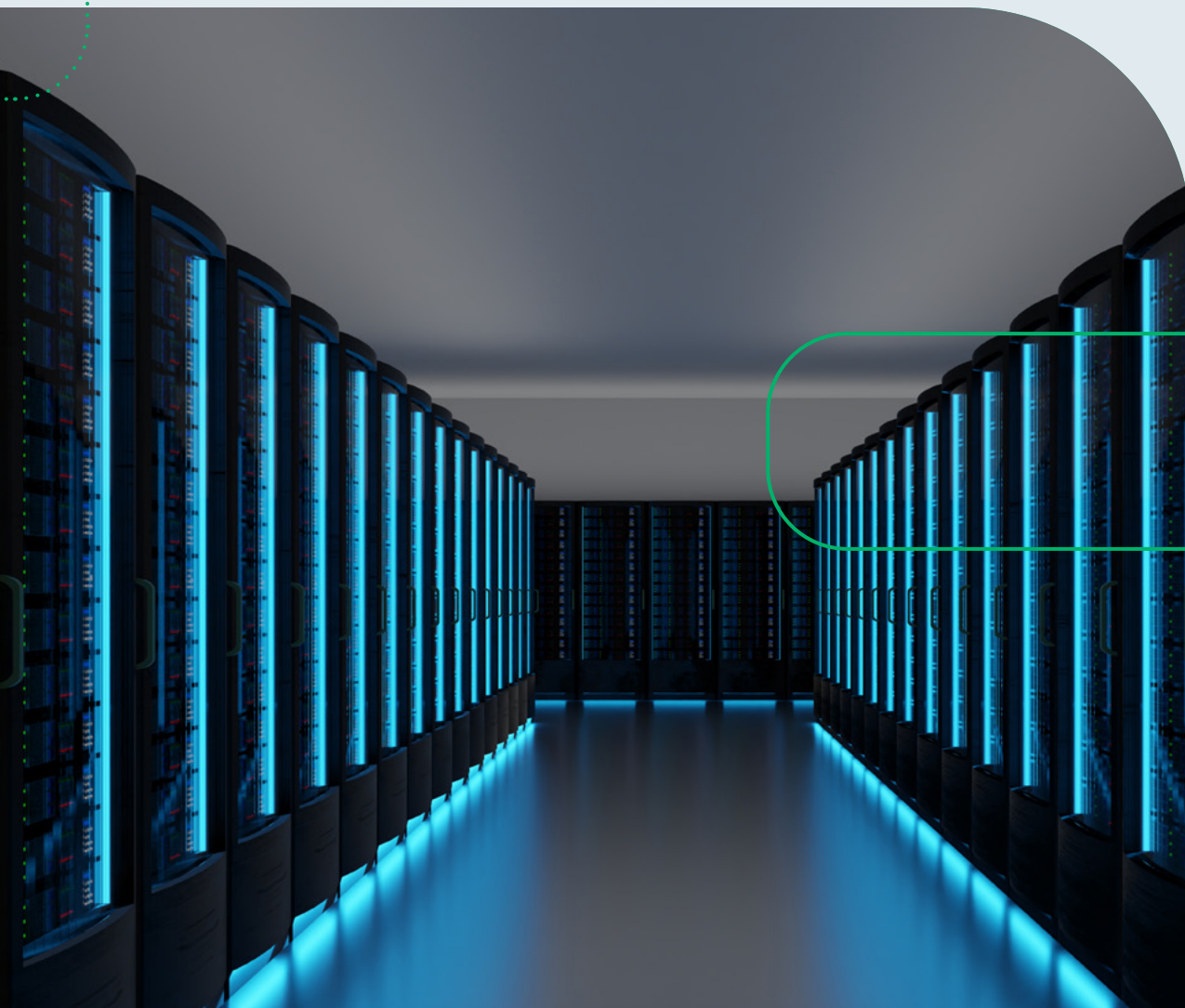


Best practice approaches to data backup and storage



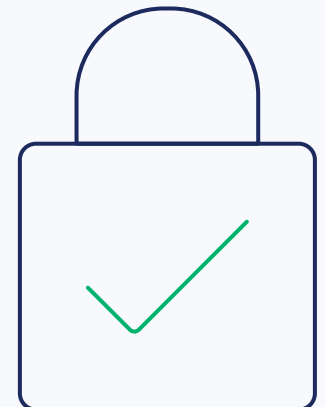
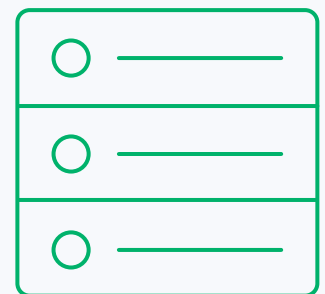
A precious resource

These days, almost every business is a digital one. Keeping organisational data safe and accessible, as well as quality-assured, is mission-critical, and network design and set up is an important step in enabling any backup and recovery strategy.

