



Feb 17 2021



online

DEVNEXUSTM

***APACHE KAFKA DEVLOPS WITH
KUBERNETES AND GITOPS***

WHAT ARE WE GOING TO TALK ABOUT?



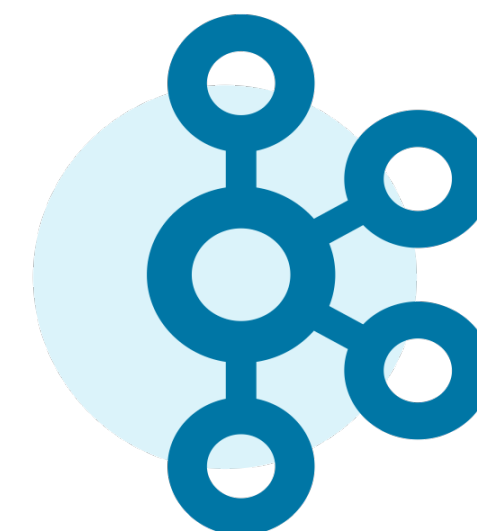
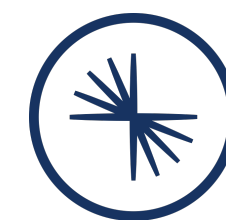
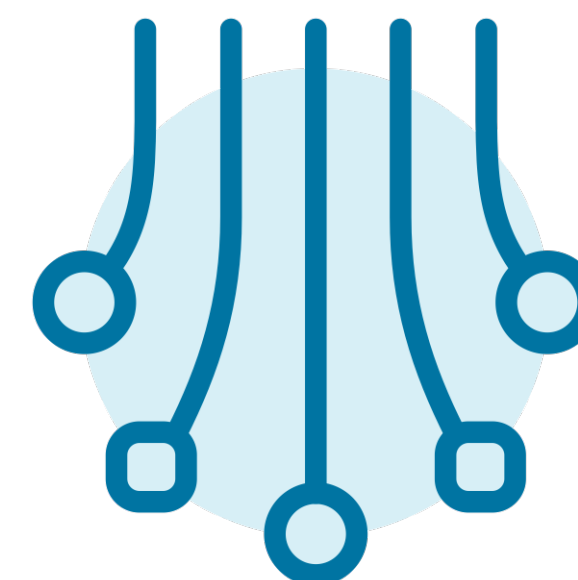
flux



kubernetes



Shell-operator



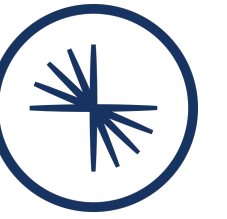
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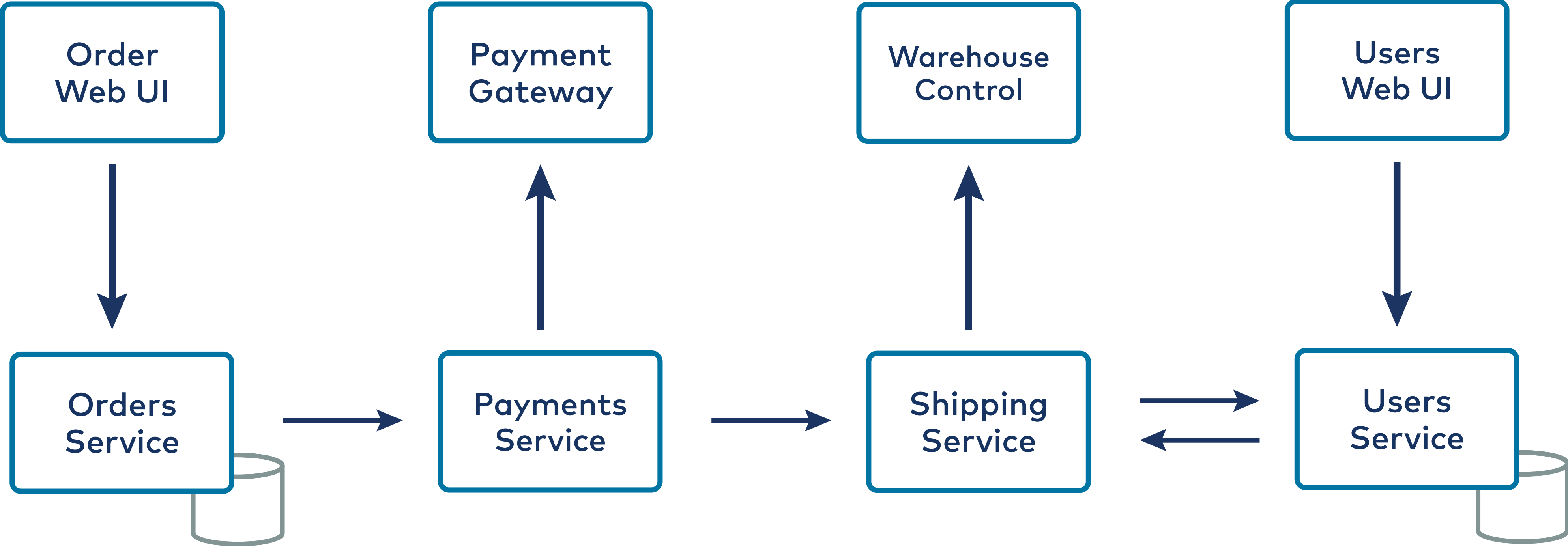
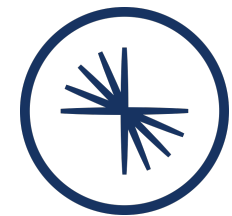
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[HTTPS://GAMOV.DEV/KAFKA-DEVOPS](https://gamov.dev/kafka-devops)



