

# The reliable, scalable and simple solution for infrastructure management.

Benefits of future-proofed  
hosted private cloud.

White Paper by



## Since 2010, OVHcloud has been delivering dedicated solutions for hybrid environments and virtualized data center infrastructure.

Hosted Private Cloud, the OVHcloud flagship service, is a virtualized and fully dedicated data center powered by VMware software-defined technologies. All infrastructure elements are abstracted from their hardware layers and controlled by software. This includes compute resources, network gear and storage services, which, freed from the constraints of a traditional, hardware-centric approach, can satisfy the changing needs of a modern enterprise. This advanced solution offers reliability, scalability, simplicity for infrastructure management and much more. Here's a look at the benefits of moving to the Hosted Private Cloud.

### Hosted Private Cloud by the numbers

**+3 PB**

migrated data  
from vCloud Air  
to OVHcloud

**7 times**

awarded provider  
of the year (Global  
or EMEA) by VMware

**+9000**

migrated VMs  
from vCloud Air  
to OVHcloud

**37**

data centers  
worldwide

**3500**

Hosted Private Cloud  
projects

**22 Tbps**

of global  
bandwidth

**10 years**

of partnership with  
VMware

**1.6M**

customers in 140  
countries

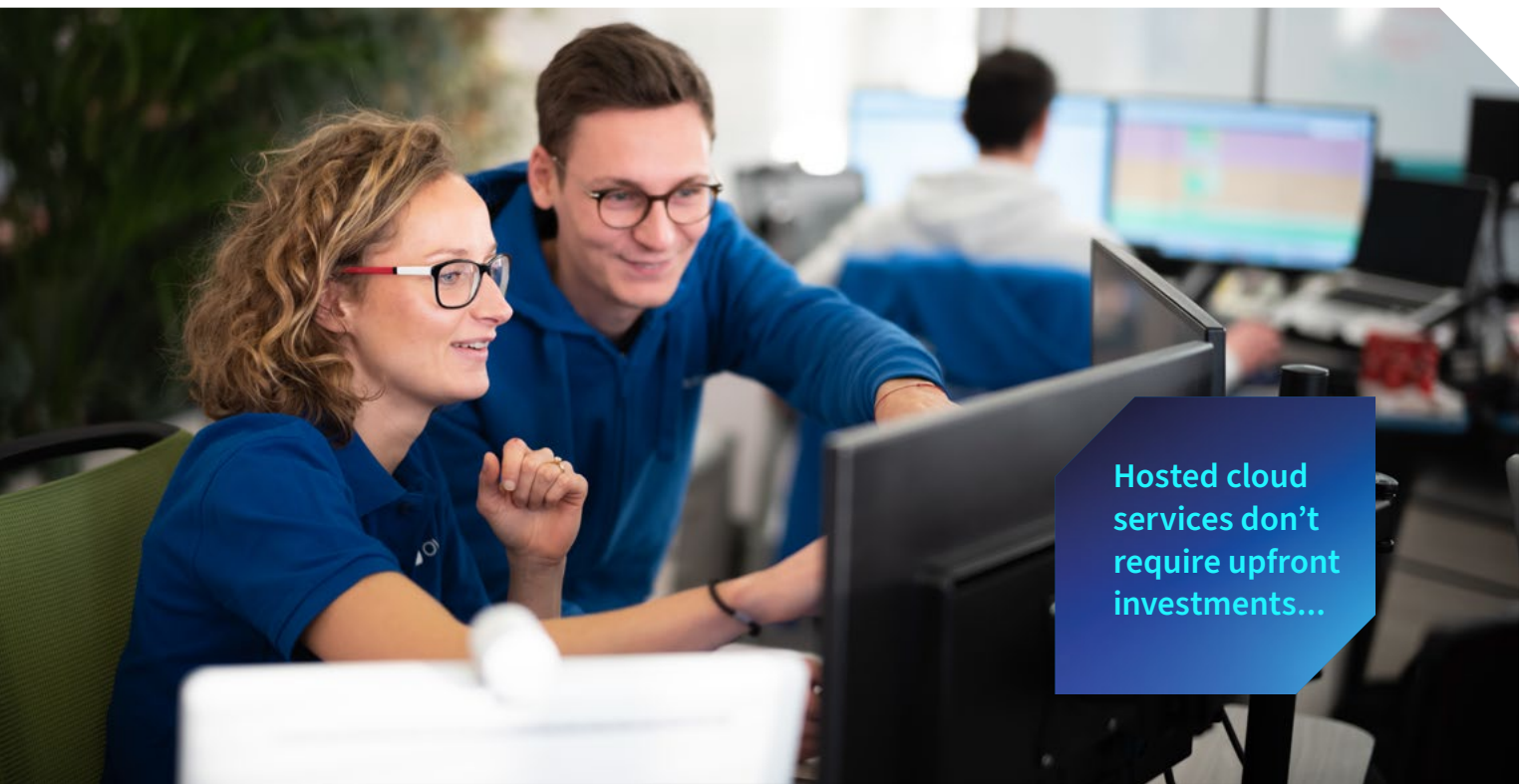
## Gain business agility.

