

# What is Data Resilience?



If there's anything that the past few years have taught us, it's that we need to be prepared for anything and everything and at a time when business continuity is all important, modern organisations should be thinking the same way about their data.

So, what is data resilience? In simple terms, it's the ability to protect and recover critical business data from a wide range of data-compromising or data-destructive events, including:

## 1. Ransomware

Stealing data and holding it to ransom is big business, with notorious gangs like REvil, Conti and DarkSide demanding millions of dollars from organisations desperate to retrieve their data – the loss of which could result in catastrophic consequences for their business.

With over 1000 attacks per day, ransomware is still the number one threat, which IBM Security's '[X-Force Threat Intelligence](#)' report backs up, reporting that 23% of cyberattacks in 2020 came from ransomware alone.

## 2. Data Breaches

IBM Security's sponsored annual '[Cost of a Data Breach Report](#)', undertaken by Ponemon Institute, revealed that the average total cost of a data breach reached a record high in 2021, coming in at an eye-watering \$4.24 million. Perhaps unsurprisingly, stolen credentials like usernames and passwords accounted for 44% of these breaches.

## 3. Disasters

Data resilience also means having the ability to bounce back and quickly recover from events that would otherwise negatively impact business operations, such as unavoidable outages from extreme weather events, which are on the rise due to global warming, and human error. Implementing a robust disaster recovery strategy and data resilient storage not only ensures minimal downtime and high availability, it also minimises disruption to users and customers and forms an important part of any business continuity plan.

## What makes storage data resilient?

It's important to understand that if the worst does happen, the ability to respond quickly and effectively, ultimately depends on where your primary data is being stored – the phrase "don't keep all your eggs in one basket" is particularly relevant here.

Storage flexibility is key to achieving not only data resiliency but also operational resiliency. With the rise in popularity of cloud computing, data can now be stored not only in the data centre, but in multiple locations including multi-cloud, hybrid-cloud, containerised and virtualised environments. Being able to store data in so many separate places means that if a data breach or unexpected event does occur at any one of these locations, the risk of disruption and data loss are greatly reduced, especially if robust backup and recovery strategies are in place.



Resilient storage solutions should include features like:

**2-site and 3-site replication** – maintains two or three independent copies of a single data volume between two systems at two separate sites. If one site fails, you still have the same data safely stored and accessible at the surviving sites.

**High availability (HA)** – infrastructure that can withstand outages, system upgrades, and localised events, while still providing continuous access to business-critical applications by providing alternate copies for zero disruption.

**Enhanced high availability** – keeps available Recovery Point Objective (RPO) and Recovery Time Objective (RTO) across any vendor, cloud or platform.

**Immutable copy** – data can never be changed or deleted due to air-gapping. Computers and networks are unconnected to systems and the internet and completely secure from any viruses or attacks that may jeopardise primary data.

**Encryption** – protects data on-premises or in flight by encrypting data which can only be accessed with the correct key.

## Useful resources

For a more in depth look at data resiliency, take a look at some of the following resources.

### Articles:

[Ensure data resilience](#)

[A Comprehensive Data Resilience Strategy Is Essential in a Threat-Filled World](#)

[How much does a data breach cost?](#)

[What is a disaster recovery \(DR\) plan?](#)

[Architecting highly available cloud solutions](#)

[What is encryption? Data encryption defined](#)

**IBM Report: [Cost of a Data Breach Hits Record High During Pandemic](#)**

**On-demand Webinar: [Boost your storage with security and flexibility](#)**

**Take the IBM Cyber Resiliency Assessment [here](#)**

