



White paper

It's time to weigh up the benefits and challenges of the multi cloud

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INTRODUCTION

The cloud has evolved a great deal over the last decade, and the once binary choice of “on premise, using self-managed servers” versus “public cloud with servers managed by a dedicated provider” has become far more complex.

Nowadays, we talk about Serverless vs Containers, Storage vs Virtual machines, PaaS vs IaaS. There are so many options out there to let you make the best choice depending on your needs.

However, in this ecosystem that’s brimming with choice, there’s still a common misconception that exists - that a single cloud provider can meet all your needs.

And yet, sooner or later, this hyper-dependence fostered by the cloud giants will have significant consequences in terms of strategy. For instance, choosing a single cloud provider is rooted in tense geopolitics, extraterritorial laws, and regional requirements for data, which can all threaten your company. Generally speaking, diversifying your choice of provider is the best way to limit the risks and negative impact on your company. Continued hyper-dependence will cause your evolution and innovation to stall, while your clients will keep asking for more control over the sovereignty of their data.

Your in-house developer teams, on the other hand, are looking for more freedom - freedom of choice, freedom to act, freedom to make decisions. The multi cloud, in many ways, is the right way to give them that freedom. Building an infrastructure that meets your needs, by promoting the added value of the product, rather than the provider, will have a positive impact on:

- Your business (invoicing, vision, innovation)
- Your teams (motivation, velocity, commitment, recruitment)
- Your end users (availability, data sovereignty)

Open standards and open source pave the way for the multi cloud. And, at Scaleway, the leading alternative multi-cloud provider, we are convinced that we are only at the beginning of the adventure.

How the criteria for choosing a cloud provider have evolved

In 2022, the cloud is no longer what it was in around 2010: your technical teams' uses and requirements have evolved towards infrastructure hyper velocity. They want performance, flexibility, and freedom of choice and action.

From storage to European digital sovereignty

20 years ago, as more and more applications were being created, developers were wondering "where are we going to store all this structured and unstructured data?". The cloud turned out to be the solution. However, the cloud became a cause of growing anxiety for end users due to concerns over data use and accessibility.

Europe partially resolved this by implementing GDPR. The localisation of data storage became a key differentiating factor for clients. Data storage is now inextricably linked to the topic of sovereignty, and compliance with American or Asian extraterritorial legislation is a major strategic issue.

89 %

According to a study by KPMG* "89% of CIOs consider data sovereignty to be an important criterion when choosing cloud providers".

**The European Cloud: Major Challenges For Europe and Five Scenarios with Major Impacts by 2027-2030, by KPMG, April 2021*

As an entrepreneur, you need to be aware of the impact of your choice of cloud provider, which is, by-design, linked to the geographical location and nationality of the storage partner responsible for your end users' data. For instance, data stored in France, but with an American player is in no way protected from extraterritorial laws. On the contrary, choosing at least one European provider is a very meaningful gesture which helps restore balance and give digital sovereignty back to Europe, to your company, to CTOs and to your end users.

From user to developer experience

Not so long ago, choosing a cloud provider depended on four key factors: product and service availability, the reliability of the provider, their network and of course, cost.

Nowadays, this is no longer enough. Your developers want a dedicated experience that makes their daily lives easier. To achieve this, they need:

- A console designed for developers, with a dedicated user interface, complete with key features, APIs, and the standard automation tools on the market (like Terraform, for instance)
- Support that's available 24/7
- Documentation providing a clear source of information and the existence of an active community
- To participate in open source projects based on continuous improvement and sharing knowledge

Meeting these new criteria will be just as beneficial to your business strategy. Optimizing your developers' experience will make it easier for you to recruit skilled developers without necessarily limiting your search to niche experts of a particular cloud provider or cloud architects, who are increasingly hard to find on the market these days.

This will in turn boost your growth.

From elasticity at all costs to finding the balance between client guarantees and environmental impact

To meet your clients' requirements, you want to guarantee availability, resilience, and security with an application offered across several regions and AZs.

But this is a high-impact decision to make. Nowadays, we can't just scale whatever the cost, without taking the potential consequences into account. We are referring, of course, to our collective and shared responsibility for the environmental footprint of the digital industry, today and for the years to come.

As always, this is a matter of choice and balance. You need to think about what is best for you, for your company's posture, and for your end users.

One cloud is all you need, or is it?

