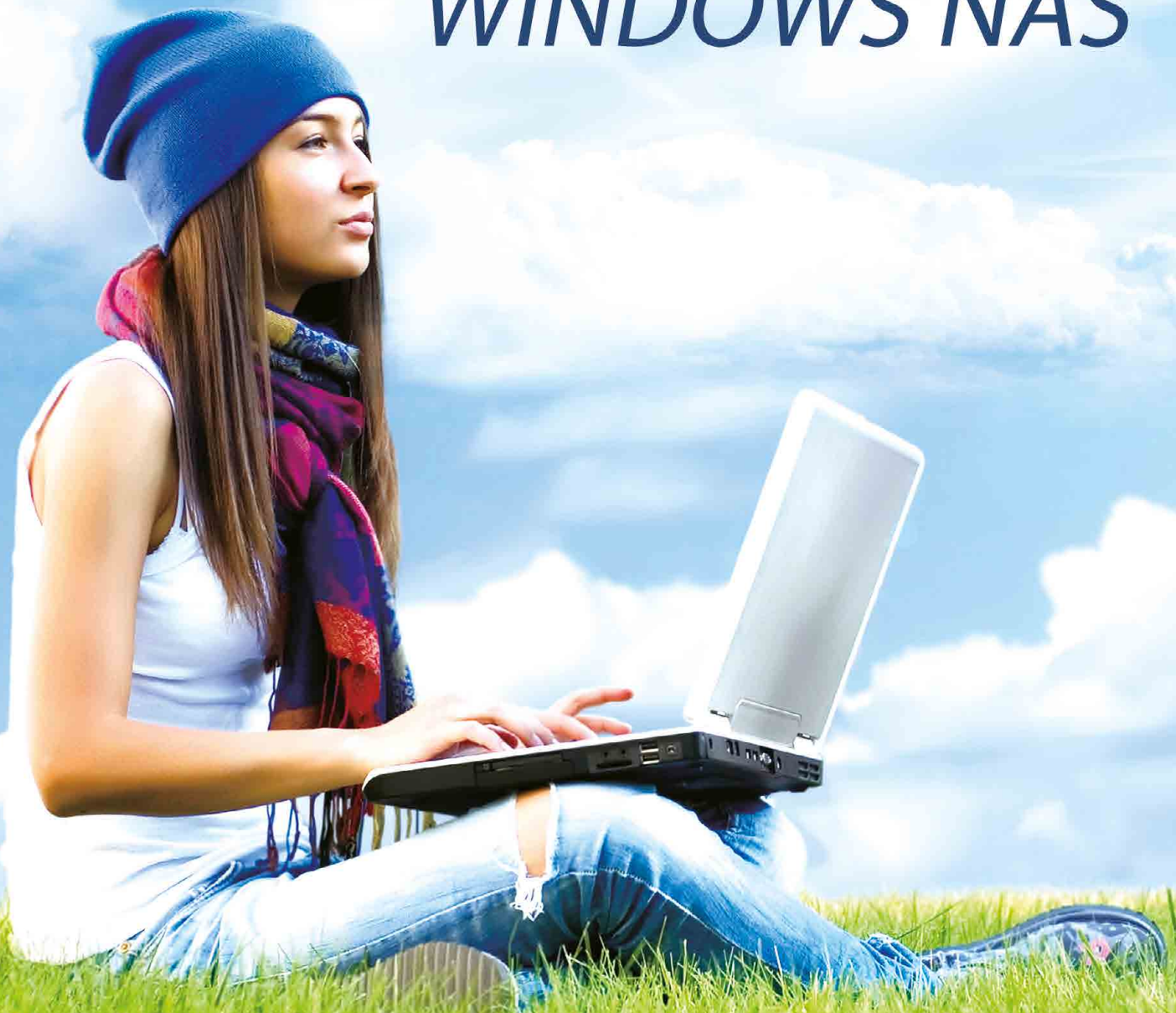


Thecus[®]

Subsidiary of Innoconn

*Affordable Easy-to-Use
Cloud Ready Storage*

WINDOWS NAS



1 Scalability Improvements and Enhanced Storage Management

Storage Spaces delivers sophisticated storage virtualization capabilities, which empower customers to use industry-standard storage for personal computers and scalable multi-node deployments. It is appropriate for a wide range of customers which use Windows Storage Server for highly available storage, that can cost-effectively grow with demand.



2 Flexibility to build on-premises and in the cloud

Windows Storage Server delivers a seamless experience whether you run your applications on-premises or in the cloud.