PREFACE

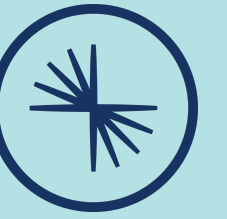
A MINIMAL MICROSERVICE IMPLEMENTATION (RPC)



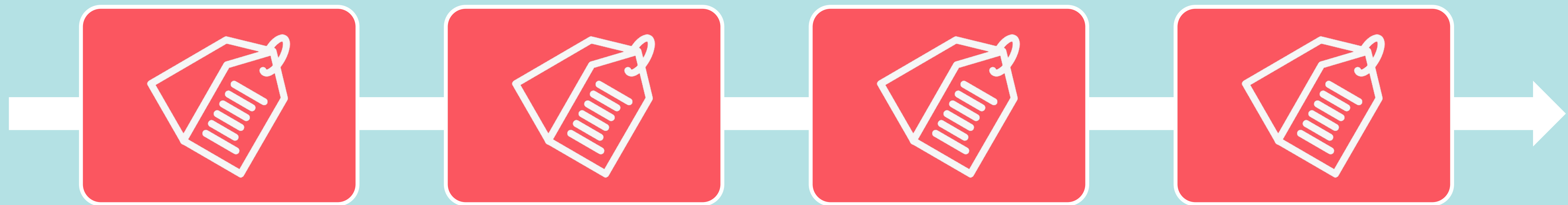
EVENT STREAMING PARADIGM

To **rethink data** as neither stored records nor transient messages, but instead as a **continuously updating Stream of Events**

