



SMB Storage Portfolio & Solution Overview

1st of March



Disclaimer

If you are viewing this presentation after the 1st of April 2015 then it may be out of date.

This presentation provides a **high level outline** of NETGEAR SMB storage products and solutions solutions.

With a focus on continuous product innovation, our product life cycles see new product introductions, end of sale and product transition changes on a regular basis. As a result, this presentation is updated monthly.

Please speak to your NETGEAR Account Team to obtain a current version. NETGEAR Channel partners can also try local PowerShift Portals for the latest edition. Errors and omissions excepted.

What's new in the March edition?

- ReadyRECOVER Slides added & modified
- Various new product and solution slides added (3130, ReadyCLOUD)
- Updated overview slides with 3130 & 200 series information
- Finetuned – shortened messaging „Why NETGEAR storage“ slides
- Added global positioning slides
- Updated 10 GE slides

How to view

This presentation has been produced using custom shows.

This allows you to view content flexibly so you can get directly to the content you want without distraction.

To achieve this, make sure you view it in **slide show mode**.

Depending on the level of detail you intend to show you can move between

- Product Overview
- Solutions
- ReadyNAS and
- ReadyDATA Details
- Sales Tools etc.



NETGEAR



The background of the slide is composed of several overlapping geometric shapes in shades of blue, grey, yellow, and purple. The Netgear logo is positioned in the upper right corner of this graphic area.

NETGEAR®

MISSION:

**« BE THE INNOVATIVE LEADER IN
CONNECTING THE WORLD TO
INTERNET »**

Fact Sheet

+ Who are we ?

- + Created in 1996
- + Footprint in 26 countries
- + 1100 employees
- + 1,4 B US\$ in 2013
- + Stock quoted on NASDAQ – NTGR
- + Strong Balance Sheet – Debt Free and strong cash flow

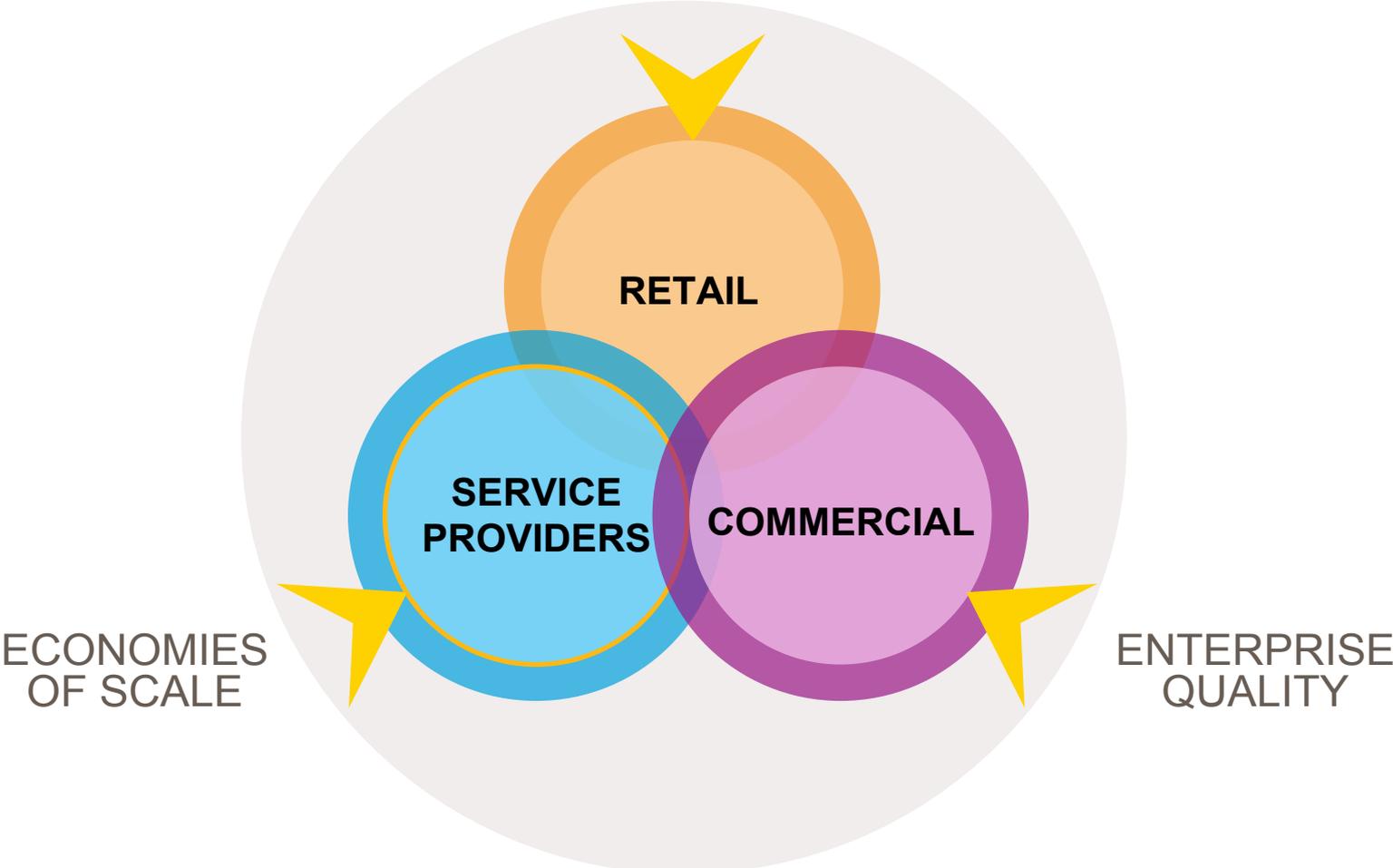
+ Market Position

- + 18 million customers Worldwide
- + 39,000 VAR partners WorldWide
- + 45,000 retail Outlets
- + 100 service providers



Three Business Units, Three Channels Singular Focus on Connectivity

BRAND



CBU Mission

Vision

NETGEAR will lead the industry by creating a unified ecosystem for medium and small organizations to acquire, deploy and optimize their ICT solutions.

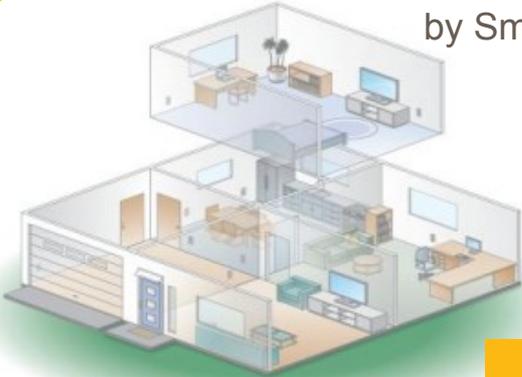
Strategy

- Easy to do business with through efficient channels
- Combine cost effective infrastructure with cloud-based solutions and support
- Targeting SOHO/Micro/Small and select Medium sized businesses
- Customers are typified by:
 - Needing to deploy cutting-edge solutions
 - Having very limited IT staff & budget
 - Drawn to turn-key solutions for low cost & rapid deployment

Cloud Drives Everything

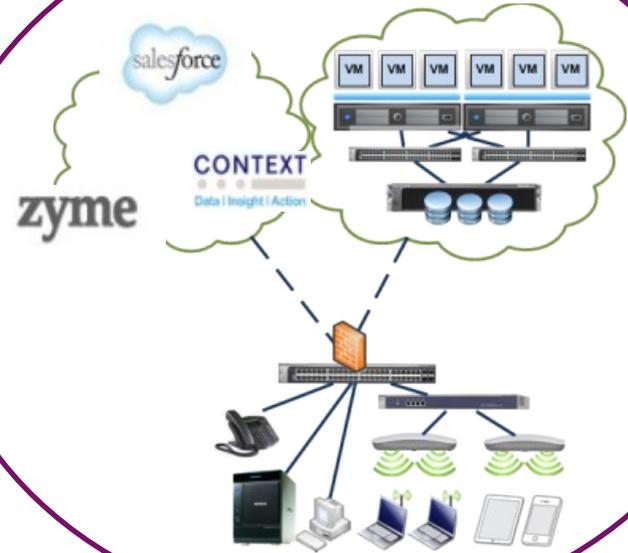
For Consumers

WiFi Smart Home Controlled
by Smartphone Via the **Cloud**



RBU

For Businesses
The **Cloud** Drives
Commoditization



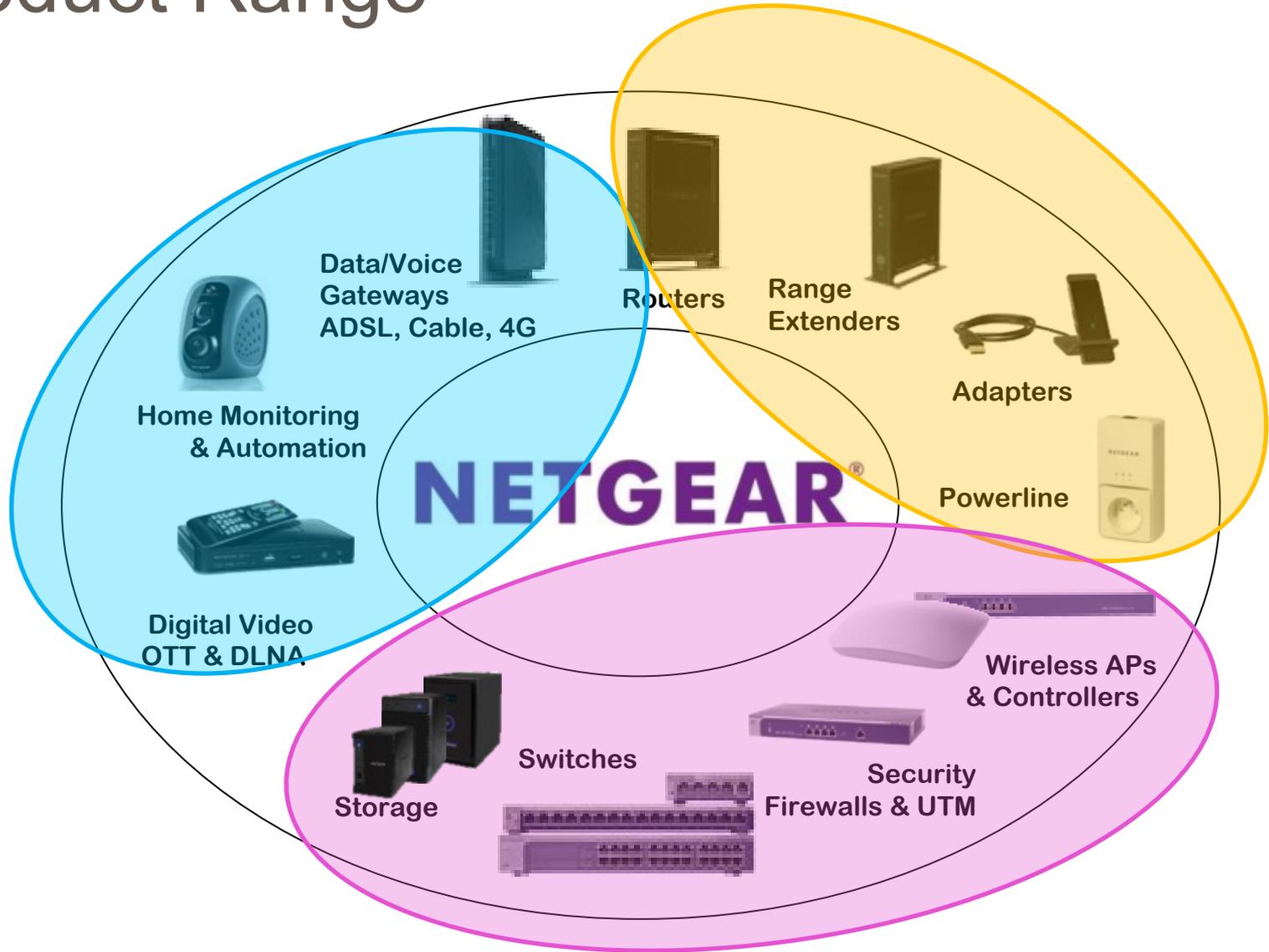
CBU

For Service Providers
Cloud is a game-changer

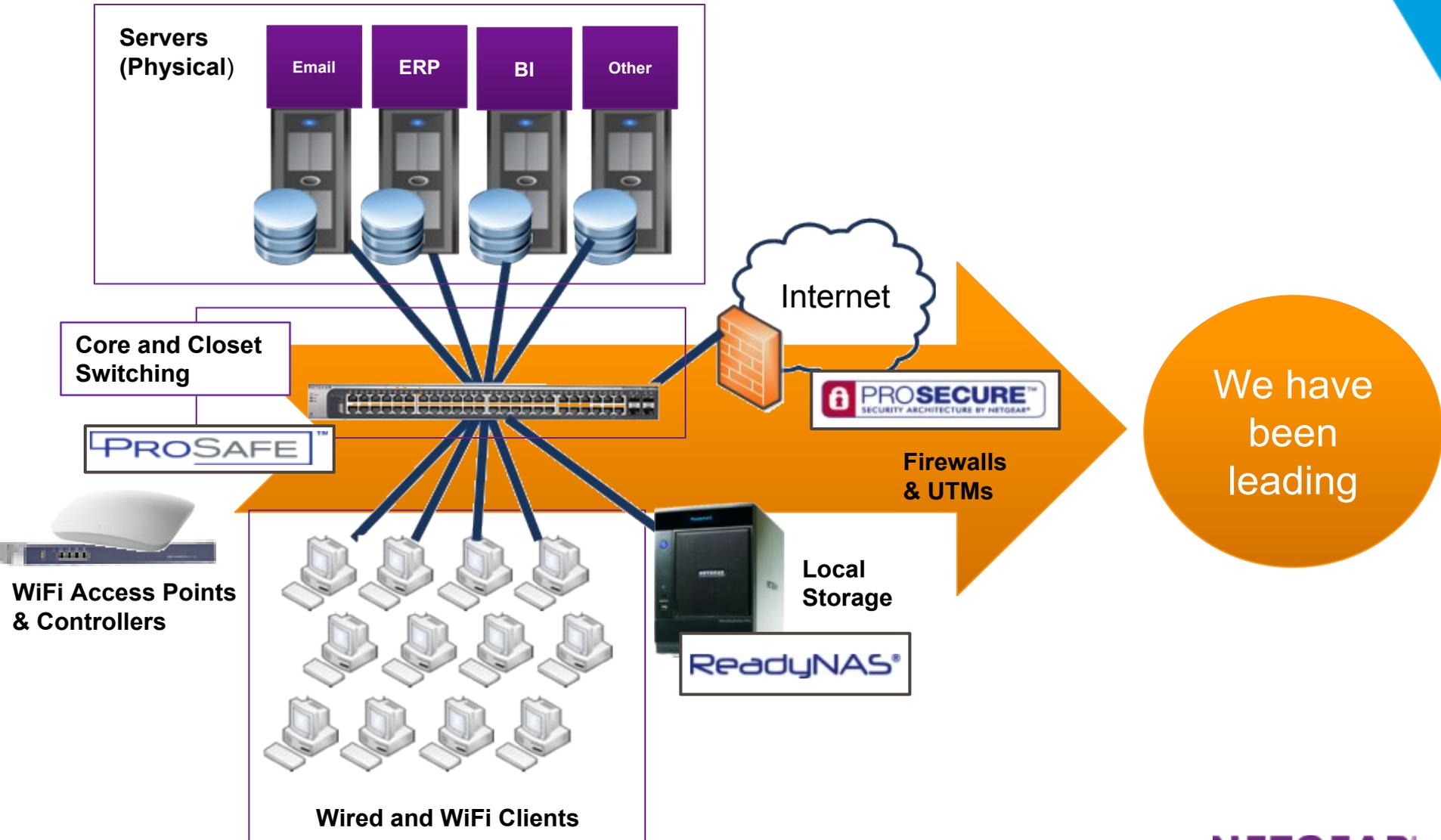
SPBU



Product Range



Traditional SMB Solution for <250 Users



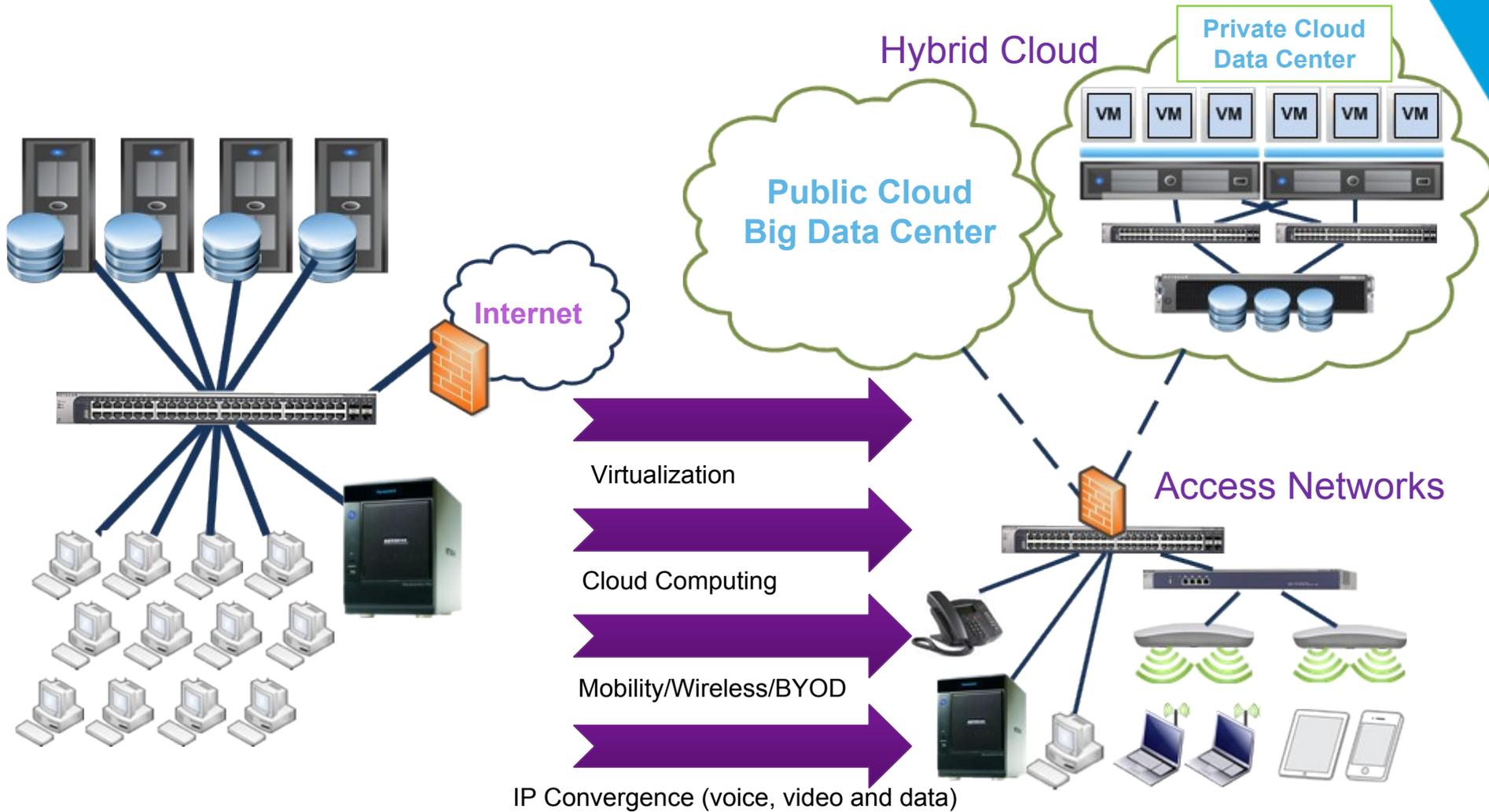
31,000,000

PRODUCTS DELIVERED TO GLOBAL BUSINESS



Transition to 21st Century SMB Network

A Hybrid Cloud & Access Network Architecture



We can scale to larger SMBs with multiple branch access networks

NETGEAR

Making Access Networks Simple to Deploy



10 GbE Switching

Future proof with ability to provide super fast cost effective network access

PoE Switching

Connecting PoE VoIP, Data, Video Conferencing, Video Surveillance

Wireless Controllers – 2 to 500 Access Points

Cost effective for BYOD environment in access networks



Smart IT, Not Big IT

ReadyNAS and ReadyDATA® Families

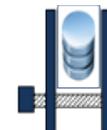
Ideal for virtualization, local/remote/cloud backup



Up to 240TB



Unlimited snapshots and restore



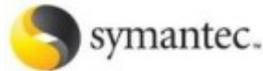
Inline compression and de-duplication



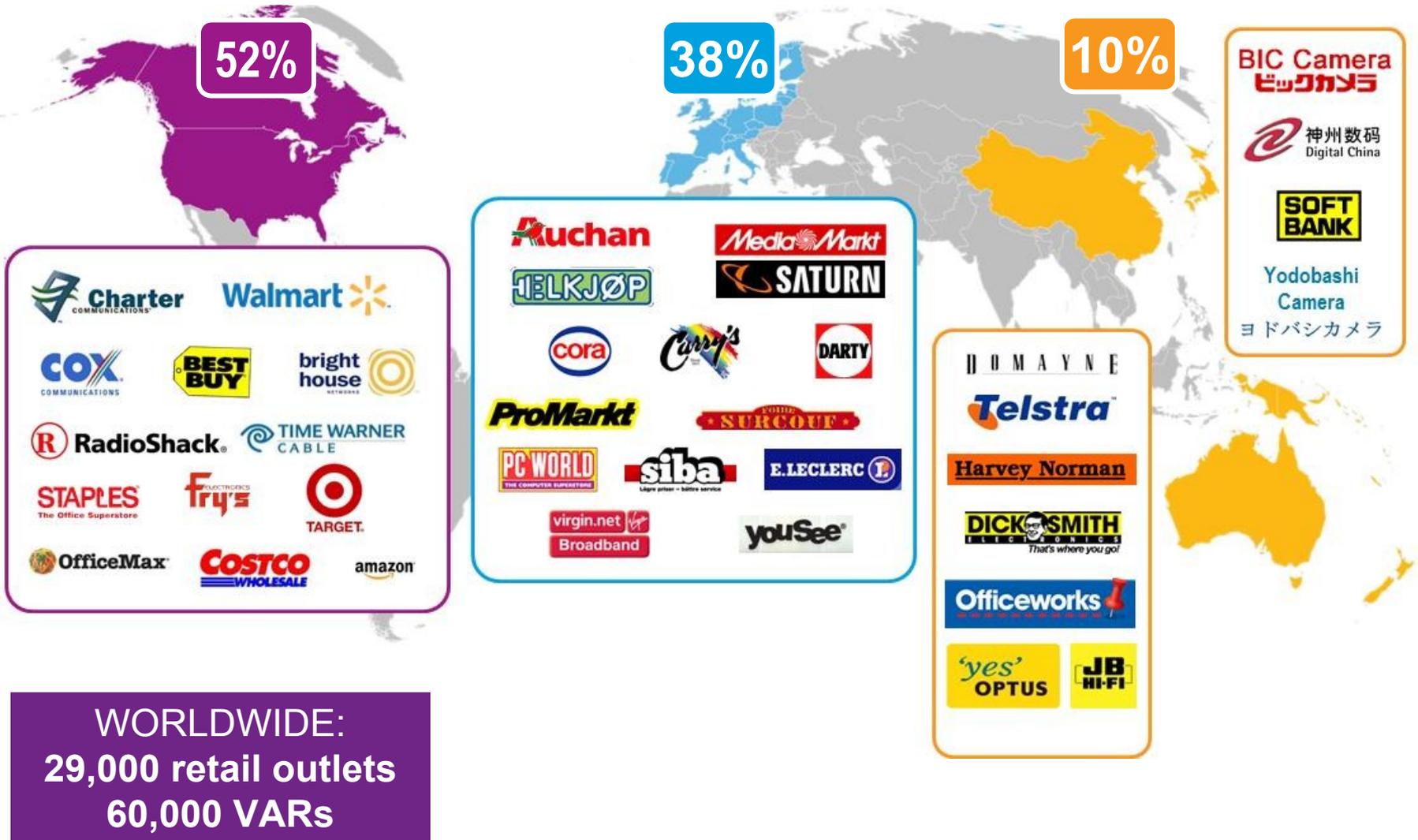
Thin provisioning

Partnerships & Certifications

- + Certifications with Microsoft, VMware & Citrix
- + Microsoft Active Directory integration
- + Compatibility with backup solutions including:



#1 Global Brand and Distribution





SWITCHES



WIRELESS



STORAGE



SECURITY

Smarter products for today's business.

Today's business climate consists of real-time communications, cloud-based applications, and a dynamic mobile workforce. Organisations must stay connected to remain one step ahead.

From reliable switches, to secure WiFi, to application aware firewalls, to network storage that continuously protects data, NETGEAR business products are purposely designed to meet the needs of this ever changing environment and keep organisations connected and moving at full speed.

