








NETGEAR ReadyNAS NVX 4 Bay Advanced Network Storage



Performance		95%
Ease of Use		92%
Features		94%
Value		87%
Overall Rating		92%

92%

Manufacturer: NETGEAR

Model: RNDX4210

MSRP(RNDX4210): \$1,499

Price as Reviewed: \$1,499

Date Reviewed: April 6, 2009

Link to Product: [ReadyNAS NVX](#)

Introduction

The NETGEAR ReadyNAS NVX the new 4-bay NAS has finally arrived. This is the first 4-bay that has been launched since Infrant the designers and originators of the ReadyNAS brand sold out to NETGEAR. The ReadyNAS NVX is NETGEAR's thumbprint, and distinctively mirrors most attributes of the larger cousin the ReadyNAS PRO 6-bay NAS device. Strategically this policy allows for a full complement of Network Attached Storage devices ranging from the 2 bay DUO to the 6 bay PRO. The ReadyNAS NVX is well positioned in the middle and complements both products as a result of its features and excellent performance. NETGEAR's ReadyNAS appliances tend to always offer an

excellent combination of features, design and value. The latest ReadyNAS NVX not only emphasis its' commitment to continue with this tradition but inadvertently also sends a stern message to its 4-bay NAS contenders to produce a worthy competitor. As if it was not already difficult to compete with the ReadyNAS NV+ NETGEAR with its introduction of the ReadyNAS NVX ups the ante considerably.

So, what is the NVX and how does it differ from its predecessor the NV+. Well, before we launch ourselves into comparisons it is important to understand the differentials and why NETGEAR will not be discontinuing the NV+ too quickly. First and foremost, the ReadyNAS NV+ has lead the way and continues to serve as a 4-bay model icon for all other 4-bay products that followed on the successful heels of NV+. All in



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all the NV+ has dominated this space for over three years firstly as the NV and then as the NV+, no NAS has come close in features, design and value criteria. We are certain some of you will find reasons to dispute our 'value' statement, but as a combination the NV+ wins hands down. No other manufacturer has been prepared to match the comprehensive 5 year warranty on their products, support this with one of finest community based forums, in which NETGEAR people take an active role as well as a ReadyNAS hotline to help resolve issues and provide support. Albeit, the hotline telephone support expires after 90 days on the basis of assuming hand holding of the purchased product is no longer necessary after this period, although product warranty support remains in place for the lifetime of the product warranty. NETGEAR it seems have clearly set standards for others to attain.



The ReadyNAS NV+ with its current price point has clearly landed firmly on its feet, allowing all home users and business users be it first time or subsequent buyers to purchase a 4-bay device that can aptly handle any information thrown at it and still maintain its good looks without much ado. The NV+ within its product lifecycle has transition to evolve into a mature product with a rock solid reputation for having the most stable firmware and features set that is

unsurpassed within the home and small to medium business sectors. The NV+ is not ready to keel over and die just as yet, with so much to offer it will appeal to a market domain that demands a combination of excellent quality, value for money, stability packed with features and a 5 year warranty for a no hassle experience.

extending the ReadyNAS range

The ReadyNAS NVX extends the 'NEW' Look Netgear NAS portfolio by fortunately continuing to retain the sleek and sexy contours of the



NV+, the only adoption to the current range is the corporate branding in the form of the NETGEAR Charcoal/Black color finishing which allows the NVX to fall in line with the ReadyNAS DUO and PRO thereby completing a trio NETGEAR NAS branded portfolio with little or no sign of the Infrant branding. Almost all except the LCD and Drive activity displays remains the same. The hot swap drive trays have changed allowing a simpler and possible more functional opening mechanism for removal of the drive from its bay. The ReadyNAS NVX is a 4-bay desktop storage



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system designed for home offices, workgroups and small businesses. The NVX will also lend itself quite admirably in any environment that requires redundancy for their information. The ReadyNAS NVX and NV+ comparison ends here as the NVX is designed on an Intel processor platform as is the ReadyNAS PRO, integrated with 4 SATA II channels and a generous helping of 1GB DDR2 SODIMM memory, coupled with a customary two 10/100/1000 Ethernet ports supporting load balancing and failover features, and complimented with three USB 2.0 ports that just about sums up the hardware connectivity options for the NVX.

