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**CloudNativeCon**

**North America 2023**





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# Istio: The Past, Present and Future of the Project and Community

*John Howard, Google*

*Louis Ryan, Solo.io*

# A Look Back: CNCF Graduation

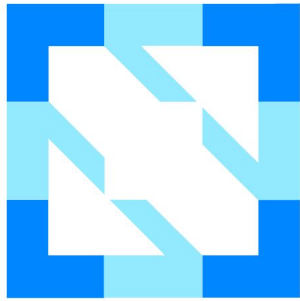


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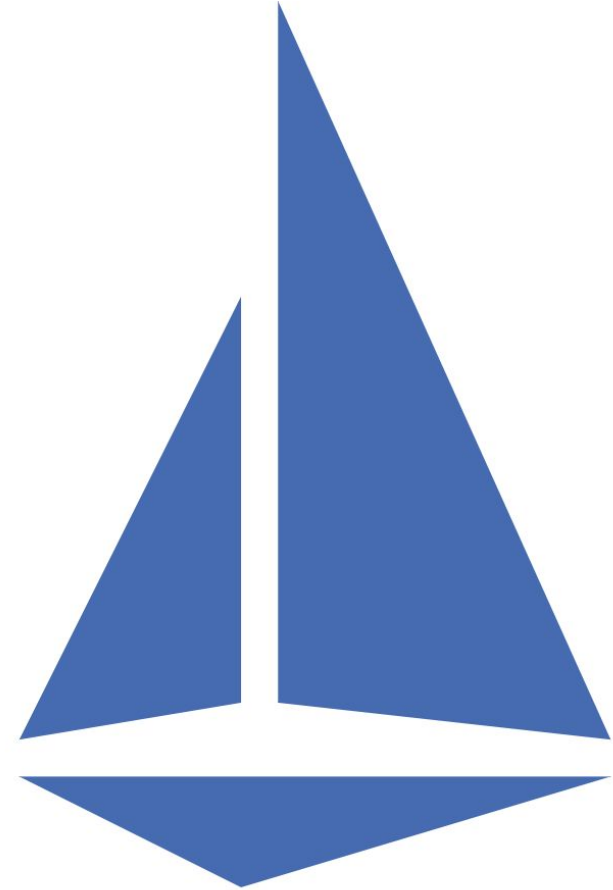


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**CLOUD NATIVE**  
**COMPUTING FOUNDATION**





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Can we do **better** ?

*Let's **rewrite** some stuff!*

No, a lot better

*Ok, lets **share** some stuff*



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# Sidecar-less! Lets share Envoy



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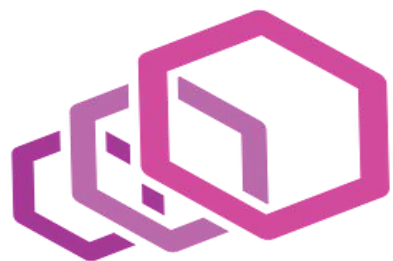


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*Complexity: People X Code*

*Complexity → Bugs → Vulnerabilities → Pain*



**envoy**

*has a LOT of code*

*no multi-tenancy!*



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# Share Envoy **without multi-tenancy?**

*Let's use the network!*

How do we **trust** things in the network?