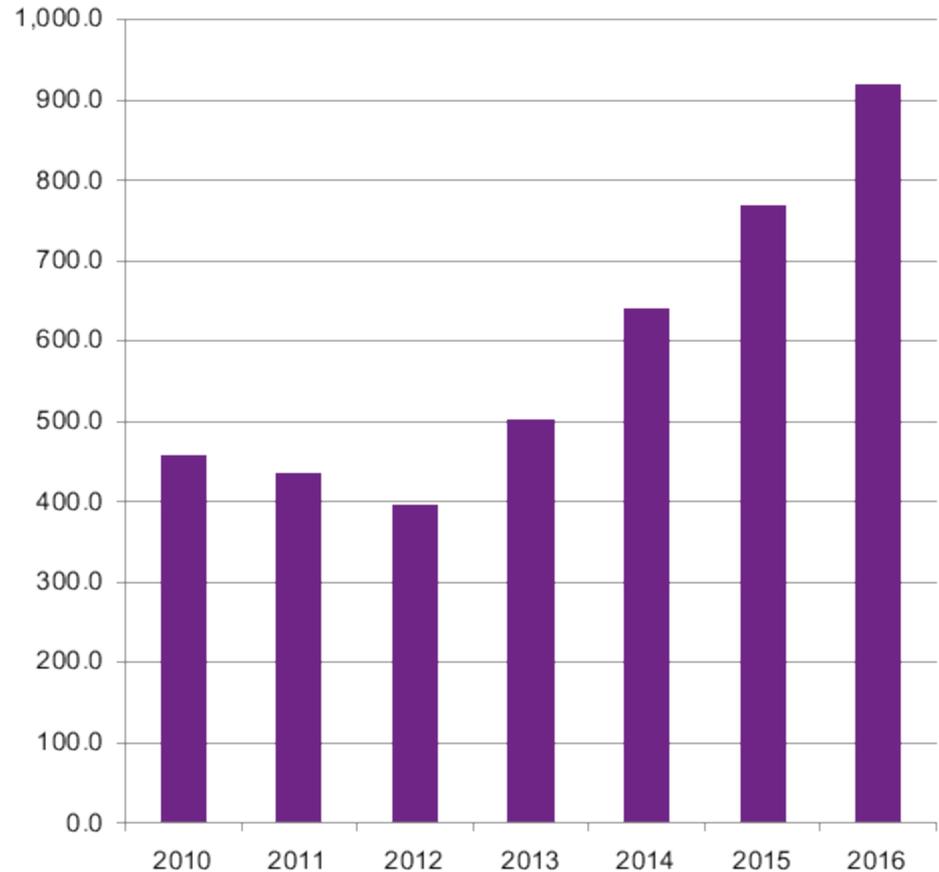
Simply, reliably and affordably.

Market Status

+ Gartner Data

- 2012 Down Industry Wide
- 2013 Bounce Back Year
- Onwards 16% CAGR

**WW NAS Market, ASP <\$5k
(\$M)**



Partnering

Partnering with NETGEAR

Making it easier for you to focus on your customers...

+ Benefits to the Reseller

- Attractive margins
- Broad portfolio from single vendor (storage, switching & wireless)
- Dedicated support for project-based opportunities

+ Benefits to the Customer

- Enterprise-class technology built and priced for SMB
 - All features included and no maintenance contract for less cost upfront
 - Easy-to-use technology and industry-best warranty for less cost over time

+ Partner Resources

- In-country account managers, system engineers and support
- “Powershift” program (education, joint marketing, deal registration)

+ Support Resources

- World-class among SMB competitors – major EU languages, mail, telephone, chat
- Way above industry average survey and customer loyalty scores

Partnering with NETGEAR (Talking Points)

Technology Advantage:

- + Reliable, Affordable, Easy to Use
- + Unique features and functionality in SMB:
 - Enterprise-like data protection,
 - 10 GE connectivity offerings
 - managed switch portfolio
- + Total cost of ownership alternative:
 - Lower upfront cost and all inclusive feature set
 - Lower long-term cost of management

Business Advantage:

- + Attractive margins
- + No „Big IT“ overhead
- + Project support
- + All you need from 1 vendor
 - Switching
 - Security
 - Wireless
 - Storage
- + Unique warranty and support
- + 17 years in business

Partnering Advantage:

- + Dedicated account managers in country
- + Systems engineers in country
- + Grow with NETGEAR: „All you need“ project support
- + „Powershift“ Partner Program:
 - Joint activities
 - Education
 - Deal registration
 - Kick-back discount

Support Advantage:

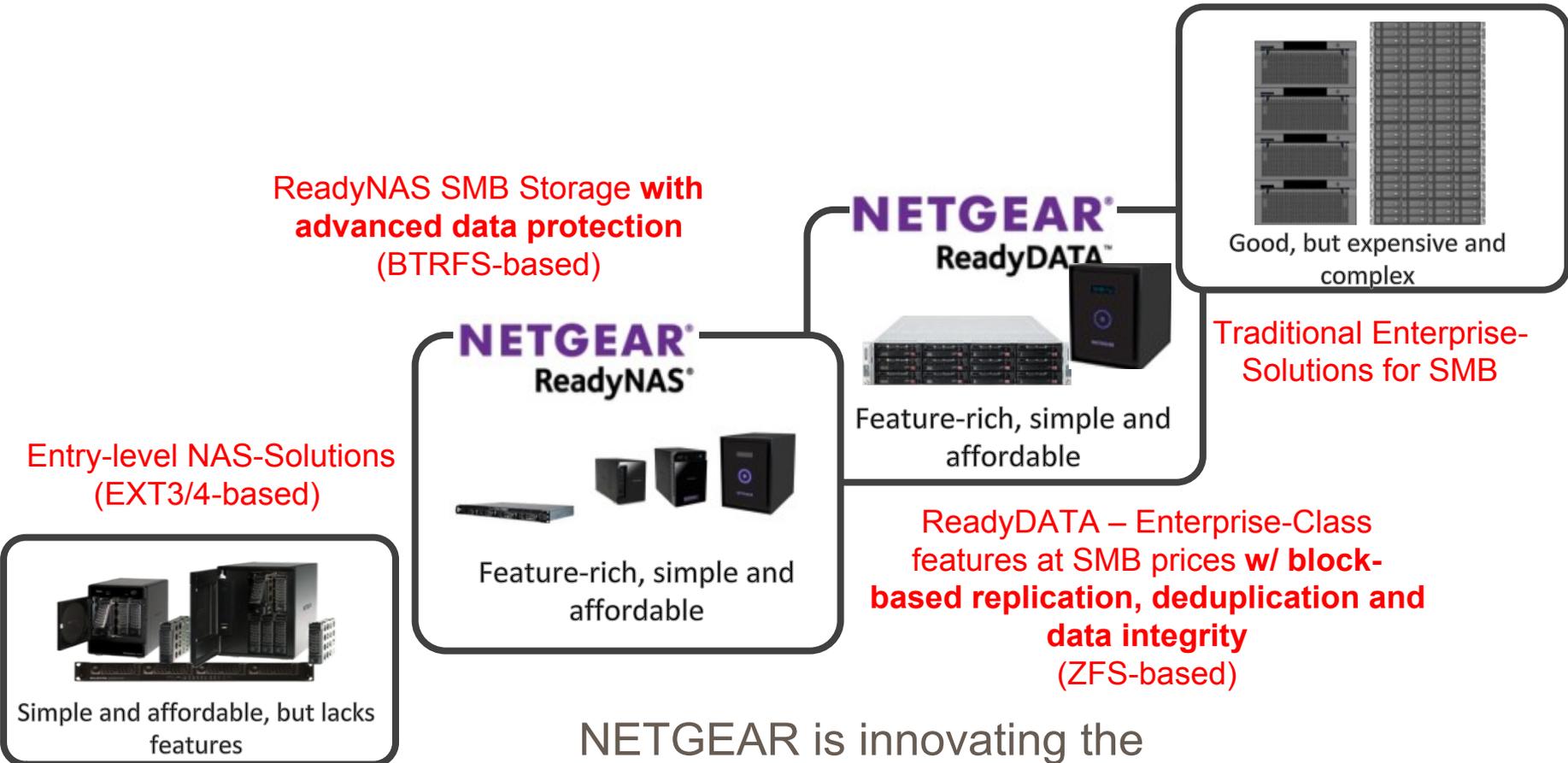
- + 94% positive survey results
- + Way above industry average NetPromoter Score (customer loyalty metric)
- + <4,3% poor support survey responses
- + Local language support (major European languages 5x9)
- + 24x7 English
- + Email AND telephone
- + Instant chat support

Product Overview



NETGEAR Storage Positioning

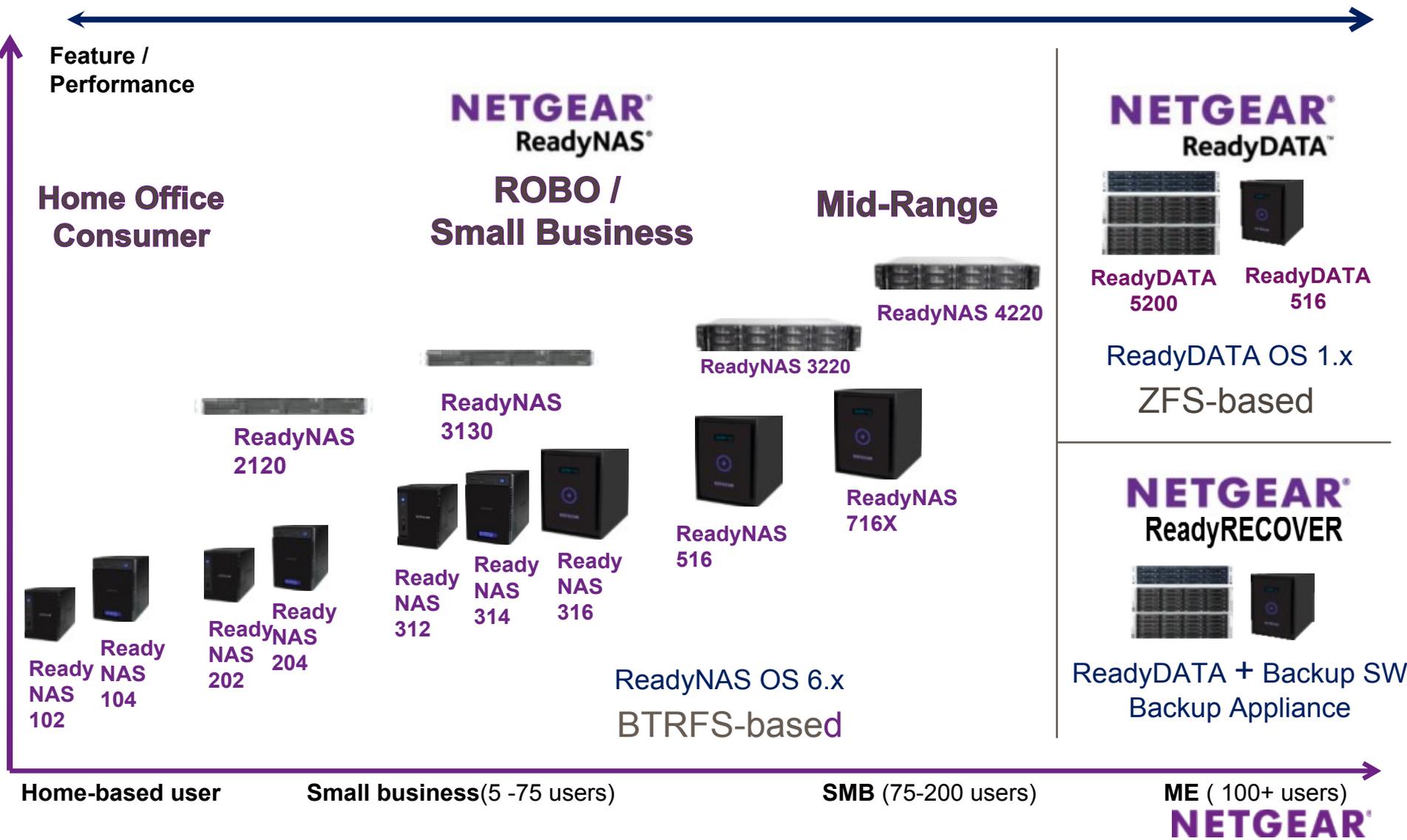
Understanding the business storage landscape



NETGEAR is innovating the SMB NAS space with the adaption of advanced file systems

NETGEAR Unified Storage for SMB

Broad portfolio for every storage need!



Why NETGEAR Storage

+ Best **data protection** for SMB:

- **Snapshot technology with hourly protection** – restore data from every point in time without impacting performance.
- **Most easy to use replication** technology for disaster recovery
- **Data Integrity due to advanced Filesystems**
- **Integrated backup solution with „only 1 full backup“ advantage**

+ Most flexible and secure solution for **personal cloud** – remote access with local hardware (privacy, performance), utmost security (no portforwarding), ease of use

+ Unique **warranty and support** offering

- **5 years warranty and NBD for almost all storage products**

2 Product Families & 1 Integrated Backup Appliance

NETGEAR®
ReadyNAS®

NETGEAR®
ReadyDATA™

NETGEAR®
ReadyRECOVER

ReadyNAS is “Storage Made Easy”

Understanding the NETGEAR difference



NETGEAR®
ReadyNAS®

+ All the latest and unique technology (ReadyNAS)

- Continuous data protection (hourly protection only with NETGEAR, Bitrot protection, AV, etc.)
- Storage efficiency (instant expansion)
- Easy off-site (cloud-managed replication)
- Easy access & D (ReadyCLOUD)

+ Less expensive to buy and manage

- Lower upfront cost and all inclusive feature set
- Lower long-term cost of management

+ Less complex to buy, deploy and manage

- All inclusive and 5 yr warranty means no surprises
- Easy management means no additional staff/consultants

YOU DO A LOT IN AN HOUR
PROTECT IT WITH HOURLY BACKUPS

ReadyDATA for High-Performance

Solving SMB Issues w/ Enterprise Tools

NETGEAR
ReadyDATA™

- + Unified (NAS/SAN) storage w/ all protocols (iSCSI/NFS/SMB/AFP/FTP)
- + Performance boost w/ SSD-caching
- + Instant expansion and continuous data protection with unlimited snapshots and clones
- + Cloud-managed block-level replication for disaster recovery
- + Advanced storage efficiency (dedupe, compression, thin provisioning)



ReadyRECOVER

Enterprise-class Backup Appliance for SMB

NETGEAR
ReadyRECOVER

- + Fully integrated **backup appliance**
- + **Protection** for Windows Servers, Virtual Machines, & PCs both onsite and offsite
- + **Easy** setup and management
- + Due to data integrity on the hardware, requires **only one full backup**
- + Combination of leading software with 100% data integrity storage (ZFS)
- + **Hardware Independent Restore**: restore to any hardware or virtualization platform
- + Zero-delay, WAN **optimized replication**



+



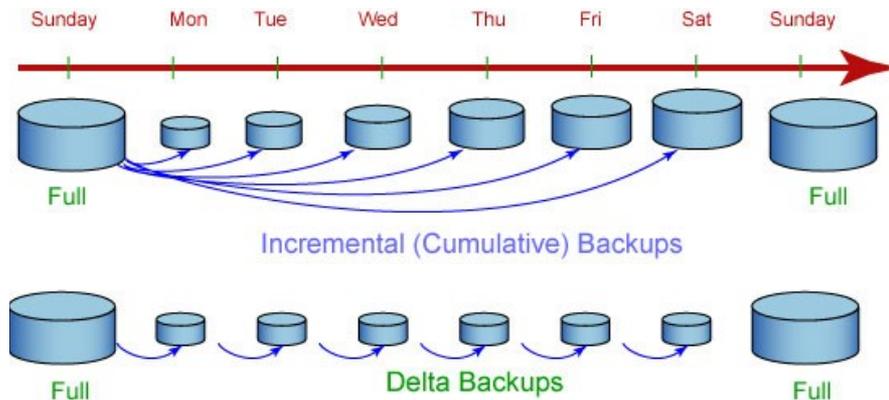
STORAGECRAFT

NETGEAR

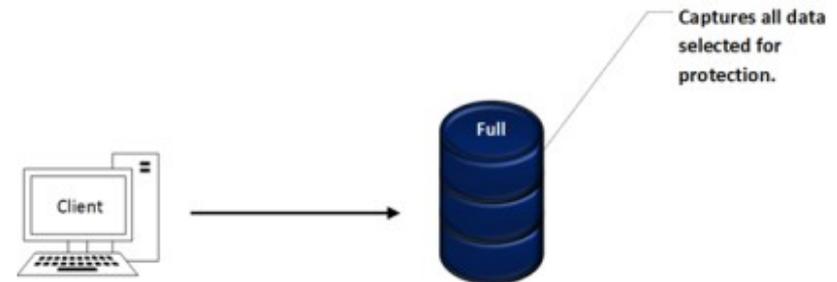
ReadyRECOVER was built to solve three common SMB backup issues

1. Limited bandwidth prevents offsite protection
2. Cumbersome management of incremental backups (“image chains”)
3. High capacity requirements due to weekly / monthly full backups

What other vendors do:



What ReadyRECOVER does:



Further USPs of ReadyNAS / ReadyDATA Solutions

Feature	ReadyNAS	ReadyDATA
Data Integrity against silent data corruption	Yes, much better than EXT4	Yes, 100% due to ZFS
Real-time Antivirus (we scan as we write)	yes	No
Replication	File-based	Block-based
Replication	Web-managed	Web-managed or locally managed
Deduplication	No	Yes
Encryption	Yes, AES256	No
SSD Caching	No	Yes
Snapshots replicated	No	yes
10 GE connectivity	Yes, RN4220 and 716	Yes RD5200
ReadyCLOUD access from anywhere w/o DynDNS, port forwarding etc.	yes	No

Global Positioning



+ ReadyNAS 300, 2120

- [Perfect backup-solution](#)
- Considerable price drop & increased performance.
- **Currently most affordable 1U rackmount NAS,**
- only one with 5 years warranty
- **Users:** 1-5 users in File Sharing environment



+ ReadyNAS, 300, 500, 700, 3220 & 4220

- [Perfect for high performance fileserving applications, Backup, DR for file. Elementary virtualization \(non HA, no replication for Virt\)](#)
- 10 GE included in case of 4220_
- Perfect for DR for files
- Great for Branch office backup for file-data
- Considerable price drop
- **Currently best price / performance ratio in 2U Rackmount segment incl. 5 years warranty**
- Unique data protection approach due to hourly protection during normal business hours – in combination with most easy to set up disaster recovery solution (Internet-based replication)
- **Users:**
- 3220 for up to 250 users
- 4220 for up to 500 users, incl 10 Gbit



+ ReadyDATA Rackmount & Desktop

- [Perfect for very high performance fileserving applications, Backup, DR for block and file and more demanding virtualization environments \(non HA\)](#)
- 10 GE included (5200)
- More scalability (360 TB)
- Perfect for DR for more demanding environments (large backup files & LUNs) (block-based, continuous replication)
- Great for Branch office backup for both file- and block-data
- Also available as fully integrated backup & recovery solution (ReadyRECOVER)
- **Perfect cost (TCO) alternative for SMB solutions from BIG IT vendors**
- **Users:** >500 Users in file sharing environment

NETGEAR Business Support

Industry-leading terms protect your investment...

+ Customer Service

- **Global & Local:**
 - 24x7 email, telephone, chat, (9x5 in major EU languages, 24x7 in English)
 - Global Command Center monitoring case lifecycle
- **Personal:** Cases typically handled by same support representative
- **Lifetime:** 24x7 chat support on all business-class ProSAFE, ReadyNAS and ReadyDATA products



+ Hardware warranty



Lifetime ProSafe,
ProSecure UTM



**Incl. Next Business Day
Replacement Service**

for duration of the warranty for business products



5 Years ReadyNAS
/ ReadyDATA



+ Additional Support Services

- OnCall 24x7: priority phone number, 24x7 phone support for 1,3,5 years
- Remote installation services
- Harddisk retention service

What our customers say

Survey after each support case

+ How would you rate the service received?

⇒ 96% rate positive



+ Would you recommend/purchase NETGEAR products in the future?

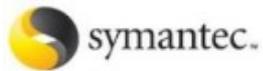
⇒ 7 out of 10 people would recommend/purchase NETGEAR products in the future

⇒ “Net Promoter Score” - NPS = 72% in 2013 – same as Apple average across product range!

*2014 Net Promoter Benchmarks survey by [Satmetrix](#). A net promoter score of 72% is a very good result across all industries

Partnerships & Certifications

- + Certifications with Microsoft, VMware & Citrix
- + Microsoft Active Directory integration
- + Compatibility with backup solutions including:



Solutions



Who are NETGEAR Customers?

- + Photographers
- + Lawyers
- + Media agencies
- + Hospitals, physicians practices
- + Retail chains
- + Publishing houses
- + Automobile workshops
- + Anyone with subsidiaries
- + Small Offices of any kind....
- + **Cost conscious small and medium businesses**

Solutions our customers need

- + File Sharing
 - + Remote Access
 - + Backup - Protection against data corruption and human error
 - + Protection against disasters
 - + Virtualization
 - + (Video Surveillance)
- ⇒ Employee Productivity

How is NETGEAR Storage different?

ReadyNAS is “Storage Made Easy”

Understanding the NETGEAR difference



NETGEAR®
ReadyNAS®

+ All the latest and unique technology (ReadyNAS)

- Continuous data protection (hourly protection only with NETGEAR, Bitrot protection, AV, etc.)
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- **Data Integrity due to advanced Filesystems**
- **Integrated backup solution with „only 1 full backup“ advantage**

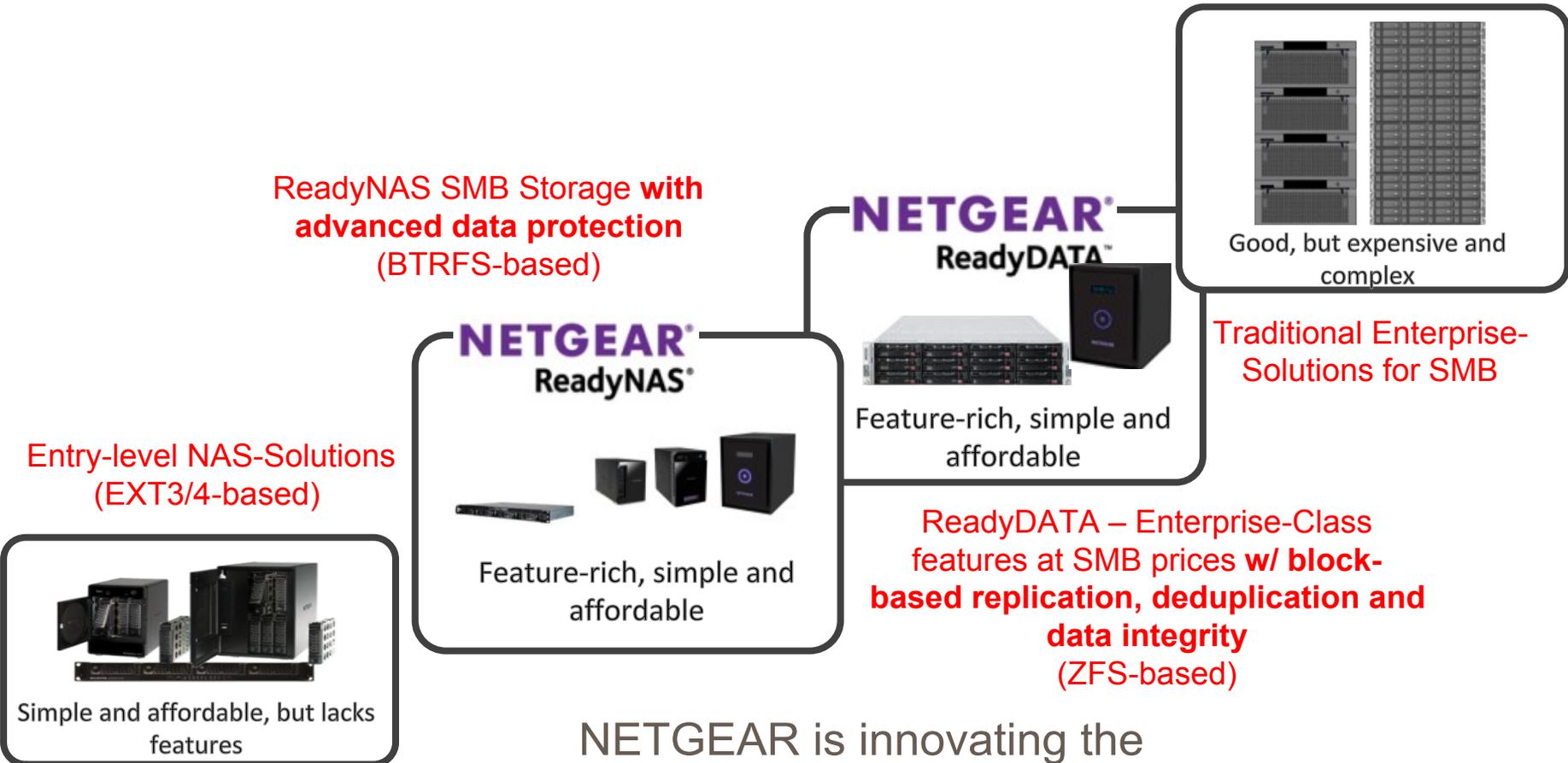
+ Most flexible and secure solution for **personal cloud** – remote access with local hardware for small businesses

+ Unique **warranty and support** offering

- **5 years warranty and NBD for almost all storage products**

NETGEAR Storage Positioning

Understanding the business storage landscape



NETGEAR is innovating the SMB NAS space with the adaption of advanced file systems

Data is More Precious than Ever

At work or at play, information surrounds us...



