Hybrid Cloud: An Obvious Reality Or A Conservative Strategy?

A Study Of Public Cloud Migrators

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Executive Summary

Public cloud's early success came from new workload enablement, providing a unique economic model that lowered the financial barrier for workloads with variability. Existing workloads, on the other hand, required significant additional spending to ready for cloud and lacked benefits from this financial model.[1] For several years, enterprises have described their cloud strategies as hybrid — using a mix of cloud and noncloud technologies to solve for their technology challenges. But this conversation has since changed. The topic of enterprise cloud migration kicked off in 2015 when an American multinational conglomerate used an industry keynote to discuss its own migration plans — claiming an aggressive, public cloud-only strategy rather than the generally accepted hybrid cloud approach. Since then, the idea gained momentum as enterprises explore this shift, with many already underway on their migration.

But the actual details behind cloud migration in practice are largely unknown. Many assume that leaders are undergoing mass migration of all applications, using a low-cost lift-and-shift method to completely migrate all apps. Some claim the private cloud is dead, and that hybrid cloud is a conservative approach rather than common sense. But in practice, things are different. Data shows continued investment in private cloud initiatives and that approaches are less aggressive. Even the initial conglomerate that keynoted has since shared plans to extend certain apps into colocation facilities instead due to cost.

In July 2017, Red Hat commissioned Forrester Consulting to evaluate the cloud migration strategies of organizations by conducting an online survey with 272 respondents and four interviews with cloud migrators at enterprises all over the world. We found that less than 5% of migrators use a single migration method. Migrators pick and choose the best migration method for each workload, weighing criteria like cost and performance optimization, flexibility, speed, and methods for mitigating disruption. Most interestingly, despite the chatter, private cloud is still very much in the mix for the enterprises that are actively migrating existing workloads to the public cloud.

The reality for cloud migrators differs greatly from the current migration dialog.

KEY FINDINGS

› **Huge shifts to public cloud are not expected.** Even though migrators are moving large workloads to public cloud currently, the total percentage of infrastructure moving to public cloud will only increase by about 4% over the next couple years.

› **Private cloud investment is on the rise.** The majority of migrators intend to increase their level of investment in private cloud, alongside their continued investment in public. They do so, presumably, because they expect to reap a host of benefits from a move to private cloud, including better cost management and improved infrastructure flexibility.

› **Hybrid strategies will play a large role going forward.** The preponderance of both public and private cloud use indicates that no single cloud deployment will be the future for enterprises. Rather, the future of cloud is likely to be a hybrid story.

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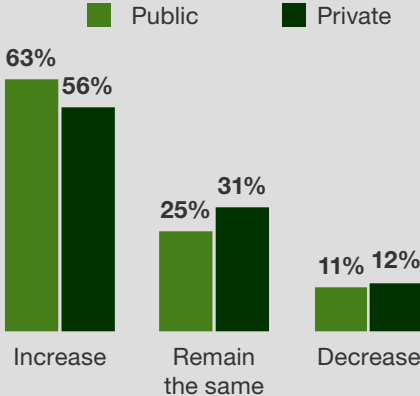# Private Cloud Is Here To Stay, Even For Public Migrators

This study explores private cloud investment plans for cloud migrators as part of a two-part series that details the current practices and future plans of cloud migrators. Specifically, this study attempts to answer one gnawing question: Is the future really hybrid, or are complete migrations to public cloud platforms the new normal? The focus of this study was to speak specifically to those who are currently migrating existing workloads to the public cloud — a population that few have profiled thus far — to better understand migration practices and if there is still a role for private cloud to play.

Our study found:

› **Migrators expect a 4% increase of their application portfolio to shift to public cloud over the next two years.** Scope of migration is important. For migrators, over 100 applications have either moved or are planned to migrate to public cloud. Although this may seem high, this only represents 21% of total workloads in public clouds today, with an estimated 25% expected in two years — a mere 4% increase. Migration is here, and it is happening at scale, but this still only represents a fourth of the total application portfolio — not a mass migration of all apps.