Digital transformation efforts both require and produce a staggering amount of data, making it an extremely valuable asset that can help businesses create and maintain a sustainable competitive advantage.

However, this also means there is a lot at stake for organisations in the event of a data loss or breach.¹ Replacing records or reparations can be costly and time consuming, and lead to long-lasting reputational damage and legal ramifications. Investing in data protection strategies now is a proactive step businesses can take to help decrease the chance of an incident occurring.

Organisations looking to accelerate their digital transformation in the months and years ahead should consider how they can leverage their network solution to prevent a loss and support their data demands.



Data backup and storage – what’s the difference?

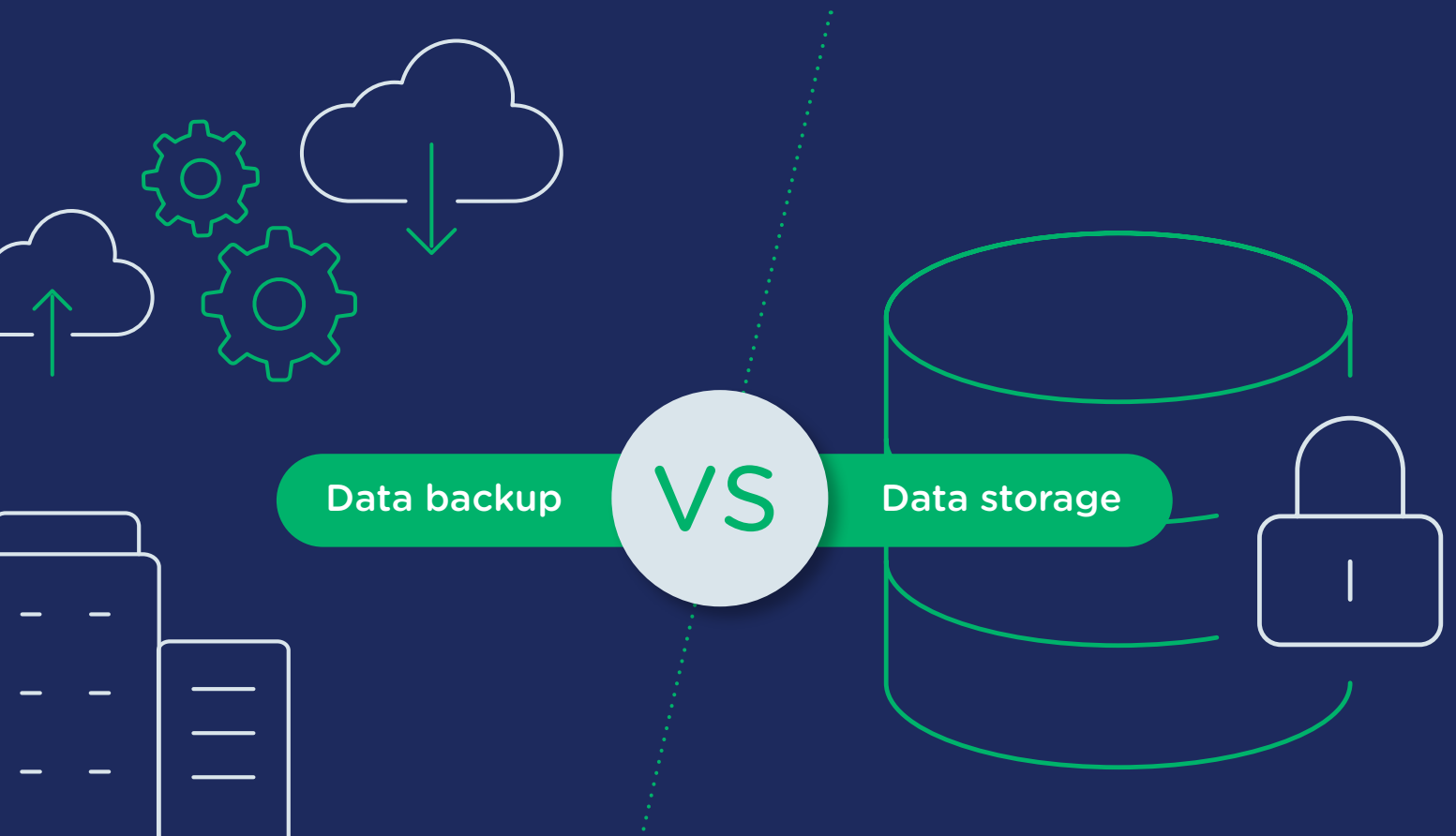
Data backup and storage, while complementary, are not the same thing, and need to be approached differently.

