CIO Essential Guidance: Modernizing Applications in a Multi-Cloud World

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Introduction

With almost three quarters of businesses operating across multiple public clouds[1], it's critical to run modern app portfolios that connect seamlessly across environments and feature the latest technologies and methodologies.

Modern apps deployed in a multi-cloud environment present many opportunities for service, innovation and growth. Regardless if your users are customers or employees, apps have the potential to transform lives in both small and big ways. Whether it's a patient receiving faster care, a customer effortlessly making a purchase, or an employee working remotely, apps have a big impact on day-to-day life.

Developer experience (DevEx), cost savings and revenue growth are additional pluses of running modern apps on multi-cloud. Many businesses want to ditch clunky, legacy software to enjoy all of these benefits. But efforts to modernize need to be executed strategically. Organizations that are most successful have taken the time to standardize functions across clouds. They have chosen the clouds that best meet the needs of their apps, while operating unifying platforms that maintain seamless business control over multiple cloud providers. They've also improved their DevEx to make the best use of one of their greatest assets: their Dev team.

The 4 Keys for App Success

1. Developer Velocity

The best applications are created by equally talented developers, so it's crucial to attract and retain the best talent. And DevEx is tied closely to user experience.
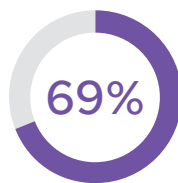
69% According to a recent Forrester poll, 69 percent of business leaders agreed that a good DevEx results in a better customer experience.[2]

Good DevEx allows your developers to do what they do best: code and release software quickly. In a recent VMware survey, 45 percent of enterprise IT executives report that their dev teams push software releases on a monthly or faster pace (on average).[3]

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1. The Power of "And" in the Multi-Cloud Era, Inc., July 2022
2. Forrester, An Executive's Checklist To Fostering A Strong Developer Experience For Business Growth, June 2022
3. Source: VMware FY23 Q4 Executive Pulse, N=452 Enterprise Technology Executives

Customer Story

When Employers Insurance began building cloud-native applications, they saw tremendous results in reduced time-to-market, improved customer experience and greater agility of their dev team.

Employers CIO Jeffrey Shaw says that by moving to a multi-cloud environment, they were able to be nimble and scale up and down quickly. He explains,

"I was able to hire people that could do these agile cloud-native applications that could come in and build an app in a month instead of taking nine months on my old data centers."

The new cloud-native applications they built drastically improved customer experience. He points out,

"The time to get a quote for our customer went from about 18 minutes to less than two minutes."

And by running those apps on multi-cloud, Employers was able to pair the right cloud with the right application.

Additionally, IT has now become central to the company's future. Shaw says,

"IT isn't the bottleneck anymore. It really flipped on its head and it became who [the organization] looked at to help guide [the direction of] the company."

But all too often, there are barriers that prevent this from happening. Cumbersome legacy platforms and tools slow down developers and make onboarding and attracting talent difficult. A lack of defined strategy and clear ownership can cause unintended churn that delays time-to-market and frustrates developers.

An inefficient, reactive workflow that doesn't center on customer experience will always be a few steps behind business needs. Manual processes and handoffs that could be automated likewise slow down work. Infrastructure tasks like provisioning or even meetings and paperwork can take time away from development. Lastly, developers will find it more difficult to keep up with security constructs if they differ between cloud environments.

Take all of the complexity of your multi-cloud estate out of the equation by providing your developers with a user-friendly, cross-cloud development platform that abstracts the underlying infrastructure. The platform should feature the development environments they prefer to work with, including pre-selected open-source products. Structure the organization and create agile workflows to best support their day-to-day. Giving them the support and freedom to do their best work has the potential to unleash innovation.

Key Questions
Are your developers spending at least 85 percent of their time coding? If not, can you think of a non-coding task you can take off their plate?
Are they able to utilize their preferred development tools for each task?
What is stopping your organization from releasing applications in half the time?

2. Unified Cloud Management

Despite all the advantages of a multi-cloud environment, if you can't easily manage your cloud estate, you're not reaping the full benefits. You could be underutilizing resources from one cloud provider, while maxing out on another. Moreover, lack of visibility means greater risk.
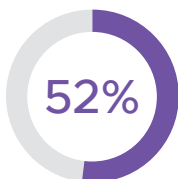
52% In a recent VMware survey, 52 percent of executives reported that their clouds were not perfectly in sync.[4]

Moreover, 39 percent of execs said their organization struggled to maintain a common set of controls over their cloud environments.[4]

4. 4 Strategic Insights on Multi-Cloud Management, Inc., August 2022.