Data stored in the location of your choice, an excellent, personalized developer experience, flexible solutions that adapt to your needs and ideas, etc. This is the hyper-customization of your cloud environment that you've come to expect from your cloud provider. But, between us, no single provider alone can guarantee this unique adaptability to every business.

The supremacy of the dominant providers has come crashing down

For years, the dominant providers have implemented a rather efficient acquisition and retention strategy by leading us to believe that a single cloud can meet all your needs.

Even if this single cloud which meets all your needs seems highly attractive, especially for startups taking their first steps into the cloud, the reality is quite the opposite. Users find themselves tied into extreme dependency due to lock-in practices:

- An anti-competitive acquisition strategy through offering an indecent number of free credits, the famous "try before you buy"
- A retention strategy through creating interdependent products and services
- An abusive loyalty strategy through financial or technical pressure, with long-term, unclear, and misleading contracts

All in all, a framework that's far from supportive or productive.

Today's choices can put tomorrow's business at risk

Unfortunately, this hyper-dependent strategy is working.

This choice has a direct impact on your current and future business. Locking yourself into the straitjacket of a single cloud provider leads, in the medium/long term to:

- Technical recruitment being limited to niche experts
- Predicting visible, and more often than not, hidden costs becoming impossible
- Excessive amount being charged for data extraction, which might make you think twice about migrating towards another provider
- Certifications becoming a never-ending nightmare
- Architectural dependence making reversibility impossible
- Support being more expensive than efficient

These obstacles for your company are not new, so resist the call of free credits as it's just a masquerade for long term costs. There are other ways to manage your budget without it coming at the expense of your future independence.

Whether you have adopted an on-premise or a hybrid cloud model, the best way to guarantee your freedom of choice is the multi cloud. The choice, and your company's future, are in your hands. Why should you make do with only being 60% satisfied by one provider, when you could be 100% satisfied by several?

The multi cloud is not a myth, it's already here

You likely use Github (hosted by Azure), Google Docs (hosted by GCP) and your AWS or Scaleway infrastructure all at once, on a daily basis. See? You're already using the multi cloud. This example shows that rather than making things more complicated, using several cloud providers is making your daily life simpler. It's just a question of common sense.

Using the multi cloud on a larger scale is just the same if you adopt the right approach - the point is not to create a full backup of your applications with other providers (DRP or BCP). This is a trap you should avoid as it will be a waste of time despite the advantages this strategy can bring in terms of innovation.

Creating an application with a multi-cloud strategy will allow you to benefit from the most relevant services offered by different cloud providers in order to build an efficient, resilient, and flexible architecture that meets your business needs, and improves your developers' efficiency and experience.

It is worth noting that, for 80% of use cases, only 20% of the products out there are actually necessary. When cloud providers use the same market standards, it makes it easier to find the same products, such as load balancers, private networks, S3, etc. all the while sparing technical teams additional training.

Nowadays, your teams can rely on an already significant range of multi-cloud products:

- Gitlab and Github for building
- Terraform and Ansible for deployment
- Docker and Kubernetes for scaling

So whatever the obstacles between you and a multi-cloud strategy, they are nothing but a myth.

The benefits of a multi-cloud strategy for your infrastructure, recruitment, and corporate culture

There's fierce debate surrounding the multi cloud. Some will tell you that deploying a product across several regions, or even AZs, with one single cloud provider is complicated enough as it is. So why make it worse by adding more providers? The answer is - because the tables have turned. Nowadays, the obstacles are falling one by one, thanks to open source, and this strategy clearly has the most advantages.

Open source: the driving force behind the adoption of the multi cloud

Using open source technologies is a safe bet for you, but also for your provider. The technologies developed by the community (like Kubernetes, created by Google before being handed over to the CNCF for maintenance) are vendor agnostic by design. They pave the way for the development of standards that facilitate the adoption of the multi cloud. In the next few years, the adoption of the multi cloud will increase exponentially.

Reducing provider lock-in

Of course, we are not going to abolish it completely. When you choose to use a specific technology, or the services of a cloud provider, then you are, of course, tied-in to their user agreement.

Still, you will gain independence and, should this partnership not suit you anymore, it will be easier for you to terminate it.

Being able to smoothly migrate your infrastructure can be a key argument in the particular case of a startup merger or acquisition.

Leveraging the best of each cloud provider

Another key argument is, of course, the freedom the multi cloud offers. Choosing the products that best suit your infrastructure is no longer a luxury beyond your reach.

Using managed services will make it easier for you to coordinate and integrate cloud environments to your infrastructure. By delegating the maintenance tasks (backup, monitoring, patching, etc.), you will save time, and increase your efficiency. Most importantly, you will always be able to regain your freedom.