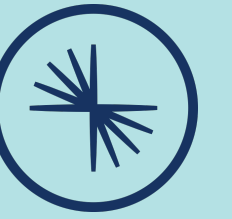
A STREAM



REPRESENTS HISTORY AS A SEQUENCE OF EVENTS



EVENTS CHANGE THE WAY WE THINK



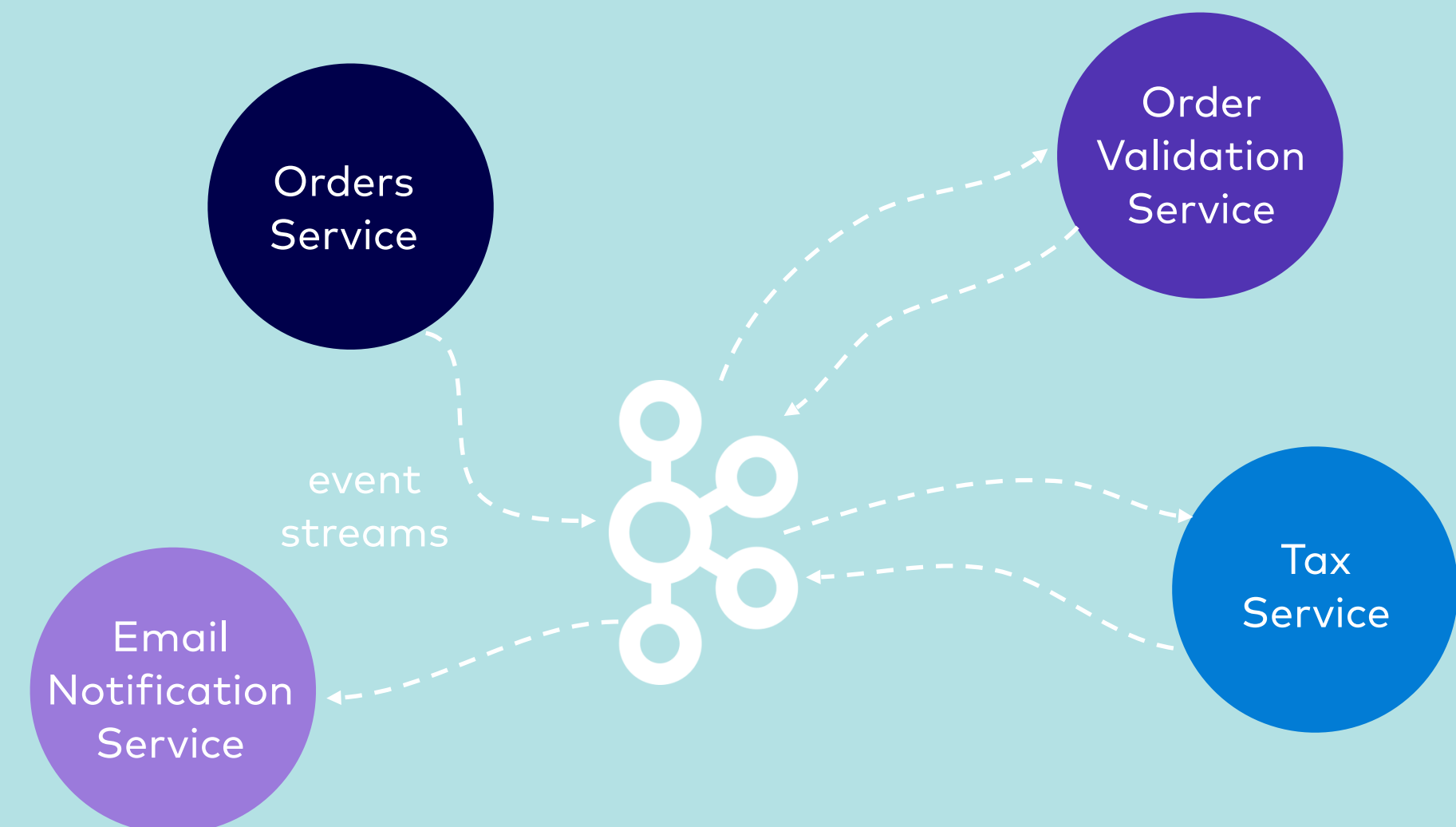
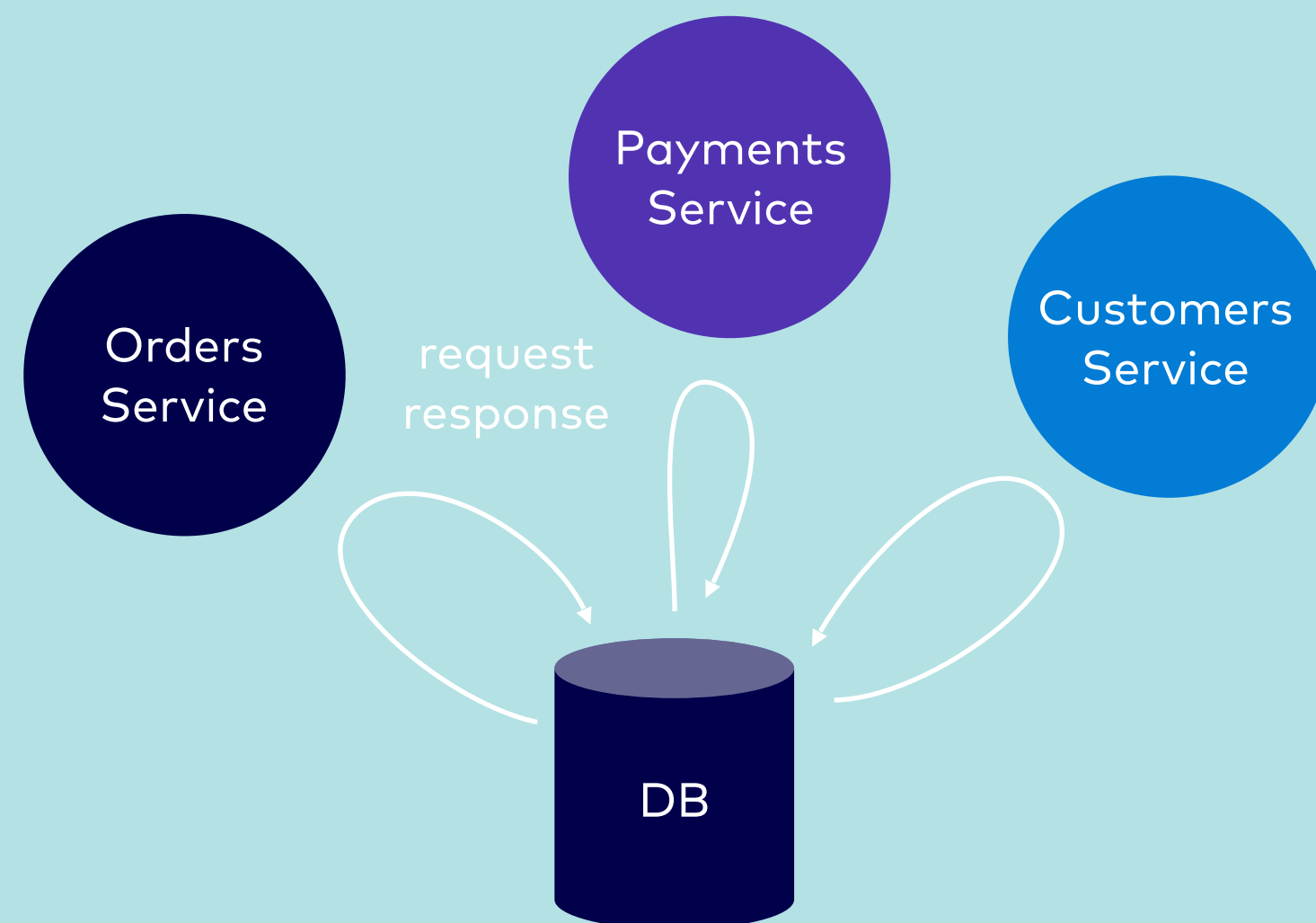
Monolithic Approach

