

Market check-in: Will microservices disrupt the cloud?

The “race to the cloud” dominated the headlines a few years ago. Most businesses subscribed to the speed, prowess and agility of cloud computing, and cloud adoption gradually matured. Today, another tailwind is here to disrupt technological frameworks: microservices-based architecture.

Although microservices are a direct result of cloud’s prevalence, its adoption can alter the cloud in a variety of ways – from app development to tech stack usage and more. **Pulse surveyed 100 engineering and IT executives to gauge their changing perceptions of cloud technologies on the back of the growing relevance of microservices.**

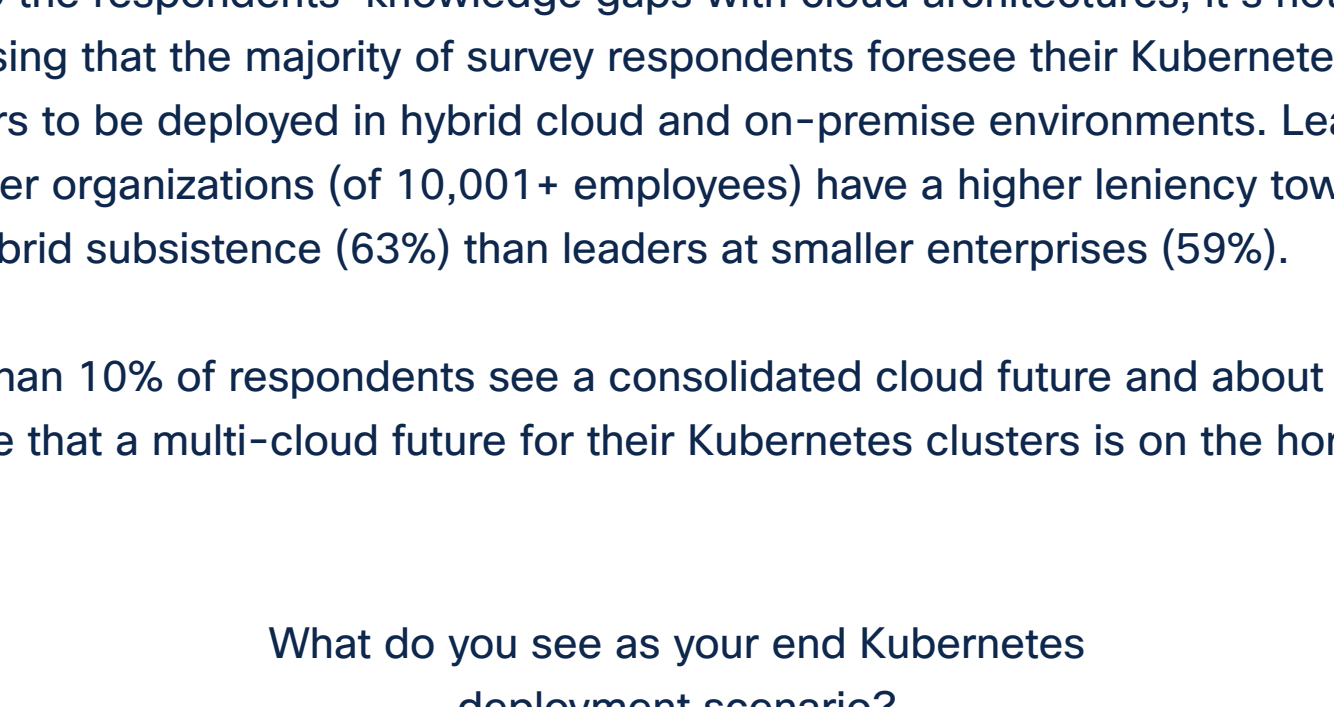
Data collected from July 19 – August 12, 2021

Respondents: 100 engineering and DevOps leaders

Old habits die hard: Companies still prefer hybrid structures as cloud-native cost illusion persists

69% of the engineering and DevOps leaders surveyed ranked cost in their top 3 pain points when adopting cloud-native architectures, with 36% ranking this as their #1 pain point. Other operating hurdles include shortcomings with organizational skills and technical complexity.

