



KubeCon



CloudNativeCon

North America 2023



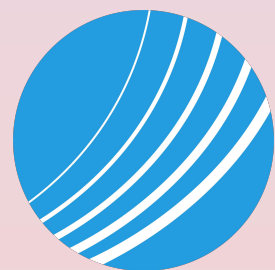


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Contour Project Update

Highlighting New Features and Community Contributions

Introductions



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Sunjay Bhatia

Staff Engineer, VMware

Contour maintainer

@sunjayBhatia (GitHub)

@sbhatia (Slack)



Nigel Brown

Senior Developer Advocate, Intuit

Contour Community Manager

@pnbrown (GitHub)

@nigel (Slack)

What is Contour?



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- Kubernetes ingress controller using Envoy Proxy
- CNCF incubating project since 2020
- Path/header/query-based routing, TLS termination, rate limiting, external auth, upstream TLS, and much more
- Supports HTTPProxy CRD, Ingress, and Gateway API

Architecture

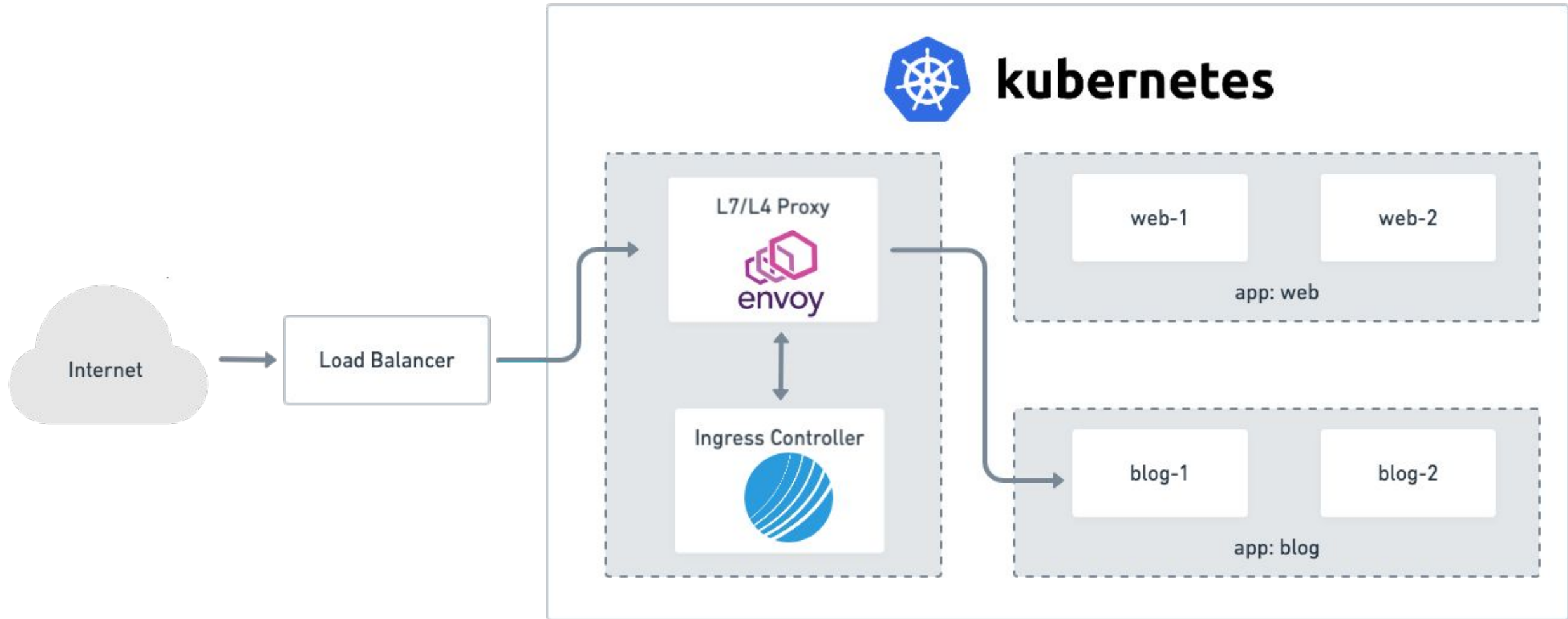


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Envoy Proxy



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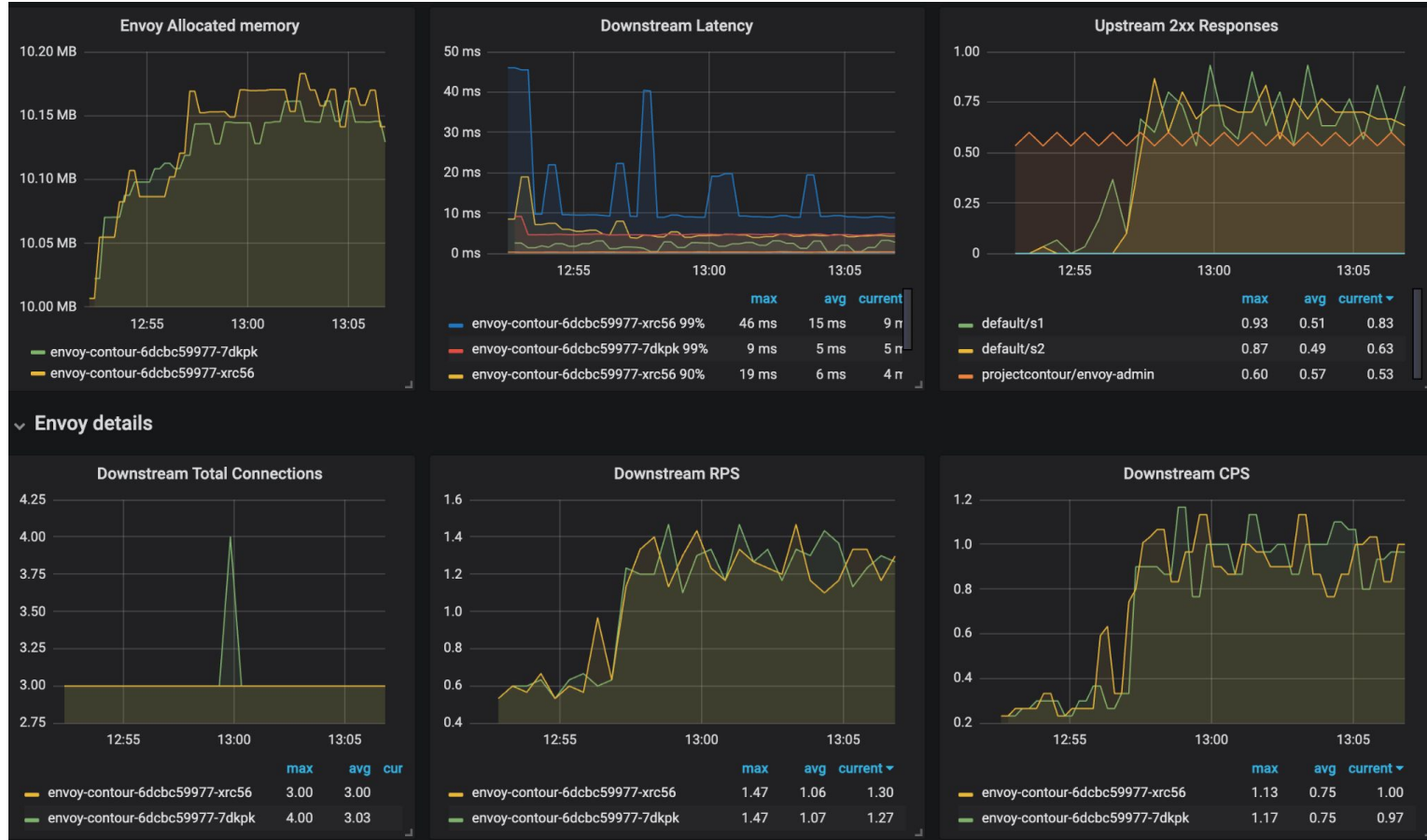


