

Techstrong | Research

Cloud Workload Portability PulseMeter

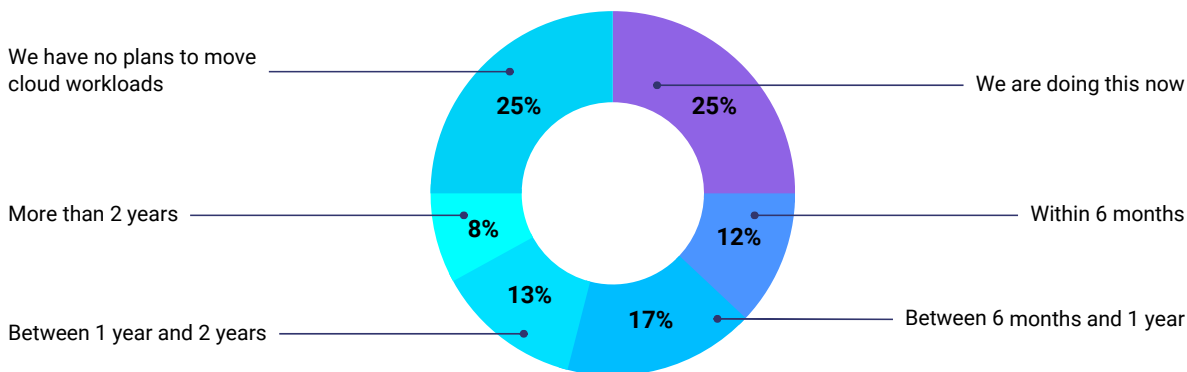
Cloud workload portability has gained significant attention from organizations focusing on cloud optimization. Portability enhances operational flexibility by enabling seamless migration of applications and services across diverse computing environments to find those that are best suited for specific workloads. Portability also bolsters resilience by minimizing the risk of downtime due to hardware failures or service disruptions within one provider. Additionally, workload portability facilitates cost and performance optimization, allowing organizations to leverage the most cost-effective cloud resources as needed. Finally, businesses can capitalize on new services and capabilities offered by different cloud providers, thereby maintaining a technological edge.

While the benefits of workload portability are compelling, several technical impediments hinder adoption. The lack of standardized practices for multicloud deployment and management presents challenges, demanding specialized skills that are often scarce. Additionally, data security, compliance, and governance concerns loom large, forcing significant due diligence efforts before moving a workload. Despite these obstacles, technological advancements tailored to address portability concerns, such as containers, microservices, and infrastructure-as-code (IaC), offer promising solutions. As these technologies continue to gain traction and mature, workload portability becomes much more viable, bridging the gap between strategic intent and technical feasibility.

In the summer of 2023, Techstrong Research polled our community of DevOps, cloud-native, cybersecurity, and digital transformation readers and viewers to take their pulse on workload portability. Respondents indicate the top three drivers for workload portability are business continuity/disaster recovery (31%), cost savings (30%), and resilience (27%). The biggest challenges are vendor lock-in and data migration, but the continued adoption of cloud-native technologies and preferred pricing for bulk data movement are poised to address these challenges.

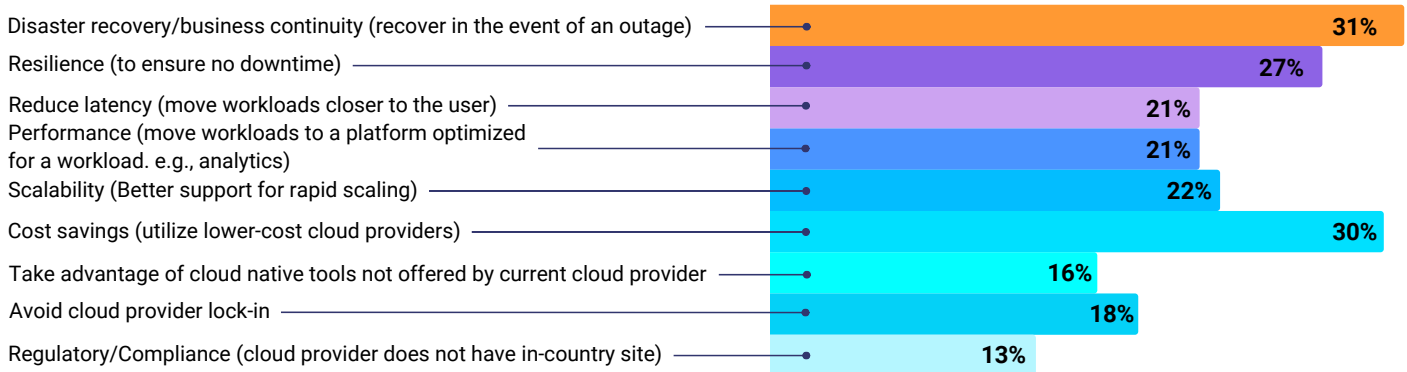
Do you expect to move workloads between cloud providers?

