Veritas Backup Exec 21: Administration

VERITAS
The truth in information.

COURSE DESCRIPTION

The *Veritas Backup Exec 21: Administration* course is self-paced, modular course with lab exercises, and is designed for the data protection professional tasked with deploying, configuring, maintaining, and managing a Backup Exec environment.

The course covers how to back up and restore data critical data, configure storage devices and media, and work with various Backup Exec agents and options, which protect applications like Microsoft Exchange, Microsoft SharePoint, Microsoft SQL, Active Directory, Cloud, Oracle, and virtual environments.

Delivery Method
This course is available in the following delivery methods:
- Learning Lab

Duration
- Learning Lab – Self-paced module guide plus 6 months of lab access

Course Objectives
By the completion of this course, you will be able to:
- Describe the functionality and architecture of Backup Exec.
- Install and upgrade to Backup Exec 21.
- Configure storage devices – Cloud based storage and Network storage.
- Backup data to and restore data from disk, network, and the Cloud.
- Perform tape devices and tape management.
- Manage servers and jobs.
- Set backup and recovery settings and methods.
- Work with the Database Encryption Key.
- Perform online Disaster Recovery.
- Install the SDR disk creation wizard, create an SDR disk imagen and recover a server with SDR.
- Backup a physical machine and convert to a virtual machine either simultaneously or on a schedule.
- Install, configure, and manage the Backup Exec Central Admin Server feature.
- Configure Backup Exec Deduplication Storage.
- Protect remote servers using the appropriate remote agents, applications and databases.
- Use Backup Exec to protect databases and applications, including;
    - Microsoft Hyper-V
    - Microsoft SQL Server
    - Microsoft Exchange
    - Microsoft SharePoint
    - Agent for Active Directory
    - Oracle
- Protect virtual environment
- Perform virtual machine conversions.

Who Should Attend
This course is designed for system administrators, system engineers, technical support personnel, consultants, backup administrators, backup operators, and others who are responsible for installing, configuring, managing and monitoring Backup Exec 21.

Prerequisites
You must have basic working knowledge of administrating and configuring Windows Server 2016 and later platforms. Basic working knowledge of the following applications is beneficial, but not required:
- Microsoft SQL Server
- Microsoft Exchange Server
- Microsoft SharePoint Portal Server
- Microsoft Hyper-V
- VMware virtual infrastructure.
- Oracle and cloud infrastructure

Hands-On
This course includes practical, hands-on lab exercises that enable you to test your new skills and begin to transfer them to your working environment.

COURSE OUTLINE

Module 01: Backup Exec Fundamentals
- Data backup basics
- Backup Exec solution offerings
- Backup Exec architecture

Module 02: Licensing Backup Exec
- Subscription, Perpetual and Custom Licensing
- Trialware and upgrades
- Capacity and subscription license enforcement
- Updating licensing information
- Capacity widget and capacity metering
- Maintenance and Extended Support Licensing

Module 03: Installing Backup Exec
- Backup Exec: New installation
- Typical installation of Backup Exec
- Custom installation of Backup Exec
- Installation details
- Applying Backup Exec updates

Labs
- Exercise A: Installing Veritas Backup Exec
- Exercise B: Verifying the Veritas Backup Exec installation
- Exercise C: Adding Backup Exec licenses
- Exercise D: Configuring and running Veritas Update
- Exercise E: Viewing the Backup Exec license

Module 04: Working with the Backup Exec Administration Console
- Installing and configuring the Backup Exec
- Using the Backup Exec Administration console
- Exploring the Backup Exec Administration Console

- Introduction to Backup and Restore
- Introduction to BEMCLI

Labs

- Exercise A: Installing the Backup Exec Remote Administration Console
- Exercise B: Exploring the Home tab of the Backup Exec Administration Console
- Exercise C: Working with the Configuration Task Widget
- Exercise D: Exploring the Backup Exec Administration Console
- Exercise E: Creating a configured view
- Exercise F: Creating disk storage
- Exercise G: Creating a basic backup job
- Exercise H: Creating a basic restore job

