

ReadyNAS

Product and Solution Updates

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NETGEAR[®]



Today's Topics

- + ReadyNAS Core Competence, Differentiation and Value Proposition
- + ReadyNAS Software
- + ReadyNAS Hardware
- + NETGEAR Business Surveillance Solution

Data loss can come in any form



Physical damage



Ransomware



Human error



Natural disaster



Virus & malware

Causing costly damage to your business



Some examples...



1. This year, 40% of small to medium sized businesses will have their network accessed by a hacker, and more than 50% won't even know they were attacked.
2. In 2015, the rate of ransomware infections fluctuated between 23,000 and 35,000 per month. These numbers ballooned to 56,000 in March 2016.
3. 20% of small to medium sized businesses will suffer a major disaster causing loss of critical data every 5 years.
4. 31% of targeted attacks focus on businesses with fewer than 250 employees
5. 93% of companies that lost their data for 10 days or more filed for bankruptcy within one year of the disaster, and 50% filed for bankruptcy immediately.

Source: 1. Gartner Group 2 & 4 Symantec 3. Richmond House Group 5. National Archives & Records Administration

What data are you willing to lose?



Decided to sort out your backup with some available options? Might be challenging...

EXTERNAL DRIVE



Easily corrupted and prone to failure as all hard disk drives

Highly manual process, cumbersome & prone to errors

No centralization of data

TAPE BACKUP



Manual process

Long delay between backups

Easily corrupted due to mishandling, accidental formatting, heat

CLOUD BACKUP

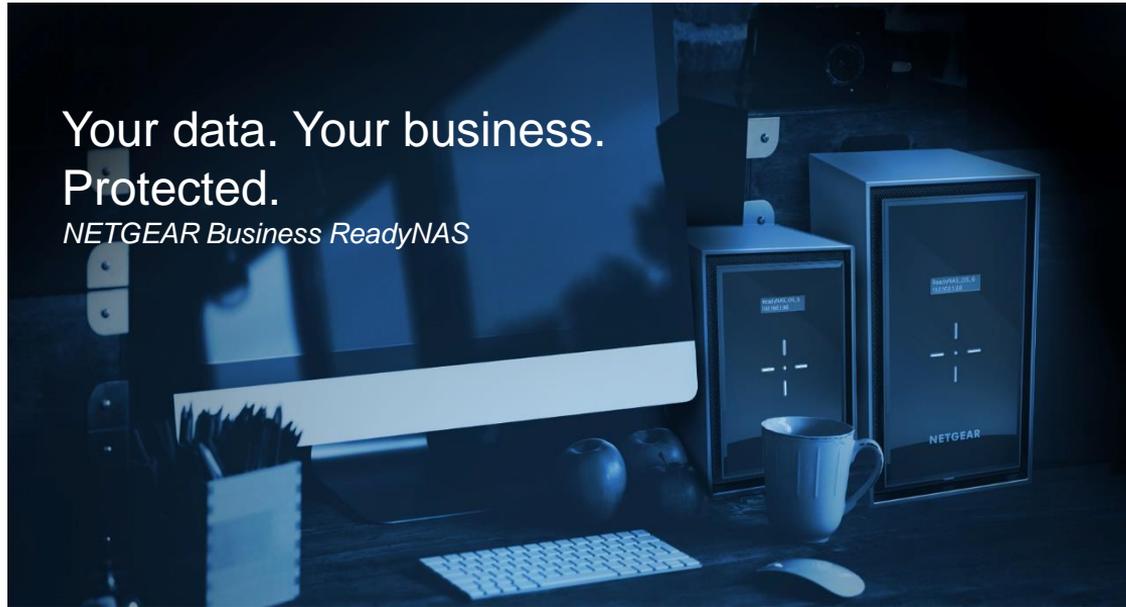


Existing security breach with ransomware or malware

All data cannot be stored in the Cloud

Need a high network bandwidth and anytime network connection

Core Competence, Differentiation and Value Proposition



ReadyNAS, your best backup plan



DISASTER RECOVERY

In the event of a catastrophe, rapidly recover the latest backup with full data reconstruction.

- HOURLY ENCRYPTED SNAPSHOTS

"You can do a lot in an hour". Encrypted snapshots can be taken hourly to protect your latest data modifications.

