



# PROTECT VALUED DATA WITH ROBUST STORAGE SOLUTIONS

*Network attached storage (NAS) strikes the right balance between cost, ease-of-use, and performance.*

## Improving Data Storage Practices

In today's data-driven world, homes and small and medium-sized businesses (SMBs) need to manage a quickly growing number of photos, videos, employee records, and other types of digital files. However, too many individuals and businesses are not adequately backing up and securing their vital information nor taking advantage of time-saving and useful features provided by available storage solutions.

For example, an unsafe common practice is to keep a single copy of data on a PC or external hard drive that could fail and result in a large expense to recover the data, if it can be recovered at all. This paper discusses the benefits of network attached storage (NAS) and how it can be used to help avoid such unfortunate scenarios for both consumers and business owners.

## Safeguarding Valuable Data

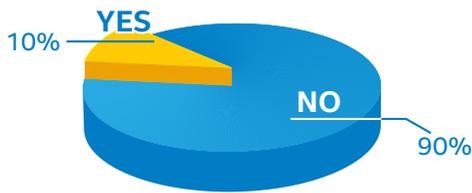
The thought of losing one's personal and business data strikes fear in most people. Their cherished memories are captured in photos and videos, and financial activities are reflected in tax forms and bank records, among a sea of other important data files.

Small- and medium-sized businesses must also store a lot of data from various job functions, such as work product, sales, accounting, human resources, marketing, etc.

Although sensitive information, like financial transactions, employee social security numbers, and patient data, needs to be protected, many companies are not doing so, as shown in Figure 1.

For many businesses, digital files generated by video surveillance must be securely stored.

Video surveillance lets them monitor the entire premises to keep inventory and property secure, and staff and customers safe. The demand for video surveillance systems is rising, and IHS Markit estimated that more than 130 million surveillance cameras shipped in 2018.<sup>3</sup>



Implemented Data Protection<sup>1</sup>



Experienced a Data Breach Involving Customer or Employee Information in the Last 12 Months<sup>2</sup>

Figure 1. Surveys of Small- and Medium-Sized Businesses

### What is NAS?

Simply dumping data onto external drives is no longer considered a good practice due to a lack of storage redundancy and failure recovery. Providing a surprisingly affordable alternative, NAS is a storage device that attaches to either a wired or wireless network in the home or office, as shown in Figure 2. It contains hard disk drives (HDDs) that can be accessed by personal and work devices that have the proper permissions and allows people to manage the data they store.

Figure 2 also shows two other storage options for the home and office. Some store files on a server with direct-attached storage (DAS); however,

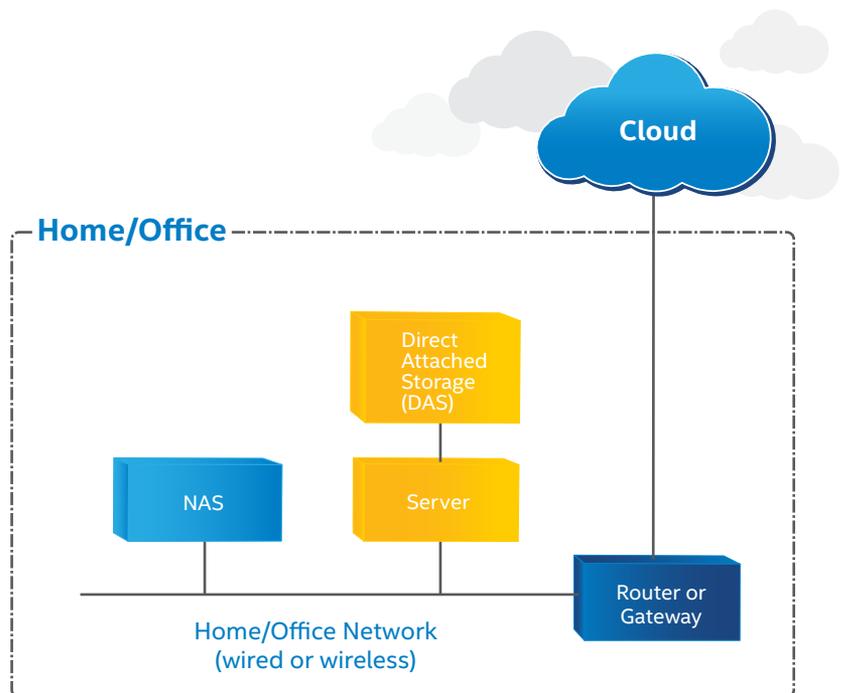


Figure 2. Home and Office Storage

there can be complexity related to implementing security, backup, capacity expansion, and disaster recovery. Cloud storage may be a good solution, but there can be issues related to data access speed, Internet connectivity, control of the data, data privacy, and security.

## Benefitting from a NAS-based Private Cloud Solution

With NAS devices, individuals can enjoy easy access to all their movies, videos, and photos. Media and entertainment storage is centralized and integrates seamlessly with mobile devices, so new photos, videos, and files are uploaded automatically. Individuals can also easily locate and play media files by streaming directly to a compatible media player.