› **Private cloud spending is increasing among migrators.** By necessity, migrators to public cloud have a high level of investment in that deployment category. However, 87% of cloud migrators also plan to increase or maintain their level of investment in private cloud over the next four years (see Figure 1). This is on par with public cloud spending (88% plan to keep the same level or increase investment in public cloud over the next four years), indicating that private cloud is still very much a part of enterprises' cloud strategies now and going forward.

Figure 1

"Over the next four years, do you expect your investment in the following cloud deployment options to increase, decrease, or remain the same?"

- Public
- Private

	Public	Private
Increase	63%	56%
Remain the same	25%	31%
Decrease	11%	12%

Base: 272 cloud migration decision makers
Note: Percentages may not total 100 because of rounding.
Source: A commissioned study conducted by Forrester Consulting on behalf of Red Hat, July 2017

87% of migrators are keeping the same investment or increasing investment in private cloud, compared to 88% for public cloud.

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› **Private cloud remains a priority — even outside of migrators.** This study focused on public cloud migrators, not the average enterprise. Taking a step outside of this sample, the results are consistent. Even among enterprises not specifically focused on cloud, or migration, investment interest in private cloud is still high. Sixty percent of North American and European enterprise hardware decision makers report that building a private cloud is a critical or high priority for their business.[2]

› **Migrators expect benefits from migration to both public and private cloud.** Not surprisingly, those currently in the process of migrating workloads to the public cloud are expecting to see a return for all their effort. Specifically, they expect better IT cost management (41%), improved IT infrastructure management and flexibility (39%), and the ability for IT departments to focus on strategic projects rather than manage data centers (37%). Interestingly, the story is similar for private cloud (minus what is gained from the classic outsourcing benefits). Specifically, they expect that migration to private cloud will result in improved IT infrastructure management and flexibility (38%), better IT cost management (35%), and improved security and compliance (35%) (see Figure 2).
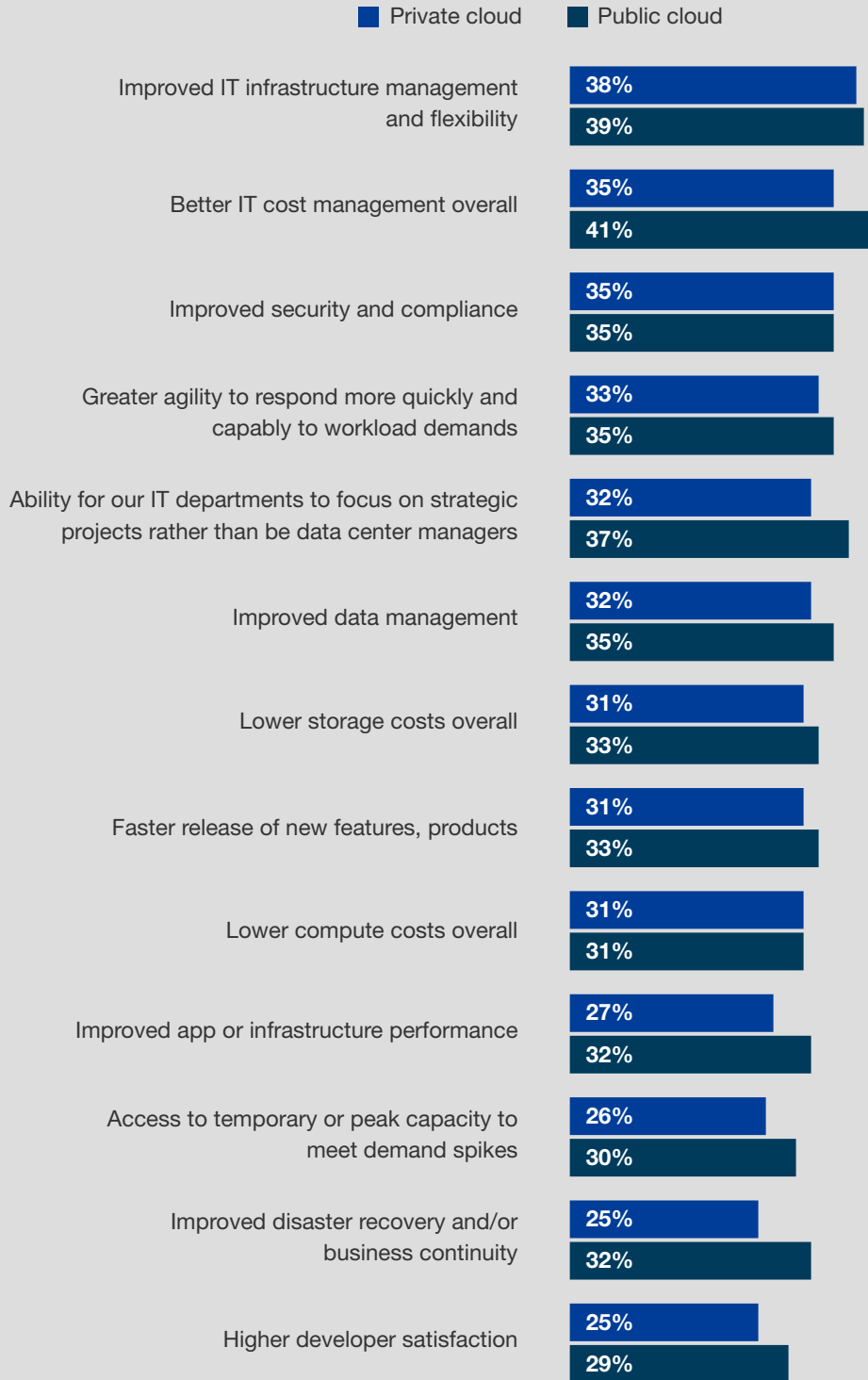
"We look at private cloud as a launching pad for internal applications. When we started with cloud, we realized the majority of our legacy apps weren't ready to be hosted on a cloud platform, which is why we went private instead of public. We could be more flexible."