- a database
- a variable
- a singleton
- an RPC



Event-First Approach

- an event
- a stream
- a 'data' flow
- a stream processor

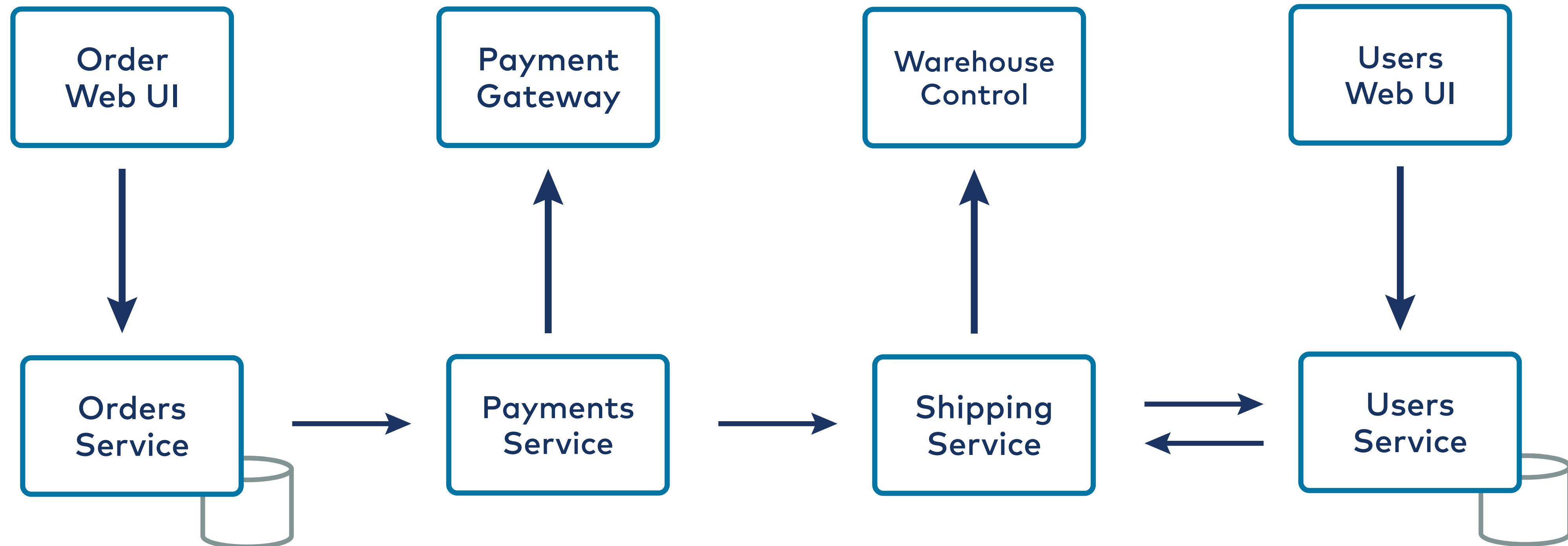
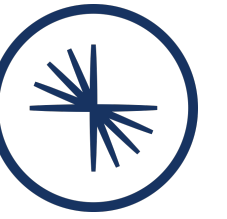


