Why the cloud is the best solution for effective data lifecycle management

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Introduction

Data volumes are ever on the rise — that fact has become one of life's certainties. According to IT analyst IDC, the total sum of data worldwide will reach 175 zettabytes (ZB) by 2025. IDC also reports that organisations expect data to keep growing by 30–40 per cent every year.

We live in a world that is becoming ever more digital and digitalised. Data is constantly being created and captured, multiplying with every click and every keystroke. It is generated (and replicated) from everywhere: every web search, every email, social media post and smartphone message, and each and every online video stream.

The Internet of Things (IoT), ever more granular customer and marketing data, employee and human resources systems are all adding to the information overload that businesses must manage.

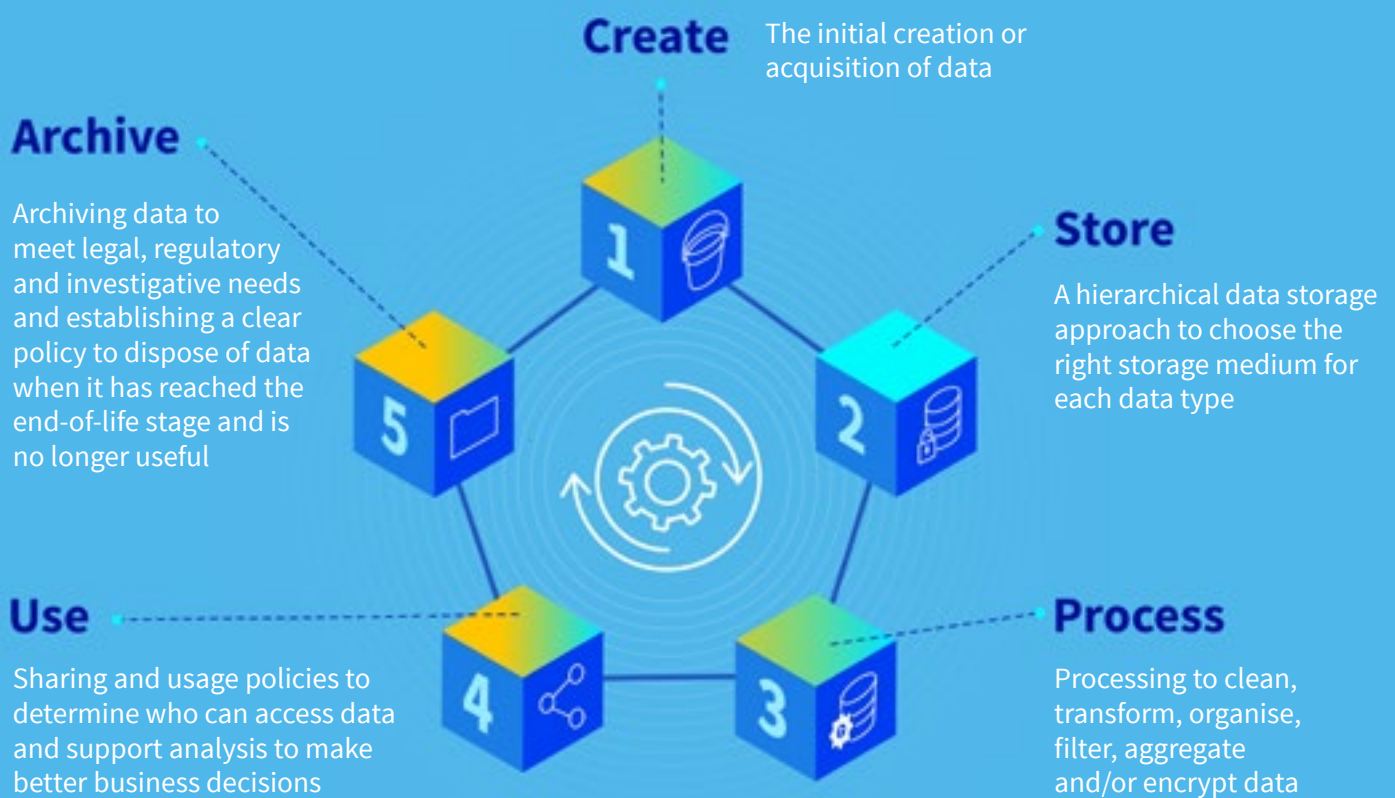# Taking back control of your organisation's data

Properly processed data can speed up decision making, improve business processes, drive growth and improve customer understanding. 'Taking back control' means an end to the struggle of just trying to keep up with spiralling storage demand and costs.

