

Veritas Backup Exec 22: Administration

Course Summary

Description

Acquire the skills to make your data protection strategy successful with the Veritas Backup Exec 22: Administration course. The course is designed for the data protection professional tasked with deploying, configuring, maintaining, and managing a Backup Exec environment. The course covers Backup Exec concepts, how to back up and restore 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, Microsoft 365, Active Directory, Cloud, Oracle, and Virtual environments.

Objectives

At the end of this course, students will be able to:

- Describe the functionality and architecture of Backup Exec.
- Install and upgrade to Backup Exec 22.
- 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 image and recover a server with SDR.
- Back up 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
 - Microsoft 365
 - Active Directory
 - Oracle
- Protect virtual environments.
- Perform virtual machine conversions.

Topics

::Backup Exec Fundamentals	::Upgrading Backup Exec
::Licensing Backup Exec	::Central Admin Server Feature
::Installing Backup Exec	::Deduplication Feature
::Working with the Backup Exec Administration Console	::Security and Compliance Features
::Disk Storage Devices	::Remote Agent, Applications, and Databases
::Cloud-based Storage Devices	::Protecting Microsoft Exchange Server
::Network Storage Devices	::Protecting Microsoft SQL Server
::Disk and Network Data Management	::Protecting Microsoft SharePoint Server
::Tape Devices and Tape Management	::Protecting Microsoft Active Directory
::Backing Up Data	::Protecting Virtual Environments – Part 1
::Managing Servers and Jobs	::Protecting Virtual Environments – Part 2
::Restoring Data	::Performing Virtual Machine Conversions
::Working with the Database Encryption Key	::Agent for Linux and UNIX
::Simplified Disaster Recovery	::Agent for Oracle

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Course Summary (cont'd)

Audience

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 22.

Prerequisites

You must have a 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
- Cloud Technologies
- Microsoft 365

Duration

Five days

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Course Outline

- I. *Backup Exec Fundamentals*
 - A. Data Backup Basics
 - B. Backup Exec Solution Offerings
 - C. Backup Exec Architecture
 6. Exercise F: Creating a Disk Storage
 7. Exercise G: Creating a Basic Backup Job
 8. Exercise H: Creating a Basic Restore Job
- II. *Licensing Backup Exec*
 - A. Subscription, Perpetual, and Custom Licensing
 - B. Trialware and Upgrades
 - C. Capacity and subscription license enforcement
 - D. Updating Licensing Information
 - E. Capacity Widget and Capacity Metering
 - F. Maintenance and Extended Support Licensing
- III. *Installing Backup Exec*
 - A. Backup Exec: New installation
 - B. Typical Installation of Backup Exec
 - C. Custom Installation of Backup Exec
 - D. Installation Details
 - E. Applying Backup Exec Updates
 - F. Labs
 1. Exercise A: Installing Veritas Backup Exec
 2. Exercise B: Verifying the Veritas Backup Exec Installation
 3. Exercise C: Adding Backup Exec Licenses
 4. Exercise D: Configuring and Running Veritas Update
 5. Exercise E: Viewing the Backup Exec License
- IV. *Working with the Backup Exec Administration Console*
 - A. Installing and Configuring the Backup Exec Administration Console
 - B. Using the Backup Exec Administration Console
 - C. Exploring the Backup Exec Administration Console
 - D. Introduction to Backup and Restore
 - E. Introduction to BEMCLI
 - F. Labs
 1. Exercise A: Installing the Backup Exec Remote Administration Console
 2. Exercise B: Exploring the Home tab of the Backup Exec Administration Console
 3. Exercise C: Working with the Configuration Task Widget
 4. Exercise D: Exploring the Backup Exec Administration Console
 5. Exercise E: Creating a Configured View
- V. *Disk Storage Devices*
 - A. Backup Exec Storage Devices
 - B. Viewing disk storage: Storage View
 - C. Disk Cartridge Devices
 - D. Deduplication Disk Storage
 - E. Importing a Legacy Backup-to-disk Folder
 - F. Backup Exec Storage Pools
 - G. Windows Storage Pool and Spaces
 - H. Labs
 1. Exercise A: Creating a Disk Storage Device Using the Configuration Wizard
 2. Exercise B: Viewing the Disk Storage in the Backup Exec Management Command Line Interface
 3. Exercise C: Viewing Disk Storage Device Properties
 4. Exercise D: Creating a Storage Pool
- VI. *Cloud-based Storage Devices*
 - A. Basics of Cloud storage Support in Backup Exec
 - B. Amazon S3 Cloud-based Storage
 - C. Google Cloud-based Storage
 - D. Microsoft Azure Cloud-based Storage
 - E. Backup Exec Cloud Deduplication
 - F. Configuring a Cloud-storage Device in Backup Exec
 - G. Managing Cloud-storage in Backup Exec
 - H. Labs
 1. Exercise A: Configuring Generic S3 Compatible Cloud Storage in Backup Exec
 2. Exercise B: Backing up data to Generic S3 Cloud-based Storage
 3. Exercise C: Configuring Deduplication on Generic S3 Compatible Cloud Storage
- VII. *Network Storage Devices*
 - A. Network Storage Devices
 - B. OpenStorage Devices (Third-party deduplication)
 - C. Backup Exec Remote Media Agent for Linux
 - D. NDMP Servers

