



Why a
Multicloud Infrastructure
is the way to go

Whitepaper

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EXECUTIVE SUMMARY

Infrastructure management isn't just an on-premises data center anymore. Architectural configuration, software selection, and governance are key ingredients of any hybrid IT setup.

With all the hype in business computing, it is rare to find an IT department that depends on one environment or technology to support operations. With an average downtime cost of \$8,850 /minute, businesses can't bear the risk of system failure. Full access to data and services all the time and everywhere is a must. It is one of the major reason to hedge your bets with a multicloud strategy.

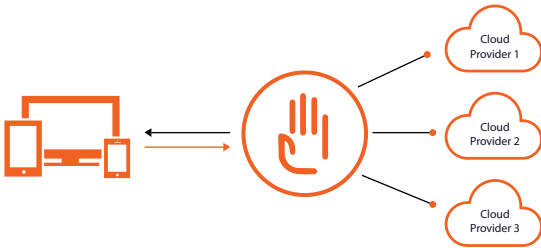
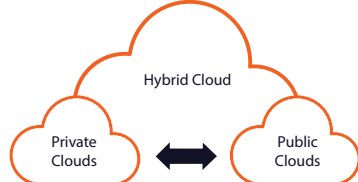
Connect with us on facebook, twitter, linkedIn or through email (info@haltdos.com) to know more about how HaltDos can protect your infrastructure.

What is MultiCloud?

Multicloud means multiple public clouds. This cloud approach uses more than one public cloud instead of a single public cloud to support more than one application.

It is a distribution of software, applications, cloud assets, etc. It uses different environments like Infrastructure-as-a-Service (IaaS) and Software-as-a-Service (SaaS) to gain an overarching business goal. Different providers need not be necessarily connected.