With all businesses facing a never-ending increase in data, now is the time to harness that data and bring it under control. Thinking strategically and tactically about data is crucial for business success, and even survival, in the years ahead. Releasing the value in your data and using it to power better decisions can give your business a compelling competitive advantage.

How to manage the data lifecycle

A structured data lifecycle management (DLM) approach is the key to giving organisations control over the entire lifecycle of their data. DLM enables better management and optimisation of that data from creation to eventual deletion.

All businesses need to think about implementing a DLM strategy to aid data integrity, availability and security. At OVHcloud, we divide the key areas of DLM into five stages:

Create
The initial creation or acquisition of data

Archive
Archiving data to meet legal, regulatory and investigative needs and establishing a clear policy to dispose of data when it has reached the end-of-life stage and is no longer useful

Store
A hierarchical data storage approach to choose the right storage medium for each data type

Use
Sharing and usage policies to determine who can access data and support analysis to make better business decisions

Process
Processing to clean, transform, organise, filter, aggregate and/or encrypt data
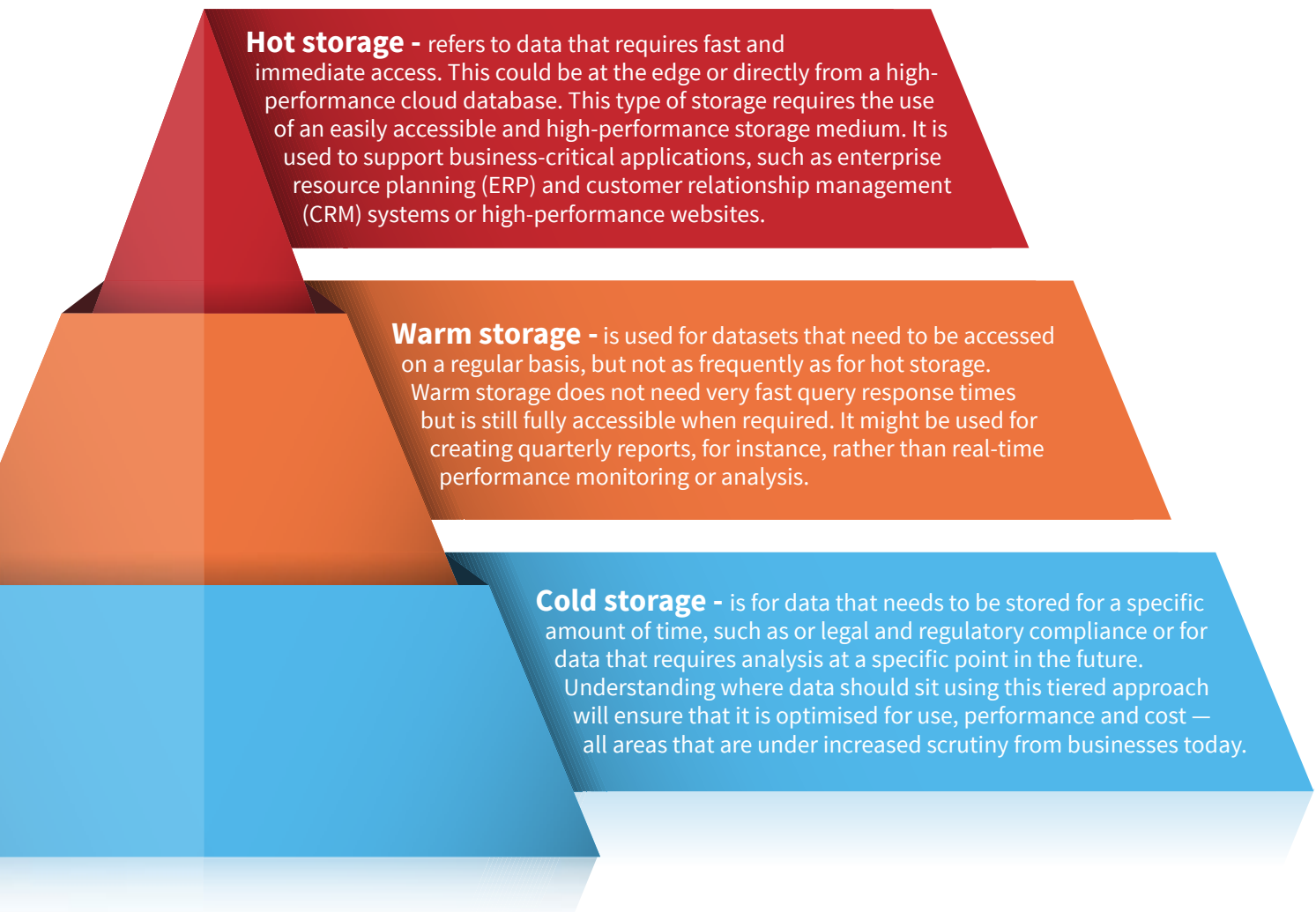
Although DLM is not a new idea, it is becoming more important as more organisations are seeking to transform their businesses to improve productivity, increase efficiency and lower costs with the rise of digitalisation. The increased need to handle rising data volumes — along with the desire for better control over data and the need to ensure that strong data protection and security measures are in place — brings the importance of DLM into focus.