Module 05: Disk Storage Devices

- Backup Exec storage devices
- Viewing disk storage: Storage view
- Deduplication disk storage
- Importing a legacy backup-to-disk folder
- Backup Exec storage pools
- Windows Storage Pool and Spaces

Labs

- Exercise A: Creating a disk storage device using the Configuration Wizard
- Exercise B: Viewing the Disk Storage in the Backup Exec Management Command Line Interface
- Exercise C: Viewing disk storage device properties
- Exercise D: Creating a Storage Pool

Module 06: Cloud-based Storage Devices

- Basics of Cloud storage support in Backup Exec
- Amazon S3 cloud-based storage
- Google cloud-based storage
- Microsoft Azure cloud-based storage
- Configuring a cloud-storage device in Backup Exec
- Managing cloud-storage in Backup Exec

Labs

- Exercise A: Configuring Generic S3-compatible cloud storage in Backup Exec
- Exercise B: Backing up data to Generic-S3 cloud-based storage

Module 07: Network Storage Devices

- Network storage devices
- OpenStorage devices (Third-party deduplication)
- Backup Exec Remote Media Agent for Linux
- NDMP servers

Module 08: Disk, Network, and Cloud Data Management

- Data Lifecycle Managament Fundamentals
- DLM rules overview
- Manual expiration and retention
- Retain
- Read only setting
- Media Catalogs

Labs

- Exercise A: Manually expiring backup sets
- Exercise B: Retaining backup sets and changing the expiration date of a backup set

Module 09: Tape Devices and Tape Management

- Tape storage
- Managing tapes
- Robotic Libraries
- Tape storage operations
- Tape Storage: Alerts

Labs

- Exercise A: Inventorying robotic libraries when Backup Exec services start
- Exercise B: Configuring barcode rules for a robotic library
- Exercise C: Assigning a cleaning slot to a robotic library
- Exercise D: Understanding storage default values
- Exercise E: Viewing default media sets
- Exercise F: Creating a media set
- Exercise G: Creating a media vault
- Exercise H: Assigning a media set to a media vault
- Exercise I: Assigning tapes to a media set
- Exercise J: Backing up to tape
- Exercise K: Restoring from tape

Module 10: Backing up Data

- Preparing for backups
- Adding a server
- Creating a backup job
- Multi-server backups
- Accounts and credentials in Backup Exec
- Managing server selections
- Backup selections
- Excluding files from backup
- Backup Settings
- Backup stage basics
- Job Name Fundamentals
- Manually running backup jobs

Labs

- Exercise A: Adding a server
- Exercise B: Backing up files and folders
- Exercise C: Creating a one-time backup job
- Exercise D: Creating a new backup job using the settings from an existing backup
- Exercise E: Backing up multiple servers
- Exercise F: Backing up System State
- Exercise G: Working with backup methods

Module 11: Managing Servers and Jobs

- Backup and Restore view
- Server groups
- Tag as Business-Critical

Labs

- Exercise A: Creating a server group
- Exercise B: Viewing server details
- Exercise C: Tagging a resource as Business-Critical and backing it up
- Exercise D: Tagging a resource as business-critical from the Include/Exclude window
- Exercise E: Examining pre-defined and custom reports

- Exercise F: Viewing Job Log details

Module 12: Restoring Data
- Contents of backup set
- Restore job basics
- Restore settings
- Granular restore technology (GRT)
- Restoring data
- Online Disaster Recovery
- Restoring System State
- Shadow Copy Components

Labs
- Exercise A: Viewing the contents of a backup set
- Exercise B: Restoring data to the default location
- Exercise C: Restoring data to an alternate location
- Exercise D: Restoring file and folder permissions
- Exercise E: Restoring data using the Search Wizard
- Exercise F: Restoring data to a VHD
- Exercise G: Restoring data directly from disk
- Exercise H: Restoring data from a tape backup
- Exercise I: Restoring a business-critical resource

Module 13: Working with the Database Encryption Key
- Backup Exec Database sensitive data components
- Auto-generated AES-256 encryption key
- Protecting the Database Encryption Key (DEK)

