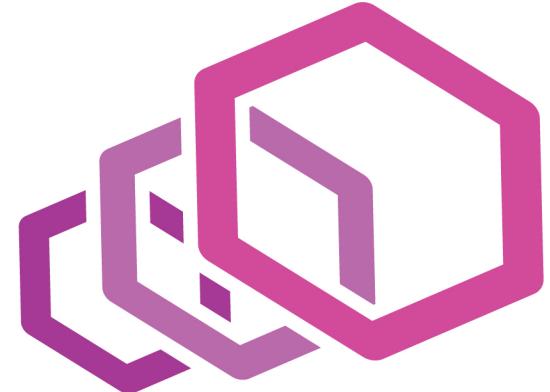


envoycon



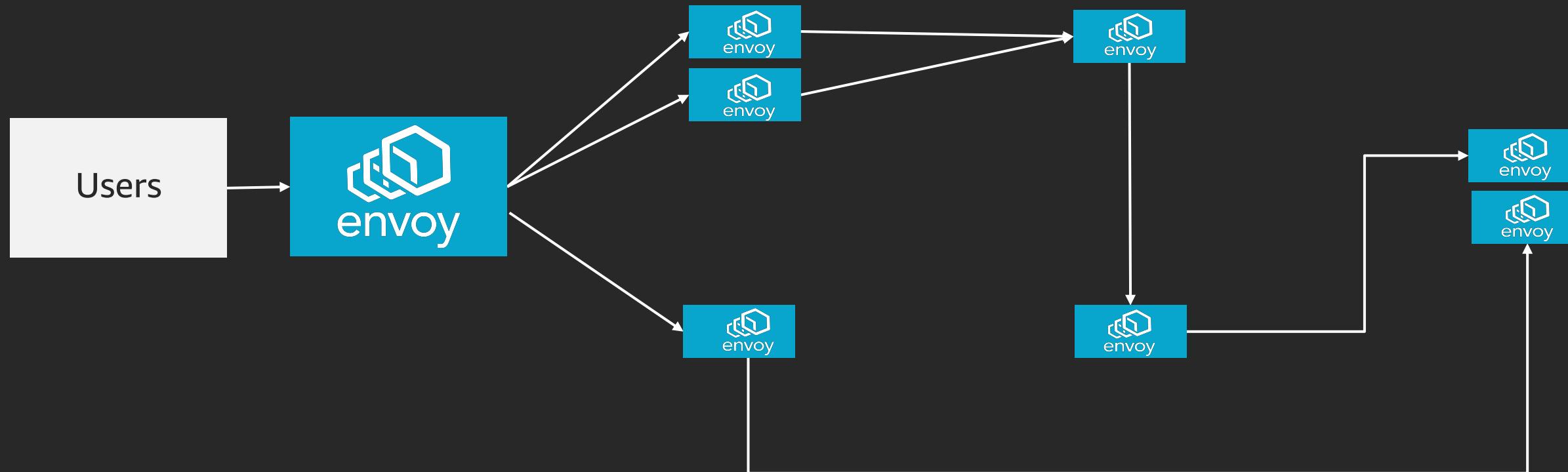


envoycon

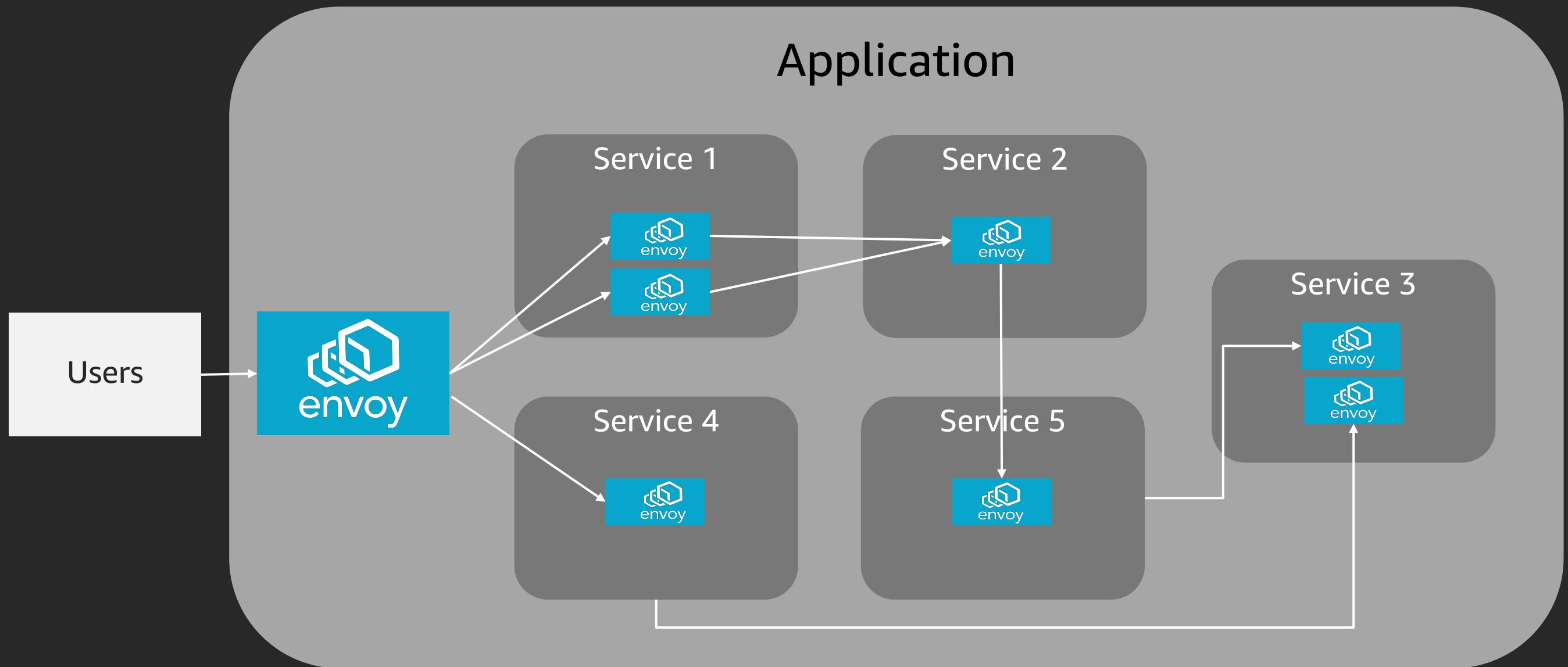
Managing tens of thousands of Envoy: How we do it