3 No Windows Server CALs

No required Windows Server Client Access Licenses (CALs) benefits users by providing the ability to access the services of the server without a permit. With this, business users will not have to go through the trouble of obtaining authorization of per-user or per-device.



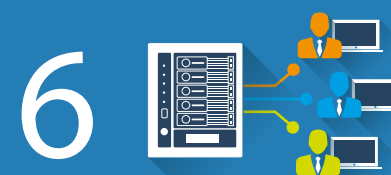
4 Secure Remote Access

RWA enables end users to work remotely from virtually anywhere using almost any device. A website for RWA delivers a highly secure way for users and administrators to use their web browser to access files and folders, client computers, and the servers running in your environment.



5 P2P Connectivity

Pre-installed with the Ultimate Package from Orbweb, users will be able to easily transform their Windows NAS into their own personal cloud without network configuration. Enjoy an always accessible cloud experience, while keeping your data in your hands.



6 Directory Services and User Management

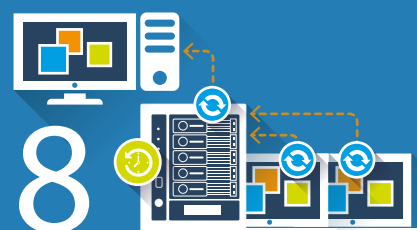
In Windows Storage Server, Microsoft has enhanced Active Directory to be virtualization-aware and to respond accordingly. You can now run Active Directory at scale with support for virtualization and rapid deployment through domain controller cloning.

10 User Friendly Platform & 36 Language Supported

Windows Storage Server is a robust and reliable foundation on which to develop, deliver, and manage rich user experiences and applications. Windows Storage Server provides a secure network infrastructure and reduces costs while increasing technological flexibility and value within your organization.

9 Server Virtualization Deployment

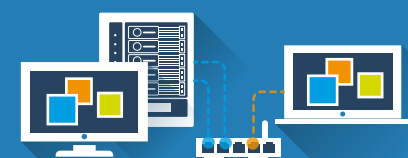
Microsoft virtualization solutions go beyond basic virtualization capabilities, such as consolidating server hardware, to create comprehensive platforms for private and hybrid cloud. This means your organization can achieve considerable cost savings and operational efficiencies.



8 Comprehensive Data Protection and Backup

Windows Storage Server provides great management and backup capabilities that help you better manage your storage capacity for a single server or multiple servers, one class of storage or a variety of storage solutions, for a Windows-only or a heterogeneous environment.

7 High-Performance and Stable Networking



SMB Multichannel and NIC Teaming increases the network performance and availability of file servers. Allows server applications to take full advantage of all available network bandwidth and makes them resilient to network failures.

THECUS
HARDWARE

10 REASONS TO
CHOOSE
THECUS
WINDOWS NAS

WINDOWS
SOFTWARE

Essentials

Windows Storage Server

Standard

Windows Storage Server 2012 R2 Essentials is designed for small businesses that want to leverage cloud services in a NAS appliance. It enables cross-premise functionality, providing small businesses with robust on-premises solution for file and print, client backup and restore, secure remote access, and identity management services, combined with optional off-premise services supported by Microsoft.

Windows Storage Server 2016 Standard offers an enterprise-class, simple and cost-effective solution that's application-focused and user centric. With Windows Storage Server 2016 Standard, you can utilize the capacity of your datacenter, deliver best-in-class performance for your Microsoft workloads, and receive affordable, multi-node business continuity scenarios with high service uptime and at-scale disaster recovery.