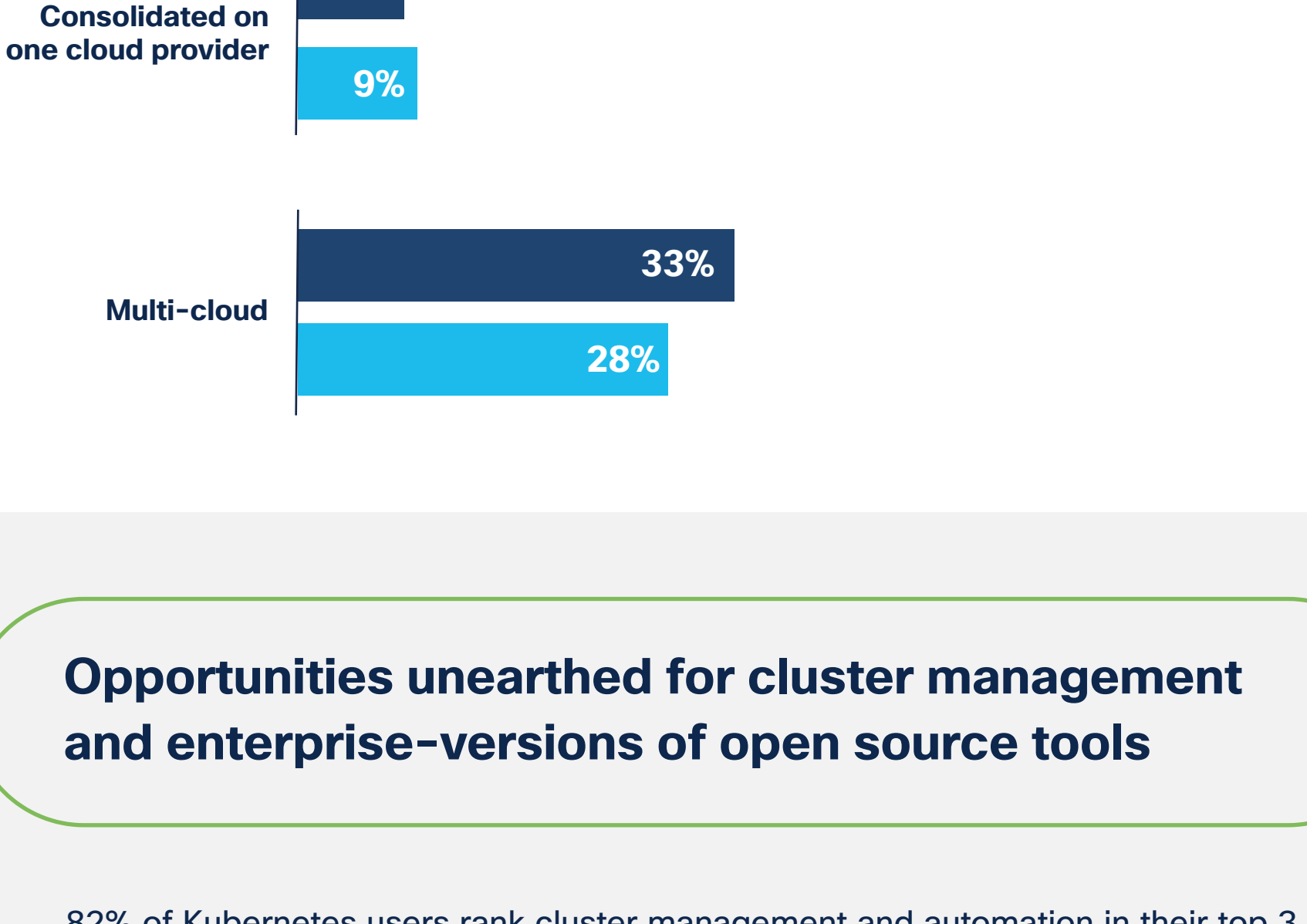
What are the top 3 pain-points your organization is running into in its adoption of cloud-native architectures?



Due to the respondents’ knowledge gaps with cloud architectures, it’s not surprising that the majority of survey respondents foresee their Kubernetes clusters to be deployed in hybrid cloud and on-premise environments. Leaders at larger organizations (of 10,001+ employees) have a higher leniency towards the hybrid subsistence (63%) than leaders at smaller enterprises (59%).

Less than 10% of respondents see a consolidated cloud future and about a third believe that a multi-cloud future for their Kubernetes clusters is on the horizon.

