D-LINK Storage

Product Portfolio

25 YEARS of technology & innovation

D-Link®

Si está interesado en almacenamiento de datos le recomendamos visitar:

www.almacenamientodlink.es

Agenda

- D-Link Storage Solution Features.
  - Features & Software Applications.
  - NAS New Features Update.

- D-Link Storage Portfolio.
  - NAS
    - DNS-315, DNS-320, DNS-320L, DNS-325, DNS-345
  - IP SAN
    - DNS-3200, DNS-3400
  - NAS-IP SAN
    - DNS-1100-04, DNS-1200-05, DNS-1550-04
  - NVR
    - DNR-322L, DNR-326

Features &

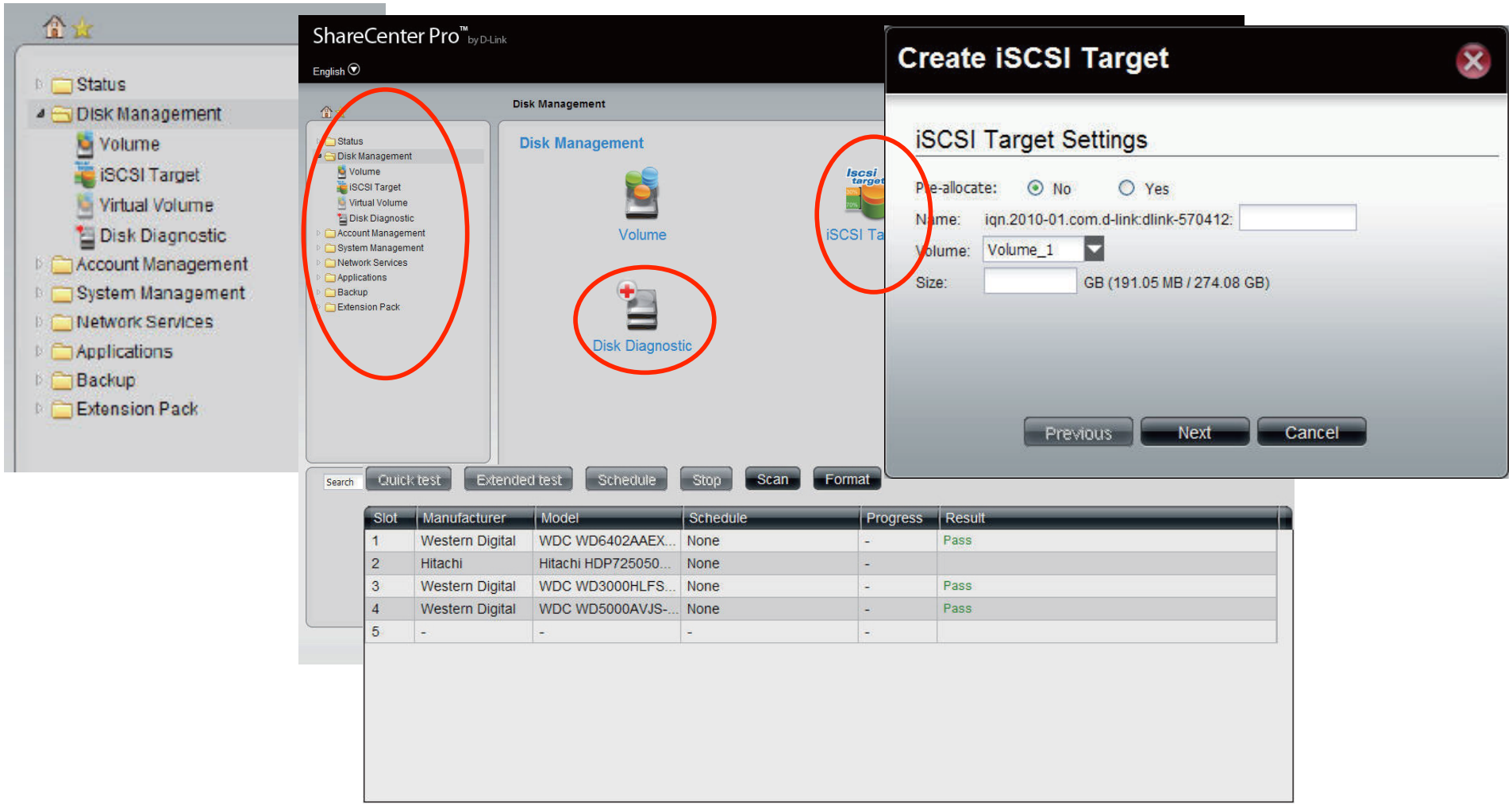
Software Applications

25 YEARS of technology & innovation

D-Link®

Intuitive User Interface

Simplified Management – no special IT skills needed

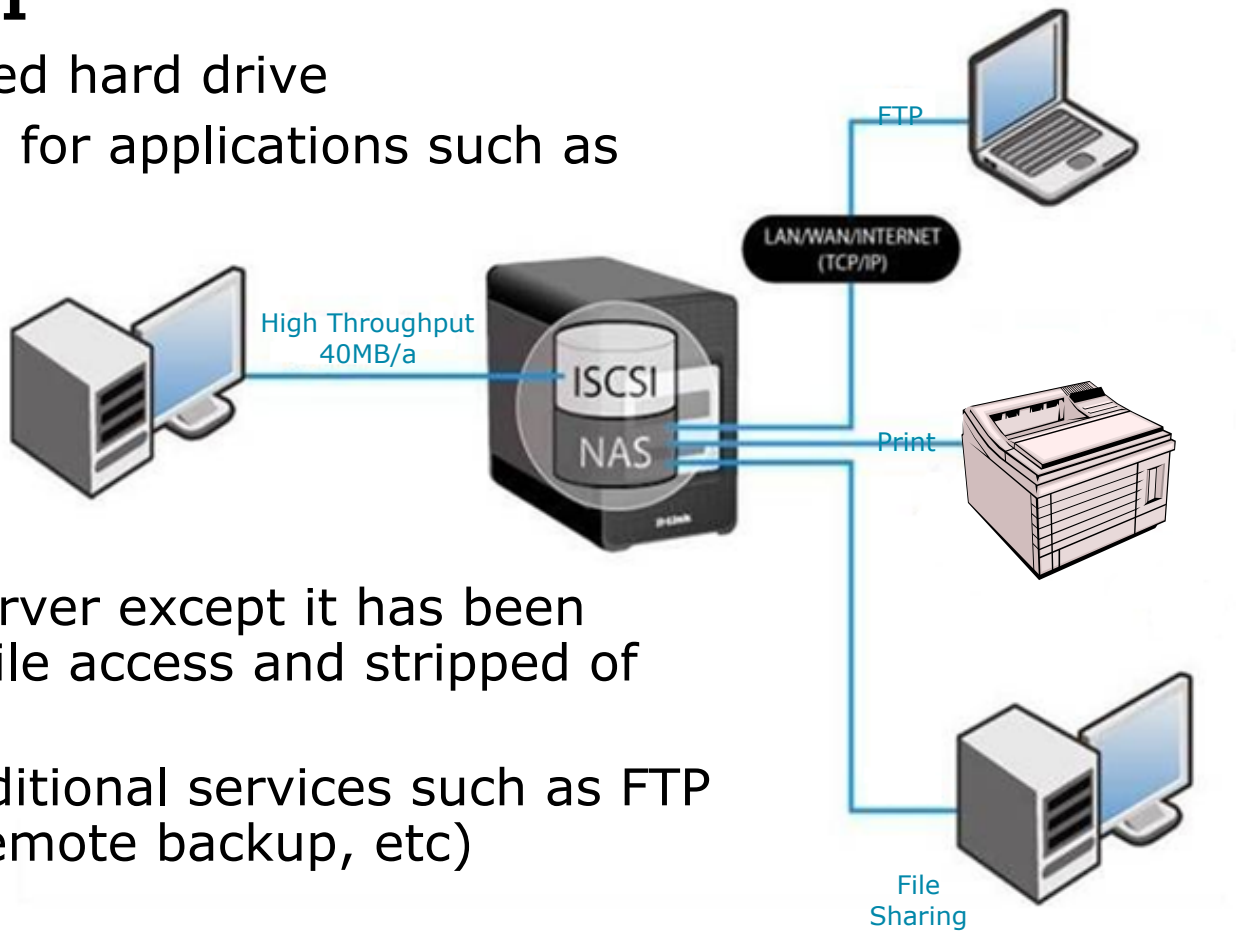


What is Unified Storage?

Unified Storage: Concurrent iSCSI and NAS

Characteristics of iSCSI

- Acts as a locally attached hard drive
- Block-level access ideal for applications such as email and databases



Characteristics of NAS

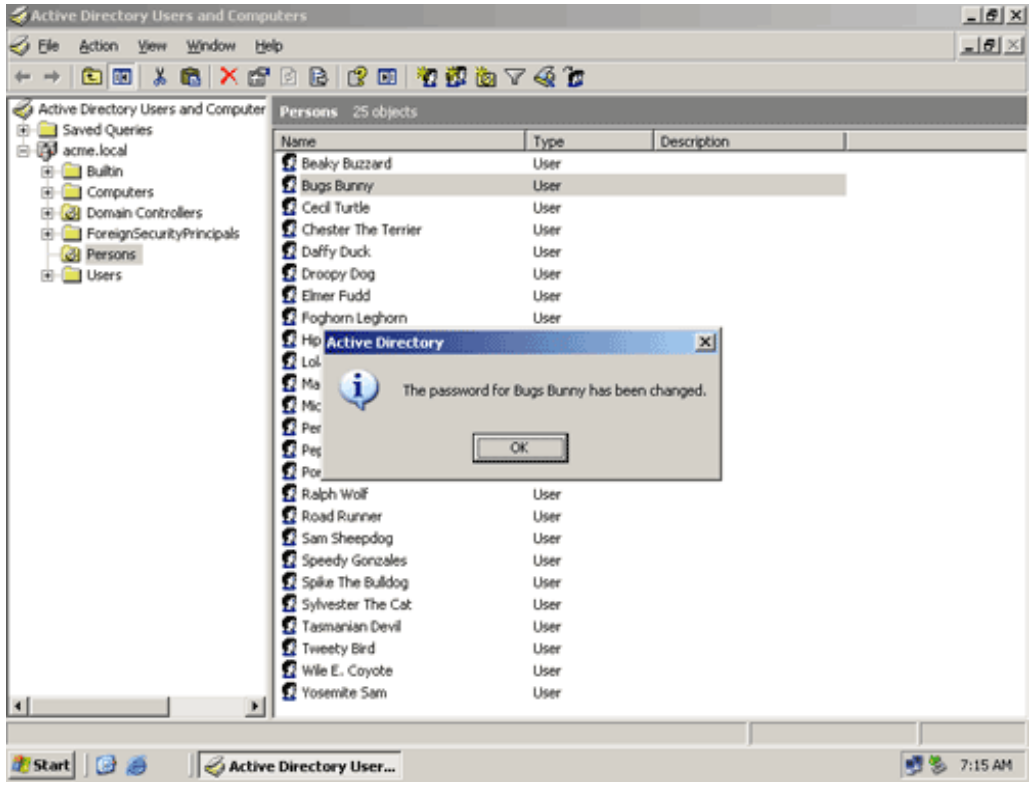
- Like a traditional file server except it has been optimized for efficient file access and stripped of auxiliary utilities.
- D-Link incorporates additional services such as FTP Server , Print server, remote backup, etc)

Microsoft Active Directory Support

Active Directory Service (ADS)

Microsoft Active Directory is a database service that allows for a single point of administration for all shared resources on a network, including

- Files
- Peripheral devices
- Databases
- Web sites
- Users, and services.



Windows Server® Active Directory

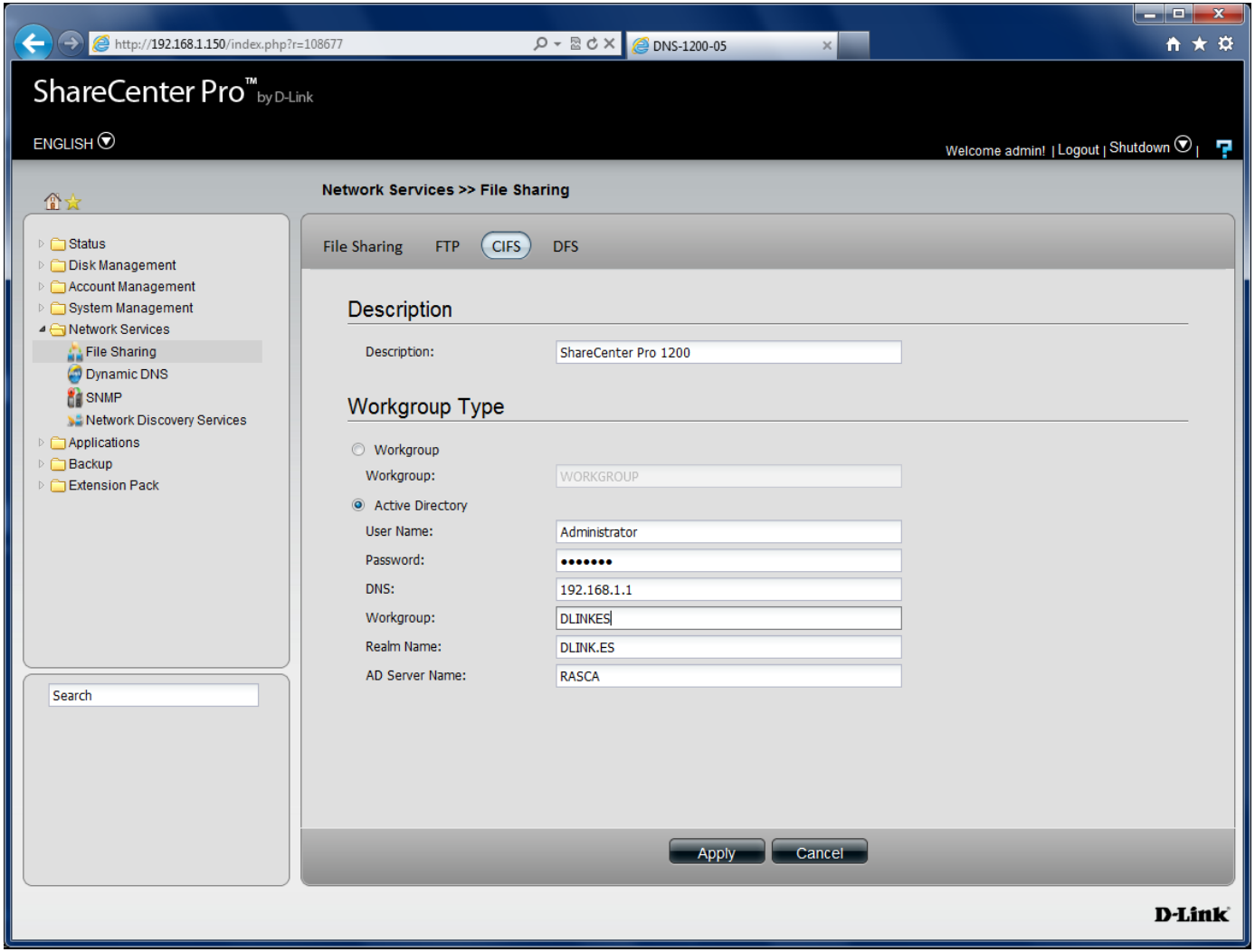
D-Links ShareCenter™ Pro 1100 and 1200 can easily integrate into any Active Directory environment.

Microsoft Active Directory Support

Active Directory Supporty

Active directory support will import the user database to the Storage Unit.

This permit to network manager to define access policies on the storage unit with the existent users on the Domain controler user database, without needing to create local users.

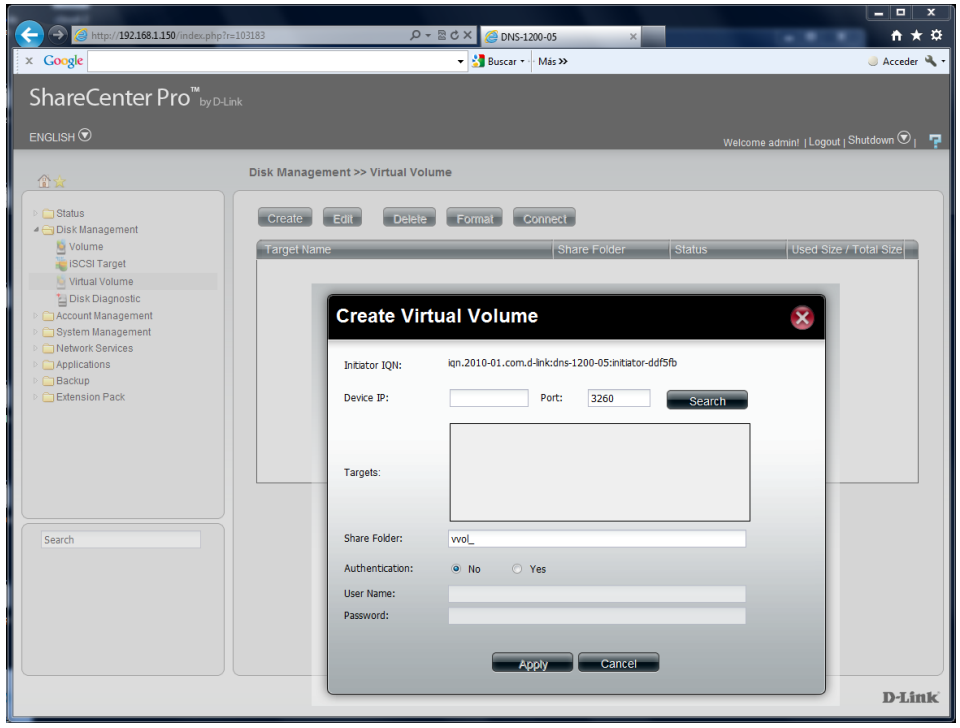


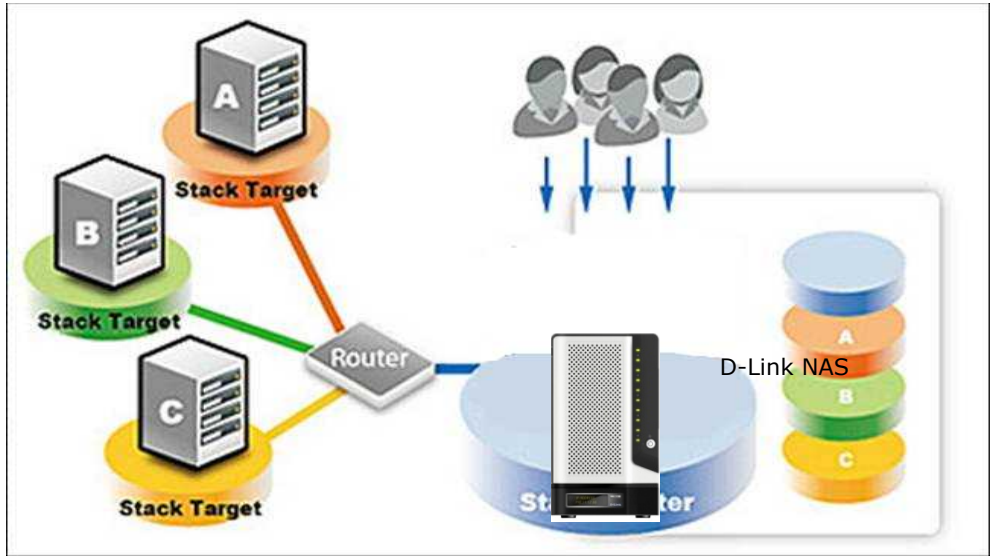
Virtual Disk Expansion

- Using iSCSI the DNS-1100-04 and DNS-1200-05 can connect to other iSCSI targets on the network and present them as virtual disks
- These virtual disks are seen as multiple single volumes and can be accessed by servers and workstation on the network