Understanding the temperature of your data:

When instituting DLM, it is essential to understand how and where data will be stored and for what purposes. In other words, it is the temperature of the storage that matters, especially from cost and efficiency perspectives. Businesses need to understand whether their storage should be hot, warm or cold.

Hot storage - refers to data that requires fast and immediate access. This could be at the edge or directly from a high-performance cloud database. This type of storage requires the use of an easily accessible and high-performance storage medium. It is used to support business-critical applications, such as enterprise resource planning (ERP) and customer relationship management (CRM) systems or high-performance websites.

Warm storage - is used for datasets that need to be accessed on a regular basis, but not as frequently as for hot storage. Warm storage does not need very fast query response times but is still fully accessible when required. It might be used for creating quarterly reports, for instance, rather than real-time performance monitoring or analysis.

Cold storage - is for data that needs to be stored for a specific amount of time, such as or legal and regulatory compliance or for data that requires analysis at a specific point in the future. Understanding where data should sit using this tiered approach will ensure that it is optimised for use, performance and cost — all areas that are under increased scrutiny from businesses today.

Remember data storage should be reversible

It is also important to remember that where data sets should be fully reversible a flexible data strategy will allow you to easily and quickly move data from warm to hot storage if required.

Business priorities change fast. The importance of different datasets can change over time as your organisation and its aims change. There might be a business goal of expanding in one region or to increase sales of one product line. So data that was of no interest one week is suddenly very important the next week. You may need to move data fast from cold to warm, or warm to hot, so that it can be analysed to help power better decision making to support that growth. A properly implemented DLM plan makes that possible.

Why today's intelligent organisation needs to manage the data lifecycle

Many organisations are not well placed to handle a surge in data growth. For those with on-premises datacentres, this fast rate of growth limits the ability to scale, with capacity potentially being used up quickly. Extending a datacentre can be a long — and costly — process involving the provisioning of new equipment, with additional management and maintenance required once that equipment is installed.

This capacity problem is compounded by the increased desire to gain valuable insights to better understand customers and make better informed business decisions. Many IT departments are struggling to cope with a two-fold challenge: more data to store and more complex data queries to run on that data.

On-premises IT also makes it more difficult to take advantage of machine learning (ML) and artificial intelligence (AI). This means that many businesses might fail to derive the greatest value possible from their data without access to cloud services.

Regaining control of storage costs

Without a DLM strategy, data storage costs can end up spiralling out of control. As organisations grow, they often develop storage silos, both in their own datacentres and in the cloud. This often occurs when different departments or business units have their own IT budgets and separate corporate objectives.

A storage silo can also arise following the acquisition of another company. The main issue is that data access is limited to specific users and is not available to the people who need it. A silo can also affect the quality of the data and can lead to inconsistencies and incompleteness of datasets. And it means that organisations can end up spending unnecessarily on storage, especially when data platforms and business processes are duplicated.

