Microservices, Kubernetes and Istio

2022 Adoption Trends

Solo.io has conducted a survey of technology leaders and practitioners to understand how microservices, Kubernetes and Istio are being adopted.

Based on the research conducted, we observe 6 top level trends:

1. There is an explosion of microservices
85% of companies say they are modernizing their apps to a microservices architecture, but many are struggling with how to effectively manage it all

2. Kuberentes has crossed the chasm
Nearly two-thirds of companies are using Kubernetes in production to some degree, and satisfaction with Kubernetes is nearly universal

3. API gateways are foundational for success
The vast majority (93%) of companies are utilizing API gateways– primarily to ensure service reliability

4. Companies are turning to service mesh
As microservices architectures are adopted, service mesh becomes an increasingly popular and important organizational tool. 87% of companies report using or evaluating a service mesh

5. Best practices for service mesh are not widely established
As with any emerging market, the reasons for service mesh adoption are varied with less broadly recognized trends

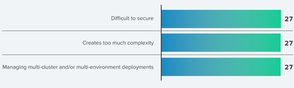
6. Leading organizations are finding success with service mesh deployments
We observe a strong correlation between success with microservices and faster, more reliable application development. Organizations that couple their microservices strategy with a service mesh report a very positive impact on app reliability as a result

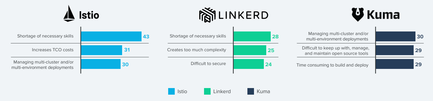
Technology leaders and practitioners agree– there are 5 basic requirements or service mesh:

Use cases among users of the most common service mesh deployments—Istio, Linkerd, and Kuma—vary significantly.

Apart from the more-or-less-universal shortage of skills, the pain different users of different service meshes are solving for varies greatly.

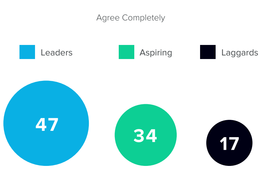
Q: What would you say are the THREE biggest challenges with using a service mesh





However, given these requirements and challenges, most leading organizations prefer Istio as their service mesh deployment:

Q: please indicate your level of agreement with the following statement. Use a five point scale in which one means you do not agree at all, and five means you agree completely.



Our organization prefers an Istio-based service mesh over alternative service mesh architectures/products

The broad adoption of containers and the emergence of Kubernetes as a defacto standard have pushed the boundaries of cloud native development impact even further.

However with all new tech, when one problem is solved, another emerges. Modern enterprises now struggle to deal with the negative externalities that result from the microservice and API sprawl.

To solve for this, leading enterprises are turning to service mesh to complement their API gateways. By looking at these leading companies and how they are using service mesh and API gateways, other companies can reap the same benefits and maximize the positive impact to their dev teams and KPIs.

To see all of the data points and trends captured in the survey, including top challenges of service mesh deployments and a comparison of the three most common service mesh deployments download the full report.

Ready to get started? Request a meeting with our service mesh and API gateway technical experts.

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Find more information at www.solo.io.