

Managing & securing microservices with Aspen Mesh

Overview and demo
August 2018



ASPEN MESH

From monolith to microservices

- Containers and microservices are two of the biggest trends in modern application development
- Applications are more distributed than ever
- Increasing use of hybrid deployments — multi-cloud, on-premises + cloud
- Focus on speeding time to market for new code





Honest Status Page

@honest_update

Following



We replaced our monolith with micro services so that every outage could be more like a murder mystery.

5:10 PM - 7 Oct 2015

3,034 Retweets 2,552 Likes



 20

 3.0K

 2.6K



An array of challenges...

What's going on in my system?

What happens when something breaks?

How can I secure my perimeter in this distributed landscape?

How do I know traffic is secure between services?

How can I meet my regulatory requirements?

How can I speed deployment of new code?

How do I manage all of this complexity?



A service mesh is....

- An abstracted communication layer that provides observability, security and control.
- Exists so developers can focus on code, not infrastructure.
- While operators work independent of dev cycles to provide a more resilient environment with consistent visibility, policy and security.



Aspen Mesh is a supported service mesh built
on Istio.



Three pieces to the Aspen Mesh solution

Enterprise Service Mesh

Supported distribution of Istio

- Service discovery
- Intelligent load balancing and request routing
- Secure communication
- Policy enforcement
- Unified logging and requests tracing
- Blue/Green and canary testing
- HTTP, HTTP2, gRPC support
- Hybrid and multi-cloud support

Analytics Platform

Visibility and insights for microservices

- Hosted SaaS for reduced TCO
- Visualization of clusters and microservices
- Real-time health and security monitoring
- Details and insights into errors and warnings
- Customizable alerts
- End-to-end policy map for your services
- Predictive analytics