- BLOCK-LEVEL REPLICATION

NAS to NAS backup uses block-level replication for optimized bandwidth and efficiency.



HYBRID BACKUP

ReadyNAS provides a combination of on-premises, NAS to NAS and Cloud backup for the best data protection.

- ALL TYPES OF DATA BACKUP

Backup any type of data to ReadyNAS: files, shares, configurations, virtualized storage, databases, email, etc.

- DATA RELIABILITY & SECURITY

All ReadyNAS provide the highest levels of data protection for ultimate security of your data (anti-virus, Cloud replication, RAID, bitrot protection...)



EASY CONFIGURATION

Easiest backup configuration and ReadyNAS management for efficiency

- AUTOMATIC CONFIGURABLE BACKUP

Easily pre-configure your backup for the best backup schedule for your data and your business.

- APP MANAGEMENT

Locally and remotely manage your ReadyNAS through [NETGEAR Insight app](#).

ReadyNAS Hybrid Backup – 3 options

One ReadyNAS, Triple data protection



Configurable automatic sync with Windows/Mac app



Fast & secure hourly block-replication backup with encryption & easy restore



Configurable automatic sync with Public Cloud

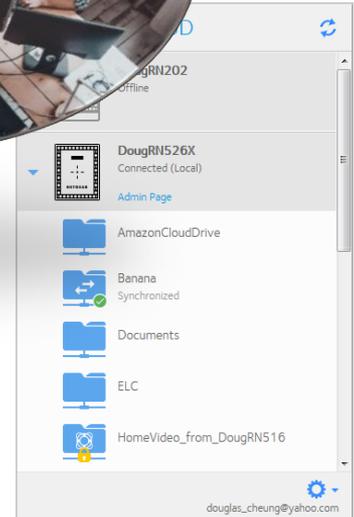


Backup option 1 - Centralized computer backup to ReadyNAS

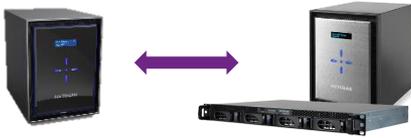


+ ReadyCLOUD PC/Mac app

- Automatic backup with easy configuration
- Protect data with Snapshot – separate folder, block level backup
- Intuitive interface to select folders & files to synchronize
- Remote access & configuration with automatic VPN
- Easy restoration of data in case of data loss or corruption



Backup option 2- Disaster Recovery with ReadyDR



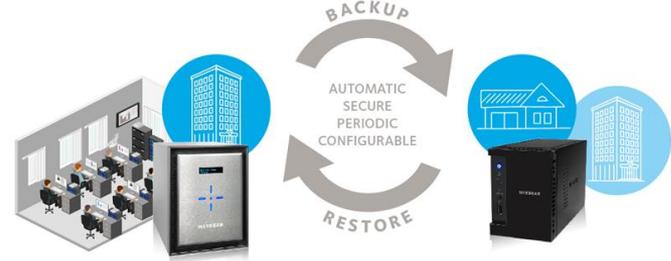
+ Fast block-replication backup to another ReadyNAS at no extra cost & with very high performance

+ Second ReadyNAS can be:

- Any Business-Class desktop or rackmount ReadyNAS with ReadyDR
- Local or remote in any location connected to the network (business owner's house, remote office, etc)

+ ReadyDR Disaster Recovery

- Works on NFS, NTFS, SMB, VMFS, etc.
- Incremental, continuous and event driven
- Multiple replications to multiple destination supported
- Asymmetric hardware supported



NETGEAR ReadyNAS™
Admin Page

System Shares iSCSI Accounts Network Apps Cloud Backup ReadyNAS Community Admin Password Language