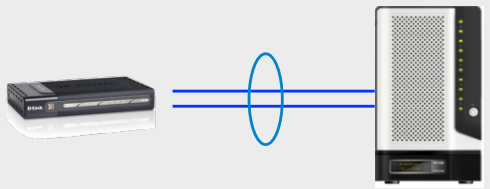
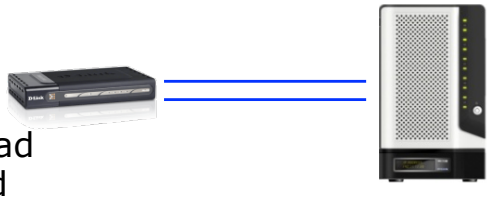
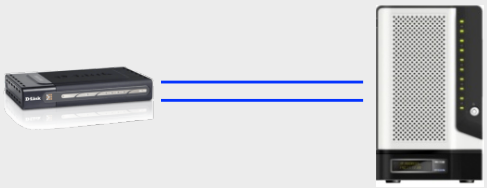
Benefit:

Virtual Disk Expansion enables users to add storage capacity to the DNS-1200-05 or DNS-1100-04 beyond the drives installed



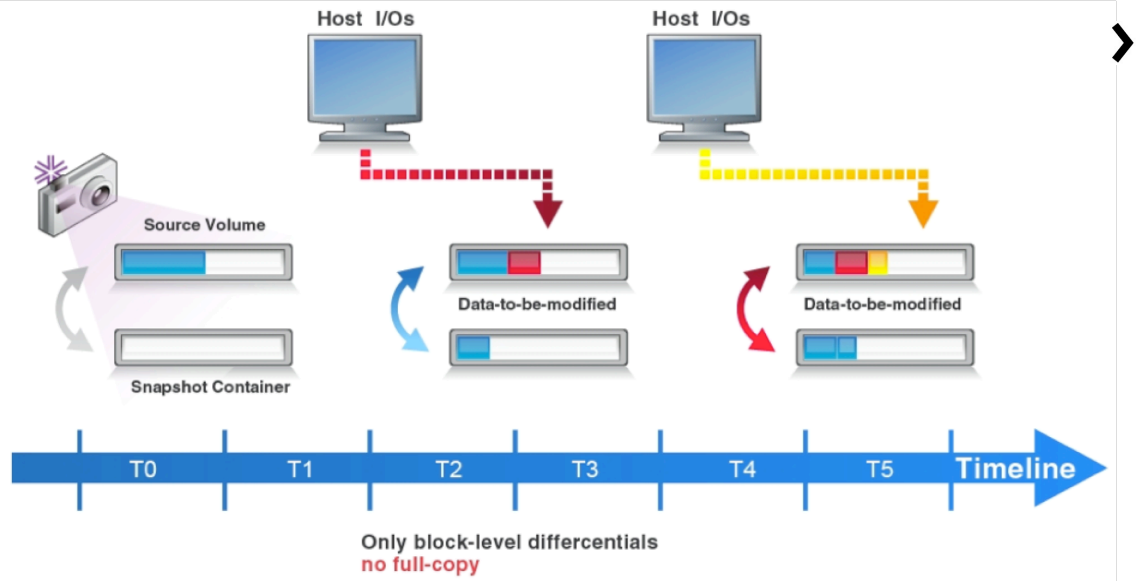


Dual Gigabit Ethernet Benefits

Features	Description	Benefits	Figure
Link Aggregation	Link Aggregation combines both LAN ports into a single group in to increase the link speed beyond that of a single cable or port.	1. Performance enhancement 2. Throughput enhancement	
Load Balancing	Load balancing is a way to spread data traffic (workload) between each port, in order to achieve optimal resource utilization, maximize throughput, and minimize response time.	1. Network connectivity optimization: Using 1 cable the workload is 100% Using 2 cables with load balancing the workload per cable is only 50%	
Failover	Failover automatically switches the data traffic from a failed port to working port. Should the port come back then the information will be retransmitted.	1. Improved Network reliability 2. Reduced downtime	

Snapshot Technology

D-Links ShareCenter™ Pro 1100, 1200, 1550 include Volume Snapshot capabilities to record multiple points in time for the data, so that should an emergency occur, the data can be rolled back to the earlier state without having to restore from backups

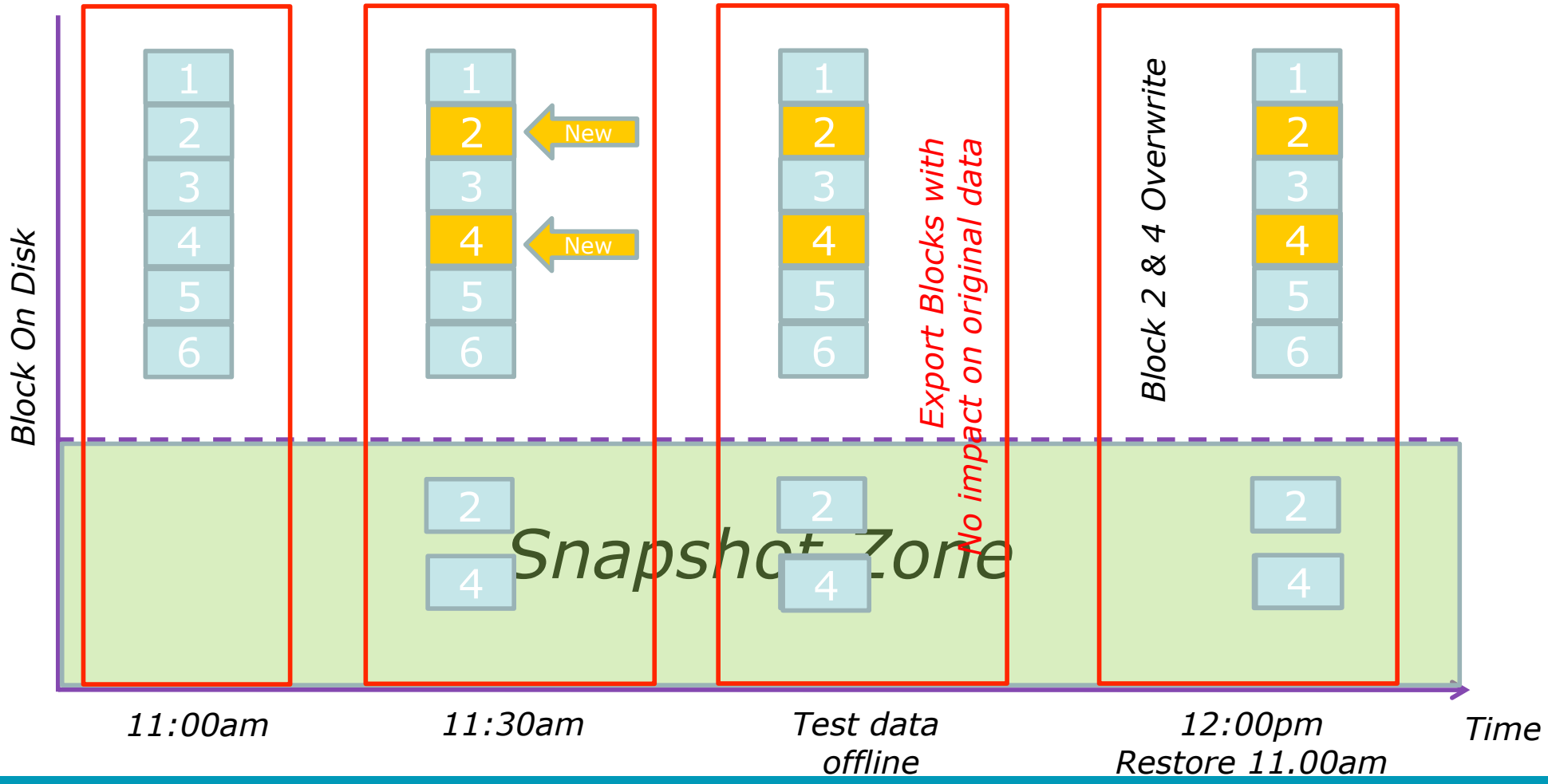


› Benefits:

1. Snapshots shorten the time of data backup
2. Snapshots allow users to instantly restore the data to a designated time
3. Snapshots provide easy backup management

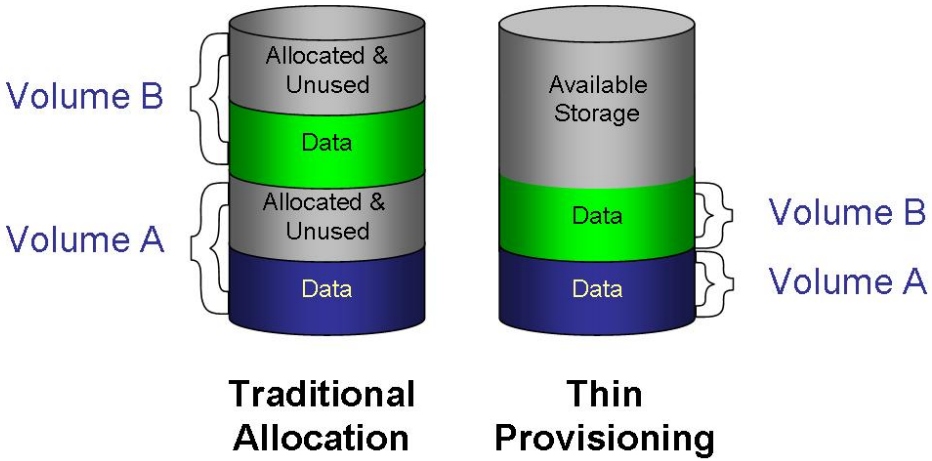
Snapshot Technology

› COW (Copy-On-Write) Snapshot Technology



Thin Provisioning

- Thin Provisioning is a method of optimising the utilisation of available storage
- Thin provisioning allows disk capacity to be allocated to servers on a "just enough" and "just in time" basis.
- Organisations or departments can now be charged for actual capacity usage, reducing operating costs and improving resource management.



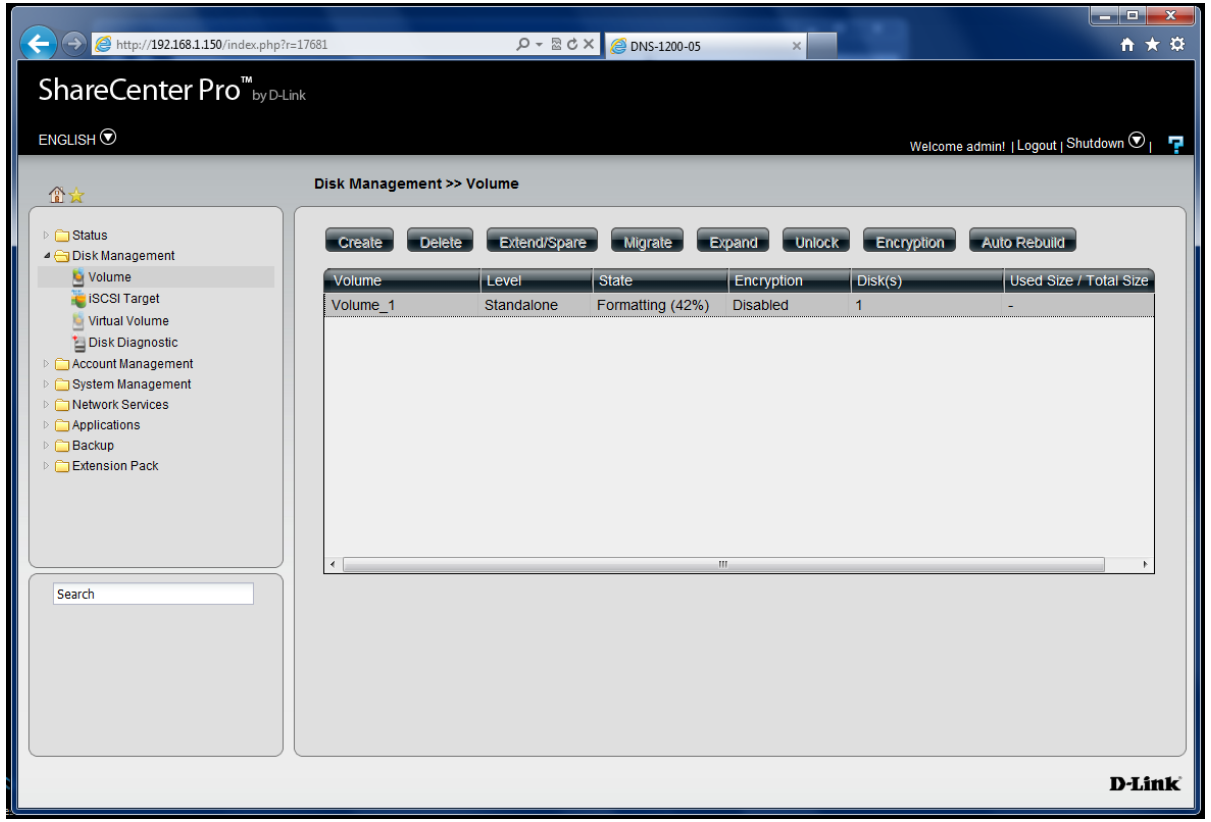
- Benefits
  1. Lower initial purchase cost
  2. Upgrade capacity in line with actual business usage
  3. Enhanced storage capacity utilization
  4. Reduce operation cost

Thin Provisioning

Create a Volume

Once a RAID is created and formatted, a Volume will be created. This Volume can be used for different porpoises.

- File Share as NAS
- LUNs in iSCSI mode

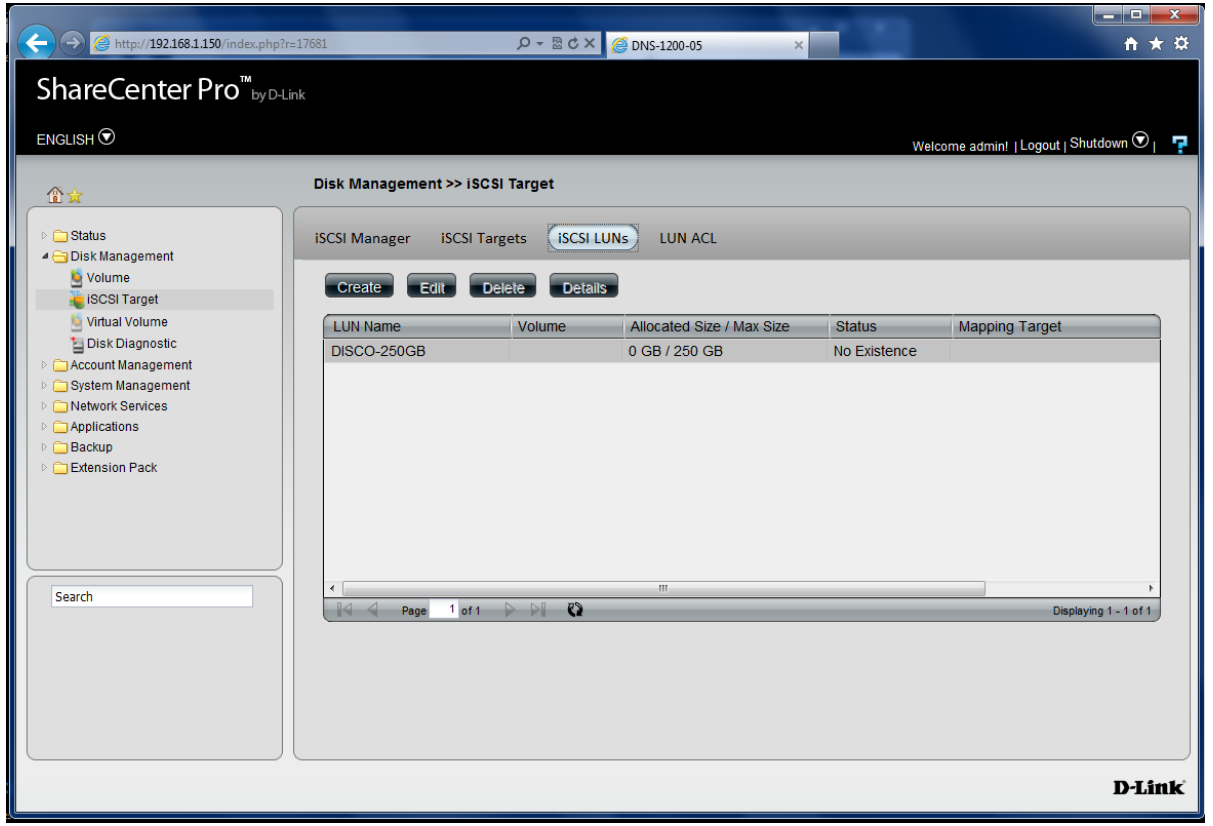


Thin Provisioning

Assign Space to a iSCSI unit

Once the Volume is created on the Unit is possible to allocate an specific amount of space for been use as SAN and the rest for the Volume or use the maximum available space of the Volume on the iSCSI unit and let the space allocation to the storage unit.

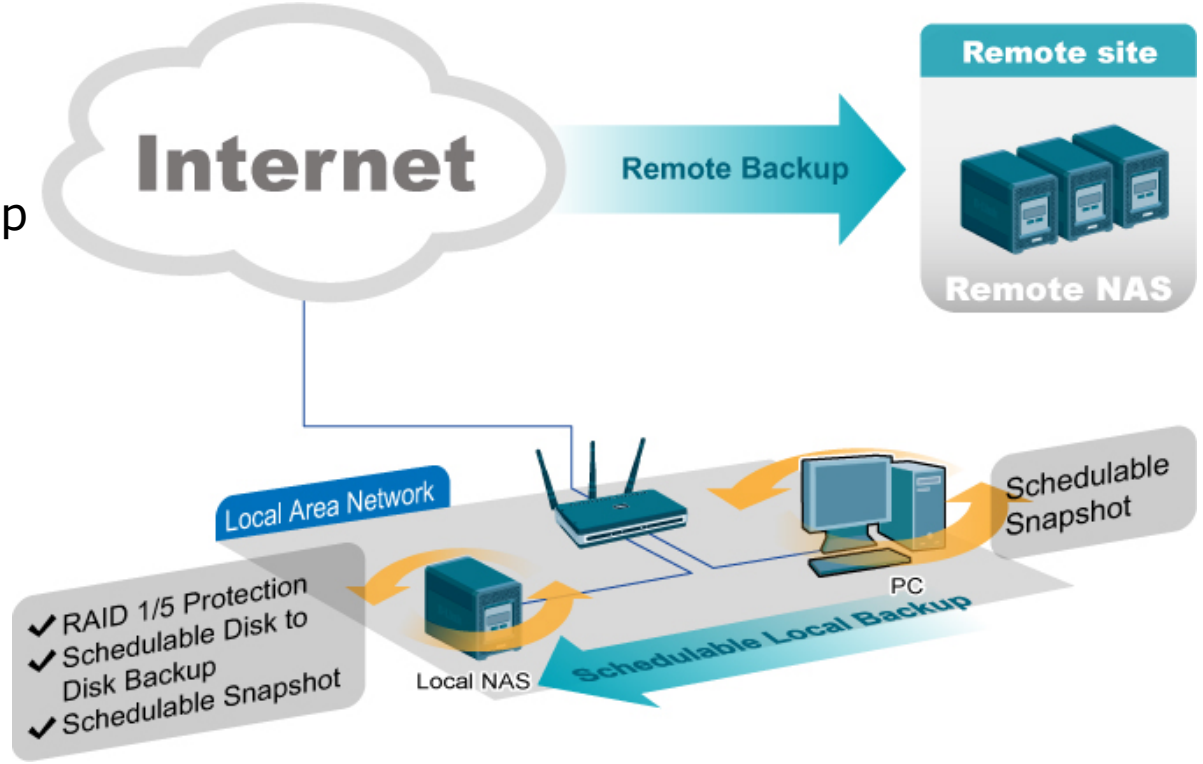
If the NAS space needs grows faster than SAN the storage unit will use the available space as NAS or vice versa.



