



The Path to Breaking Free from Cloud Vendor Lock-in



WHITE PAPER



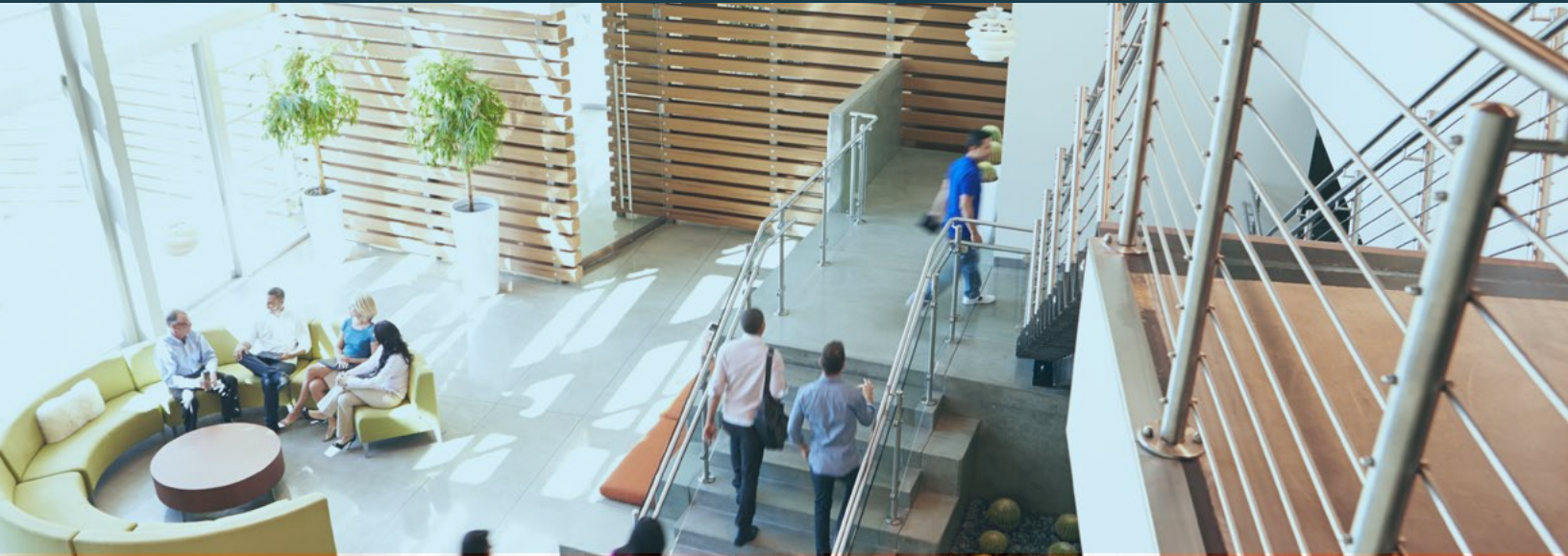
When it comes to cloud migration, there are very few limitations. However, the significant cost benefits and flexibility that come with operating in the cloud have been somewhat mitigated due to the rise of cloud vendor lock-in. Enough so, that many current IT professionals are abruptly dismissing the benefits of cloud migration at an alarming rate.

And the reason why IT experts won't break the traditional chains relating to cloud migration is that they don't have a vested interest in the development of cloud storage in the first place.

Executive Summary

Individuals and organizations alike have to make the best of remote computing resources. However, the cloud computing shift affects all players in the IT industry. Platforms as a Service (PaaS) is the developers' favorite because of how it integrates the software of an entire firm and leaves no room whatsoever to deal with manual infrastructure.

Migration to another platform, however, has become a tumultuous process due to vendor lock-in. And customers often switch back-and-forth or deal with consequences when the vendor subsequently decides to increase prices or change security protocols altogether. Besides, the effort to move to another cloud vendor requires an enormous amount of re-engineering capabilities. Thus, we suggest the basic remodeling of variables that are directly involved in shaping the cloud computing storage. And cloud platforms vary in nature because each has its own framework, language, and set of features.



Foundational Background

The instant access to an extensive means of services has created the need to maintain an internal infrastructure. And cloud computing offers valuable computing services on a pay-as-you-go basis to users across the world.

However, the variation in three layers of service model provided by NIST creates obstacles for customers.

With the advent of Infrastructure as a Service (IaaS), consumers have the freedom to acquire necessary processing power, operating system, software stack, and storage capacity for their networks. Besides, time and knowledge are of the essence when it comes to continuously updating and managing the infrastructure. Platform as a Service (PaaS), on the other hand, serves as an abstraction to the overall designed and installed infrastructure.

Also, the fundamental reason why Software as a Service (SaaS) is the optimal model for cloud storage service is that it caters quality service only to the end user.

