# Optimizing the control plane performance

Examples take from "Istio in Action"

https://www.manning.com/books/istio-in-action

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### Why is it important?

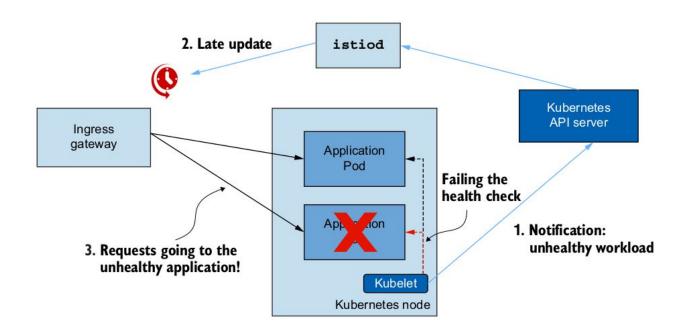


Figure 11.1 Routing traffic to phantom workloads due to an outdated configuration



#### Steps to synchronize the data plane

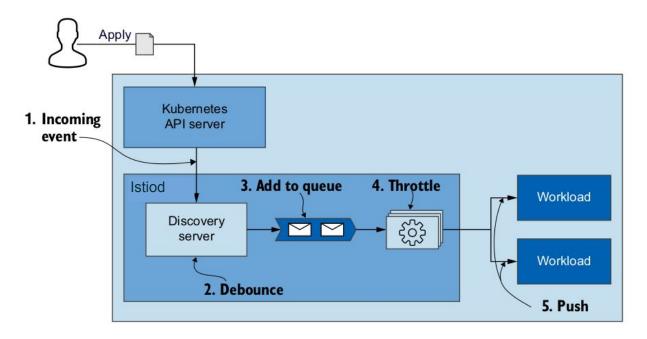


Figure 11.2 The sequence of actions to push the latest configuration to workloads



#### Factors that determine performance

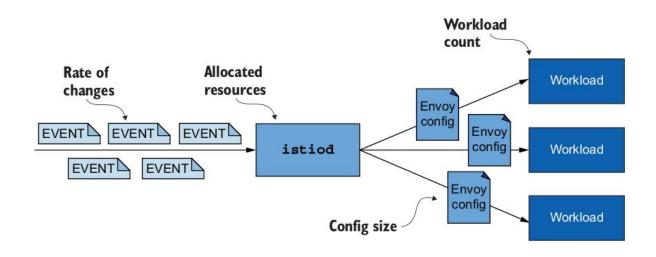


Figure 11.3 The properties that affect control-plane performance



### Knobs of improving performance

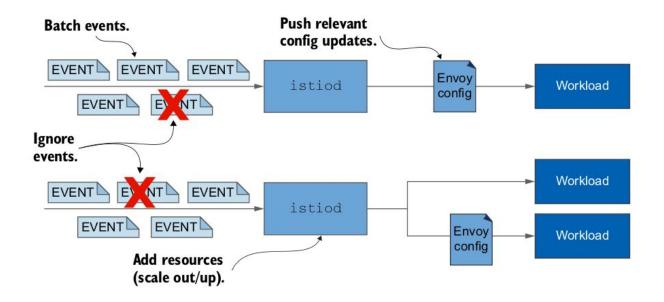


Figure 11.8 The options to improve control-plane performance

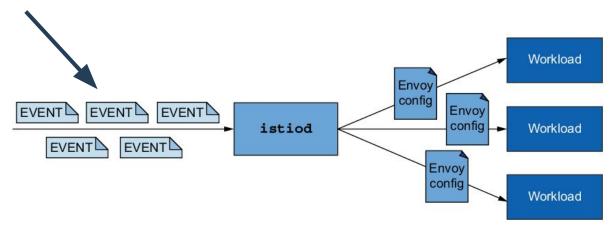


## Demo



### Scale out or scale up? (1)

#### The bottleneck is the rate of changes





### Scale out or scale up? (2)

#### The bottleneck is outgoing traffic Workload Envoy config Envoy EVENT EVENT EVENT config \_\_ istiod Workload EVENT EVENT Envoy config Workload



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#### Thank You!

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