Number of Client Support

For 1-50 Home & SMB Users



For >50 Large Business Users



KEY FEATURES



Cloud Ready



Remote Access



Easy-to-Use



Virtualization



Redundancy



Big Capacity



Embedded Boot Drive



Multimedia Ports



Connectivity Ports



Redundant Power Supply



10GbE Ready



SATA /SAS

THECUS MODELS

W4810



W2810PRO



W5810



W12000



W16000



W8900



W16850/W16910SAS



W12850/W12910SAS

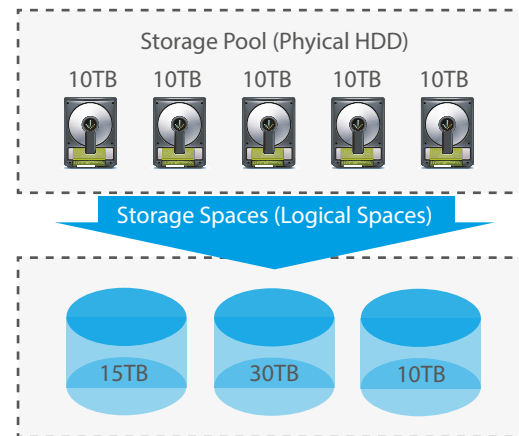


Scalability Improvements



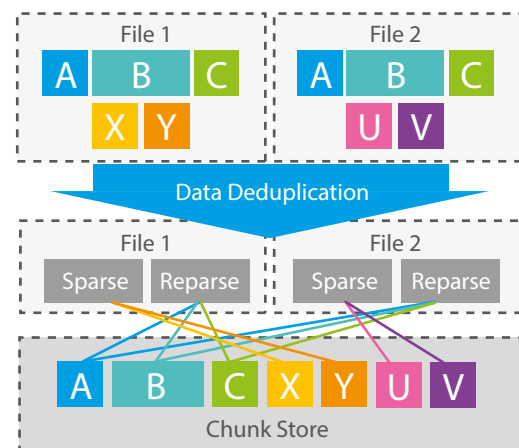
Storage Spaces

Storage Spaces delivers Software Defined Storage (SDS). Easily group multiple hard drives into a storage pool and protect data in the pool, without the need to understand RAID. Storage Spaces enables cost-effective, highly available, scalable, and flexible storage solutions for business-critical deployments.



Data Deduplication

Controls data growth by removing duplicate data. Allows the server to efficiently store, transfer and backup less data.



Server Virtualization



Hyper-V

Windows Server Hyper-V offers a scalable and feature-rich virtualization platform that helps organizations of all sizes realize considerable cost savings and operational efficiencies. Using Windows Storage Server 2016 Standard, you can take advantage of new hardware technology, while still utilizing the servers you already have.

Integrated Cloud Services



Integration with Office 365

Windows Storage Server 2012 R2 Essentials provides the option to integrate with Office 365 or a third-party Hosted Exchange provider. Administrators need only create a user's account once — an associated mailbox can be automatically created at the same time. The Essentials server syncs passwords with Office 365, helping end users enjoy a seamless sign-on experience whether they are accessing local or cloud-based resources.

Critical Data Protection



File History

File History periodically (every hour by default) scans the file system for changes and creates a copy on the server. It simplifies the recovery of files, accidentally deleted or overwritten, without the need for an administrator's assistance.



Client Computer Backups

Configured to run daily on each PC that's connected to the Essentials environment, client computer backup stores your backup data centrally on the server. This type of automatic protection enables you to restore individual files and folders, or an entire PC, as you would do when replacing a faulty hard drive or upgrading from an older hard disk drive.



Server Backup

You can add a hard disk drive to the server, either internally or externally, and designate it as a backup destination as opposed to server storage. Windows Storage Server will then use this drive to back up all the data stored on the server, including both the operating system files and your business data.



NTFS Online Scan and Repair (CHKDSK)

CHKDSK in Windows Storage Server introduces a new approach that prioritizes volume availability and allows for the detection of corruption while the volume remains online with data available.



Robust Windows Server Security

Flexible anti-virus support and complete disk protection with BitLocker Drive Encryption for robust data protection.



Failover Clustering

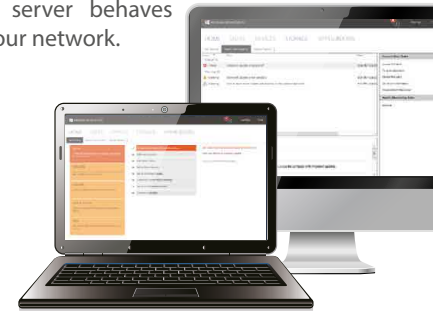
Failover clusters provide high availability and scalability to many server workloads. These include server applications such as Microsoft Exchange Server, Hyper-V, Microsoft SQL Server, and file servers. The server applications can run on physical servers or virtual machines.

Centralized Management



Essentials Administrative Dashboard

The Dashboard is the command and control center for Windows Storage Server 2012 R2 Essentials. Designed with a streamlined look and feel and enhanced with improved functionality, the Dashboard is used to perform all the management and maintenance tasks you need to control how your server behaves on your network.



Launchpad

The Launchpad is a small application that provides authenticated users with access to key features of the server, including shared files and media, add-ins, and Remote Web Access. The Launchpad also provides real-time information and notifications about the health of the computer.



Printer Server Support

Print Services enables you to share printers on a network, as well as to centralize print server and network printer management tasks. It also enables you to migrate print servers and deploy printer connections using a Group Policy.



Health Monitoring

Health status notifies you of issues or problems related to computer backups, server storage, low disk space, and more. Health reports can be automatically generated on a scheduled basis and emailed directly to local administrators or external partners.