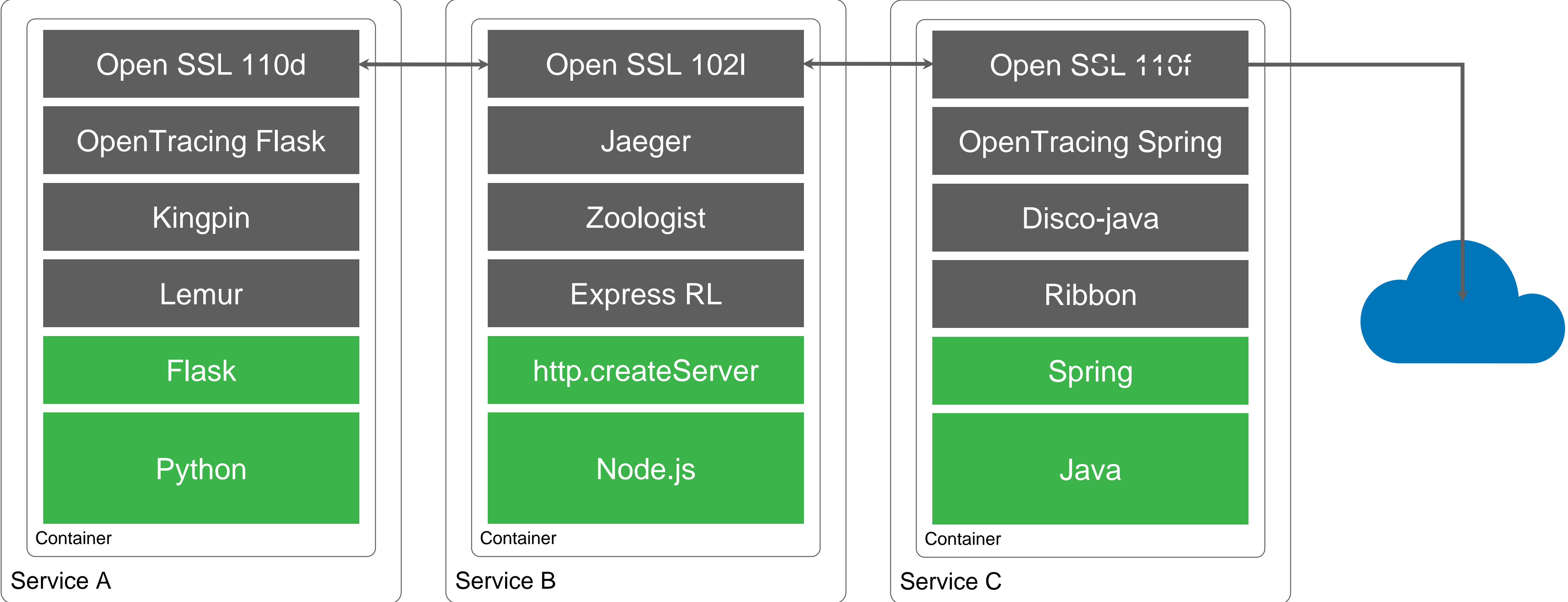
Support

Access to engineering and support

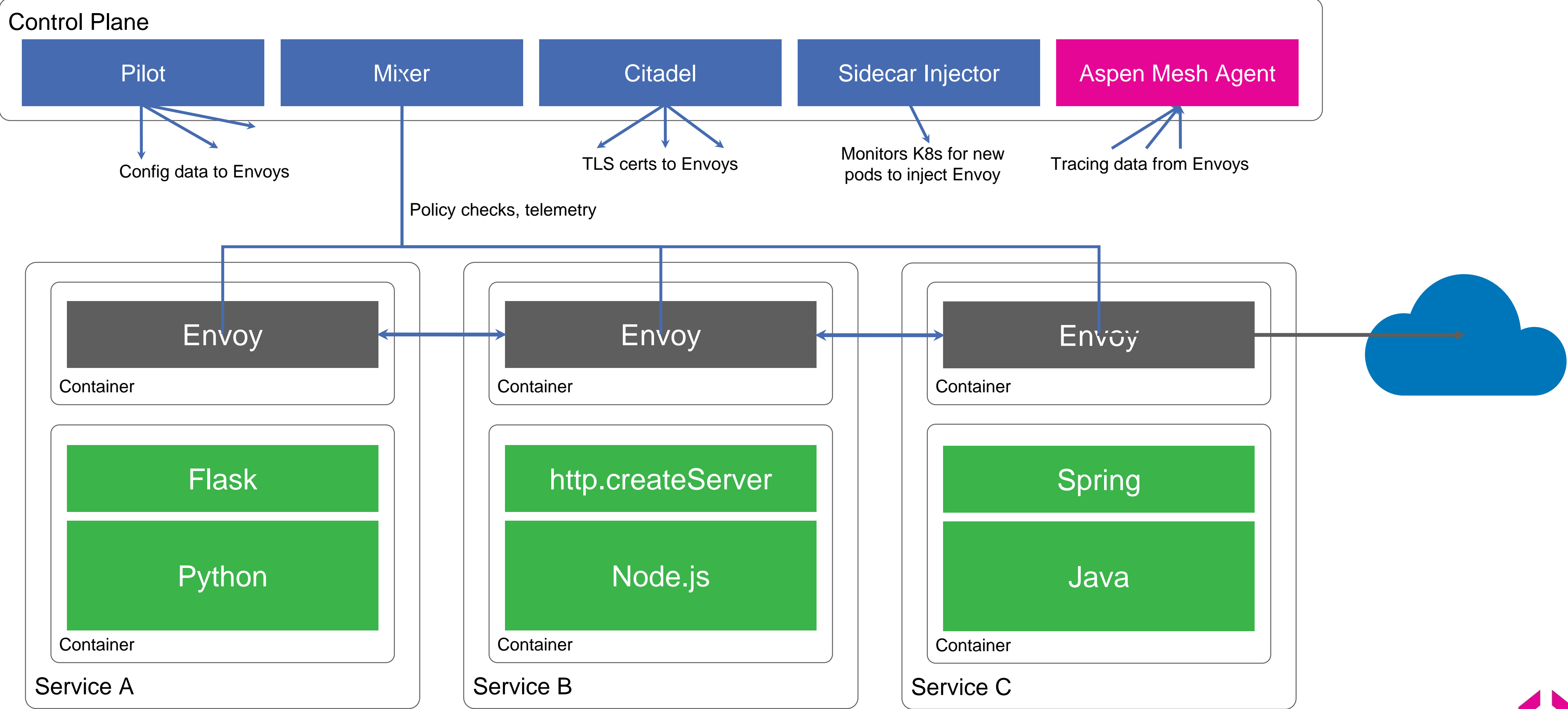
- Tested, packaged and documented
- Performance optimization
- Technical support
- Troubleshoot production issues
- Upstream bug fixes
- Feature development
- Community representation