Shubha Rao, AWS App Mesh
 @_shubha

Compute and distribute mesh configuration

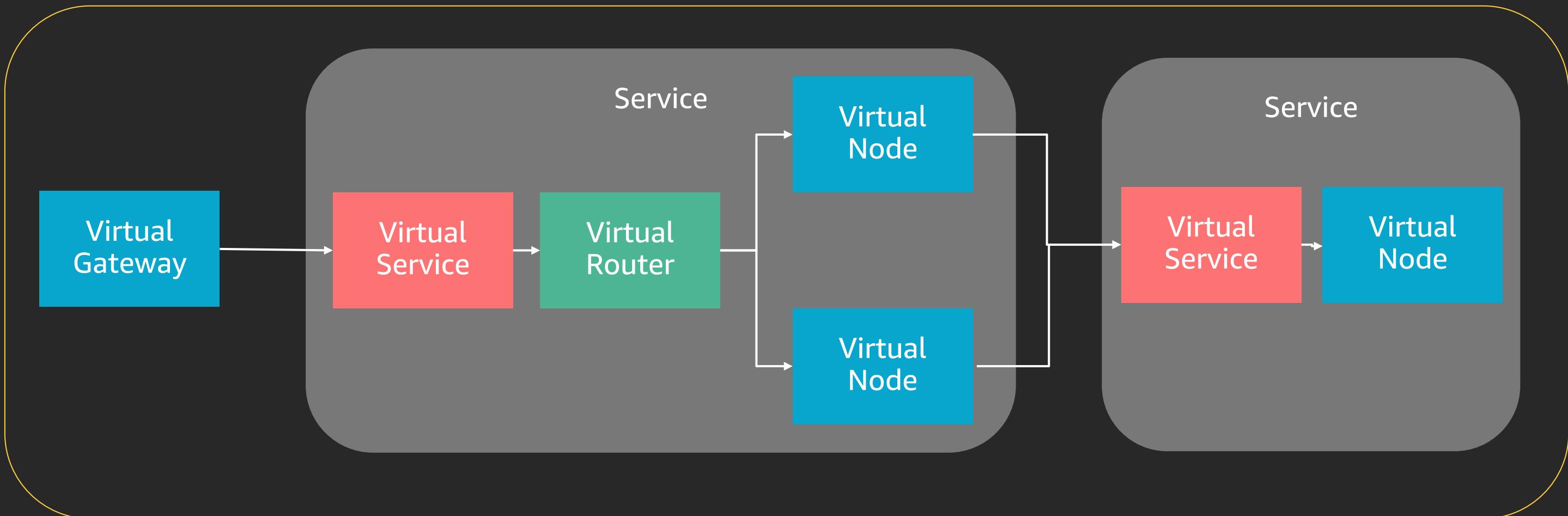


Represent mesh using logical application definitions

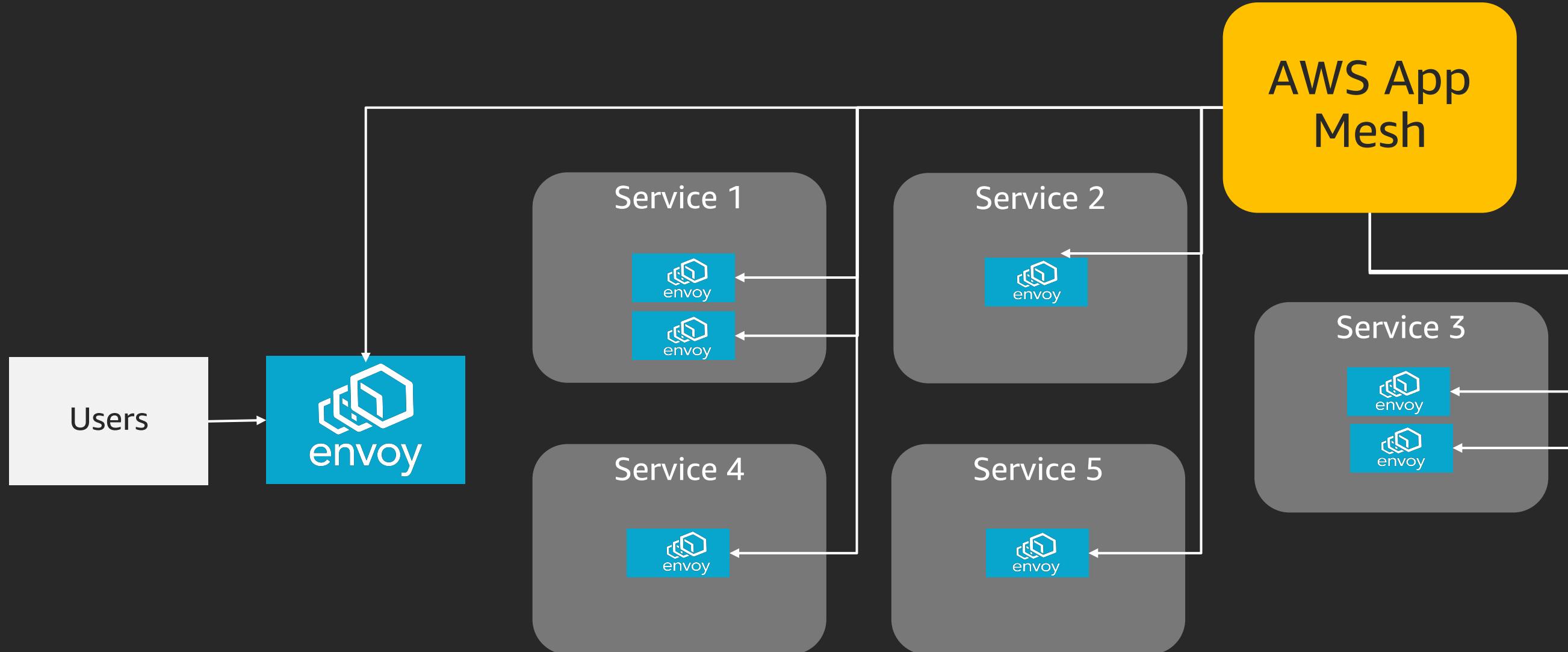


App Mesh Configuration

| Mesh | Virtual Gateway | Virtual Service | Virtual Router | Virtual Node |
|-------------|-----------------|------------------------------------|-----------------------------|-------------------------------|