*oh yeah, mTLS*

# A Look Back: Ambient Mode

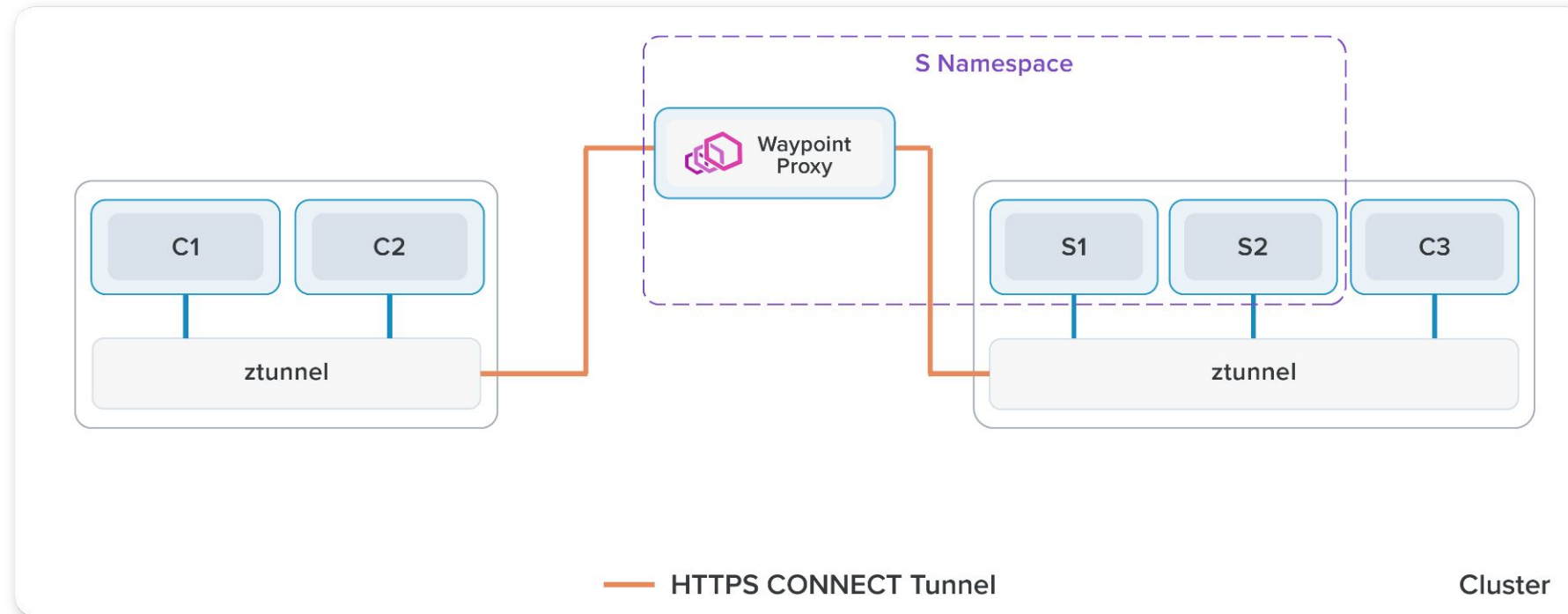


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	Allocated vCPU	# of e2-standard-8 Instances	Utilization % of CPU Allocated	Utilization % of MEM Allocated	Cost / Month
Baseline	132	17	32%	17%	\$3326.45
Sidecars	226	29	35%	55%	\$5674.53
Ambient (L4 Only)	132	17	40%	19%	\$3326.45
Ambient + Waypoint Proxy	142	18	39%	22%	\$3522.12

Simulation: 111 Application namespaces / 100 Load Generator Clients / 1200 Deployments / 788 Services