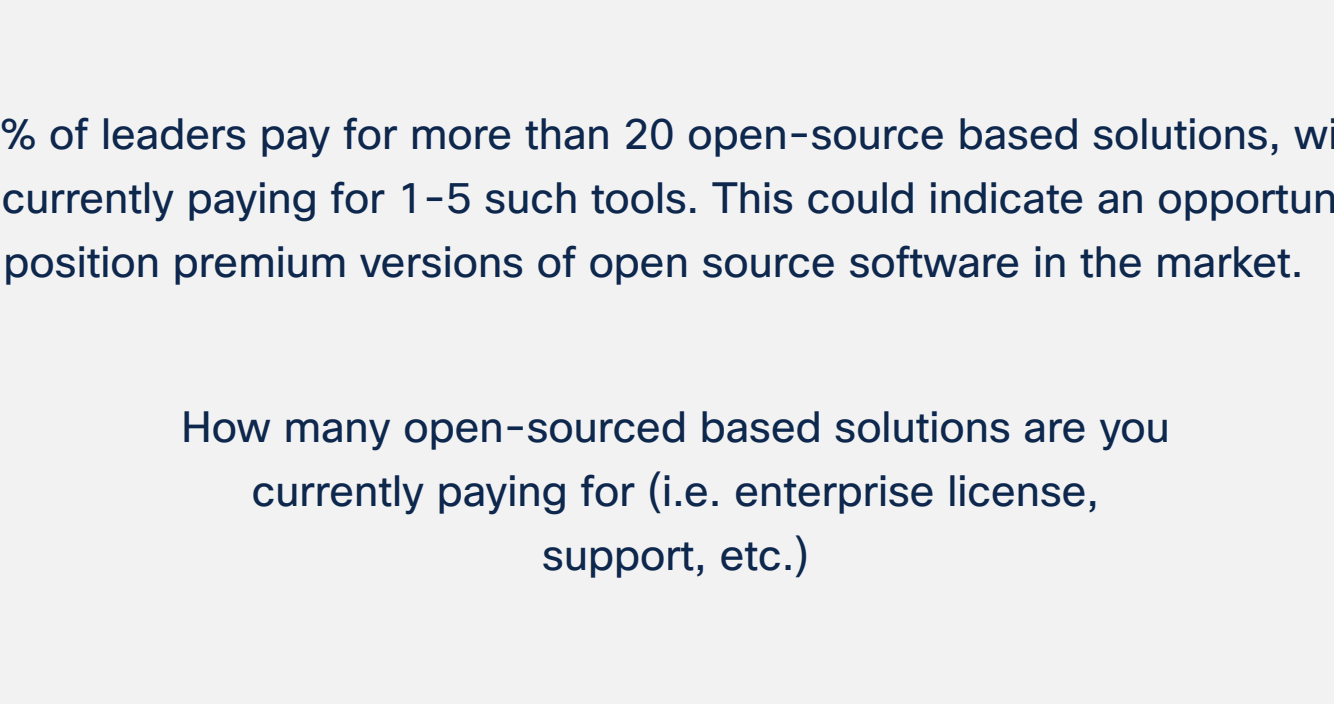
What do you see as your end Kubernetes deployment scenario?



Opportunities unearthed for cluster management and enterprise-versions of open source

82% of Kubernetes users rank cluster management and automation in their top 3 most common problems when using containers and Kubernetes based applications, with 41% ranking this as their most severe problem. Nearly three-quarters of respondents also include security isolation and visibility (74%) and connectivity monitoring and troubleshooting (73%) in their top 3 most common problems.