| Application | Ingress rules | Logical name/ Service discovery | Routing match conditions | Group of service endpoints |



AWS App Mesh manages your proxy configuration



Why did we built AWS App Mesh?



**Security, reliability,
availability, and scale**

Managed by AWS



**Application
focus**

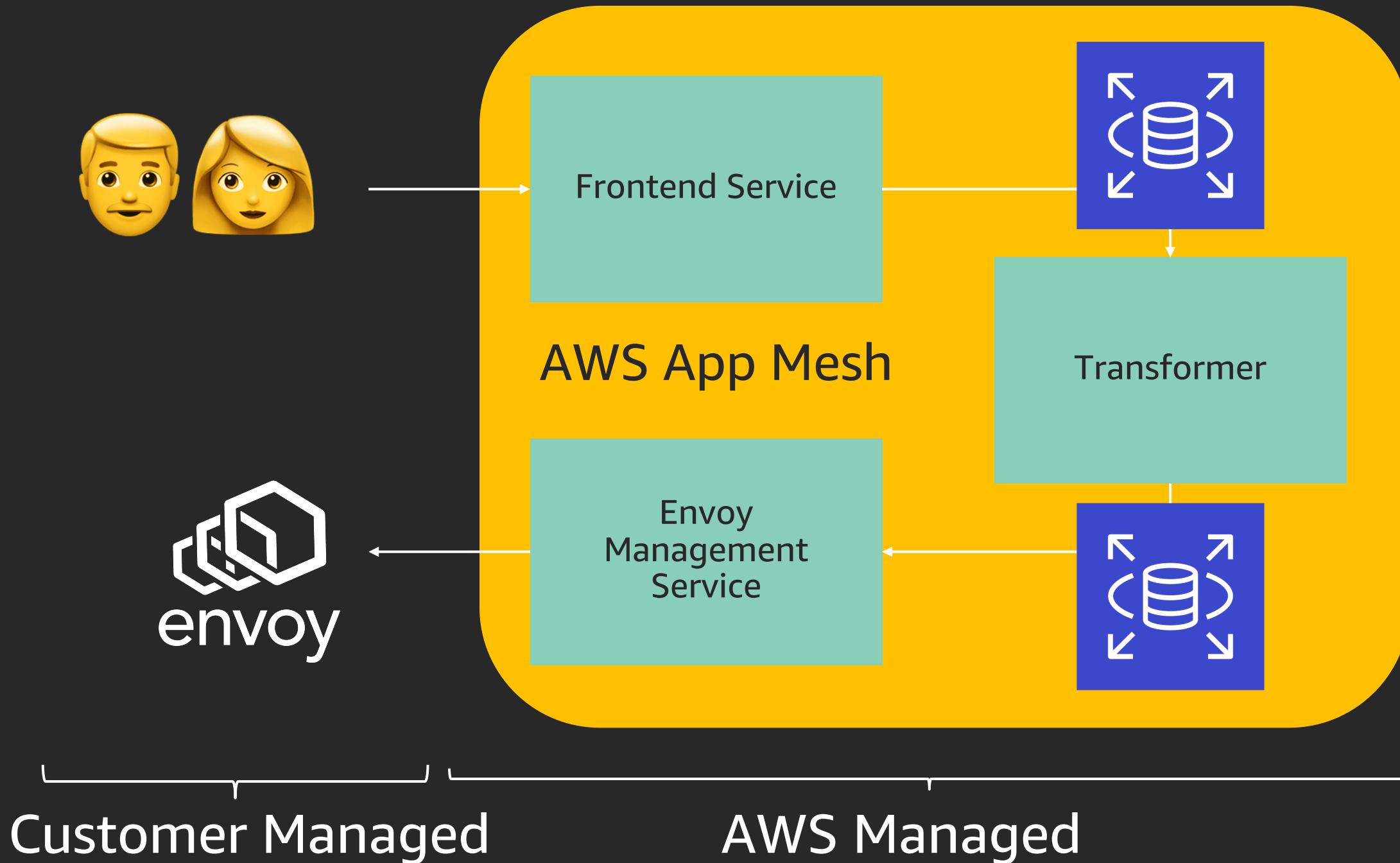
Declarative model for
application communication



