Service mesh: from technology to teams

William Morgan

Maintainer, 

CEO, 

About me

Hi, I'm William Morgan!

- One of the creators of Linkerd (linkerd.io)
- CEO of Buoyant (buoyant.io)
- Builder of Dive (dive.co), the service mesh-powered *delivery platform* for cloud native teams

Deliverer of more service mesh talks and webinars than you can shake a stick at!

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@wm

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The actually interesting people here today

Matt Young
VP Cloud Engineering
EverQuote

Ana-Maria Calin
Systems Engineer
Paybase

William King
CTO
Subspace

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Today's agenda is simple

1. Yet another (very brief!) look at "what is a service mesh?"
2. Panel: how engineering organizations actually adopt a service mesh in practice
3. Live Q&As

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What is a service mesh?

What is a service mesh?

A service mesh is a tool for giving...

... **platform owners** (SREs, devops, etc)

... the **observability**, **reliability**, and **security** primitives

... that are **critical** for cloud native architectures

... with **no developer involvement**!

A service mesh doesn't solve technical problems, it solves **socio-technical problems**: by decoupling platform owners from developers, it gives them control over their own destiny. 💪

👉 **Who?**

👉 **What?**

👉 **Why?**

👉 **The magic beans**

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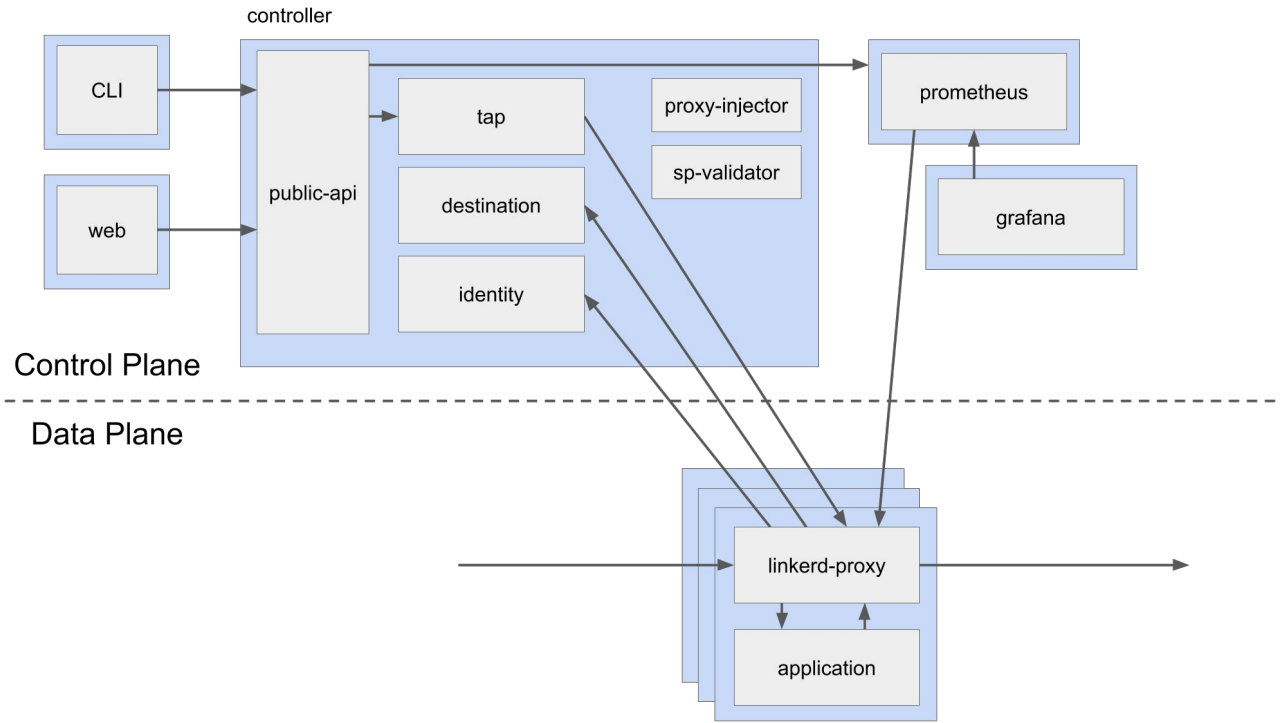
Control plane and data plane



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An open source, open governance **service mesh** and CNCF project.

- **36+** months in production
- **4,000+** Slack channel members
- **10,000+** GitHub stars
- **100+** contributors
- **Weekly** edge releases
- **~8 week** stable release cadence

NORDSTROM CHASE

GoDaddy Walmart

STRAVA BIGCOMMERCE

Expedia OfferUp

ebay Cisco webex

COMCAST planet.