Total Backup Capabilities

› DNS-1100-04 and DNS-1200-05 provide the following data backup options:

1. Disk to Disk Backup
2. Schedule Snapshot
3. Remote NAS Backup
4. Cloud Amazon S3 Backup



Total Backup Capabilities

Volume Snapshot

Allow the Storage unit to perform up to 10 Snapshots.

Local Back-Up

Allow the unit to perform local back-up. Copyng data from 1 Volume to other.

Remote Back-Up

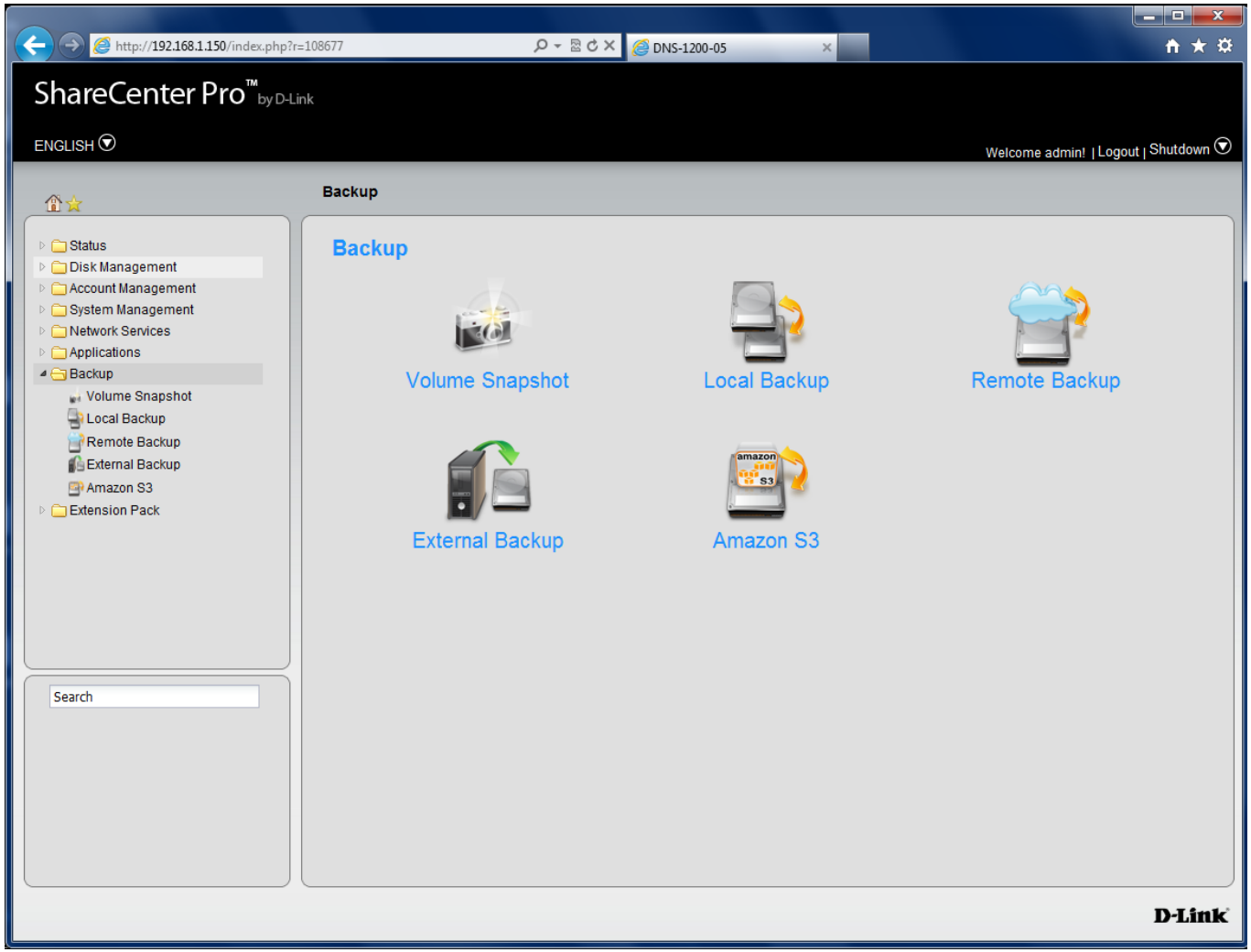
Perform data replication from 1 device to other, the replication can be done from device to device or to a Linux server.

External Back-Up

Perform Back-Up From/To an USB drive to the Storage unit.

Amazon S3

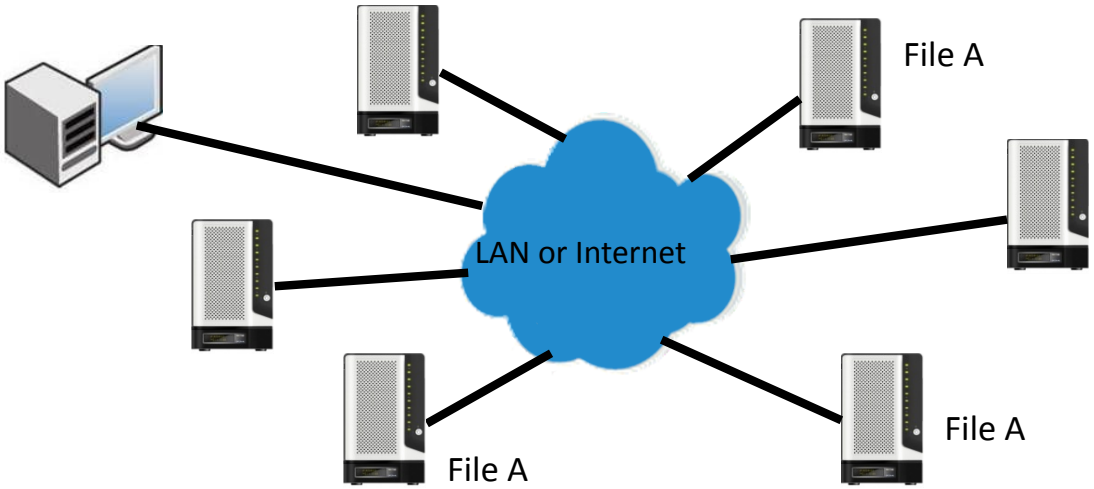
The devices include an Amazon S3 client allowing to perform Cloud BacK-Up



Distributed File System

Distributed File System (DFS)

- **Distributed File System** is a set of client and server services that allow an organization to organize many distributed SMB file shares into a distributed file system.
- DFS provides location transparency and redundancy to improve data availability in the face of failure or heavy load by allowing shares in multiple different locations to be logically grouped under one folder, or DFS root.
- **Benefits:** While many client PCs may have the same file, when using DFS, the files appears grouped under one folder. This is for ease of file discovery and for redundancy.



Green Technologies

Green Technologies

➢ Hard Drive Hibernation : Hard Drive Hibernation reduces the power consumption and noise, and also extends the life of the hard drives.

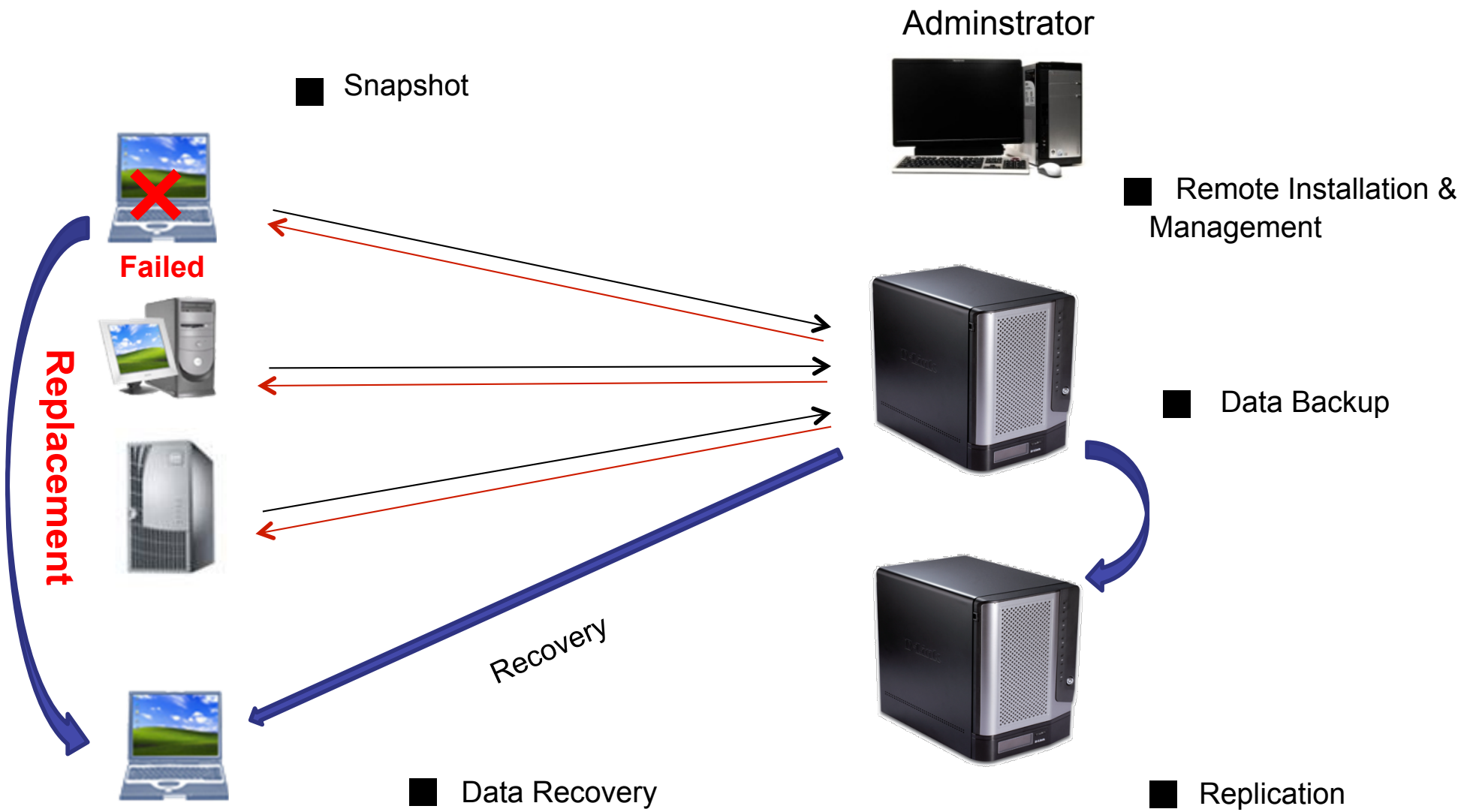
➢ Low Power Consumption : D-Link's NAS devices are powered by low power consumption CPUs and therefore consumes low power when operation.

➢ Smart Fan Design : Smart fan design will automatically adjust the fan speed based on temperature measured to efficiently dissipate the heat and conserve the power.

➢ D-Link Green Ethernet : The Green Ethernet feature, which will be implemented on new D-Link NAS devices, allows the device to optimized power usage based on dynamic detection of cable .

➢ Schedule Power On/Off : The schedule power on/off feature offers the option to flexible operates the device per users' desire.

Farstone Backup & Recovery



Farstone Applications

User	Issues	D-Link Solution
SMB	1. Virus Attack 2. Long OS installation time 3. Complicated backup and restore policies 4. Data base fail, operation down 5. File server damaged 6. High cost of replication deployment	1. Restore from Snapshot 2. OS snapshot 3. Central management and simple backup plans 4. Restore from replication site 5. Restore from replication site 6. Replication included in the purchase cost of the NAS.
Government	1. Manual data backup from distributed sites. 2. Data Security 3. Reducing Down time	1. Central management and backup data 2. AES 128, 192 & 256 encryption 3. Snapshot & replication
Education	1. Computer returned in a damaged state 2. High cost if licenses for each computer	1. Re-build from back-up 2. Unlimited License SKU available