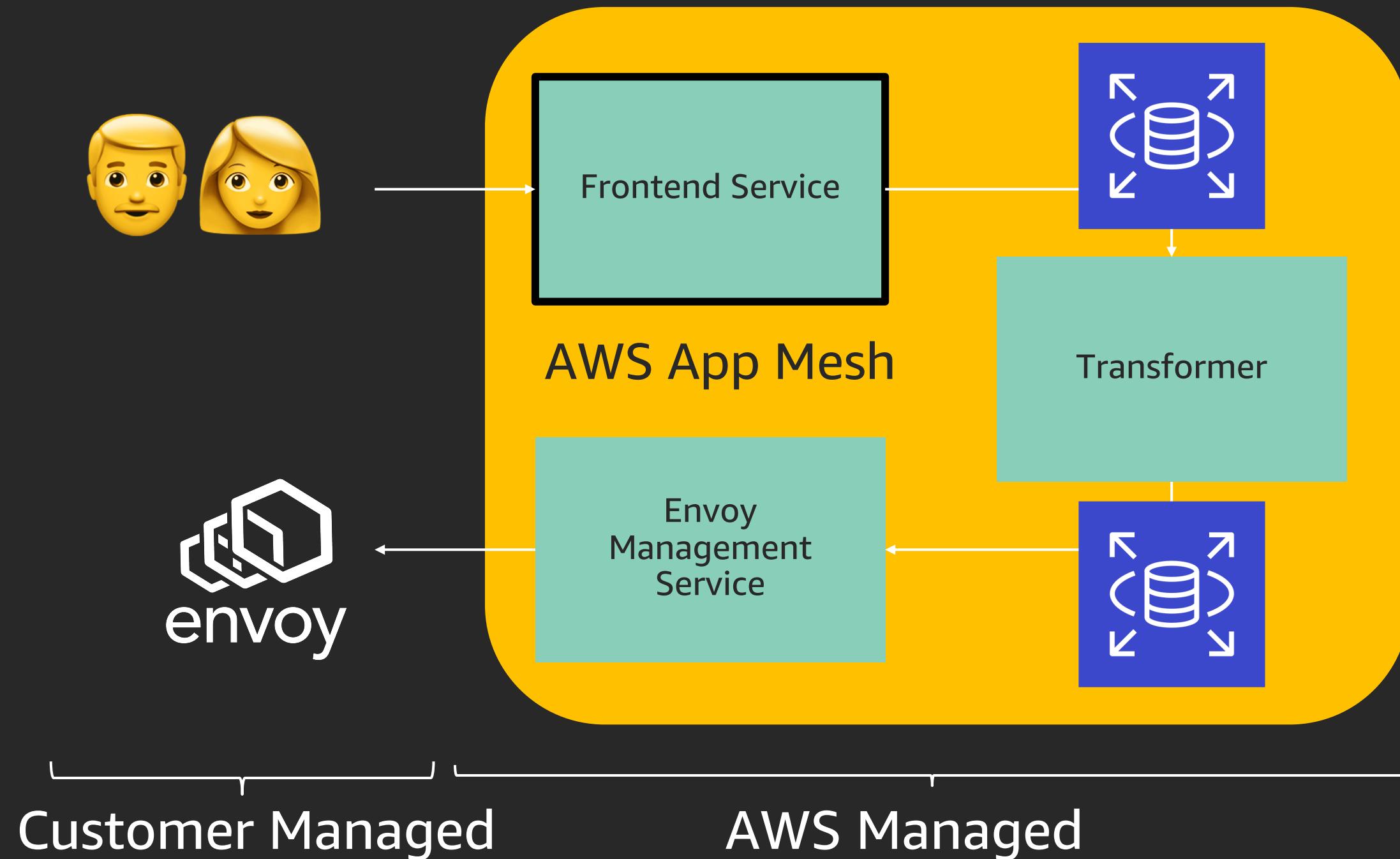
**Choice: picking the
best tool for the job**