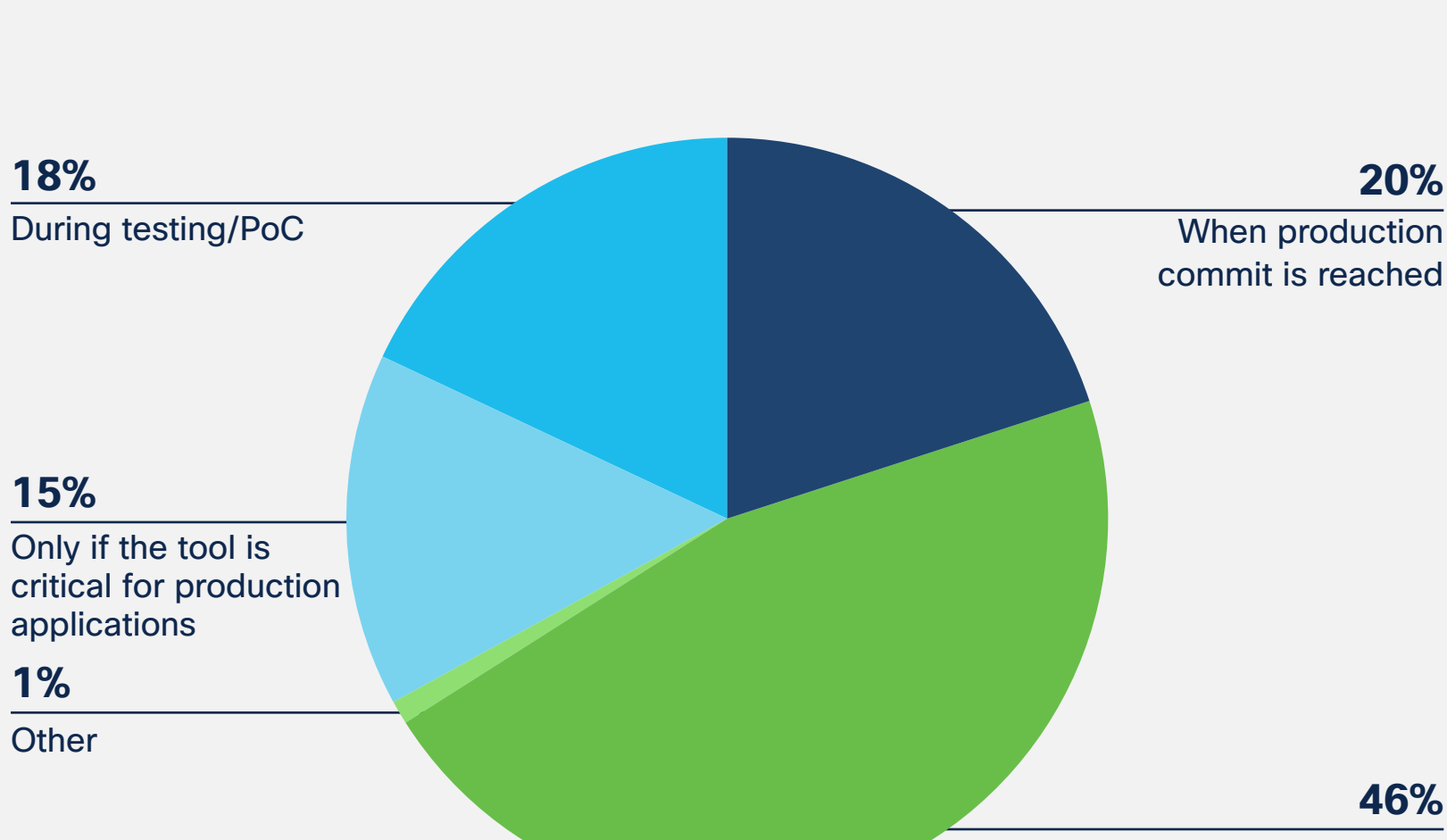
What are the most common problems you run into when using containers/Kubernetes based applications? Rank in order of severity