Storage Challenges for SMB

- + Continuous data growth
- + Growing service level expectations
 - Customers are less willing to accept SMB lower service levels compared to big Enterprises (Amazon, airlines, eCommerce...)
- + Tape Replacement / use of tape for 3rd backup tier & archiving
- + Backup time windows are less and less sufficient
- + „Disasters“ are not limited to large Enterprises
- + SMB and virtualization
 - ⇒ How can I fulfil those requirements with SMB budget and limited personnel resources?



At the core: data protection!

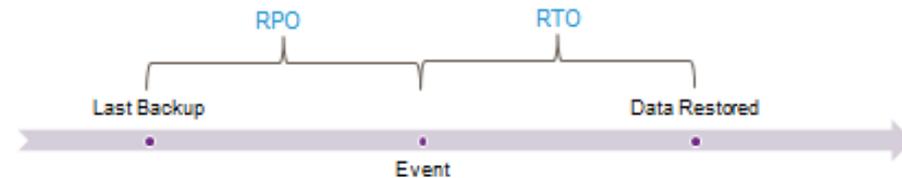
100% dependency of data dramatically increased
importance of data protection:

+ **Backup** more frequent than daily / weekly

+ **Restore** of data from previous points in time

- Quick and easy for optimum user productivity
- Minimize “RPO” – Recovery Point Objective
- Minimize “RTO” – Recovery Time Objective

SMB need true
Snapshot technology



+ Centrally managed Disaster
Recovery for HQ and remote offices

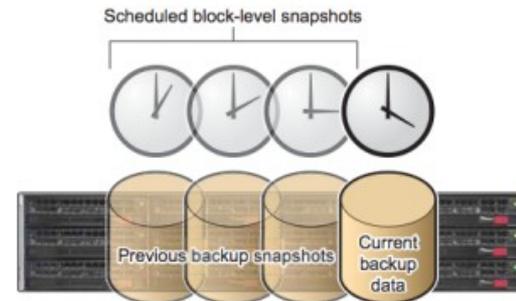
+ **reliable, affordable and easy-to-use**

SMB need easy-to-use
Disaster Recovery

Requirement #1: Hourly Protection on the NAS

- + Capability to protect data on the NAS every hour
- + restore from any previous point in time
- + Pointer/Block-based Snapshot-Technology:
 - Space efficient
 - No performance impact
 - Unlimited
- + Can be automatically or manually created
- + Smart Snapshot Management prunes according to age
- + Rollback, Clone... just as the big guys

Requires
BTRFS/ZFS



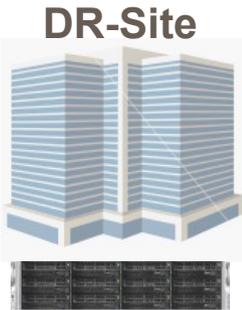
Only way to achieve “Near
Continuous Data Protection”
for max user productivity

NETGEAR

Demo Video Snapshot

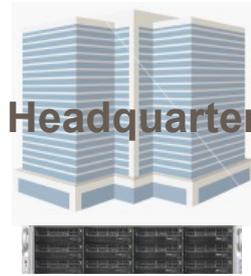
+ <https://www.youtube.com/watch?v=Mig6Mpn5HKs>

Requirement #2: Easy Disaster Recovery & Core to Edge protection...

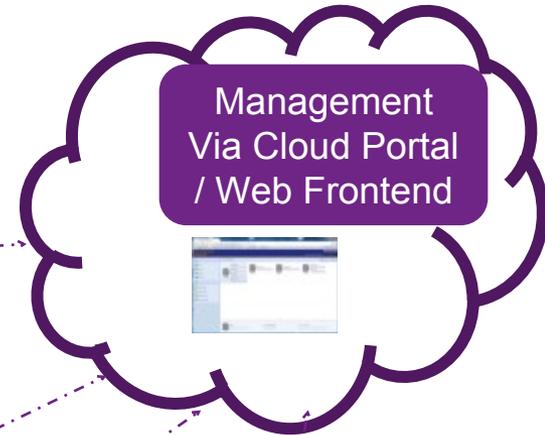


DR-Site

Data via VPN
(not cloud)



Headquarter

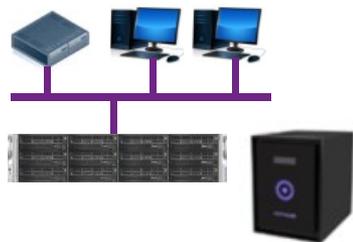


Management
Via Cloud Portal
/ Web Frontend

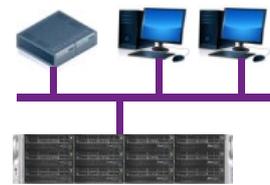


ReadyNAS:
File-level
replication
Web-based
management

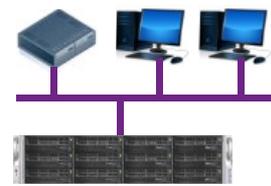
ReadyDATA:
Block-level
replication
Local or web-
based
management



Branch Office 1



Branch Office 2

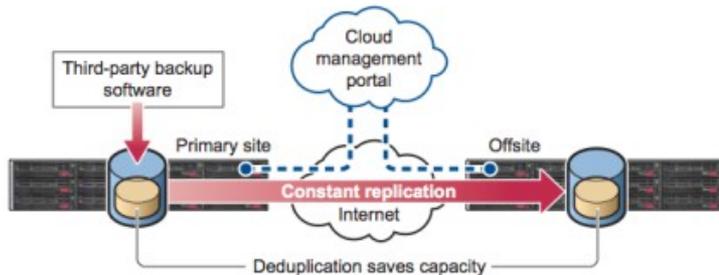


Branch Office 3



Why NETGEAR Storage for DR/Branch Office Protection?

- + Most simple to set up replication in the market
- + No VPN, router or firewall configuration
- + Replication set up with a few mouseclicks



ReadyNAS Strengths:

- Licensing included
- Disaster recovery for file data
- Scheduled Replication
- Web-managed

ReadyDATA Bonus:

- Disaster recovery for block-and file data
- Replicates data with snapshots
- Scheduled and continuous Replication
- Web- or locally managed

ReadyRECOVER Bonus:

- Backup SW licenses for Servers, PCs and virtual servers
- 15 minute granularity

Demo Video Replication

+ <https://www.youtube.com/watch?v=epm29aN10BY>

Dataprotection approaches compared

Technology	Min. RTO & RPO with Snapshot-Technologie	Disaster Recovery	Cost	Complexity
Typical SMB storage	No, Limitation in File System. Loss of a lot of data in case of event. Long recovery time (RTO) Requires SW for Backup of Servers / PCs	Not available or very complex. No block-based replication	\$	Low, but functionality not sufficient
NETGEAR ReadyNAS and ReadyDATA	Yes, up to hourly granularity (RPO). Very short recovery time. Requires SW for Backup of Servers / PCs	Very easy to configure, automated and centralized	\$, included in system price	low
NETGEAR ReadyRECOVER	Yes, up to 15 min granularity (RPO), very short recovery time	Easy replication fully integrated	\$\$ - less management, less capacity	Low, as fully integrated
Storage plus additional Backup Software	Yes, up to 15 min granularity (RPO), short recovery time	complex & additional cost	\$\$\$, additional cost for SW, HW, management	High, additional SW integration
Enterprise Storage, e.g. NetApp	Yes, hourly granularity (RPO). Very short recovery time. Requires SW for Backup of Servers / PCs	complex & additional cost	\$\$\$\$\$, and additional licenses for snapshots, replication etc	High

Requirement #3: Data Integrity against „Silent Data Corruption“ or „Bitrot“

- + **Symptoms:** Files don't open, databases get corrupt, photos change...
- + **Causes:** Headcrashes, SW Bugs, over-voltage, radiation & magnetic fields, write errors...

EXT 4

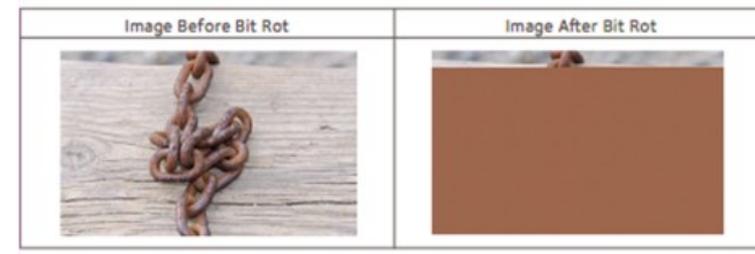
Trad. filesystems: No protection against failures when reading from the RAID

„Advanced“ filesystems provide protection mechanisms

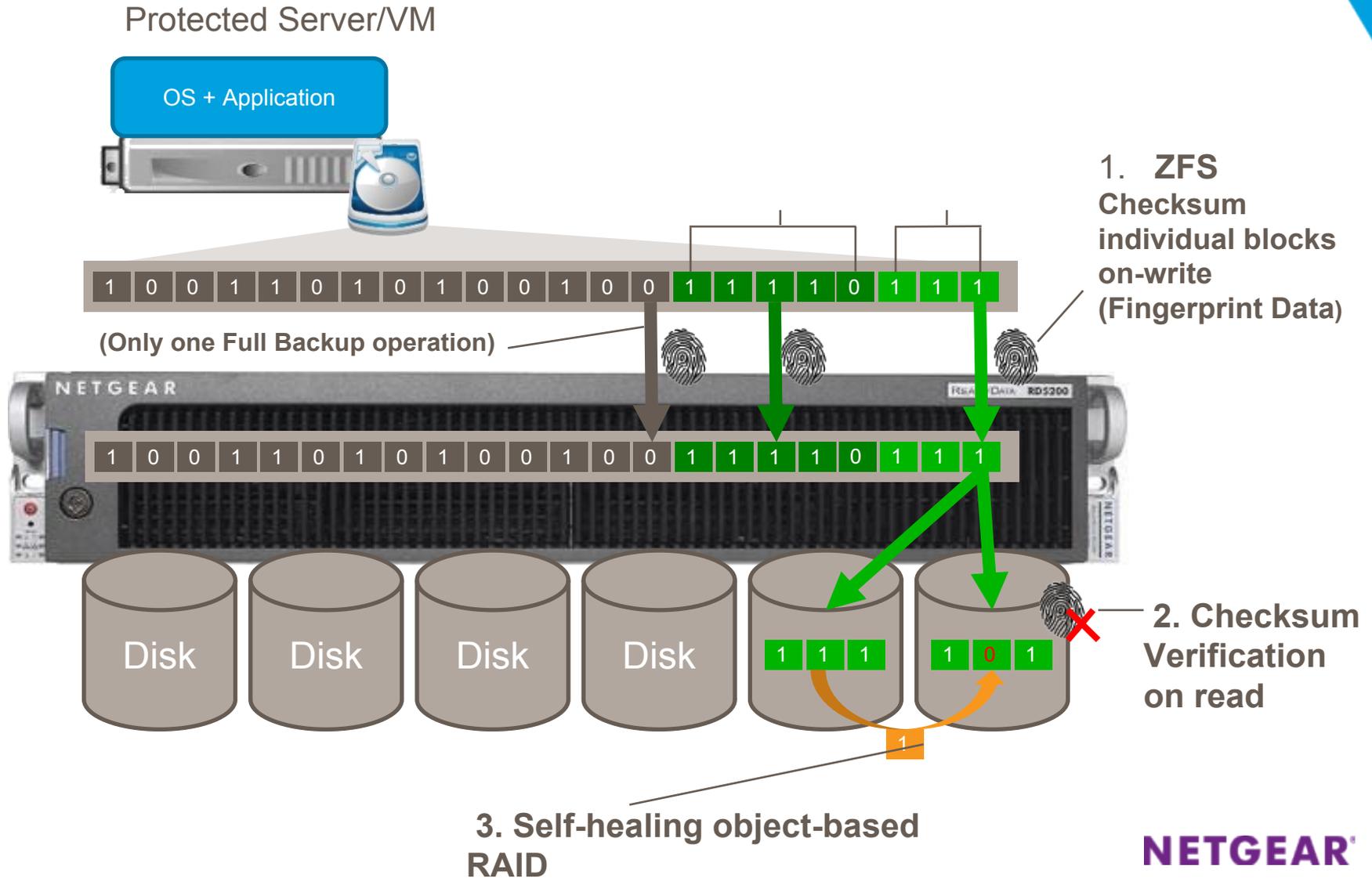
ZFS, BTRFS (in ReadyNAS)

- + **Checksum algorithms for data, metadata and inodes**
- + ZFS: Source-data are being only deleted once „Checksummed“ on non-volatile media

=> The „Missing Piece“ for true end-to-end data protection

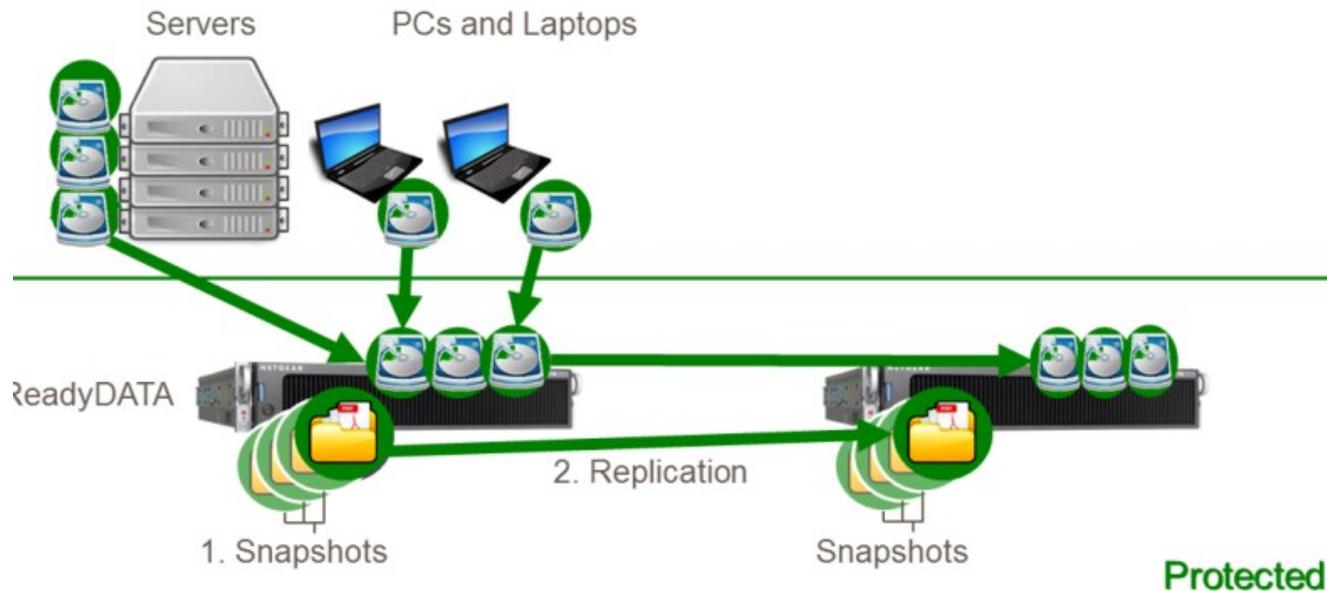


End-to-End Integrity



ReadyRECOVER Backup Appliance

- + Complete Backup and Disaster Recovery solution incl PC, server and virtual server protection
- + Full backup every 15 minutes
- + only 1 initial real full backup due to ZFS
- + Trusted relationship between SW and HW layer



Protected

NETGEAR

5 Levels of File Protection with ReadyNAS

BTRFS File system gives ReadyNAS the edge



Automatic Raid protects against disk failure



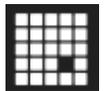
Point in time recovery with snapshot technology

Exclusive



Free Real-Time Antivirus

Exclusive



Bitrot protection defends against media degradation

Exclusive

New



Offsite backup with cloud or 2nd ReadyNAS

Requirement #4: Remote Access / „Private Cloud“

- + **ReadyCLOUD** for cloud-like access from anywhere (PCs, Macs, Web Access portal)
- + **Fully transparent VPN Access from PC/Mac for all Businesses without VPN**
- + **No Portforwarding, no security risk, no configuration effort**



ReadyCLOUD From Anywhere

A new way to deploy and manage your NAS...

The screenshot displays the ReadyCLOUD web interface. At the top, the browser title is "ReadyCloud". The main header features the "NETGEAR ReadyCLOUD™" logo on the left and a welcome message "Welcome, readynasos6demo readynasos6demo" on the right. Below the header is a navigation bar with tabs for "Discover", "Access", "Browse" (which is active), and "Manage". A "Profile" dropdown menu is located on the far right of this bar. The main content area shows a file browser view for the path "Recovery mode: \\ RN314Demo \ data \ Pictures \ FirstSnap (Mar 09, 2013 21:37:58)". On the left, a sidebar shows a tree view of the file system, with "Pictures" selected. The main area displays a grid of 18 image thumbnails, each with its filename and size. At the bottom, there is a date navigation section for "09 March, 2013" with buttons for "Years", "Months", "Days", and "Hours" (the "Hours" button is highlighted). A calendar view shows the date "21" selected, with "9 ..." below it.

NETGEAR ReadyCLOUD™

Welcome, readynasos6demo readynasos6demo

Discover Access Browse Manage Profile

Recovery mode: \\ RN314Demo \ data \ Pictures \ FirstSnap (Mar 09, 2013 21:37:58)

- RN314Demo
 - data
 - Backup
 - Documents
 - Music
 - Pictures
 - readydrop
 - Videos

Floating Ice.jpg 1.5 MB	Floating Leaves.jpg 2.3 MB	Forest in Mist.jpg 1.5 MB	Galaxy.jpg 2.3 MB	Grass Blades.jpg 2.4 MB	Hawaiian Print.jpg 5.6 MB
Isles.jpg 1.8 MB	Lake.jpg 892.3 KB	Milky Way.jpg 2.8 MB	Moon.jpg 1.9 MB	Mt. Fuji.jpg 2.8 MB	Pink Forest.jpg 1004.3 KB
Pink Lotus Flower.jpg 3.1 MB	Red Bells.jpg 1.5 MB	Rice Paddy.jpg 5.7 MB	Shapes.jpg 3.7 MB	Sky.jpg 877 KB	Snow.jpg 2 MB

09 March, 2013

Years Months Days Hours

21¹

9 ...

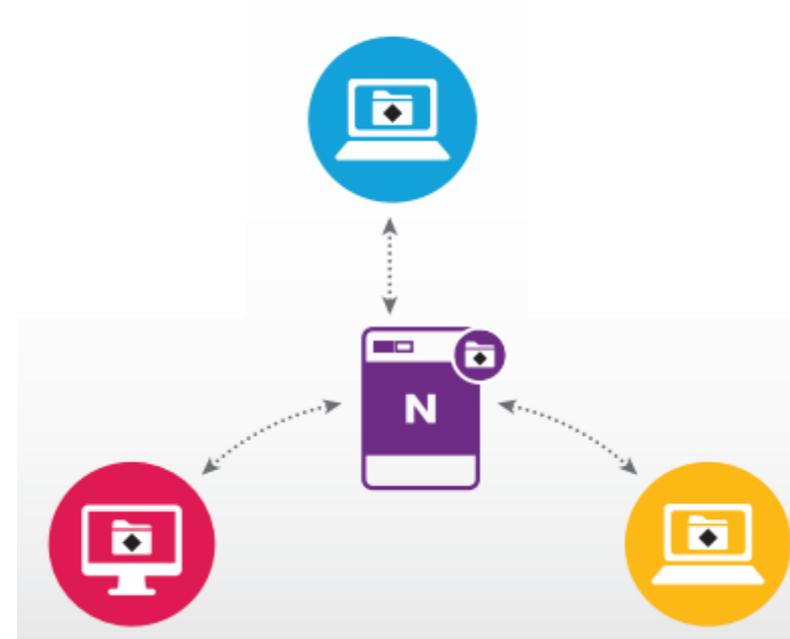
ReadyCLOUD

Collaboration / Access Portal

New

Exclusive

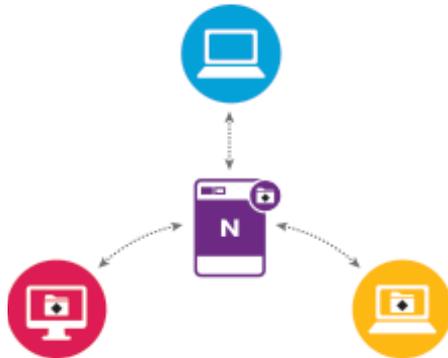
- + Synchronization of multiple folders
 - Automatically between PCs and ReadyNAS
 - Turn any folder on the NAS into a sync folder
- + Building a virtual File-Sharing environment, even across multiple NASes
- + Sync Folder on all PCs. Not only Sync via the Cloud
- + Device-independent access via readycloud.netgear.com (Access Portal)



ReadyCLOUD Collaboration

+ Share large files via Email-Link

- Large files – no limits
- Multiple Files
- Any receiver
- Various Security / Privacy options



Advanced cloud technology

Easier Setup; Easier ongoing use

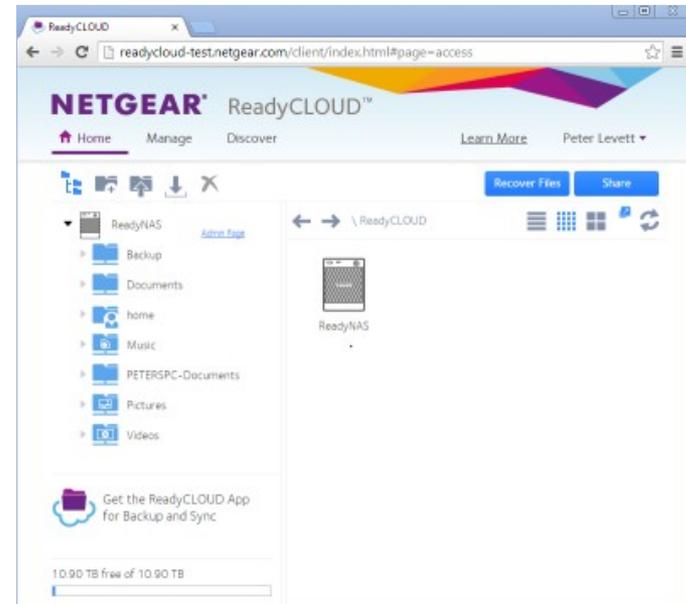
Exclusive

New

Exclusive

Cloud setup and auto discovery

Consistent web portal for home or away



Comprehensive Backup

Making it easier to use your ReadyNAS

New

Automatic PC Backup

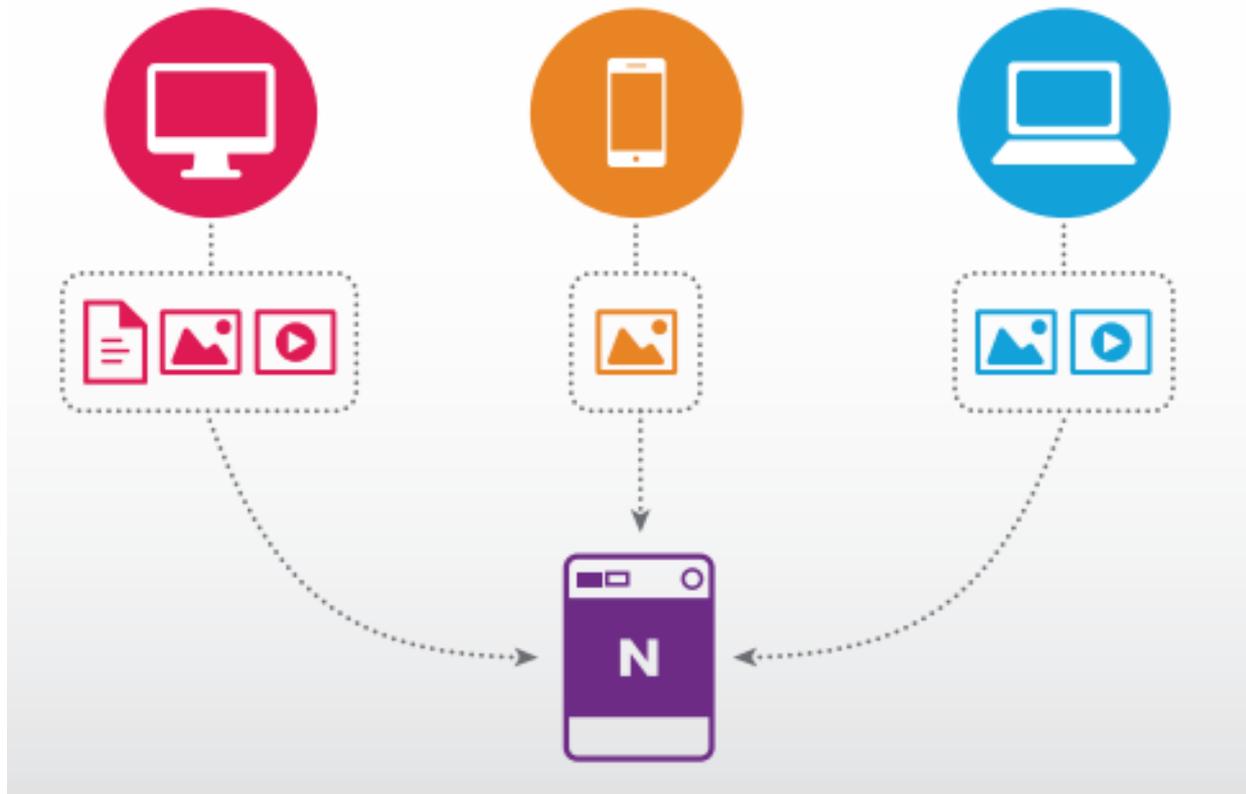
NEW ReadyCLOUD PC App

Mobile photo backup

ReadyCLOUD mobile app

Time machine backup

Multi-user support

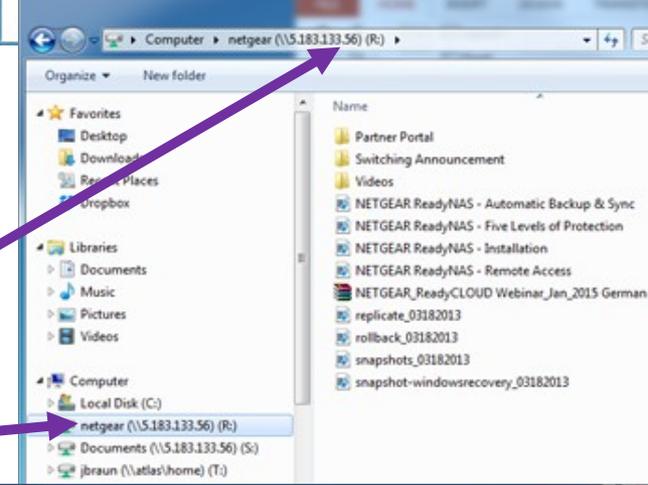
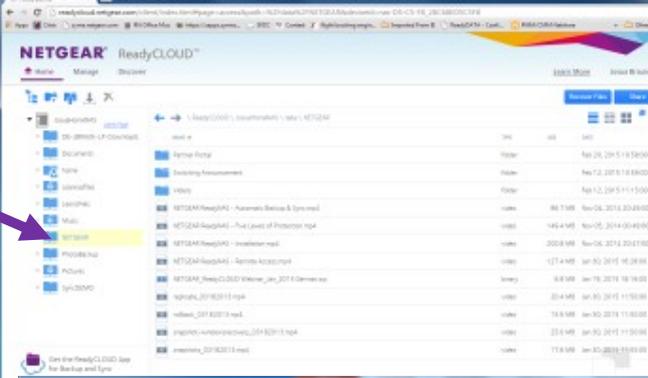