NAS

New Features Update

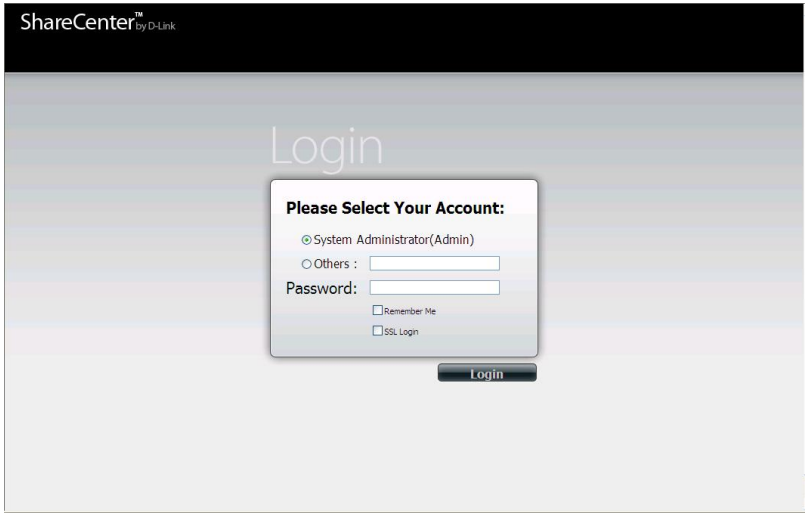
25 YEARS of technology & innovation

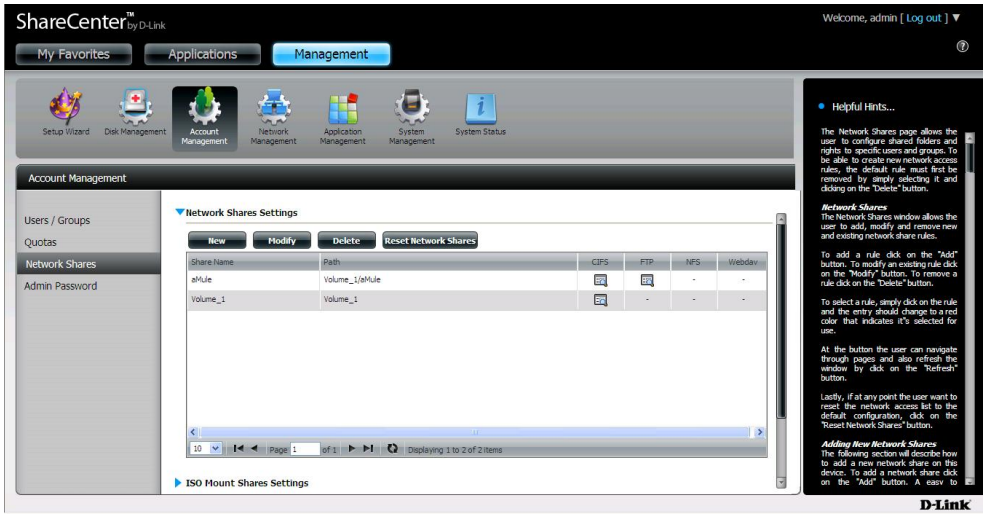
D-Link®

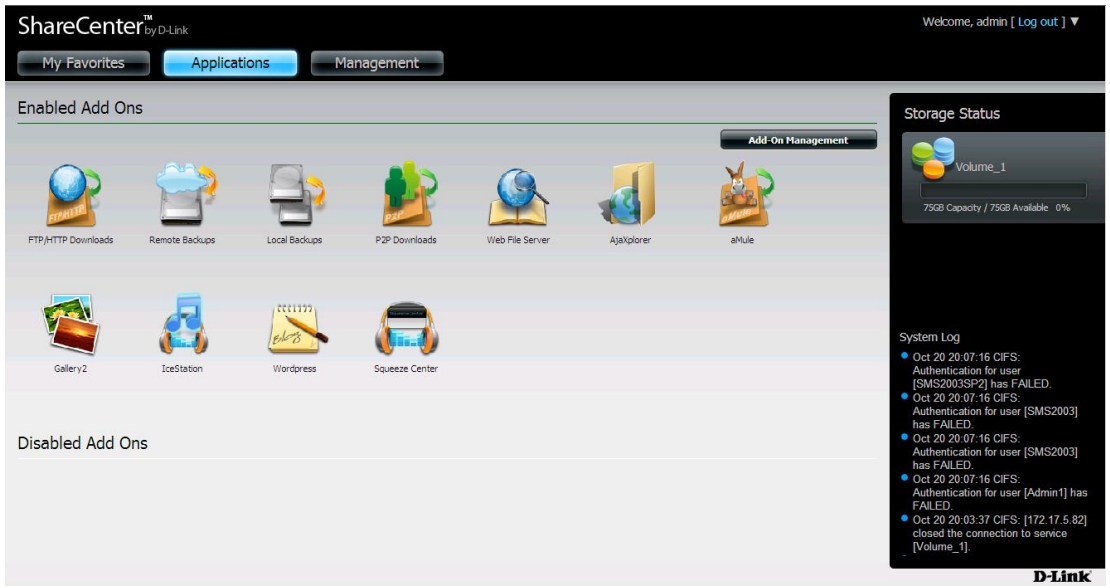
NAS: New Features Update

New GUI design

New GUI design will be featured on new NAS devices



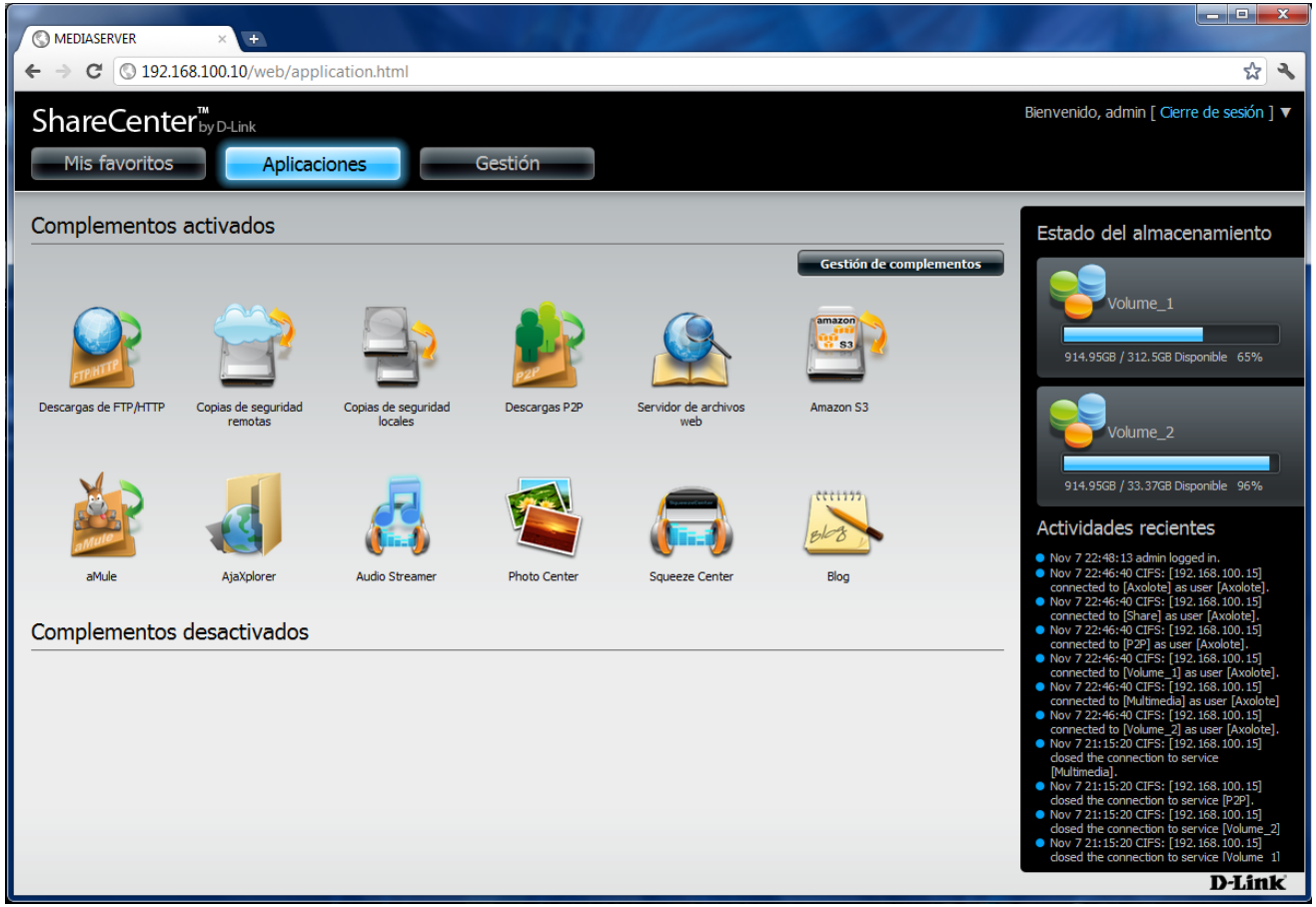


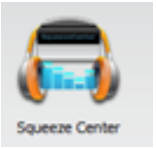


NAS: New Features Update

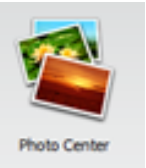
Add-on applications

Customize your NAS with extensive add-on applications





SqueezeCenter Audio Streaming



Gallery 2 Photo Center

Blog

WEB DAV

AjaXplorer

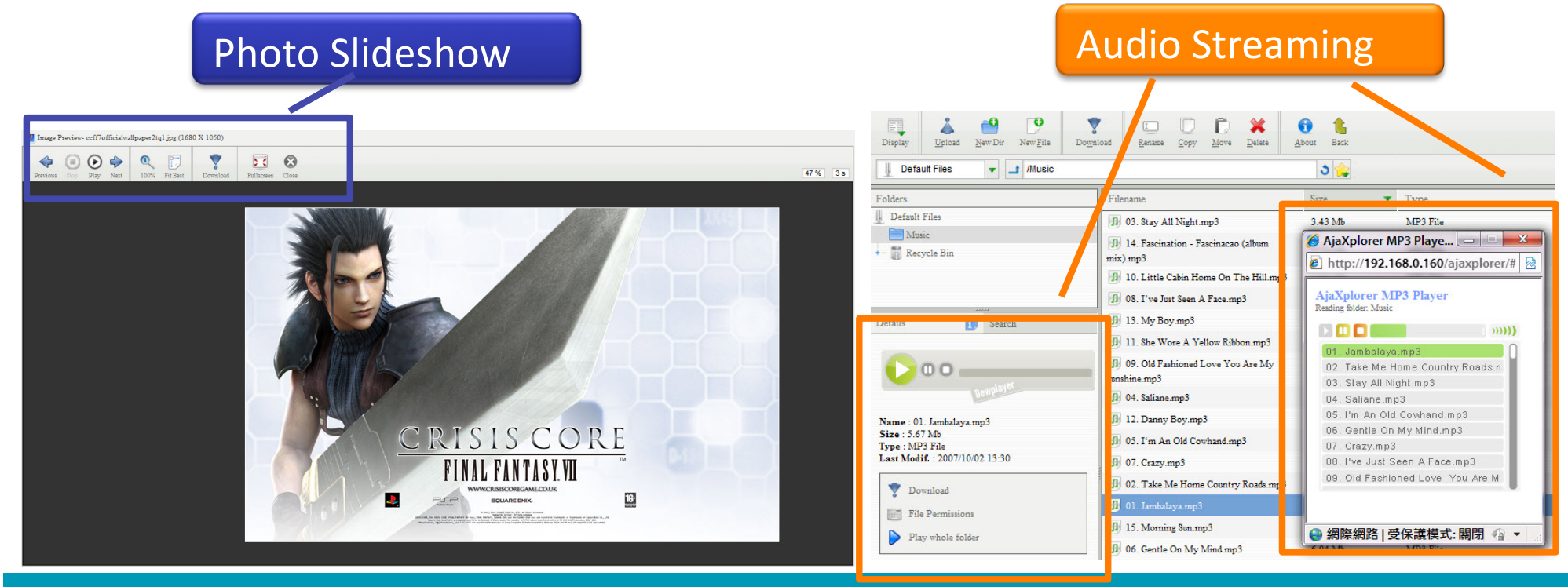
aMule Download Manager

Audio Streamer

NAS: New Features Update

AjaXplorer

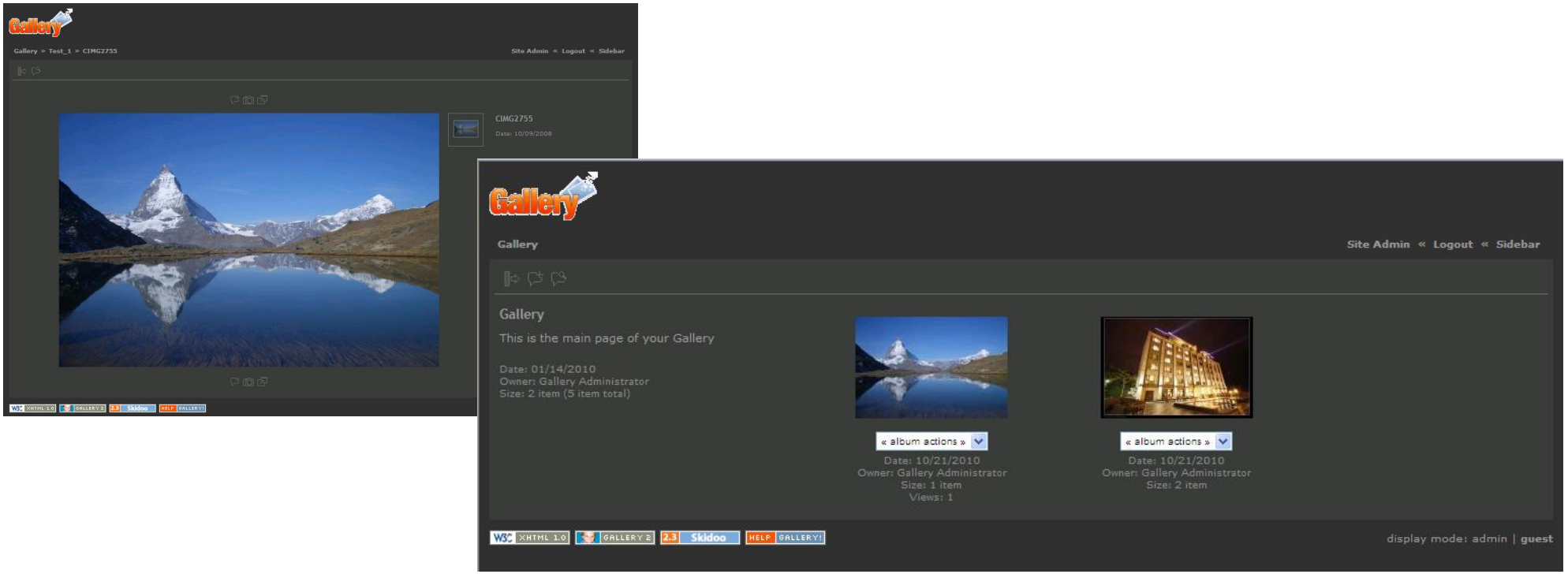
- New D-Link Consumer NAS products also integrate the AjaXplorer as an advanced web file server which allowing users to access files through the web interface to the designated folder
- With AjaXplorer, **Audio Streaming** and **Photo slideshow** become possible



NAS: New Features Update

Photo Center

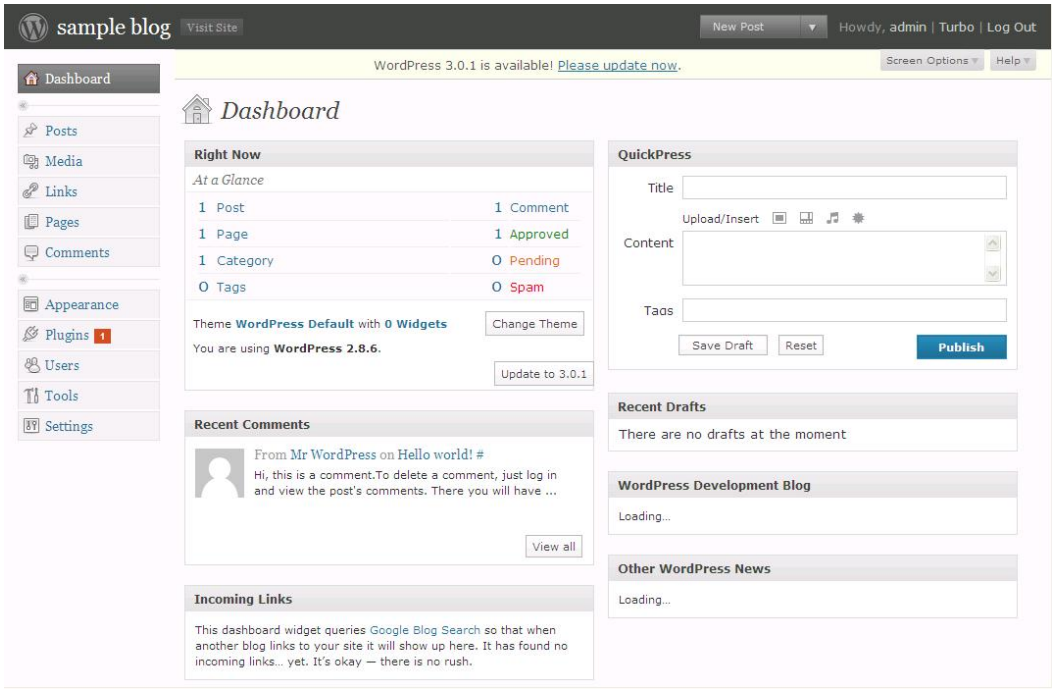
- The **Photo Center** (Gallery) add-on sets up your ShareCenter to share your photos over the web. It provides a convenient interface from which you can create albums of photos with descriptions. The albums are then accessible over the web using HTTP so that your family and friends can then view your ShareCenter stored photos from any internet connection.



NAS: New Features Update

Blog (WordPress)

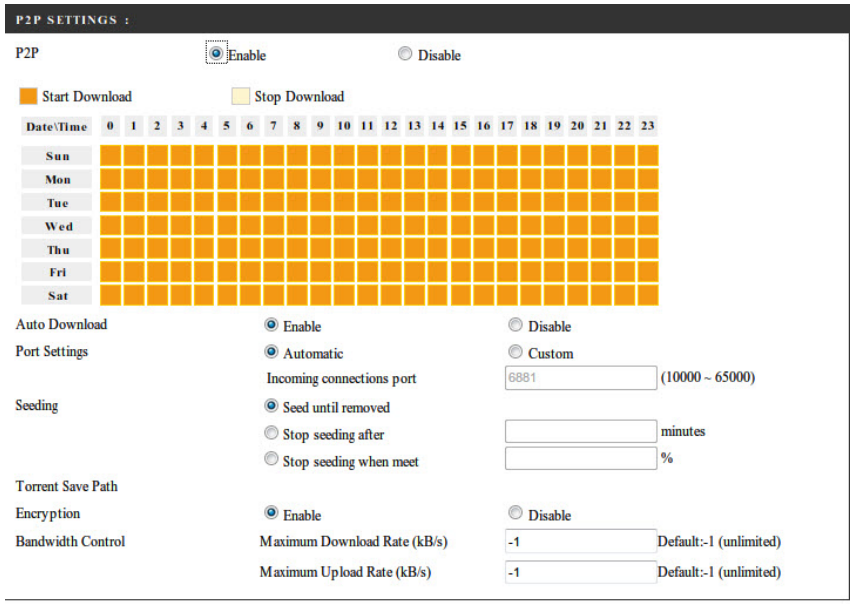
- **WordPress** is web software you can use to create a website or blog. With the WordPress add-on allows you to create your own ShareCenter based customized Blog. Using the ShareCenter's Internet connection the WordPress blog can be accessed and commented on from any Internet connection.

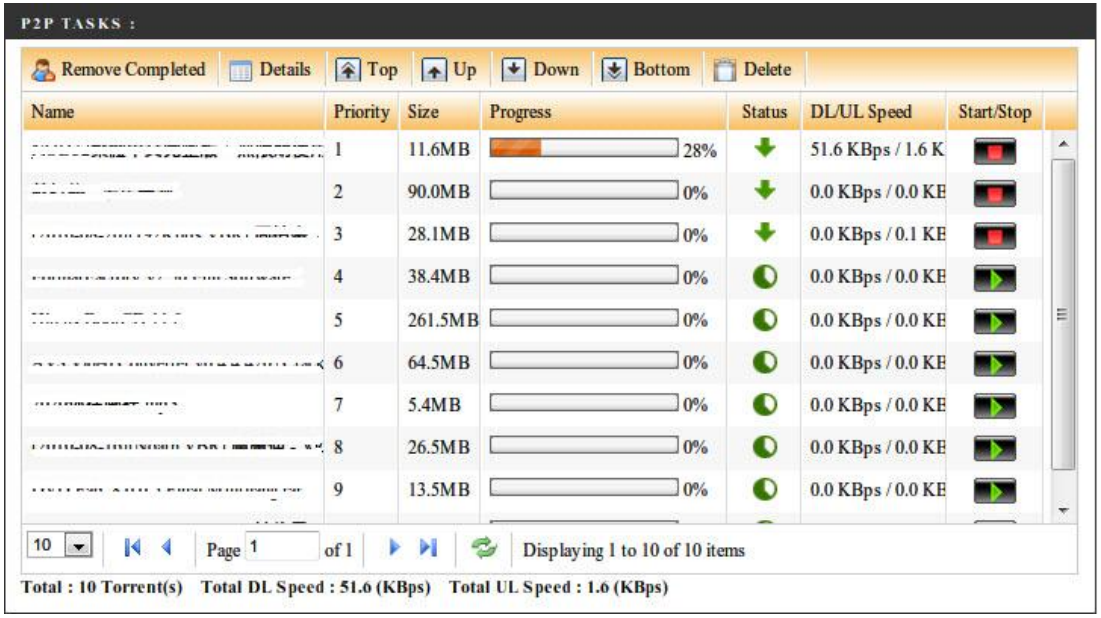


NAS: New Features Update

Enhanced Torrent Download Engine

- New D-Link Consumer NAS products integrates an Enhanced Torrent Download Engine
- Key enhancement includes:
  - ✓ Priority for Download Tasks
  - ✓ Download Service Scheduler (Set Time (by Hour) to Start/Stop Download Service)
  - ✓ Bandwidth Control
  - ✓ Encryption
  - ✓ etc.

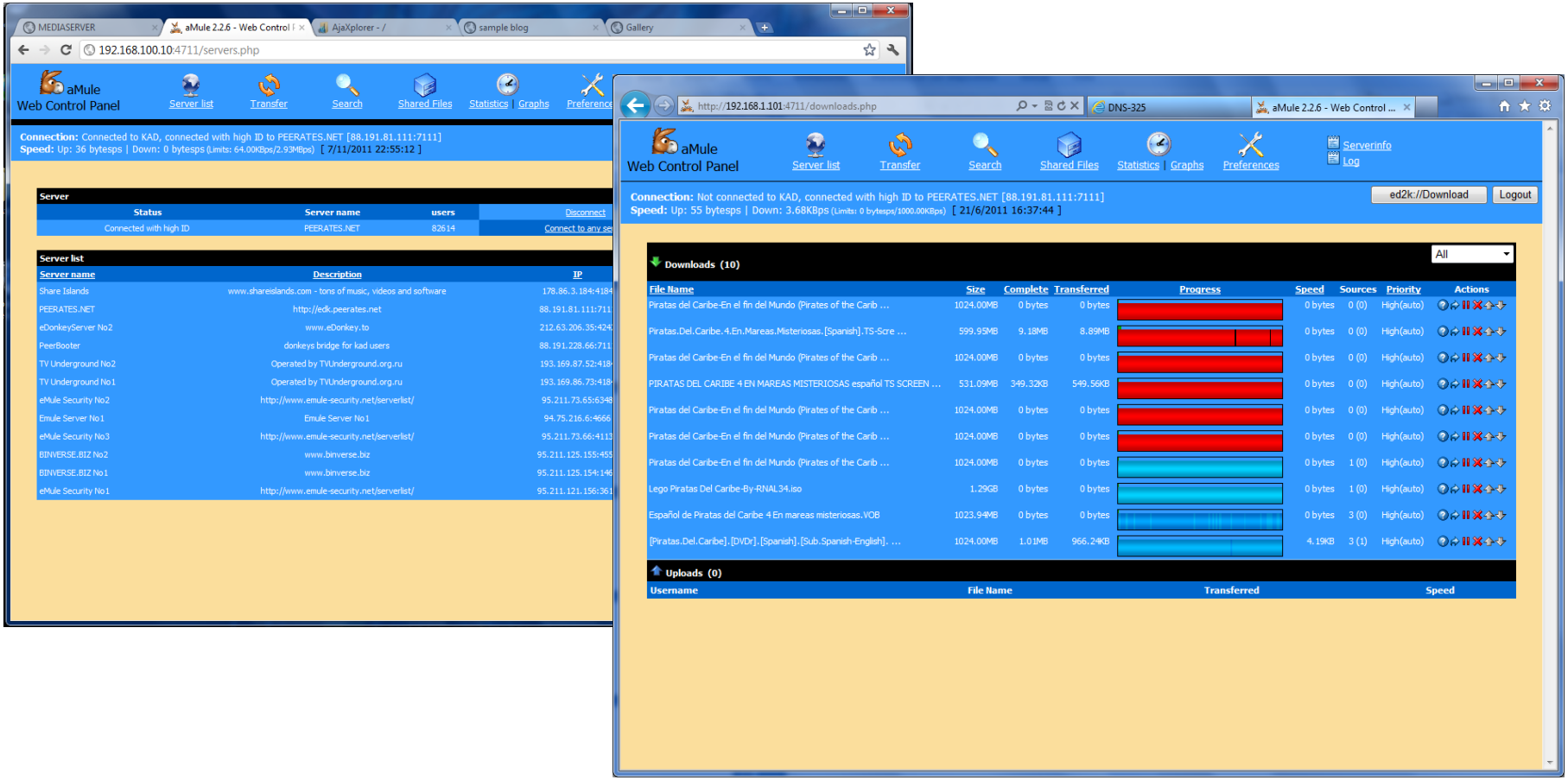




NAS: New Features Update

aMule Download Manager

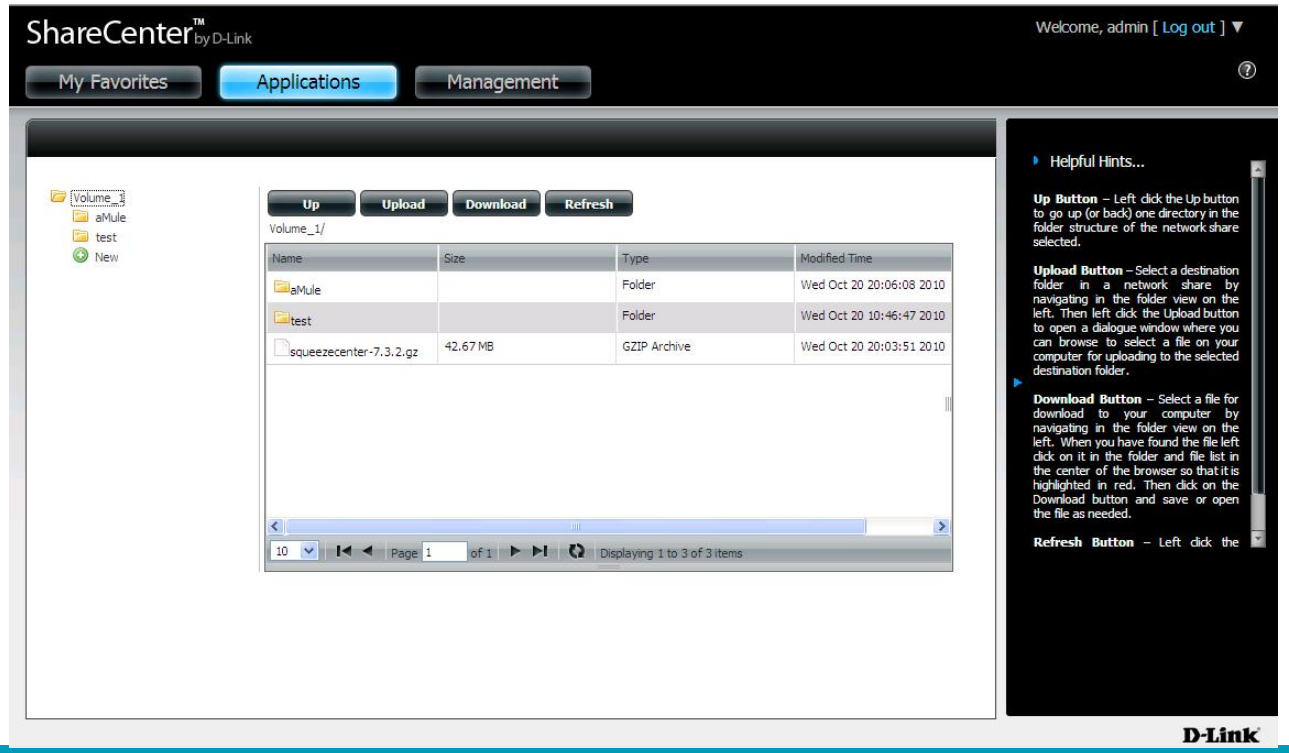
- Web management for aMule download manager



NAS: New Features Update

Web File Server

- New D-Link Consumer NAS products integrate the Web File Server, allowing users to access files through the web interface.
- With DDNS enabled and port 80 forwarding, users can access the file across the Internet to the designated folder.