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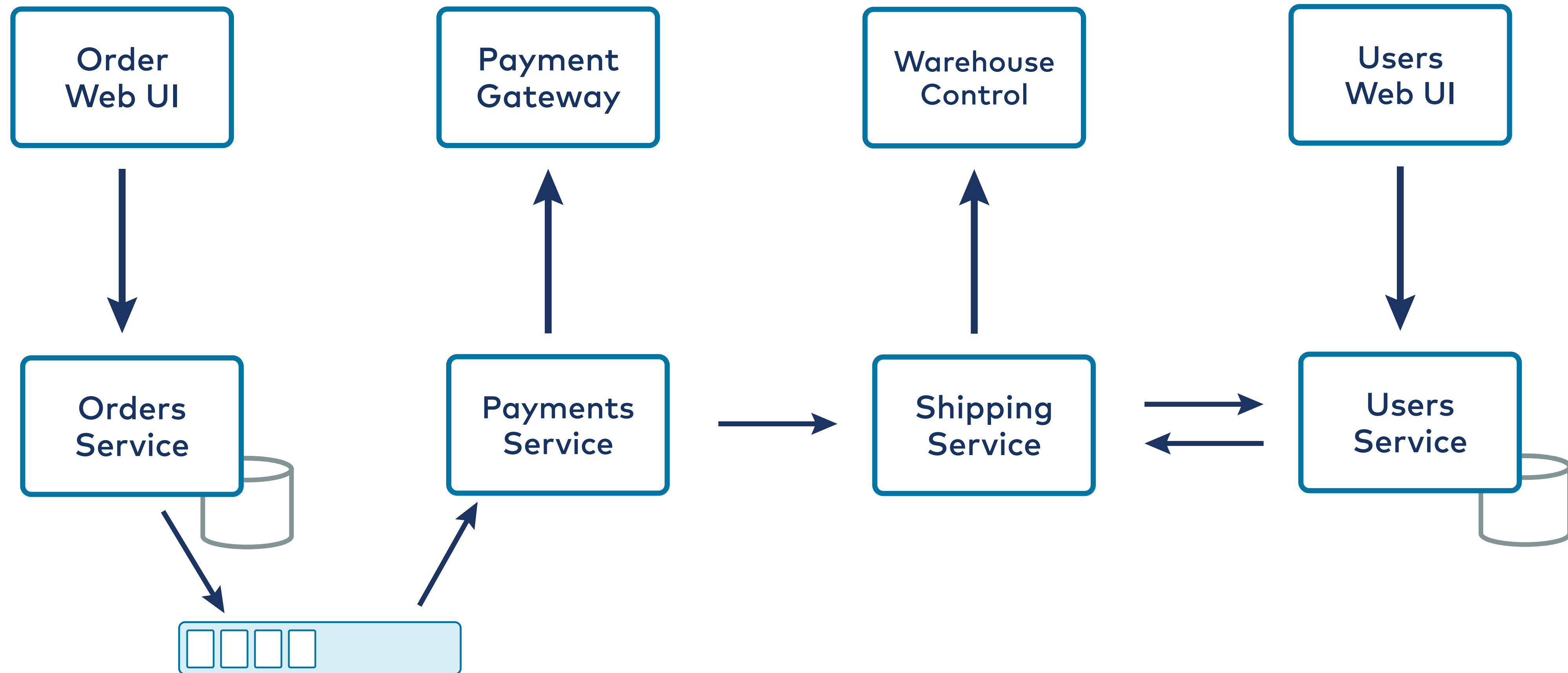
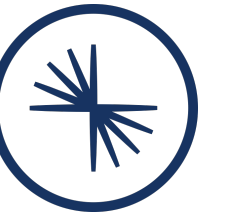
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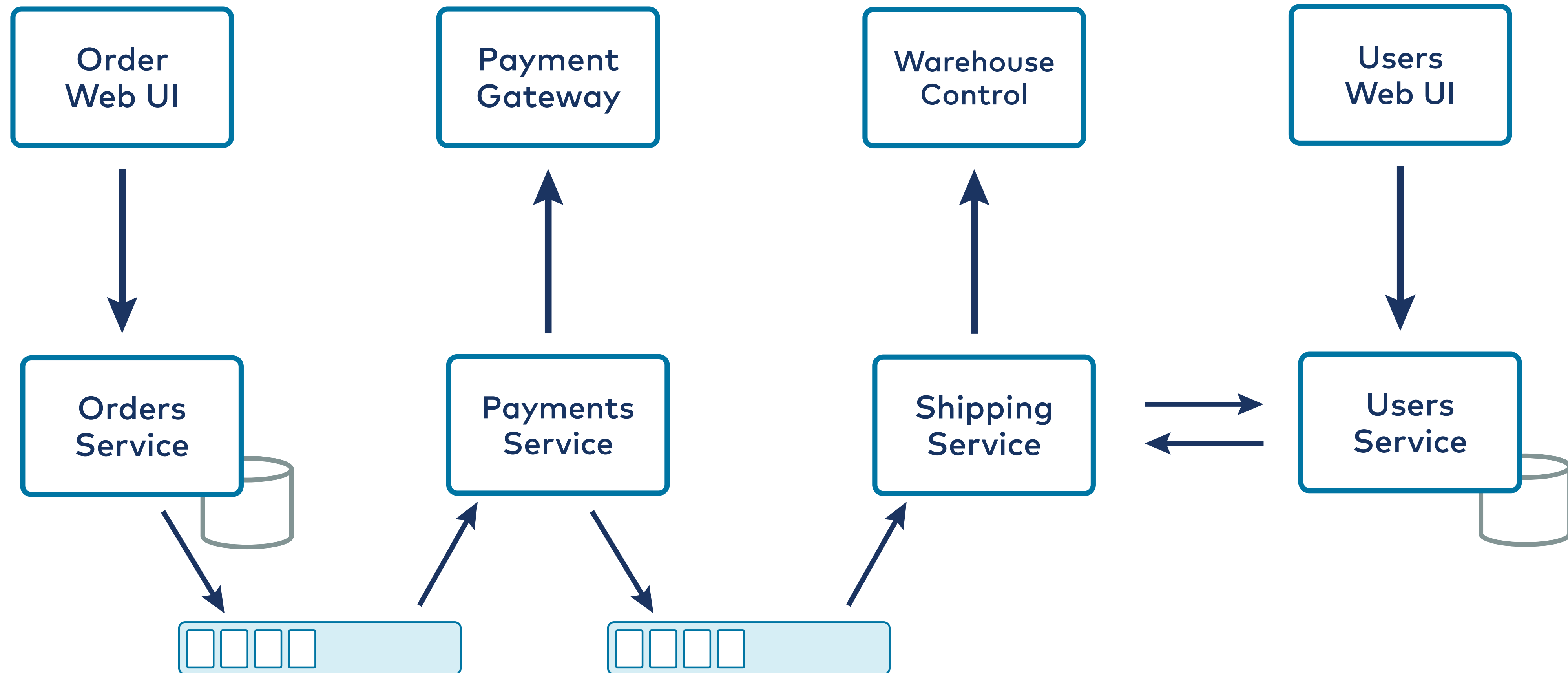
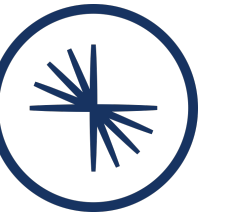
REFACTORING TO MESSAGES