In simple terms, data backup is a snapshot of organisational data saved in the event of loss or damage. The backup allows for fast restoration of data to continue business operations, although it might not be as current as data produced up to the time of a loss.²

Data storage is where data is held for day-to-day access for business applications and operations. These days, this activity is often cloud-based, with access provided from anywhere through a variety of devices.³

In order to make sure that data backup and storage strategies fit with the organisation’s unique needs, it’s important to align efforts back to business priorities and resources. Important considerations might be industry-specific sensitivities around client or customer records, currently available resources, data needs that are critical to business functions, future plans for business growth, and changes to modes and methods of work.

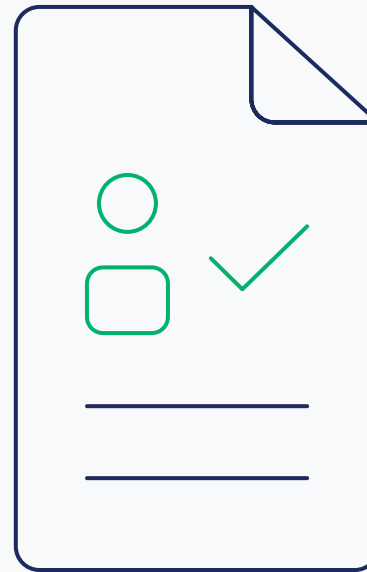
Where data is stored and how frequently data is backed up are key questions, along with network choice to support large data transfers into and out of the organisation.



Data factors at play

Data continuity concerns have long driven the need for a strategic approach to data backup and storage. But the answer for how to best execute a strategy can be complex due to a variety of issues.

Key factors businesses may want to consider include:



1

Exponential data growth

Data is a commodity that can influence strategic and operational business decisions, including customer retention, business performance, and service and product development.⁴ Capturing more data and retaining it for longer periods of time supports these functions, resulting in huge data lakes and increased demand for backup and storage solutions to cope with this rising tide.

2

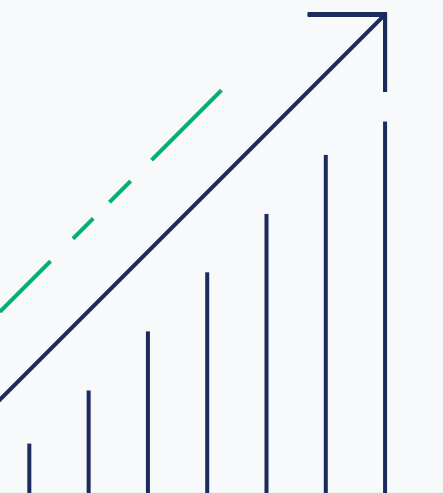
Complex technology environments

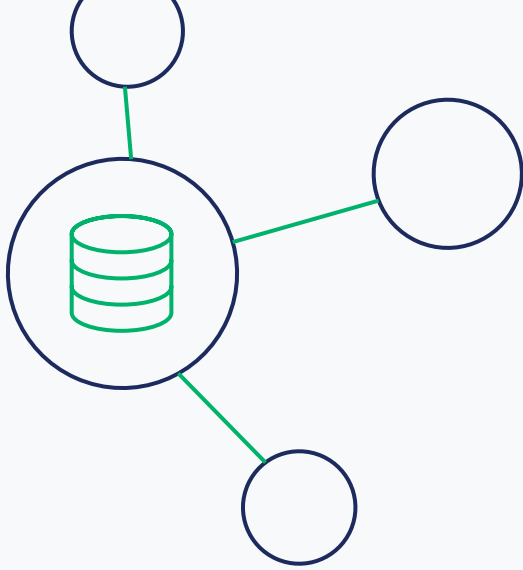
Distributed systems and applications hosted on-premises and in the cloud, along with different types of data storage systems, place higher demands on IT teams to maintain backup and storage quality.