ReadyCLOUD

VPN Access and Web Access Portal

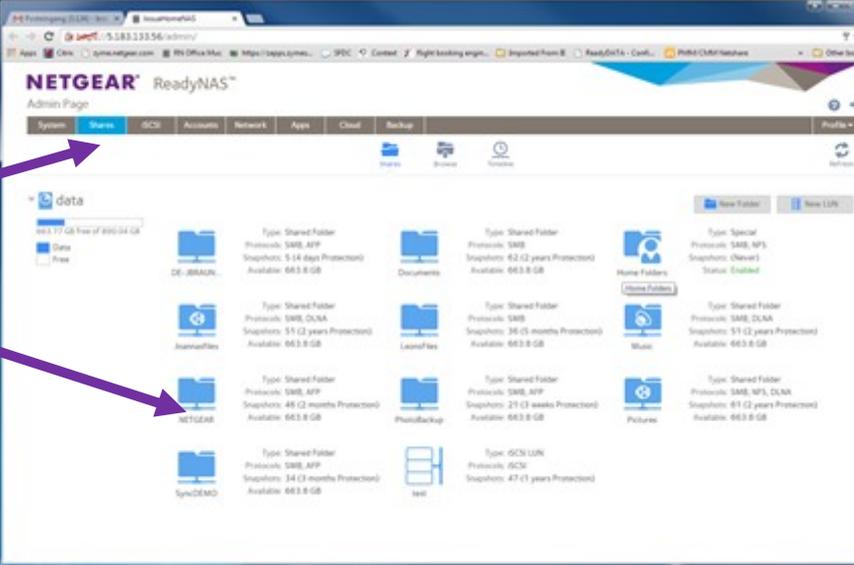
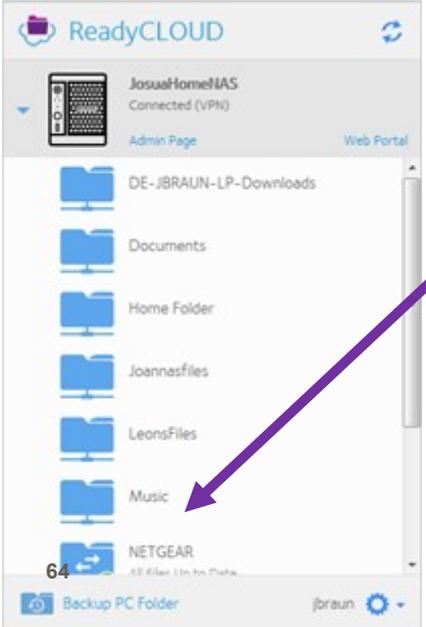
- + Install App on PC or Mac
- + Full management and file sharing access from anywhere
- + Map network drives and access just like local from anywhere
- + Access and manage without app from any browser

Web Portal for basic management and file sharing



map remote NW-drives just as local

full management and file access from anywhere



Why is ReadyCLOUD different?

- + **More secure than Dropbox or Cloud-options of other NAS-vendors:** no portforwarding, automatic VPN connection (SSL), fully transparent
- + **All data stay on own HW:** No Public Cloud, no „Big Brother“
- + **Significantly more Sharing- and Sync-options** than other NAS-offerings
- + **Maximum eas-of-use:** just a few clicks to install, no router config or DynDNS, easy replication via the web-portal

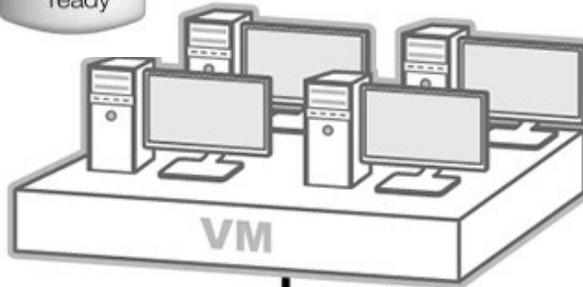
Demo Video Cloud

- + <https://www.youtube.com/watch?v=Fl075BsWjC4>
- + Better do live demo of ReadyCLOUD

Virtualization



Hypervisor



ReadyNAS Strengths:

- Thin provisioning
- Good solution for local environments

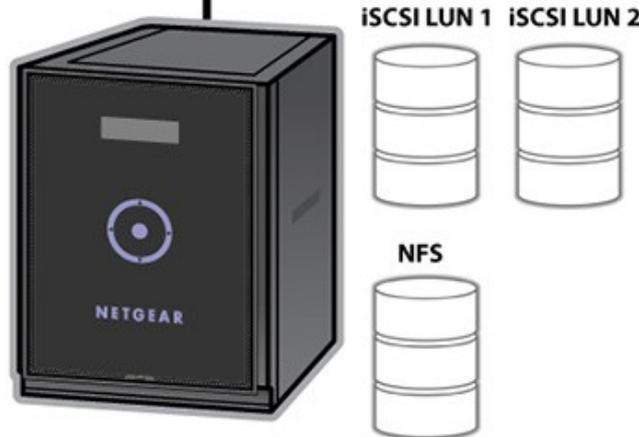
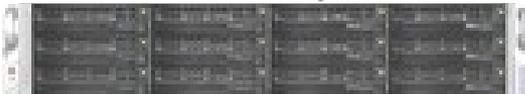
ReadyDATA Strengths

- Snapshot protection
- Continuous block-level replication (CDP)
- Scale
- Performance (SAS/SSD Caching)

ReadyRECOVER Bonus

- SW licenses for Server and Virtual Server backup,
- bare metal restore
- (SAS/SSD Caching)

ReadyNAS / ReadyDATA

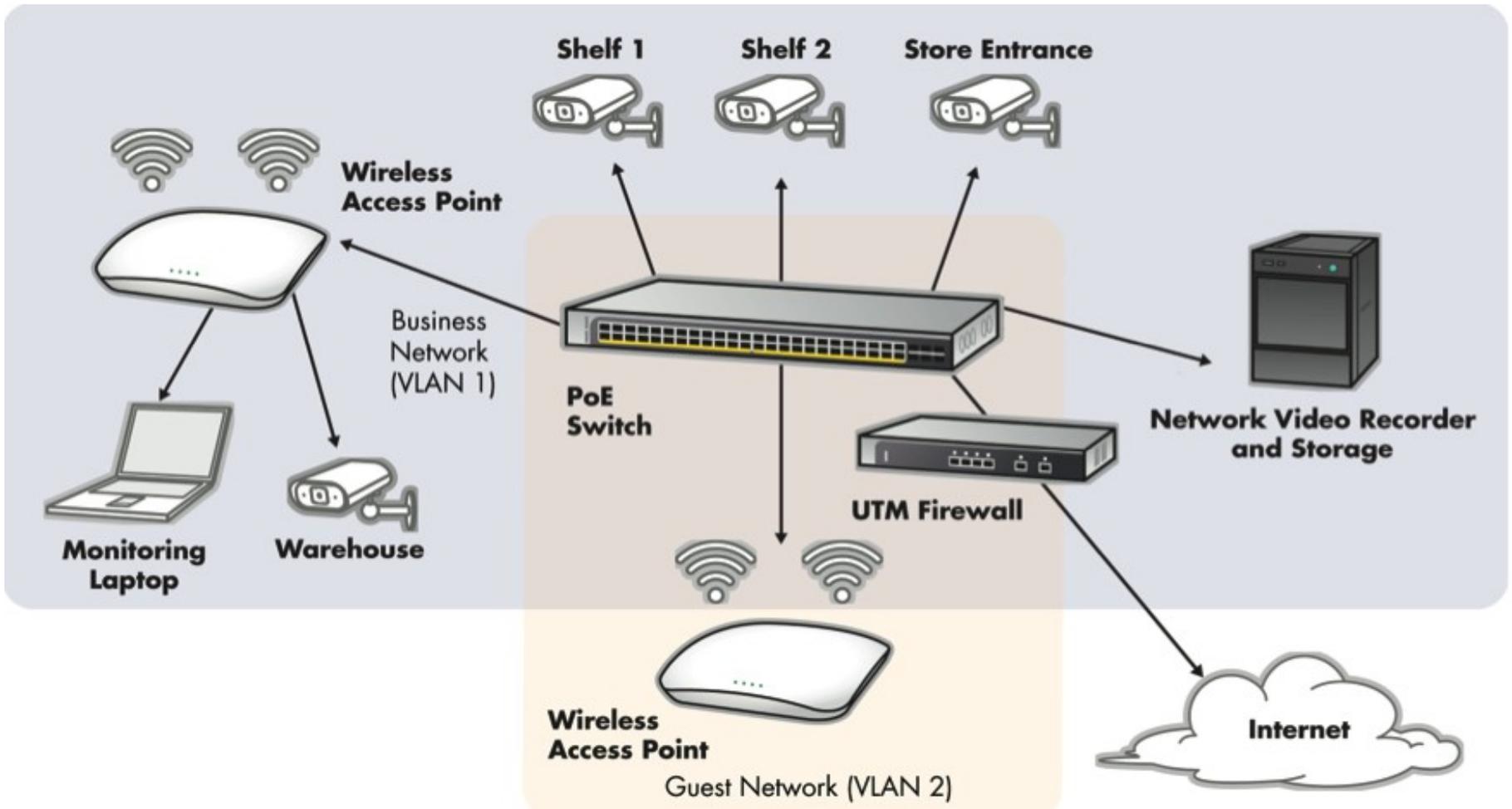


Why NETGEAR Storage for Virtualization?

- Certified with VMware, Citrix, HyperV
- Simple iSCSI Management
- iSCSI Thin Provisioning
- Block-based replication with ReadyDATA
- Performance because of SSD Caching
- Easy Backup of VMs in branch offices with Block-base replication

ReadyNAS Surveillance

Complete surveillance solution with NETGEAR...



Surveillance with ReadyNAS and ReadyDATA

ReadyNAS 3220



ReadyNAS
314



NETGEAR
ReadyNAS
Surveillance Software

ReadyDATA 5200



ReadyDATA
516

ReadyNAS

- Unlimited Snapshots
- Hourly Backups
- Integrated Surveillance solution

ReadyDATA

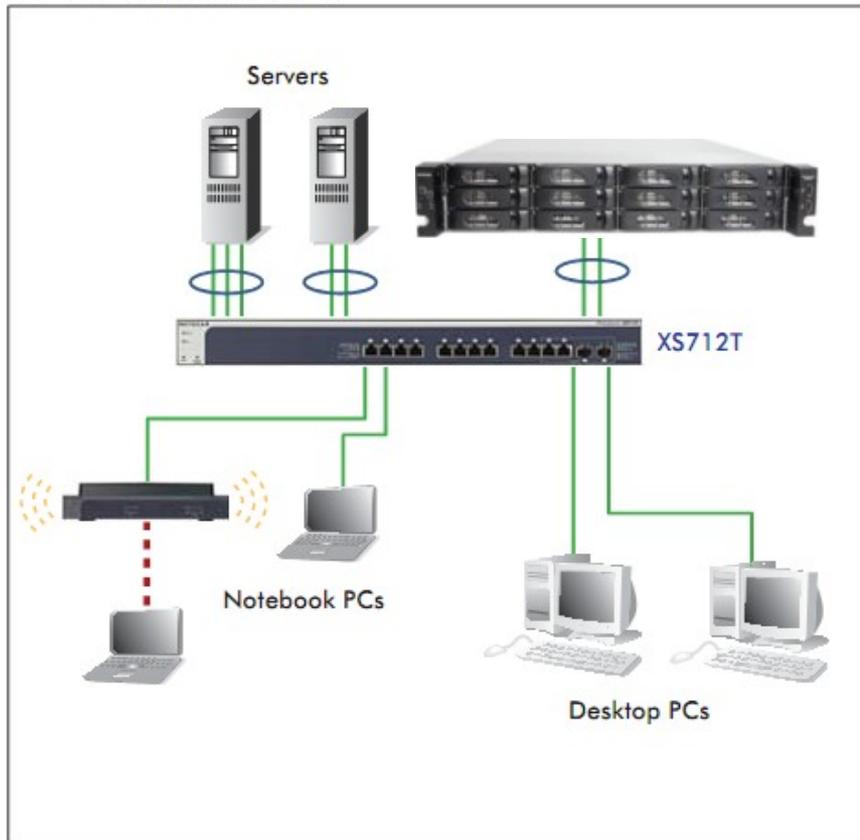
- Unlimited Snapshots
- Hourly Backups
- CDP
- Scalability

Capacity = Cameras x Quality x Retention

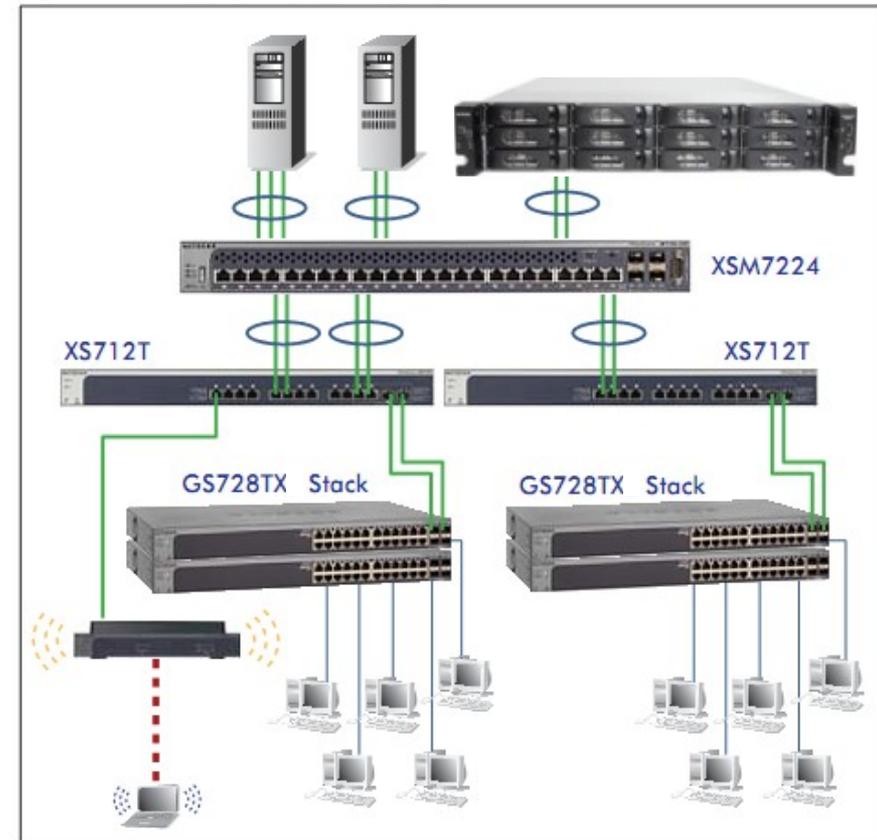
The Winning Team: NETGEAR 10GE Switching und Storage

the most affordable 10GE Solution in the market

XS712T in SMB Network



XS712T in Medium-sized Network



— 10GE link — GE link - - - Wireless link

Target the Correct Series for 10 GE Storage

	Series	Scalability (Concurrent Users)	Target / Performance
ReadyNAS			
Desktop	700	Up to 500 users	<ul style="list-style-type: none"> - Campus, Virtualization, High Performance, Video editing - no Rackspace and small capacity requirements
Rackmount	4220X/S	Up to 500 users	<ul style="list-style-type: none"> - Campus, Virtualization, High Performance, Video editing - Rackspace, up to 48TB capacity
ReadyDAT A			
Rackmount	5200	Up to 500 users	<ul style="list-style-type: none"> - Campus, Virtualization, Block-based replication, Deduplication, Tier 1 backup, scalability

10GbE Switching

- 8x 10GbE Copper
- 1x shared SFP+
- Standalone
- Basic VLAN, QoS

Plus

- 12x 10GbE Copper
- 2x shared SFP+
- Standalone L2+
- Web Managed

Smart

- 24x 10GbE Copper
- 4x shared SFP+
- Dual Power / Fans
- Standalone L2+
- Auto-iSCSI Feature

Managed

- 24x 10G SFP+
- 4x shared 10GbE Copper
- Dual Power / Fans
- Stacking
- L2+ or L3 optional

Managed

- 3 Slot 4U Chassis
- 10GbE Copper / Fiber blades
- Passive backplane
- Fully redundant
- L2/L3/L4

Chassis Mgd



NETGEAR

3 Take aways

+ Best data protection for SMB:

- **Snapshot technology** – restore data from every point in time without impacting performance. **For SMB only with NETGEAR**
- **Most easy to use replication** technology for disaster recovery

+ Personal Cloud – remote access with local hardware (privacy, performance).

- **That many options, high security and ease-of-use only with NETGEAR**

+ Unique warranty and support offering

- **5 years warranty for almost all products, NBD HW replacement for all NETGEAR business storage**

Competition Summary

Competition

The NETGEAR Advantage

- Unlimited Snapshots
- Simplest replication solution
- Real-time AV
- ReadyCLOUD flexibility in access and management
- Warranty and support
- Advanced functions with ReadyDATA

NETGEAR[®] ReadyDATA[™]



Feature-rich, simple and affordable

The NETGEAR Advantage

- No-licenses, All relevant features included
- No other Desktop NAS
- 30-80% less TCO
- Ease-of-Use
- Warranty and support
- Simplest replication solution

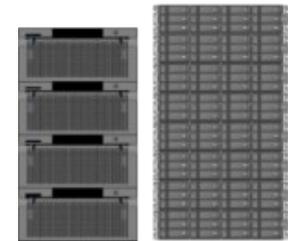


Simple and affordable, but lacks features

NETGEAR[®] ReadyNAS[®]



Feature-rich, simple and affordable



Good, but expensive and complex

QNAP

BUFFALO[™]

Synology[®]

iomega

NetApp[™]

EMC²



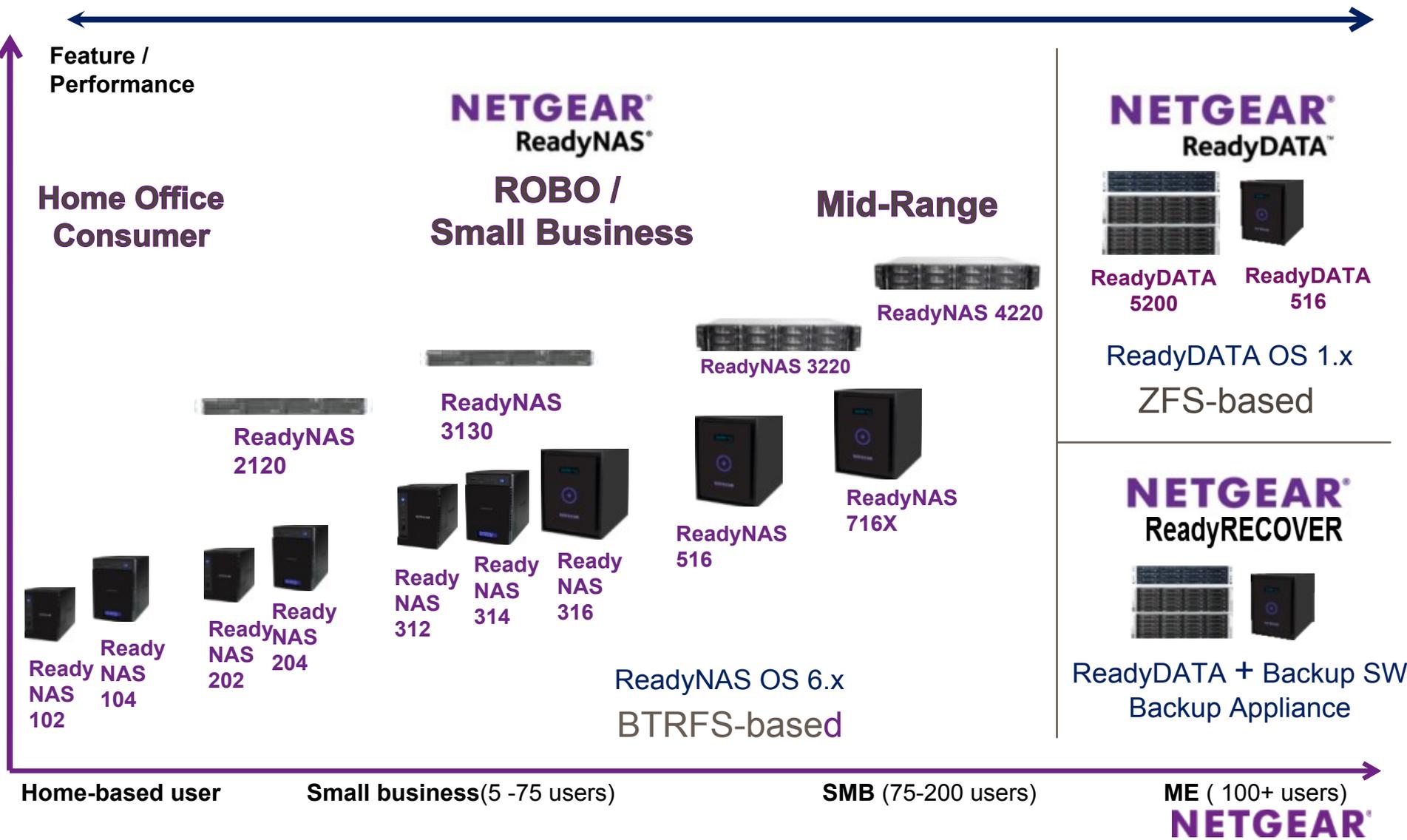
FUJITSU

Details ReadyNAS



NETGEAR Unified Storage for SMB

Broad portfolio for every storage need!