The need and use of Infrastructure as a Service (IaaS) and Software as a Service (SaaS) is fairly recognizable in cloud computing, but a platform such as (PaaS) is comparatively far more usable.

And despite all the added benefits of Platform as a Service (PaaS), it all comes down to how it's directly responsible for vendor lock-in. And previous platforms are making it significantly easier to access libraries amidst the development phase to provide all the features while blocking the application in the process.



NoSQL may normalize the best customer experience, but you may lose sight of complicated program designs and re-engineering choices, which can be a major hurdle when migrating to another platform.

And mOSAIC also took the approach to offer a thin layer of abstraction or APIs to start from, beginning with how data storage options and software stacks were maintained on (PaaS) platform.

The central use of middleware for lock-in is inconceivable despite cross-functional operability. There are several factors that you can alter to make the migration process easier.

Thus, our criteria to make software migration between platforms easier depends on the pricing strategy, security infrastructure, availability of the service, quality of service (QoS), shifting dynamics in technology, and even the legality of provided service can decide the course of cloud migration.

The Problem with Vendor Lock-In

PaaS solutions have been growing in number ever since the market became rustically open to new providers such as Amazon Web Services (AWS), Google App Engine (GAE), and Microsoft Azure. The market, on the other hand, isn't reliant on only three early players in the technology industry. It is constantly evolving and shifting to new dynamic patterns in cloud computing platforms.

The fragmentation of the servers relies heavily on how users access libraries from cloud platforms. And both Google App Engine and Azure storage provider have NoSQL solutions instead of MySQL.



That said, the design and structure of the program are inherently similar. That means using a distributed binary index to categorize schema-less and Key-Value. And to have optimal functional performance, both systems require extensive knowledge and work.

The lock-in occurs because of the comparative design of the system and how other platforms support the same databases. Furthermore, Amazon's DynamicDB and HBase merely serve as an infrastructural layer instead of a built-in feature of PaaS. Similarly, the infrastructure to handle different data properties also varies.

With the advent of NoSQL databases, trying to move from one data cloud solution to another has become more difficult than ever. Moreover, the purpose of each NoSQL is different. They are, however, compulsory to enjoy the scalability and maximum performance.

And once you look at the available considerations, the platform fluctuates depending on the price and how it's going to be deployed. Customers are now relying on new platforms, such as TOSCA, to increase computability of cloud storage applications.

The architectural structure may be more stable for older platforms, but there is a need to improve the latest technological advancement for the IT sector to attract new customers. Furthermore, the built-in services available in PaaS, such as Redis, Memcached or RabbitMQ are often neglected, which are essential for OpenShift cloud application.

However, the fact remains, that BigTable is in compliance with how the potent data size, such as petabytes, varies to uphold the standards of cloud storage.



The developed applications gained a diversity that allows the possibility of a dominant platform in the market. And vendor lock-in is a marginalized issue since the security structure and trade-offs increased on other platforms. That said, the PaaS providers are managed on a healthy ecosystem and present the practicality of migration from one platform to another.