Head of infrastructure, architecture, and design, US financial services company

Figure 2

"What do you expect the benefits to be of migration to public cloud/private cloud?"

■ Private cloud ■ Public cloud

	Private	Public
Improved IT infrastructure management and flexibility	38%	39%
Better IT cost management overall	35%	41%
Improved security and compliance	35%	35%
Greater agility to respond more quickly and capably to workload demands	33%	35%
Ability for our IT departments to focus on strategic projects rather than be data center managers	32%	37%
Improved data management	32%	35%
Lower storage costs overall	31%	33%
Faster release of new features, products	31%	33%
Lower compute costs overall	31%	31%
Improved app or infrastructure performance	27%	32%
Access to temporary or peak capacity to meet demand spikes	26%	30%
Improved disaster recovery and/or business continuity	25%	32%
Higher developer satisfaction	25%	29%

Base: 272 cloud migration decision makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Red Hat, July 2017

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Hybrid Is Critical For The Future Of Cloud

Simply put, public cloud migration is very much here. But it's not the only story. Today, 60% of enterprises identify their cloud strategy as hybrid.[3] Even public cloud migrators continue to invest in private cloud environments. As one senior business systems analyst at an American insurance company put it plainly, "There is no scheduled mass migration to public cloud intended." The head of infrastructure, architecture, and design at an American financial services firms said: "I think we'll always be in a hybrid mode. We'll always need internally hosted apps; I don't think we'll ever get everything into public cloud. We might move those apps to a managed service somewhere, but they can't move to public."

Change is difficult and expensive. Enterprises must decide which changes generate the most value and are most critical for success in their higher-level digital transformations. Even those who are actively migrating their existing workloads to the public cloud currently still report investment in private cloud as a central part of their digital transformation strategies; 55% of migrators say digital transformation is the primary use case of private cloud (see Figure 3).