NAS: New Features Update

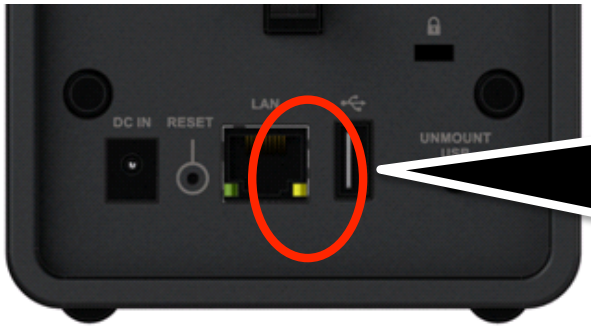
Apple Time Machine Support

- D-Link Consumer NAS products will support **Apple Time Machine** which allows Apple® users to easily backup any Mac computers running OS X (10.5 or later) using Time Machine.

NAS: New Features Update

External USB Drive Support

- New D-Link Consumer NAS products include one USB 2.0 port, supporting
  - USB Printers
  - External USB Drives
  - UPS Monitoring
- In addition, the ShareCenter supports USB Copy function, allowing users to easily back up your files from the External USB drive (Flash drive or Hard Drive) to the device.
- Simply connect the USB drive to the USB port on the front panel, and then push the **USB Copy Button**. All the data stored in the USB drive will be copied to the ShareCenter.



USB Button:

- ✓ USB Copy: Press 1 second to copy the data stored in the USB drive to the ShareCenter Pulse
- ✓ USB Un-mount: Press over 5 second to safely un-mount the attached USB drive.

Product Portfolio

25 YEARS of technology & innovation

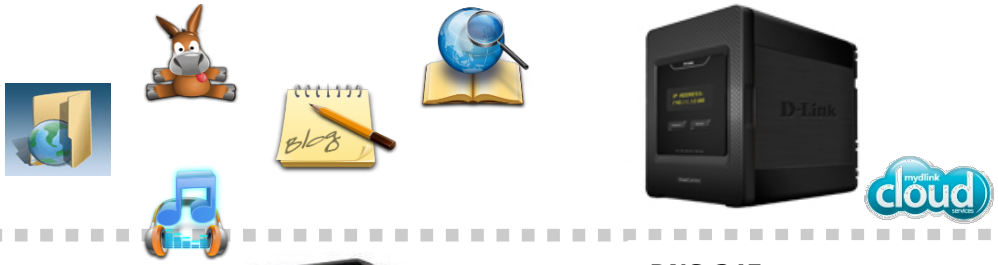
D-Link®

Product Portfolio NAS Storage

4-bay

2-bay

1-bay



DNS-345
ShareCenter Quattro 4-Bay Network Storage
- 1.6 GHz CPU / 512MB RAM
- 2 GbE
- Rich Consumer Features
- Basic SMB Feature

DNS-325
ShareCenter Shadow
2-Bay Network Storage Enclosure
Premium 2-Bay NAS

DNS-320 & DNS-320L
ShareCenter Pulse
2-Bay Network Storage Enclosure
Low Cost 2-Bay NAS

DNS-315
DNS ShareCenter Solo
3.5" 1-Bay NAS Enclosure

● **Available** ● **In Development** ● **In Plan**

Features

25 YEARS of technology & innovation D-Link

DNS-320 ShareCenter Pulse

Device Interfaces
- 1 Gigabit Ethernet port
- 1 USB 2.0 port supports External USB
    - USB copy button
    - Print server
    - UPS Monitoring

Networking Features
- DDNS
- FTP, CIFS/SMB, NFS, AFP
- NTP
- HTTP/ HTTPS
- PnP-X, LLTD, Bonjour, UPnP
- Users/Groups
- Quotas

BitTorrent

dlna

Disk management
- Two 3.5-inches SATA Standard Drive with capacity support up to 3 TB
- RAID 0/1, Standard and JBOD
- RAID Migration
- Disk Diagnostics (S.M.A.R.T)

Additional Features
- UPnP AV Server
- iTunes Server
- FTP Server
- NFS Server
- Peer-to-Peer Download Engine
- Remote Access
- Web File Manager
- Network Access Management
- Syslog
- Email Alerts
- Yahoo! Widget
- Power Management (Disk spin-down, Auto Power Recovery, Schedule Power off, Smart Fan, Green Ethernet)
- Media Server (DLNA certification candidate)

25 YEARS of technology & innovation

D-Link®

DNS-320L mydlink

Device Interfaces
- 1 Gigabit Ethernet port
- 1 USB 2.0 port supports External USB
    - USB copy button
    - Print server
    - UPS Monitoring

Networking Features
- DDNS
- FTP, CIFS/SMB, NFS, AFP
- NTP
- HTTP/ HTTPS
- PnP-X, LLTD, Bonjour, UPnP
- Users/Groups
- Quotas

Disk management
- Two 3.5-inches SATA Standard Drive with capacity support up to 3 TB
- RAID 0/1, Standard and JBOD
- RAID Migration
- Disk Diagnostics (S.M.A.R.T)

Additional Features
- UPnP AV Server
- iTunes Server
- FTP Server
- NFS Server
- Peer-to-Peer Download Engine
- Remote Access
- Web File Manager
- Network Access Management
- Syslog
- Email Alerts
- Yahoo! Widget
- Power Management (Disk spin-down, Auto Power Recovery, Schedule Power off, Smart Fan, Green Ethernet)
- Media Server (DLNA certification candidate)

DNS-325 ShareCenter Shadow

Device Interfaces
- 1 Gigabit Ethernet port
- 1 USB 2.0 port supports External USB
  - USB copy button
  - Print server
  - UPS Monitoring

Disk management
- Two 3.5-inches SATA Standard Drive with capacity support up to 3 TB
- RAID 0/1, Standard and JBOD
- RAID Migration
- Disk Diagnostics (S.M.A.R.T)

Networking Features
- DDNS
- FTP, CIFS/SMB, NFS, AFP
- NTP
- HTTP/ HTTPS
- PnP-X, LLTD, Bonjour, UPnP
- Users/Groups Quotas

Additional Features
- UPnP AV Server, iTunes Server, Squeeze Center
- FTP Server
- NFS Server
- Peer-to-Peer Download Engine
- Remote Access
- Remote Backup
- Web File Manager
- Network Access Management
- Log system
- Photo Station
- Apple Time Machine
- Email Alerts
- Yahoo! Widget
- USB port supports External USB (Copy Button), Print Server, and UPS monitoring
- Power Management (Disk spin-down, Auto Power Recovery, Schedule Power off, Smart Fan, D-Link Green Ethernet)
- Multi-language support
- DLNA-certified Media Server

DNS-345 ShareCenter Quattro

Device Interfaces
- 2 Gigabit Ethernet port
- 1 USB 2.0 port supports External USB
  - USB copy button
  - Print server
  - UPS Monitoring

Disk management
- Four 3.5-inches SATA Standard Drive with capacity support up to 3 TB
- RAID 0/1/5/10 5+Spare, Standard and JBOD
- RAID Migration
- Disk Diagnostics (S.M.A.R.T)
- OLED Status Display

Networking Features
- DDNS
- FTP, CIFS/SMB, NFS, AFP
- NTP
- HTTP/ HTTPS
- PnP-X, LLTD, Bonjour, UPnP
- Users/Groups Quotas

Additional Features
- UPnP AV Server, iTunes Server, Squeeze Center
- FTP Server
- NFS Server
- Peer-to-Peer Download Engine
- Remote Access
- Remote Backup
- Web File Manager
- Network Access Management
- Log system
- Photo Station
- Apple Time Machine
- Email Alerts
- Yahoo! Widget
- USB port supports External USB (Copy Button), Print Server, and UPS monitoring
- Power Management (Disk spin-down, Auto Power Recovery, Schedule Power off, Smart Fan, D-Link Green Ethernet)
- Multi-language support
- DLNA-certified Media Server
- Active Directory Support
- DFS Support

Product Portfolio NAS/SAN Storage

5-bay

DNS-1200-05
ShareCenter Pro 1200
5-Bay SMB Storage Enclosure

V1.01 FW enhancement,
-- Amazon S3
-- iSCSI multi-LUN
-- WebDAV
-- iSCSI MPIO
-- AFP

V1.02 FW enhancement,
-- D-Link Discovery Protocol
-- Virtual O/S certification
-- IPv6
-- Server Clustering support
-- EXT4 file system

Features Roadmap

DNS-1550-04
1U 4-bay Rack

- ADS
- iSCSI/NAS
- New GUI
- SNMP
- Snapshot
- 2 GbE
- High Performance
- Dual PSU

4-bay

DNS-1100-04
ShareCenter Pro 1100
4-Bay SMB Storage Enclosure

- ADS
- iSCSI/NAS
- New GUI
- SNMP
- Snapshot
- Link Aggregation
- AES
- 2 GbE

● **Available** ● **In Development** ● **In Plan**

Features

DSN-1100-04

25 YEARS of technology & innovation
D-Link®

DNS-1100-04

Disk management
- Four 3.5-inches SATA Standard Drive with capacity support up to 3 TB
- RAID 0/1/5/6/10 5+Spare, Standard and JBOD
- RAID Migration
- Disk Diagnostics (S.M.A.R.T)
- OLED Status Display

Device Interfaces
- 2 Gigabit Ethernet port
- 1 USB 2.0 port supports External USB
  - USB copy button
  - Print server
  - UPS Monitoring

Networking Features
- DDNS
- FTP, CIFS/SMB, NFS, AFP
- NTP
- HTTP/ HTTPS
- PnP-X, LLTD, Bonjour, UPnP
- Users/Groups Quotas

CITRIX ready

Windows Server 2008

Additional Features
- Remote Backup
- Web File Manager
- Network Access Management
- Log system
- Email Alerts
- Power Management (Disk spin-down, Auto Power Recovery, Schedule Power off, Smart Fan, D-Link Green Ethernet)
- Multi-language support
- Active Directory Support
- Remote Access
- Unified Storage Design
- Dual Giga LAN
- DFS Support
- Green Technology
- Snapshot
- Thin Provisioning
- Encryption
- Great Performance
- Total Backup Solution

DSN-1200-05

25 YEARS of technology & innovation

D-Link®

DNS-1200-05

Disk management
- Five 3.5-inches SATA Standard Drive with capacity support up to 3 TB
- RAID 0/1/5/6/10 5+Spare, Standard and JBOD
- RAID Migration
- Disk Diagnostics (S.M.A.R.T)
- OLED Status Display

Device Interfaces
- 2 Gigabit Ethernet port
- 1 USB 2.0 port supports External USB
    - USB copy button
    - Print server
    - UPS Monitoring

Networking Features
- DDNS
- FTP, CIFS/SMB, NFS, AFP
- NTP
- HTTP/ HTTPS
- PnP-X, LLTD, Bonjour, UPnP
- Users/Groups Quotas

Windows Server 2008

CITRIX ready

Additional Features
- Remote Backup
- Web File Manager
- Network Access Management
- Log system
- Email Alerts
- Power Management (Disk spin-down, Auto Power Recovery, Schedule Power off, Smart Fan, D-Link Green Ethernet)
- Multi-language support
- Active Directory Support
- Remote Access
- Unified Storage Design
- Dual Giga LAN
- DFS Support
- Green Technology
- Snapshot
- Thin Provisioning
- Encryption
- Great Performance
- Total Backup Solution

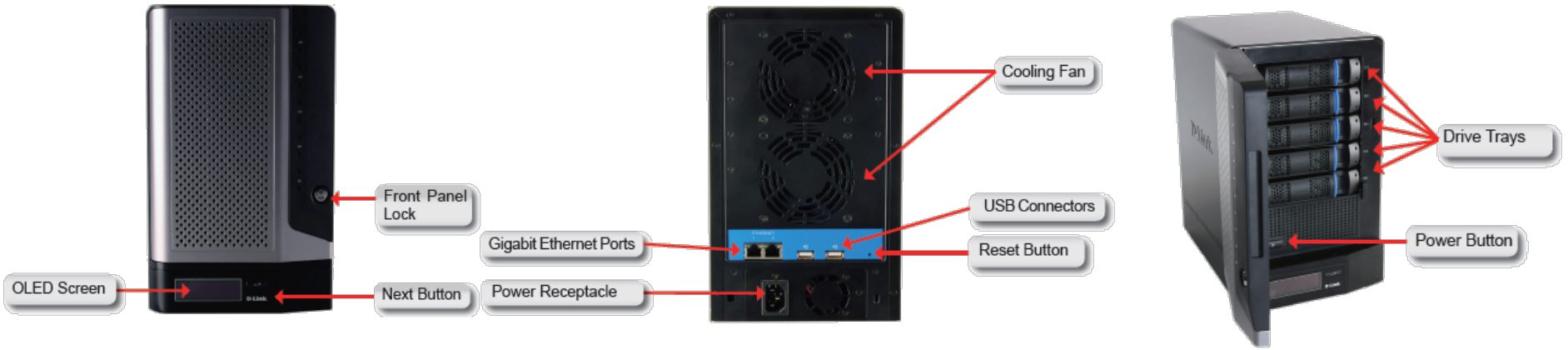
DNS-1200-05 Performance

D-Link in-house testing using IOZone vs smallnetbuilder.com RAID 5 file copy write /read performance		
	Write (MB/s)	Read (MB/s)
DNS-1200-05	81.92	72.79
Netgear RNDU4000	64.5	94.90
Netgear NVX	51.6	98.6
Buffalo TeraStation III	24.0	55.1
Buffalo TeraStation ES	23.8	39.90
Iomega StoreCenter Ix4-200d	20.90	45.70

Higher Write Performance is better for back-Up applications and CCTV Environments
Higher Read Performance is better for general purpose storage

DNS-1200-05

- **DNS-1200-5 is optimized for data protection applications:**
- 5 drives means we can offer the same available capacity but with added protection:
  - 4 x 1TB RAID 5 = 3TB usable capacity
  - 5 x 1TB RAID 5 = 4TB usable capacity or **3TB RAID 6**
- RAID-6 ensures you still have access to your data if 2 drives fail (and most people will use low cost SATA drives that have low MTBF so are more likely to fail)
- Performance tuned to optimise write performance for reduced back-up time
- Includes Snapshots for fast restore in the event of a failure
- Includes Farstone back-up software so users can simply back-up their valuable data
- Includes remote back-up so you can copy your data to another location for disaster recovery applications (in case of fire or theft)



DSN-1550-04

25 YEARS of technology & innovation
D-Link®

DNS-1550-04

Disk management
- Four 3.5-inches SATA Standard Drive with capacity support up to 3 TB
- RAID 0/1/5/6/10, Standard and JBOD
- RAID Migration
- Disk Diagnostics (S.M.A.R.T)
- OLED Status Display

Device Interfaces
- Redundant power supply
- 2 Gigabit Ethernet port
- 5 USB 2.0 port supports External USB
  - USB copy button
  - Print server
  - UPS Monitoring

Networking Features
- DDNS
- FTP, CIFS/SMB, NFS, AFP
- NTP
- HTTP/ HTTPS
- PnP-X, LLTD, Bonjour, UPnP
- Users/Groups Quotas

vmware READY

Windows Server 2008

CITRIX ready

Additional Features
- Remote Backup
- Web File Manager
- Network Access Management
- Log system
- Email Alerts
- Power Management (Disk spin-down, Auto Power Recovery, Schedule Power off, Smart Fan, D-Link Green Ethernet)
- Multi-language support
- Active Directory Support
- Remote Access
- Unified Storage Design
- Dual Giga LAN
- DFS Support
- Green Technology
- Snapshot
- Thin Provisioning
- Encryption
- Great Performance
- Total Backup Solution
- IPV6
- MySQL
- DLNA
- P2P Downloads

25 YEARS of technology & innovation

D-Link®

DNS-1550-04 Hardware Specification

Item	Specification
CPU	Intel Atom D525 Duel-Core 1.8 GHz
RAM	2 GB
Flash	256 MB
# of HDD	4, support SATA II HDD.
VGA	Yes (for debug only)
USB	Front x 1/Rear x 4
Ethernet Port	Gigabit x 2
Power Supply	250 W (80 PLUS Certified) x 2 (Redundancy)
Enclosure Dimension	1U Rack
Chassis	Metal
Button	Power, One-Touch Backup, Reset

DNS-1550-04 Software Specification

Category	Functionality & Feature
RAID Level	0, 1, 5, 6, 10,1E
RAID Management	PDM, online RAID level Migration, online Capacity Expansion, Synchronization, DDF
iSCSI	Target/Initiator, CHAP, LUN Mapping/Masking, SPC-3, MPIO
Network	IPV4, IPV6, Load Balance, Fail Over, IEEE 802.3ad, Balance XOR, LLTD
Network File Sharing	SMB/CIFS, AFP, NFS, WebDAV, FTP server,
System Management	Telnet, SSH, LCD Configuration, Setup Wizard, Firmware Upgrade
Backup Solution	NAS remote backup, External Flash backup/restore, Amazon S3, NAS volume Snapshot, Apple Time Machine Support, One-touch backup
PXE Server	Yes
Backup software Bundle	Acronis Backup and Recovery NAS Edition (for Server and workstation)
Disk Management	Wake-on-LAN, Disk Spin Down, MAID 2.0, Media Patrol, HDD S.M.A.R.T
File System	XFS
Security	System Firewall, Volume Encryption, IP Block, Connection Monitor
Application Server	Web Server, SQL, File Management
Power Management	Schedule Power on/off, UPS (USB/Ethernet), Auto Power Recovery
Account Management	Windows ADs, Open LDAP
Language Support	English, German, French, Italian, Spanish, Russian, Japanese, Korean, Traditional Chinese, Simplified Chinese

DNS-1550-04

Unified NAS and IP-SAN solution.