Reducing infrastructure costs

By hyper-customizing your infrastructure to meet your needs, there will be a direct impact on your costs. No more unnecessary products, no more excessive consumption. As your teams save time, your company will save money.

Even though your purchasing power will be distributed across several cloud providers, your ability to compare providers will increase your negotiating power.

Building redundant architectures

Deploying with the multi cloud allows you to diversify to your infrastructure's hosting locations, which guarantees high availability for your clients. So, should one of your cloud providers encounter technical issues, the features and services that are deployed on other clouds will still be available for your users.

Leveraging a true competitive advantage to benefit your teams

Building your infrastructure across multiple providers, AZs, and regions, protecting you from any incident is a thrilling challenge, which will certainly lead to an improved user experience for your engineers and developers.

Empowering your teams

An increasing number of teams are organized into tribes and brigades. Being free to choose the provider or the product that best meets their needs will make a huge difference for them. It will help you build an atmosphere of trust, and increase commitment among your teams.

Simplifying recruitment to help your teams grow

By relying on more than just one provider, you won't have to limit yourself to niche experts when recruiting Cloud Architects.

Some of your developers might feel a bit anxious about transitioning from a single cloud to the multi cloud. Involve them in the discussions when choosing providers, reassure them by providing them with documentation and helping them get acquainted with the new providers' ecosystems. Finally, give them the opportunity to upgrade their skills, which will benefit both the company and their CVs.

Now that you know all the arguments, there are three possible outcomes:

- You are already leveraging the services of several providers, but you want to benefit from all these advantages to the fullest
- You are currently using an on-premise or hybrid approach, and now you want to move on to a multi-cloud strategy
- Or you either think all of this is just nonsense, or you simply don't believe what you just read. In this case, we would like to hear about your reservations

If one of the first two fits your case, then the next step for you is to analyze your infrastructure to find out what works and what doesn't, and define the areas of improvement.

All this should help you determine your next move.

Scaleway, the leading alternative multi-cloud provider, and your future partner

Initiating or strengthening a multi-cloud strategy is not without consequences. You will need to entirely rethink the way your applicative fleet is or will be built. The only way forward is to choose a local partner that really knows your market, your needs, and who will be by your side every step of the way as you build a multi-cloud infrastructure that meets your needs.

Scaleway is the first cloud provider to offer a complete cloud ecosystem including:

- Products that meet market standards and are open design (for instance, our Kubernetes offer, which is certified by the CNCF), while helping improve your teams' velocity
- An Elastic Metal offer, which combines the performance of dedicated servers and the elasticity of the cloud
- The first European dedicated offer for Serverless architectures
- Predictable costs and straightforward billing
- European presence, in three key regions with low latency access and no intermediary for over 50 million internet users
- An optimal developer experience relying on proximity and communication
- Environmental responsibility with tangible actions implemented on a daily basis since our data centers are 100% powered using renewable energy (DC5 is the most energy and water-efficient data center in Europe), our decommissioned hardware components are all securely reused and recycled where possible.
- And of course, GDPR compliance and European sovereignty with 100% local project management, from the data center to the software level

These aren't just criteria for us. These elements are part of a state of mind, a vision we share with our clients as we help them grow.

CONCLUSION

Over the last ten years, cloud practices and uses have undergone massive changes, and ultra-customization is at the heart of this evolution. Now, users want to build their own cloud which is adapted to their financial, technical and business needs.

Currently, no single cloud provider can meet all of your requirements which include availability, sovereignty and resilience (among others), and give you the freedom that you are searching for. So, it's time to be proactive and to build your own solution with multiple providers. At Scaleway, as a multi-cloud provider, we are convinced that the future of the cloud is the multi cloud.

The multi cloud allows you to use products and services from several public cloud providers, meaning that you can benefit from numerous advantages at the architecture level, on your invoice, and within your team. You'll also find that your team is motivated by the challenge of implementing a multi-cloud architecture, and thanks to this new freedom, recruitment will become simpler too.

The choice of your cloud providers will be key to successfully adopting a multi-cloud strategy. We advise you to opt for providers who already share this vision, and have multi-cloud products. They will be best placed to help you lay a solid foundation.

At Scaleway, we help hundreds of companies, and we don't just offer our complete cloud ecosystem to clients, we help you connect to all cloud ecosystems in order to build your personalized architecture.

TO GO FURTHER

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