Firms must evaluate the goals of migration efforts in the larger context of their digital strategy and examine the best environment for every individual workload. Not every application is suited for movement to the public cloud, nor should they all remain private. An informed migration strategy takes these considerations into account.
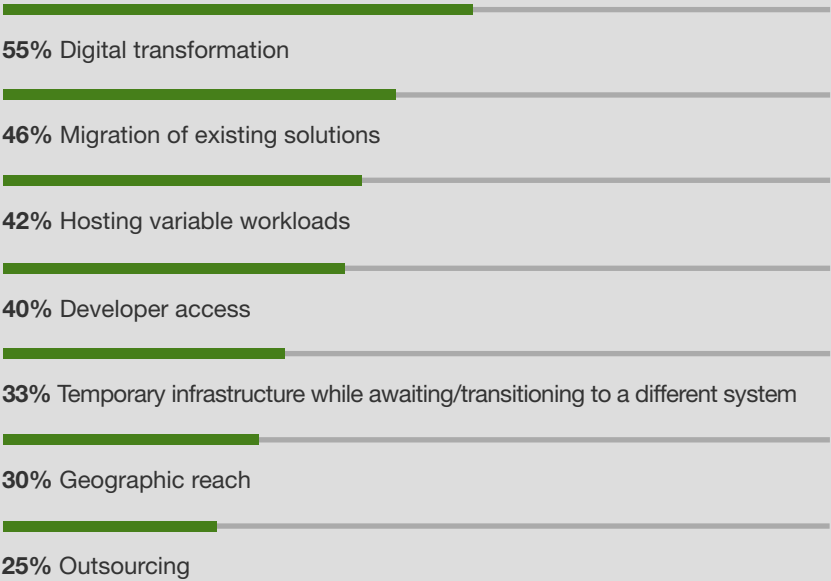
> "There is no scheduled mass migration to public cloud. We'll continue to integrate where it makes sense . . . but we're not looking to transition entirely from one model to another."
>
> *Senior business systems analyst, American insurance company*

Figure 3

"What are your organization's primary use cases around the use of private cloud?"

55% Digital transformation

46% Migration of existing solutions

42% Hosting variable workloads

40% Developer access

33% Temporary infrastructure while awaiting/transitioning to a different system

30% Geographic reach

25% Outsourcing

Base: 267 cloud migration decision makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Red Hat, July 2017

Private cloud is a critical part of firms' digital transformation.

Forty-six percent of public cloud migrators also view migration as a primary use case for private cloud.

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Key Recommendations

Forrester's in-depth study of public cloud migrators highlighted the large role private cloud still plays for organizations, even if they have committed themselves to a large-scale migration to public cloud. This, along with respondents' self-professed dedication to a hybrid strategy, yielded several important recommendations for all professionals seeking to build and execute a successful cloud strategy:

Build a strategy that represents both new development and optimizing for existing apps. Cloud strategies must deliver visions for both its existing portfolio of applications and for obtaining or building new applications. Although an enterprise may choose to focus its resources or marketing to its business on one strategy, a complete strategy must account for both.

Identify the key benefits you are hoping to achieve with migration. Change is expensive. If you're moving an application, determine the benefits that you hope to achieve and ensure that the math aligns to that vision. Business groups requesting a move to the cloud likely don't understand the benefits or costs of doing so.[4] They may believe that cloud always means lower cost and higher performance. For legacy apps moving to the public cloud, rarely is that the case.[5]