# A Look Back: Gateway API & GAMMA

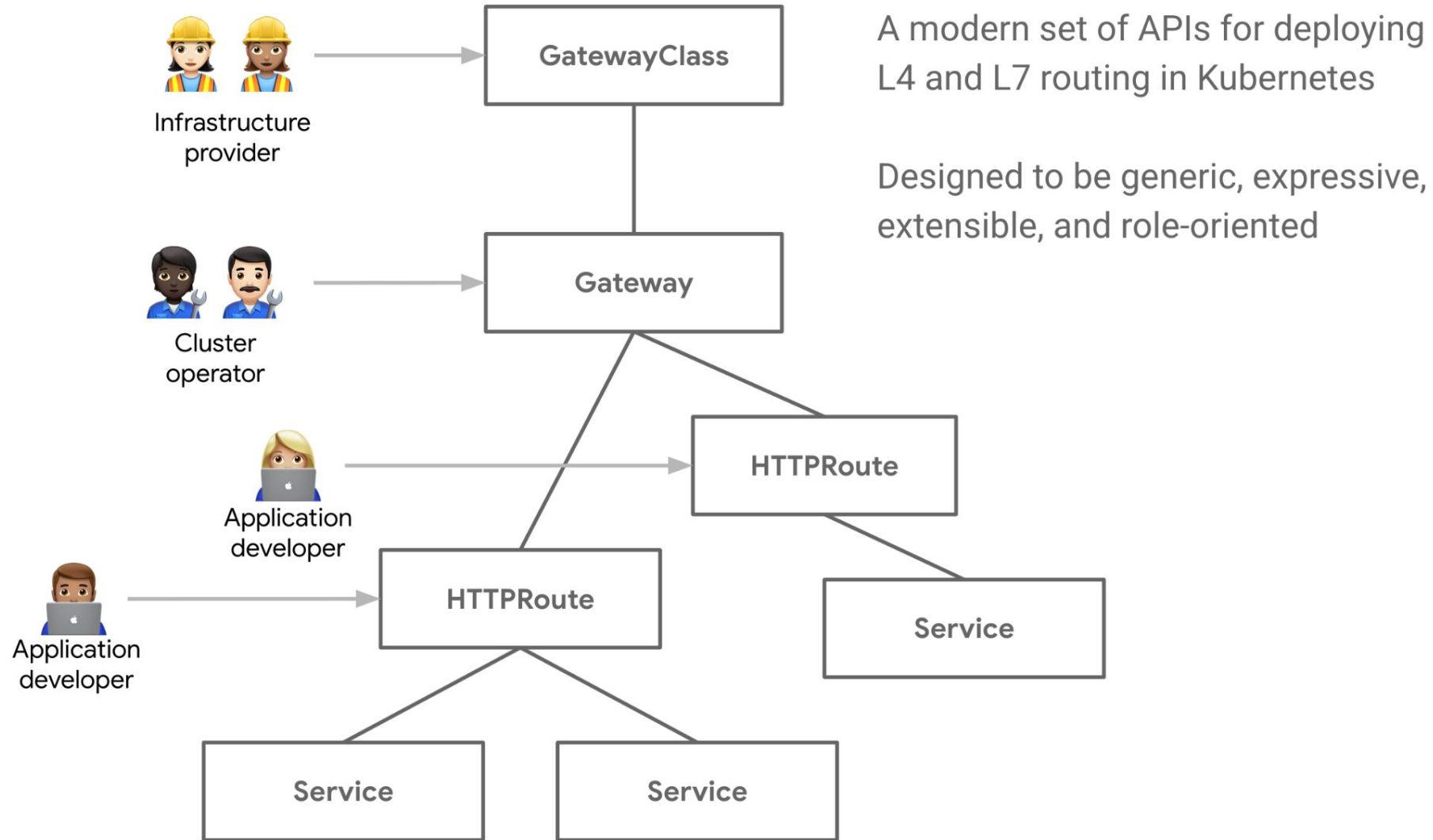


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# A Look Back: Community



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- Over 600 active contributors
  - Across 120 companies
  - 200 contributing for the first time in the past year
- MSFT announced Istio support
- Third most active project in CNCF (by PRs)
  - Kudos to OpenTelemetry and Kubernetes for kicking our butt

# A Look Back: Much, much more



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- Feature Promotions:
  - External Authorization to Beta
  - Helm installation to Beta
  - Canary upgrade and revision tags to Beta
  - WorkloadGroup to Beta
  - Distroless to Beta
  - Dual Stack support to Experimental
- Enhanced Security:
  - Formal Audit completed
  - Fuzz testing continues to be expanded
- ARM support

# The Future



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... more of the same ...

# The Future: Goals



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- Keep Istio boring
- Bring mesh to more users
- With less cost and compromise

# Standards & Integrations



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# Enhancements and Stability



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**EXPERIMENTAL  
ALPHA  
BETA**



**STABLE**



# Thank You!



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- Community
- Contributors
- Users
- Complainers

# Get involved!



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<https://istio.io/latest/get-involved/>



## Ask questions

There are a variety of ways to reach out to the community for input.

- 1 Bring your particular Istio questions to the **gamified wizards** of [Stack Overflow](#).
- 2 The [Istio discussion board](#) hosts conversations with other Istio users. Join in to ask questions and discuss Istio.
- 3 Join our [Slack](#) and interact live with other members of the Istio community.