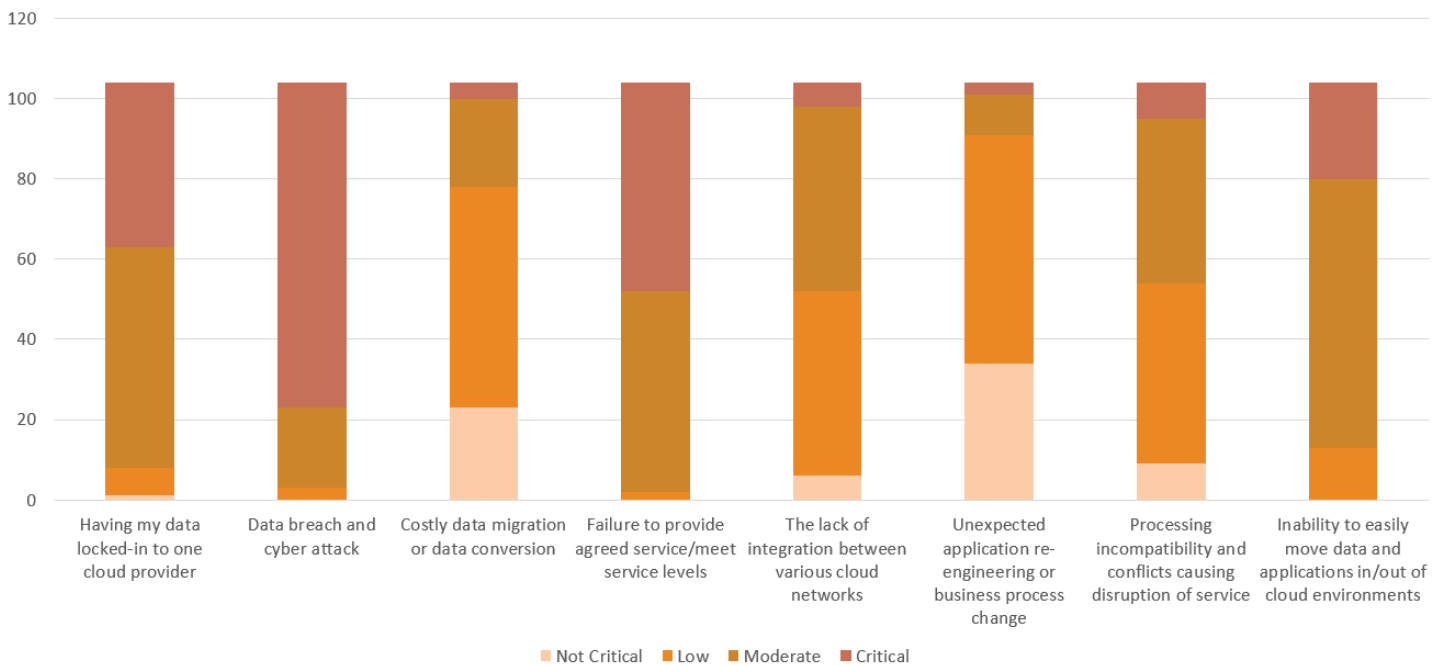
Multicloud Vs. Hybrid Cloud

| Multicloud | Hybrid Cloud |
|---|--|
| <ul style="list-style-type: none"> Involves more than one cloud infrastructure of the same type sourced from different vendors.  <ul style="list-style-type: none"> It is not mandatory to have some form of orchestration and integration between the two infrastructure. Involve 2 public cloud environments or 2 private cloud environments. | <ul style="list-style-type: none"> Involves more than one cloud infrastructure of same as well as a distinct type.  <ul style="list-style-type: none"> There should be some form of orchestration and integration between the two infrastructure. Involve a public cloud environment and a private cloud environment with infrastructure. |

Why Avoid the One-Cloud-Fits-All Approach

One of the principal benefits of the cloud is Efficiency. However, there isn't any way that states managing two or more separate cloud services is more efficient than maintaining a single service. Then what's the need to complicate cloud management? To avoid lock-in into a single vendor's offerings. Single cloud service restrains you to adapt changing condition. As change is only constant. If you don't build flexibility into cloud plans, you will end up facing a monumental data-migration project only to switch vendors.

Unfavorable outcomes of vendor lock-in in cloud computing

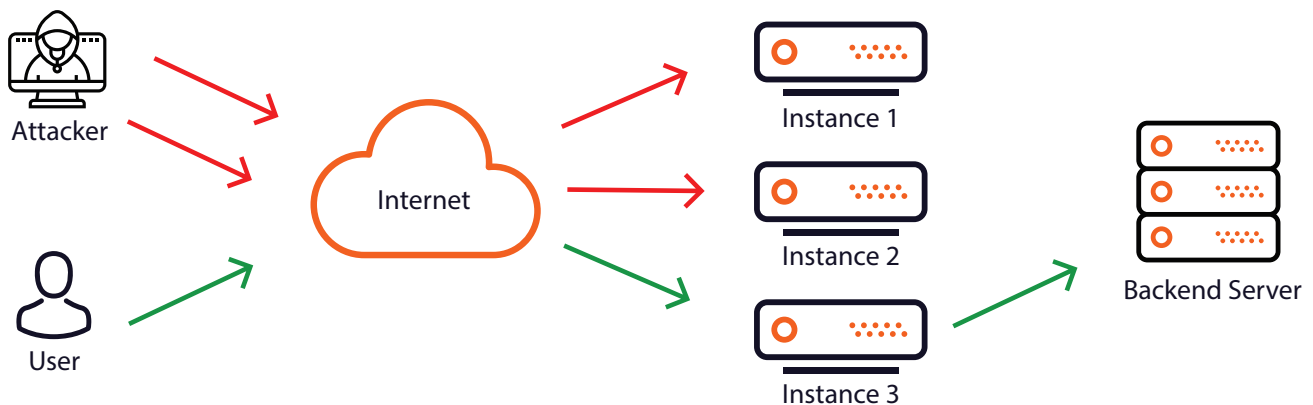


Source: Journal of Cloud Computing, via Springer Open

Multi-Cloud Infrastructure Future of Enterprise IT - Why?

Minimize DDoS Attacks Risk

DDoS attacks are the biggest threat to an enterprise. Especially when all the resources that power its website are on a single cloud. Rand Group survey states that an hour of downtime results into approx. USD 100,000 loss to 98% of firms.



With such a substantial loss, a business needs to have a multi-cloud resource to power its website. It ensures the website doesn't get down quickly. In case a single cloud gets compromised, the other cloud can take charge until apt remedies are put in place.