RAID with Redundancy

The ReadyNAS NVX RAID features are comprehensive, supported via two modes, expandable mode - supports the innovative X-RAID2 automatic online expansion with background sync whilst the flexible mode - supports multiple volumes within RAID levels 0, 1 and 5. The hot swap disks enable support for hot spare disk/s if requirements demand support. The volumes are supported by a journaling file systems as well as user and group quotas. Support for Network Protocols are impressive, CIFS/SMB for Windows, AFP 3.1 for MAC OS 9/X, NFS v2/v3 for Linux and UNIX, remote backup to another ReadyNAS via rsync and secure rsync, as well as using WebDAV for remote access into the device. Aside from the standard protocol support, iSCSI target is now available on the NVX and platform support is by way of Windows, MAC and UNIX/Linux initiators. We ran a quick test using iSCSI and

performance was impressive and this will be a boon for any business user that may wish to implement a dedicated storage server for critical data backup. We have provided a full feature list and a brief X-RAID2 in action presentation to allow our readers to better understand the ReadyNAS NVX feature set.

Backup with Ease

The Backup schema is well thought and provisions have been made for all platforms which is not an easy feat at the best of times, the ReadyNAS has always fared well in this area, whilst many of the other NAS manufacturers struggled to make their features work, the ReadyNAS was happily trotting along without issues, the NVX is no different, client backup target using CIFS, NFS, FTP and HTTPS. Integrated backup manager facilitates full and incremental scheduled backups, whilst simple backups can be done using point-in-time methodology by deploying the Snapshot feature. This is a very useful feature which others NAS devices do not support. If you need to back up the NVX this can be established using external USB devices, or simply use another NV+ or NVX to replicate locally or remotely using rsync and secure rsync, or the Multi-system cloning that is now supported. Replication or cloning as it is sometimes referred to be a major feature addition, as witnessed by the number of requests we have received internally from our Netgear client base for adoption of this feature.



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Structured Design

The resemblance between the ReadyNAS NVX and the ReadyNAS NV+ is uncanny, when you open the unit by simply removing three panels (2 sides and 1 top); in fact they are exactly the same with no obvious differences to note.



The memory slot is exactly in the same place and as opposed to the NV+ being a 256MB SODIMM, we now have a 1GB SODIMM supporting DDR2 specification. Of course, as previously mentioned the NVX is designed on the Intel platform and not merely an extension of the NV+. We also noted the product is a 'closed' unit so to speak, as major parts replacements will require some skill with the correct tools at hand. The mainboard is not accessible easily and should not be attempted as warranty will become void. Any faults requiring such intervention are best dealt with Netgear's five year warranty plan. We were pleasantly surprised when the ReadyNAS PRO was to a certain extent open architecture as it afforded the opportunity to swap parts out safely and quickly if required, allowing quick return back to Netgear. Aside from the Power Supply Unit and memory there is very little warranty replacement that can be carried out,

best to let Netgear do warranty. We do not recommend any users to try otherwise. This is not uncommon as nearly all the other manufacturers do not encourage users to warranty replace parts either, in some instances the old practice of adhering a warranty void seal is also prevalent.

Then unit has an integral 92 mm chassis cooling fan that is most quite although it is not purported to be of a silent variety. The cooling fan is software controlled providing fan alerts via email should the device experience high temperatures and offers auto shutdown option to prevent any damage from occurring. We are often prompted to share our opinion on noise levels, and normally we do our best, but it is more of a personal opinion and must be treated as such. We did notice how quite the NVX was once it had completed the boot up cycle, the only noise we noticed were that of the drives when being accessed, but very little device noise.

Ease of Connectivity

The ReadyNAS NVX has Three (3) USB 2.0 Ports, allowing a plethora of USB peripherals to be supported, as we discovered when we connected 4 differing USB external HDD units, couple of printers for sharing, and as first adopted by the NV+ one of the three USB ports is located at the front of the unit to support one touch USB device backup that can be setup in the management application (Frontview) allowing ease of backup on the fly.