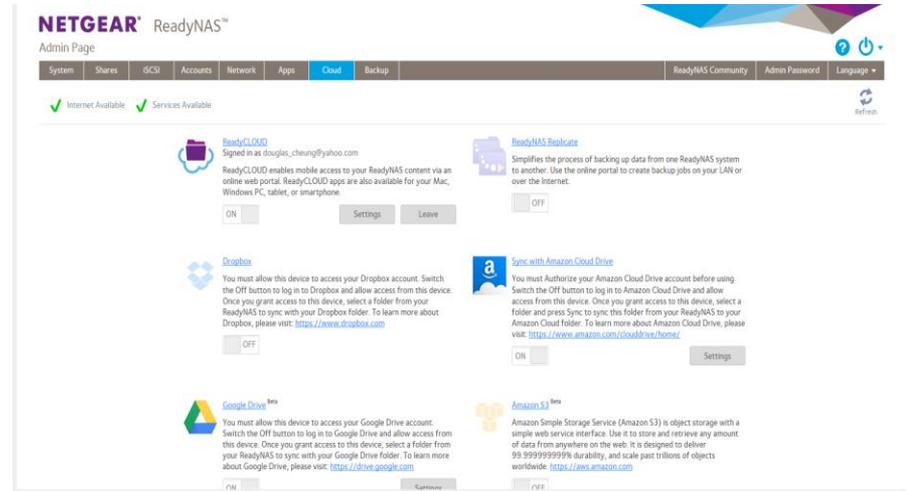
Jobs [Backup 250](#) [Add Backup](#) [Backup All](#)

NAME	BACKUP OPTION	SOURCE / DESTINATION	SCHEDULE	STATUS	LAST BACKUP
DougRNS2Pc3DougRN212	Yes	share: Pictures → remote: Windows/NAS (Timestamp)	Daily Every 24 h between 03-23	Completed	Sun May 14 2017 3:05:09
DougRNS20YVideo2DougR...	Yes	share: Videos → remote: Windows/NAS (Timestamp)	Daily Every 24 h between 00-23	Completed	Sun May 14 2017 0:05:08
MWS_Robotics_Backup_D...	Yes	share: Pictures → remote: Windows/NAS (Timestamp)	Daily every 24 h between 00-23	Completed	Sun May 14 2017 0:05:26

Backup option 3- Backup to the Cloud



- + Configure periodic and frequent ReadyNAS data sync to the Public cloud
- + Small business can backup to: Dropbox, Google Drive, Amazon Cloud Drive, Microsoft Azure, etc.
- + Medium size businesses should consider Amazon AWS/S3 services for better cost, manageability and scalability



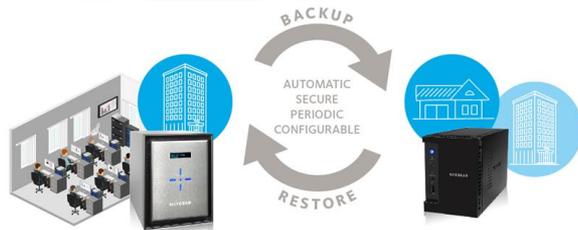
ReadyNAS: Your best backup plan against ransomware



+ Ransomware is about using a stolen user credential to encrypt data, ask for money in exchange of a decryption key so the owner of the data can recover the data

+ ReadyNAS Snapshot takes continuous backup of a share. When the hacker encrypts a share, the user can simply go to the snapshot and “roll back” and recover the data

+ MORE IMPORTANTLY, the snapshot is saved in a separate Share and the share is NOT writable. NOT even the admin can write to it. **YOU CAN NOT ENCRYPT WHAT YOU CAN NOT WRITE.**