- Enterprise class RAID protection
- Best-in-class iSCSI performance

Designed for SMB environments that need the simplicity and affordability of Networked Storage

- Intuitive GUI design
- Hot swappable modular accessories

Enhanced features to enables users to secure their valuable data include:

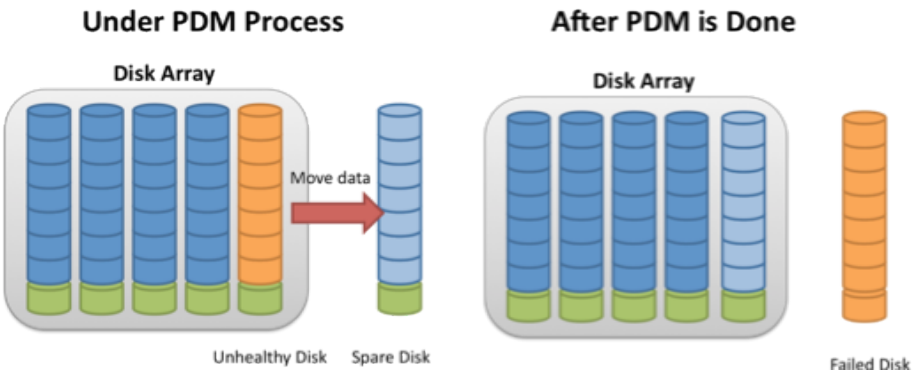
- S.M.A.R.T monitoring of drives to warn users of impending drive failures
- Comprehensive backup solution; snapshot, replication, cloud backup, etc.
- Includes Acronis Backup software.
- USB log retrieval

Green NAS: MAID 2.0& 80 plus power supply

Enterprise Class RAID Protection

- RAID 0/1/10/5/6, JBOD
- RAID level migration& Recovery
- Media Patrol: Scan media surface to make sure data is intact
- Predicable Data migration and SMART

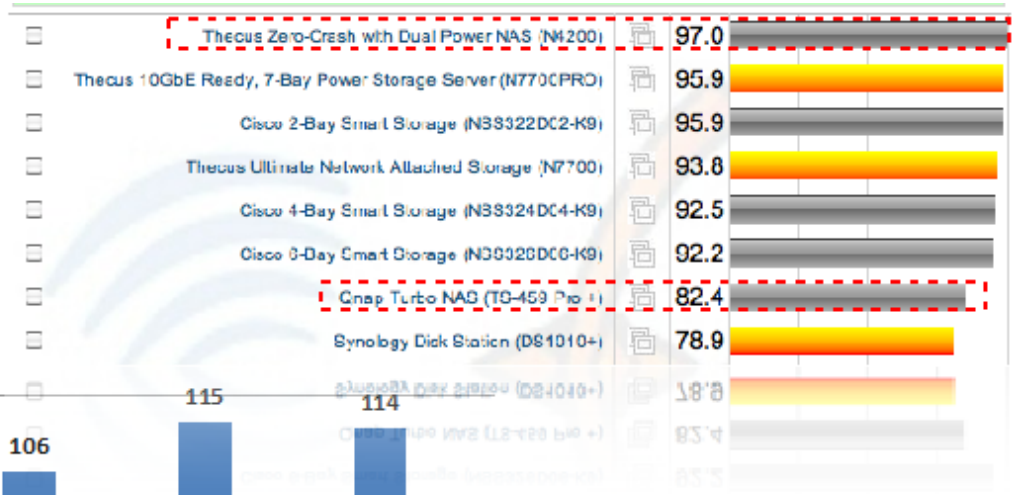
What is Predicable Data migration, PDM?

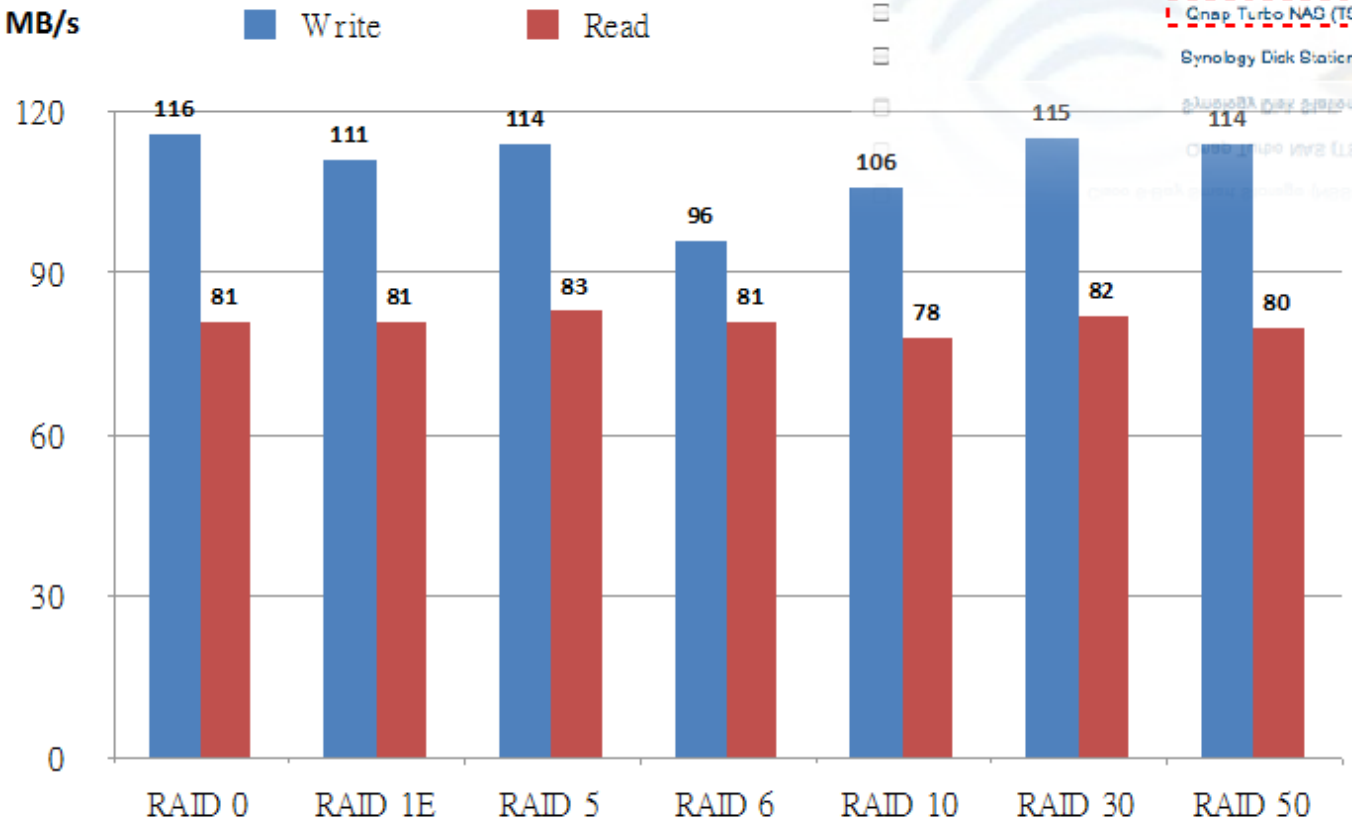


Through the PDM system, hard disk drives incorporate a suite of advanced diagnostics (i.e. S.M.A.R.T) that monitor the internal operations of a drive and provide an early warning for many types of potential problems. When a potential problem is detected, the hard drive can be repaired or replaced **before any data is lost or damaged.**

Best –in-Class iSCSI Performance

Competitors' iSCSI Write
*(From **SmallNetBuilder.com**)*

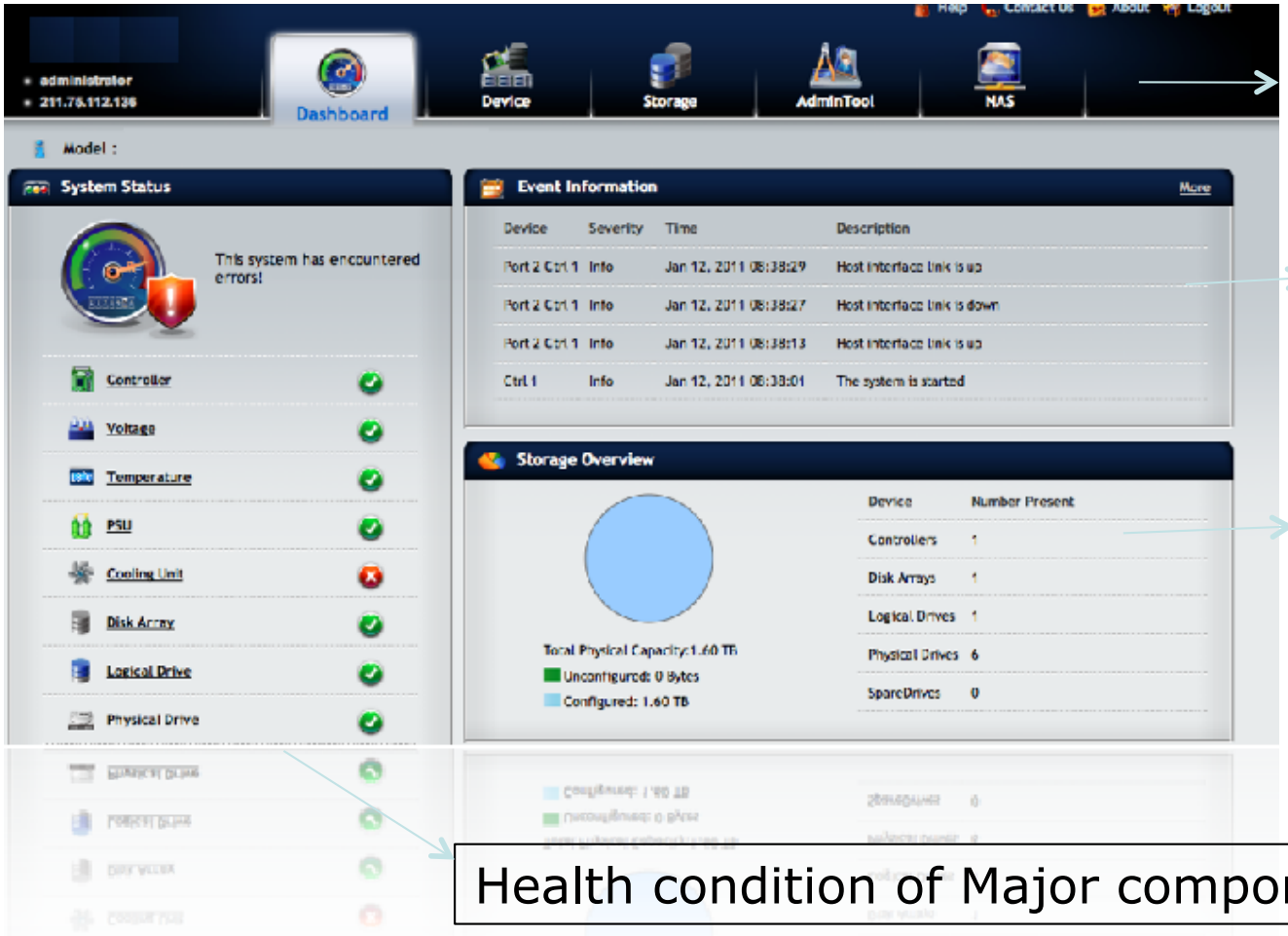




DNS-1550-04 write performance av. 108 MB/s is higher than competitors listed on SmallNetBuilder.com

Intuitive Graphic User Interface

Simplified Management – no special IT skills needed



Dashboard & wizard

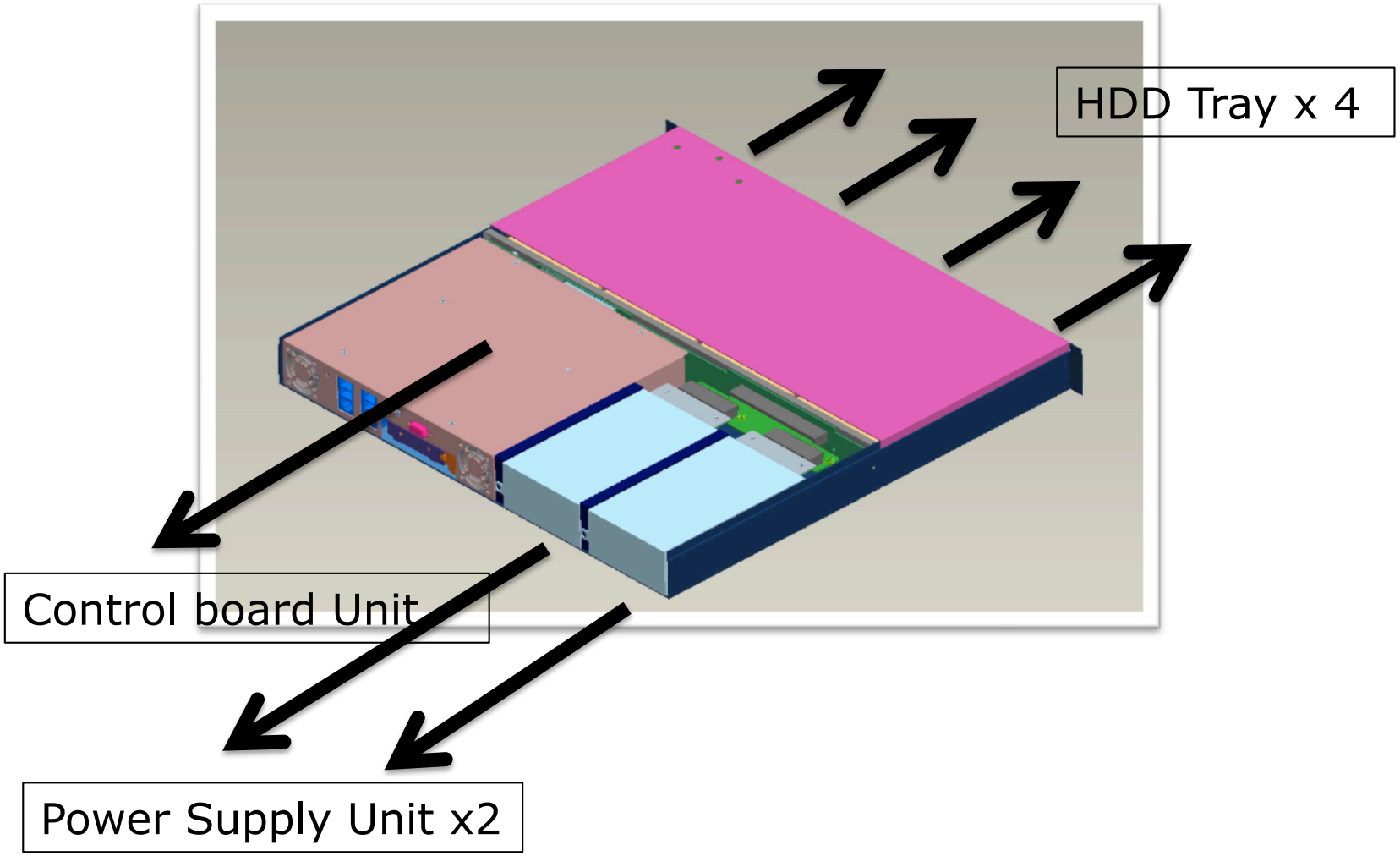
Event Log

Capacity Utilization

Health condition of Major component

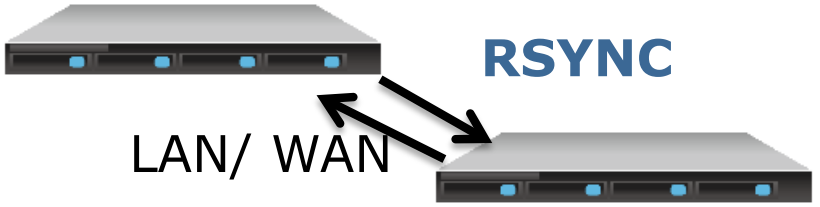
Hot swappable Modular Design

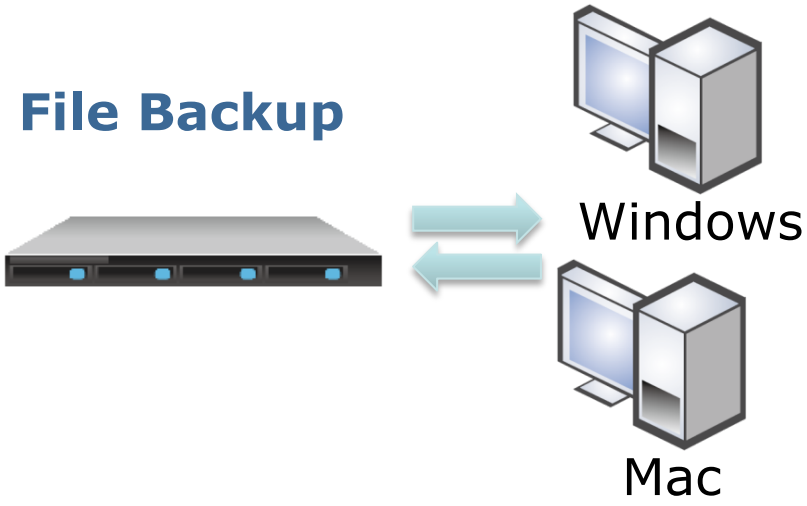
Hot swappable modular accessories, Easier for field maintenance

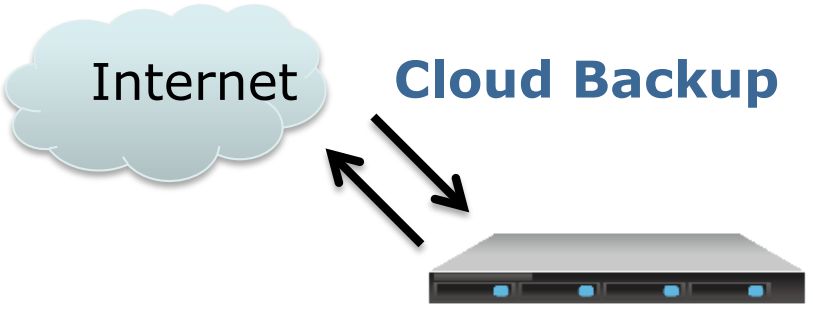


Comprehensive Backup Solution

- Workstations/ Servers backup
- Volume Snapshot
- Rsync between Storages
- Cloud backup to Amazon S3





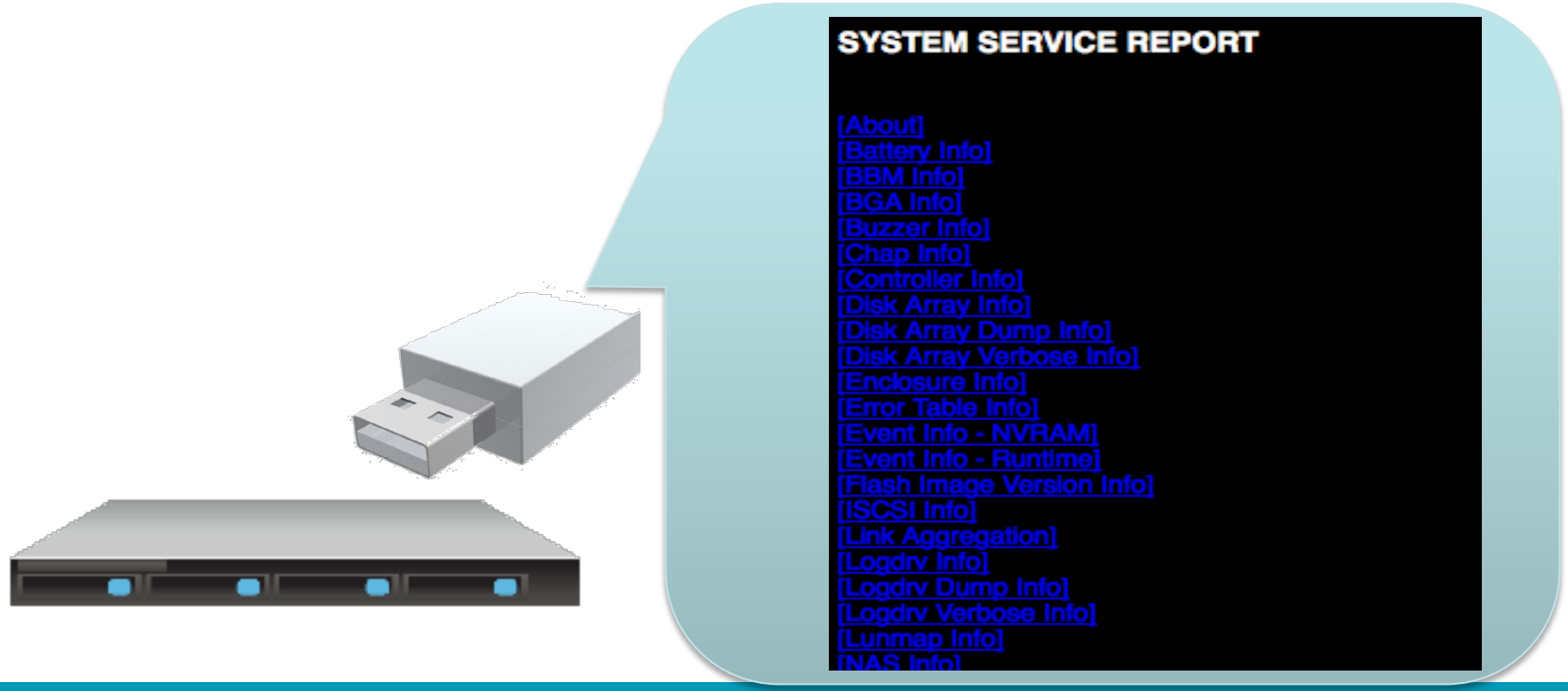


USB log Retrieval

TWO STEPS to retrieve system log:

Plugin the pen drive to NAS

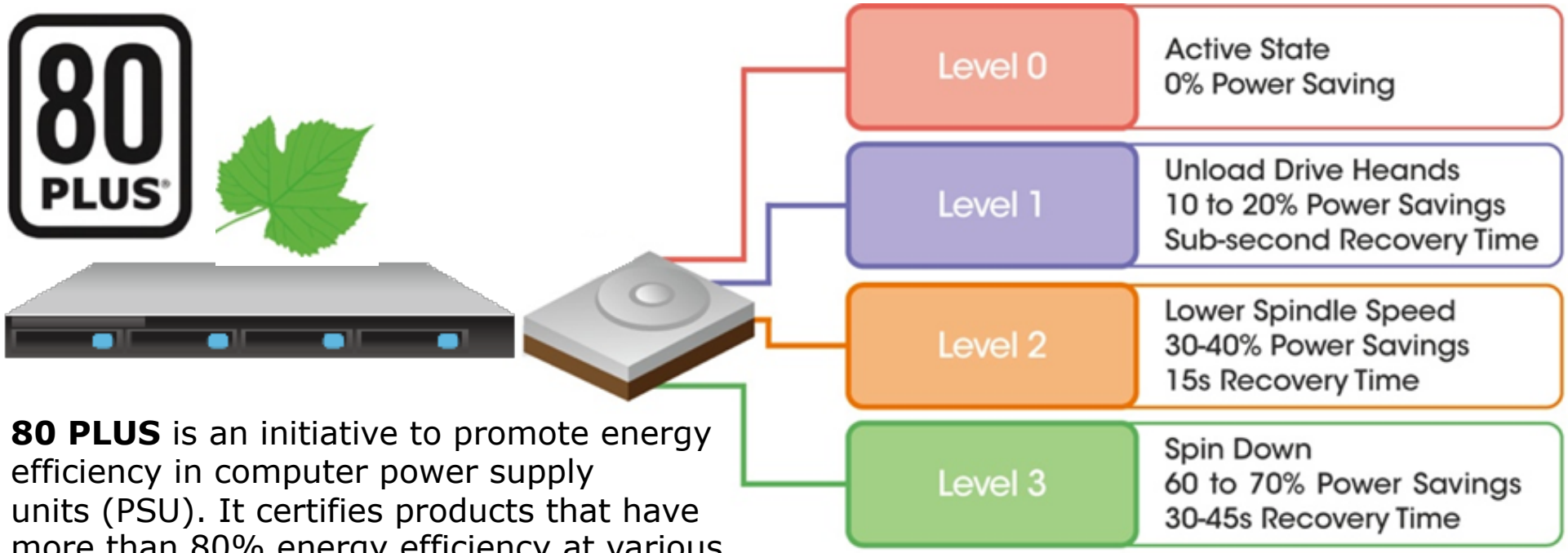
"USB Retrieval" will export the system log (*.html) to pen drive automatically.



Green NAS: MAID 2.0 & 80 plus power supply

MAID 2.0 helps users accomplish effective green storage practices.

MAID stands for **M**assive **A**rray of **I**dle **D**isks, and is a technology used in large disk subsystems where disk drives not in active use at any given time are automatically switched off to save power.



80 PLUS is an initiative to promote energy efficiency in computer power supply units (PSU). It certifies products that have more than 80% energy efficiency at various rated of load.

Product Portfolio SAN iSCSI

D-Link Flexible Storage Architecture

NAS – IP SAN

DSN-1100-04
DNS-1200-05

- *5 Hot-Swap SATA-II Hard Drive Bays(10TB)*
- *4 x 1GbE*
- *Over 80k I/Os per Sec*
- *ƒƒƒBattery Protected Cache Memory: Up to 1GB*
- *5TB Capacity with 1TB HDDSs*
- *200 Watt Power Supply*

DSN-1550-04

- *8 Bay Hot-Swap SATA-II HDD*
- *4 x 1GbE*
- *Over 80k I/Os per Sec*
- *ƒƒƒBattery Protected Cache Memory: Up to 4GB*
- *16TB Capacity with 2TB HDDSs*
- *400 Watt (N+1) Power Supply*

DSN-3200-10

- *3U-15 Bay Hot-Swap SATA-II HDD*
- *8 x 1GbE*
- *Over 80k I/Os per Sec*
- *ƒƒƒBattery Protected Cache Memory: Up to 4GB*
- *30TB Capacity with 2TB HDDSs*
- *760 Watt (N+1) Power Supply*

DSN-3400-10

- *3U-15 Bay Hot-Swap SATA-II HDD*
- *1 x 10GbE*
- *Over 80k I/Os per Sec*
- *ƒƒƒBattery Protected Cache Memory: Up to 4GB*
- *30 TB Capacity with 2TB HDDSs*
- *760 Watt (N+1) Power Supply*

DSN-6000 Series

- *2U/12 Bay Hot-Swap*
- *SAS and SATA-II HDD*
- *Up to 8 x GbE*
- *200k I/Os per Sec*
- *ƒƒƒBattery Protected Cache Memory*
- *120 TB +Capacity with 2TB HDDs*
- *N+1 Power Supply*

DSN-3000 Series

Windows Server 2008

vmware READY

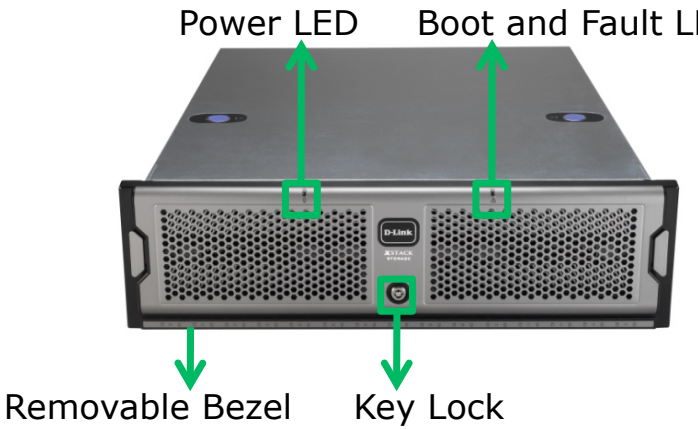
CITRIX ready

25 YEARS of technology & innovation

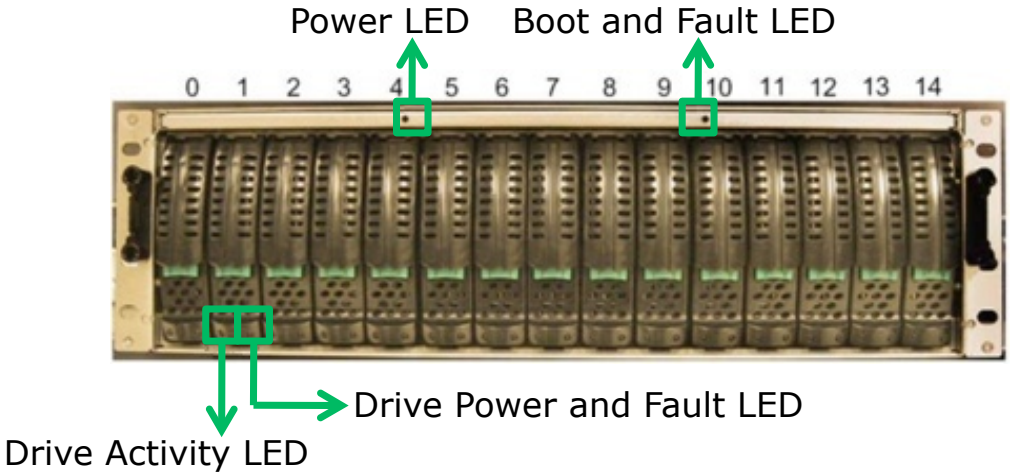
D-Link

DSN-3200-10 overview

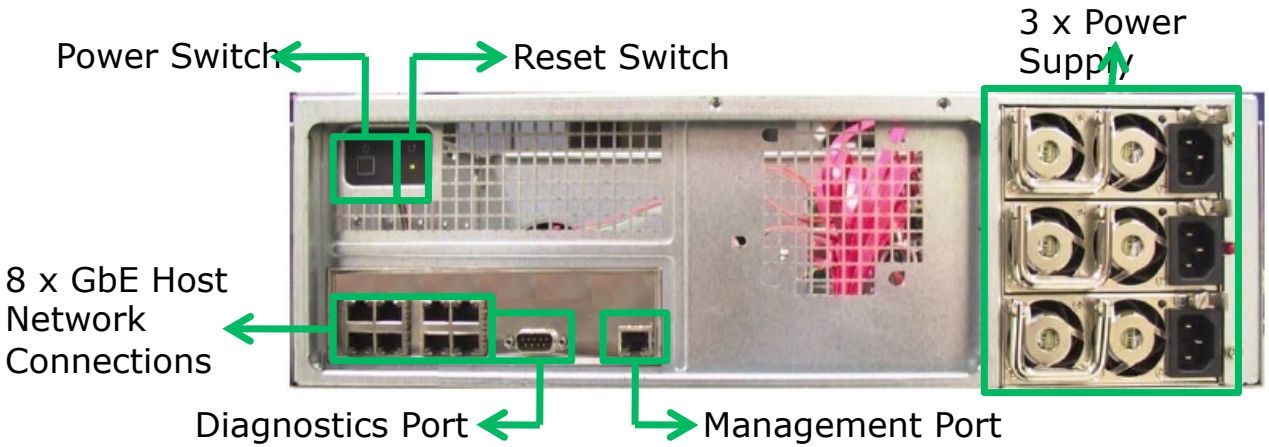
Front Panel Components



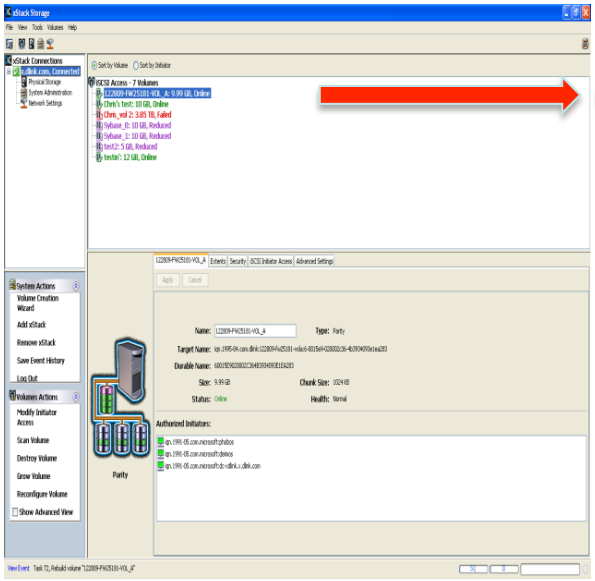
Drive Bays

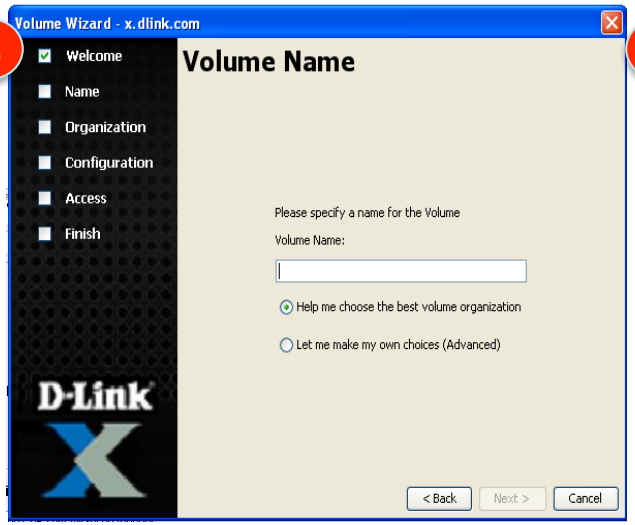


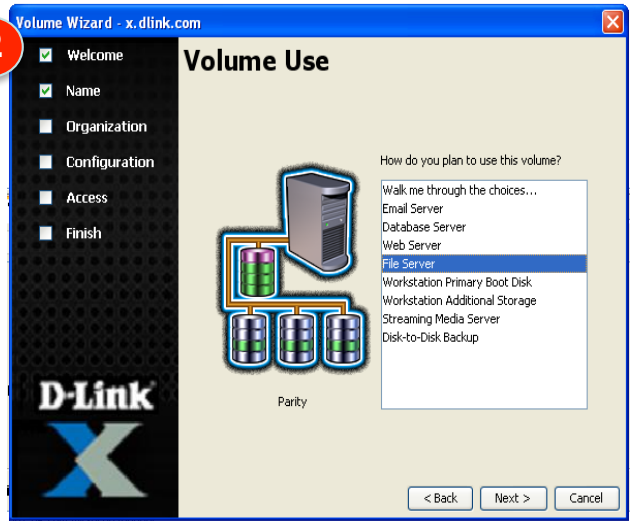
Back Panel Components

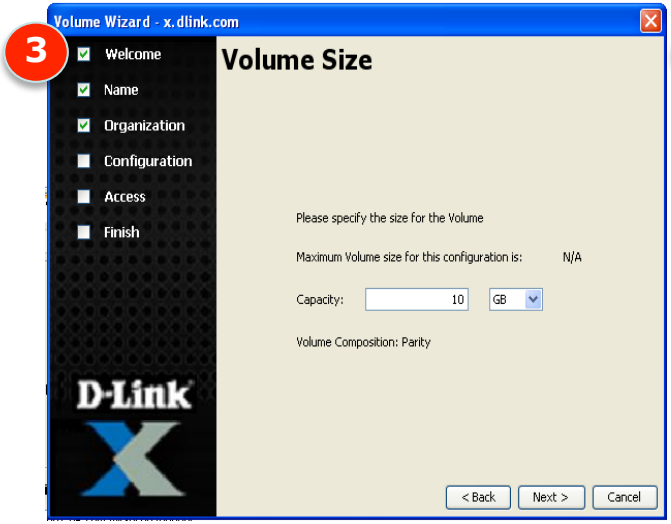


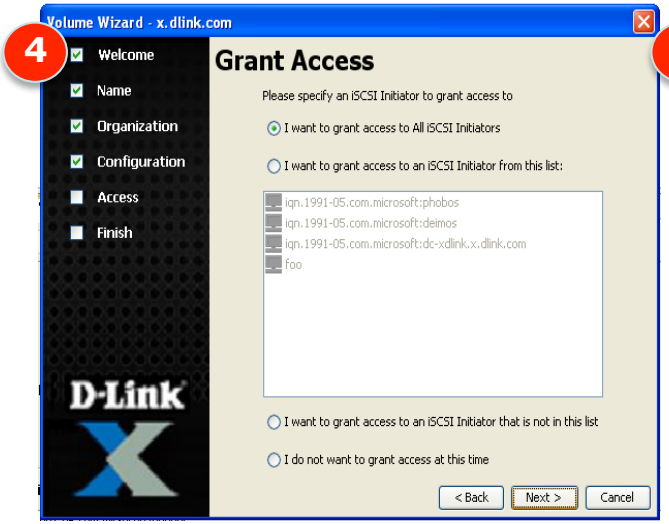
Easy Configuration – 5 Clicks

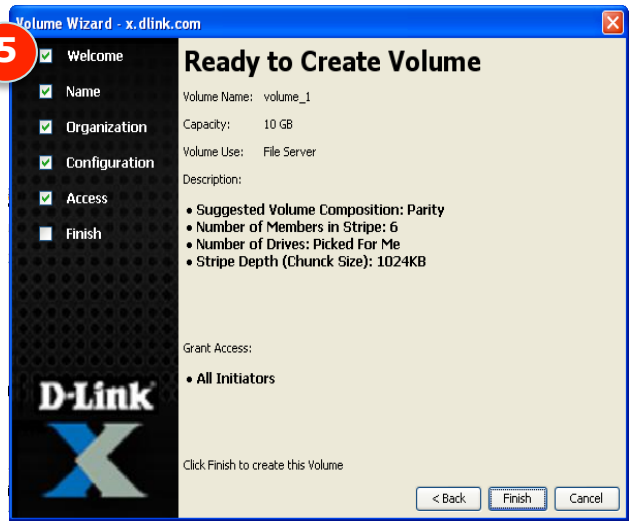












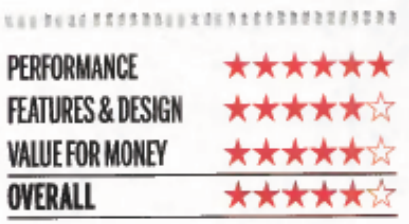
D-Link Storage - Tried & Tested

DSN-3200 - PC Pro Recommended

Highlights:

"The DSN-3200-10 offers a high storage capacity and, as you'll see from our lab tests, truly stunning performance."

"For sheer performance it can easily hold its own against many more expensive solutions."



DSN-6000 Series

Windows Server 2008

vmware READY

CITRIX ready

25 YEARS of technology & innovation

D-Link

Introducing DSN-6000 Series

Overview

The DSN-6000 series is a range of high performance, fully redundant storage solutions that are simple to deploy and manage.

All DSN-6000 storage solutions are supplied complete with Snapshot capabilities and remote replication as standard so no need for additional licenses, and each RAID controller is equipped with 4GB cache to ensure maximum performance straight out of the box.

Target Market

Small to Medium Businesses that need constant data availability but may have limited IT experience.

Small to Medium Enterprises that need secondary storage for back-up or disaster recovery applications.