Flexible for use with
multiple compute options

(Very) High-Level Control Plane Architecture



(Very) High-Level System Architecture



Frontend Service: manages user configuration

Authentication

You are who you
say you are

Authorization

You can do what
you want to do

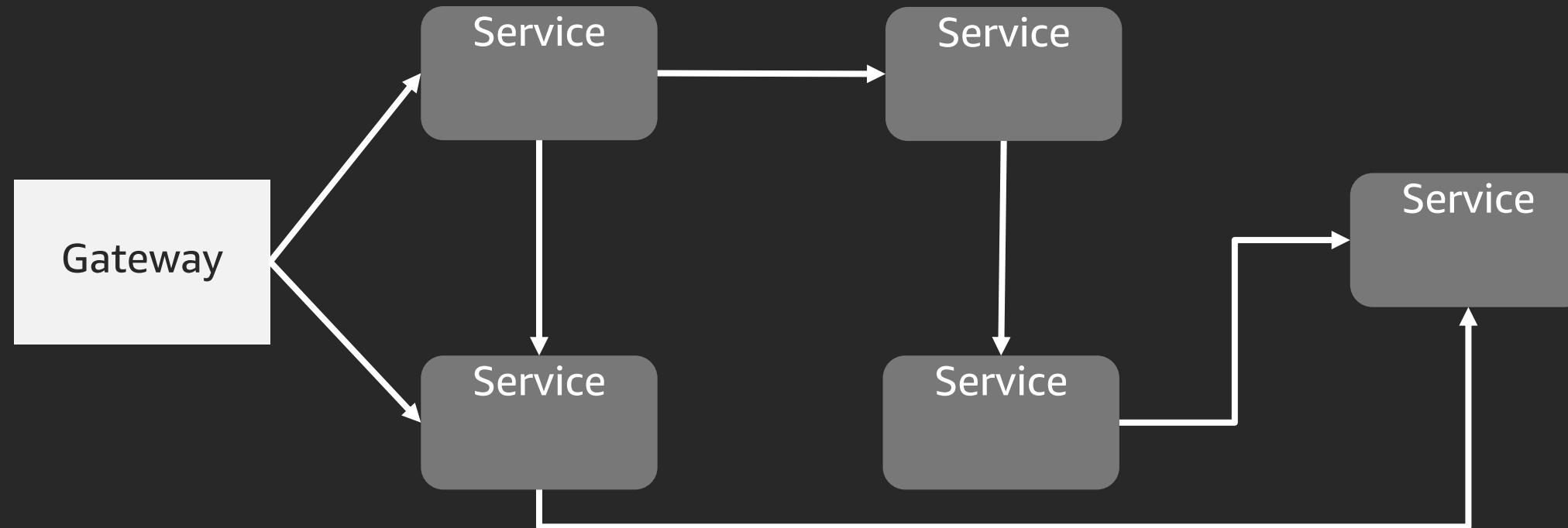
Validation

The input is
correct

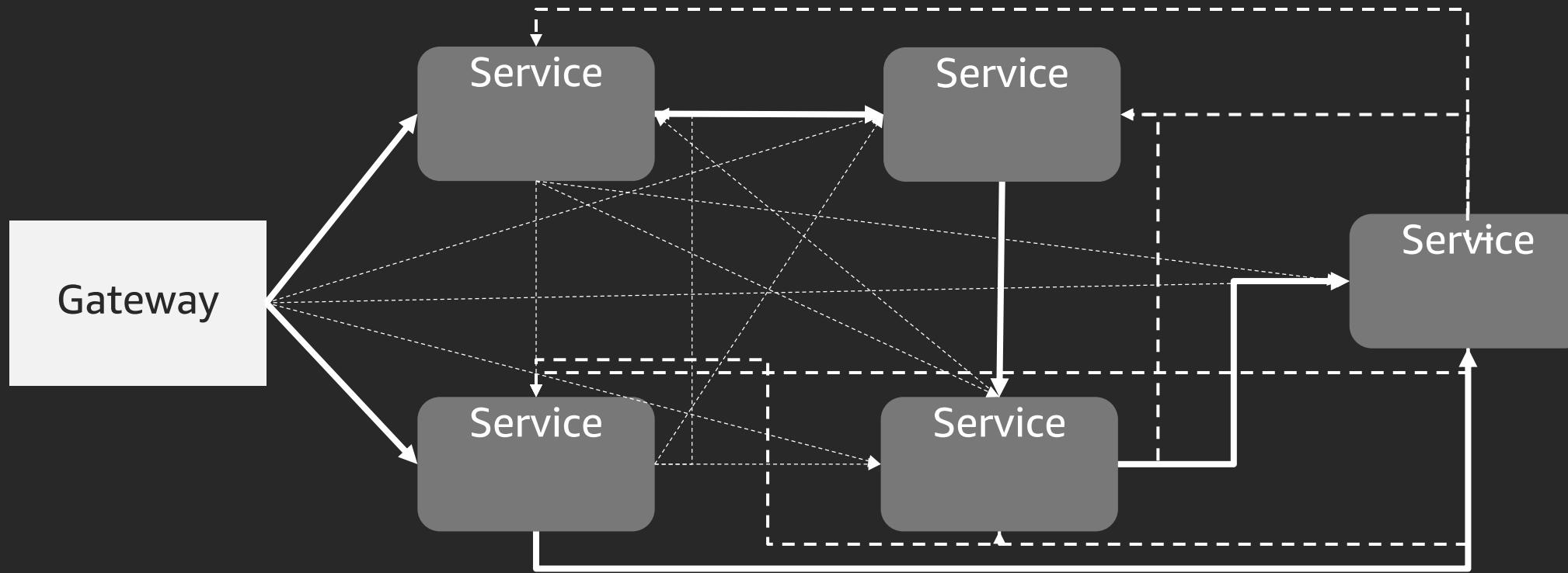
Persistence

Read or write the
result

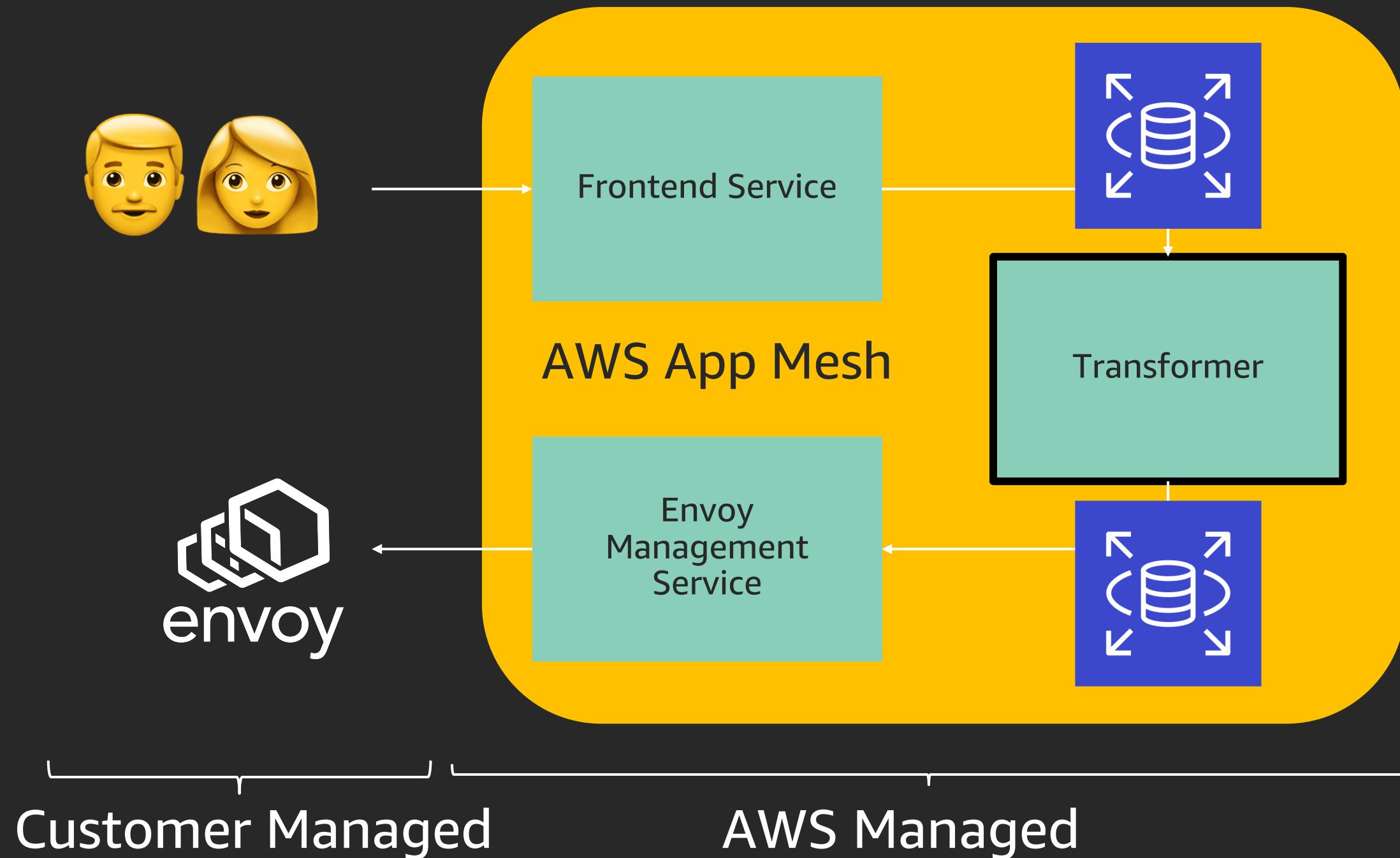
App Mesh requires explicitly modeled dependencies



