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Hybrid Cloud is Here to Stay:

Now What?

Introduction

If one question has the habit of perpetually leaving businesses scratching their heads, it is the question of how to get the most out of the cloud. And while, in the past, the choice seemed to be two-fold - public or private - it's now clearer than ever that the two need to not only co-exist, but work together to provide a solution where the whole is better than the sum of its parts.

Whether a company is looking to move a legacy application to public cloud, and stuck in the process, or choosing to invest in a private cloud environment while looking to public cloud to provide additional capacity, for example a disaster recovery site, the reality is that most are already managing multiple environments and multiple clouds.

According to the **Nutanix Enterprise Cloud Index**, most agree that a hybrid IT model is ideal but adoption is lagging. Without the right tools in place businesses are left struggling. So what's next? What are the top challenges businesses are facing in managing hybrid cloud infrastructures? And how can they be addressed?

This report takes a closer look at the challenges businesses are facing managing public and private clouds, and what they can do to set themselves up for future success.
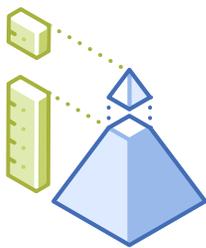
96%

are facing hurdles in managing applications and data across both on-prem and public cloud

88%

are encountering challenges in ensuring their IT staff has the necessary skills to manage a hybrid cloud infrastructure
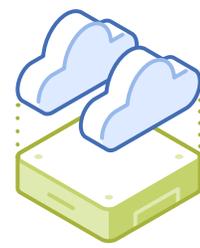
95%

believe their organization would benefit from a "symmetric cloud" solution providing consistent constructs and operations across clouds

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Public cloud *alone* is not always the answer

Public cloud revolutionized the IT industry and offered businesses a solution to many of the problems they were facing - from increased agility to reduced operational overhead. However, they were quick to learn that, while it offered many benefits, it was not the right solution for all workloads and situations.

While all organizations surveyed are running some of their workloads on public cloud, most still have some reservations, especially regarding business- critical applications. When it comes to running the applications that are most vital to their businesses, respondents identified security (90%), reliability (75%), portability (73%), and cost (72%) as concerns.

Additionally, organizations are also facing significant challenges when moving applications to public cloud. What is preventing them from moving more applications to public cloud is the need to re-architect or re-platform applications when moving them across clouds (75%) or the complexity of the migration (71%). These actions can be so costly and complex that many organizations are simply not able to move legacy, business critical applications to public cloud.

Concerns with running business- critical applications on public cloud

Category	Percentage
Security	90%
Reliability	75%
Cost	72%
Portability	73%
Software licensing	61%
Performance	69%
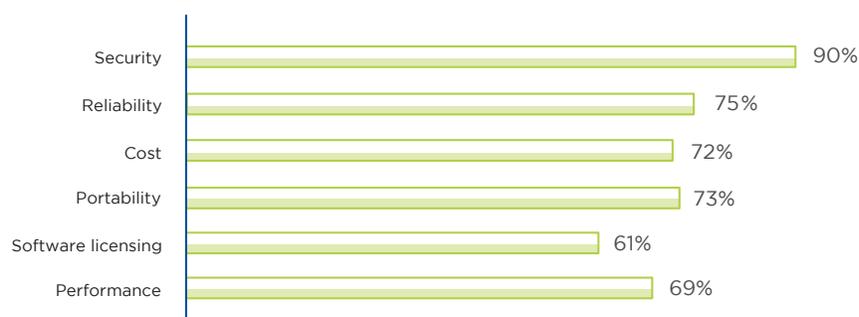
Whether organizations choose to keep their business- critical applications on-prem, or are simply unable to move them, most businesses are managing two different environments.

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A hybrid environment, with interoperability between private and public clouds, gives the flexibility to choose the right cloud for the right application, streamlines management, and allows organizations to centralize security posture visibility and policy enforcement. Most organizations (85%) agree - **hybrid cloud is the ideal IT model.**

However, the journey to this ideal environment is not always simple: 96% of respondents report that their organization is facing hurdles in their attempts to manage applications and data across both on-prem and public cloud. And more than two thirds (69%) of organizations believe that their transformation to a hybrid IT infrastructure is taking longer than expected. The top challenges with managing applications across private and public cloud environments include: securing data across both environments (54%), acquiring and retaining IT staff (53%), and cost of migrating applications across environments (49%).

Challenges encountered when managing applications and data on both public and private clouds

Challenge	Percentage
Securing data across both environments	54%
Acquiring and retaining IT staff with the skills to manage both environments	53%
Cost of porting / migrating data to and between cloud environments	49%
Operational and data silos	38%
Data access and management/ role-based access controls (RBAC)	38%
Meeting regulatory compliance	38%
Sourcing the necessary tools	16%
There are no challenges when managing data on both cloud and on-prem	4%

A shortage of skills

Managing public and private clouds require different skill sets, tooling and policies meaning most companies often need separate teams, with different skills and knowledge. Finding and retaining qualified IT staff is often a challenge, but it's an even bigger one when managing applications and data across two different cloud environments.

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Most organizations (88%) are facing challenges in ensuring their IT staff has the necessary skills to manage a hybrid IT infrastructure. Specifically, over half (53%) of respondents report that their organization finds acquiring and retaining IT staff with the skills to successfully do this as one of the top challenges that they are facing.

Additionally, cloud skills shortages are preventing over two thirds (69%) of respondents from moving more applications to the public cloud, and nearly half (44%) find that IT staff lack the skills to manage both environments.

The rise of silos

Another common result of managing two different cloud environments is the rise of operational silos. Nearly all respondents (95%) report that their organization has encountered operational silos as a result of how they are managing their public and private cloud environments. Top concerns that organizations face include: resource sprawl (49%), an increase in costs (45%), and/or a waste of resources (43%).

