configuring VMware Backups

Performing VMware Backups Labs: 
 Exercise A: Configuring NetBackup to Perform VMware Backups

• Exercise B: Configuring a VMware Policy • Exercise C: Performing and Monitoring VMware Virtual Machine Backups

• Exercise D: Excluding Disks from a VMware Virtual Machine Backup • Exercise E: Configuring Continuous Data Protection

Recovering VMware Environments • Performing VMware Restores • Instant Access and Instant Rollback for VMware

• VMware Agentless Restores Labs: • Exercise A: Recovering Virtual Machine Files (agentbased)

• Exercise B: Recovering a VMware Virtual Machine Disk • Exercise C: Recovering an Entire VMware Virtual Machine

• Exercise D: Using the VMware Agentless Restore • Exercise E: Downloading Files and Folders from a VM Backup Image

• Exercise F: Creating Instant Access VM from a NetBackup Backup Image • Exercise G: Instant Rollback for VMs

• Exercise H: Performing Restores on CDP Protected Backup Duplicating and Replicating Backups • Duplication Strategies

Storage Lifecycle Policy: Concepts • Using Storage Lifecycle Policies • Additional Storage Lifecycle Policy Features and Benefits

Labs: • Exercise A: Configuring a Storage Lifecycle Policy • Exercise B: Configuring a Policy to Use an SLP

Exercise C: Customizing SLP Settings • Exercise D: Viewing and Monitoring SLP Operations

• Exercise E: Using SLPs to Perform MSDP Optimized Duplication • Exercise F: Configuring SLPs for Replicating Backup Images Protecting the NetBackup Catalog • Understanding NetBackup Catalog • Protecting the NetBackup Catalog

• Performing NetBackup Catalog Recovery • Maintaining the NetBackup Catalog Labs:

• Exercise A: Verifying Catalog Configuration Files • Exercise B: Configuring and Running NetBackup Catalog Backups

• Exercise C: Recovering the Catalogs Using the NetBackup Catalog Recovery Wizard

• Exercise D: Performing Catalog Operations • Exercise E: Configuring a Policy for Catalog Archive

Configuring Immutable and Indelible Storage • Ransomware Overview • NetBackup Protect Against Ransomware

Configuring NetBackup WORM Protection • Backup Anomaly Detection Labs:

• Exercise A: Configuring Disk Pool and WORM Storage Unit • Exercise B: Configuring NetBackup Policy

• Exercise C: Understanding Catalog Operations on WORM Image Copy • Exercise D: Configuring and Identifying Backup Anomaly Generating NetBackup Reports • Generating Reports in NetBackup • NetBackup OpsCenter

• Generating NetBackup Reports in OpsCenter • Generating Reports Using APTARE IT Analytics Labs:

• Exercise A: Using the NetBackup Reports Utility • Exercise B: Configuring OpsCenter Data Collection for NetBackup

• Exercise C: Generating Reports Using OpsCenter Upgrading and Updating NetBackup • NetBackup Upgrades: Overview

• VxUpdate: Overview • Deployment Policy Management • Initiating Upgrades Using VxUpdate • VxUpdate: Error Codes Labs:

• Exercise A: Populating the Repository with NetBackup Packages • Exercise B: Configuring a Deployment Policy

• Exercise C: Manually Initiating Upgrades from the Primary/Master Server Using VxUpdate

• Exercise D: Initiating Upgrades from the Client Using VxUpdate • Exercise E: Viewing the Deployment Job Status

Collecting Logs and Diagnostic Information • Performing Basic NetBackup Troubleshooting

Identifying NetBackup Processes, Services, and Daemons • NetBackup Logging: Overview • Using Support Utilities

• Using NetBackup Support Resources Labs: • Exercise A: Viewing the NetBackup Services

• Exercise B: Using the nbsu and nbcplogs Commands • Exercise C: Viewing and Setting Debug Logging Properties

- Exercise D: Enabling NetBackup Legacy Debug Logging Exercise E: Viewing Debug Logging Levels for Unified Logs
- Exercise F: Using the Logging Assistant Appendix A: Protecting Hyper-V Environment Introduction to NetBackup for Hyper-V

- Configuring Hyper-V Backups 
  Configuring NetBackup Policies for Hyper-V
  Performing and Monitoring Hyper-V Backups
- Performing Hyper-V Restores 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
- Exercise E: Performing Hyper-V Backups and Restores in an SCVMM Environment Appendix B: Protecting NAS Data
- 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
- Understanding NDMP Three-way Backups 
  Data Protection Configuring NDMP Three-way Backups
- Dynamic NAS (DNAS) Data Protection Labs: 
  Exercise A: Authorizing NetBackup Access to NDMP Hosts
- Exercise B: Configuring and Performing NDMP Backups 
  Exercise C: Using NetBackup Accelerator for NDMP
- Exercise D: Performing NDMP Restores Exercise E: Performing Prerequisite Tasks for D-NAS Configuration
- Exercise F: Configuring and Performing D-NAS Backups Exercise G: Restoring D-NAS Backups
- Appendix C: Configuring and Managing Tape Storage Media Manager Storage Units Configuring Tape Devices
- Verifying Tape Storage 
  NetBackup Media Concepts 
  Configuring Media 
  Managing Robots and Tape Drives
- Monitoring Media and Media States 
  Managing Tapes 
  NetBackup Device Troubleshooting 
  Common NetBackup Device Issues
- Media And Device Selection Media-related Status Codes Using Multiple Data Streams
- Optimizing Tape Drive Performance Using Multiplexing 
  Troubleshooting Frozen and Suspended Media Labs:
- Exercise A: Verifying and Discovering Tape Devices Exercise B: Viewing Configured Tape Devices
- Exercise C: Configuring Tape Devices 
  Exercise D: Configuring Volume Pools 
  Exercise E: Configuring Media
- Exercise F: Viewing Tape Drive and Robot Configuration Settings Exercise G: Using the Device Monitor to Monitor and
- Manage Tape Drives Exercise H: Managing Media Exercise I: Using the Robtest Utility
- Exercise J: Running NetBackup Reports from the Command Line Exercise K: Media State Management Using the
- Command Line Appendix D: Performing Instant Recovery Using VMware Instant Recovery
- VMware Instant Recovery: Differences VMware Instant Recovery: Process VMware Instant Recovery: Options
- NetBackup Plug-in in vSphere Web Client Instant Recovery Cleanup Executing the nbrestorevm Command Labs:
- Exercise A: Performing Non-NetBackup Pre-requisite Tasks for IRV Exercise B: Performing NetBackup Pre-requisite Tasks for IRV Exercise C: Performing Instant Recovery for VMware Using the vSphere Web Client

#### **Further Information**

#### 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

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.

#### Session Dates

On request. Please Contact Us

#### **Additional Information**

This training is also available as onsite training. Please contact us to find out more.