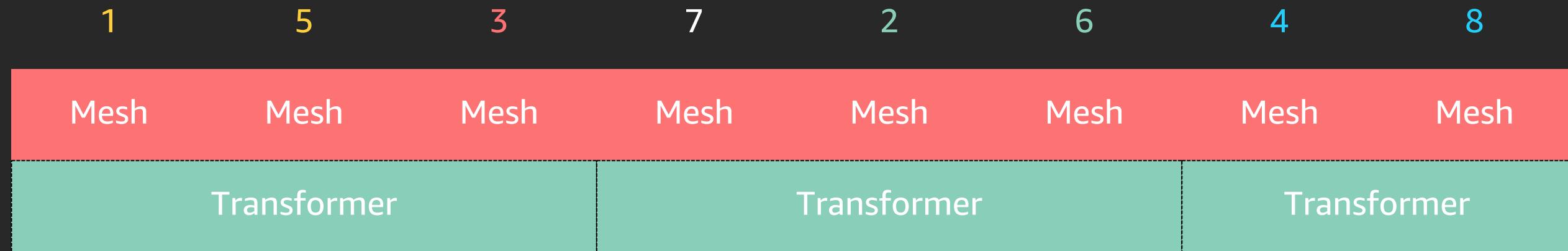
Minimizes config size, mutation and blast radius



