

WHY MODERNIZING APPLICATION DEVELOPMENT IS MISSION CRITICAL AND HOW KUBERNETES CAN HELP

 **42%** of IT decision makers indicated containers as a top technology investment over the next two years.¹

While it may have taken a pandemic to do so, companies quickly embraced changes that may have taken years to materialize at an organic pace. Within a matter of months, maybe weeks, business leaders began openly embracing ideas such as remote work strategies and packaging everything into a service, concepts that up to that time were viewed by many with shared reluctance. It didn't take long to realize how empowering these changes would prove to be in terms of application delivery development. A report published in May of 2020 titled, "Successful Digital Transformation: Apps at the Ready," showed a growing greater involvement in app/software development by multiple stakeholders across their respective organizations. In fact, 88% of the 5,000 respondents that included ITDMS, BDMS and developers agreed that organizations with software-minded leaders are more successful.² The prominent role that app/software development holds today was clearly manifested throughout the report with 79% going as far as saying that organizations will not be able to deliver a best-in-class end user experience without successfully modernizing application and software development processes.

THE COSTS OF SUPPORTING LEGACY APPLICATIONS

The debate between maintaining and replacing legacy infrastructures has been ongoing within IT decision rooms for years now. One major culprit is legacy applications that are overly dependent on platform infrastructures and internal



monolithic architectures. According to Gartner, the ongoing support of legacy applications is a form of technical debt that compounds year by year and could eventually consume more than 40 percent of the typical IT budget by 2025.³ Gartner states that application modernization should be a business-centric process that is continuous and multiplatform. In addition, companies are currently experiencing greater than normal attrition rates within their workforces. The process of training new hires how to run legacy IT applications can prove costly and time consuming. Besides the technical debt and operational costs associated with legacy applications there are additional challenges and anxieties present throughout companies today regarding application development.

- Startup organizations are not saddled with legacy infrastructure and are thus innovating faster and winning market share



- Development teams can't release software fast enough to keep pace with demand for not only new apps, but new features and innovative releases
- There is the uncertainty as to whether development teams are creating the right types of apps for the users that need them
- The inability to take advantage of cloud elasticity for on-prem applications

In the same manner that workers today must update their skills to be relevant today, applications must be updated to take advantage of new computing approaches, languages, frameworks, and infrastructure platforms. The challenge is how an enterprise goes about updating the hundreds or even thousands of applications they rely on when all of them are different.

FREE YOUR APPS

In order to modernize your business applications, you must set them free from the infrastructure that impeded them. They must be location agnostic with the ability to run anywhere within your multi-cloud hybrid architectures. This requires a transition to containerized applications that utilize microservices architecture. So how does one go about gaining this freedom? Part of the equation is the cloud, which is the only way that companies can deploy new application innovation with the necessary speed and scale. As a result, estimates are that 90% of new enterprise applications will be delivered using cloud native approaches by 2022, entailing some 500 million applications by 2025.⁴

The other key to the puzzle is Kubernetes, a portable, extensible open-source platform used to manage containerized workloads and servers that increases agility, accelerates software delivery, and simplifies the work of both developers and operators. With Kubernetes, applications are now unshackled from their underlying infrastructures and platforms which are now basically irrelevant. By freeing applications and removing their complex dependencies, you free developers to do what they do best which is to build great apps.

THE LIBERATING POWER OF KUBERNETES

The shift towards the adaption of the Kubernetes ecosystem within production environments is clearly underway. According to a 2021 study involving companies with more than 1,000 employees, 98% of those surveyed acknowledged significant benefits from Kubernetes.⁵ When was the last time you heard about 98% of a given audience agreeing on anything? Improved resource utilization was the most stated benefit (58%) followed by the ease in upgrading and maintenance (48%). Shortened software development cycles came in third at 46%.

The reason why Kubernetes is the leading container management platform is due to the tremendous agility and flexibility it offers, which stems from the underlying Kubernetes clusters that host your applications. Not only are these cluster platforms independent but they can encompass multiple machines and environments. That means that a single cluster can span multiple clouds, multiple virtual machines, and operating systems. You can even run them on-prem and in the cloud simultaneously, moving workloads in between them. Kubernetes containers can basically run anywhere you need them to.

Due to the simplified nature of Kubernetes and its cloud functionality, multiple stakeholder teams can participate in Kubernetes operations. This holistic approach ensures that new application features and services are properly aligned with current business needs and future goals. Greater collaboration between stakeholders and influencers such as the development teams, IT support teams and application owner help ensure a more relevant product that adds value right away.

VMWARE TANZU SIMPLIFIES KUBERNETES EVEN MORE

One of the key findings in the 2021 report stated that do-it-yourself (DIY) Kubernetes deployments dropped 11% from the year prior. That's because there are multiple Kubernetes offerings such as VMware Tanzu on the market today. Tanzu is a suite of products that allow users to run their many Kubernetes clusters and microservices across both public and private clouds in automated fashion. You can run all your clusters from



a single command center and proactively manage policies to optimize and protect them. Customer case studies have shown these types of average results:

- Provisioning time reduction of 90%
- Developers spend 37% more-time coding
- New features are released 61% faster
- Increased Day 2 efficiencies of 69%⁶

THE POWER OF PARTNERING WITH TANZU LABS

If your development is new to Tanzu Labs or even Kubernetes environments, that's not a problem. VMware Tanzu Labs is a service that partners with organizations across the world to help them accomplish their mission of application modernization. Their application specialists can assess your app portfolio to identify where the greatest value can be attained through modernization. They can then provide expertise in the art of automated containerized workloads, proactive app management and DevSecOps and show you how to reduce release times, operating costs, and risks. While security has traditionally been an afterthought in terms of application development, Tanzu Labs takes a more integrated

approach in which security issues are addressed in the initial building stages. This helps ensure that your entire software chain of containers and clusters is properly secured across vast cloud estates. With Tanzu Labs working side-by-side with your development teams from day 1, your modernizing transitions can take place in a matter of weeks, not months.

CONCLUSION

In the end, the goal is to create better apps, at a faster rate, that create greater value for both the application owner and customer. That simplicity is what Kubernetes and VMware Tanzu are all about.



TALK TO WEI TODAY

WEI's team of engineers have hands-on expertise with solutions powering DevOps, automation and hybrid cloud environments. Contact us today to learn more about how Kubernetes and VMware Tanzu can fit into your environment to accelerate your digital transformation initiatives.

Sources:

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6. VMware Tanzu Overview | VMware Tanzu



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Why WEI? Because we care. Because we go further.

At WEI, we're passionate about solving your technology problems and helping you drive your desired business outcomes. We believe in challenging the status quo and thinking differently. There are a lot of companies that can take today's technology and create a great IT solution for you. But we do more. We go further. And we have the customer, vendor and industry awards to prove it. WEI is a premier technology partner, who always puts our customers first while providing the most innovative solutions for over 30 years.



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