Agility and faster time to market are the key features of cloud services that help IT departments drive business growth. With most businesses already recognizing the advantages of cloud computing, the same goes for customers who expect services in the cloud. Moving to a hosted private cloud can speed up the pace of innovation, shifting a company's focus from its infrastructure to the core business.

## Harness the CapEx and OpEx.

For many organizations, migrating to the cloud is all about cost-effectiveness. Companies can avoid capital expenditures (CapEx) and ongoing upgrades of outdated hardware, which can significantly reduce costs. Hosted cloud services don't require upfront investments, and the capital expense is offloaded to the cloud service provider (CSP).

Besides initial hardware, software and deployment costs, a self-hosted infrastructure requires a lot of ongoing administration and maintenance. Those operational costs (OpEx) account for a substantial part of the total cost of an on-premises environment. A hosted and managed solution frees an organization from hardware and network operational costs related to vendor contracts, warranties and regular maintenance.



Hosted cloud services don't require upfront investments...

## Reduce the TCO.

To accurately estimate the savings that can be achieved through migrating to the cloud, an organization needs to know the total cost of ownership (TCO) of its on-premises infrastructure.

The TCO should include the ongoing cost to run, maintain and upgrade the solution over its entire lifecycle, which is typically five to 10 years, depending on the project. With many factors to evaluate, it's easy to overlook some significant costs, such as hardware lifecycle or energy consumption. These costs don't apply when an enterprise moves workloads to a hosted private cloud. Using the OVHcloud on-demand infrastructure, a company benefits from the latest hardware. Moreover, top-tier cloud providers like OVHcloud can achieve a PUE<sup>1</sup> of 1.2 in their industrialized facilities and pass the savings on to customers.



## Avoid hiring and training expenses.

Every migration process requires in-depth planning to ensure effective use of resources, risk management and budget. When a new cloud technology comes on board, the process may require additional training for operations teams or even hiring experts to lead the enterprise from on-premises to the cloud. To avoid additional HR expenses, the organization may use the same framework — a cloud operating system — for the cloud as for the self-hosted environment.

Using the VMware software stack, OVHcloud Hosted Private Cloud is easy to operate for IT teams well-acquainted with a VMware-powered infrastructure. It doesn't require them to develop a new skill set, as the well-known vSphere interface allows them to manage and monitor IT resources, just as they would with on-premises infrastructure.

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<sup>1</sup> Power Usage Effectiveness (PUE) factor shows how much electricity is needed to keep the data center facility running. With a PUE of 2.5, which is the industry standard, for every watt required to power the servers, another 2.5 watts are needed to keep the data center running (cooling, lights, fire detectors, etc.).

## Forecast cloud costs.

Cloud computing services can be overwhelming with a wide variety of options, add-ons and features, each with a separate pricing and different consumption metrics. As a result, companies rarely know how much they will pay by the end of the month. A simple billing system without hidden and unexpected costs is the mark of a reliable cloud service provider.

For OVHcloud, it's an important aspect of creating a product offer. For our Hosted Private Cloud, the invoice contains monthly charges for hosts, datastores and additional resources, with both datastores and hosts consumed by the hour. Ingress and egress traffic is unlimited and included. Optionally, a customer may request Windows Server licenses for VMs and pay for them accordingly at the beginning of the following month.

## OVHcloud and VMware — a long-lasting partnership.

Partners since the launch of Dedicated Cloud in 2010, OVHcloud and VMware have maintained close relations over the years, working hand in hand to offer businesses industry-leading IaaS solutions. OVHcloud, a VMware Cloud Verified partner, delivers flexible, interoperable VMware Cloud Infrastructure as a Service, powered by technologies including VMware vSphere, vSAN, NSX and HCX. The companies collaborated to bring Software-Defined Data Center (SDDC) as a Service to market in 2016. The strong relationship between the companies is why the Hosted Private Cloud service benefits from all the VMware innovations with no restrictions. The partnership also gave rise to OVHcloud Academy and its technical training sessions adapted to customers' needs. OVHcloud was recognized seven times as Service Provider of the Year (Global and EMEA) by VMware.