Today's businesses have a growing number of PCs, mobile devices, cameras, point-of-sale devices, and other systems - and that means more data to manage. They also have more critical data to protect, like sales transactions and employee records. Sending everything to the cloud can be costly, especially considering the extra demand on Internet bandwidth. If the Internet connection slows or goes down, a business might lose access to its data, which could cause a major disruption.

For both home and business use, NAS devices powered by Intel® technologies are designed to balance performance, power, and cost, providing a cost-effective solution that delivers 24/7 accessibility to data. Also important are the major benefits NAS solutions provide, including:

### Low cost storage solutions

Compared to storing data in a public cloud or in servers with DAS, NAS provides an optimized private cloud solution for the home or office that delivers excellent performance at an affordable price. Using a NAS device to store critical, sensitive data or large files can help reduce cost over time.

### Expandable storage in the home or office

With NAS, it is easy to increase storage capacity by adding another HDD to a local network (e.g., local area network (LAN)).

### Highly reliable storage

In the event of HDD failure or data corruption, data can still be retrieved from a NAS device through drive redundancy and failure recovery (redundant array of inexpensive disks (RAID)).

### Quick data recovery

Encrypted backup of data saved on PCs, tablets, mobile phones, and other systems can be retrieved in the event any of these devices fails.

### Easy setup and ease of use

NAS devices are designed to be used right out-of-the-box, ready to backup files and devices without the need to install complicated software or configuration files. By setting up a NAS device to automatically sync with devices and upload data, data can be quickly recovered in the event of a device failure.

### Fast, reliable, and persistent access to data

If business-critical data is stored in the cloud, Internet connection issues can cause major disruptions. In some cases, even issues with cloud service providers can cause delays in accessing data. With NAS, a business can always have access to the data it needs, such as:

- Billing information
- Appointment calendars
- Contacts
- Patient medical records, inventory, and pricing
- Customer loyalty accounts

Select NAS devices can support wired and wireless connectivity with speeds up to 10 gigabit Ethernet (10 GbE), enabling very fast file access and transfer.

## Data privacy

Sensitive and proprietary data stays in the home or office, possibly keeping it more private than when stored in the cloud. Data privacy can be important when storing:

- Financial transactions
- Employee social security numbers
- Patient records
- Intellectual property
- Other sensitive information

## More Secure data

Fast data encryption (and decryption) on Intel processor-based NAS devices helps safeguard data from hackers and unauthorized personnel. In addition, Intel® QuickAssist Technology (Intel® QAT) on select Intel® processors quickly encrypts and decrypts data.

## Video surveillance support

Video surveillance solutions can help protect homes and offices, but they require a lot of storage. NAS devices keep data on-premises instead of sending it to the cloud, which can be costly and perhaps not in compliance with industry data privacy regulations, like the European Union's General Data Protection Regulation (GDPR).

Moreover, administrators can easily manage cameras, view live feeds, conduct analytics, retrieve footage, and play back video in a browser or the management interface - all without impacting their overall network performance.

1. "Cybercrime and hacking are even bigger worries for small business owners," The Guardian, January 2015, <https://www.theguardian.com/business/2015/jan/21/cybersecurity-small-business-thwarting-hackers-obama-america>
2. "2017 State of Cybersecurity in Small & Medium-Sized Businesses (SMB)," Ponemon Institute, September 2017, [http://www.veille.ma/IMG/pdf/2017\\_state\\_of\\_cybersecurity\\_in\\_small\\_medium-sized\\_businesses.pdf](http://www.veille.ma/IMG/pdf/2017_state_of_cybersecurity_in_small_medium-sized_businesses.pdf).
3. "Top Video Surveillance Trends For 2018," IHS Markit, 2017, <https://cdn.ihs.com/www/pdf/Top-Video-Surveillance-Trends-2018.pdf>.

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## Providing Greater Piece of Mind

Today's homes and businesses are dealing with more digital files, photos, videos, and data than ever before. NAS devices can help them keep up with the rapidly growing need for data storage while also being able to work in tandem with the cloud storage.

NAS devices powered by Intel technologies offer an affordable way to manage files and media. With more secure, private storage right in the home or office, data is always available when it's needed - for backup and recovery, video surveillance, and entertainment.

Intel technologies deliver fast file transfer speeds, exceptional performance, amazing graphics, analytics, and robust encryption to help keep data secure. Since these solutions are designed for easy setup, they can be used in homes and offices right away.

When researching NAS devices, look for solutions that use Intel technology, including solutions from Synology\*, QNAP\*, ASUSTOR\*, NETGEAR\*, INFORTREND\*, and QSAN\*.

## More Information

For more information about Intel®-based storage and connectivity solutions, visit [www.intel.com/connectedhome](http://www.intel.com/connectedhome)

