

Techstrong | Research

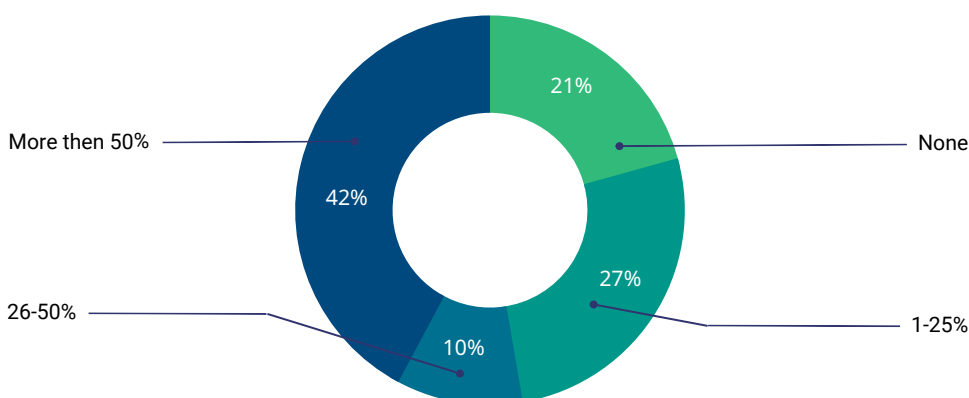
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Kubernetes has accelerated the adoption and management of containers at scale in both cloud and on-premises environments. We have seen cloud providers, including AWS, Google and Azure, embrace and integrate Kubernetes into their cloud service offerings, which validated the platform and resulted in significant Kubernetes adoption, with many large applications capitalizing on its potential. While it remains early in the Kubernetes adoption cycle, early users are seeking more advanced features, including user management, security enhancements and third-party integrations.

As this evolution continues, additional advanced capabilities are required to address the needs of mission-critical applications, as well as multi-cloud support. Enterprise adoption will present challenges such as configuration management, multi-cloud security, automation and observability for large and complicated deployments. To overcome these complexities, organizations have begun implementing multi-cluster management platforms which ensure consistency across clusters and offer improved workload management and enterprise-grade security.

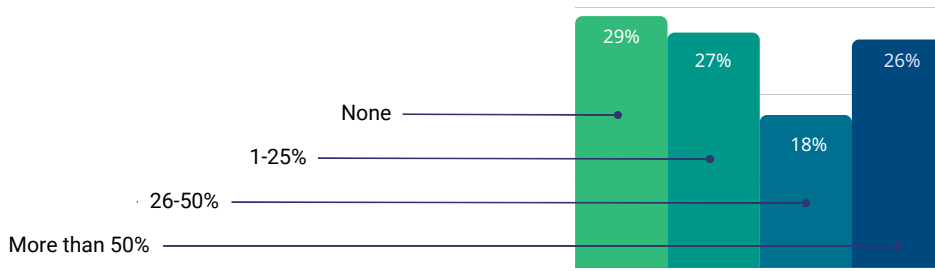
In early 2023, Techstrong Research polled our community of DevOps, cloud native, cybersecurity and digital transformation readers and viewers to see how far along their organizations were in their cloud and Kubernetes journey. A majority of respondents indicated some level of cloud and Kubernetes adoption, with 79% running applications in the cloud and 71% running applications in a containerized environment. Among the numerous cloud providers, respondents noted high adoption of AWS and Amazon EKS. While respondents said they planned on using containers to modernize applications (31%), implement container life cycle management (29%) and migrate applications to the cloud (26%), they also noted several inhibitors to modernization efforts. Respondents noted that legacy applications (34%) and budget (25%) were the top two inhibitors of modernization efforts. And while security is a top-of-mind issue for the respondents, it is not a dealbreaker for modernization.

What % of your production applications run in the cloud?



As anticipated, a large majority (79%) of respondents platform their applications in the cloud. Of those respondents, many (42%) run more than 50% of their application portfolio in the cloud.

