

Manage Windows Server Storage



Tim Warner

Principal Author Evangelist, Pluralsight

@TechTrainerTim TechTrainerTim.com



Overview



Configure file systems

Configure SMB Direct

Configure Data Deduplication

Configure Storage Quality of Service (QoS)



Manage Storage and File Services

Configure Azure File Sync

Manage Azure File Sync

Configure and Manage Windows Server File Shares

Configure Windows Server Storage

Manage Windows Server Storage



Configure Windows Server Storage



Windows Server File Systems

NTFS

Windows NT

OS and fixed/removable data disks

Quotas, compression, encryption

Reliability - Bad sector repair

ReFS

Windows Server 2012

Fixed data disks only (BitLocker supported)

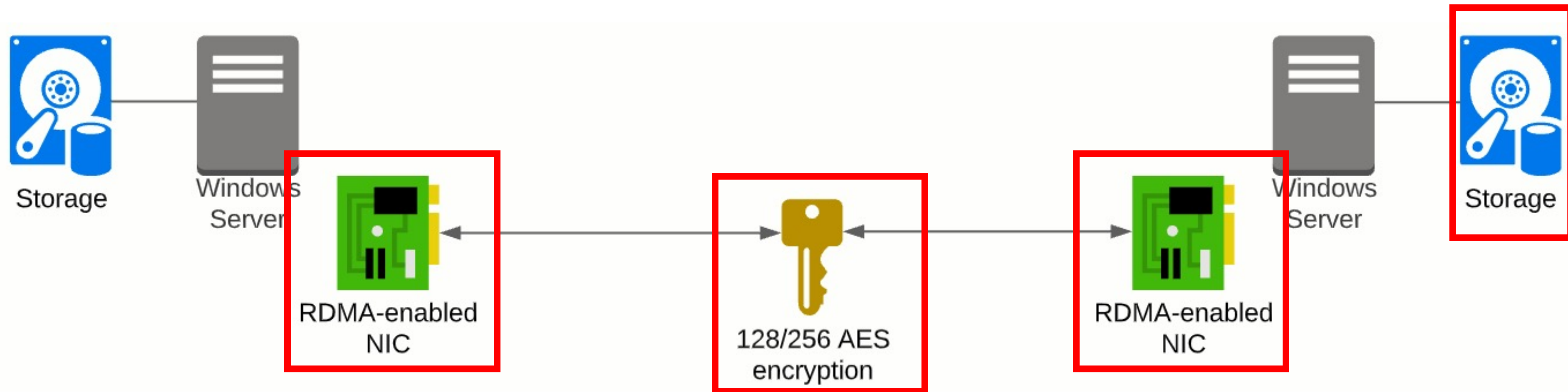
Resiliency - detect and fix corruptions

Performance - especially for Storage Spaces/S2D and VM workloads

Scalability "Millions of terabytes"



SMB Direct



SMB Multichannel

Hyper-V hosts only



"Our file servers have so much wasted space due to duplicate file storage."

The problem



Data Deduplication

Space savings without sacrificing access performance

- User documents 30-50% savings
- VHDs 80-95% savings
- Deployment shares 70-80% savings

File server context

- Home/work folders
- Software dev shares

VDI context

- VHDs

Backup context

- Optimizing backup snapshots



"Our Windows Server clusters have a 'noisy neighbor' problem with some clustered virtual machines."

The problem



Storage Quality of Service (QoS)

**Hyper-V Scale-Out File Server
optimization**

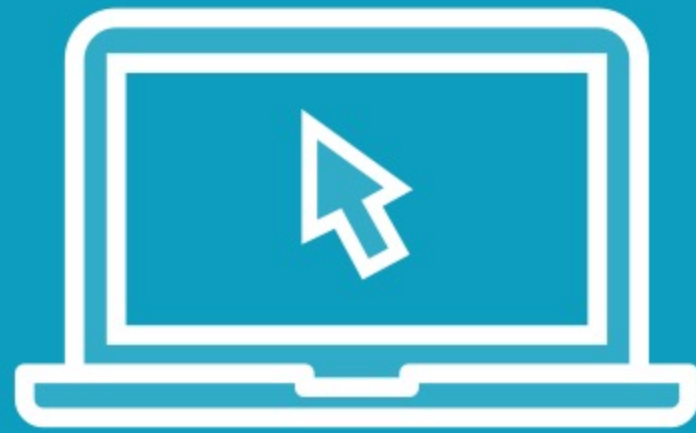
Requires CSV storage for VMs

Granularly control VM IOPS

**Ensure consistent access for
clustered VMs**



Demo



1

Run Get-NetAdapterRdma commands to verify RDMA on NICs

Create NTFS and ReFS volumes

Show data deduplication



Summary



Consider working with these features in a lab environment

- Windows 10/11 Hyper-V
- Microsoft Evaluation Center

Thanks for your participation!

Courses: timw.info/ps

Twitter: [@TechTrainerTim](https://twitter.com/TechTrainerTim)

Email: timothy-warner@pluralsight.com