Creating a single point of truth

When data is incomplete and inconsistent, and when access is limited, strategy development and decision making can be impacted negatively because the organisation does not have an accurate and complete picture of what the data is telling it.

To overcome this, data needs to be optimised, centralised and made available to all. In addition, with few tools available to manage data across storage silos, businesses are limited in their ability to mine data for insights. An additional cost consideration with storage is using the same medium to store data, especially if this is expensive disk storage. For example, in the archive stage, tape storage makes much better sense from a cost perspective than disk storage.

Reducing data complexity

Data complexity is another key issue facing businesses. Many fail to make the best use of their unstructured data to gain insights and improve decision making. Unstructured data — in document files such as Excel and PDF files, as well as audio and video — can often contain valuable information that simply isn't being harnessed for maximum benefit.

Up to 80–90 per cent of a company's data may be unstructured. But few businesses — only 18 per cent — are taking full advantage of this type of data, according to a 2019 Deloitte survey. The failure to make more out of this data with analytics can sometimes be attributed to a lack of available tools. In addition, using AI in an on-premises IT setup can involve costly and time-consuming efforts to make data available in the proper way for extraction, searching and analysis.

Guarding data sovereignty

A strong DLM strategy supports the need for better sovereignty over corporate data. According to the United Nations Conference on Trade and Development (UNCTD), 71 per cent of countries around the world have data protection and data privacy legislation.

Each country will also have other laws and standards that need to be met — this is especially the case for heavily regulated industries such as financial services and healthcare. Any company that operates on a multinational level must comply with an array of country-specific regulations. Internal data governance policies are also better supported with a well-thought-out approach to DLM.

The related areas of backup and disaster recovery data are also key elements of good DLM. Paying attention to these ensures there is an effective and cost-efficient process for data replication so the business can continue as painlessly as possible after any disruption.

Ensuring flexibility, agility and scalability

Organisations today increasingly need greater flexibility so they can scale easily and meet future business challenges. Consider how the COVID-19 pandemic led to a huge and immediate need to support remote working to keep businesses operational — it demonstrated clearly how the cloud can support fast business change. Whatever the challenge, all businesses need the ability to pivot and react to changing circumstances.

Understanding how the cloud can help solve the DLM challenge

Cloud offers the ability to make data more easily available for sharing and enable better collaboration and easier encryption, among other uses. It also supports the data nirvana of a single source of truth — the cornerstone of strong DLM. By running workloads in the cloud, an organisation can benefit from modern cloud services that boost performance and bring more flexibility to the business.

Balancing hybrid cloud for cost/performance and flexibility gains

While many organisations might choose to go all-in with the cloud, hybrid cloud fast became the de facto IT model for businesses, with 82 per cent of IT leaders reporting they have adopted it. Hybrid cloud makes sense for businesses that need to keep sensitive data on-premises and extend their infrastructure as needed. An example of this is keeping certain workloads on site — for example, workloads that are subject to significant regulation — while using the cloud for less sensitive workloads.