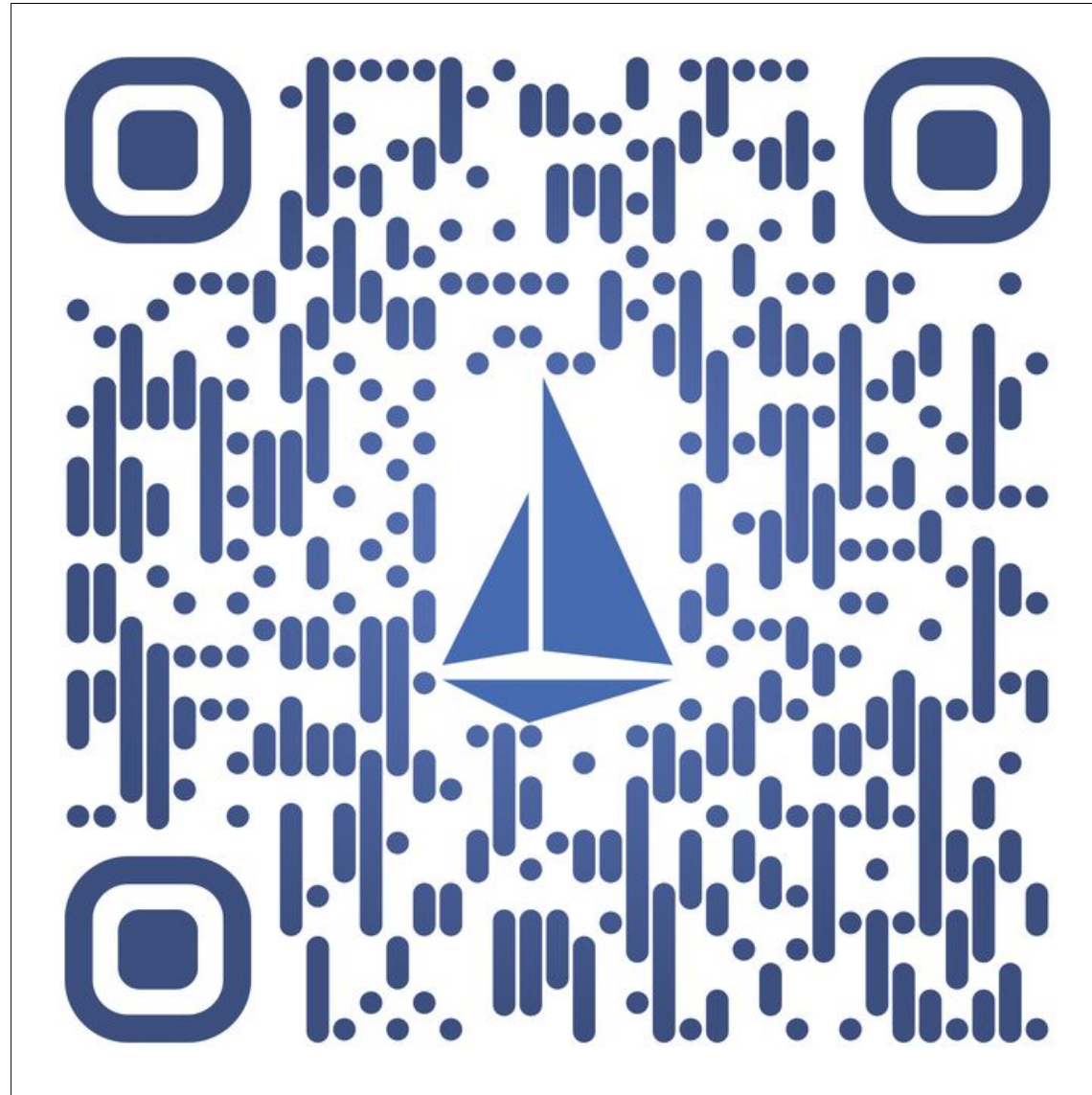
## Join the community

There is so much to talk about around Istio. We welcome your voice!

- 1 Attend an event! [Follow our calendar](#) to see what is coming up!
- 2 Follow us on [Twitter](#) - [@IstioMesh](#)



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**Take the Istio End User Survey!**