Installation, Storage, and Compute with Windows Server 2016, Part 2 of 5: Storage Solutions

Meet the expert: Patrick Loner has certifications for MCSA, MCSE, MCITP, A+, Network+, Security+, and more. He has been working as a Microsoft Certified Trainer, network administrator, and network consultant for over ten years. He has over a decade of experience working with and teaching about Windows networks with client and server operating systems. He has guided many students toward Microsoft and CompTIA certifications. Most recently, he has worked as a freelance trainer and network consultant specializing in Windows Server 2008 and Microsoft Exchange 2007 and Exchange 2010 implementations, design, and upgrades. Patrick continues to branch out now working with and training on Windows Server 2012, Windows 8, Exchange 2013, and System Center Configuration Manager 2012.

Prerequisites: There are no prerequisites for this course

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Course description: This course will cover a range of topics related to storage in Windows Server 2016. It will go over topics such as: local storage and enterprise storage, disk management, types of disk storage, partition types, data de-duplication, direct attached storage, network storage, and fiber channel. It will also cover data center bridging, multi-path input/output and finish up with configuring file and folder sharing.

Course outline:

Manage Disks and Volumes
- Introduction
- Managing Disks and Volumes
- Partition Table Formats
- Disk Types
- Required Disk Volumes
- File Systems
- Resilient File System
- Demo: File System Options
- Demo: File System Conversion
- Virtual Hard Disks
- Selecting Physical Disk Types
- Working with Disk Volumes
- Volume Management Tools
- Demo: Volume Management
- Demo: Manipulating Volumes
- Understanding RAID
- Harware vs. Software RAID
- RAID Types
- Summary

Storage Spaces
- Introduction
- Implementing and Managing Storage Spaces
- Requirements for Storage Spaces
- Storage Space Features
- Demo: Create Storage Pool
- Demo: New Volume
- Changes to Storage Spaces
- Storage Space Usage Scenarios
- Direct Deployment Scenarios
- Managing Storage Spaces
- Using PowerShell with Storage Spaces
- Managing Disk Failure with Storage Spaces
- Monitoring Storage Spaces
- Summary

Configure Data Deduplication
- Introduction
- Overview of Data Deduplication
- Enhancements in Windows Sever 2016
- Data Deduplication Requirements
- Data Deduplication Components
- Data Deduplication Process
- Planning Data Deduplication
- Data Deduplication Usage Scenarios
- Demo: Install Data Deduplication
- Demo: Deduplication PowerShell Commands
- Demo: Deduplication Examples
- Monitoring and Maintaing Data Deduplication
- Summary

Understanding Storage Types
- Introduction
- Overview of Storage Solutions
- Direct Attached Storage
- Network Attached Storage
- Storage Area Networks
- Comparing Storage Solutions
- Comparing Storage Technology
- Summary

Fibre Channel, iSCI, and Ethernet
- Introduction
- Fibre Channel
- Fibre Channel Layouts
- Fibre Channel Considerations
- iSCSI
- iSCSI Target Server
- iSCSI Initiator
- Considerations for Implementing iSCSI
- Summary

Understand iSNS, DCB, and MPIO
- Introduction
- iSNS
- iSNS Functions and Installation
- Data Center Bridging
- MPIO
- Summary

File and Folder Sharing
- Introduction
- Configuring Sharing in Windows Server 2016
- Server Message Block
- Configuring SMB Shares
- Demo:
- Demo: 2
- Network File System
- Configuring NFS Shares
- Summary