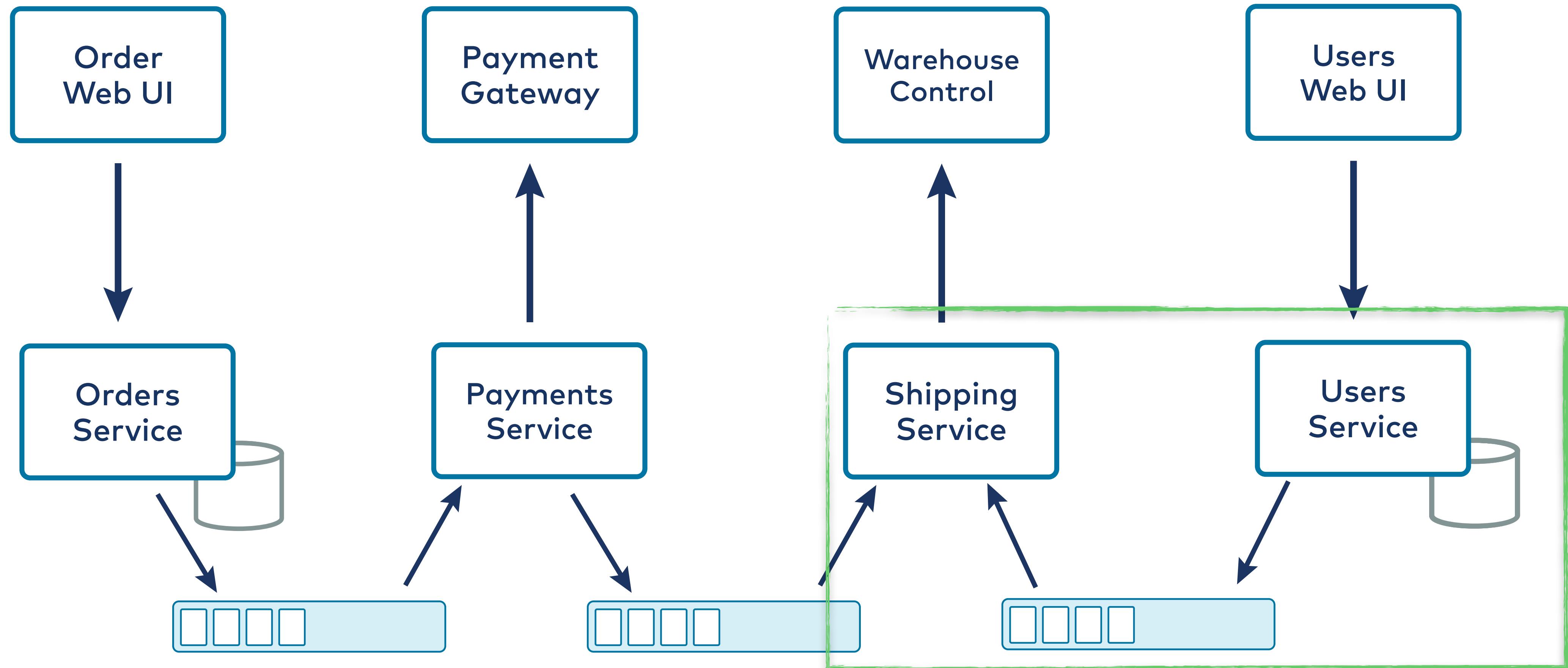
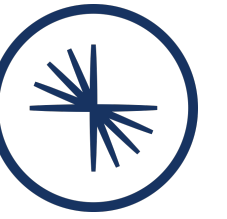
REFACTORING TO MESSAGES