4. App deployment workflows 5. L7 observability and load balancing

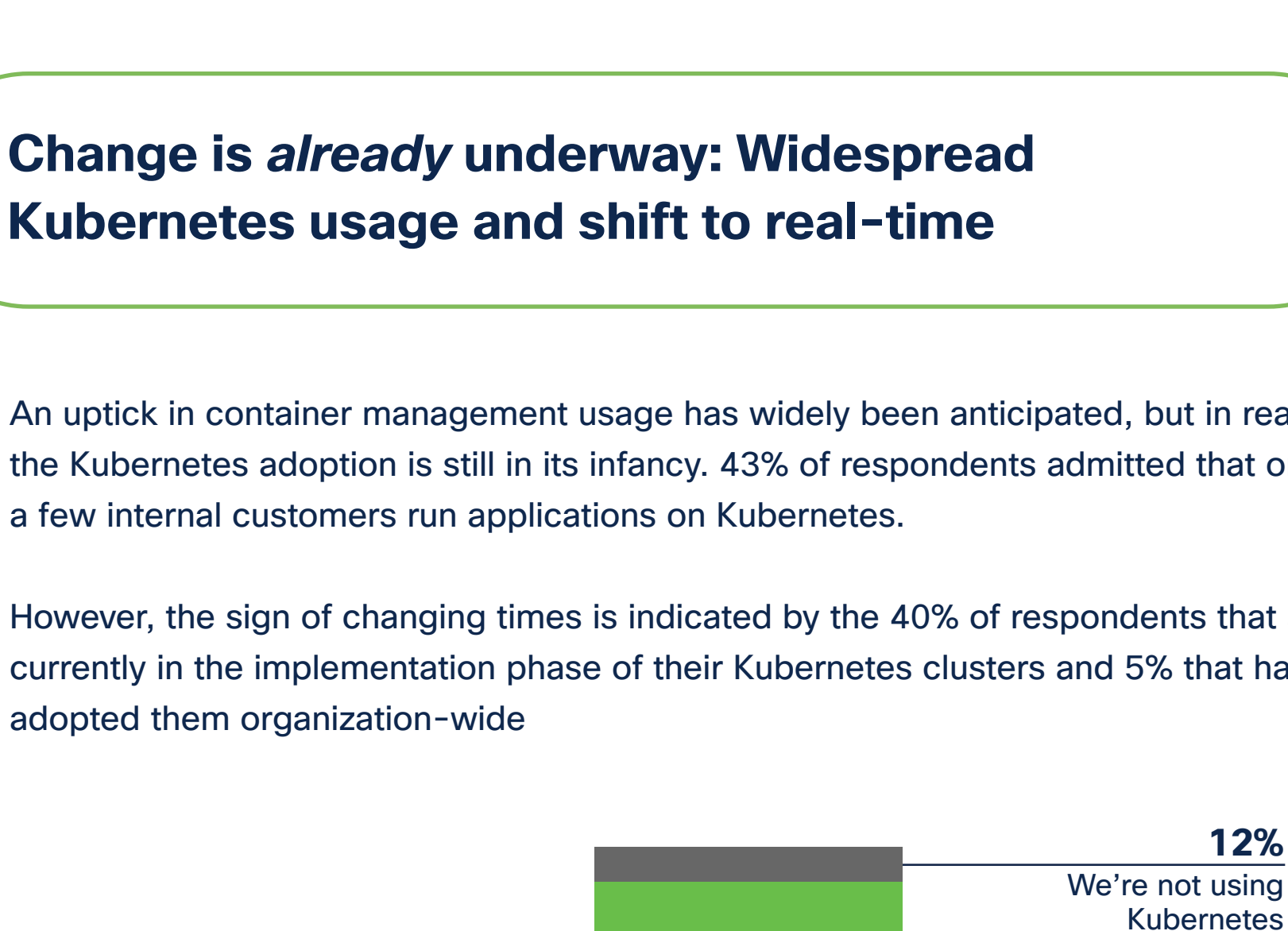
Only 9% of leaders pay for more than 20 open-source based solutions, with most (39%) currently paying for 1–5 such tools. This could indicate an opportunity to better position premium versions of open source software in the market.

How many open-sourced based solutions are you currently paying for (i.e. enterprise license, support, etc.)



46% of the respondents revealed that they consider purchasing open source solutions after reaching a certain usage or production threshold, which suggests that they may be using open-source tools in production without paying for them.

When do you typically make purchasing decisions for open-source solutions?