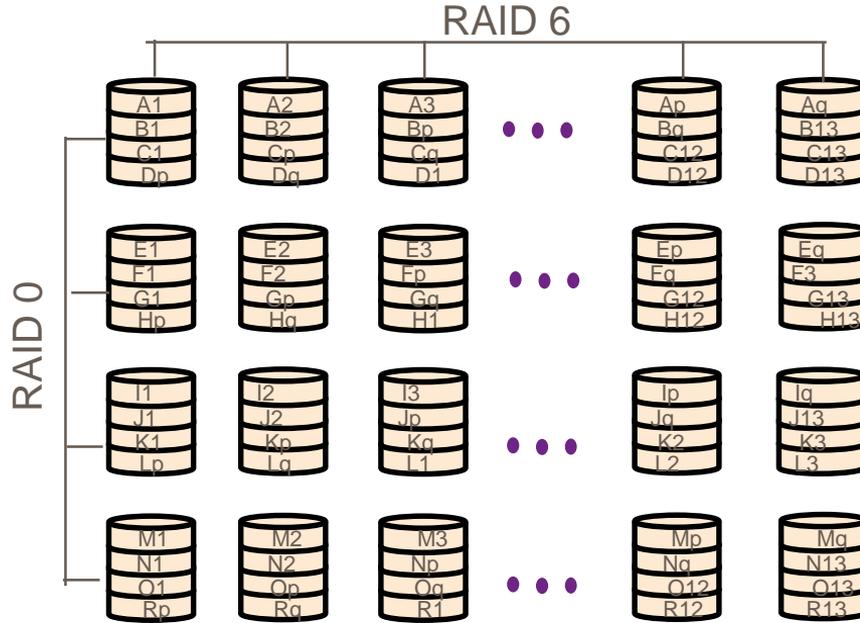
Hourly snapshots

+ <https://kb.netgear.com/000036750/ReadyNAS-Protection-against-Ransomware>

5 Levels of Data Protection from ReadyNAS

- + Mechanical failure - XRAID
- + Human error – Snapshot, incremental and unlimited
- + Physical deterioration - Bitrot
- + Malicious attacks – Antivirus
- + System level failure – Device to device; device to Cloud backup

RAID 50 and 60 Support – Unique and Industry Leading Fault Tolerant Feature



- + RR4360X default RAID configuration
 - RAID 60
 - 4 stripes
 - Protection against higher points of failure
- + Capacity Calculation, based on RAID 60
 - RR4360X
 - Defaults to RAID 60 +4 (4 groups of 15)
 - Capacity of 15 drives minus 2 per group
 - Total = $4 \times 15 = 60 - (2 \times 4) = 52$
 - 3x EDA4000
 - Groups of 12
 - 10 effective capacity in a group
 - Total = $3 \times 10 \times 2 = 60$
 - Grand total = 112
 - Grand total capacity = $112 \times 10\text{TB} = 1.12\text{Petabyte}$

RR4360X in RAID 60 Configuratioin: 15 Drives per RAID 6, 13 effective drive capacity

RAID 50, 60 – Higher Performance, Higher System Reliability

RAID 50 & RAID 60

Enterprise Level Reliability and Performance for SMB

	RAID 5	RAID 50	RAID 6	RAID 60
Fault Tolerance	One drive failure	One drive failure in each of the clusters	Two drive failure	Two drive failure in each of the clusters
Read Performance	High	High	High	High
Write Performance	Low	Medium	Low	Medium

ReadyDR

Disaster Recovery Solution for Unified NAS, SAN, and Virtualization Storage



+ Functions

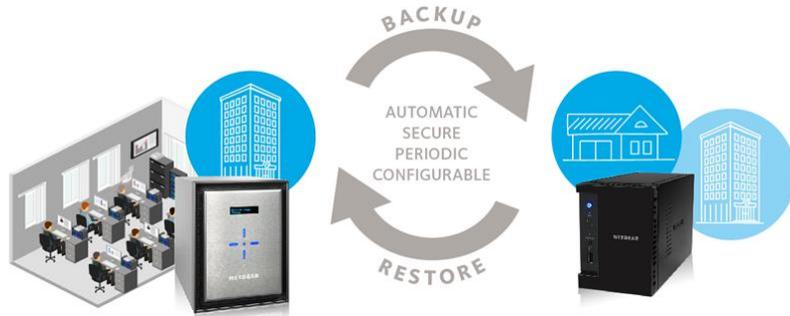
- Block level replication
- Replicate shares and LUNs in a non-writable share
- Works on NFS, NTFS, SMB, VMFS, etc.
- Incremental
- Continuous event driven

+ Applications

- Multiple replications to multiple destinations
- Asymmetric hardware
 - Powerful “production storage” paired with any size and speed of ReadyNAS as “backup storage”

+ Benefits

- Assures business continuity
- Continuous dual copy of everything
- Fully automated, fully compatible with NAS, SAN and virtualized network



Technology Leadership and Differentiation

+ Linux 4.4

- First in the industry
- Significant improvement in robustness and security

+ BTRFS File System

- First in the industry, 2014
- Enterprise grade file system for data reliability and security

+ Single Code Base across All Hardware Platforms

- Single OS and FS code base
- Ensure compatibility and supportability
- Reliable and battle tested since 2014