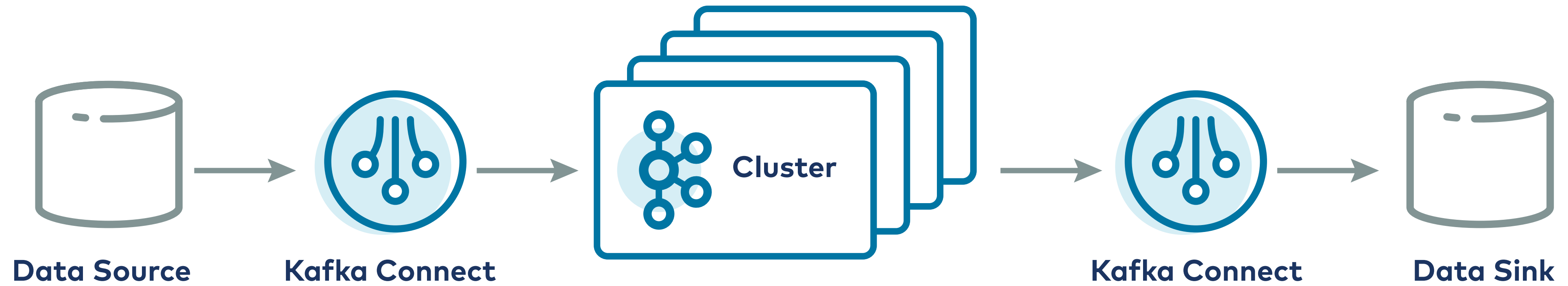
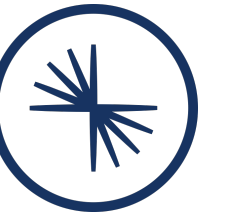
REFACTORING TO MESSAGES