3

Alignment between resources and outcomes

It is crucial to match resources to needs and business outcomes. Decisions should be based around internal capability (IT infrastructure, expert staff) or reliance on outsourcing with cloud-based backup and storage.





4

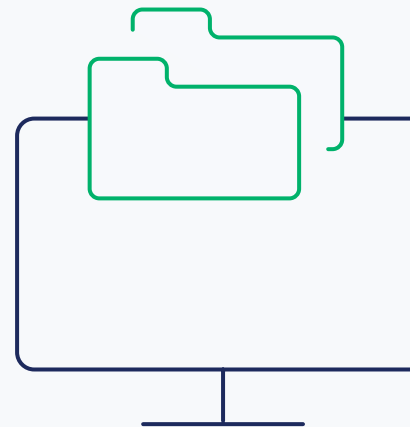
Consequences of poor backup and storage practices

Lost or stolen data represents an unacceptable risk for most digital organisations.⁵ The more data you're moving, the greater demands this puts on your network. Increasing the speed of your network, and leveraging features such as committed information rates to prioritise data backup application, can help reduce interruptions to the backup activity, or the impact it has on other activity occurring at the same time.

5

Onsite vs offsite data backup and storage

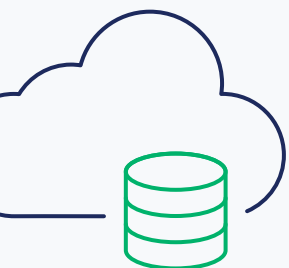
The more important data is to an organisation, the more important it is to consider where it is kept. Keep it close (onsite) and you need resources to manage it. Keep it offsite, and you need to think about possible interruptions to data transfer in and out of the organisation, as well as the potential impact on network performance from moving large amounts of data around during high-traffic times.



6

Productivity

Fast access to business applications and data is critical for maximum organisational productivity. When data needs to be downloaded and uploaded for use and sharing, smooth and fast access is dependent on network configuration and capacity.

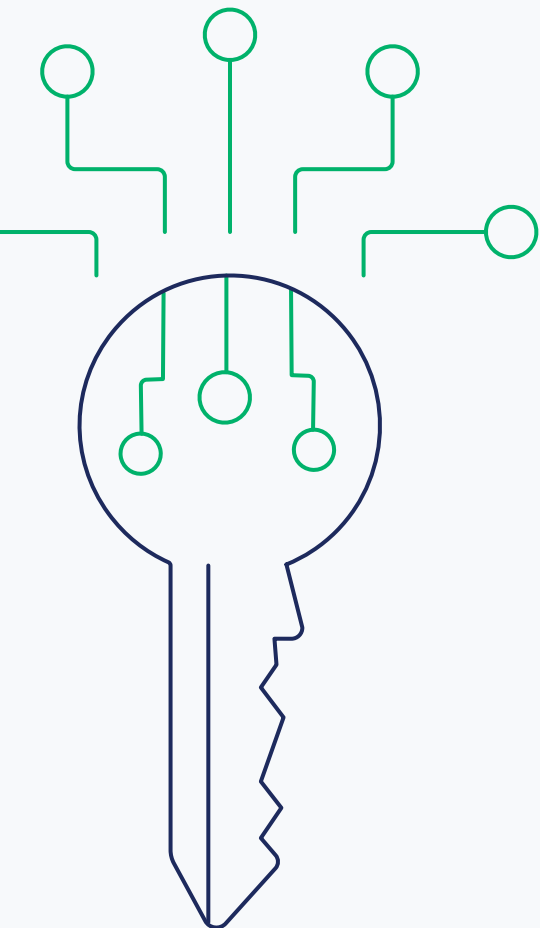


Networking considerations

Moving masses of data around places pressure on the business network, requiring organisations to align network configuration and capacity with backup and storage plans.

Well-articulated data backup and storage practices can provide a sense of security for businesses. The process needs to be seamless and regular, with fast restoration in the event of a disaster or catastrophic data loss.

Accounting for what happens at the network level can help ensure a smoother transfer process.



Key network considerations for data backup and storage:

Traffic: Transferring data can have an impact on other network activities, and vice versa. Depending on when backups happen and the duration, business activities like video calls or cloud uploads can be impacted by congestion. Business-grade network features, such as prioritised data, can help reduce the impact the transfer has on other network activity by routing certain data applications to specified data paths that are separate from other activity.

Access: Digital organisations often rely on cloud-based applications and data hosting for quality and efficiency, with the caveat that onsite and remote teams have seamless access to maximise productivity.