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Course Outline (cont'd)

VIII. Disk and Network Data Management

- A. Data Lifecycle Management Fundamentals
- B. DLM Rules: Overview
- C. Dependent Backup Sets
- D. DLM Dependent Rules
- E. Manual Expiration and Retention
- F. Read-only Setting
- G. Media Catalogs
- H. Labs
 1. Exercise A: Manually Performing Two Sets of Full and Incremental Backups
 2. Exercise B: Manually Expiring the Backup Sets
 3. Exercise C: Retaining Backup Sets and Changing the Expiration Date of a Backup Set

IX. Tape Devices and Tape Management

- A. Tape Storage
- B. Managing Tapes
- C. Robotic Libraries
- D. Tape Storage Operations
- E. Tape Storage: Alerts
- F. Labs
 1. Exercise A: Inventorying Robotic Libraries when Backup Exec Services Start
 2. Exercise B: Configuring Barcode Rules for a Robotic Library
 3. Exercise C: Assigning a Cleaning Slot to a Robotic Library
 4. Exercise D: Understanding Storage Default Values
 5. Exercise E: Viewing Default Media Sets
 6. Exercise F: Creating a Media Set
 7. Exercise G: Creating a Media Vault
 8. Exercise H: Assigning a Media Set to a Media Vault
 9. Exercise I: Assigning Tapes to a Media Set
 10. Exercise J: Backing up to Tape
 11. Exercise K: Restoring from Tape

X. Backing Up Data

- A. Preparing for Backups
- B. Adding a Server
- C. Creating a Backup Job
- D. Multi-server Backups
- E. Accounts and Credentials in Backup Exec
- F. Managing Server Selections
- G. Backup Selections
- H. Excluding Files from the Backup
- I. Backup Settings
- J. Backup Stage Basics

- K. Job Name Fundamentals
- L. Manually Running Backup Jobs
- M. Labs
 1. Exercise A: Adding a Server
 2. Exercise B: Backing Up Files and Folders
 3. Exercise C: Creating a One-time Backup Job
 4. Exercise D: Creating a New Backup Job Using the Settings from an Existing Backup
 5. Exercise E: Backing up Multiple Servers
 6. Exercise F: Backing up System State
 7. Exercise G: Working with Backup Methods
 8. Exercise H: Adding a Stage to a Backup

XI. Managing Servers and Jobs

- A. Backup and Restore View
- B. Server Groups
- C. Tag as Business-Critical
- D. Labs
 1. Exercise A: Creating a Server Group
 2. Exercise B: Viewing Server Details
 3. Exercise C: Tagging a Resource as Business-critical and Backing it up
 4. Exercise D: Tagging a Resource as Business-critical from the Include/Exclude Window
 5. Exercise E: Examining Pre-defined and Custom Reports
 6. Exercise F: Viewing Job Log Details