Building a new datacentre today and continuing to extend it at scale is fast becoming obsolete for many enterprises. It is no surprise that, by 2025, 87 per cent of the enterprise storage installed base is predicted to reside in the cloud. As we have stated, the scalability offered by the cloud allows businesses increased flexibility. One emerging trend is that of storage as a service (STaaS). While this is focused primarily on storage vendors creating cloud-like storage services in an on-demand model, it can easily be applied to public and private cloud providers or colocation companies when offering storage services that support increased data needs.
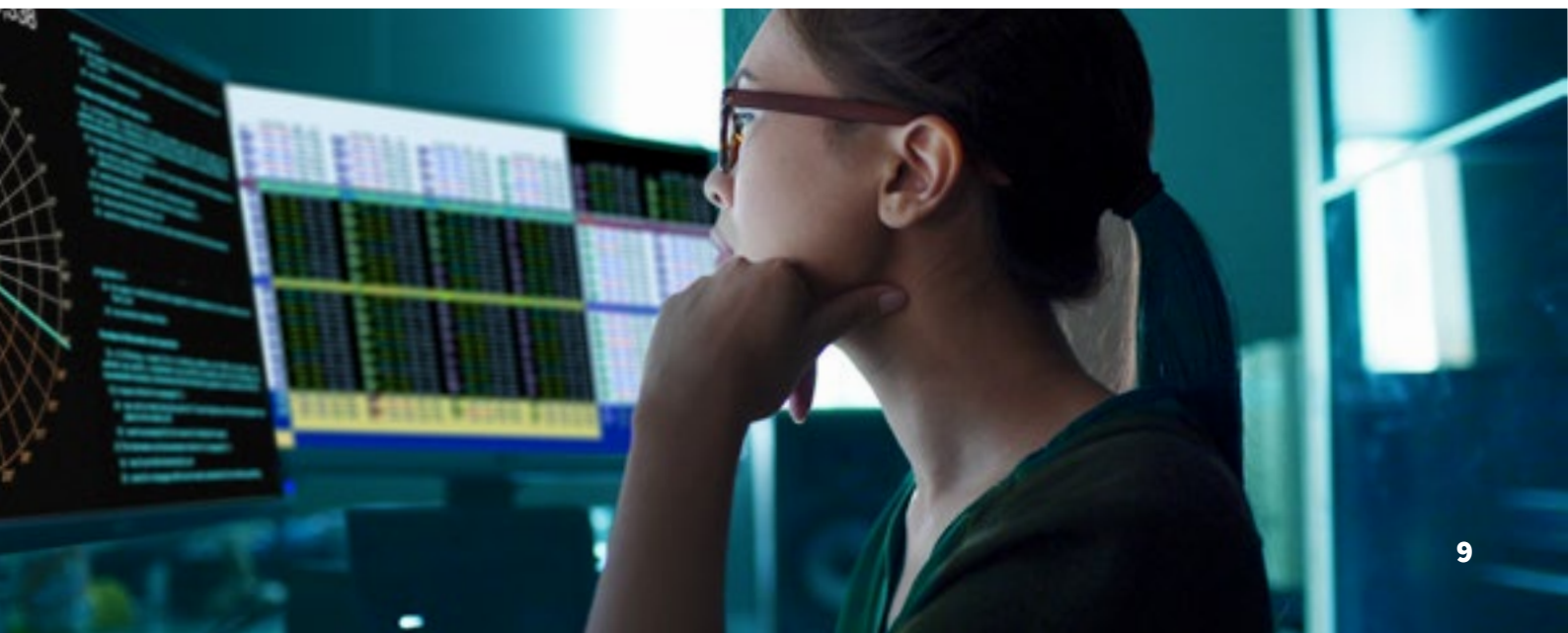
Using DLM to dynamically control storage costs across hybrid estates

A DLM strategy will also help determine where costs can be saved by making the best use of both on-premises and cloud IT environments in any hybrid cloud setup. IT costs can be reduced further by using the cloud to handle a business's technology needs, because cloud reduces the need to invest in new IT equipment and the related ongoing management costs that are required. For organisations with limits on headcount, cloud has become a positive way to help a business grow easily and better manage its cashflow.

Using cloud to support cost-effective data lifecycle management

It is clear that cloud is a cost-efficient and flexible solution to support effective data lifecycle management. And all sizes of businesses can benefit from being able to scale more easily and make better-informed decisions, to support growth and become more competitive. It is imperative that all organisations begin the journey to achieve dominion over their data — failure to do so will only leave them lagging behind in the quest to achieve efficiencies and business agility.

Using Storage as a Service gives scalability at the right price

StaaS-like offerings help businesses identify and use the right storage to meet their performance-versus-costs objectives, whether that be cold storage for archiving or hot storage for fast access to information.

A good provider should also be able to help businesses identify the right storage for each business need. With storage needs rising, it is essential to partner with a company that understands this.

Cloud providers offer a range of storage types that match the need to tier and treat storage as hot, warm or cold. This includes high-performance block storage to manage instances, file storage to enable collaboration and also to support inexpensive storage media for archiving.

Cloud services help support a number of types of data analytics — such as for data mining, AI and ML — that help to speed decision making. Data mining and big data analytics are now much more easily in reach for organisations when using the cloud. Cloud eliminates the cost of building, designing and maintaining the required infrastructure to support data analytics. Easily accessible cloud services help make data analysis easier and more accessible by providing sophisticated and proven ways to extract and classify data to help businesses elevate decision making.