ReadyNAS Desktop



	ReadyNAS 102	ReadyNAS 104	ReadyNAS 202	ReadyNAS 204	ReadyNAS 312	ReadyNAS 314	ReadyNAS 316	ReadyNAS 516	ReadyNAS 716X	EDA 500
CPU	Marvell Armada 370 1.2GHz		Annapurna AL212 Cortex A15 Dual Core 1.4GHz		Intel Atom Dual Core 2.1GHZ			Intel i3 Dual Core 3.3GHz	Intel Xeon Quad Core 2.5GHz (3.5GHz Turbo)	Expansion Unit
Memory	512MB	512MB	2GB	2GB	2GB	2GB	2GB	4GB ECC	16GB ECC	
Recommended # concurrent users	1-4	1-4	1-4	1-4	5-25	5-25	5-25	Up to 250	Up to 500	
GE Ports	1	2	2	2	2	2	2	2	2 + 2 10GBase-T	
USB Ports (3/2)	2 / 1	2 / 1	2/1	2/1	2 / 1	2 / 1	2 / 1	2 / 1	2 / 1	
eSATA ports	1	1	1	1	2	2	2	3	3	
Total Solution Capacity	12TB	24TB	12TB	24TB	32TB	64TB	76TB	96TB	96TB	20TB
HDD Types	2.5" SSD/SATA or 3.5" SSD/SATA									

Fast, Faster, Fastest and Extreme

- + Tiered performance and pricing
- + Same software feature set on every product

ReadyNAS Rackmount

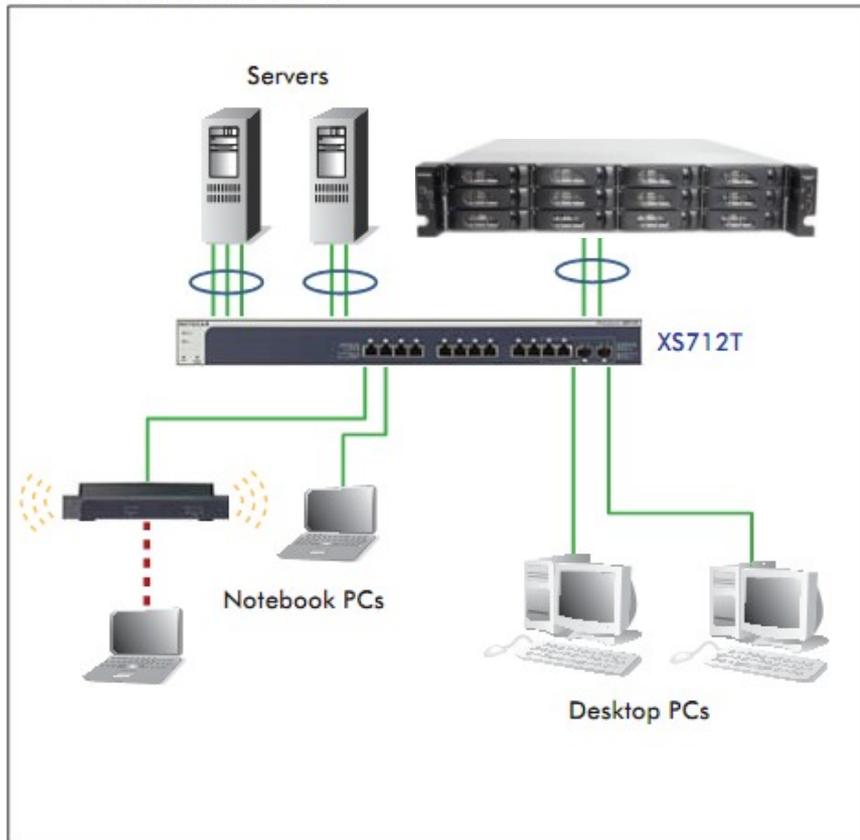


	ReadyNAS 2120	ReadyNAS 3130	ReadyNAS 3220	ReadyNAS 4220S	ReadyNAS 4220X
CPU	Marvell Armada XP Dual Core 1.2GHz	Intel Atom C2338 Dual Core 1.7GHz, 2GHz Turbo	Intel Ivy Bridge i3-3220v2 Dual Core 3.3GHz	Intel Ivy Bridge Xeon E3-1225v2 Quad Core 3.2GHz	Intel Ivy Bridge Xeon E3-1225v2 Quad Core 3.2GHz
Memory	2GB	2GB ECC UDIMM	4GB ECC	8GB ECC	8GB ECC
Bays	4	4	12	12	12
Recommended # concurrent users	5-25	25-200	26-250	50-500	50-500
Power	Single Internal Power	Single Internal Power	Dual Redundant Hot-Swappable	Dual Redundant Hot-Swappable	Dual Redundant Hot-Swappable
GE Ports	2	4	4	4	4
10G Ethernet Ports	None	None	None	2 x SFP+	2 x 10GBase-T
USB Ports (3/2)	2 / 1	2/1	2 / 1	2 / 1	2 / 1
eSATA ports	2	2	2	2	2
Max Capacity	24TB	24TB	72TB	72TB	72TB
HDD Types	2.5" SSD/SATA or 3.5" SSD/SATA				

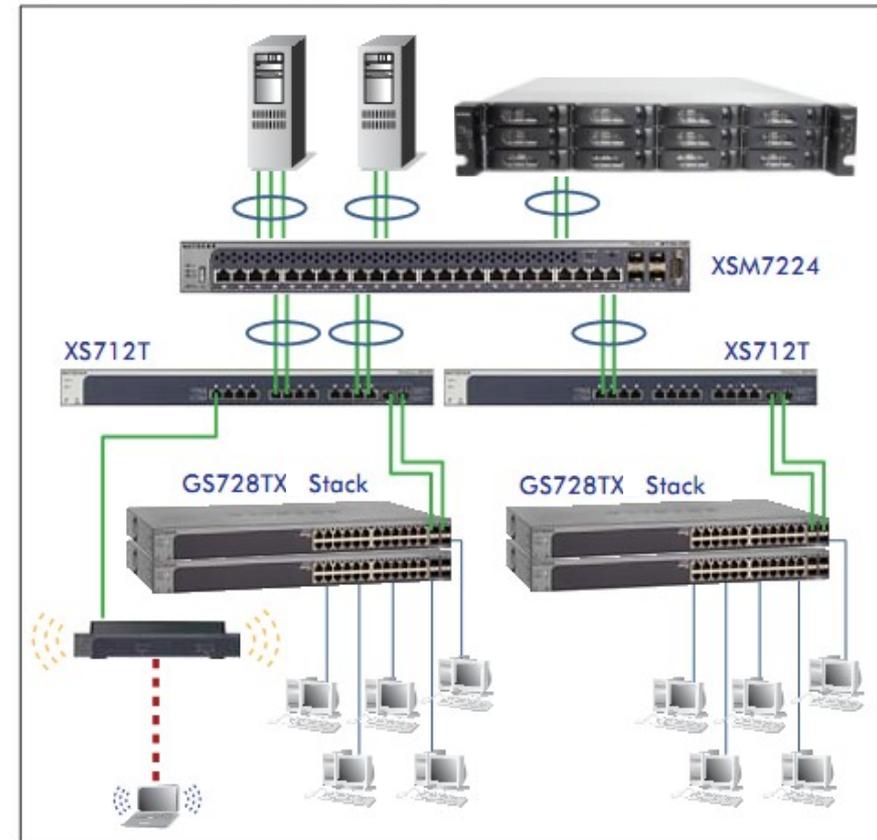
The Winning Team: NETGEAR 10GE Switching und Storage

the most affordable 10GE Solution in the market

XS712T in SMB Network



XS712T in Medium-sized Network



— 10GE link — GE link - - - Wireless link

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ReadyDAT A			
Rackmount	5200	Up to 500 users	<ul style="list-style-type: none"> - Campus, Virtualization, Block-based replication, Deduplication, Tier 1 backup, scalability

10GbE Switching

- 8x 10GbE Copper
- 1x shared SFP+
- Standalone
- Basic VLAN, QoS

Plus

- 12x 10GbE Copper
- 2x shared SFP+
- Standalone L2+
- Web Managed

Smart

- 24x 10GbE Copper
- 4x shared SFP+
- Dual Power / Fans
- Standalone L2+
- Auto-iSCSI Feature

Managed

- 24x 10G SFP+
- 4x shared 10GbE Copper
- Dual Power / Fans
- Stacking
- L2+ or L3 optional

Managed

- 3 Slot 4U Chassis
- 10GbE Copper / Fiber blades
- Passive backplane
- Fully redundant
- L2/L3/L4

Chassis Mgd



NETGEAR

Configurations (Diskless & Populated), only applies to ReadyNAS



+ Diskless

- Optimize drives for technical specs and/or price
- Good for resellers who want to provide additional optimization for their clients
- Good for resellers to maximize profit
 - Buy drives on-sale

+ Populated

- Easy
- Good for Enterprises that don't want to be bothered
- Good for resellers who do not buy lots of storage
- Support/Warranty
 - No finger pointing, single support owner

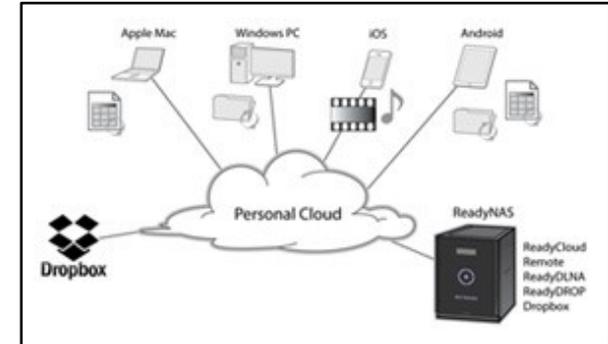
+ ReadyDATA requires NETGEAR drives

ReadyNAS OS 6 Features

Industry's leading data protection platform

+ Cloud-based setup, collaboration and backup for small businesses

- Your own private cloud solution



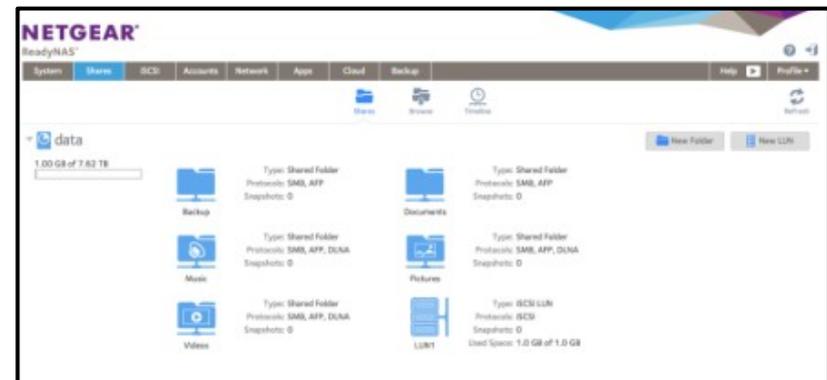
+ Real-Time Antivirus

- No subscription.
- Scans files as they are written to the device



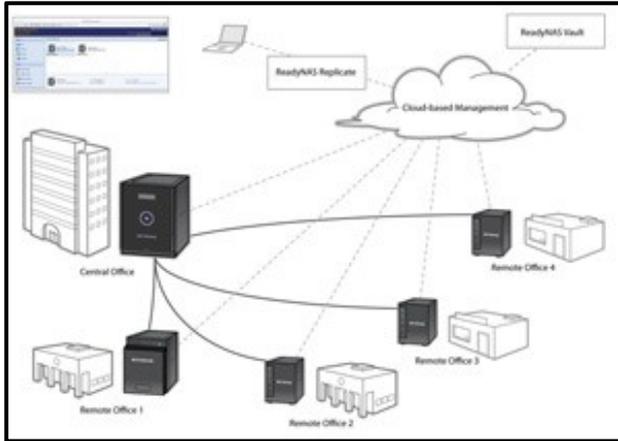
+ Unified storage platform

- Support NAS & SAN protocols
- Thin Provisioned



ReadyNAS OS 6 Features

Industry's leading data protection platform

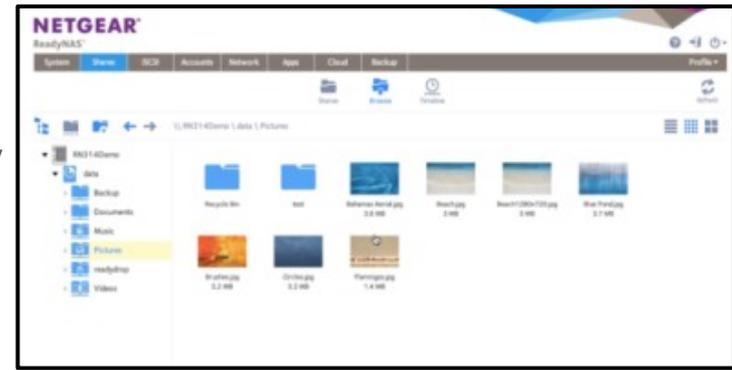


+ Replication

- No additional licensing required
- Disaster recovery solution: send data to another ReadyNAS
- No port forwarding/firewall rules to adjust

+ Unlimited Snapshots

- Continuous data protection w/ no performance impact
- Instantly restore to any point in time, restore files to any previous versions
- Clone file systems



YOU DO A LOT IN AN HOUR

PROTECT IT WITH HOURLY BACKUPS

NETGEAR

ReadyNAS OS 6 Features

Industry's leading data protection platform

- + Self-service IT through file restoration from Windows w/ snapshot data
- + 256-bit encryption and real-time anti-virus based on signatures & heuristic algorithms w/ no subscription cost
- + Instant and thin provisioning with immediate protection
- + Remote backup/restore for Apple Mac
- + Ever growing selection of business Apps
- + Most secure and versatile personal cloud

 Anti-Virus Plus Author: NETGEAR, Inc. x86: 2.0.0 arm: 2.0.0 Downloads: 4606	 Plex Media Server Author: NETGEAR, Inc. x86: 0.9.7.28.0-6105c1-netgear-- arm: 0.9.7.28.0-6105c1-netgear2 Downloads: 4279	 ownCloud Author: ReadyNAS Xtras x86: 0.0.7-0mra2 arm: 0.0.7-0mra2 Downloads: 2160
 transmission Author: Poussin x86: 3.00.3 arm: 3.00.3 Downloads: 1864	 Qbittorrent Client Author: Poussin x86: 1.0.3 arm: 1.0.3 Downloads: 1348	 ReadySurveillance Author: NETGEAR, Inc. x86: 1.3.1-9 arm: 1.0.0-10 Downloads: 1274
 MySQL Server Author: Poussin x86: 1.0.0 arm: 1.0.0 Downloads: 1052	 VPN Server Author: Poussin x86: 1.1.9 arm: 1.1.9 Downloads: 1027	 istat Author: Poussin x86: 1.0.1 arm: 1.0.1 Downloads: 939
 PHP Author: Poussin x86: 1.0.0 arm: 1.0.0 Downloads: 884	 PHPMyAdmin Author: Poussin x86: 4.0.4 arm: 4.0.4 Downloads: 807	 Ajxplore Author: Poussin x86: 0.0.4 arm: 0.0.4 Downloads: 804
 ReadyNAS Photos II Author: NETGEAR, Inc. x86: 2.0.0 arm: 2.0.0 Downloads: 677	 Syslog Server Author: NETGEAR, Inc. x86: 1.0.8 arm: 1.0.8 Downloads: 643	 BitTorrent Sync Client Author: Poussin x86: 1.1.70 arm: 1.1.70 Downloads: 641
 SABnzbd Author: ReadyNAS Xtras x86: 0.7.13-0mra1 arm: 0.7.13-0mra3 Downloads: 624	 Piwigo Author: Poussin x86: 2.5.3 arm: 2.5.3 Downloads: 607	 HipPlay Connect for Rea... Author: Axentra Corporation x86: 1.0.11 arm: 1.0.11 Downloads: 584

Finding the Right Solution

Features the same across the respective family...

Series	Scalability (Concurrent Users)	Target / Performance
RN1xx	1-4 users	Home/SOHO environment
RN3xx 2120	5-25 users	Small Office, Remote Office, Simple Virtualization
RN5xx RN3220	26-250 users	Large Office, Remote/Branch, Virtualization
RD516 RN716X RN4220	50-500 users	Central Office, High Performance Virtualization
RD5200	500+ users	Data Center, MSP Data Center, Central Office, High Performance Virtualization

Solutions: ReadyNAS vs ReadyDATA

ReadyNAS	ReadyDATA
<ul style="list-style-type: none"> • Business Apps, Prosumer Apps 	
<ul style="list-style-type: none"> • Remote access via ReadyCLOUD, ReadyNAS Remote also when no VPN 	<ul style="list-style-type: none"> • Remote access via existing VPN
<ul style="list-style-type: none"> • Disaster Recovery for HQ / centralized backup, file based • ReadyNAS Replicate: Web-managed • Local management possible via rsync 	<ul style="list-style-type: none"> • Disaster Recovery for HQ / centralized backup, block-based • ReadyDATA Replicate Web- or locally managed
<ul style="list-style-type: none"> • Multi-Site backup for distributed environments, file based replication 	<ul style="list-style-type: none"> • Multi-Site backup for virtual/ iSCSI apps w/ block replication • Large file size environments • Deduplication required
<ul style="list-style-type: none"> • Primary storage for File Sharing in offices and ROBO environments up to 84TB 	<ul style="list-style-type: none"> • Primary storage for File Sharing with high performance /capacity needs (SSD-caching, RAM, 240 TB)
<ul style="list-style-type: none"> • Primary storage (iSCSI or NFS) for non-HA server apps & VM environments without replication 	<ul style="list-style-type: none"> • Primary storage (iSCSI or NFS) storage for non-HA server apps & VM environments w/ with replication

When ReadyNAS vs ReadyDATA



ReadyNAS vs. ReadyDATA

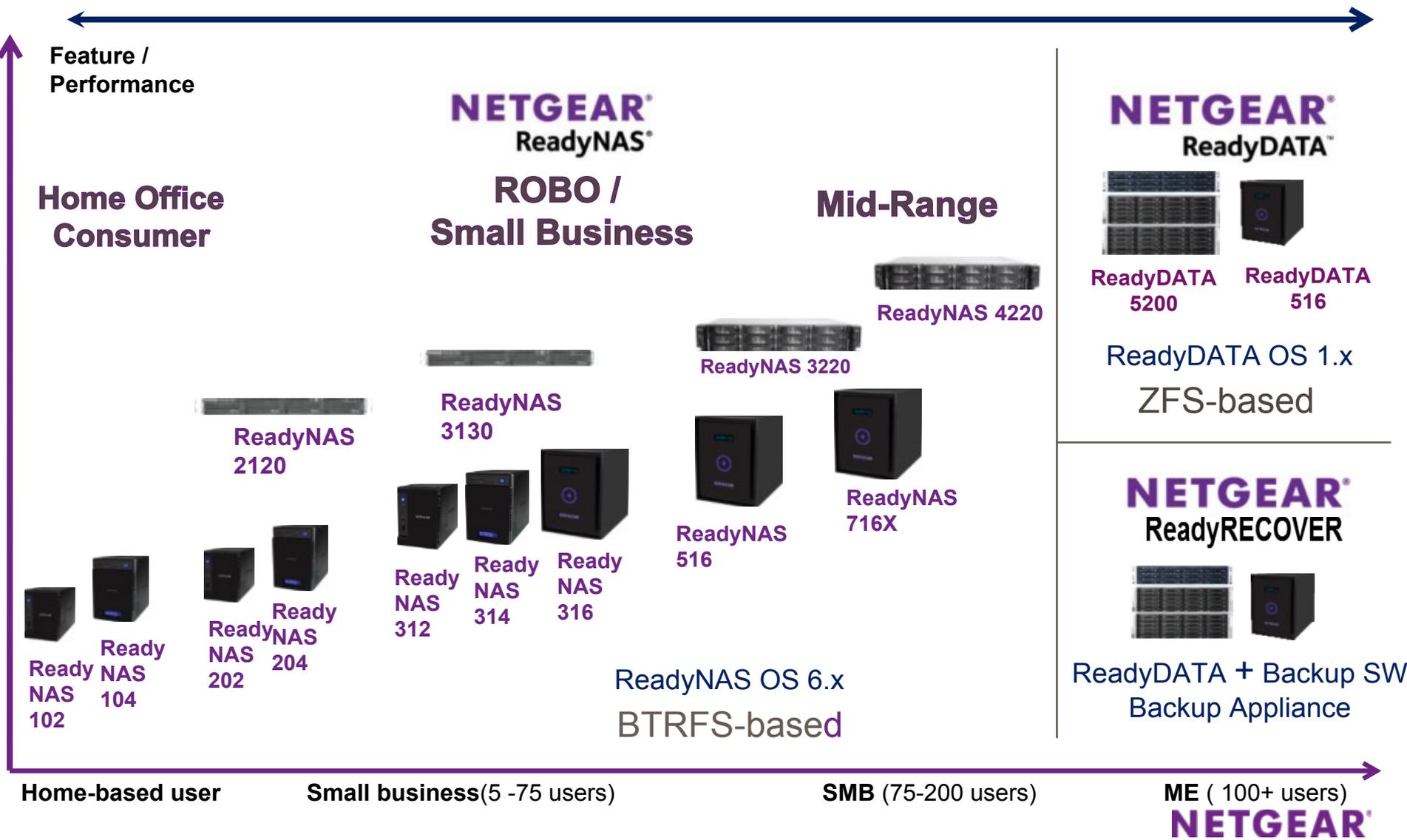
	ReadyNAS OS 6.x	ReadyDATA OS 1.x
HCL Approved	SATA SSD	SATA SSD SAS
Scalability	eSATA, 84 TB	SAS, 204TB
Unlimited block-based Snapshots	Yes	Yes
Thin Provisioning	Yes	Yes
Real-Time Anti-Virus	Yes	No
Discovery	ReadyCLOUD	RAIDar
Replication Type	File	Block
Replicate LUNS	No	Yes
Instant Provisioning	Yes	Yes
Instant Multi-disk RAID Expansion	Concatenate only	Yes (Supports RAID 50/60)

Details ReadyDATA



NETGEAR Unified Storage for SMB

Broad portfolio for every storage need!