Silos are the scourge of efficient, cost- effective application and data management, and a fundamental concern when operating in multiple spaces or environments. If left unaddressed, they only grow bigger.

Negative implications on organizations as a result of encountering operational silos

IT resource sprawl	49%
Increase cost	45%
Waste of resources	43%
Slow down decision making	34%
Lack of accountability	31%
Discourage a culture of collaboration	31%
Additional IT staff	21%
There are no negative impacts as a result of data silos	6%

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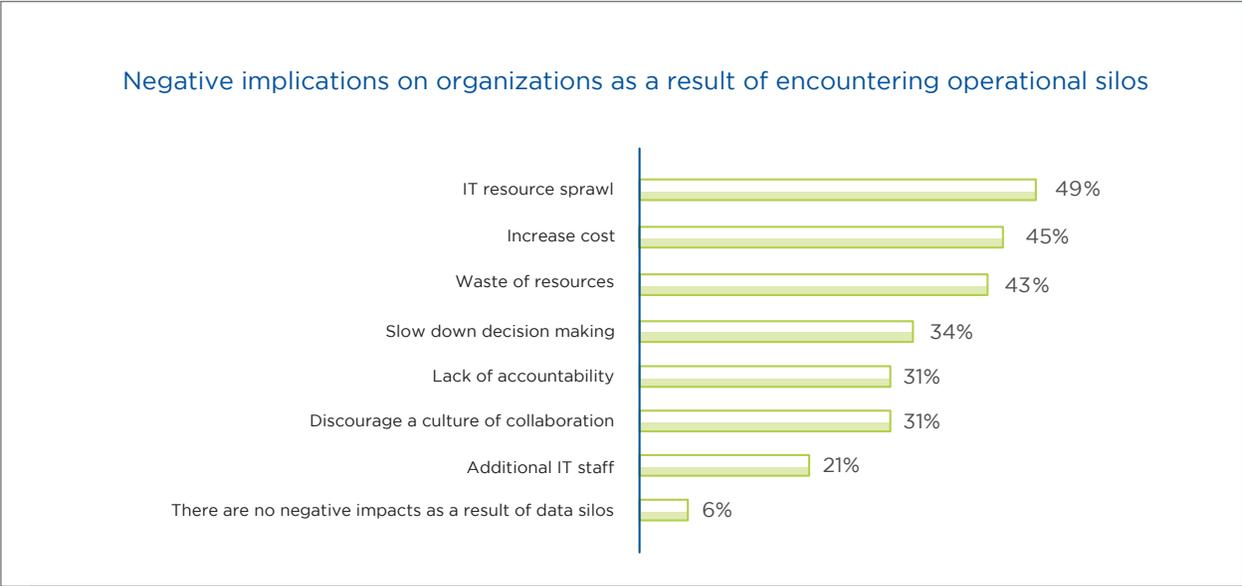
Change is needed

For organizations to get the most out of cloud, changes are needed, with most (88%) feeling that a simplification and standardization of cloud operations would help. Having the right tools in place would be a good first step, with the vast majority (96%) feeling that their organization could get more out of hybrid IT infrastructure if this were the case.

Yet many are not getting the help that they need from the third-party vendors that they are engaging with. Most current solutions lack true interoperability between the private and public cloud environments which is key to a strong hybrid infrastructure. Without interoperability, and the ability to seamlessly lift-and-shift applications, businesses will be forced to spend a lot of resources to re-architect their applications to make them cloud-native. Solutions that bundle in native networking integrations between private and public clouds make app and data portability seamless, allowing them to use the right environment for each application - whether to manage cost, quickly scale, or burst resources in case of a disaster.

Interestingly, licensing seems to be an important aspect for respondents. Portable software licenses are a key aspect of a hybrid IT infrastructure for most (86%) to help address difficulties surrounding licensing (58%) or vendor lock-in (58%). Additionally, nearly two thirds (65%) are willing to consider subscription licensing for their IT infrastructure signaling an important shift in the industry.

Conclusion

The choice is no longer about private or public. More and more businesses are realizing that a hybrid solution would allow them to get the most out of cloud but current offerings are simply not meeting their needs.

It does not have to be this way. The right tools, in the right hands, can make a profound difference. For half (50%) of respondents, their organization only realized that they lacked the IT skills required to operate an environment that spans private and public cloud once they had already started migrating to cloud. They simply were not prepared.

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An IT environment that capitalizes on the benefits of public and private cloud is achievable for organizations. Specifically, nearly all respondents (95%) believed their organization would benefit from a "symmetric cloud" solution providing consistent constructs and operations across clouds, eliminating the need to re-platform applications, change operational practices, or train staff to use new tools across environments. A solution like **Nutanix Clusters** helps address the challenges facing organizations looking for the flexibility to leverage the cloud environment that best fits their needs, offering unified operations across private and public clouds and enabling seamless mobility of applications with the need for retooling or re-architecting.

Ultimately, businesses want the flexibility to leverage the right tools for their business.

It's not a choice between private and public, or even the right public cloud provider. Businesses are looking for a solution that allows them to manage multiple cloud environments, including private and multiple public clouds, seamlessly with similar policies, tooling and processes, making a hybrid solution ideal for most businesses.

Methodology

In spring 2020, Nutanix commissioned independent market research company Vanson Bourne to conduct the research upon which this report is based. Across March and April 2020, 650 interviews with IT decision makers were conducted.

The research was conducted globally, with representation from seven different nations, U.S., UK, Germany, South Africa, Australia, Japan, Singapore. Respondents' organisations have a minimum of 500 global employees, across private and public sectors, and all both operate an on-prem (or co-located) data center and use public cloud for some part of their IT infrastructure.

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