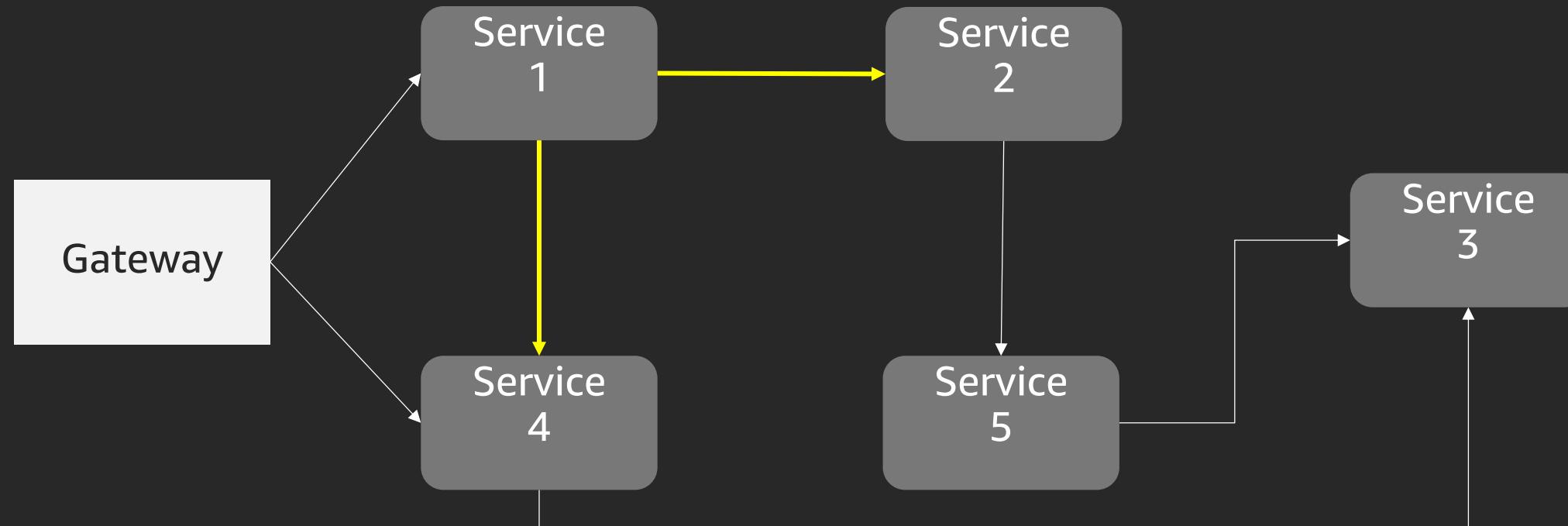
(Very) High-Level System Architecture



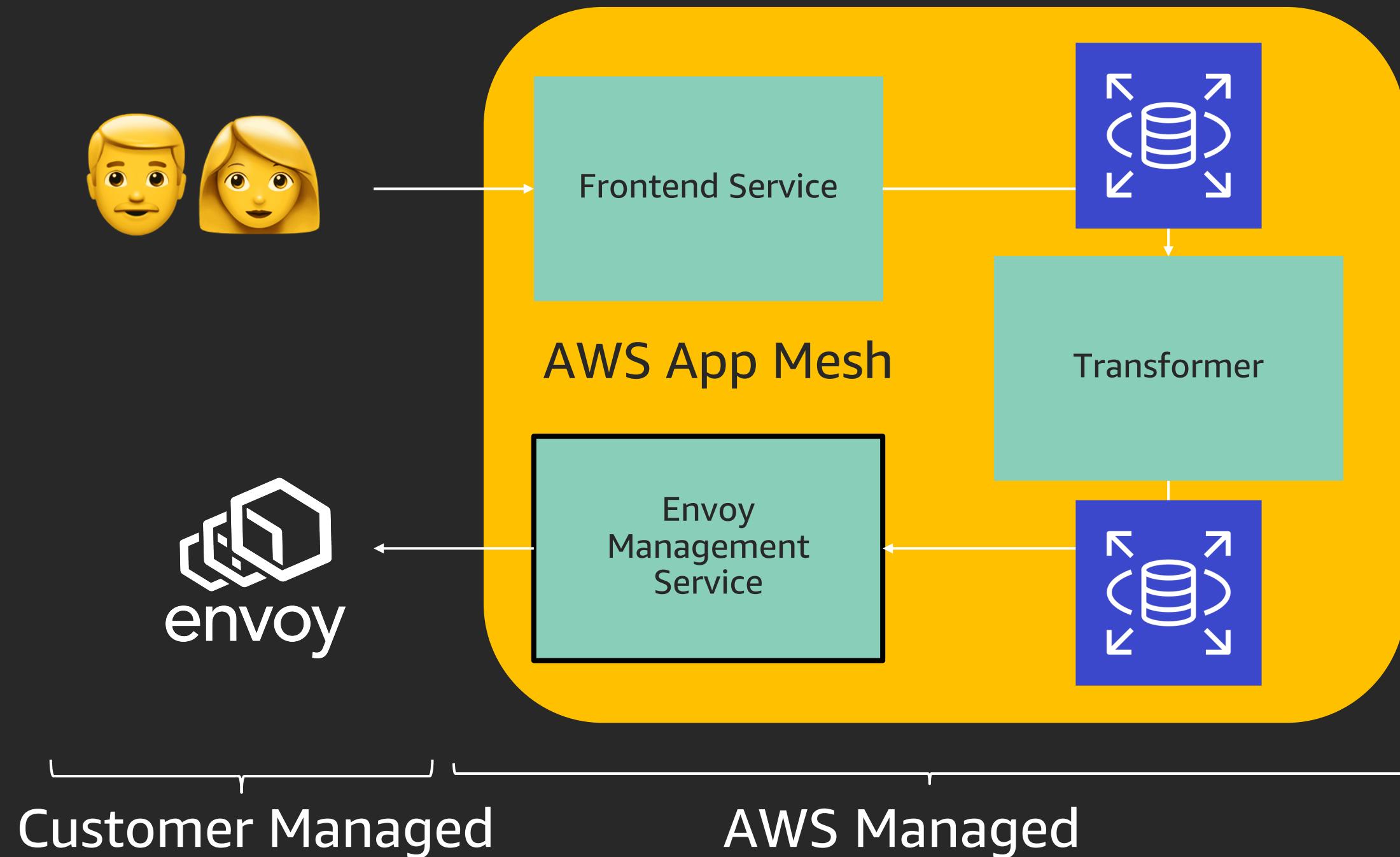
Distributed, scheduled transformation



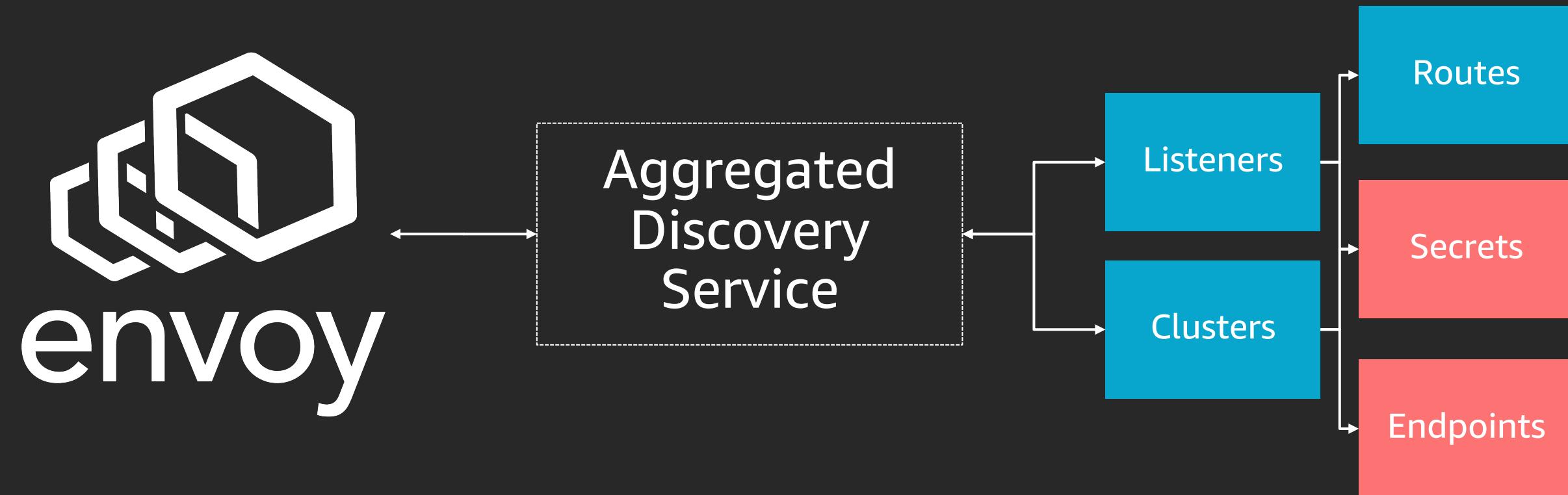
Performs fragment parsing to customize config