The timeframe estimates for organizations to move workloads between providers is almost a perfect bell curve; 25% do so now and another 29% plan to within a year. The remainder are on the back end of the adoption curve.



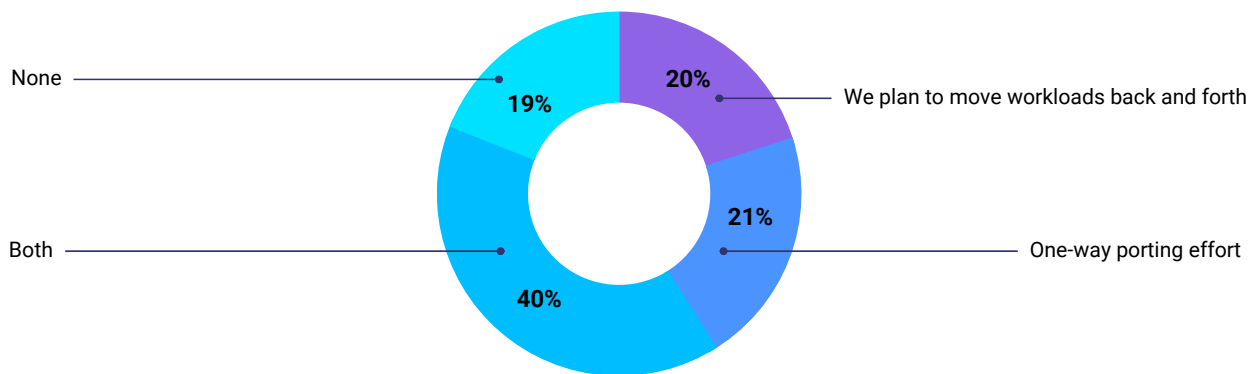
Why do you need workload portability?

The three most popular use cases for workload portability are disaster recovery/business continuity, cost savings, and resilience. It's also worth noting that latency, performance, and scalability are each rated at 21%-22%, which signals that respondents are looking at portability for optimization/efficiency as well.



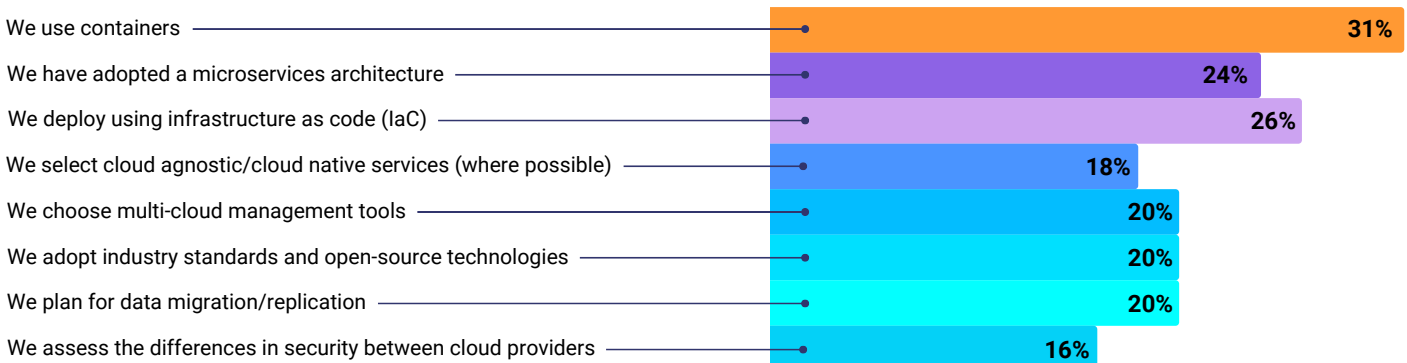
Do you plan to move workloads back and forth between providers or is it a one-way effort?

Nearly half of the survey's respondents are looking to portability not only to move workloads between providers but to move off of one provider to another (i.e., migration). Cloud-native technologies are critical to providing the freedom to move workloads from a single platform.