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The USB ports are also supported with the two (2) Gigabit Ethernet ports with Load Balancing which allows you to balance traffic across the two ports to maximize transfer rates, as well as Failover which in turns allows you to have the luxury of the second port taking over in case the first port fails. These are all standard now across the entire Netgear NAS portfolio (excluding the DUO), and clearly depicts the commitment for supporting automation and ease of use.

Performance

NETGEAR have traditionally always managed to squeeze the last droplet of performance possible from their devices and the ReadyNAS NVX is no exception. If there was an Oscar for performance turned in by a 4-bay NAS device in this class, the NVX would be streets ahead of any competition. The only unit that would compete with the NVX in totality would be the ReadyNAS NV+, how ironic is that! The performance turned in by the ReadyNAS NVX clearly depicts its readiness for performance hungry data. **ENTER THE DRAGON.**

Test Environment

NETGEAR ReadyNAS NVX RNDX4210 (upgraded to 3x1000GB – Enterprise Class)

[The unit supplied was the ReadyNAS NVX RNDX4210 with 2x1000GB drives, however, we added a third drive to allow testing based on RAID 5 emulation but using X-RAID2]

Firmware Revision: FW 4.2.4

X-RAID2 - Redundancy

Network

NETGEAR FSM726 10/100Mbps + 1000Mbps ProSafe Managed Switch

Test Method

We use a Real-World testing utility as well as a realistic Drag & Drop procedure as depicted in everyday normal operations.

Real-World testing utility that consist of workload traces gathered from typical digital home applications, traces of high definition video playback and recording, office productivity applications, video rendering /content creation as well as a broad range of different applications, using 1024 KB sequential block reads and writes on a 2 GB test file, as well as Drag & Drop of a 2 GB file over CIFS, Windows default network protocol.

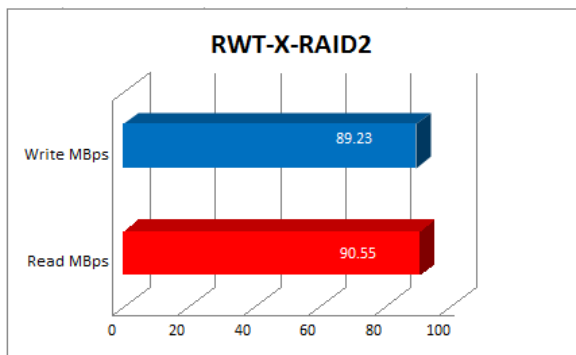
The outcome of the Real World Test performance results are crystal clear, the NVX is FAST!, in this category the ReadyNAS NVX will not disappoint as clearly depicted by the test results. Read and Write speeds are a credible 90.55MB/s and 89.23MB/s respectively, the



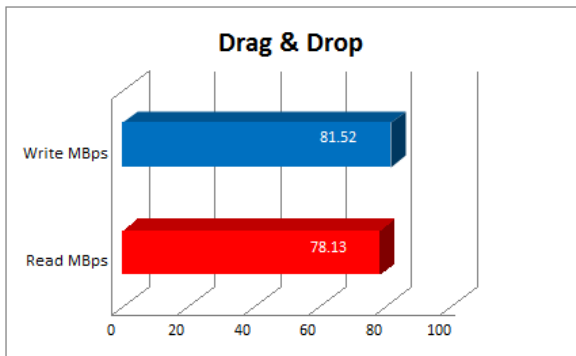
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NVX did hit manage to reach the 95MB/s marker but this was not sustainable.



Drag and Drop is a methodology used by a majority of users to move data back and forth on a Windows workstation mapped to the array of the NAS device. We strongly believe this process should become a cornerstone of all our tests as it emulates what occurs in real life.



Drag and Drop clearly highlight the NVX performance strengths with a marked improvement on many systems we have tested before. Read and Write speeds are a credible 78.13MB/s and 81.52MB/s respectively.

The overall results emphasize the NVX prowess in the performance arena, and this crown is not going to be easily relished by NETGEAR, normal

practice from their R&D team is to constantly strive in increasing performance without compromising quality and reliability. The ReadyNAS NVX is a quality act to follow.