+ Intel Server Processors

- Fastest data transfer speed
- Support most number of concurrent users
- Support largest number of VMs and heaviest workload

Summary:

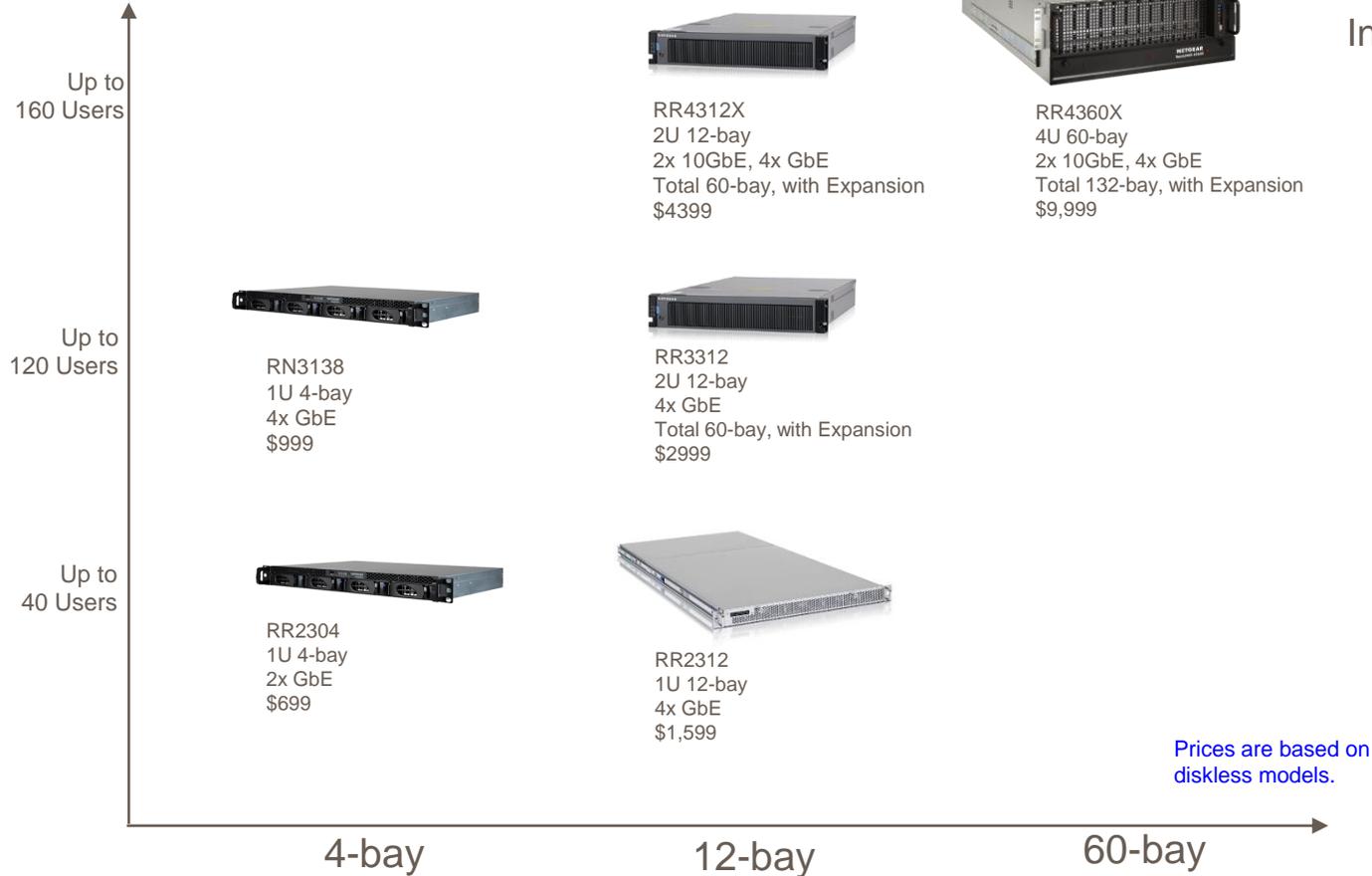
Who does ReadyNAS serve?