The ReadyDATA Concept

Enterprise-class Features for SMB

- + **Position where customer cannot afford “Big-IT” solutions but needs advanced data management features**
 - All SMB-relevant Enterprise functions without licenses
- + **Simple to use, simple to buy and simple to sell**
 - Advanced data management features, virtual networking and 5 year warranty come standard with every box
- + **High performance and capacity**
- + **Easy Management**
- + **Filesystem with highest reliability and integrity**
- + **SMB Pricing**



ReadyDATA features

Feature set unmatched by any mid-range vendor

- + 6-bay Desktop, 12-60 Bay Rackmount
- + Unified (NAS/SAN) storage
- + ZFS-based
- + SSD caching for performance boost
- + Instant expansion and continuous data protection
- + block-level replication for disaster recovery
- + Advanced efficiency (thin provisioning, data compression & deduplication)



Hardware Platforms ReadyDATA



Up to 60 bays
with expansion
units



	ReadyDATA 5200	ReadyDATA 516
CPU	Intel Xeon Quad core 2.66GHz	Intel Core i3 Ivy Bridge 3.3GHz
Memory	16GB ECC	16GB ECC
Bays	12 - 60	6
GE Ports	2	2
10 GE Ports	2	0
6 GB SAS Ports	2	0
Total Solution Capacity	240TB	24TB
HDD Types	SSD, SAS, NL-SAS, SATA, SSD Caching	SSD, SATA, SSD Caching

ReadyDATA Lowest Total Cost of Ownership (TCO) – 4 areas of saving

Lower Hardware Cost

- Especially in complex config (SSDs, SAS)
- No hidden cost / surprises

Lower Support and Warranty Cost

- 5 Years warranty
- 3 years NBD Hardware replacement

No Extra License Cost for:

- Replication
- Deduplication
- Unlimited Snapshots
- 10 GE

Utmost Simplicity

- Simplest GUI
- Little training
- No license management
- Cloud-managed Replication

Solutions: ReadyNAS vs ReadyDATA

ReadyNAS	ReadyDATA
<ul style="list-style-type: none"> • Business Apps, Prosumer Apps 	
<ul style="list-style-type: none"> • Remote access via ReadyCLOUD, ReadyNAS Remote also when no VPN 	<ul style="list-style-type: none"> • Remote access via existing VPN
<ul style="list-style-type: none"> • Disaster Recovery for HQ / centralized backup, file based • ReadyNAS Replicate: Web-managed • Local management possible via rsync 	<ul style="list-style-type: none"> • Disaster Recovery for HQ / centralized backup, block-based • ReadyDATA Replicate Web- or locally managed
<ul style="list-style-type: none"> • Multi-Site backup for distributed environments, file based replication 	<ul style="list-style-type: none"> • Multi-Site backup for virtual/ iSCSI apps w/ block replication • Large file size environments • Deduplication required
<ul style="list-style-type: none"> • Primary storage for File Sharing in offices and ROBO environments up to 84TB 	<ul style="list-style-type: none"> • Primary storage for File Sharing with high performance /capacity needs (SSD-caching, RAM, 240 TB)
<ul style="list-style-type: none"> • Primary storage (iSCSI or NFS) for non-HA server apps & VM environments without replication 	<ul style="list-style-type: none"> • Primary storage (iSCSI or NFS) storage for non-HA server apps & VM environments w/ with replication

End User ReadyDATA Positioning

What to sell when the customer can't afford Big IT



+ Small Budget

- Organizations with part time “IT generalists”
 - IT generalist will manage two or more IT-related tasks/areas (backup, database, network, servers)
- Owns little-to-none Big IT storage
- Requires easy-to-implement and easy-to-administer storage device
 - Also requires explanation of storage features like snapshots, clones, thin provisioning, etc

+ In-between

- Organizations with one or more “IT generalists”
 - IT generalist will manage two or more IT-related tasks/areas (backup, database, network, servers)
- Owns some storage from a Big IT vendor, but can't always afford it
- Requires enterprise storage features in a product that fits a non-enterprise budget

+ Big Budget

- Organizations with dedicated, full time IT staff with specific expertise to manage specific applications or parts of the IT infrastructure
- Owns storage from a Big IT vendor and has budget for more
- Increasingly requires alignment between IT investment and importance of application to the business

End User ReadyDATA Positioning

When to recommend ReadyDATA

	Small Budget	In-between	Big Budget
Backup-to-Disk	Great Fit	Great Fit	Great Fit
File Serving	Great Fit	Good Fit	Difficult
Non-production iSCSI Applications	Great Fit	Great Fit	Great Fit
Virtualization/VDI	Great Fit	Good Fit	Difficult
Production iSCSI Applications	Great Fit	Good Fit	Difficult

When ReadyNAS vs ReadyDATA

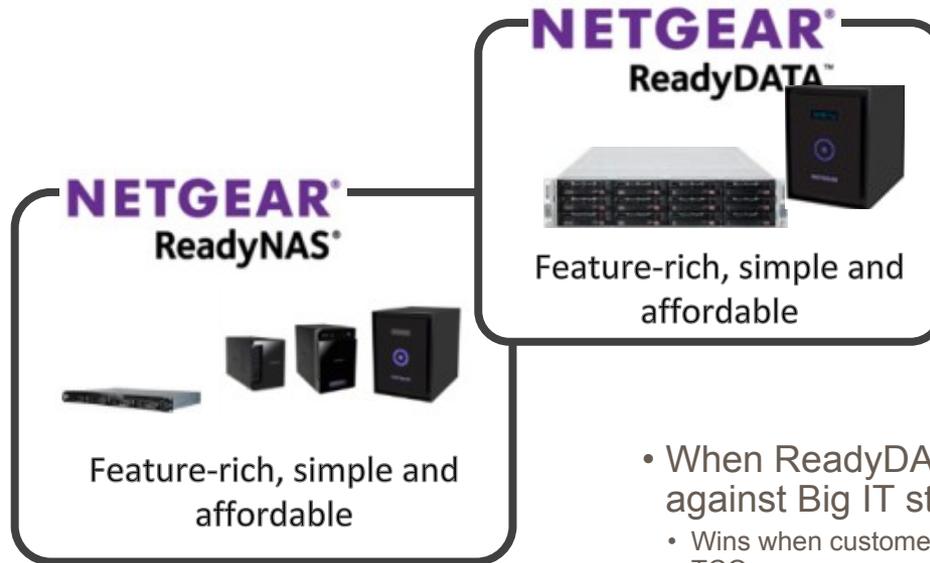


ReadyNAS vs. ReadyDATA

	Raidiator 4.x/5.x	ReadyNAS OS 6.x	ReadyDATA OS 1.x
HCL Approved	SATA	SATA SSD	SATA SSD SAS
Scalability	No	eSATA	SAS
Unlimited Block-based Snapshots	No	Yes	Yes
Thin Provisioning	No	Yes	Yes
Real-Time Anti-Virus	No	Yes	No
Discovery	Raidar	ReadyCLOUD	Raidar
Replication Type	File	File	Block
Instant Provisioning	No	Yes	Yes
Instant Multi-disk RAID Expansion	No	No	Yes
Data Consistency	No	No	Yes

Competitive Landscape

- When ReadyDATA 5200 competes against low-end storage
 - Wins when customers focus on feature set and consider warranty and support
 - Loses when customers focus on price and drive cost



- When ReadyDATA 5200 competes against Big IT storage
 - Wins when customers focus on feature set and consider TCO
 - Loses when customers primary feature requirement is HA and when customers are brand-centric

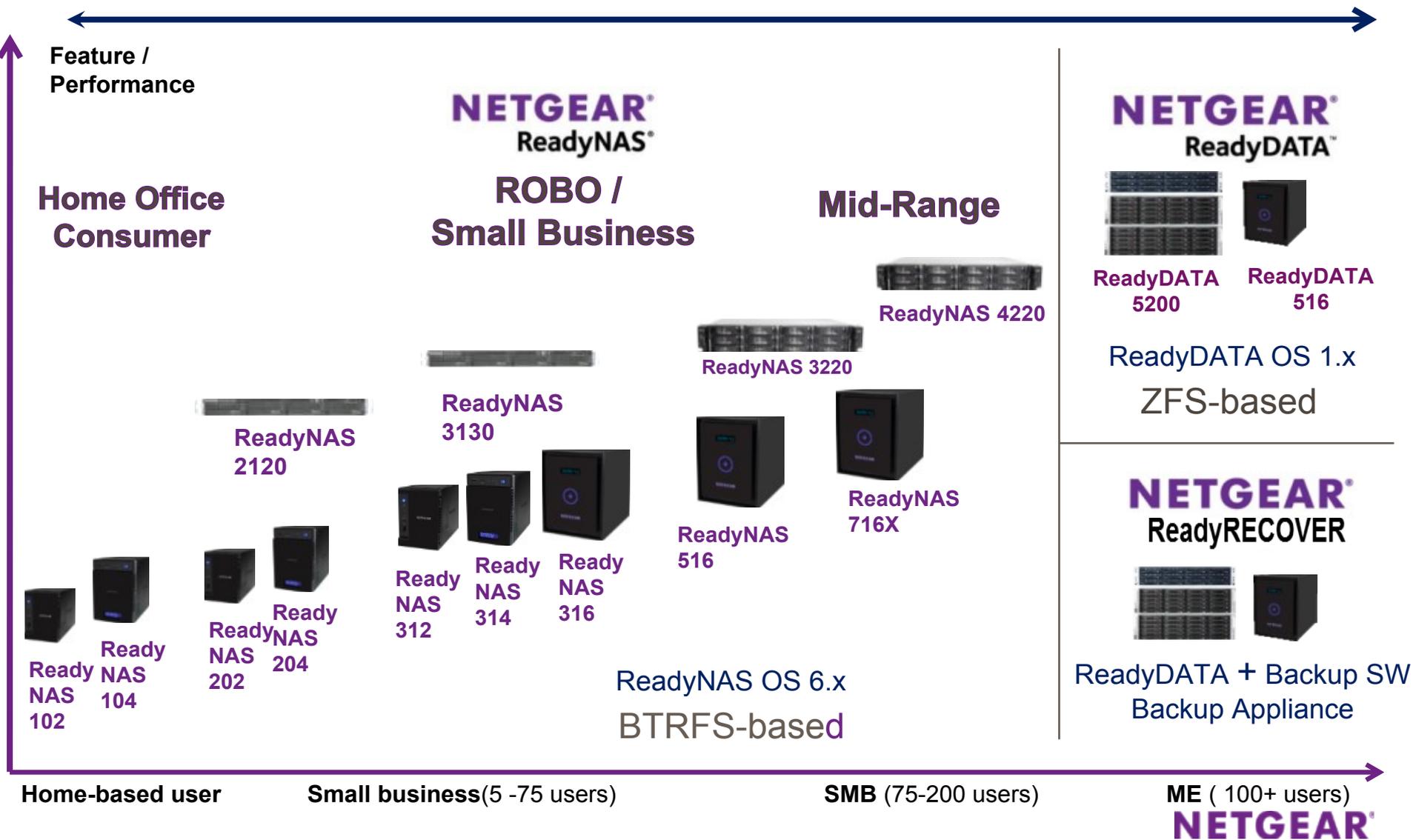


Details ReadyRECOVER

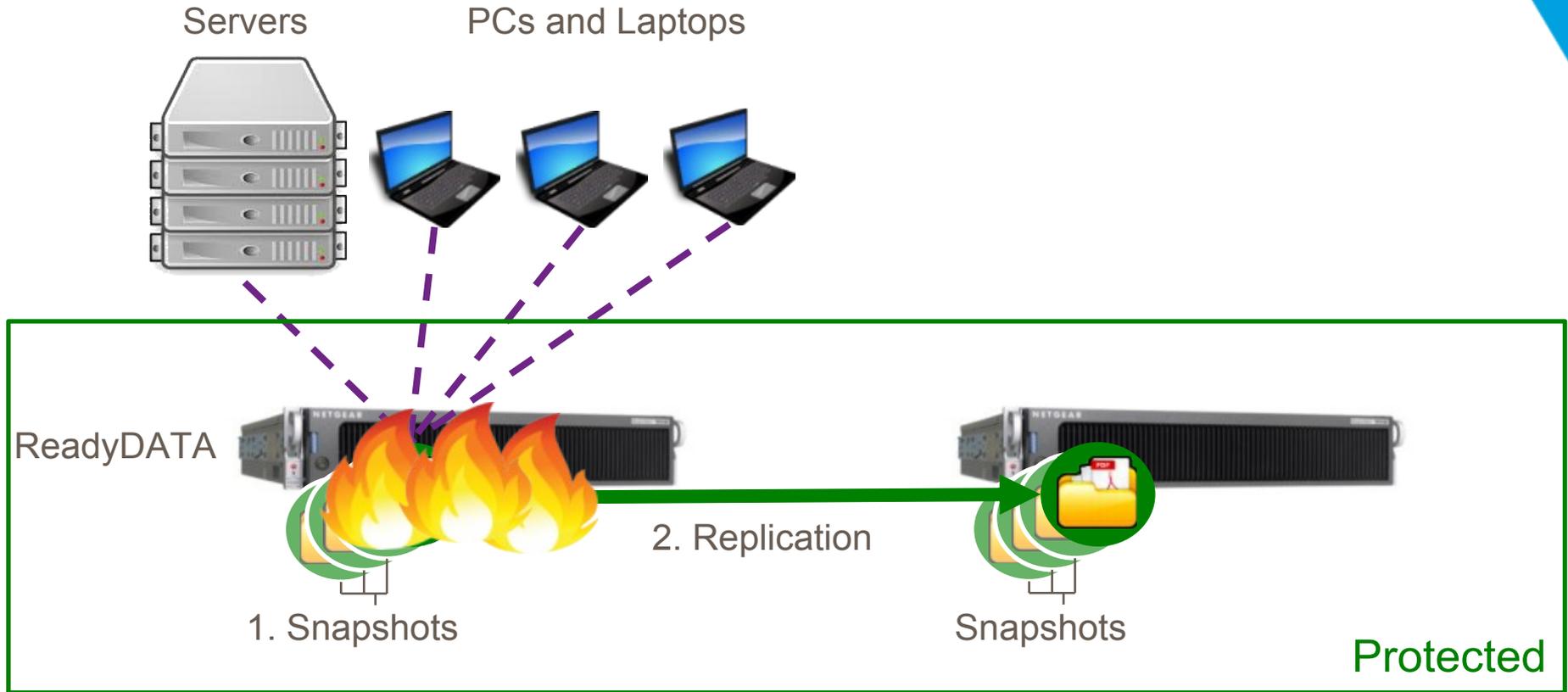


NETGEAR Unified Storage for SMB

Broad portfolio for every storage need!



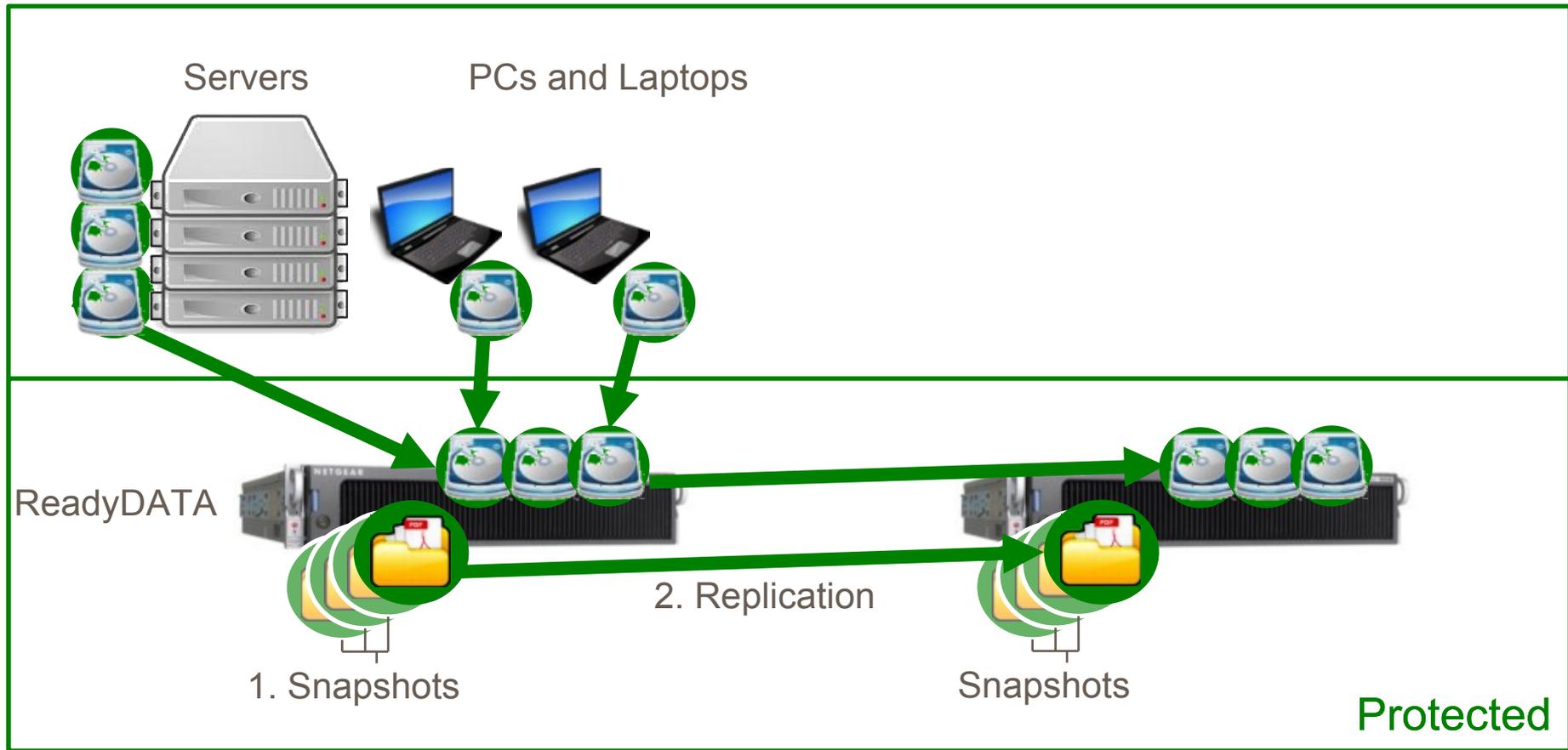
What does ReadyDATA Protect?



What **doesn't** ReadyDATA Protect?



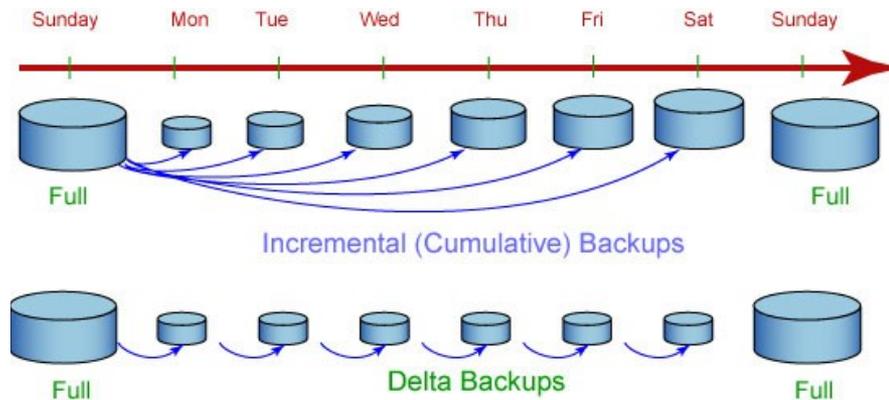
How can ReadyRECOVER help?



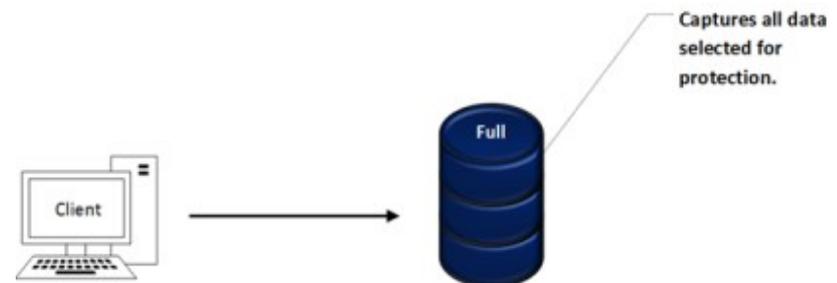
ReadyRECOVER was built to solve three common SMB backup issues

1. Limited bandwidth prevents offsite protection
2. Cumbersome management of incremental backups (“image chains”)
3. High capacity requirements due to weekly / monthly full backups

What other vendors do:



What ReadyRECOVER does:



Full Backup Every 15 Minutes, Forever!

with ReadyRECOVER

Because RR provides **a trusted relationship** between Software and 100% data integrity File System

- ✓ **Every backup writes only changed data, forever!**
 - ✓ Maximum efficiency & minimal performance impact
- ✓ **Every backup is verified in real time, forever!**
- ✓ **Every backup is a full restore point, forever!**
- ⇒ **Only 1 Full backup at the beginning, no weekly additional backups**
- ⇒ **We can do that because auf ZFS File System**

Write Only Changed Data, Forever!

with ReadyRECOVER

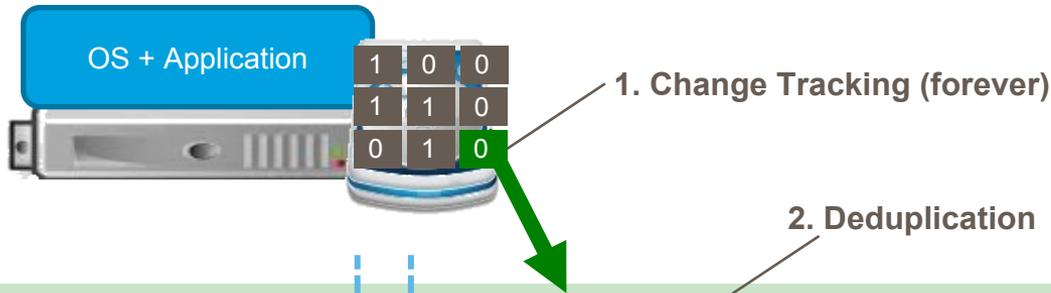


- + Changes to live data are tracked at the block level
- + When a backup runs, only blocks of data that have changed since the last job are written
- + With less data to write for each backup job:
 - Fewer cycles are consumed for **maximum processing efficiency**
 - Less capacity is required for **maximum storage efficiency**
- + Efficient backups mean lower overall IT costs

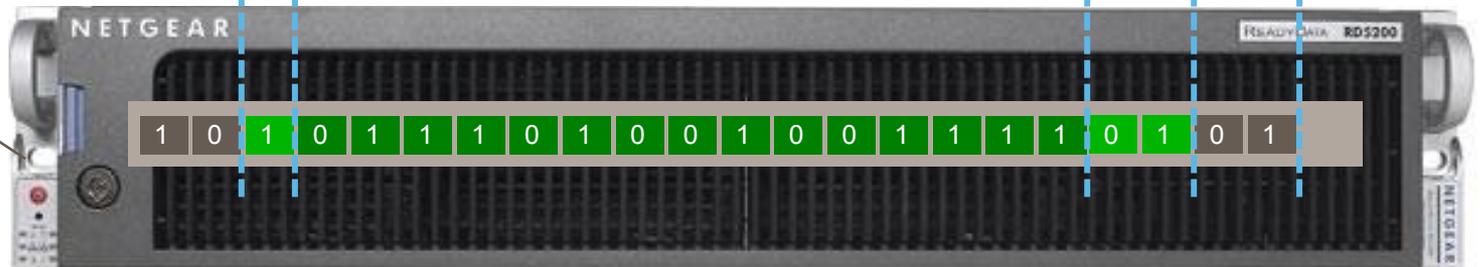
Capacity Efficiency

Why doesn't each full restore point consume a lot space?

Protected Server/VM



3. Inline Compression

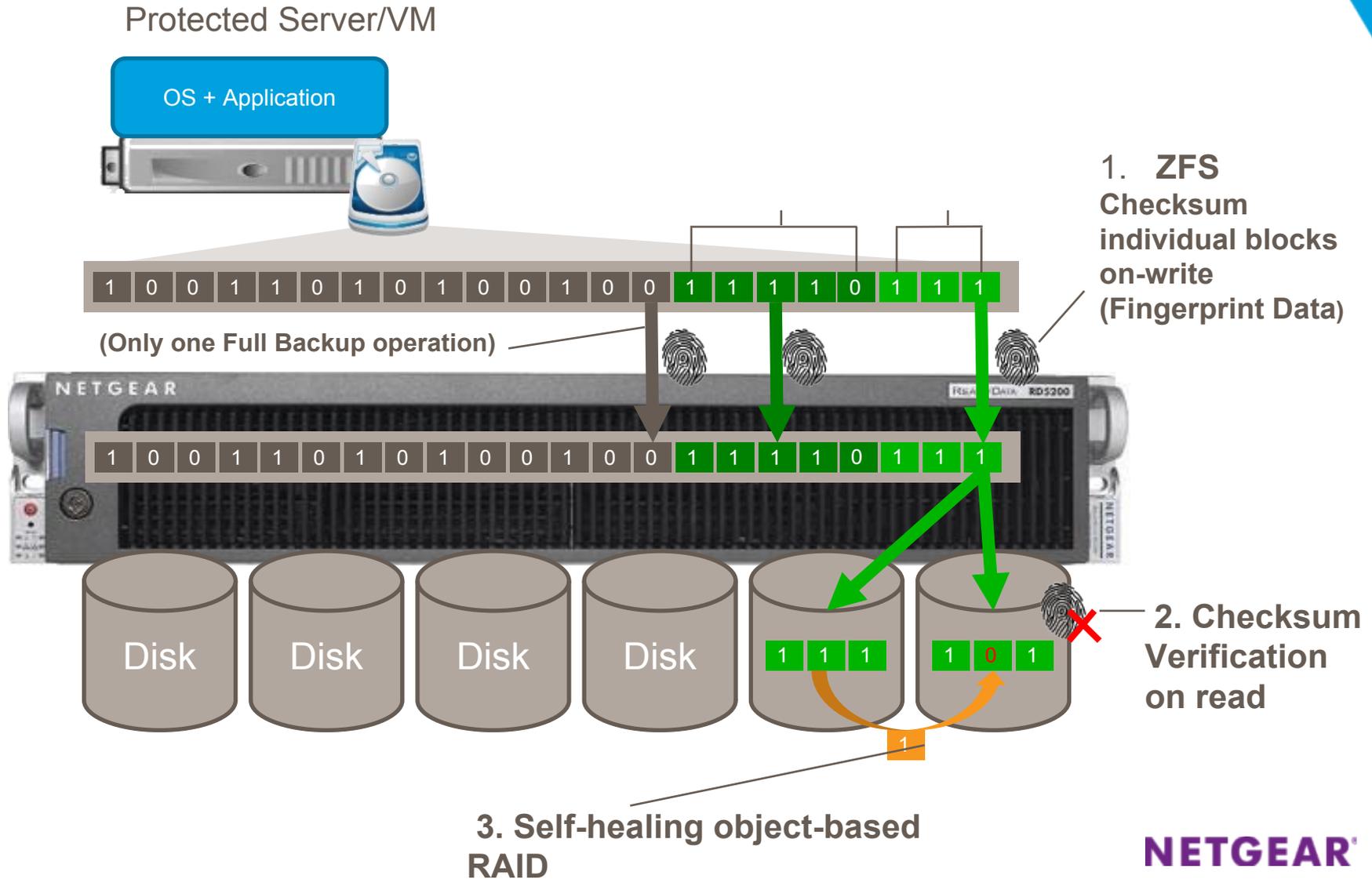


Verify in Real Time, Forever!

with ReadyRECOVER

- + Any time backup data is written to ReadyRECOVER, it is automatically checked against the source data for accuracy and integrity
- + Anytime a discrepancy is found, it is immediately corrected before moving on with the backup
- + With ReadyRECOVER there will never be “surprises” when the need arises for data to be restored
- + **Unlike competitive offerings, any data restored from ReadyRECOVER will always be identical to what was originally written**

End-to-End Integrity



Full Restore Points, Forever!

with ReadyRECOVER



- + Unlike competitive offerings, ReadyRECOVER only ever requires one full system backup – your first
 - Competitive products require periodic full backups which consume large amounts of time and storage capacity
 - Competitive products then perform incremental backups at regular intervals. To restore a file, database or server these incremental backups must be compiled with the last full backup
- + **Unlike competitive offerings, every ReadyRECOVER backup is a full restore point**
 - Each backup can be used to restore Microsoft SQL, Exchange, and SharePoint servers, into production mode on any platform – physical or virtual. Each backup is also ready for fast, simple recovery of files or folders.