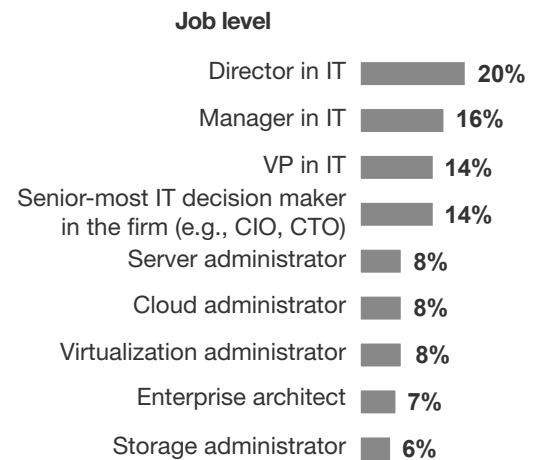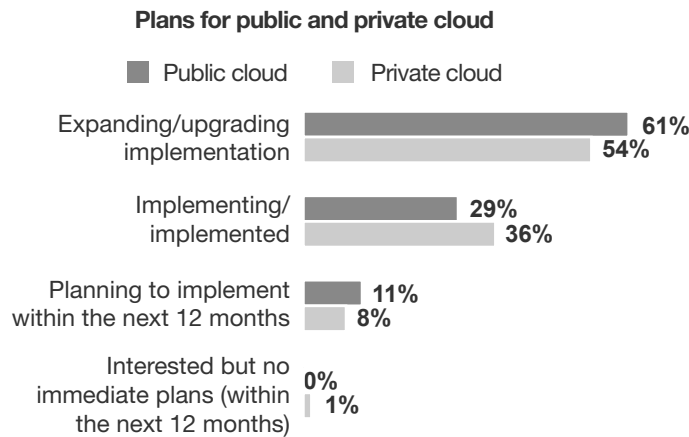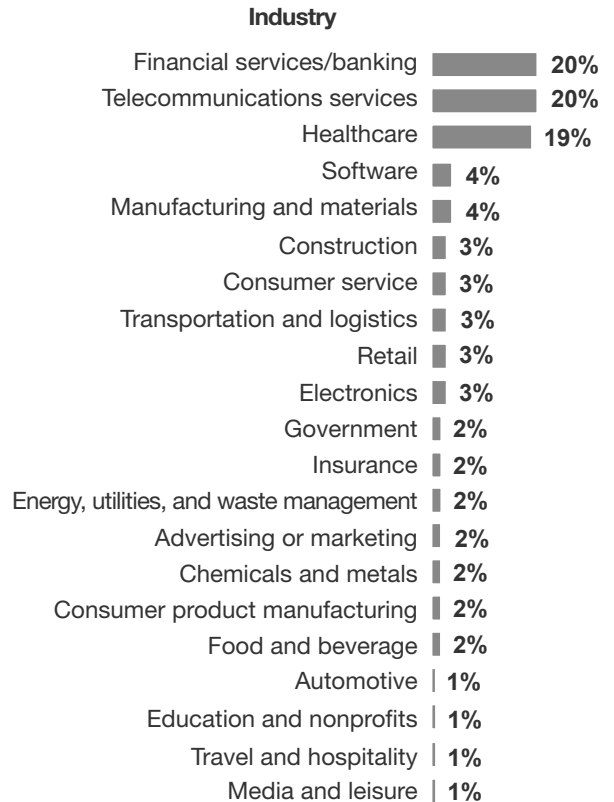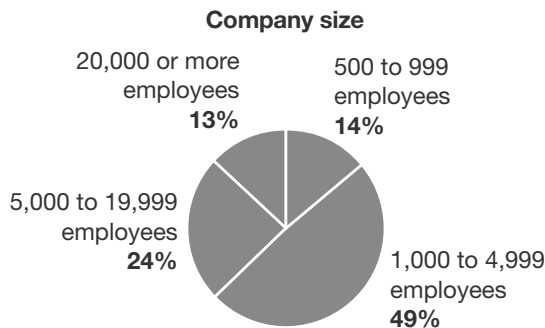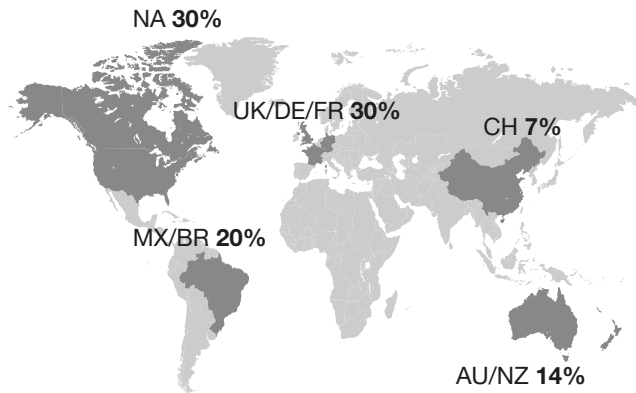**Make decisions based on cost and performance optimization.** Even if the benefits are high, make sure that they align to the costs of doing so. Poorly planned and executed migration strategies lead to overspending and decreases in performance.

