



World-class solutions for managing your digital transformation.

Data center extension and
migration with VMware
virtual machines.

White Paper by

 OVHcloud®

Digital transformation is moving fast. Data center extension and migration are key to keeping pace.

As fast as the digital world has moved in the past few years, it's still increasing exponentially. Global data is estimated to hit 175ZB by 2025. What does that mean for you and your organization? Well, it brings both opportunities and challenges. As information technology goes through yet another transformation, it's reshaping how we do business, how we interact, how we make decisions, and how we organize our society.



More and More, and Less and Less

More data creates more challenges for IT leaders trying to figure out what to do with it all. Where will you store it? How can you ensure what's needed is readily available? Most importantly, how can you remain within your IT budget when there's less and less of it, and even free up funds for skilled new talent? If you often experience sudden changes in workload or computing needs, you need to be able to deploy new resources quickly and effectively. Having only an on-premises environment can slow this down or even grind it to a halt.

As organizations are forced to update their on-premises environments' legacy hardware and software, a progressive transition through data center extension can eliminate the risk of obsolescence. You enjoy the benefit of the latest hardware and software while you retain full control over your infrastructure and data. Alternatively, you may want to migrate your on-premises workloads to the cloud and decommission your on-premises data centers. Perhaps you want to host a new application or diversify your list of cloud providers. Whatever your specific situation, there are extension and migration solutions to suit your needs.

What is a data center migration or extension?

A data center migration is the process of migrating an entire pre-existing, on-premises infrastructure to the cloud, hosting it in an external data center and decommissioning the existing infrastructure.

This sort of large-scale move to the cloud is a highly effective way of avoiding hardware obsolescence in legacy infrastructures. It also frees your internal teams of the need to monitor on-premises physical hardware, allowing them to focus their attention on developing your infrastructure and driving ongoing business growth. This is further enhanced by the freedom to add, delete and scale resources that the cloud offers, meaning you retain the ability to design and deploy your infrastructure in the way that suits you, just as you would with on-premises servers.

A data center extension, on the other hand, involves retaining specific elements of an on-premises infrastructure while migrating others to the cloud or creating whole new elements in the cloud. In either case, this is accomplished through secure, private connections between your on-premises

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infrastructure and your cloud solutions. There is a wide range of potential applications for such architectures. For example, you may retain your on-premises infrastructure for hosting your websites and applications while taking advantage of the scalability of the cloud for your storage requirements. Alternatively, you might utilize the cloud on a project-by-project basis to accommodate anticipated spikes in traffic, deploying new virtual servers when they are needed.



How a data center migration or extension could benefit your organization.

The potential benefits of a data center migration or extension will depend on your long-term goals and the specific solutions you elect to put in place. For this reason, it is important to be clear about your short- and long-term goals before investing time and money in any strategic data center solutions.

You might, for instance, design your infrastructure to ensure maximum redundancy so that uptime is never affected in the event of a hardware or software failure. Alternatively, you may want to minimize the ongoing storage cost of legacy data without compromising security. It's therefore important to begin the process with a comprehensive data center migration assessment to clarify your goals, existing infrastructure and current level of internal cloud expertise. This will determine which combination of solutions will prove most effective and can then be used as the basis of an effective project plan for the entire migration process.

Following this assessment, a data center migration checklist is strongly recommended to ensure your data is protected at every stage of the migration and any downtime is kept to the absolute minimum. This way, your teams will be able to start making use of your new infrastructure straight away, avoiding many of the common data center migration challenges.

Built on VMware®. VMware brings compute, storage and network virtualization into a natively integrated stack that combines hyperconverged software (vSphere plus vSAN) with network virtualization (NSX), enabling a simpler and cheaper way to deliver a private cloud. VMware can accelerate your data center extension or migration to the cloud by delivering consistent infrastructure and operations.

Your VMware virtual machines can be effortlessly migrated or extended to the cloud without any changes, as OVHcloud offers full VMware standard compatibility based on SDDC technology. You can rapidly migrate all workloads from your data center to the cloud with consistent infrastructure and minimize the cost without having to refactor the VM. Adding resources and hosts quickly, especially on the VMware side, is fully automated. We have our own public-facing API so that customers can automate many of their systems. Bundling these solutions with our HPC Premier service lowers the total cost of ownership. Finally, your teams can seamlessly transition from on-premises to the cloud using the same tools and methodologies they rely on already.

Globally available multi-DC implementation is possible, covering disaster recovery scenarios and international services expansion. OVHcloud offers 33 global data centers with more under construction, and a proprietary global network with 22Tbps total network capacity.

Affordable. You can opt for monthly billing, allowing you to convert CapEx to OpEx for your replication site. This way, you will be able to implement a disaster recovery plan that's fully in line with your preferred RPO/RTO strategy, based on clear costs and business objectives.

Secured environment. Compliance is becoming increasingly important for cloud computing providers. As more organizations embrace the benefits of moving data to the cloud, cybersecurity is evolving to keep pace with new security threats and risks. Along with current cloud provider standards, many industries have also imposed regulations and rules about cloud compliance. Cloud-delivered services are expected to be compliant with local, state, federal and international security standards, laws and regulations. OVHcloud provides a comprehensive set of compliance offerings, including certifications and attestations applicable to its data centers and products.

For 20 years, we have dealt with threats through constant innovation in this domain, and through hardware and software protection such as OVHcloud Anti-DDoS protection. A benefit of working with OVHcloud is our security experts quickly identify and mitigate up to 5Tbps DDoS attacks at no charge.

Performance for demanding apps. We offer a full SSD datastore range with higher capacities of storage, fully dedicated to the customer, with no backup stored on your repository. It's the best price, best performance storage and the choice for intensive enterprise workloads such as highly transactional databases, web streaming and dense environments like VDI.

OVHcloud provides connectivity with dual front-side 25Gbps network cards, which communicate to the internet and dual private 25Gbps cards to our internal VLAN for host-to-host communication routed through vRack. The storage connectivity improvements for vSAN models include dual backend 50Gbps network cards that allow for support of high-performance applications.

The accelerated performance with vSAN new storage capacities offers minimum latency, with 115Tbps of full SSD that can be increased to approximately 39Tbps per host, eliminating large upfront investments and allowing you to lower the total cost of ownership with a high-performance and scalable solution to grow at your own pace.

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Connect your data centers to OVHcloud data centers.

With multiple points of presence (PoPs) and dedicated network connectivity, you can connect to OVHcloud global infrastructure, including any of our data centers (except Singapore and Australia). The OVHcloud fiberoptic private network between data centers provides you with access to all the resources you need, with both VMware virtualization and dedicated bare metal servers. Data is transferred between sites via a direct private link or VPN, so all your exchanges are secure.

On-demand resources from OVHcloud.

OVHcloud resources are available on demand to shift your legacy on-premises infrastructure to the cloud, respond to activity overflow in your data centers, host a new cloud-based application or migrate your existing virtual machines to OVHcloud data centers with minimal downtime. You can transfer all or part of your data and servers to OVHcloud without changing the technology or architecture you already know and trust. Retaining the latest versions of the solutions and licenses you use internally, such as VMware and vSphere.

Thanks to advanced automation and connectivity, you can move your existing workloads to OVHcloud using both VMware virtualization and world-class dedicated servers, depending on your needs.

Extend or migrate your on-premises infrastructure.

You'll cut down the time you spend on maintaining, updating and scaling your existing on-premises solution. You can easily incorporate high-performance dedicated servers equipped with the latest technology into your infrastructure. Your internal costs will go from CapEx to OpEx, which means you will no longer need to pay for licenses for network and hardware, instead renting and resizing them as required.



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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