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- Cloud-native, open-source edge and service proxy
- API driven, built for dynamic configuration updates
- Performant
- Observable



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Project History

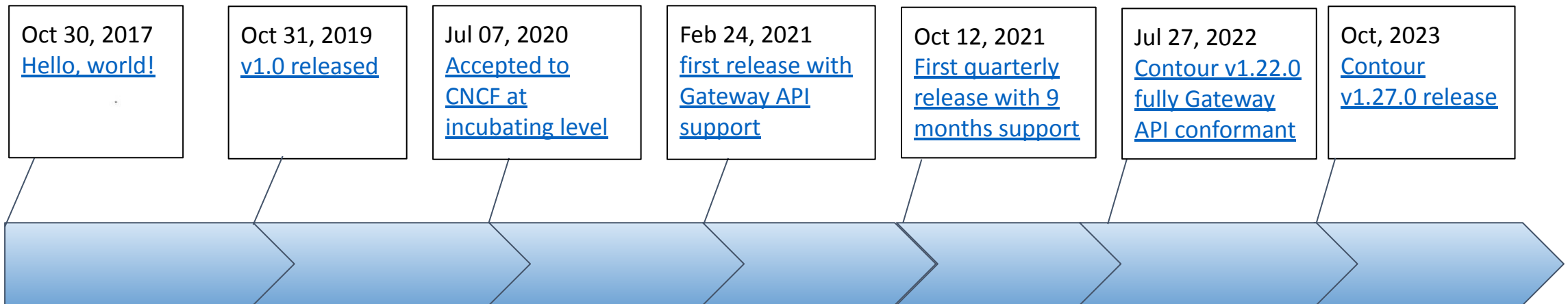


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Production Ready



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- GA since November 2019
- Used at scale in many production environments
- Latest three minor releases supported
 - Includes 9 months of support for each
 - Backports for high severity bug fixes and CVEs