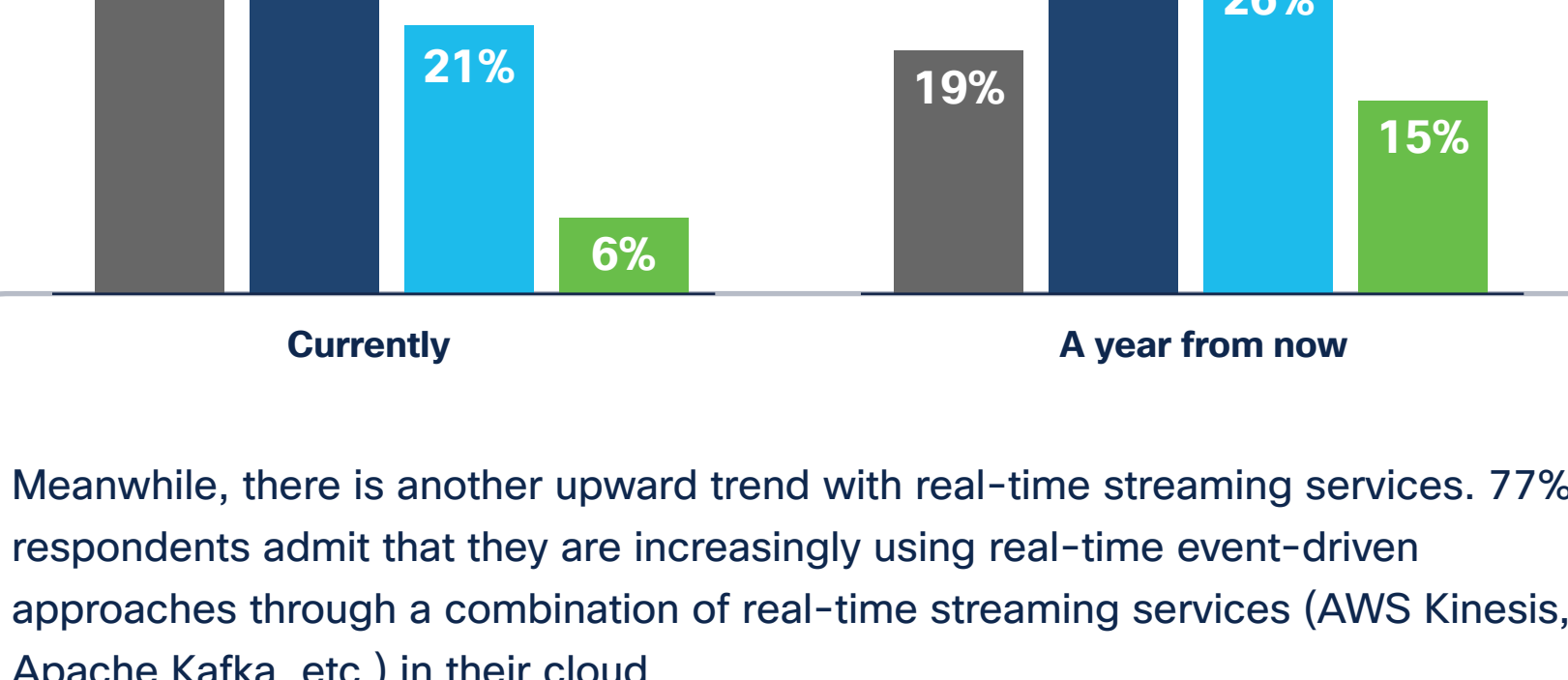


48.3% of respondents that pay for 1–20 open-source solutions (n=87) make their purchasing decisions when certain usage or production thresholds are reached, as compared to 22.2% of respondents who pay for more than 20 open-source solutions (n=9).

Change is *already* underway: Widespread Kubernetes usage and shift to real-time

An uptick in container management usage has widely been anticipated, but in reality, the Kubernetes adoption is still in its infancy. 43% of respondents admitted that only a few internal customers run applications on Kubernetes.

However, the sign of changing times is indicated by the 40% of respondents that are currently in the implementation phase of their Kubernetes clusters and 5% that have adopted them organization-wide



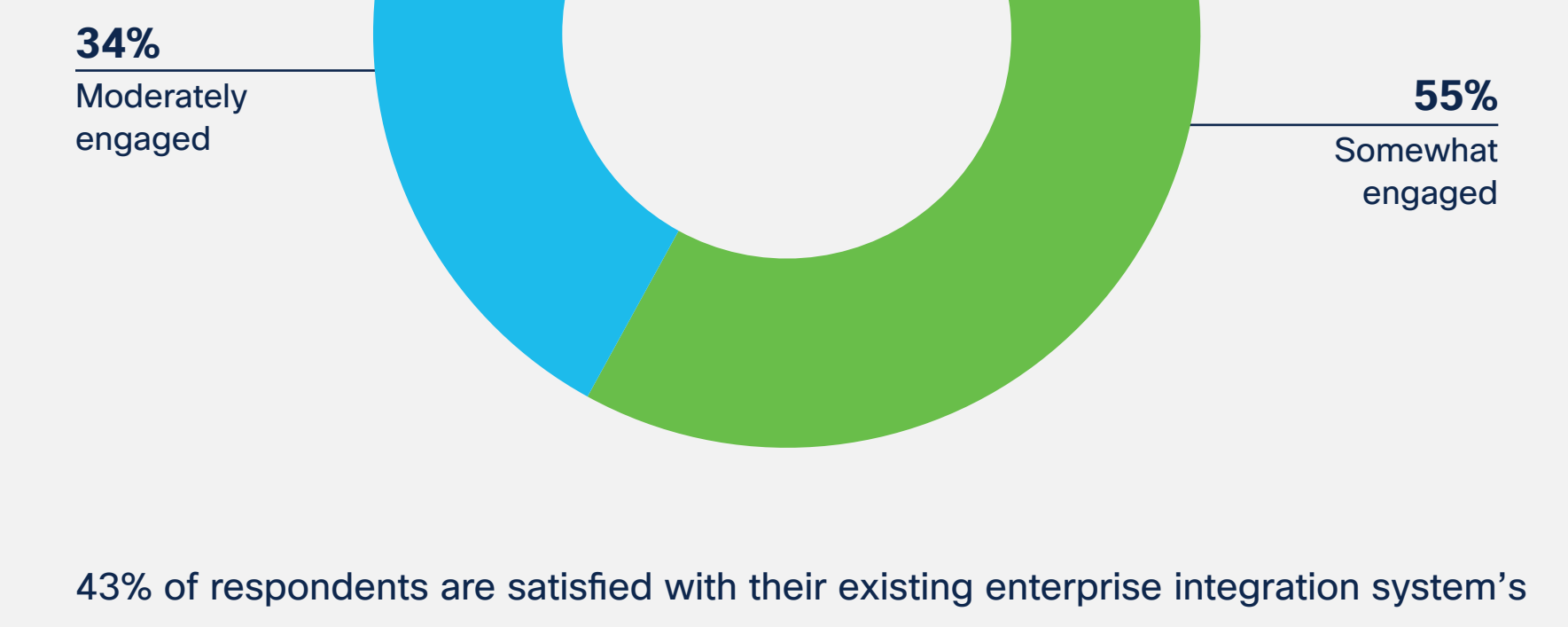
Only 27% of respondents that use a Kubernetes environment are running more than 41% of their applications there. But an additional 14% of respondents expect to run that many applications on Kubernetes a year from now. The percentage of respondents that run 61–80% of their applications on Kubernetes could more than double from 6% now to 15% a year from now.

