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Public Cloud to Cloud Repatriation Trend

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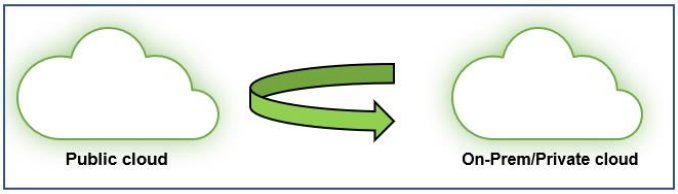
Abstract **Review Article**

Cloud repatriation is the process of moving a workload or application from a public cloud to an on-premises or private cloud. The statistics of cloud repatriation, its possible effects, and the justifications for company adoption are all included in the paper. According to recent estimates, in 2021, over 80% of US businesses will pull some workloads from the public cloud. The statistic of the Public Cloud to Cloud Repatriation Trend initially seems to indicate a significant return to on-premises systems.



Keywords: Cloud repatriation, document sharing, public cloud, data centers.

INTRODUCTION

In the past 12 to 15 years, the public cloud trend has become more popular. The public cloud was introduced by AWS in 2006, Microsoft Azure in 2010, and Google Cloud in 2008. The public cloud, which includes services like Dropbox, Netflix, DocuSign, and Box, began to take off as a trend around 2012-2013.

Thanks to cutting-edge new technologies like document sharing and internet streaming, customers can access data and watch movies from any location. Some major enterprise firms started moving their development workloads to the public cloud first to save costs associated with operating on-premise data centers, expensive hardware maintenance costs, software license fees, data center space, power, and cooling costs.

Critical production workloads were then transferred to the public cloud as well. As they grew, they learned, however, that moving demanding workloads to the public cloud was more expensive and difficult than doing it in on-premise data centers. Shadow IT has also grown over time and now governs the IT industry.

What is Cloud Repatriation?

Cloud repatriation is the process of transferring IT workloads or applications from public clouds to on-premises or co-located data centers. Due to hybrid cloud adoption, data security of the public cloud, regulation, app performance, vendor lock-in, downtime, and data security of the public cloud, the organization's strategy to shift some workloads from the public cloud to on-premises has been forced to be rethought.

For instance, a former Amazon Web Service (AWS) employee was charged with stealing data regarding Capital One from the AWS system in 2019.

Because of these issues, organizations that now demand total control over their data in the public cloud have major security concerns. Instead of the start of the end for public cloud providers, Cloud Repatriation heralds the end of the beginning for the cloud itself.

Why do companies employ Cloud Repatriation?

Large company IT leaders are beginning to understand that not all data and application workloads are suitable for the public cloud. Some workloads

perform better in an on-site data center. Over the years, they have developed their skills in managing their environment in the public cloud and have identified the optimum method for executing various workloads on either the public cloud or on-premise.

To minimize the high ongoing costs of extending the public cloud, they frequently move archive data, static workloads, low latency application workloads, and regulatory and compliance workloads back to on-premise data centers.

A fantastic case study on Dropbox (Kurt Marko) shows how the company successfully relocated its workload out of the public cloud and constructed software-defined data centers on-premise, resulting in annual cost savings of millions of dollars for the enterprise.

Dropbox Infrastructure Optimization Initiative Impact

Dropbox Historical Financials

	2015	2016	2017
Revenue	**$604**	**$845**	**$1,107**
Annual Growth Rate		*40%*	*31%*
Infrastructure Optimization Cumulative Net Savings	N/A	40	75
Cost of Revenue	407	391	369
Gross Profit	**$196**	**$454**	**$738**
Gross Margin	*33%*	*54%*	*67%*
Free Cash Flow	**($64)**	**$137**	**$305**
Incremental Margin vs. 2015 (% Pt)		**+21%**	**+34%**

Source: Dropbox S-1, a16z analysis

Source: Dropbox S-1 filed February 2018

The potential implications of the cloud repatriation

There has been substantial debate about what the phenomena of cloud repatriation would signal for the future of the sector. The hyper-scale cloud companies may minimize or ignore the idea by extolling the freedom and agility of public clouds. While the data center incumbent vendors highlight the security and operational control benefits of on-premises and private infrastructure (implying that the repatriation trend is much larger or permanent than it is).

However, information on cloud repatriation is frequently taken out of context. Most businesses now seek an IT estate that can satisfy the cost, performance, and governance requirements of the diverse workloads (a concept we've been calling "best execution venue" for years).

This is because most companies no longer look for a single, all-encompassing answer to their IT requirements. Cloud repatriation is happening, according to data from 451 Research's surveys on IaaS/PaaS public cloud and datacenter/colocation public cloud, but not to the exclusion of the hyper scalers' capacity to stay in business.

On-premises/private cloud environments are preferred by certain firms for a variety of good reasons; some of them have to do with the public cloud, while others are more focused on organizational/governance difficulties and the availability of cloud expertise/skills.

Moving data, workloads, and applications often across environments won't be a unique IT practice anymore. It is not a boomerang, but a rotating door.

Statistics about cloud repatriation

Between June and July, 451 Research polled over 600 data center/colocation respondents for its Voice of the Enterprise: Data Centers 2021 survey. It found that over the previous 12 months, 48% of those surveyed stated they had migrated a workload or application away from the hyper-scale public cloud providers (such as Amazon Web Services, Microsoft Azure, and Google Cloud Platform) to another place.

This number might initially seem concerning, but it just shows if firms have experienced any back-to-on-premises situations in the last year. That approximately 50% of workloads were moved out of public cloud settings in 2020–2021 should not be concluded (whether they were hosted on hyper scale platforms or not).

Less companies with their data centers or leased colocation facilities have opted for cloud repatriation during the last five years. According to a comparable 2016 study, 68% of respondents stated their companies had used the hyper-scale public cloud in the preceding year.

When asked where those organizations transmitted their workloads, 87 percent of respondents

selected self-managed infrastructure, with 14 percent selecting a colocation facility and 86 percent selecting their data center. Contrarily, 28% of organizations chose infrastructure that was controlled by a third party, suggesting a modest overlap of those selecting a combination of the two choices.

According to Figure 1, 40% of companies who went with a third-party alternative selected a hosted private cloud, 21% went with a small-scale public cloud, and 13% selected managed colocation.

Source: 451 Research's Voice of the Enterprise: Data Centers 2021

CONCLUSION

Top IT executives predict that in the future years, business firms may see a trend where certain public cloud workloads migrate to on-premises. In the future, enterprises will not have to be vendor-locked and will be allowed to move their data to other cloud providers.

Moreover, resulting in ROI-justified administration of multi-cloud platforms from a single dashboard as technology advances and some of the problems with public cloud are rectified. Businesses may once more employ the public cloud.

The main issue of the businesses is that they think that the public cloud will function in the same manner as their corporate data centers and that cloud service providers' claims that their solutions are affordable and simple to adopt are true. Most frequently, such fundamental errors in technology comprehension are to blame for disappointments.

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