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Advanced Features

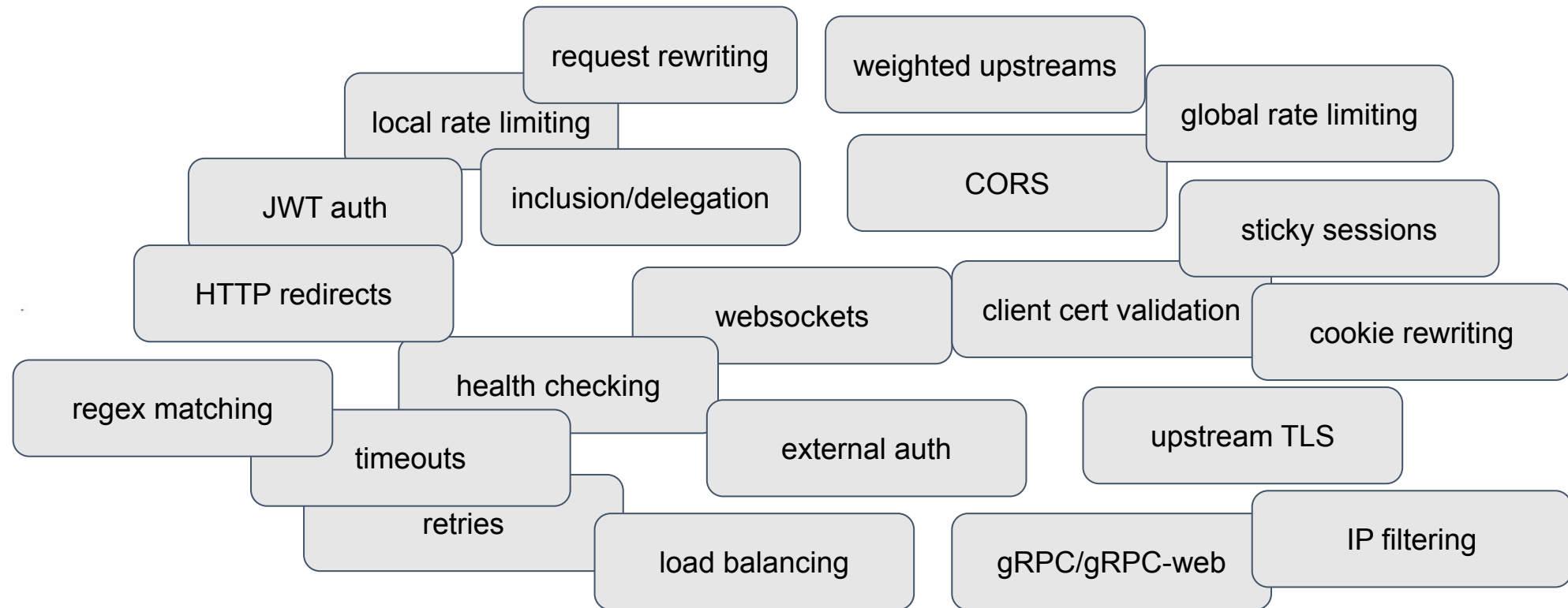


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Multiple Configuration APIs



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HTTPProxy

- Implements advanced features
- Stable v1 CRD

Gateway API

- Next-generation service networking APIs
- Owned by the SIG-Network community
- v1.0.0 + GA for core L7 resources
- Extensible, community-driven

Ingress

- Supports common routing use cases
- A great way to get started with ingress and Contour

Multiple Configuration APIs



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Ingress

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- A great way to get started with ingress and Contour



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Recent Work and Community Contributions



- HTTPProxy IP filtering support by **@ecordell**
- Exporting request tracing data to OpenTelemetry by **@yangyy93**
- HTTPProxy internal redirect support by **@Jean-Daniel**
- HTTPProxy route rule query parameter matching by **@relu**
- Gateway API: GRPCRoute support by **@fangfpeng**



- Gateway API: Conformant with v0.8.0
- Gateway API: Support for Gateway Listeners on many ports
- Gateway API: TCPRoute support
- Operational improvements for Listeners and Clusters by **@clayton-gonsalves**, **@rajatvig**, **@izturn**
- Kubernetes 1.28 support

Contour v1.27.0



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- Bug fix in route sorting for regex path match rules by **@davinci26**
- Improved cache warmup logic on startup by **@therealak12**
- EndpointSlice support by **@clayton-gonsalves**
- Mitigations for HTTP/2 rapid reset CVE



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Upcoming Release and Future Roadmap

Contour v1.28.0



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- Gateway API: v1.0.0 support
- Gateway API: Implementing more extended features
 - HTTP Timeouts
 - Backend protocol
 - BackendTLSPolicy
- Migration to using EndpointSlices by default
- See the v1.28.0 GitHub milestone for more:
<https://github.com/projectcontour/contour/milestone/68>

Future Roadmap



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- **Continuing contributor-driven initiatives and feature development**
- **Working toward expanding the maintainer team**
- Website architecture overhaul
- Working with partners running Contour in production
 - Improving efficiency at scale
 - Improving observability
- Continuing to be a fully conformance Gateway API implementation
- Parity between HTTPProxy and Gateway API offerings

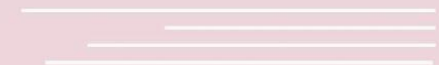


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Get Involved!

Contour Community



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CONTOUR

projectcontour.io
<https://projectcontour.io/community/>



#contour



project-contour@googlegroups.com

70M+
Image Pulls

200+
Contributors

650+
Forks

3.5k
GitHub Stars

112
Releases

210+
Contributing
Companies

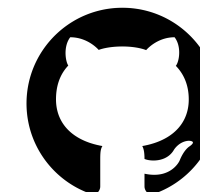
1,360
Slack
members

19 Blog posts
9 KubeCon
talks

1k+
Twitter
followers



@projectcontour



<https://github.com/projectcontour>



<https://www.youtube.com/channel/UCCde7QSfcyYJ8AuXofD5bTA>



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