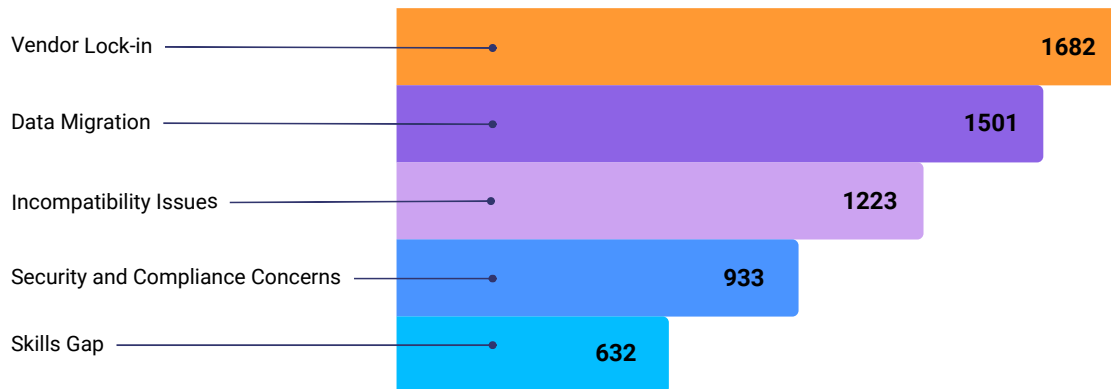
What approaches do you take in application architecture to facilitate portability?

Containers (31%), infrastructure-as-code (26%), and microservices (24%) are the most prominent approaches to facilitate portability. We'll see more workload portability as these approaches adoption continues to build over the next few years.



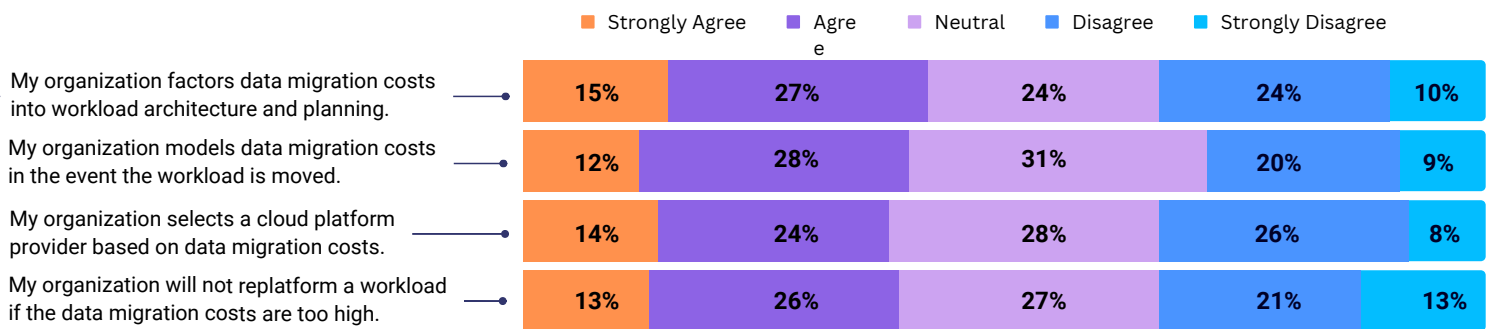
Rank the biggest challenges you face in moving workloads?

Vendor lock-in due to platform-specific tools is the biggest challenge to workload portability. Moving massive amounts of data is also challenging, as are incompatibility issues. These headwinds are primarily technical but can be overcome by embracing technologies like containers, microservices, infrastructure-as-code, and looking for low-cost egress options.



Do you agree with the following statements about data migration costs?

From a cost consideration standpoint, the data is middle of the road. About 40% of respondents either strongly agree or agree with the statements listed in the chart below. About 30-35% disagree. It seems cost isn't a huge factor in workload portability one way or the other.



Techstrong Research Analyst View

We're in the early days for cloud workload portability as evidenced by respondents' near-perfect bell curve of adoption. The business drivers are compelling, including the flexibility to optimize a workload for the specific capabilities of a cloud provider and to find the most cost-efficient platform. We'll see more portability in the future, but technology challenges create short-term headwinds.

Specifically, many organizations take advantage of proprietary services from cloud providers in hopes of accelerating development, and this can create vendor lock-in, a serious hurdle that holds companies back from considering or moving workloads. As more containers, microservices, and IaC are adopted (and they will be), we'll see portability become more accessible to more organizations. But this is a vivid example of the battle waging between proponents of cloud-native design and those pushing platform-centric design.

Organizations must also understand the cloud cost environment to make a better business case for cost-driven portability. Right now, respondents don't show a firm inclination to factor costs into the portability discussion, but we believe that's due to not understanding the cost factors.

The bottom line is we are confident that cloud-native design will prevail over time because of the architectural advantages of this approach, and companies want freedom of movement for their data and apps and want the ability to optimize for both performance and cost. The journey will be measured in years, but as applications are modernized and refactored using open architecture, cloud workload portability will become more prevalent.