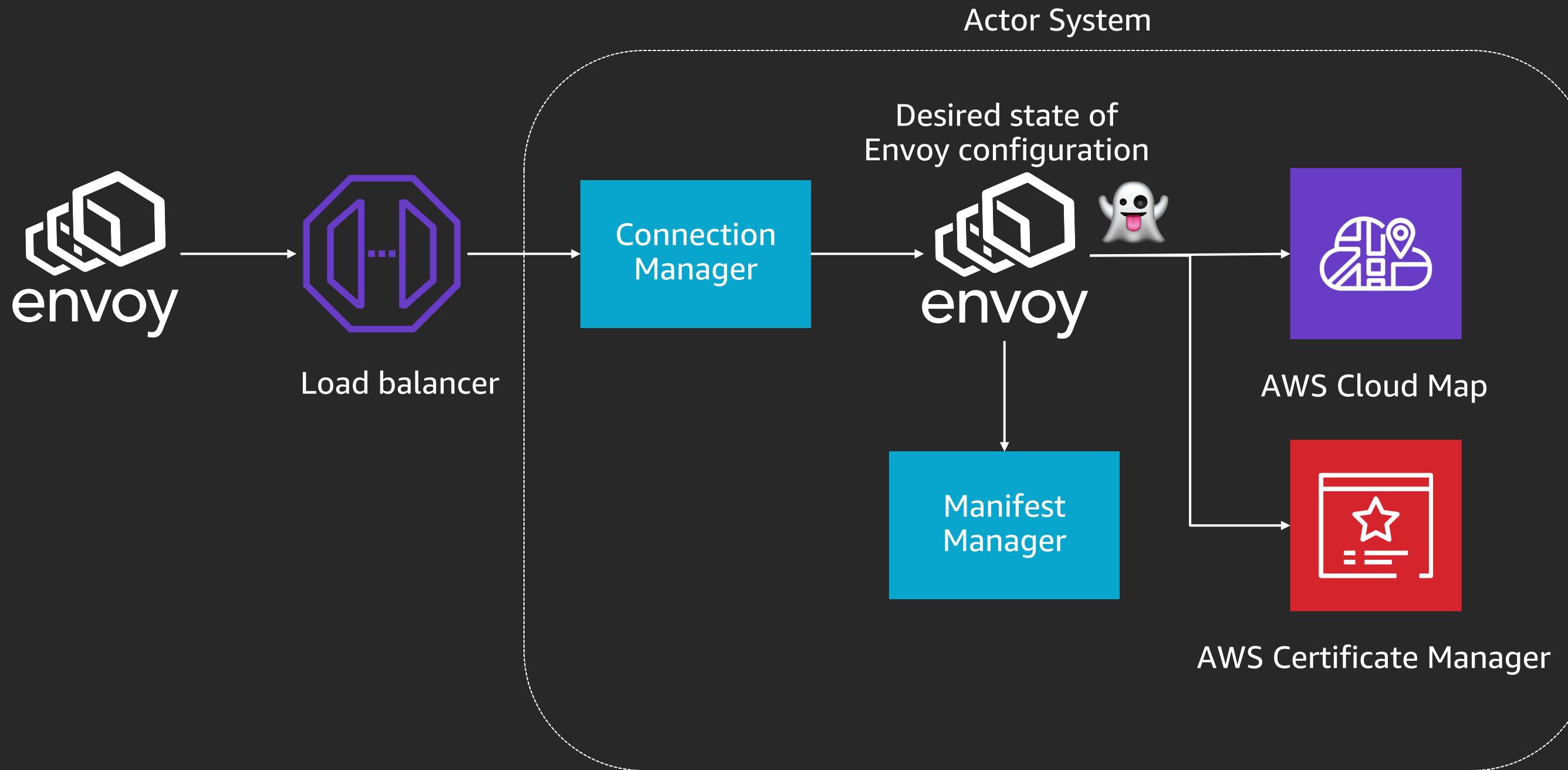
(Very) High-Level System Architecture



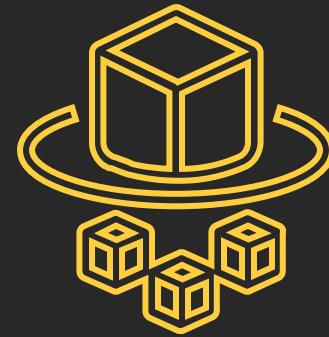
Envoy Management Service implements xDS



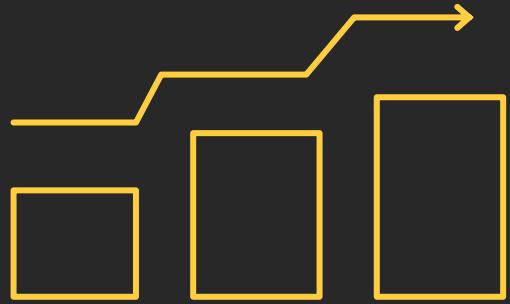
Transaction number based version tracking



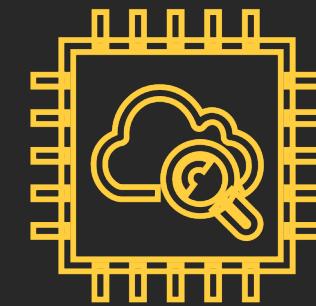
Operations



Each service runs
on AWS Fargate



Each service scales
independently



Monitoring for key
service indicators

C O N 3 2 3 - R

AWS App Mesh: Under the Hood

David Bell

Senior Software Engineer
Amazon Web Services

Engage with us



Meet engineers at our booth



aws-app-mesh-roadmap



_shubha



Thank You