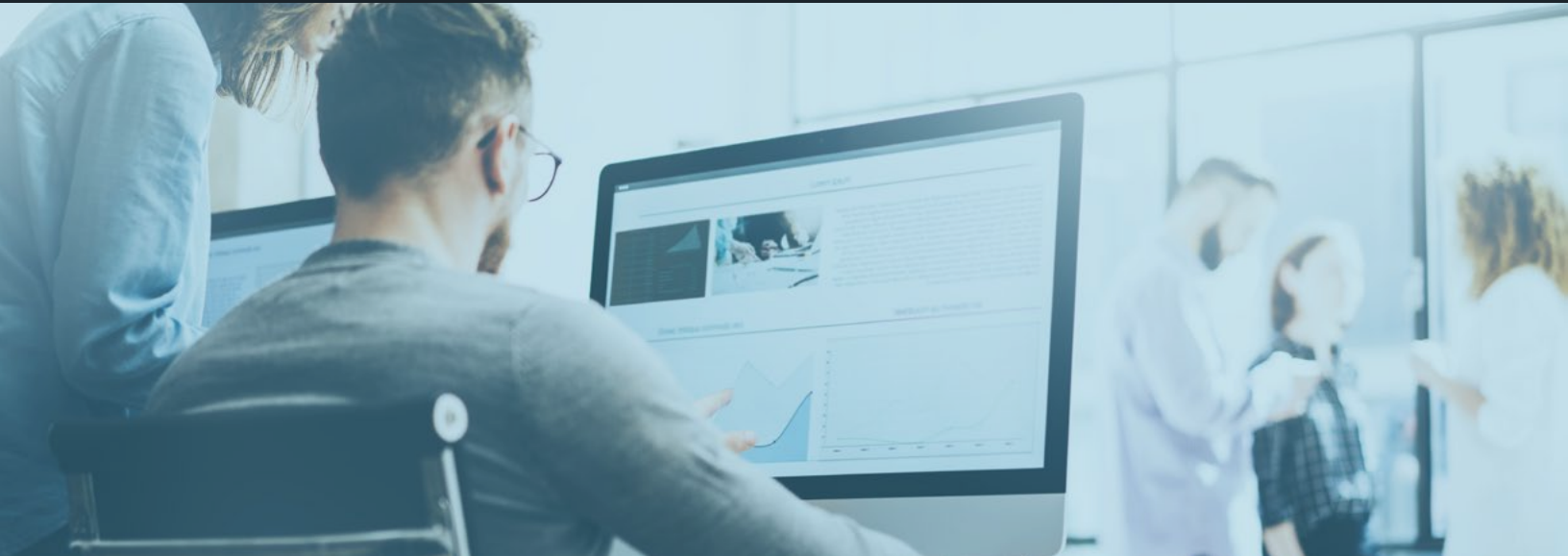
Possible Layered Solutions

Pricing Model

Arguably the most valuable added benefit of cloud computing is that it's cost-effective. And it's an idea that's not entirely lost but has been muddled along the development process of the technology.

The sheer level of unearned and undeserved freedom that large cloud vendors have to marginally tweak prices is a monopolistic self-righteous business practice that needs to be discarded.

And meanwhile, the market is also gifted with the presence of Rackware, which can predict prices for you in advance through its [hybrid cloud management platform](#). Large cloud vendors, on the other hand, attempt to handcuff you to their platform by making it inefficient to migrate to competitive environments.



Cost Structure

The purpose of cloud storage is the transparency of data. And when that breach of confidence deviates from cloud vendors, the core principle of cloud management service loses its purpose.

Rackware stands firm as a singular force to confront this issue. Rackware's hybrid cloud management platform possesses the capacity to predict any foreseeable change in the prices across multiple cloud vendors to help you choose a price model that fits your requirements.

The constant increase in price devalues the offered benefits and ultimately adds more burden to the customer.

Security Infrastructure

With developers leaning more towards using business applications without proper regard of authority and security, the protection and encryption of transactional data become more susceptible to attacks from hackers. And that leads to how cloud computing could help find the source of the ransomware or a cybersecurity breach.

The same cycle of elements also applies to how the data on the cloud management servers is stored. Keeping that in mind, disaster recovery should be at the forefront of the cloud's security infrastructure design.

Your data migration should be virtually and physically easy to transfer. Moreover, data should also be open to moving in clusters and databases.



Rackware's [disaster recovery](#) capability provides all the aforementioned navigational tools and makes sure the cost remains effective.

Clouds are elastic in nature and that makes it possible for more cost-effective advantages. Similarly, the protection of the cloud could be radically achieved by reducing the footprint of the applications. Also, the entire process allows you to remain up-to-date with transactions and shrink data as per required.

The Scale of Multiple Cloud Storage

With the new capabilities of hybrid cloud management, consumers can put their resources on multiple clouds or a combination of clouds and on-prem infrastructure.

And when it comes to implementing multiple cloud storage systems, the agility goes beyond the overall usage of cloud systems, like Azure, Amazon Web Services, etc.

Also, assessing deployment load through a cloud, and how automation ties data together, orchestrated workflow, use of tracking tools, and the necessity to deploy correct user databases all fit in as a Mobius strip to achieve feasible scalability for multiple cloud storage.

The IT sector needs to realize and understand the severity of the issue from the consumers' point-of-view instead of relying on a capitalistic mindset.



Sustainability and Agility

Time should be a factor taken into account for sustainable cloud storage systems. And since the market has become increasingly more competitive for retailers, hybrid cloud management platforms, such as Rackware, adhere to listing authentic address information by monitoring fluctuations in traffic. So, when the promotions are carried out effectively, the flexibility of information on the cloud becomes even more scalable.

Also, the rapid and unfair inclusion of vendors substantially slowed the agility of the cloud computing possibilities that attracted consumers in the first place.

That said, the cloud storage network should align with metadata and should focus on the application process simultaneously, not just data.



Conclusion

We present this paper in relation to how migration between multiple cloud platforms could be functional, and how the migration of data could be carried out in every form and size.

The issue in hindsight also indicates how cloud storage could be transformed to make migration between PaaS more accessible.

For non-disruptive business operations, owners should devise flexible plans that inherently speak to developers' overall abilities.

The ultimate focus, however, lies in understanding customer needs and how adopting a project migration to different provider may lead to longer-term success. And the best platform ensures insights during the discovery phase to determine how it performs within the entire technological spectrum.

If you have any questions regarding cloud migration, hybrid cloud management, disaster recovery, or cloud backup, visit www.rackwareinc.com or contact us [here](#).