Why ReadyRECOVER is so special...

Full system backup must be performed at least **once per month/week, requiring tremendous capacity**

"Full" system backup occurs every 15 minutes, **ONLY ONE** physical full back at the beginning minimizes capacity requirements

Full backup requires lengthy scan for **all files**

Full backup requires quick check of **changed data index**

Full backup can take **8+ hours**

Full backup completed in **less than 5 minutes**

Full backup requires **space for all files** that have changed since last backup

Full backup requires **space for only the data within each file (blocks)** that has changed in the last 15 minutes

Restore requires **compiling all incremental backups** with last full backup

Restore can be performed from **any 15 minute snapshot**

Proof...

Other backup vendors have similar block tracking technology as StorageCraft backup software (used as part of ReadyRECOVER), however, they are not able to guarantee data integrity like ReadyRECOVER. Because of this, a user must periodically make a long-running, resource intensive verification that scans every block on the machine being backed up and on the storage (similar to taking a slow running full backup).

For example Veeam's comments that contradict their product literature: "This backup method lets you perform **forever-incremental backup** and save disk space as you have to store only one full backup on the backup repository." from

http://helpcenter.veeam.com/backup/70/hyperv/reversed_incremental_backup.html

Vs:

<http://forums.veeam.com/veeam-backup-replication-f2/how-often-do-i-need-a-full-backup-t8926.html>

Other vendors make similar claims, but have the same caveats. CA ARCserve is another example of "incremental forever" that actually isn't forever:

http://www.arcservedocs.com/arcserved2d/r15/help/us/cad2d_how_resync_backups_works.htm.

Additionally, most backup vendors track incremental changes in image chains which require administrators to manage the chains. Veeam and ARCserver are good examples:

http://www.arcservedocs.com/arcserved2d/r15/help/us/cad2d_how_infinite_incrementals_work.htm

With ReadyRECOVER, there are no chains to manage because every backup in a single restore file (looks like a full backup), which is why we say "Full backups every 15 minutes". More important, only one long-running, resource intensive backup is needed because ReadyDATA guarantees data integrity. When we say "forever", we mean forever.

Proof....



How often do I need a full backup? 0 Like Share 0 +1 0

POSTREPLY ↩

35 posts

How often do I need a full backup?

by **dstreufe** » Mon Oct 03, 2011 11:59 pm

I see that the FAQ says this is possible, but what is the best practice around how often I need to take a full backup? Due to the type of storage I am using a synthetic full takes a LONG time, and an actual full takes about 35 hours. Instead of doing this once per week, I would like to do it once per month or less.

How far apart can I stretch the interval between full backups before I am flirting with trouble?

Thanks,
Dan

dstreufe
Novice
Posts: 9
Liked: never
Joined: Mon Apr 19, 2010 10:25 pm
Full Name: Dan S

Re: How often do I need a full backup?

by **Gostev** » Tue Oct 04, 2011 9:45 am

Hi Dan, recommended values are as follows:

For incremental backup mode:

- Synthetic full weekly (UI will not allow you to schedule synthetic less often for performance reasons), OR
- Active full monthly (driven primarily by retention policy and disk space considerations - unlike with reversed incremental backup, older restore points cannot be deleted immediately, until the new full backup is created)

For reversed incremental backup mode:

- Active full once every 1-3 months (this backup mode is specifically designed for long incremental chains, but Active Full is still good for the purpose of defragmenting and reducing full backup size).

That's what I am seeing other customers doing typically. Internally at Veeam are not using active fulls at all, but effectively they still happen once every half-year or so because of various job arrangements, Veeam B&R upgrades etc.

Thanks!

Gostev
Veeam Software
Posts: 15465
Liked: 748 times
Joined: Sun Jan 01, 2006 11:01 am
Full Name: Anton Gostev

Why should I care?

1. Significant **savings in storage capacity**: Only 1 full backup is required, ALL additional full backups are block-based incrementals only, with dedupe and compression
2. Significant **savings in bandwidth** – 1 full backup at the beginning, after that only changed blocks will be sent to offsite location
3. Enablement of **easy offsite storage & recovery** / DR in bandwidth-constraint areas where full backups over WAN are not possible
4. **Less management** overhead: No extra backup server, no image chains
5. **Extremely fast restore**: Every 15 min recover point is a full backup

Unique Selling Proposition

Every ReadyRECOVER backup writes only changed data, forever!

- Bandwidth savings
- Capacity savings
- 15 minute restore points!

Who else can do this?



NETGEAR'

Buying ReadyRECOVER

Step 1) Select software licenses



Server
Protection:
RRSERV01-
10000S



Virtual Server
Protection: RRVIRT01-
10000S



Windows Small
Business Server
Protection: RRSBS01-
10000S



PC & Desktop
Protection: RRDESK01-
10000S

Step 2) Pick a ReadyDATA model

ReadyDATA 5200
Rack mount, 2U 12-bay, expandable
up to 360TB (60-bay)
SKU: RD5200-100WWS



ReadyDATA 516
Desktop, 6-bay, scalable to 36TB
SKU: RDD516-100



Buying ReadyRECOVER

Step 3) Choose capacity

ReadyDATA 5200		ReadyDATA 516	
SATA Drive Packs	RD5D1LT01-100WWS - 1 X 1TB SATA HDD Drive Pack	SATA Drive Packs	RDD1LT02-10000S - 1 x 2TB SATA HDD Drive Pack
	RD5D1LT02-100WWS - 1 X 2TB SATA HDD Drive Pack		RDD1LT03-10000S - 1 x 3TB SATA HDD Drive Pack
	RD5D1LT03-100WWS - 1 X 3TB SATA HDD Drive Pack		RDD1LT04-10000S - 1 x 4TB SATA HDD Drive Pack
	RD5D1LT04-10000S - 1 X 4TB SATA HDD Drive Pack		

SSD drive packs are also available.

NL-SAS, SAS, and SSD drive packs are also available.

Step 4) Don't forget hardware support!

ReadyDATA 5200 Support

PMB0314-10000S OnCall 24x7 (1 Year)

PMB0334-10000S OnCall 24x7 (3 Years)

PMB0354-10000S OnCall 24x7 (5 Years)

PSB0304-10000S Professional Setup and Configuration (Remote)

PSP1104-10000S Professional Setup and Configuration (Onsite)

ReadyDATA 516 Support

PMB0313-10000S OnCall 24x7 (1 Year)

PMB0333-10000S OnCall 24x7 (3 Years)

PMB0353-10000S OnCall 24x7 (5 Years)

PSB0303-10000S Professional Setup and Configuration (Remote)

PSP1103-10000S Professional Setup and Configuration (Onsite)

ReadyRECOVER Family

Product Configurations and SKUs...

Software SKUs:

SKU	Config	List	Street	Region
RRSERV01-10000S	StorageCraft ShadowProtect Server Edition	\$1,359.99	\$979.99	WW
RRVIRT01-10000S	StorageCraft ShadowProtect Virtual Server Edition	\$514.99	\$369.99	WW
RRDESK01-10000S	StorageCraft ShadowProtect Desktop Edition	\$129.99	\$94.99	WW
RRGRE01-10000S	ReadyRECOVER Granular Restore for Exchange	\$2,499.99	\$1,799.99	WW
RRSBS01-10000S	ReadyRECOVER Small Business Server Edition	\$699.99	\$499.99	WW

- Software SKUs are added to new or existing ReadyDATA hardware
- Partner and deal registration discounts will be applied, but no SBAs
- Software includes a free 30-day trial
- Customer has to already be or become a NETGEAR ReadyNAS or ReadyDATA customer

ReadyRECOVER Family

Product Configurations and SKUs...

Accessory SKUs:

SKU	Config
MRRSERV1-10000S	ReadyRECOVER Server Edition One-year Maintenance Extension
MRRVIRT1-10000S	ReadyRECOVER Virtual Server Edition One-year Maintenance Extension
MRRDESK1-10000S	ReadyRECOVER Desktop Edition One-year Maintenance Extension
MRRSBS1-10000S	ReadyRECOVER SBS Edition One-year Maintenance Extension
MRRGRE1-10000S	ReadyRECOVER Granular Restore for Exchange One-year Maintenance Extension

Competitive Landscape

+ On-premise backup

- “Classic backup-to-disk”
- Tape replacement
- Backup data is stored onsite
 - Can also be stored offsite on owned assets

ReadyRECOVER
target market

+ Cloud-based backup

- Backup data is stored only in the cloud/non-owned assets

File only; no full
system restore

+ Hybrid backup

- Primary backup data is stored onsite
- A copy of backup data is stored in the cloud/non-owned assets

Traditional backup
vendors exiting
this space

Competitive Landscape

Feature	Symantec Backup Exec 3600	Unitrends RC823
Max Drives	4	8
Capacity	5.5 TB	13 TB (19 TB raw)
Instant Replication	Not supported	Not supported
De-duplication & Compression	Additional License Required	Included
Incremental Forever	Not supported	Not supported
Backup for # of Physical Servers	Unlimited	Unlimited
Backup for # of Virtual Servers	Unlimited	Unlimited
Dynamic drive loading	Included	Included
Granular Exchange restore	Additional License	Limited
Pricing	\$20,212.99	\$22,995.00

Feature	ReadyRECOVER w/ RD5200
Max Drives	60
Capacity	15 TB (18 TB raw)
Instant Replication	Included
De-duplication & Compression	Included
Incremental Forever	Included
Backup for # of Physical Servers	4 (Can purchase additional licenses)
Backup for # of Virtual Servers	6 (Can purchase additional licenses)
Dynamic drive loading	Included
Granular Exchange restore	Additional License
Pricing	\$15,865

ReadyRECOVER is purchased a-la-carte.

Pricing is for a ReadyRECOVER appliance with similar capacity

Sales Tools



NETGEAR®

Sales Tools

Check local country / regional
PowerSHIFT portals for updates and
available local language based assets

NETGEAR®

AUTHORIZED RESELLER



ReadyNAS/ReadyDATA Resources

Powerful collection of solution selling tools

NETGEAR®



www.netgear.com/readynas or www.netgear.com/readydata

NETGEAR®

Tools

ReadyDATA

- [ReadyDATA Demo, 14 min](#)
- [ReadyDATA Replicate, 7 min](#)
- [ReadyDATA Configurator](#)
- [Virtualization with Protection for SMBs Using the ReadyDATA 5200](#)
- [Volume Performance and Configuration on ReadyDATA Platforms Performance and Configuration Guides](#)

ReadyRECOVER

- [ReadyRECOVER Video \(Positioning and Demo, 23 min\)](#)
- [ReadyRECOVER Application Notes and configuration guide](#)
- [ReadyRECOVER Offsite Protection: Replication Overview and configuration guide](#)
- [ReadyRECOVER Solution Brief_Overview](#)
- [ReadyRECOVER Solution Brief: Single Files Restore](#)
- [WP: Storage Efficiency the ReadyRECOVER way: Saving with RR](#)
- [LINK to 30 Day Trial License](#)

ReadyNAS

[Overview incl Video](#)
[Feature Videos – great short Feature Videos](#)
[ReadyNAS Sandbox](#) (Simulator)

Tools

[Drive Compatibility List](#)
[How to sell ReadyNAS to Endusers sheet](#)

WPs

[BTRFS on ReadyNAS](#)
[Continuous Data Protection on ReadyNAS](#)
[ReadyNAS Performance Overview](#)
[XRAID vs FLEXRAID WP](#)

Tools

ReadyNAS Surveillance

[Surveillance Storage &](#)

[Bandwidth calculator](#) – Sizing tool for RN video surveillance projects – great for partners!

[ReadyNAS Surveillance Video](#) – great short video 3 min, shows functionality and positioning of RN Surveillance

[List of supported cameras](#)

[Solution Guide: IP Networking & Surveillance](#)

Whitepapers, Brochures & Solution Guides

[Data Protection Brochure](#)

[Building Backup-to-Disk and Recovery solutions](#)

[Intels overview of ReadyNAS and ReadyDATA Storage](#)

Other Sales Tools

[Drive Compatibility List](#)

[Product Selector Tool](#)

[RAID Calculator](#)

[Visio Stencils](#)

[ProSUPPORT Website](#)

Community

- [APPS Overview & developer Website](#)
- [ReadyNAS FORUM](#)

Summary: Why NETGEAR ReadyNAS and ReadyDATA Storage?

- + CLOSES THE GAP for **data protection** between SMB and Enterprise
 - „Continuous Data Protection“ with Pointer-based, unlimited Snapshots
 - Web-managed replication – easiest replication solution in the market
 - Block-based Replication (ReadyDATA)
 - Dedupe (ReadyDATA)
 - SSD-Caching (ReadyDATA)
- + How do we do that? NETGEAR is the only SMB-vendor with **BTRFS/ZFS**
- + Advanced Cloud-usage – most simple to use disaster **recovery/Branch office protection solution**:
 - ReadyNAS/ReadyDATA Replicate
 - ReadyCLOUD Deployment/Access/Sharing
- + **Warranty and support** – 5 years for chassis and Ent drives, 5 years NBD all ReadyNAS 300 and above and ReadyDATA INCLUDED
- + Reliable, Affordable, Simple – only NETGEAR offers advanced capabilities at an SMB budget

3 Take aways

+ Best **data protection** for SMB:

- **Snapshot technology with hourly protection** – restore data from every point in time without impacting performance.
- **Most easy to use replication** technology for disaster recovery
- **Data Integrity due to advanced Filesystems**
- **Integrated backup solution with „only 1 full backup“ advantage**

+ Most flexible and secure solution for **personal cloud** – remote access with local hardware (privacy, performance), utmost security (no portforwarding), ease of use

+ Unique **warranty and support** offering

- **5 years warranty and NBD for almost all storage products**

Press and project highlights

Public Recognition for Storage

ReadyNAS & ReadyDATA awards are rolling in...

+ ReadyNAS

- InfoWorld (US)
 - ReadyNAS 4220 takes #1 in 4-unit NAS round-up!
- Computer Total (Netherlands)
 - ReadyNAS 104 takes #1 in 14-unit NAS round-up
- PC Pro (UK)
 - ReadyNAS 314 finished #2 in 11-unit NAS round-up!



+ ReadyDATA

- InfoWorld (US)
 - ReadyDATA 5200 earns 9.3 out of 10 and Editor's Choice!
- Search Storage (US)
 - ReadyDATA 516 is 2013 Runner-up for Backup Hardware Product of the Year!



Recent Project Deals for Storage

Large-scale installations are growing and growing...

+ ReadyNAS

- \$128+K for 150 x 314 (4X1TB DS)
 - distributed environment of German savings bank
- \$79+K for 100xRN312 and 2xRN3220
 - IaaS for agriculture, FR
- \$46+K for 10xRN4220X
 - Oil & Gas, UK
- \$29+K for 26 RN314 and 140RN104
 - Educational vertical, UK

+ ReadyDATA

- \$124K+ for two fully populated ReadyDATA units with 60 drives each
 - Tarsus, UK
- \$109K+ for two fully populated ReadyDATA units with 60 drives each
 - Broadcasting company, UK
- \$49K+ for two fully populated ReadyDATA units
 - IaaS company, Germany
- \$47K+ for two fully populated ReadyDATA
 - Hospital, Spain

Recent Project Deals for Storage

Large-scale installations are growing and growing...

+ ReadyNAS

- \$93K+ for 200 ReadyNAS desktop units
 - Retail vertical in USA
- \$92K+ for 7 ReadyNAS rackmount units
 - Healthcare vertical in China
- \$89K+ for 70 ReadyNAS desktop units
 - Government vertical in Spain
- \$51K+ for 13 ReadyNAS rackmount units
 - Surveillance solution in India

+ ReadyDATA

- \$104K+ for two fully populated ReadyDATA units
 - Manufacturing vertical in USA
- \$101K+ for 13 ReadyDATA units
 - Manufacturing vertical in Korea
- \$74K+ for 4 ReadyDATA units
 - Manufacturing vertical in USA

Recent ReadyNAS Press Coverage

The industry is paying attention...

+ Tech Bargains

- <http://www.techbargains.com/reviews/396518>



+ Tweak Town

- <http://www.tweaktown.com/reviews/5951/netgear-readynas-104-four-bay-consumer-nas-review/index.html>



+ SmallNetBuilder

- <http://www.smallnetbuilder.com/nas/nas-reviews/32133-netgear-readynas-o>



+ Anandtech

- <http://www.anandtech.com/show/7608/netgear-readynas-716-review-10gbaset-in-a-desktop-nas>



+ PCPro

- <http://www.netgear.com/images/pdf/111013-PC-Pro-Review.pdf>



+ PC Advisor

- <http://www.pcadvisor.co.uk/reviews/software/3462508/netgear-readynas-314-review/>



Recent ReadyNAS Press Coverage

The industry is paying attention...

NAS FESTPLATTEN TEST

Neu erschienen für wasser Resistenten...
FAZIT
 Hier sind unsere Favoriten...
TESTERGEBNISSE

Platz	Modell	Preis	Prozess	Speicher	Leistungs
1	SYNOLÓG DS214	199,-	Intel Atom	2x 3TB	100 MB/s
2	NETGEAR ReadyNAS 102	249,-	Intel Atom	2x 3TB	100 MB/s
3	QNAP TS-219	199,-	Intel Atom	2x 3TB	100 MB/s
4	WESTERN DIGITAL MyCloud	249,-	Intel Atom	2x 3TB	100 MB/s
5	SEAGATE Desktop NAS	249,-	Intel Atom	2x 3TB	100 MB/s

ZUM SELBERMAK... DER TRICK MIT DEM MAN...

Computer Bild

Test / Netzwerkspeicher

6 Netzwerkspeicher im Test

Sicherheit für NAS-System und Netzwerk...
Die Apps der Netzwerkspeicher

Test / Netzwerkspeicher

6 Netzwerkspeicher im Test

NAS-Systeme sind große Datenlager, die sich vom Heimnetz aus oder über das Mobilgerät erreichen lassen - der ideale Private Cloud-Speicher. PC-WELT hat sechs Modelle genau unter die Lupe genommen.

PC-WELT Test Sieger (twice)

1. Platz Synology DS214
 DER NAS-SEKRETAR im schlichten Kunststoffgehäuse...
2. Platz Netgear ReadyNAS 102
 DAS NAS-MODELL im Metallgehäuse...
3. Platz Qnap TS-219
 NASMODELL (EITZENS) präsentiert sich...
4. Platz Western Digital MyCloud
 WESTERN DIGITAL MyCloud...
5. Platz Seagate Desktop NAS
 SEAGATE Desktop NAS...
6. Platz D-Link ShareCenter DNS-327L
 DER NAS-SEKRETAR...
6. Platz LaCie Big2 NAS
 DER NAS-SEKRETAR...

Platz	Modell	Preis	Prozess	Speicher	Leistungs
1	SYNOLÓG DS214	199,-	Intel Atom	2x 3TB	100 MB/s
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4	WESTERN DIGITAL MyCloud	249,-	Intel Atom	2x 3TB	100 MB/s
5	SEAGATE Desktop NAS	249,-	Intel Atom	2x 3TB	100 MB/s
6	D-LINK ShareCenter DNS-327L	249,-	Intel Atom	2x 3TB	100 MB/s
6	LACIE Big2 NAS	249,-	Intel Atom	2x 3TB	100 MB/s

PCWELT

NETGEAR

1. Platz Synology DS214
 2. Platz Netgear ReadyNAS 102
 3. Platz Qnap TS-219
 4. Platz Western Digital MyCloud
 5. Platz Seagate Desktop NAS
 6. Platz D-Link ShareCenter DNS-327L
 6. Platz LaCie Big2 NAS

Recent ReadyNAS Press Coverage

The industry is paying attention...

+ Tomsnetworking:

- <http://www.tomshardware.de/netgear-readynas-312-test-review-benchmark.testberichte-241429.html>



+ PCTipp.ch

- <http://www.pctipp.ch/webcode/artikel/test-netgear-readynas-rn102-69560/>



+ PC Magazin

- <http://www.pc-magazin.de/vergleichstest/netzwerkfestplatten-nas-speicher-test-vergleich-synologie-netgear-1531377.html/>



+ Die Welt

- <http://www.welt.de/wirtschaft/webwelt/article119861101/NAS-Festplatten-bringen-Ordnung-in-Ihre-Daten.html>



+ Spiegel Online

- <http://www.spiegel.de/netzwelt/gadgets/backups-netzwerkfestplatten-fuer-die-automatische-datensicherung-a-938739.html>



+ Heise.de

- <http://www.heise.de/ct/artikel/Multitalent-NAS-1948184.html>



NETGEAR'

Recent ReadyDATA Press Coverage

The industry is paying attention...

+ ITPRO

- <http://www.itpro.co.uk/server/22091/netgear-readydata-516-review>



+ Storage Magazine

- <http://searchdatabackup.techtarget.com/feature/Data-backup-hardware-2013-Products-of-the-Year-finalists>



+ TechEdge

- <http://www.techedgemag.com/content/ContentCT.asp?P=774>



+ ChannelProSMB

- http://www.channelpro smb.com/article/netgear_readydata_5200_review_-_all_your_storage_needs_in_one_box



+ CRN

- <http://www.crn.com/reviews/storage/240008691/review-netgear-readydata-rd5200.htm?pgno=1>



+ Network World

- <http://www.networkworld.com/community/blog/8-great-videos-interop>



+ Storage Review

- http://www.storage review.com/netgear_readydata_516_review



Recent ReadyDATA Case Studies

Customers and resellers are excited to their story...

- **Bishop Heber High School**
 - Education (file serving)
- **Haynes Bros**
 - Retail (virtualization & replication)
- **ECO-IT**
 - Solution Provider (virtualization & desktop-as-a-service)
- **EMCO**
 - Solution Provider (virtualization and disaster recovery)
- **Everlast**
 - Retail (virtualization)
- **Arafura**
 - Solution Provider (virtualization)



Thank you!

Have you discovered
NETGEAR Infrastructure
Products?

www.netgear.com

BACKUP SLIDES

Flexibility with NETGEAR

+ **ReadyNAS 100/300/500 Series and 2120**

- Diskless, Desktop-Class or Enterprise-Class HDDs
(716X only diskless)

+ **ReadyNAS 3220, 4220:**

- Diskless & Enterprise Class HDDs

+ **ReadyDATA – only NETGEAR-HDDs**

New Desktop SKU Format

RN##BDCR-100<REGION>

RN=	“ReadyNAS”
## = Series	“10, 31, 51, 71”
B = Number of Bays	“2, 4, 6”
D = Number of Disk	“0, 1, 2, 4, 6”
C = Drive Capacity (TB)	“0, 1, 2, 3, 4”
R = Drive Reliability	“D, E” (Desktop, Enterprise)

RN10200-100NAS ReadyNAS 100 Series, 2-bay, Diskless

RN31221D-100EUS ReadyNAS 310 Series, 2-bay, 2x1TB, Desktop

RN51664E-100AJS ReadyNAS 510 Series, 6-bay, 6x4TB, Enterprise

New Rackmount SKU Format

RN##BDCR-100<REGION>

RN=	“ReadyNAS”
## = Series	“21, 32, 42”
B = Generation	“2”
D = Number of Disk	“0, 4, 12”
C = Drive Capacity (TB)	“0, 1, 2, 3, 4”
R = Drive Reliability	“D, E” (Desktop, Enterprise)

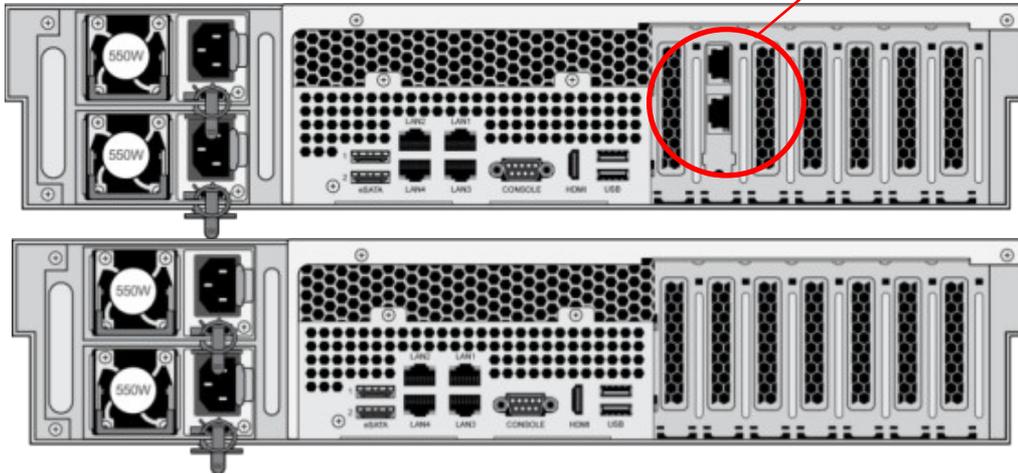
RN2120-100NAS ReadyNAS 2120 Series, Diskless, North America

RN21241E-100EUS ReadyNAS 2120 4bay, 4x1 TB, Enterprise, EU

RN32122E-100AJS ReadyNAS 3220 Series, 12-bay, 12x2TB,

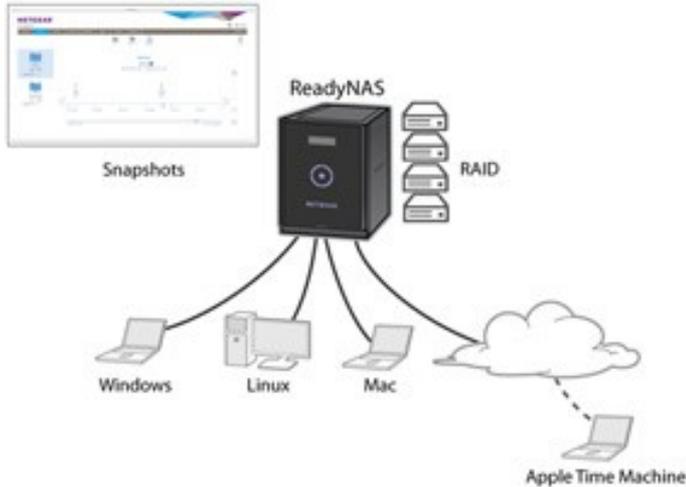
ReadyNAS 3220 and 4220

2x10 GE



ReadyNAS 716X Use Cases

High performance business solutions...