- + Businesses Where Data Is at the Core
- + 40% of small businesses DO NOT backup their data
- + 60% of the businesses who do not backup data DO NOT survive a data disaster
- + Re-typing 20MByte of sales or marketing data costs up to \$17k
 - 20MByte of creative data is priceless, no re-typing will ever re-create that moment of brilliance

ReadyNAS Desktop



2017 Rackmount Portfolio



Intel Skylake



4 sets of 15 Bays inside, vertical



RR4360X/S



Dual 10-Gigabit Ethernet connectivity

RR4360X with 2 x 10Gb Copper
RR4360S with 2 x 10Gb SFP+

ReadyNAS RR4360 – 60 Bay

Lowest TCO

+ Simplify and secure data storage with the lowest TCO

Highest density storage

+ Highest density of the market for SMBs (15 Bays per 1U compared to 4...6 Bays for other vendors)

Ultra-high Capacity and Reliability

- + New addition to the ReadyNAS 4000 series with 60 Bays, 4U and 20 GbE connectivity
- + 5 levels of data protection & Disaster Recovery
- + RAID 0, 1, 10, 5, 50, 6, 60
- + Space reduction in rack

Expandable to over 1 Petabyte with 132 Bays

+ Best price-capacity ratio NAS solution in the industry

Versatile, flexible configuration (NAS and iSCSI)

Virtualized or containerized environment

Scalable (No need to fill all slots to start with)

IP Surveillance Video Recording

+ up to 128 simultaneous HD camera streams

MSRP \$9,999.99

Milestone Arcus on ReadyNAS

*Industry's Most Advanced SMB Surveillance
Video Management System*

NETGEAR®



NETGEAR

[BUY NOW](#)

ReadyNAS + Milestone Arcus

Integrated surveillance from the experts

World-class scalable video protection

 milestone ARCUS™ on **NETGEAR** ReadyNAS®



+ Scalability

- Storage capacity
- Camera count
- Camera type
- Network throughput, up to 24Gbps in a single unit
- Coverage area

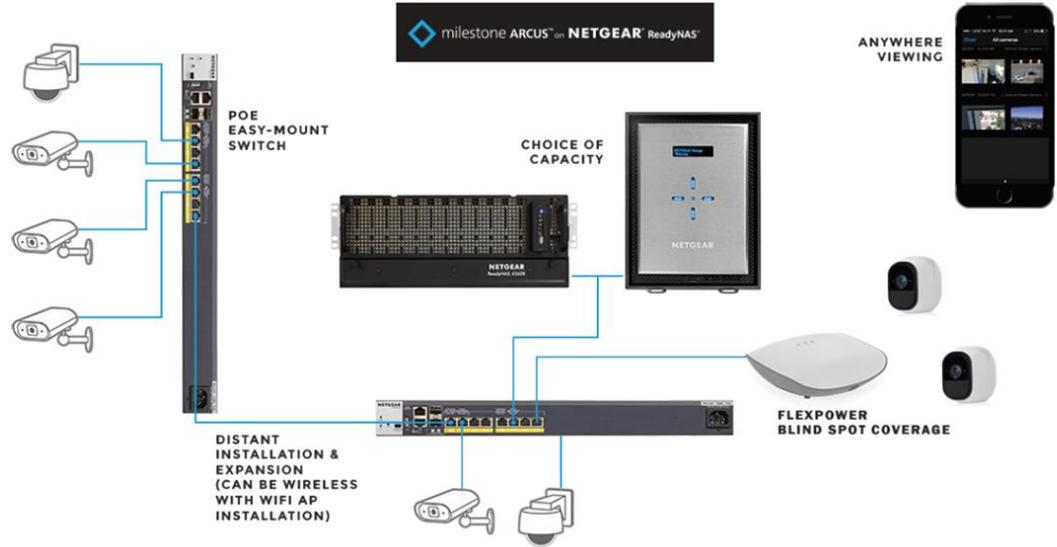
+ Protection

- Video data retention with 5 levels of data protection
- Multi-site data backup
- Redundant network connections

+ World-class

- Leaders in VMS and networking
- 40 years of combined experience
- World-class support from the most trusted brands

Easy installation and scalability with Milestone Arcus on ReadyNAS



Ideal Surveillance Solution for...



- Retail stores, Kindergartens, Property management firms
- 8 .. approx. 40 cameras
- Local storage of video data