XII. Restoring Data

- A. Contents of a Backup Set
- B. Restore Job Basics
- C. Restore Settings
- D. Granular Restore Technology (GRT)
- E. Restoring Data
- F. Online Disaster Recovery
- G. Restoring System State
- H. Shadow Copy Components
- I. Labs
 1. Exercise A: Viewing the Contents of a Backup Set
 2. Exercise B: Restoring Data to the Default Location
 3. Exercise C: Restoring Data to an Alternate Location
 4. Exercise D: Restoring File and Folder Permissions
 5. Exercise E: Restoring Data Using the Search Wizard
 6. Exercise F: Restoring Data to a VHD

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Course Outline (cont'd)

7. Exercise G: Restoring Data Directly from a Disk
8. Exercise H: Restoring Data from a Tape Backup
9. Exercise I: Restoring a Business-Critical Resource

XIII. Working with the Database Encryption Key

- A. Backup Exec Database Sensitive Data Components
- B. Auto-generated AES-256 Encryption Key
- C. Protecting the Database Encryption Key (DEK)
- D. Labs
 1. Exercise A: Viewing the Database Encryption Key
 2. Exercise B: Viewing the Database Encryption Key and Attempting to Back it up
 3. Exercise C: Exporting the Database Encryption Key
 4. Exercise D: Backing Up and Restoring the Database Encryption Key

XIV. Simplified Disaster Recovery

- A. Simplified Disaster Recovery Fundamentals
- B. Simplified Disaster Recovery: Backup
- C. Installing the SDR Disk Creation Wizard
- D. Creating an SDR Disk Image (.iso) file
- E. Recovering a Server with SDR
- F. Windows Storage Pools and Spaces
- G. Labs
 1. Exercise A: Adding a Server
 2. Exercise B: Viewing and Identifying Critical System Devices
 3. Exercise C: Creating a Simplified Disaster Recovery Enabled Backup Job
 4. Exercise D: Performing a Complete Online Restore of a Computer – Walkthrough
 5. Exercise E: Creating a Simplified Disaster Recovery Disk
 6. Exercise F: Recovering appsv1 Using the SDR Disk

XV. Upgrading Backup Exec

- A. Basics of Upgrading the Backup Exec Server
- B. Standard and Rolling Upgrade – Backup Exec
- C. Agent for Windows Upgrade
- D. Migration Report
- E. Labs
 1. Exercise A: Upgrading Veritas Backup Exec

2. Exercise B: Upgrading the Agent for Windows

XVI. Central Admin Server Feature

- A. Backup Exec CAS: Overview
- B. Installing the CAS
- C. Installing the Managed Backup Exec Server (MBES)
- D. Instant Recovery Jobs in a CAS Environment
- E. MBES Settings
- F. Backup Jobs: MBES and Server Pools
- G. Restoring Files using CAS
- H. Copying Configuration to MBES
- I. Instant Recovery jobs in a CAS environment
- J. MBES Settings
- K. Copy Configuration to MBES
- L. Upgrading a CAS Environment to Backup Exec 22
- M. Renaming CAS and MBES
- N. MBES to Standalone
- O. Offline Central Admin Server Restore from a Managed Backup Exec Server
- P. Labs
 1. Exercise A: Installing the CAS Feature
 2. Exercise B: Converting a Backup Exec Server to a Managed Backup Exec Server
 3. Exercise C: Viewing the Settings for a Managed Backup Exec Server
 4. Exercise D: Creating a Backup Exec Server Pool
 5. Exercise E: Restoring Data from CAS
 6. Exercise F: Using Optimized Duplication with the Central Admin Server
 7. Exercise G: (Optional) Changing the CAS Storage and Media Data Location for MBES
 8. Exercise H: (Optional) Running the Backup Exec Utility for CAS Operations