Overall Conclusion

As you would expect the NETGEAR ReadyNAS NVX does not disappoint in performance. Couple this with a five-year product warranty, excellent telephone and forum community support, Sleek looks with fine build quality, generous memory, it's a tough act to follow. The ReadyNAS NVX 4 bay NAS takes the Oscar for the Best Performance by any 4-bay NAS and has no peers in this category. It's excellent for businesses as well, as it offers plenty of backup and security features, and now supports IP SANs in the form of iSCSI.





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Technical Specifications

- General

- NETGEAR RAIDiator Operating System
- Setup Wizard and easy browser-based interface
- Intel® advanced embedded processor
- 1 GB DDR2 SODIMM
- 4 SATA II channels
- Two 10/100/1000 Ethernet ports with load balancing and failover
- 3 USB 2.0 ports

- RAID

- X-RAID2 automatic online expansion for single volumes
- Multiple volume support for RAID 0, 1, 5
- Background sync and SmartSync resume
- Life Support mode
- Hot swap disks
- Hot spare disk support

- Volumes

- Advanced volume management (Flex-RAID)
- Journaled file system
- User and group quotas

- Network Protocols

- CIFS/SMB for Windows
- AFP 3.1 for Mac OS 9/X
- NFS v2/v3 for Linux and UNIX
- HTTP/S for Web browsers
- FTP/S
- rsync and secure rsync
- WebDAV
- Print Sharing
- UPnP

- iSCSI target support for Windows, Mac and UNIX/Linux initiators

- Network Security Models

- Shares
- Local users
- Active Directory/Windows Domain support
- Encrypted network logins
- Secure Sockets Layer (SSL)

- Network Services

- DHCP or static IP address assignment
- DHCP Server
- WINS Server
- NTP server synchronization
- VLAN and LACP support for load balancing and failover

- System Management

- Performance tuning options
- Device health status
- System configuration backup and restore
- Email alerts and event logs
- Network UPS monitoring
- SNMP

- Backup Schema

- Client backup target using CIFS, NFS,FTP or HTTPS
- Integrated Backup Manager for full and incremental ReadyNAS backups
- Snapshot for point-in-time backups of the ReadyNAS system
- Backup to/from USB disks
- Remote backup to CIFS, NFS, FTP and HTTPS targets
- Remote backup to another ReadyNAS via rsync and secure rsync



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- System configuration backup and restore
- Multi-system cloning

- Included Backup Software

- CDP (continues data protection) backup software for Windows and Macintosh clients
- Replication to another ReadyNAS system
- ReadyNAS Vault online backup with subscription option

- Supported USB Devices

- Programmable, one-touch, one-demand backup button
- External USB hard drives (support for FAT32, Ext2, Ext3, and NTFS)
- Printers (see Web site for the latest list)
- Flash devices with camera auto-copy
- UPS with monitoring and auto-shutdown

- Power-saving Options

- Disk spin-down
- Power-on schedule
- Wake-on-LAN

- Supported Web Browsers

- Internet Explorer® 7.0+
- Opera 9.5+; Safari 2.0+
- Mozilla Firefox® 2.0+

- Languages

- Management UI: English, Japanese, Chinese, French and German
- File names: Unicode

- Electrical

- 200W server-rated AC power supply
- Input: 100 – 240V AC, 50/60 Hz

- Power Consumption

- 70W typical (with 4 x 1 TB disks)

- Thermal

- Software-controlled 92 mm chassis cooling fan
- Fan failure alert
- High temperature email alert with auto shutdown option

- Operating Environment

- 0° - 40° C (32° - 104° F)
- 20% – 80% humidity (non-condensing)
- FCC, UL, CE, C-Tick, KCC, VCCI, RoHS compliance

- Physical

- LCD display
- Kensington lock slot
- Dimension: 200 H x 132 W x 222 D mm (7.9 H x 5.2 W x 8.7 D in)
- Weight: 4.6 kg (10 lb) without disks

- Warranty

- NETGEAR 5-year Warranty†

- ProSupport Service Packs Available

- OnCall 24x7, Category 3
- PMB0333
- XPressHW, Category

- Optional Spare Parts

- Hot swappable SATA disk tray
- 92 mm chassis fan

- Available Configurations

- Visit www.netgear.com for the latest price and capacity points or contact your favorite NETGEAR PowerShift Partner