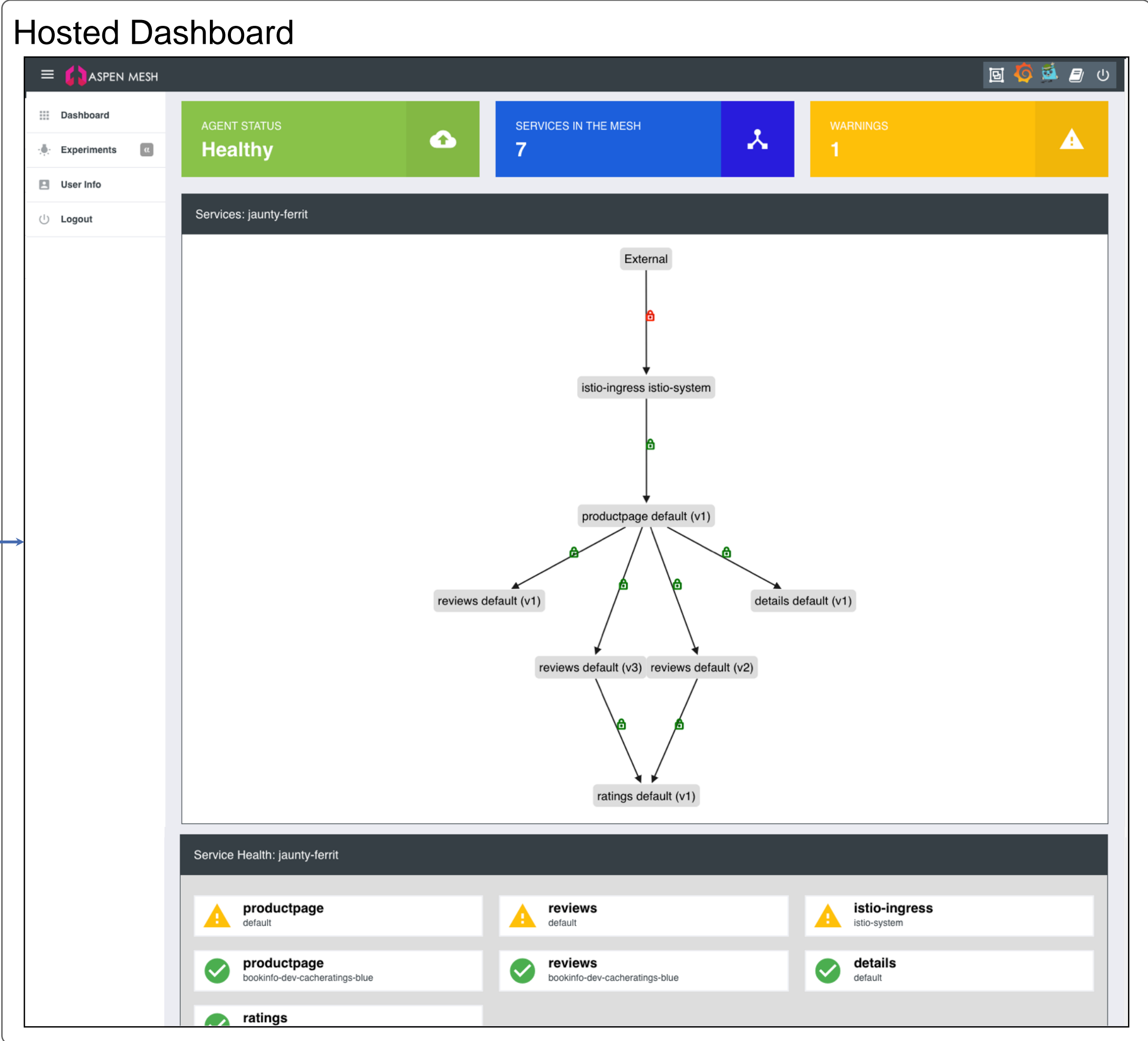
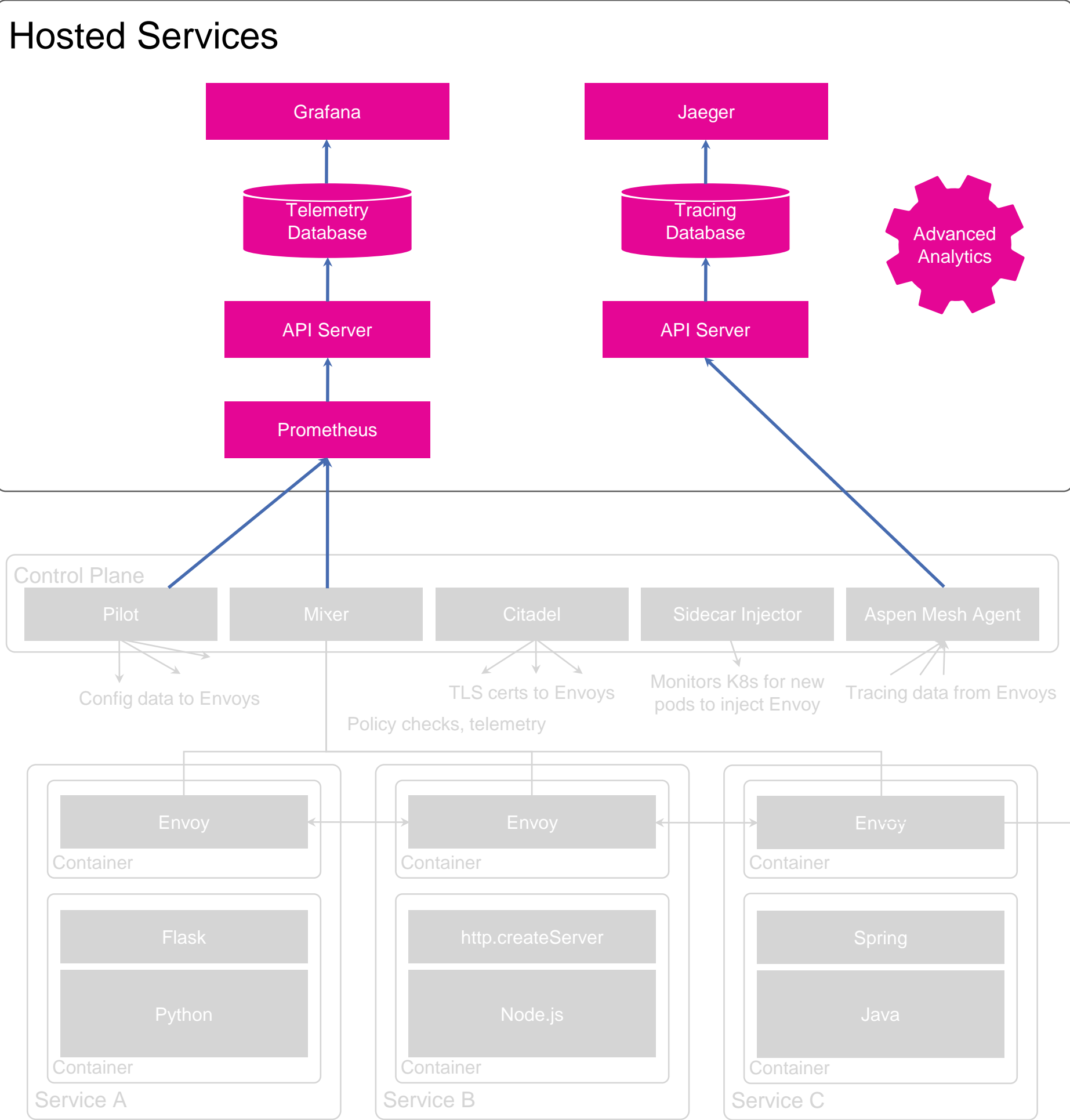
Microservices without a service mesh can be complex to manage