Freedom to Choose

A single cloud hosting provider can't meet all of an enterprise's demands ranging from speed to size. However, a multi-cloud approach meets your purpose. It lets you assign different aspects to different providers on the basis of their abilities. Thereby, boosting enterprise performance.

Avoids Vendor Lock-In

A single cloud provider cannot deliver all essential computing services. Several financial stakeholders are wary of vendor lock-in. In case if there is a better deal with other providers, it becomes tough for a business to move from one architecture to another. Here comes the multi-cloud. It allows you to mix and match vendors as well as platforms to ensure workload doesn't get locked-in to a single provider. You can switch easily and automatically. Even if your enterprises scale up swiftly, it allows you to maintain operations efficiently.

Proximity

In order to minimize, reduced response time for cloud users who are miles away from enterprise prime location, some workload can be hosted by regional cloud providers which are within the proximity of the users. Multi-cloud approach allows a business to adhere to data sovereignty laws—protocols and maintain high availability.

Failover

Multicloud environment ensures protection from outages. As a failover solution, this environment provides highly scalable and available backup for data, workflows, and systems to enterprises in a situation when your primary cloud goes dark.

Best of breed

Technology is evolving daily. So, is the innovations are emerging. Different cloud hosting providers are exceling in different sectors. To stay ahead, you will have to leverage the best and advanced capabilities from multiple vendors.

Negotiating Power

No business continuity should be on a single vendor. Especially, in the case of computing infrastructure. If your cloud hosting provider knows you include options and are actively engaging with them, you can negotiate terms.

ROI Optimization

A multi-cloud strategy lets you select the best possible solution for your enterprise. As diverse needs arise, alter, and become more complex, a business can use resources for a particular purpose, exploit those resources and pay as per utility.

Advanced Disaster Preparedness

Multiple cloud vendors have extremely low concurrent downtime. Service providers such as Microsoft Azure, Google Cloud Platform, and Amazon Web Services have notable service level agreements to ensure client protection against downtime. Leverage two or more of these services to significantly reduce disaster risk.

Managing and Automating Multicloud Environments

IT is evolving and becoming more dynamic on the basis of virtual infrastructure both on premise and off. As a result, the complexity around governance, self-service, resource management, compliance, capacity planning, and financial controls are also increasing. Automation tools and cloud management aids in greater oversight and visibility maintenance across distinct resources.

Enterprises use automation discretely with different tools used by different teams for separate management domains. However, current automation technologies can easily automate assets across the environments. Addition of contemporary automation capabilities to multicloud environment improves workload security & performance and limits the complexity of the environment for traditional as well as cloud-native applications.

About HaltDos Cloud

Haltdos is a security company providing next generation security products. Our solutions are catered for enterprise regardless of the underlying infrastructure. All our security products are built on top of Haltdos Platform (hdPlatform) which is internationally certified with **Common Criteria EAL 2+** certification.

Infrastructure Agnostic

hdPlatform is a proprietary platform that separates security from underlying infrastructure. This allows hdPlatform to be installed in various flavors - SaaS, Hardware or Virtual form factor. Separating logical entities from physical infrastructure provides the following benefits:

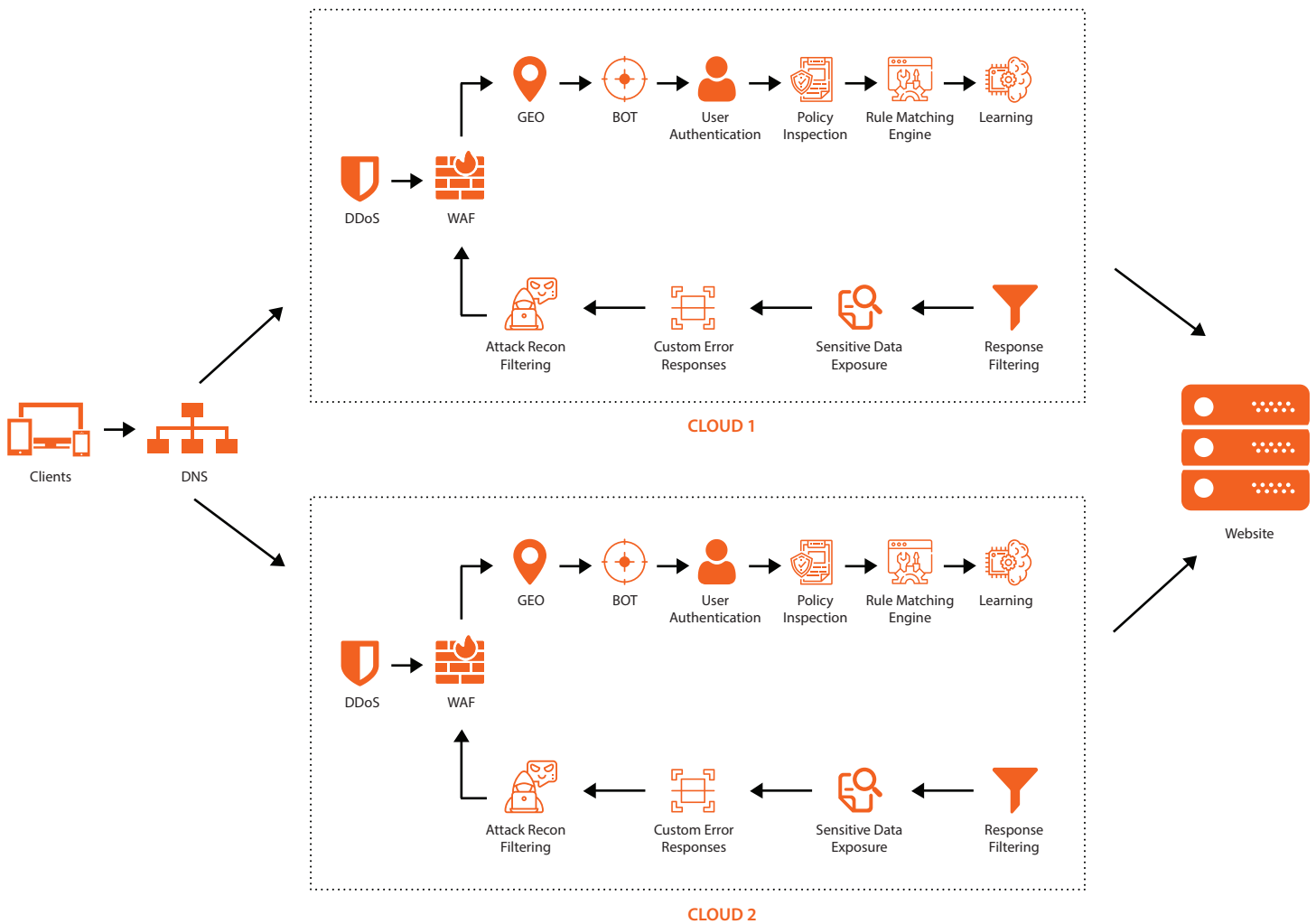
- Horizontally scale by adding more hardware
- Flexible Deployment for any environment
- Apps built on hdPlatform can work across any flavor - SaaS, Hardware or Virtual without compromising on features

What does Multicloud Architecture look like with HaltDos?

Powered using a multi-cloud infrastructure, hdPlatform ensures greater reliability, scalability and provides enterprise grade security. Along with the stated benefits of adopting Multi-Cloud architecture, Haltdos Cloud offers the following additional benefits:

- **Hyper-localization:** Every cloud provider has its reach. It has PoPs (Point of Presence) and data centers around the world. However, the extent of the reach of each cloud provider is limited, meaning some cloud providers can offer greater connectivity in certain regions over others. By leveraging multiple clouds, Haltdos can seamlessly deploy its technology over different cloud service providers to offer hyper-localized deployments much closer to end customers.
- **DDoS Mitigation at Source:** Another great advantage of using multiple cloud providers is in our ability to detect, isolate and localize high volume DDoS attacks for the targeted customer without impacting other customers and users of the targeted customer accessing from regions other than the source of origin of DDoS attack.

- **Economics:** By leveraging multiple cloud providers, Haltdos can negotiate prices, reduce its operational and maintenance cost, which translates into affordable pricing of our services to our customers.



Conclusion

Developing a multi-cloud infrastructure is the most significant benefit for businesses that depend heavily on the cloud for a critical section of IT infrastructure. Multicloud infrastructure modernize IT environment and make it flexible and more agile. Enterprises can distribute workload among multiple cloud environments and mitigate risk associated with a single cloud environment.

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