What percentage of your organization’s applications currently run and are anticipated to run in a Kubernetes environment a year from now?



Meanwhile, there is another upward trend with real-time streaming services. 77% of respondents admit that they are increasingly using real-time event-driven approaches through a combination of real-time streaming services (AWS Kinesis, Apache Kafka, etc.) in their cloud.

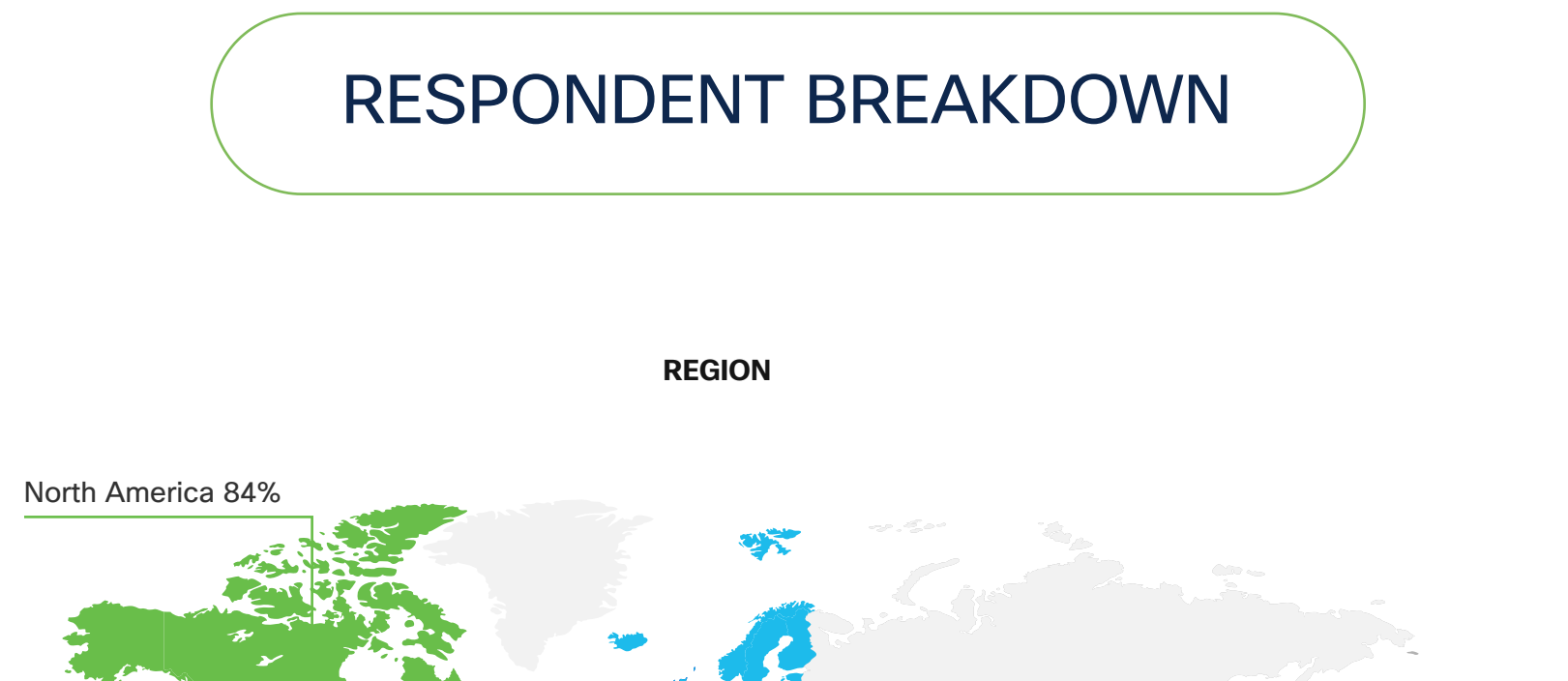
To what extent do you agree with the following statement: “We are increasingly embracing real-time event-driven approaches.”