Bottlenecks: The quality of the network solution is only as good as its weakest link. Consider geography, peak data usage times and remote access in designing the most appropriate network solution.

Speed: Download speed is important for accessing data, but transferring large amounts of data can put additional pressure on your network configuration. Most residential plans on the **nbn**TM network are designed for a higher level of download data compared to upload data. Transferring large volumes of data digitally increases the upload requirements for your business, and higher upload speeds can help.

Key questions for building a strategy:^{5,6}

Onsite or offsite storage?

There are pros and cons to backing up and storing data onsite or offsite, but the 3-2-1 Rule states that businesses should consider a mix of mediums and locations to help ensure that one event doesn't affect all data copies.

What is the right backup frequency?

Large amounts of data backed up offsite can place a significant burden on the business network. Volume of data produced, data importance and peak usage requirements might require out-of-hours automated backups for efficiency.

Are there trade-offs?

Data sensitivity, backup frequency and internal resources require decisions and trade-offs to be made when formulating the right approach.

What resources and tools are needed?

Access to expertise and infrastructure is critical and can be sourced internally or outsourced. This decision can be driven by the importance and sensitivity of business data.

Is there network strategy alignment?

Understanding the volume of data, traffic patterns, cost of bandwidth and speed helps align the network solution to data backup and storage strategy.

The 3-2-1 Rule⁶



3

Data copies:
the original + two backups



2

Types of storage:
can include hard drives and the cloud



1

Offsite storage:
at least one data copy should be offsite or in a remote location

Network choice matters

Backup and storage provide a sense of security for businesses, and the process needs to be seamless and regular, with fast restoration in the event of a disaster or catastrophic data loss.

Ensuring continuous business operations in the face of unexpected events that cause data loss is critical to creating long-term resilience and protecting data as a valuable business asset.

Underpinning a successful digital organisation and an effective data backup and storage strategy is the right choice of network.

The **nbn**TM network serves as a digital backbone that can support businesses of all sizes as they develop a best-fit data backup and storage strategy to meet their current and future needs. **business nbn**TM offers wholesale network features to meet the unique needs of businesses across Australia, including:

Bandwidth and capacity

Many service provider plans powered by **business nbn**TM include performance targets to help minimise disruptions, providing more predictability for backups and access to stored data.

Symmetry

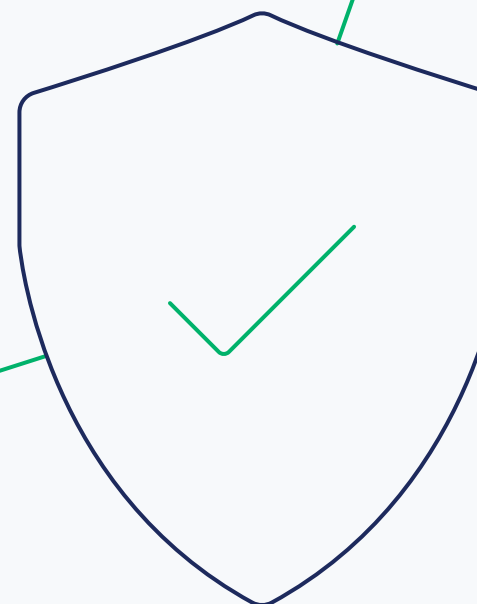
Symmetrical download and upload speeds help reduce variation, drop-outs or interruptions for application and data access and data backup.

Data prioritisation

Committed information rates may be offered under certain plans to prioritise business data (such as backup) on the **nbn**TM network to reduce the chance of disruption.

As data continues to drive digital transformation efforts for businesses of all sizes, effectively managing and protecting this resource will become mission-critical.

business nbnTM wholesale plans offered by a range of service providers can help businesses create a network that is tailored to their specific needs, helping businesses to stay connected to critical business data and potentially making it easier to mitigate a catastrophic data loss event.



Find out more about business **nbn**[™] fibre

Sources

1. Notifiable data breaches report: January-June 2020, Office of the Australian Information Commissioner (July 2020)
2. Data backup, Techopedia (December 2016)
3. What is data storage?, Dataversity (January 2020)
4. How companies are using big data and analytics, McKinsey & Company (April 2016)
5. Cost of a data breach report 2020, IBM and the Ponemon Institute (2020)
6. Create your data backup strategy: A comprehensive guide, TechTarget (July 2020)
7. The 7 critical backup strategy best practices to keep data safe, Storage Switzerland (July 2019)