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## The Benefits and Challenges of Implementing Open-Source Solutions

- Unlock innovation by giving developers freedom: Allowing developers to take advantage of the wealth of possibilities, tools and knowledge available in trusted open-source communities can lead to creative, cutting edge solutions.

- Mitigate risk by curating and pre-selecting trusted open-source solutions: Not all open-source software is created equal. Vet and choose company-approved software and provide it to your developers through a unified development platform.

Teams should deploy unifying platforms across clouds that are tailored to address specific business needs (development, security, operations, etc.). Running your multi-cloud estate as if it were one cloud provides the highest level of ease and control. Centralized management presents opportunities for greater governance, cost-savings and risk management.

Key Questions
Can you easily access information about your cloud spend?
Can you re-allocate resources between clouds?
Are applications on different clouds able to interact seamlessly and efficiently?

3. Security as a Built-In Service

The development process should be security-minded from the start, versus building an app and securing it later. This notion, called "shifting security left," means that security is considered and addressed at each stage of the development cycle. Additionally, companies can implement security as a built in service, empowering them to build security into both the development process and their infrastructure.

92%
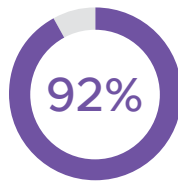
92% of IT execs say they have a cloud security and risk team.[6]

VMware president Sumit Dhawan says, "Security that's intrinsic to the infrastructure and the platform gives you the ability to create checks at the technology level. As the data is flowing in through the infrastructure, you're able to protect it through your controls."[5]

While using multiple cloud providers may increase risk, this can be mitigated by managing security on a central platform. You get all the benefits of multi-cloud without sacrificing data protection. Companies are making security a key tenet of their overall cloud strategy. In a recent VMware survey, 92 percent of IT execs reported that they have a cloud security and risk team focused on governing the organization's cloud strategy.[6]

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5. The CIO of 2025: Start Modernizing Your App Pipeline Today, Forbes Insights, 2022
6. VMware Cross-Cloud Insights, Q3 FY 23 Pulse Report, 2022

Customer Story

Fintech fiserv is able to drive innovation by prioritizing a DevEx culture, mindset and methodology. Senior Vice President of Digital Transformation, Tom Eck says,

"I like to say to my developers: if you're not coding 85 percent of the time, something's wrong."

He clears internal red tape like unnecessary meetings or paperwork to free developers to code. He explains,

"If anything's in the way, my job is to get that out of [their] way. My employees love that."

Fiserv has also liberated developers by imbuing security controls in their platform.

"That really liberates them, because they feel like, okay, I'm in a safe sandbox. I can't really mess anything up. And then you increase innovation, because you can start taking more chances."

Key Questions
Do your apps have security baked in to every layer?
Do you run your cross-cloud security on one platform?
Are you able to create consistent security policies across all your environments?
Have you secured your app development and operations processes?

4. Platform-as-a-Product

The operation of your platforms should be of the utmost importance, seeing as they are the product that keeps the company running. Enterprise IT execs have already recognized the vital importance of unifying platforms in a multi-cloud world. In a recent VMware survey, 58 percent of enterprise IT executives have already established or are currently expanding platform teams.[7]

IT teams should come to see unifying multi-cloud platforms as drivers of innovation, growth and data protection, and run them as a product. With Platform-as-a-Product, your dedicated platform team can maximize the value of your platform and minimize waste. By treating developers like "customers," operations teams can make sure their needs are being met. And by closely monitoring how the platform is functioning, teams can reduce waste and increase security. This way of thinking will prioritize the strategic management of your apps and cloud estate, and keep the focus on the big picture.

58%
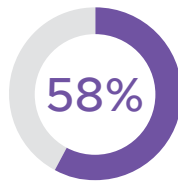
58% of enterprise IT execs have already established or are expanding platform teams.[7]

Key Questions
Does your company see cloud management platforms as a product?
Do your platform operators see themselves as providing a service to your developers?
What changes need to be made in your organization to achieve this state/elevate your operators?

7. VMware FY23 Q4 Executive Pulse, N=452 Enterprise Technology Executives

Conclusion

The full benefits of modernizing your apps across clouds can't be unlocked without success in these four key areas. Your developers must be able to do their best work quickly and securely. All of your apps and clouds should be easily managed with centralized control. Security should be shifted left, and implemented at every stage of your app pipeline. And finally, you should be supporting your unifying platforms as products that are critical to your organization. By finding success in these four key areas, the possibilities for growth and innovation are without limit.

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