Even *more* changes: Anticipate knock-on effects and opportunities across the board

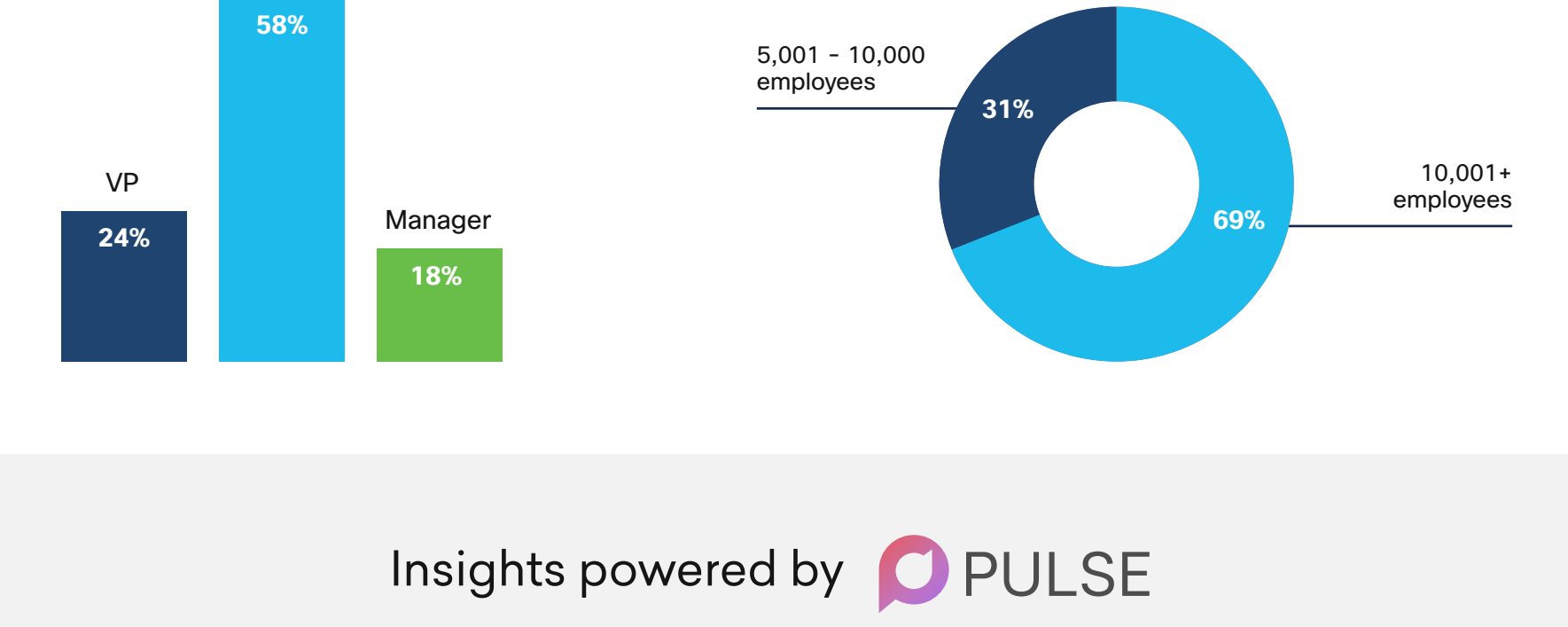
Currently, the majority (58%) of respondents’ security teams are somewhat or not at all engaged with their Kubernetes environment(s), however this could change in the coming year due to the anticipated uptick in Kubernetes usage.

How engaged/aligned is your security team with your Kubernetes environment/organization?



43% of respondents are satisfied with their existing enterprise integration system’s ability to handle hybrid cloud integrations.

On a scale of 1 to 5, how satisfied are you with your traditional enterprise integration system’s (e.g. Enterprise Service Bus (ESB)) ability to handle hybrid cloud integrations?



Cisco Investments insight

With the widespread adoption of Kubernetes and as real-time event-driven approaches like streaming services increase, dissatisfaction with traditional systems might start to creep in.

RESPONDENT BREAKDOWN