XVII. Deduplication Feature

- A. Data Deduplication and Open Storage Technology: Fundamentals
- B. Deduplication Feature Option
- C. Configuring Backup Exec Deduplication Storage
- D. Exclusion from Windows Deduplication
- E. Deduplication Backup Job
- F. Configuring Client-side Deduplication
- G. Rehydration
- H. Optimized Duplication
- I. Protecting the Backup Exec Deduplication Storage
- J. Best Practices for the Deduplication Feature
- K. OpenStorage devices (Third-party deduplication)

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Course Outline (cont'd)

- L. OpenDedupe OST Connector
- M. OpenDedupe Installation and Configuration
- N. Configuring OpenStorage in Backup Exec
- O. Upgrading from Backup Exec 21 to Backup Exec 22
- P. Labs
 1. Exercise A: Verifying the Deduplication Feature Installation
 2. Exercise B: Creating a Deduplication Storage Folder
 3. Exercise C: Creating a Backup Job to Backup Data to the Deduplication Disk Storage (Server-side deduplication)
 4. Exercise E: Verifying Data Deduplication
 5. Exercise F: Restoring Deduplication Data
 6. Exercise G: Creating a Client-side Deduplication Job

XVIII. Security and Compliance Features

- A. Backup Exec Support for GDPR
- B. Backup Exec Support for Ransomware Resilience
- C. Labs
 1. Exercise A: Working with the GDPR Guard Feature
 2. Exercise B: Working with the Ransomware Resilience Feature

XIX. Remote Agent, Applications, and Databases

- A. Agent for Windows: Fundamentals
- B. Installing the Agent for Windows
- C. Managing the Agent for Windows
- D. Agent for Applications and Databases: Fundamentals
- E. GRT Support for Agent, Applications, and Databases
- F. Enabling the Agent for Applications and Databases Feature
- G. Labs
 1. Exercise A: Viewing Backup Exec License Information
 2. Exercise B: Installing the Agent for Windows
 3. Exercise C: Viewing the Agent for Windows Installation Footprint
 4. Exercise D: Backing Up a Remote Windows Computer
 5. Exercise E: Restoring Data to a Remote Windows Computer

XX. Protecting Microsoft Exchange Server

- A. Installing the Backup Exec Agent for Microsoft Exchange
- B. Backing up a DAG

- C. Exchange Backup Selections
- D. Exchange Backup Settings
- E. Exchange Preferred Servers Only Backups
- F. Restoring Exchange data
- G. Redirected Restore Considerations
- H. VSS Providers and Exchange Writers
- I. Labs
 1. Exercise A: Viewing the Exchange DAG Configuration
 2. Exercise B: Backing Up an Exchange DAG
 3. Exercise C: Restoring Exchange Mailbox Items
 4. Exercise D: Restoring Exchange Mailbox Items Using Search
 5. Exercise E: Performing a Redirected Restore of Exchange Databases and Logs

XXI. Protecting Microsoft SQL Server

- A. Agent for Microsoft SQL Server: Fundamentals
- B. Microsoft SQL Backup Selections
- C. Backing up a Microsoft SQL Server
- D. Restoring a Microsoft SQL Server Database
- E. Supported Microsoft SQL Server Features
- F. Labs
 1. Exercise A: Backing up SQL Server System Databases
 2. Exercise B: Restoring a SQL Server Database
 3. Exercise C: Restoring a SQL Server Database to an Alternate Location

XXII. Protecting Microsoft SharePoint Server

- A. Agent for Microsoft SharePoint: Fundamentals
- B. Backing up Microsoft SharePoint
- C. Restoring Microsoft SharePoint
- D. Labs
 1. Exercise A: Viewing the SharePoint Site Details
 2. Exercise B: Backing Up SharePoint
 3. Exercise C: Performing a SharePoint GRT Restore for a Task
 4. Exercise D: Performing a SharePoint Redirect Restore for a Document
 5. Exercise E: Restoring a Versioned Document
 6. Exercise F: Restoring a SharePoint Portal Site

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Course Outline (cont'd)