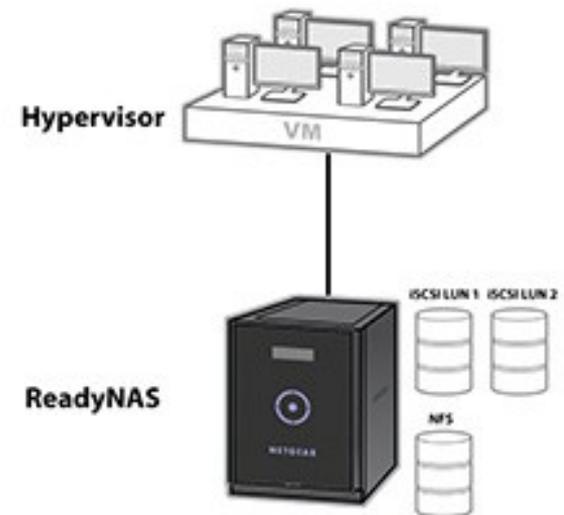


Backup

- High Performance solution in which backup windows are small
- Server backup
- Backup of virtual image files locally

Virtualization

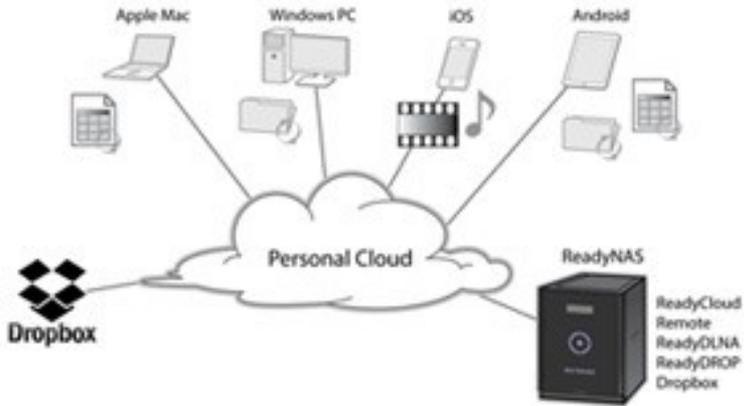
- Run multiple virtual images directly from ReadyNAS 716X
- Handle burst of virtual desktop loads for call centers, education



NETGEAR

ReadyNAS 716X Use Cases

High performance for the home...

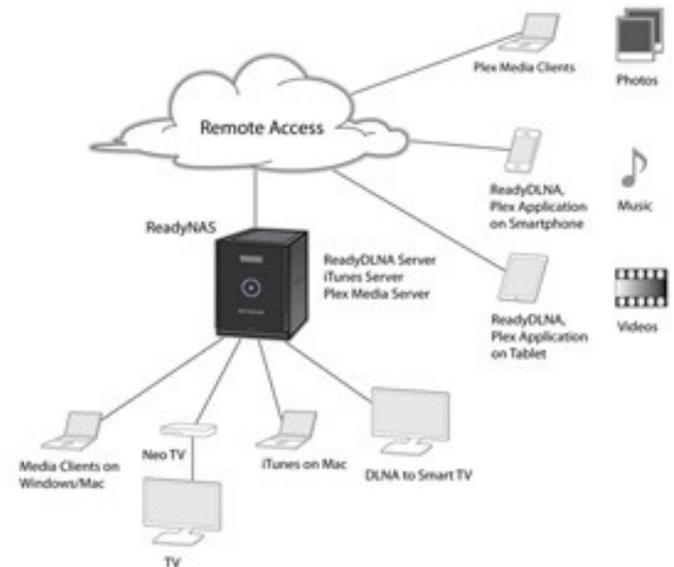


ReadyCLOUD

- Share content with others
- Personal cloud solution
- Access data from any browser
- No port forwarding/firewall rules to configure

Media Server

- Stream multiple HD videos simultaneously
- Transcode multiple HD video concurrently to different media clients



Data Protection: Service Offering

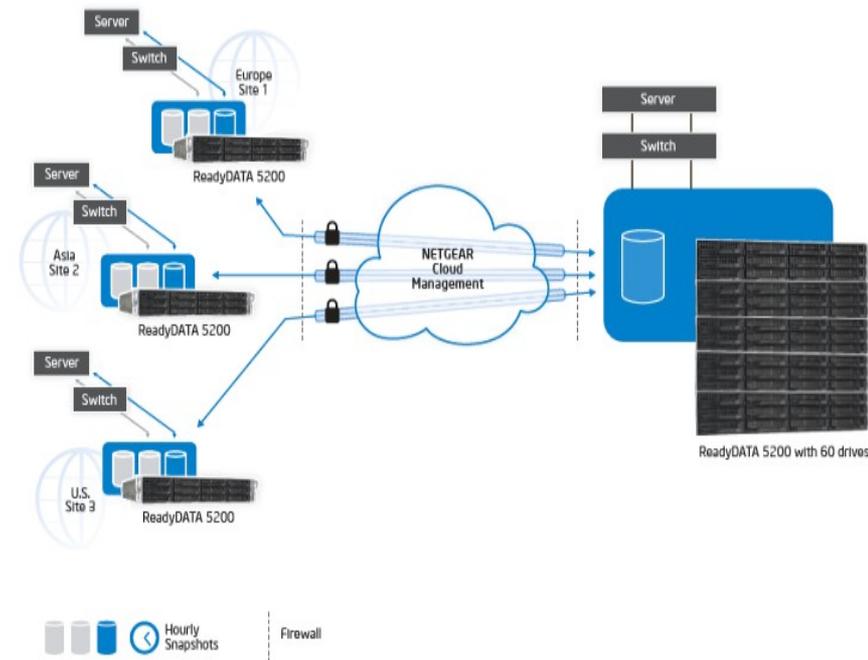
Cloud-managed backup, archival & disaster recovery

+ What is Needed?

- Inexpensive storage gateways
- Central management of replication
- Capacity reporting for chargeback
- High storage efficiency

+ What ReadyDATA Offers

- ReadyDATA 516
- ReadyDATA 5200
- Replicate Portal
- Dashboard
- Advanced efficiency features



ReadyDATA OS 1.4

Failback replication for easy disaster recovery

- + **Problem:** The biggest challenge to face once you failover to a DR location is the idea of somehow getting your data back to it's original location
- + **Solution:** Failback replication, means if your primary location comes online you can replicate back by only sending new blocks that have been created whilst your business used the offsite location.

ReadyDATA OS 1.4

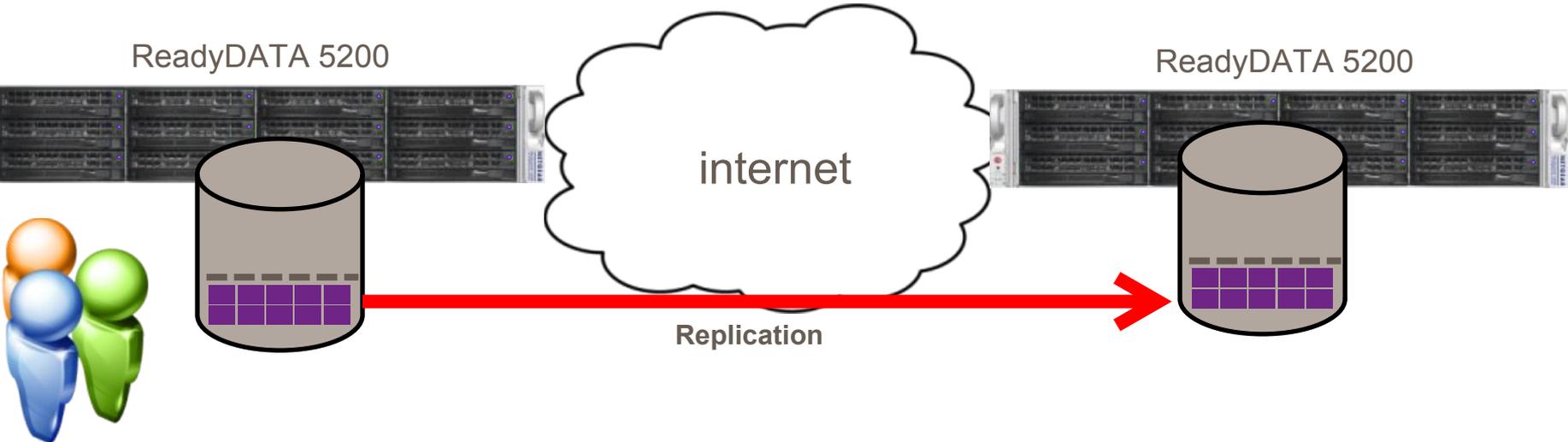
Failback replication for easy disaster recovery

Production Location

Disaster Recovery Location

ReadyDATA 5200

ReadyDATA 5200



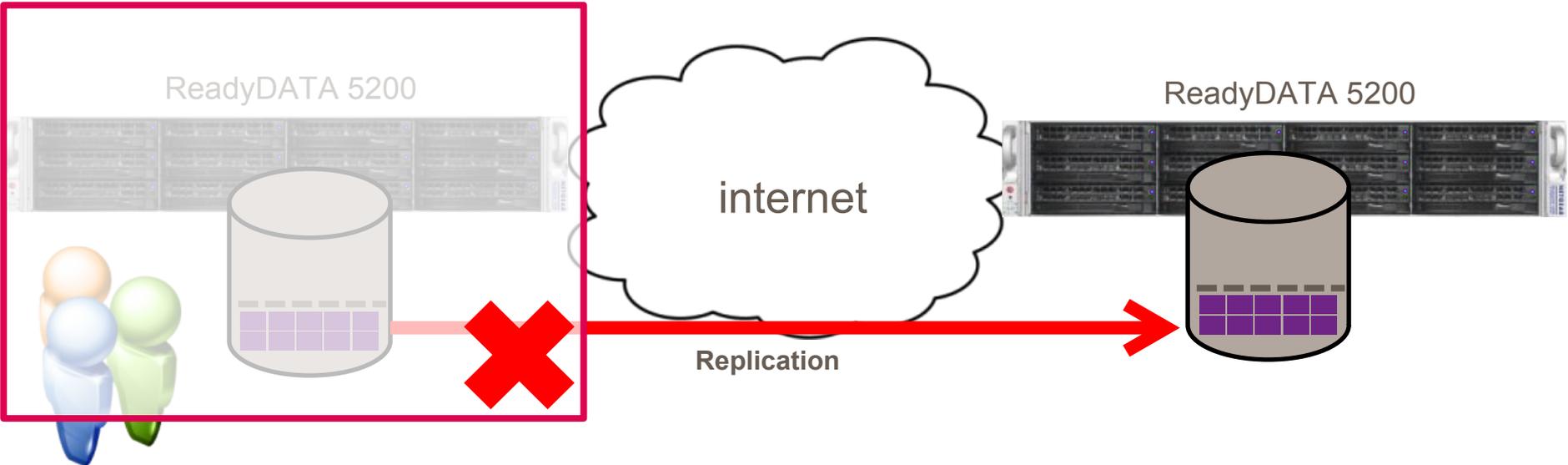
In this solution we have some users accessing data on a primary ReadyDATA that is configured with hourly snapshot protection and replication to a DR Location.

The ReadyDATA 5200s could be hosting files, VMs, databases, iSCSI LUNs, or even backup Images etc ...

Failback Replication

Production Location

Disaster Recovery Location

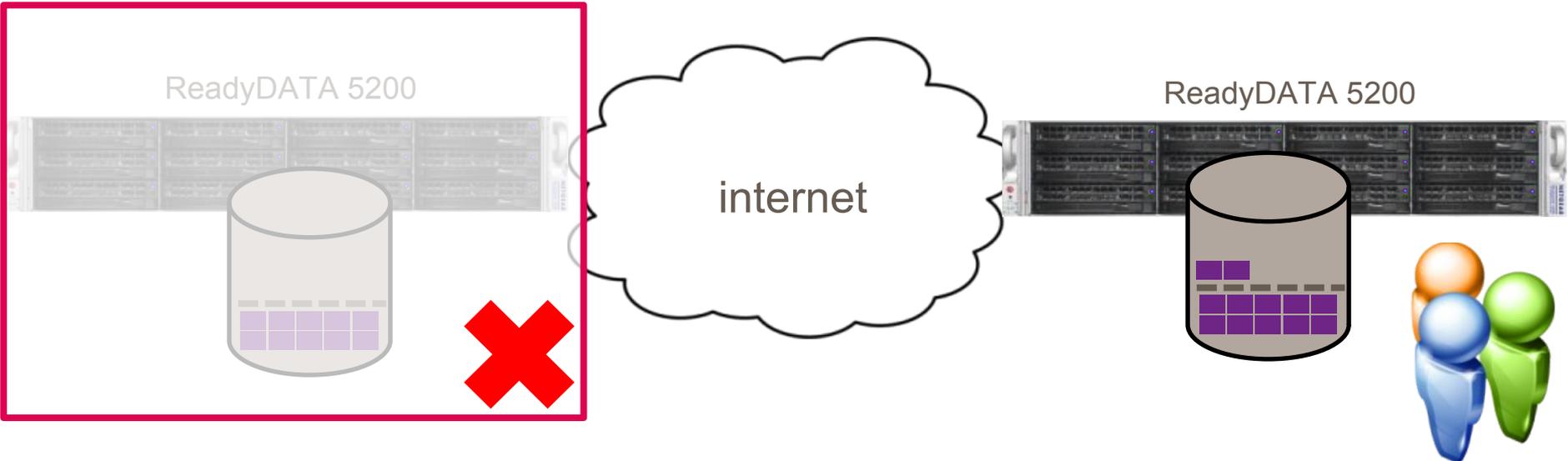


When your **Production Location** goes **offline**, your DR Location springs into action!

Failback Replication

Production Location

Disaster Recovery Location

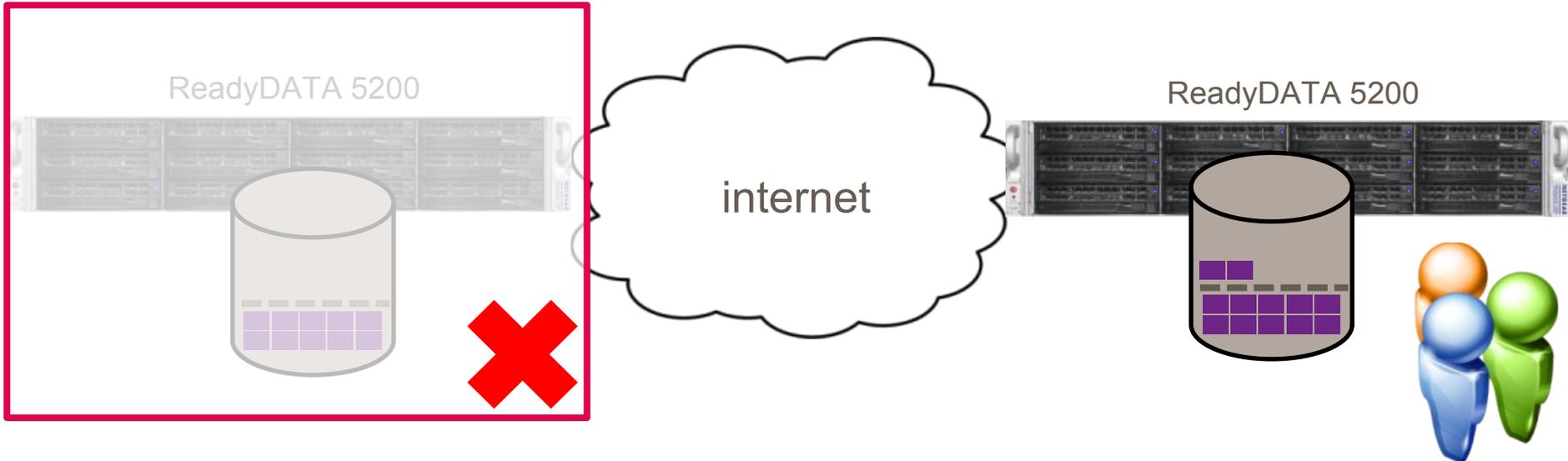


The administrator makes the data in DR Location available for everyone. This is a fast process as data doesn't need to be restored. Users start to access and create new data.

Failback Replication

Production Location

Disaster Recovery Location

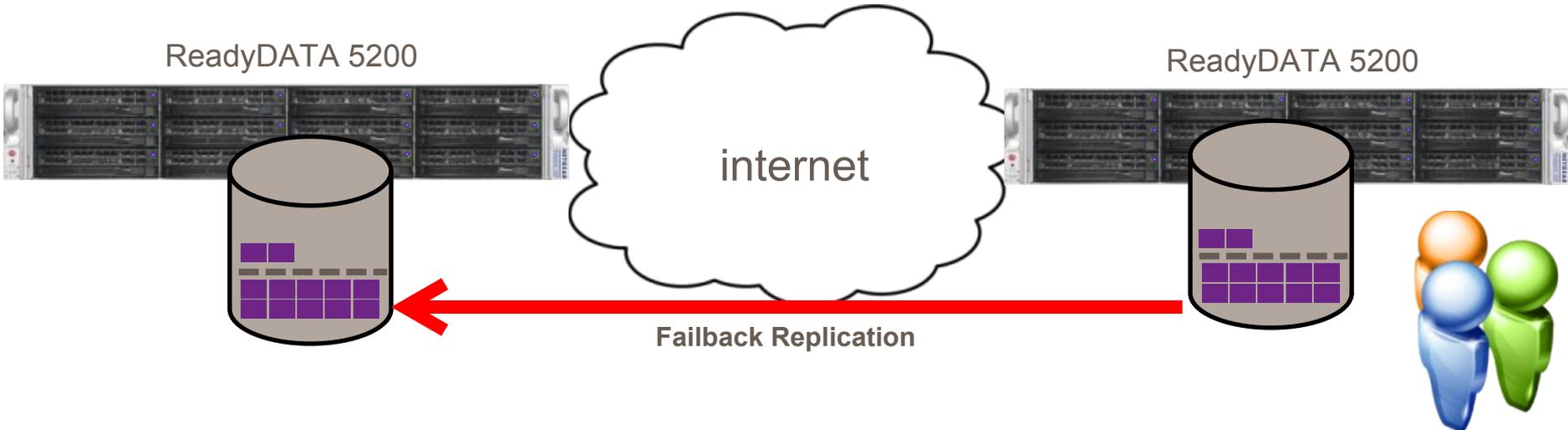


At some point the Production site comes online, but is now out of date

Failback Replication

Production Location

Disaster Recovery Location

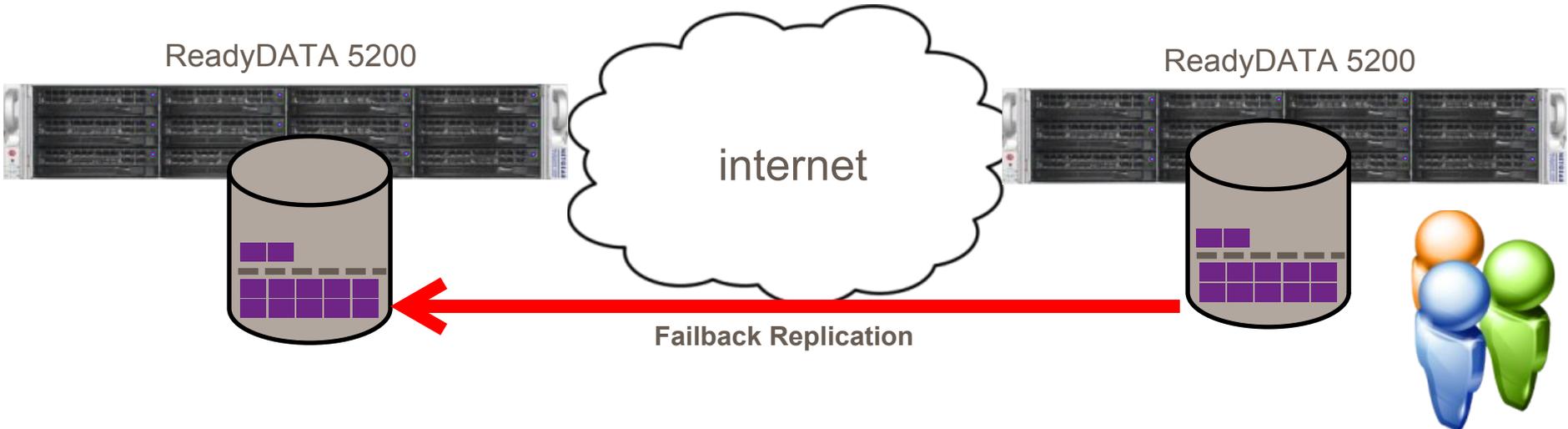


Now we can configure a new replication job (Failback Replication) to send any changed data from the DR site back to the original location.

Failback Replication

Production Location

Disaster Recovery Location

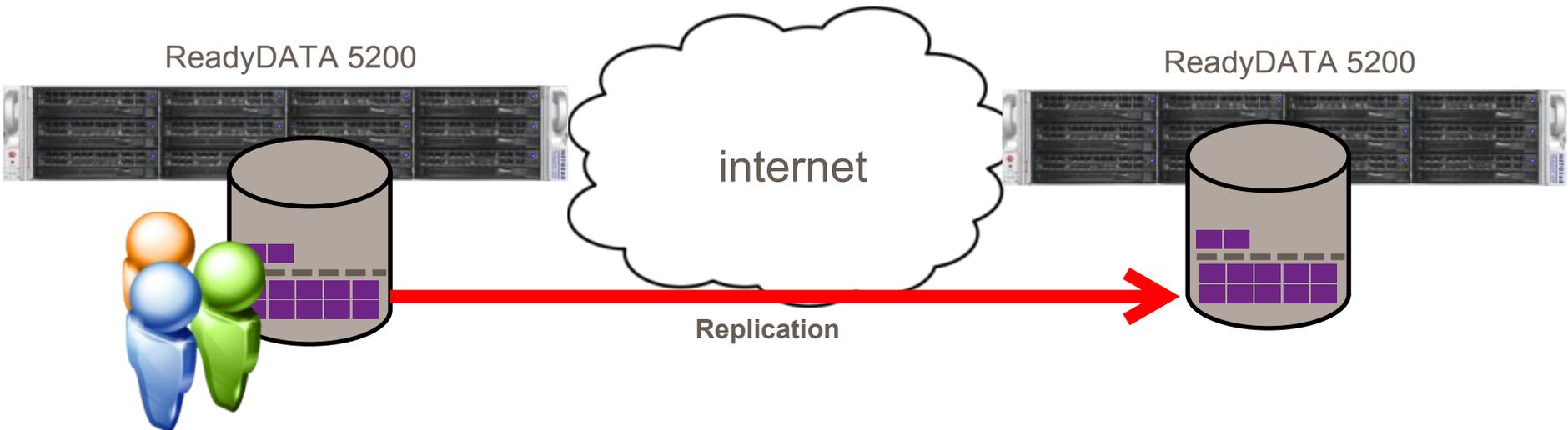


We then get our user to start using the primary site again when it's convenient and remove the "Failback" Replication Job.

Failback Replication

Production Location

Disaster Recovery Location



Finally, we recreate the original replication job, without the need to send any new data!

... At this point we have failed back from DR and the Primary site is protected once more.