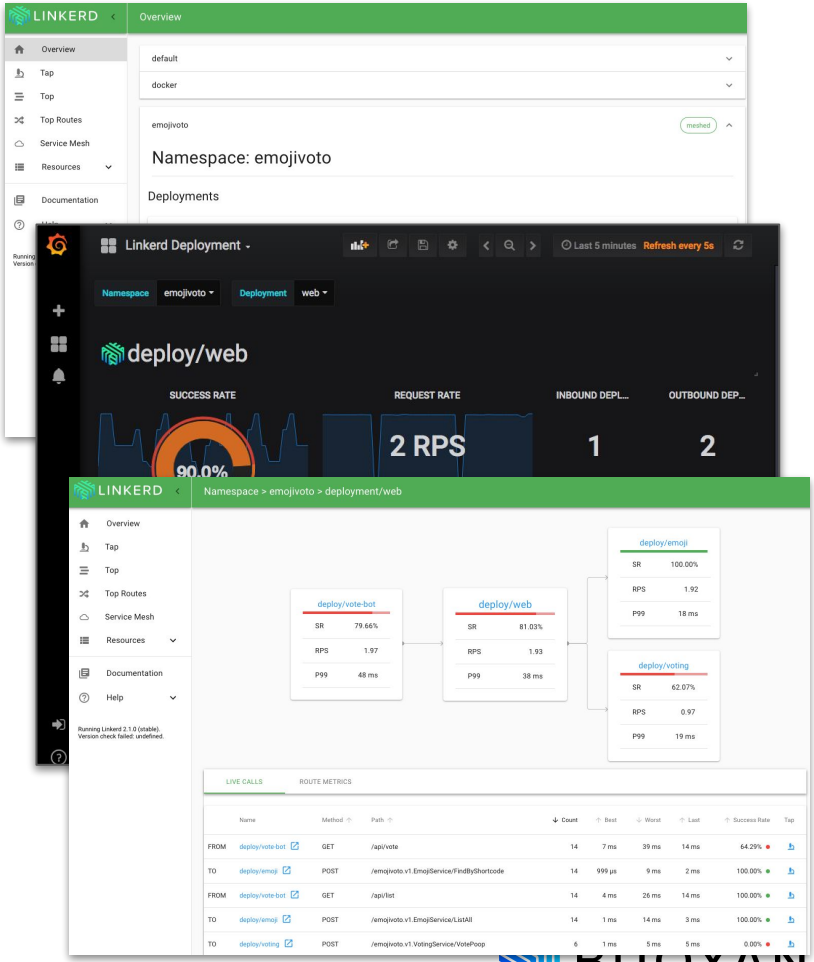
What does Linkerd do?

⚡ **Observability:** Service-level *golden metrics*: success rates, latencies, throughput. Service topologies.

⚡ **Reliability:** Retries, timeouts, load balancing, multi-cluster

⚡ **Security:** Transparent mTLS, cert management and rotation, policy

In an ultralight package focused on **operational simplicity** first and foremost.



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How does my engineering organization successfully adopt a service mesh?

Panel: adopting the service mesh

Matt Young
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1. How big is your engineering org and how is it structured?
2. Who "owns" the service mesh and how does the rest of the org interact with them?
3. What originally motivated you to adopt a service mesh, and has that panned out?
4. What has been the biggest organizational challenge to rolling out a service mesh?
5. What's been the most surprising benefit?
6. What's your best advice for other organizations who want to adopt a service mesh?

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Panel: adopting the service mesh

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Q: Who "owns" the service mesh, and how does the rest of the org interact with them?

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Panel: adopting the service mesh

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Q: Is there a platform team? And if so, what are its goals?

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Q: What originally motivated you to adopt a service mesh, and has that panned out?

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Q: What has been the biggest organizational challenge to rolling out a service mesh?

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Q: What's been the most surprising benefit?

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Q: What's your best advice for other organizations who want to adopt a service mesh?

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Attendee Q&A

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1.Can you discuss some of the differences between service mesh options? What are some tradeoffs?

2. Re latency and overhead, do you have some metrics on the gaps between Istio and Linkerd? Maybe, a chart. :)

3. Does the underlying proxy service have the greatest impact on performance and latency, or is it the policy driven parts of the mesh that cause the greatest resource contention and latency?

4. Are there specific approaches for observability you recommend?

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Thank you! (and Resources)

- 🚀 Linkerd: the open source, open governance CNCF service mesh
- 🚀 Buoyant: provider of commercial support for Linkerd
- 🚀 Dive: the service mesh-powered *delivery platform* for cloud native teams
- 🚀 William's Meshifesto: The service mesh: what every software engineer needs to know about the world's most over-hyped technology
- 🚀 Subspace's big news: Subspace emerges with $26 million to fix internet bottlenecks for multiplayer games
- 🚀 Matt Young's upcoming ServiceMeshCon talk: How we Deploy Canaries, Handle gRPC, and Enable mTLS via GitOps with Linkerd at EverQuote
- 🚀 Ana Calin's ServiceMeshCon talk: There's a Bug in my Service Mesh! What do you do when the tool you rely on is the cause?