## Benefit from an isolated environment.

When considering a migration to the cloud, IT managers are often troubled about protecting and controlling the company's data in a cloud environment. They want a flexible and scalable fortress where all the infrastructure would be isolated for the organization's exclusive usage. This is exactly what our Hosted Private Cloud is — a single-tenant, dedicated environment.

OVHcloud offers a bundle of VMware virtualization stack and physical infrastructure, including server hardware, storage, network gear and data center space, with all that is needed to keep it running. The virtual data center is deployed, managed and maintained by OVHcloud, while virtual machines, applications and data are operated by the customer.

## Build your stronghold.

Security is the top priority for OVHcloud. From basic security features like double authentication and unauthorized account access prevention to massive security systems such as anti-DDoS protection, OVHcloud does not compromise on its principles. These security features are accessible to all customers or included with the service.

OVHcloud safety measures, enhanced by VMware security systems, make our Hosted Private Cloud a strong fortress. It has been designed with availability, integrity and confidentiality in mind. To administer the infrastructure, it's necessary to pass through an SSL gateway, which guarantees the safety of data transmission. Virtual machines can be accessed through a public network or VPN if needed. Both the access to OVHcloud Control Panel and vCenter can be limited only to trusted IP addresses.

**OVHcloud Hosted Private Cloud is equipped with NSX, a software-defined network solution that allows further access control, creating security policies and deploying network and security services from a ready-to-use library.**

## Choose confirmed standards.


When looking for a trusted cloud provider, IT decision makers often request certification evidence. The increasing importance of information security is dictated not only by privacy regulations but also by a growing awareness of data value. For cloud providers such as OVHcloud, it became essential to show compliance with ISO 27001 standards and assure customers that the company is committed to maintaining the confidentiality, integrity and privacy of customer data.

SOC 1 Type II and SOC 2 Type II attestations confirm that OVHcloud has defined and implemented controls to protect the data of its customers and evaluates these controls against the international standard established by the AICPA (American Institute of Certified Public Accountants).

## Host credit card data securely.

PCI DSS standard lists over 300 controls and security features that need to be set up to process card numbers securely. To ensure our Hosted Private Cloud complies with these requirements, the OVHcloud platform undergoes annual audits by a QSA company.

Since receiving the Certificate of Compliance for PCI DSS for the first time in 2013, OVHcloud proves each year it fulfills the security requirements necessary to host electronic payment infrastructures of any size and complexity. OVHcloud, as one of the parties in the online payment system chain, holds responsibility for infrastructure security, while the customer and other parties must respect the standards in their areas.



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## Get an all-inclusive solution.

Our Hosted Private Cloud, enhanced by VMware software-defined technologies, allows enterprises and organizations to build on their existing expertise in running virtualized environments. A vSphere as a Service hosted cloud offers all well-known features like High Availability (HA), Fault Tolerance, Distributed Resource Scheduler (DRS), distributed switches and more.

## Eliminate the complexity.

Setting up a self-hosted environment from scratch is a laborious task. When you order a Hosted Private Cloud from OVHcloud, it's delivered configured (vCenter) and ready to use with the access to the vSphere interface. IT teams can start deploying VMs immediately. The virtual environment is monitored, maintained and fully automatized by us. Additional compute resources are available within minutes, fully configured and ready to take on workloads. OVHcloud handles physical layer deployments and maintenance, administration and security, so organizations enjoy reduced complexity and only need to manage their resource pools, virtual machines and applications.

## Expect SLA and redundancy.

Cloud providers typically have a higher uptime rate and less planned downtime than those achieved in a self-hosted, on-premises solution. As a result, they reduce the impact on productivity and revenue. Our Hosted Private Cloud service offers redundancy and high availability. The internal data center network is redundant and guarantees 100% accessibility, except during scheduled maintenance.

The storage system has 100% guaranteed availability and comprises master and slave storage, which takes over in the event of a master storage technical failure. In case of a host failure, OVHcloud provides a replacement in under 15 minutes to compensate for the missing resources in the cloud infrastructure.