Labs
- Exercise A: Viewing the Database Encryption Key
- Exercise B: Viewing the Database Encryption Key and attempting to back it up
- Exercise C: Exporting the Database Encryption Key
- Exercise D: Backing up and restoring the Database Encryption Key

Module 14: Simplified Disaster Recovery
- Simplified Disaster Recovery fundamentals
- Simplified Disaster Recovery – Backup
- Installing the SDR disk creation wizard
- Creating an SDR disk image (.iso) file
- Recovering a server with SDR
- Windows Storage Pools and Spaces

Labs
- Exercise A: Adding a server
- Exercise B: Viewing and identifying critical system devices
- Exercise C: Creating a Simplified Disaster Recovery enabled backup job
- Exercise D: Performing a complete online restore of a computer – Walkthrough
- Exercise E: Creating a Simplified Disaster Recovery Disk
- Exercise F: Recovering appsrv1 using the SDR disk

Module 15: Upgrading to Backup Exec
- Basics of upgrading the Backup Exec server
- Standard and Rolling upgrade – Backup Exec
- Agent for Windows upgrade
- Migration report

Labs
- Exercise A: Installing Veritas Backup Exec
- Exercise B: Upgrading Agent for Windows

Module 16: Central Admin Server Option
- Backup Exec CAS: Overview
- Installing the CAS
- Installing MBES
- Backup jobs: MBES and Server Pools
- Restoring files using CAS
- Instant Recovery jobs in a CAS environment
- MBES Settings
- Copy Configuration to MBES
- Upgrading a CAS environment to Backup Exec 21
- Renaming CAS and MBES
- MBES to Standalone
- Offline Central Admin Server Restore from a Managed Backup Exec server

Labs
- Exercise A: Installing the CAS feature
- Exercise B: Converting a Backup Exec server to a managed Backup Exec server
- Exercise C: Viewing the settings for a Managed Backup Exec server
- Exercise D: Creating a Backup Exec server pool
- Exercise E: Restoring data from CAS
- Exercise F: Using optimized duplication with the Central Admin Server

Module 17: Deduplication Feature
- Data deduplication and Open Storage Technology: Fundamentals
- Deduplication Feature option
- Configuring Backup Exec deduplication storage
- Exclusion from Windows deduplication
- Deduplication backup job
- Configuring client-side deduplication
- Rehydration
- Optimized duplication
- Protect the Backup Exec deduplication storage
- Best practices for the Deduplication Feature
- OpenStorage devices (Third-party deduplication)
- OpenDedupe OST connector
- OpenDedupe installation and configuration
- Configuring OpenStorage in Backup Exec

Labs
- Exercise A: Verifying the Deduplication Feature installation
- Exercise B: Creating a deduplication storage folder
- Exercise C: Creating a backup job to backup data to the deduplication disk storage (server-side deduplication)
- Exercise E: Verifying data deduplication
- Exercise F: Restoring deduplication data
- Exercise G: Creating a client-side deduplication job

Module 18: Introduction to Security and Privacy features in Backup Exec
- Backup Exec support for GDPR
- Backup Exec support for Ransomware Resilience

Labs
- Exercise A: Working with the GDPR Guard feature

- Exercise B: Working with the Ransomware Resilience feature

Module 19: Introduction to Remote Agent, Applications and Databases

- Agent for Windows: Fundamentals
- Installing the Agent for Windows
- Managing the Agent for Windows
- Agent for Applications and Databases: Fundamentals
- GRT support for Agent for Applications and Databases
- Enabling the Agent for Applications and Databases feature

Labs

- Exercise A: Viewing Backup Exec license information
- Exercise B: Installing the Agent for Windows
- Exercise C: Viewing the Agent for Windows installation footprint
- Exercise D: Backing up a remote Windows computer
- Exercise E: Restoring data to a remote Windows computer

Module 20: Protecting Microsoft Exchange Server

- Installing the Backup Exec Agent for Microsoft Exchange
- Backing up a DAG
- Exchange Backup Selections
- Exchange Backup Settings
- Exchange Preferred Servers Only Backups
- Restoring Exchange data
- Redirected Restore Considerations
- VSS Providers and Exchange Writers