With increasing IT costs, employing a pay-as-you-go operational expenditure (OpEx) model instead of a capital expenditure (CapEx) model helps bring a certain level of price predictability and operational elasticity to IT operations. When workloads, applications and storage are in the cloud, companies can also increase cloud usage for a specific time period, whether that's to meet market demand or to scale down operations in off-peak times.

Choose the right storage for your workload!
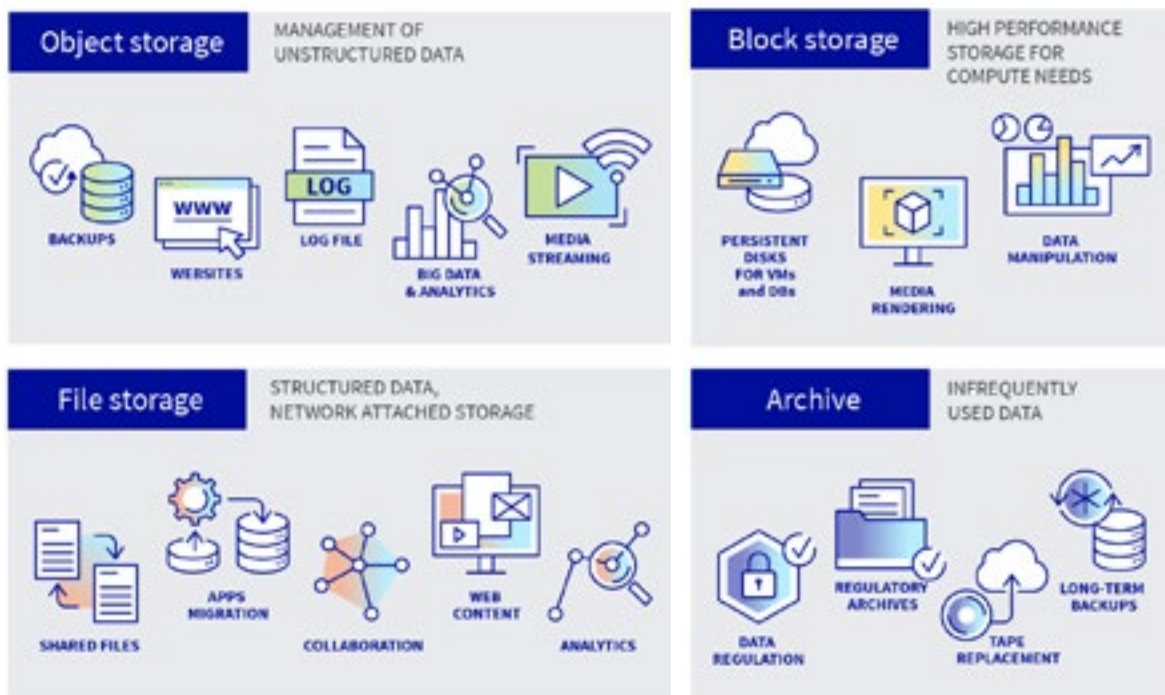
Why OVHcloud?

OVHcloud makes it possible for customers to effectively manage the flow of data from creation to archiving and end of life — with no lock-in.

Our solutions enable you to manage the entire data lifecycle end to end, protecting the quality of your data and making processing and analysis more efficient. We help you to gain complete sovereignty over your data, supporting data governance and keeping you compliant with regulations and data privacy laws.

Since 1999, we have been helping customers make the most of open, cloud-based technologies. We do that by building trusting relationships with customers of all sizes and types. We relish our role as part of the business and technology ecosystem. And we do all of this in the most sustainable and environmentally conscious way possible.

Whether you want to move all your data to the cloud or extend your on-premises environment, we can help. We offer AI services to help you manage your unstructured data to get better insights so you can improve decision making and support business growth.

We also support effective data management policies with storage services designed for your different business needs and data types. Our block, file and object storage services offer high data availability, high-performance workload support and easy data access. Built-in security means you are continuously protected from threat actors, keeping your data safe and secure.

OVHcloud offers the best price/performance ratio on the market. For example, our range of managed databases are 30 per cent more cost-effective than our competitors and we use the most cost-effective storage media for your cold archives. And all of our costs are transparent and predictable, so you can manage your IT budget more effectively.

Talk to us and let us help you regain control of the data lifecycle.

Get started

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