## Test resilience and add resources.

Testing and challenging the system's high availability (HA) should be a regular habit of every IT department. To effectively verify HA mechanisms, the team needs to simulate the failure. By adding the Resilience Test functionality directly to the vSphere interface, OVHcloud encourages companies to test the redundancy, reboot mechanism, DRS and Fault Tolerance settings. To provide flexibility and scalability for our Hosted Private Cloud, OVHcloud enhanced vSphere with features for adding and deleting resources, ensuring that customers can easily and quickly expand their virtual data center.



## Improve IT operations with software-defined technologies.

Software-defined technologies can manage and control some or all system functions. They abstract the functions from the underlying hardware and provide automation, scalability and modularity without the previously experienced limitations of the hardware layer.

Our Hosted Private Cloud is a fully integrated virtual data center solution built on three software-defined pillars: compute, network (NSX) and vSAN storage. These technologies allow companies to increase the agility of IT operations. Previously, expanding the network, creating VLANs or even deploying a firewall required many labor hours and miles of dark fiber cables. Now, with a software-defined network, it only takes a few minutes and a couple of clicks.

## Benefit from improved storage performance.

In the past, storage in the data center environment had been a performance bottleneck for many applications. The introduction of solid-state drives and the practice of combining them with NVMe protocol have helped to bridge the gap between compute and storage. These technologies were the foundation for the all-flash vSAN, combining high-speed, solid-state drives with a built-in cache to minimize storage latency.

vSAN hosts can be an extra part of your infrastructure or they can be the entire infrastructure. They integrate CPU and RAM resources and the locally mounted storage area. With vSAN, it's possible to tailor RAID protection on a per-VM basis and dynamically respond to changing requirements, providing enhanced performance, capacity and protection as the business grows.

## Automate with VMware and OVHcloud APIs.

With resource-intensive workloads, infrastructures expand and grow. As the number of clusters, servers and VMs increases, so does the number of tasks, many of them repetitive and tedious. Modern automation and development processes based on RESTful APIs provide the organization with three main benefits: consistency, agility and manageability. Since automation is repeatable and accurate, it delivers consistent results. When automated, complex and repetitive tasks can be completed rapidly. And the bigger the infrastructure, the more it calls for automation for efficient management.

With the VMware vSphere API, customers can configure and manage VMs and clusters and perform backup and recovery operations. The OVHcloud RESTful API complements the functions with network management, resource adding and deletion processes, and access control.

## Migrate VMs without hassle.

Enterprises that are using VMware technology in their local data center gain twice. They can adopt cloud strategy at their own pace, running hybrid cloud environments until they are ready for the strategic move, and they enjoy the hassle-free lift and shift migrations. For workloads that are not considered cloud-native, the cost and risk of conversion to a new platform may override the benefits. The solution is to use a common framework for on-premises and Hosted Private Cloud — VMware vSphere. Thanks to Hybrid Cloud Extension (HCX), another software solution from VMware stack, the lift and shift migration is possible between vSphere environments as easily as VMs are moved within a cluster.

## Monitor infrastructure effectively.

While managing and monitoring vast vSphere infrastructures, OVHcloud experts found that it's time-consuming and inefficient to check the status of each host and datastore separately. This is how vScope was born, a monitoring tool for Hosted Private Cloud, designed by OVHcloud. All the useful information on resources is displayed on one page. You can instantly view the number of cores and VMs, the CPU and RAM load and the network traffic on every host. And for more visibility, all data is color-coded green, orange, red or black. One aggregated view allows IT teams to keep track of infrastructure health and see new resources to be deployed.

## Go hybrid.

Our Hosted Private Cloud can serve as a cost-effective environment, a consolidation solution, a disaster recovery site or a hybrid extension for an on-premises infrastructure. To build an automated and orchestrated hybrid environment, an enterprise needs to interconnect on-premises with the cloud. With HCX, an extensive orchestration suite, it can address this and many more hybrid model challenges and migration pains. With the ability to pair two vSphere 5.0+ infrastructures, HCX offers mass lift and shift migration using stretched networks. By deploying a hybrid cloud, organizations reap the benefits of gaining business agility, flexibility and scalability while staying in control and re-using hardware.

OVHcloud US is a subsidiary of OVHcloud, a global player and Europe's leading cloud provider operating more than 400,000 servers within 43 data centers across four continents. For over 20 years, the company has relied on an integrated model that provides complete control of its value chain, from the design of its servers to the construction and management of its data centers, including the orchestration of its fiber-optic network. This unique approach allows it to independently cover all the uses of its 1.6 million customers in more than 140 countries. OVHcloud now offers latest generation solutions combining performance, price predictability, and total sovereignty over their data to support their growth in complete freedom.



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