Labs

- Exercise A: Viewing the Exchange DAG configuration
- Exercise B: Backing up an Exchange DAG
- Exercise C: Restoring Exchange mailbox items
- Exercise D: Restoring Exchange mailbox items using Search
- Exercise E: Performing a redirected restore of Exchange databases and logs

Module 21: Protecting Microsoft SQL Server

- Agent for Microsoft SQL Server: Fundamentals
- Microsoft SQL backup selections
- Backing up a Microsoft SQL server database
- Restoring a Microsoft SQL server database
- Supported Microsoft SQL server features

Labs

- Exercise A: Backing up SQL Server system databases
- Exercise B: Restoring a SQL Server database
- Exercise C: Restoring a SQL Server database to an alternate location

Module 22: Protecting Microsoft SharePoint Server

- Agent for Microsoft SharePoint: Fundamentals
- Backing up Microsoft SharePoint
- Restoring Microsoft SharePoint

Labs

- Exercise A: Viewing the SharePoint site details
- Exercise B: Backing up SharePoint
- Exercise C: Performing a SharePoint GRT restore for a task
- Exercise D: Performing a SharePoint redirect restore for a document
- Exercise E: Restoring a versioned document
- Exercise F: Restoring a SharePoint portal site

Module 23: Protecting Microsoft Active Directory

- Agent for Microsoft Active Directory: Fundamentals
- Traditional Active Directory Restore
- Active Directory: Granular Recovery Technology

Labs

- Exercise A: Backing up Microsoft Active Directory
- Exercise B: Restoring Active Directory Objects
- Exercise C: Changing the GRT backup and restore staging location path

Module 24: Protecting Virtual Environments: Part 1

- Virtualization technologies
- Backup Exec virtualization agents
- Installing Agent for VMware and Hyper-V
- Backing up virtual machines
- Restoring virtual machines

Labs

- Exercise A: Verifying the Agent for VMware and Hyper-V installation
- Exercise B: Connecting to and viewing ESX server configuration
- Exercise C: Adding the vCenter server to Backup Exec
- Exercise D: Backing up an ESXi Server
- Exercise E: Restoring a VMware virtual machine

Module 24: Protecting Virtual Environments: Part 2

- Instant Recovery for Hyper-V and VMware Virtual Machines
- Performing an Instant Recovery for a Virtual Machine
- Removing an Instantly Recovered Virtual Machine
- Instant Cloud Recovery for Hyper-V and VMware
- Virtual machine Recovery Ready validation

Labs

- Exercise A: Performing an Instant Recovery of a Windows Virtual Machine
- Exercise B: Performing an Instant Recovery of a non-Windows Virtual Machine
- Exercise C: Removing Instantly Recovered Virtual Machines
- Exercise D: Creating a validate virtual machine for recovery job for a Windows virtual machine
- Exercise E: Creating a validate virtual machine for recovery job for a non-Windows virtual machine
- Exercise F: Working with the Virtual Machine Backups widget
- Exercise G: Backing up a VM skipping the PageFile.sys

Module 25: Performing Virtual Machine Conversions

- Conversion to virtual machine: Fundamentals
- Backup and then convert workflow
- Backup and simultaneously convert workflow
- Convert to a virtual machine from a point-in-time
- One-time Convert to virtual machine

- Virtual conversion options
- Conversion considerations

Labs

- Exercise A: Performing a backup and then a virtual conversion

Module 26: Agent for Linux and UNIX

- Agent for Linux and UNIX

Labs

- Exercise A: Installing the Agent for Linux
- Exercise B: Backing up Linux server
- Exercise C: Restoring data to Linux computers
- Exercise D: Restoring data to alternate location
- Exercise E: Configuration options for Linux computers

Module 27: Agent for Oracle on Windows or Linux Servers

- Agent for Oracle on Windows or Linux Servers

Labs

- Exercise A: Configuring an Oracle Agent on Linux server
- Exercise B: Performing Oracle database backup
- Exercise C: Restoring data
- Exercise D: Performing DBA-initiated backup job