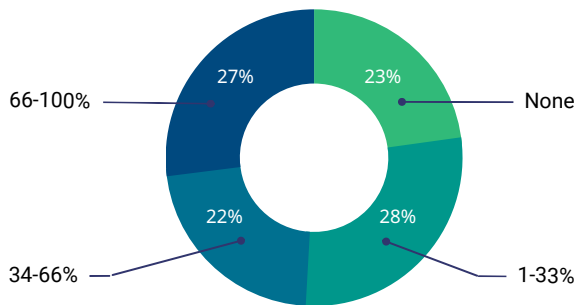
What % of your production applications operate in a Kubernetes or containerized environment?



Container management adoption is high with 71% of respondents operating their applications using Kubernetes or containers. The widespread migration to K8s is clearly underway with 26% utilizing Kubernetes to manage over 50% of their applications in the cloud.

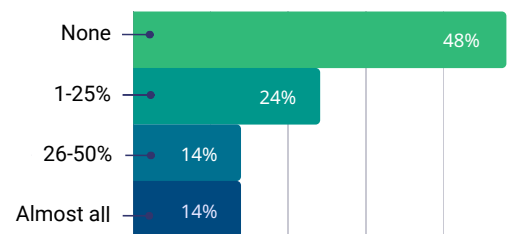
What % of your cloud applications run on AWS?

AWS is represented within 73% of respondents. In a multi-cloud world, capabilities to reliably and securely host containerized applications will be a key differentiator.



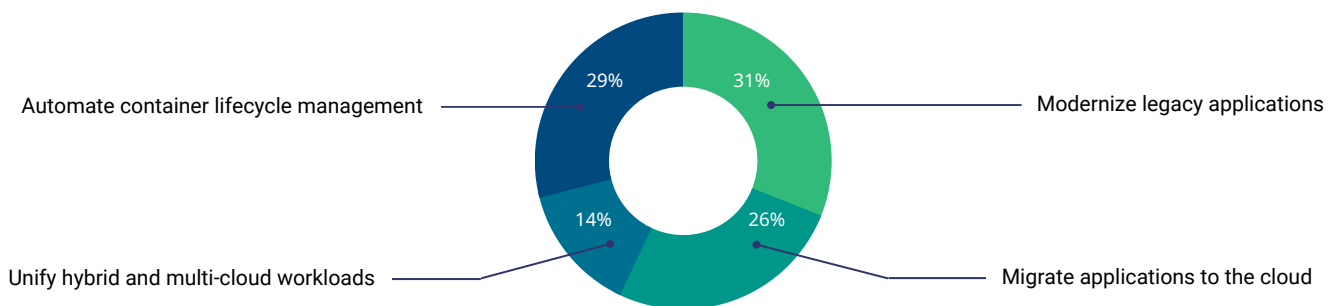
What % of your cloud applications run on Amazon EKS specifically?

52% of respondents are utilizing Amazon EKS to manage at least part of their K8s deployments.



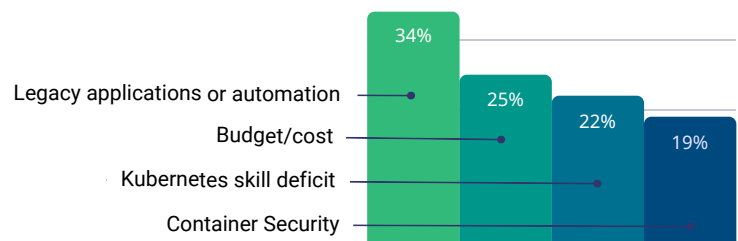
What is your organization's goal for container applications in 2023?

The top three reasons cited for containerizing applications focus on modernizing applications (31%), container life cycle automation (29%) and migrating applications to the cloud (26%).