Sidecars with a control plane add security, consistency, and clear areas of ownership



Our hosted analytics platform adds visibility, analytics, and an integrated suite of services



DEMO



Questions?



APPENDIX

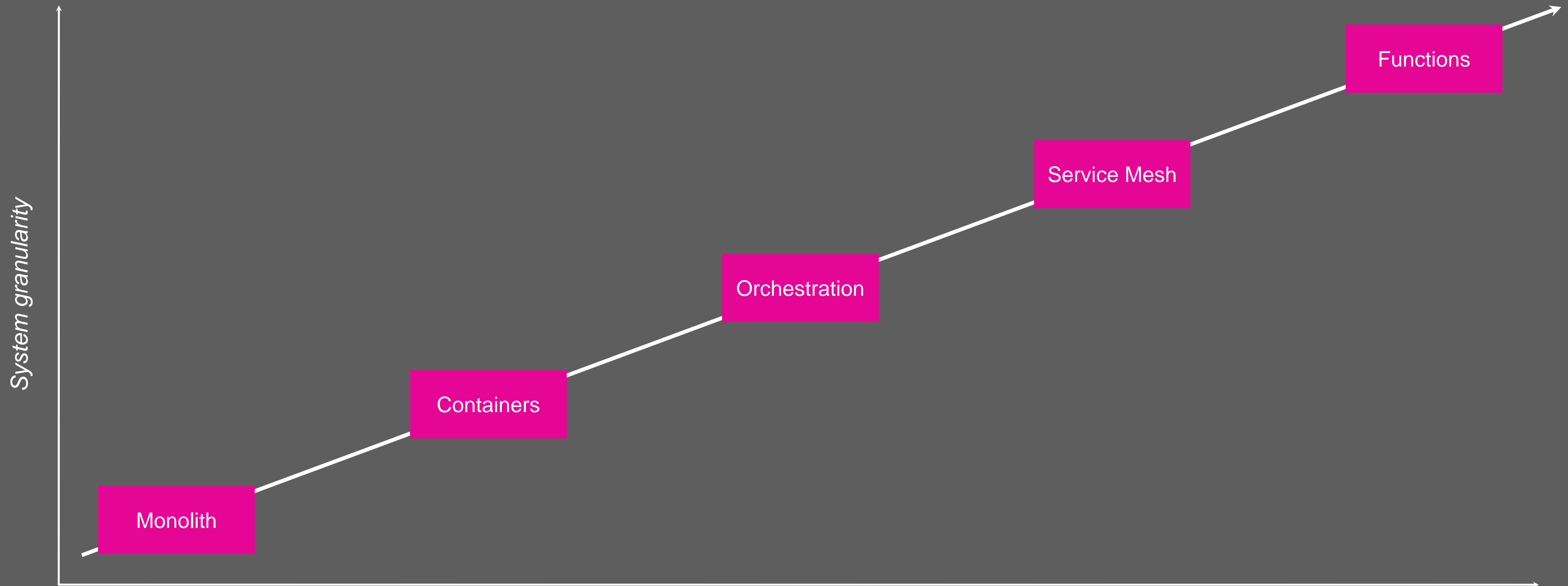


Focus on Security

- Visibility into security posture
 - End-to-end encryption via mTLS
 - Control of SSL stack and certificate management
 - Workload identity via SPIFFE
- Granular control
 - Access management via L7 attributes
 - Rate limiting & quota management



The microservices evolution



Typical solution

Custom build

Docker

Kubernetes

Istio

TBD...

Key challenge

How can I speed time to market?

How do I scale this effectively?

How can I control this more effectively?

Should I even bother with infrastructure?

TBD...