Active Directory Domain Services

Windows Storage Server 2012 R2 Essentials offers an affordable server solution that can be used as the primary infrastructure server in multi-server environments.



User Groups Management

You can create user groups and add user accounts to them. User account permissions can be managed through their user group memberships.



Active Directory Lightweight Directory Services

Active Directory Lightweight Directory Services (AD LDS) is a Lightweight Directory Access Protocol (LDAP) directory service that provides flexible support for directory-enabled applications, without the restrictions of Active Directory Domain Services (AD DS).

Secure and Fast Remote Access



Remote Domain Join

Windows Storage Server 2012 R2 Essentials turns setting up virtual private networking (VPN) into a painless wizard-driven process of just a few clicks, and simplifies the management of VPN access for users. Client computers can leverage a VPN connection to remotely join the Windows Storage Server 2012 R2 Essentials environment without the need to come into the office.



My Server App

My Server app provides a modern and touch-friendly way for end users to access files and folders, as well as perform light administration tasks. The app runs on Windows and Windows RT desktops, laptops, and tablet devices.



Orbweb P2P Connectivity

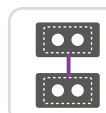
Orbweb.ME provides media streaming, webcam monitoring, and allows users to view, edit and transfer files. With no IP address necessary, users will be able to access their files anytime, anywhere, all without the risk of uploading files from third-party servers.

Improvement Networking



BranchCache

BranchCache can help you optimize Internet usage, improve performance of networked applications, and reduce traffic on your wide-area network (WAN).



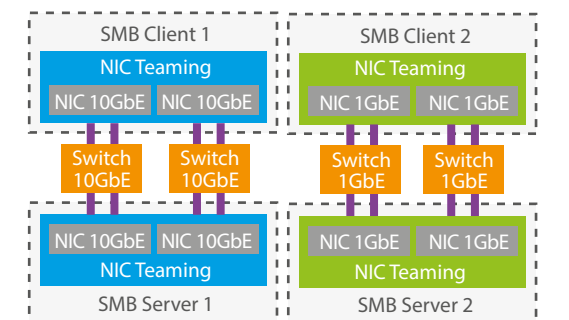
NIC Teaming

NIC Teaming, also known as load balancing and failover (LBFO), allows multiple network adapters on a computer to be placed into a team for bandwidth aggregation or traffic failover to prevent connectivity loss in the event of a network component failure.



SMB Multi-channel

SMB Multichannel enables file servers to use multiple network connections simultaneously. It facilitates aggregation of network bandwidth and network fault tolerance when multiple paths are available between the SMB 3.0 client and the SMB 3.0 server.



STANDARD
SPECIFICATION



Processor	Intel® Xeon E3-1245 v5 3.5GHz Quad-Core	Intel® Xeon E3-1231 v5 3.4GHz Quad-Core	Intel® Xeon® E3-1225 v5 3.1GHz Quad-Core	Intel® Xeon E3-1245 v5 3.5GHz Quad-Core	Intel® Xeon E3-1231 v5 3.4GHz Quad-Core	Intel® Xeon® E3-1225 v5 3.1GHz Quad-Core	Intel® Core™ i3-2120 3.30GHz Dual Core
System Memory	16GB DDR4 ECC SDRAM	16GB DDR3 ECC SDRAM	8GB DDR3 SDRAM	16GB DDR4 ECC SDRAM	16GB DDR3 ECC SDRAM	8GB DDR3 SDRAM	8GB DDR3 SDRAM
Embedded Boot Drive	60GB SSD	60GB SSD	320GB SATA	60GB SSD	60GB SSD	320GB SATA	320GB SATA
Drive Bays	16	16	16	12	12	12	8
Form Factors Supported	2.5" / 3.5"	2.5" / 3.5"	2.5" / 3.5"	2.5" / 3.5"	2.5" / 3.5"	2.5" / 3.5"	2.5" / 3.5"
External eSATA Ports	-	-	2	-	-	1	1
LAN Ports (Gigabit)	2	4	3	2	4	3	3
USB 3.0/USB 2.0 Ports	4/2	2/4	2/6	4/2	2/4	2/6	2/6
Multimedia Ports	VGA/DVI/HDMI/Audio(5+1), SPDIF	VGA	HDMI/MIC input/Line input/Audio output	VGA/DVI/HDMI/Audio(5+1), SPDIF	VGA	HDMI/MIC input/Line input/Audio output	HDMI/MIC input/Line input/Audio output
Redundant Power Supply	500W	500W	500W	500W	500W	500W	350W
Dimensions (mm) (HxWxD)	133 x 440 x 662	133 x 440 x 662	133 x 440 x 662	89 x 440 x 662	89 x 440 x 662	89 x 440 x 662	87 x 438 x 595
Weight (kg)	29.38	29.38	29.38	26.39	26.39	26.39	16.67

*The MS license needs to be purchased separately.