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Appendix A: Methodology

In this study, Forrester conducted an online survey of 272 organizations in the US, Canada, the UK, Germany, France, Mexico, Brazil, China, Australia, and New Zealand to evaluate the experience of those enterprises that had already or were in the process of migrating existing workloads to the public cloud. Survey participants included IT managers and above with knowledge of cloud computing architecture, strategy, and implementation. Additionally, Forrester conducted four interviews with similar respondents. The online survey began and was completed in July 2017. Interviews began in July 2017 and were completed in September 2017.

Appendix B: Demographics/Data

NA **30%**

UK/DE/FR **30%**

CH **7%**

MX/BR **20%**

AU/NZ **14%**

Industry

Financial services/banking	**20%**
Telecommunications services	**20%**
Healthcare	**19%**
Software	**4%**
Manufacturing and materials	**4%**
Construction	**3%**
Consumer service	**3%**
Transportation and logistics	**3%**
Retail	**3%**
Electronics	**3%**
Government	**2%**
Insurance	**2%**
Energy, utilities, and waste management	**2%**
Advertising or marketing	**2%**
Chemicals and metals	**2%**
Consumer product manufacturing	**2%**
Food and beverage	**2%**
Automotive	**1%**
Education and nonprofits	**1%**
Travel and hospitality	**1%**
Media and leisure	**1%**

Company size

20,000 or more employees **13%**

500 to 999 employees **14%**

5,000 to 19,999 employees **24%**

1,000 to 4,999 employees **49%**

Plans for public and private cloud

■ Public cloud   ■ Private cloud

	Public cloud	Private cloud
Expanding/upgrading implementation	**61%**	**54%**
Implementing/implemented	**29%**	**36%**
Planning to implement within the next 12 months	**11%**	**8%**
Interested but no immediate plans (within the next 12 months)	**0%**	**1%**

Job level

Director in IT	**20%**
Manager in IT	**16%**
VP in IT	**14%**
Senior-most IT decision maker in the firm (e.g., CIO, CTO)	**14%**
Server administrator	**8%**
Cloud administrator	**8%**
Virtualization administrator	**8%**
Enterprise architect	**7%**
Storage administrator	**6%**

Base: 272 cloud migration decision makers
Note: Percentages may not total 100 because of rounding.
Source: A commissioned study conducted by Forrester Consulting on behalf of Red Hat, July 2017

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Appendix C: Supplemental Material

RELATED FORRESTER RESEARCH

"Private Cloud In 2020: Defining The Future Of The Enterprise Data Center," Forrester Research, Inc., August 24, 2017.

"Adoption Profile: Public Cloud In North America, Q1 2017," Forrester Research, Inc., March 1, 2017.

"Brief: The Cost Of Migrating An Enterprise Application To A Public Cloud Platform," Forrester Research, Inc., March 9, 2016.

Appendix D: Endnotes

[1] Source: "Brief: The Cost Of Migrating An Enterprise Application To A Public Cloud Platform," Forrester Research, Inc., March 9, 2016.

[2] Source: "Private Cloud In 2020: Defining The Future Of The Enterprise Data Center," Forrester Research, Inc., August 24, 2017.

[3] Source: "Adoption Profile: Public Cloud In North America, Q1 2017," Forrester Research, Inc., March 1, 2017.

[4] For a discussion of the costs, benefits, and challenges involved in public cloud migration, see Chapter 1 of this thought leadership program, "Cloud Migration Is Actively Embraced, But Not For Everything."

[5] Source: "Brief: The Cost Of Migrating An Enterprise Application To A Public Cloud Platform," Forrester Research, Inc., March 9, 2016.

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