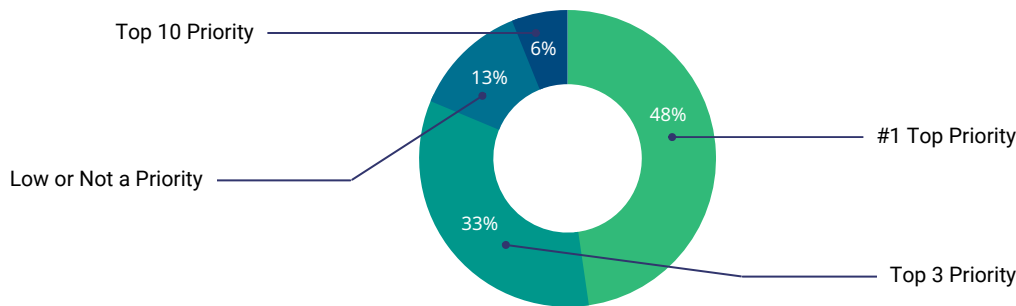


What are some inhibitors of your application modernization efforts?

Legacy applications or automation stands out as the most-cited inhibitor (34%) followed by budget (25%), though these two may be intertwined as organizations may not have the budget to modernize legacy apps.



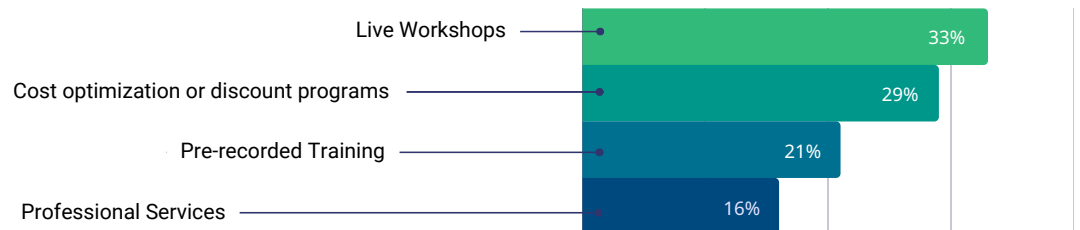
How important is application security for your containerized applications?



47% of respondents consider application security a number-one priority, with another 33% citing application security in their top three priorities. Clearly, security is top-of-mind.

In considering migrating workloads to the cloud, rank the following in order of importance:

Respondents indicated cloud skills development, using live workshops (33%) and training videos (21%) as well as managing costs (29%) when migrating to the cloud.



Techstrong Research Analyst View

Legacy application modernization is a crucial focus area for several organizations, as is evident by 31% of respondents indicating containerization of applications as a primary goal, while another 26% are viewing containers as a vital tool to aid in cloud migration. Given these numbers, it's clear that any future modernization initiatives will likely encompass both containers/Kubernetes and cloud services, making expertise in these areas crucial. This is an important trend to consider for organizations and businesses planning to modernize their IT infrastructure, not only to achieve operational efficiency but also to build capabilities for future technology demands.

Cloud provider Kubernetes services are gaining popularity owing to their scalability and managed experience, key aspects for organizations transitioning to production and scaled deployments. With the persistent skills gap posing a significant challenge to modernization efforts, managed Kubernetes services are emerging as a preferred platform for such applications, as they minimize hardware requirements and also address the skills gap.

However, the path to modernization is not without challenges. Organizations will need to employ various strategies to ease the transition. Live workshops, pre-recorded training and professional services are the preferred modes of learning for the respondents. While these are pivotal for skill-building, cost remains a vital factor, especially given the current global economic scenario. Hence, discounts and cost optimization strategies will play a crucial role in facilitating adoption.

As we move forward—and as organizations transcend the experimental phase with Kubernetes—they will require enterprise services like configuration management, backup/recovery, container life cycle management and application security. Automation, a priority for 29% of respondents, is crucial for container life cycle management to scale effectively. Application security remains a top concern, with 47% of respondents prioritizing it. Given the shared pipeline technology for containers and other software applications, it's imperative to invest in scalable, secure and manageable CI/CD capabilities. This insight will be invaluable for tech leaders and decision-makers as they strategize their approach to application modernization.