Introducing DSN-6000 Series

2U 12 bay form factor

Fully redundant & hot swappable design

- Single or Dual RAID controllers with battery backup modules
- Hot Swappable Power supplies
- Replaceable Fan modules

Two variants: 4 x 1GbE or 2 x 10GbE iSCSI ports per controller

- load balancing & failover

Up to 220K IOPS & 1300MB/Sec. throughput

Advanced data protection:

- Full RAID level support including RAID 0,1,0+1,3,5,6,10,30,50, 60, JBOD,
- Snapshots: with Windows VSS support
- Replication (1 to 1 and 1 to Many)
- Vmware, Citrix and Microsoft Certification

Scalable up to 60 drives or 5 enclosures

Green Design

- Auto disk spin down
- Advanced cooling mechanism
- 80 PLUS energy-efficient power supplies

DSN-6110 & DSN-6410

- Single Controller Solutions
- Host connectivity
  - 4 x 1GbE ports (DSN-6110)
  - 2 x 10GbE ports (DSN-6410)
- Disk connectivity
  - 12 hot-swap drive bays supporting SAS and SATA II drives
- Performance:
  - DSN-6110: 500 MB/Sec
    120,000 IOPS
  - DSN-6410: 650 MB/Sec
    130,000 IOPS
- Cache Memory
  - 4GB as standard
  - Battery backup – 72 hours
- Dual Redundant hot swappable 500W power supplies

DSN-6110

DSN-6410

DSN-6120 & DSN-6420

- Dual Redundant Controller Solutions
- Host connectivity
  - 8 x 1GbE ports (DSN-6120)
  - 4 x 10GbE ports (DSN-6420)
- Disk connectivity
  - 12 hot-swap drive bays supporting SAS and SATA II drives
- Performance:
  - DSN-6120: 900 MB/Sec
    200,000 IOPS
  - DSN-6420: 1300 MB/Sec
    220,000 IOPS
- Cache Memory
  - 4GB as standard
  - Battery backup – 72 hours
- Dual Redundant hot swappable 500W power supplies

DSN-6120

DSN-6420

DSN-6110/6120 Feature Highlights

Host Interface	8 x GbE iSCSI ports (DSN-6120) 4 x GbE iSCSI ports (DSN-6110)
Drive Interface	12 x SAS or SATA II disks supported
RAID Controllers	Single controller, can be upgradable to dual (DSN-6110) Dual-active RAID controllers (DSN-6120)
Scalability	SAS JBOD expansion unit
Green	Auto disk spin-down, Advanced cooling (FAN speed control)
RAID Level	RAID 0, 1, 0+1, 3, 5, 6, 10, 30, 50, 60, and JBOD N-way mirror
Compatibility	Support multiple OSes, applications, iSCSI HBA, software iSCSI initiator, and etc.
Virtualization	VMware, Hyper-V, Citrix
Data Protection	Snapshot (Read-only and Writable), Storage based Replication
Connection Availability	Load balancing and failover support on the GbE iSCSI ports
Dimension	442.8 x 500.6 x 88.0 (mm)
Power Supply	2 x 500W redundant PSU
Cache Protection	Hot pluggable battery backup module
Fan	2 x Redundant fan module

DSN-6410/6420 Feature Highlights

Host Interface	4 x 10GbE iSCSI ports (DSN-6420) 2 x 10GbE iSCSI ports (DSN-6410)
Drive Interface	12 x SAS or SATA II disks supported
RAID Controllers	Single controller, can be upgradable to dual (DSN-6410) Dual-active RAID controllers (DSN-6420)
Scalability	SAS JBOD expansion unit
Green	Auto disk spin-down, Advanced cooling (FAN speed control)
RAID Level	RAID 0, 1, 0+1, 3, 5, 6, 10, 30, 50, 60, and JBOD N-way mirror
Compatibility	Support multiple OSes, applications, iSCSI HBA, software iSCSI initiator, and etc.
Virtualization	VMware, Hyper-V, Citrix
Data Protection	Snapshot (Read-only and Writable), Storage based Replication
Connection Availability	Load balancing and failover support on the 10GbE iSCSI ports
Dimension	442.8 x 500.6 x 88.0 (mm)
Power Supply	2 x 500W redundant PSU
Cache Protection	Hot pluggable battery backup module
Fan	2 x Redundant fan module

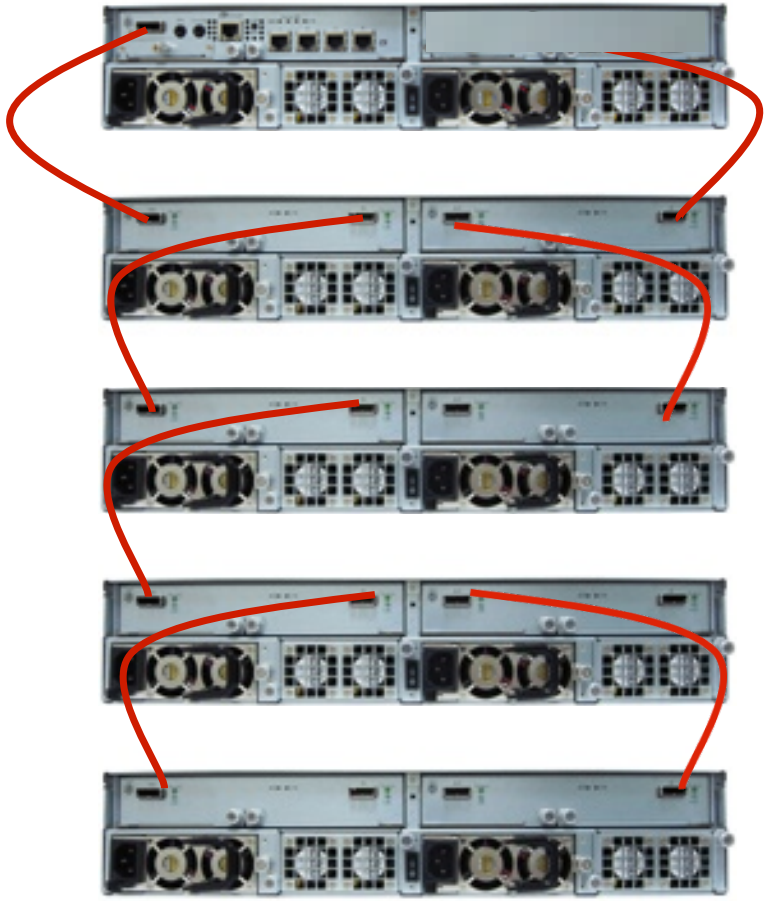
DSN-6000 family

Model	Rear view	Controllers	Gigabit iSCSI ports	10GbE iSCSI ports	Power and cooling
DSN-6110		1 x RAID	4		2 x Redundant
DSN-6410		1 x RAID		2	2 x Redundant
DSN-6120		2 x RAID	8		2 x Redundant
DSN-6420		2 x RAID		4	2 x Redundant
DSN-6020		2 x I/O	N/A	N/A	2 x Redundant

DSN-6000 Scalability

Single Controller

Expansion

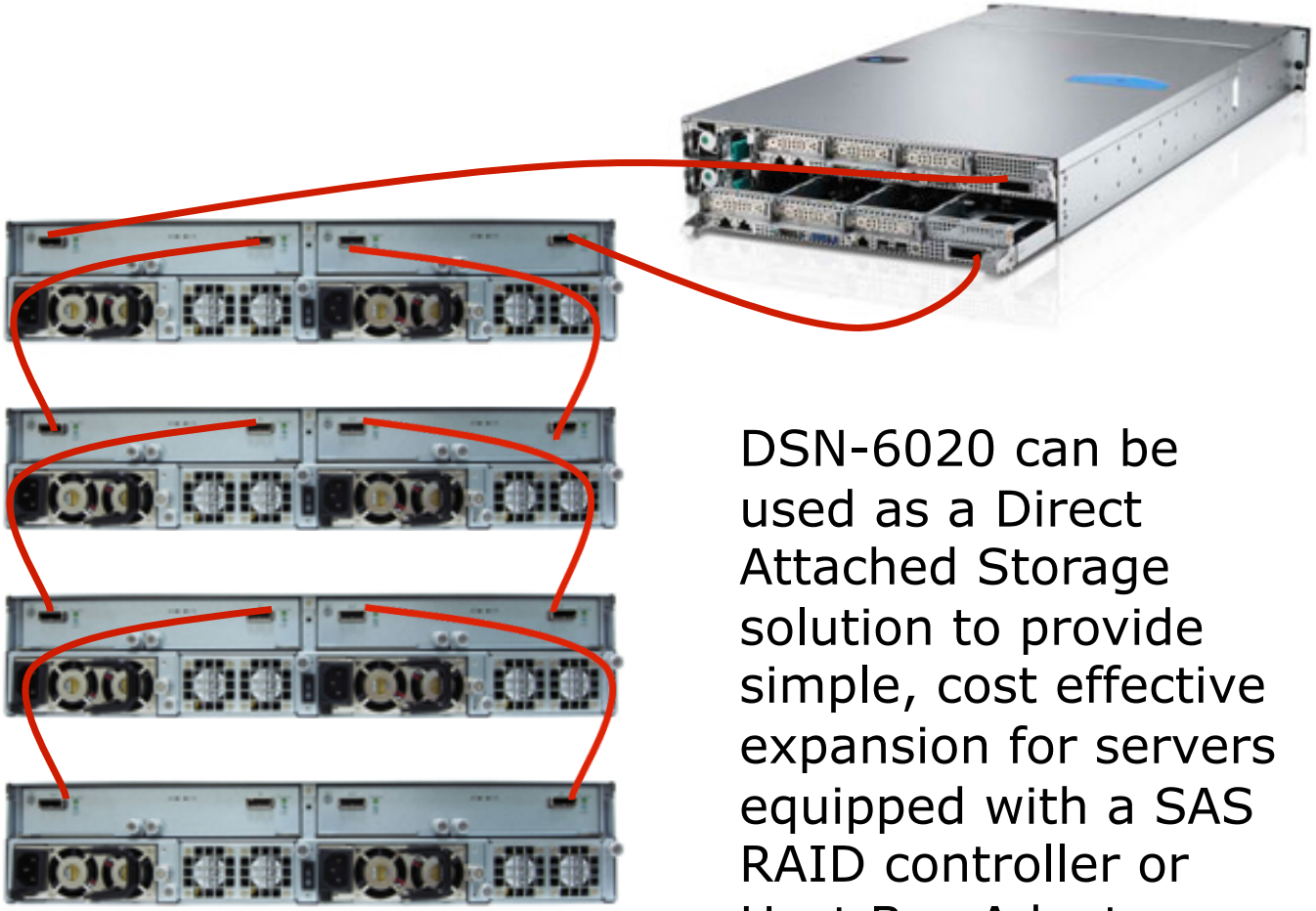


Upgrade to dual redundant Controllers

Scalable to 60 drives
With Single or Dual redundant controllers

Direct Attached storage with DSN-6020

Scale capacity as required.



DSN-6020 can be used as a Direct Attached Storage solution to provide simple, cost effective expansion for servers equipped with a SAS RAID controller or Host Bus Adaptor.

DSN-654

› What is DSN-654? (SATA bridge board)

The SAS to SATA bridge board is designed to enable single-ported SATA drives to connect seamlessly like native dual-ported SAS drives for use in enterprise storage systems (DSN-6000 series) using SAS expanders.

› What kind of configurations need DSN-654?

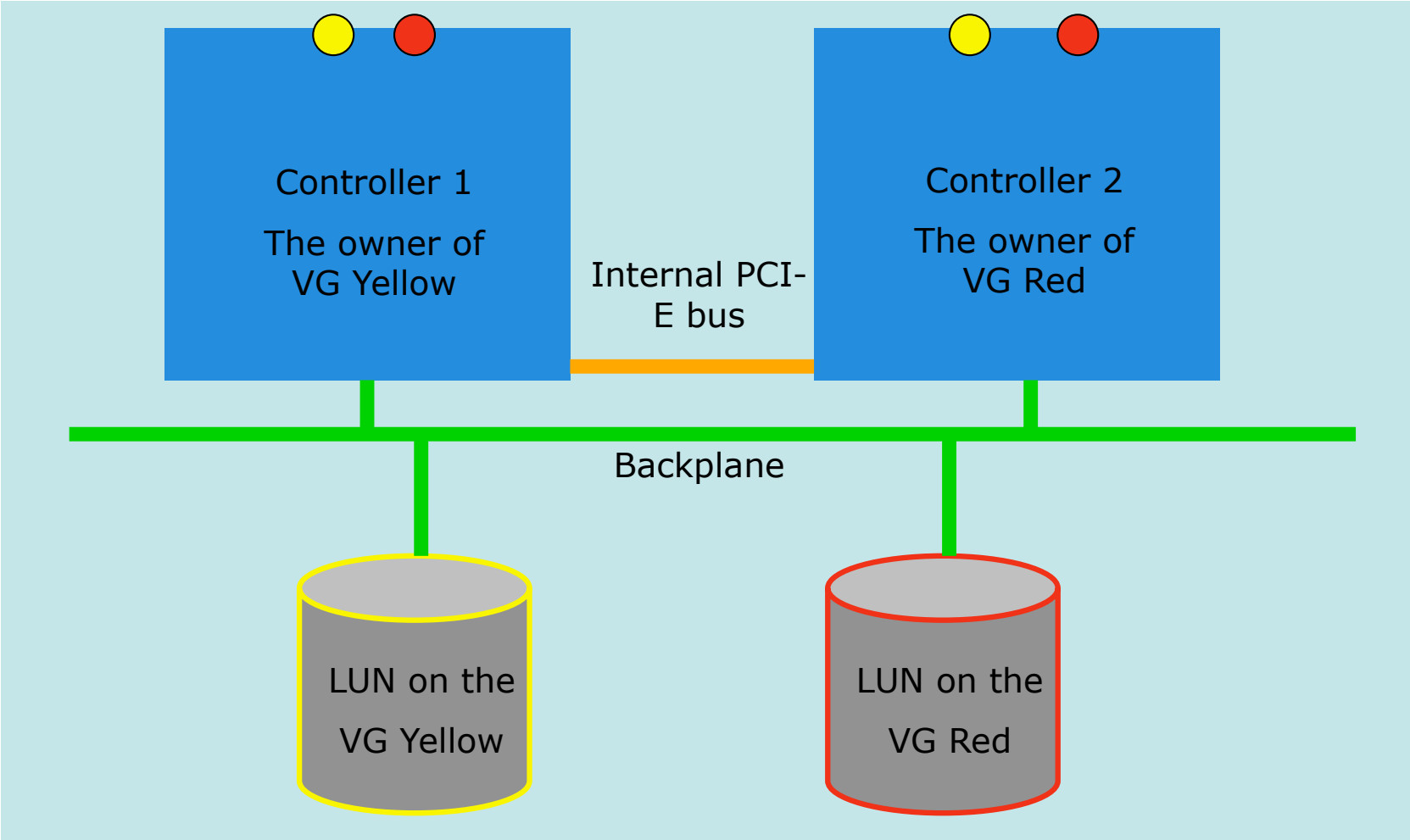
Dual controller configuration (DSN-6120/ DSN-6420) with SATA HDD

Single or Dual controller configuration with SATA HDD >3TB

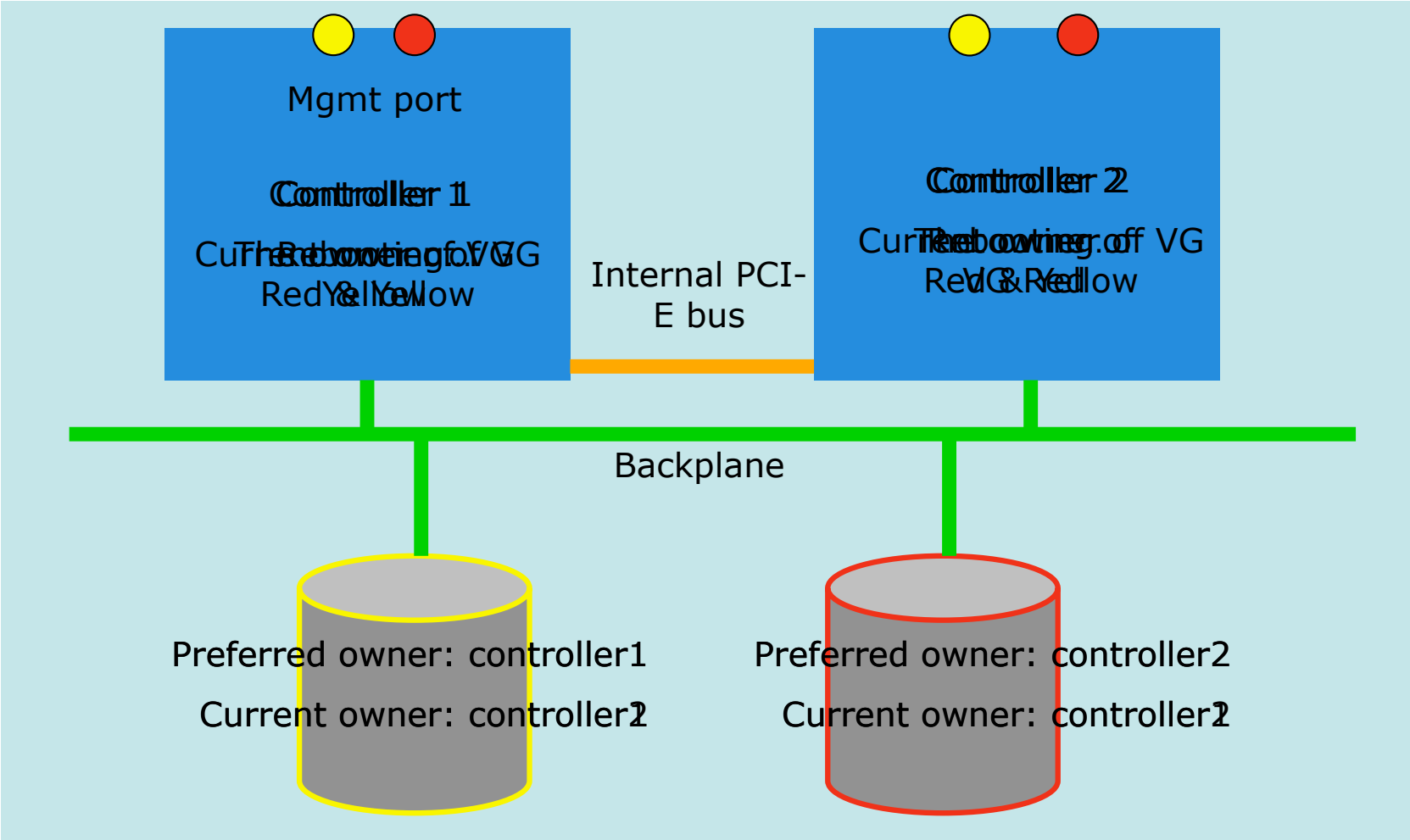
Without DSN-654

With DSN-654

Dual-controller Active/Active Design



Online Firmware Upgrade



Remote Replication

Location 2

VD3

Note:
1.Max. replication task no. is 8
2.Replication throughput is 20MBps
3.DSN-6410/20 replication throughput is limited to 20MBps

Location 1

VD2

WLAN
LAN

Embedded Service with no additional charge

A-Synchronous data replication technology

- ✓ A-Sync.: Designated time to replicate (differential) data

Full & Incremental replication

Host utility for Microsoft

- ✓ MPIO driver supports: Windows, Linux Multi-pathing, Solaris, Mac

Multi-path support over redundant controller

Backup to any location

Each location can be a source and/or a destination

VD1

HQ

D-Link Storage - Tried & Tested

"The D-Link DSN-6120 delivers high levels of redundancy and, with all features included in the price, it offers good value as well. SMBs on the hunt for an affordable, fault-tolerant IP SAN disk array with plenty of expansion potential will definitely be impressed."

EXCLUSIVE

D-Link DSN-6120

Offers excellent IP SAN performance and redundancy, plus plenty of potential for expansion – all wrapped up in an affordable package

PC PRO RECOMMENDED

KEY SPECS

2U rack chassis • 2 x 500W hot-swap power supplies • 2 x hot-swap fan modules • 12 x SAS/SATA II hot-swap drive bays. Dual hot-swap RAID controllers each with: 1.2GHz Intel IOP CPU • 2GB DDR2 cache upgradeable to 4GB • battery backup • supports RAID0, 1, 3, 5, 6, 10, 30, 50, 60, JBODs • 4 x Gigabit Ethernet • 10/100 management port • mini-SAS expansion port • 3yr RTB warranty. Options: DSN-6020 12-bay expansion enclosure, £2,365 exc VAT

OVERALL	★★★★★
PERFORMANCE	★★★★★
FEATURES & DESIGN	★★★★★
VALUE FOR MONEY	★★★★★

Behind the DSN-6120's lockable front panel sit 12 hot-swap drive bays supporting SAS and SATA drives

Si está interesado en almacenamiento de datos le recomendamos visitar:

www.almacenamientodlink.es

D-Link
Building Networks for People

Teléfono: 934 090 770

www.almacenamientodlink.es

www.youtube.com/user/DLINKIberiaTV

www.dlink.es

25 YEARS of technology & innovation

D-Link