Windows Storage Server 2016 Standard	
File sharing (SMB & NFS)	YES
Online Backup	YES
DFS-Replication	YES
File Classification Infrastructure (FCI)	YES
File Server Resource Manager (FSRM)	YES
Domain Join	YES
Shared block storage (iSCSI Target + Boot)	YES
OEM Customizable Out of Box Experience	YES
Storage Spaces	YES
Deduplication	YES
BranchCache – Hosted Cache	YES
Virtualization	YES
Clustering (including AD/DNS)	YES
Simplified Cluster Setup	YES
Networking Infra (DHCP, DNS & WINS)	YES
Number of Client Support	For >50 Large Business Users

Windows Storage Server Comparison Chart	2016 Standard	2012 R2 Essentials
Ability to join a domain	Yes	Yes
Data Deduplication	Yes	Yes
BranchCache- Hosted Cache	Yes	Yes
Virtualization	Yes (2 VMs)	No Hyper-V
Failover Clustering	Yes	Yes
Networking infrastructure (including DNS, DHCP, and WINS)	Yes	Yes
Windows Server Essentials Experience	No	Yes
Active Directory (Domain Controller, Certificate Services, Federation Services, Rights Management)	No	Yes

ESSENTIALS
SPECIFICATION



Processor	Intel® Celeron™ J1900 Quad-Core	Intel® Celeron™ N3160 Quad-Core	Intel® Celeron™ N3160 Quad-Core
System Memory	4GB DDR3 SDRAM	4GB DDR3 SDRAM	4GB DDR3 SDRAM
Embedded Boot Drive	60GB SSD	60GB SSD	60GB SSD
Drive Bays	5	4	2
Form Factors Supported	2.5" / 3.5"	2.5" / 3.5"	2.5" / 3.5"
External eSATA Ports	-	-	-
LAN Ports (Gigabit)	2	2	2
USB 3.0/USB 2.0 Ports	3/2	4 (A Type x3/C Type x1)/-	3/-
Multimedia Ports	HDMI/Line Output	HDMI/DP/SPDIF	HDMI/DP/SPDIF
Power Supply	200W	90W External Power Adaptor	48W External Power Adaptor
Dimensions (mm) (HxWxD)	230 x 190 x 240	192 x 172 x 250	146 x 102 x 213
Weight (kg)	5.09	3.63	1.76

*Software license included with purchase.

Windows Storage Server 2012 R2 Essentials	
File System	Native NTFS support, FAT32, EFS, ReFS
Disk Management	Data Deduplication
	Storage Spaces
	- Create pools of storage using industry standard hard disk drives
	- Enables data redundancy with mirroring or parity
	NTFS Online Scan and Repair (CHKDSK) Intelligently repairs unexpected corrupted data
Network Support	Protocols : IPV6 / Multiple NICs / DNS / DHCP & WINS
	Support for multiple subnets / Multiple IP addresses
File and Block Storage Protocol Support	File : SMB (1.0, 2.0, 2.1, 3.0, 3.01), NFS (v2, v3, v4.1)
	Block : iSCSI Target Server, iSCSI, SATA, and USB
Directory Services / User Management	Seamless Active Directory integration with any existing Active Directory Domain
	Authentication and authorization
	Domain Controller, Certificate Services, Federation Services, Rights Management
Windows Client Integration via Launch Pad	Agent deployed on client, one click connection to NAS appliance
Performance	NIC Teaming: Aggregates bandwidth of multiple NICs
	SMB Multi-channel: Multiple transport sessions in a single NIC
Secure Remote Access	Secure Remote Desktop Services with Encryption and Authentication
	Remote file access via FTP/FTPS
	Remote Web Access via HTTPS
	P2P connectivity via Orbweb (Ultimate edition)
Licensing	No Windows Server Client Access Licenses (CALs) required for up to 50 users or devices
Printer Server Support / FAX and Scan	Local printer connection: Full Windows print services support
	Distributed Scan Server: Print Server and Document Services
Health Reporting / Notifications	Integrated health monitoring and reporting
	- Send health report to chosen email address on a customizable schedule
Media Pack for Streaming	Stream music, videos, and pictures with the included Windows Server Essentials Media Pack
Global Language Pack	36 Interfaces Available
Number of Client	For 1-50 Home & SMB Users

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