XXIII. *Protecting Microsoft Active Directory*

- A. Agent for Microsoft Active Directory: Fundamentals
- B. Traditional Active Directory Restore
- C. Active Directory: Granular Recovery Technology
- D. Labs
 1. Exercise A: Backing up Microsoft Active Directory
 2. Exercise B: Restoring Active Directory Objects
 3. Protecting Microsoft 365
 4. Integrated Microsoft 365
 5. Support for Backing Up Microsoft 365 Tenant Data
 6. Restoring Microsoft 365 Tenant Data
 7. Notes And Best Practices For Microsoft 365

XXIV. *Protecting Virtual Environments – Part 1*

- A. Virtualization Technologies
- B. Backup Exec Virtualization Agents
- C. Installing Agent for VMware and Hyper-V
- D. Backing up Virtual Machines
- E. Restoring Virtual Machines
- F. Labs
 1. Exercise A: Verifying the Agent for VMware and Hyper-V Installation
 2. Exercise B: Connecting to and Viewing the ESX Server Configuration
 3. Exercise C: Adding the vCenter Server to Backup Exec
 4. Exercise D: Backing up an ESXi Server
 5. Exercise E: Restoring a VMware Virtual Machine

XXV. *Protecting Virtual Environments – Part 2*

- A. Instant Cloud Recovery for Hyper-V and VMware
- B. Instant Recovery for Hyper-V and VMware Virtual Machines
- C. Performing an Instant Recovery for a Virtual Machine Removing an Instantly Recovered Virtual
- D. Machine
- E. Instant Recovery Resiliency
- F. Virtual Machine Recovery Ready Validation
- G. Labs
 1. Exercise A: Performing an Instant Recovery of a Windows Virtual Machine
 2. Exercise B: Performing an Instant Recovery of a Non- Windows Virtual Machine

3. Exercise C: Removing Instantly Recovered Virtual Machines
4. Exercise D: Creating a Validate Virtual Machine for a Recovery Job for a Windows
5. Virtual Machine
6. Exercise E: Creating a Validate Virtual Machine for a Recovery Job for a Non-Windows Virtual Machine
7. Exercise F: Working with the Virtual Machine Backups Widget
8. Exercise G: Backing Up a Virtual Machine Skipping PageFile.sys

XXVI. *Performing Virtual Machine Conversions*

- A. Conversion to Virtual Machine: Fundamentals
- B. Backup and then Convert Workflow
- C. Backup and Simultaneously Convert Workflow
- D. Convert to a Virtual Machine from a Point-in-time
- E. One-time Convert to Virtual Machine
- F. Virtual Conversion Options
- G. Conversion Considerations
- H. Labs
 1. Exercise A: Performing a Backup and then a Virtual Conversion

XXVII. *Agent for Linux and UNIX*

- A. Agent for Linux
- B. Installing the Agent for Linux
- C. Backing up Linux Servers
- D. Agent for Linux: Best Practices
- E. Linux References
- F. Labs
 1. Exercise A: Installing the Agent for Linux
 2. Exercise B: Backing up a Linux Server
 3. Exercise C: Restoring Data to Linux Computers
 4. Exercise D: Restoring Data to an Alternate Location
 5. Exercise E: Configuration Options for Linux Computers

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Course Outline (cont'd)

XXVIII. Agent for Oracle

- A. Agent for Oracle on Windows or Linux Servers
- B. Installing the Oracle Agent on Windows or Linux Servers
- C. Configuring the Oracle Agent on Windows or Linux Servers
- D. Authenticating Credentials on the Backup Exec Server
- E. Backing up Oracle Databases
- F. Restoring Oracle Databases
- G. Best Practices for Backup Exec Agent for Oracle on Windows and Linux Servers
- H. Labs
 - 1. Exercise A: Verifying the Backup Exec Remote Agent (RALUS) Installation on the Linux Server
 - 2. Exercise B: Configuring the Oracle Agent on the Linux Server
 - 3. Exercise C: Performing Oracle Database Backup
 - 4. Exercise D: Restoring Data
 - 5. Exercise E: Performing a DBA-Initiated Backup Job
 - 6. Exercise F: Installing and Configuring Backup Exec Remote Media Agent (RMAL) on the Linux Server