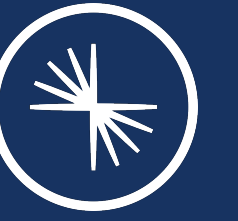
REFACTORING TO MESSAGES



KAFKA CONNECT

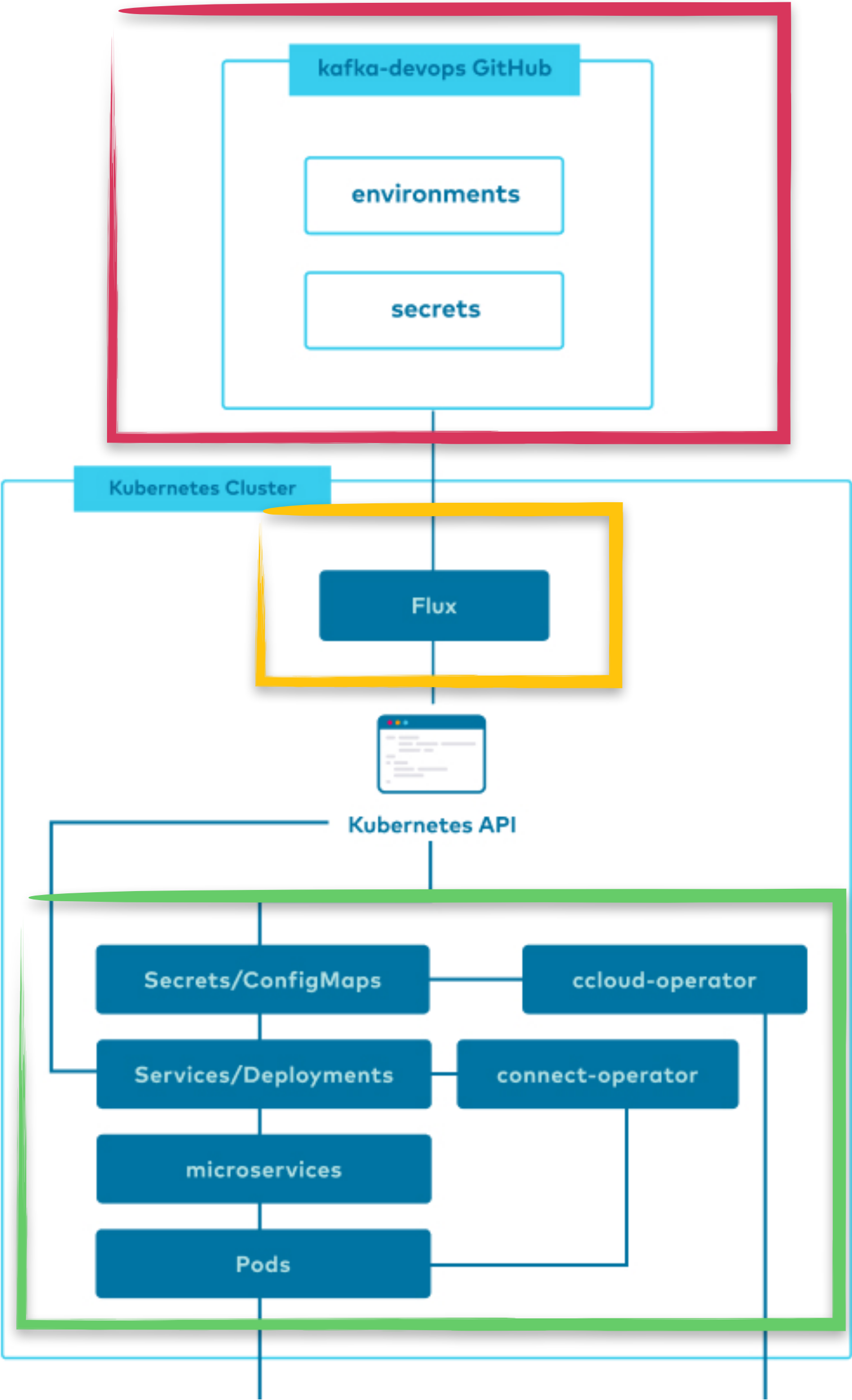
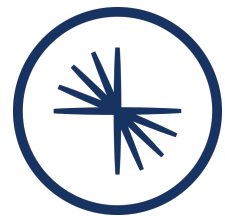


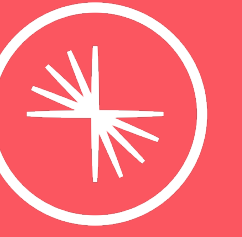
GITOPS



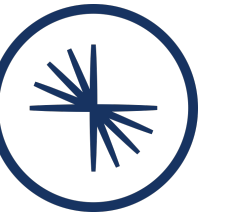
- The Git repo represents the desired state of the system.
- Use existing development workflows and tools, like PRs and code reviews.
- A clear history of the changes to your system in a Git.

GITOPS WITH FLUX



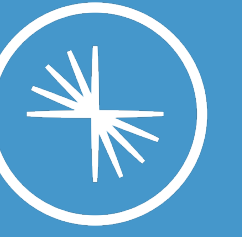


STOP! DEMO TIME



PREREQUISITES

- ccloud
- kubectl
- helm
- fluxctl
- k3d (for local testing)
- kubeseal
- jq
- yq

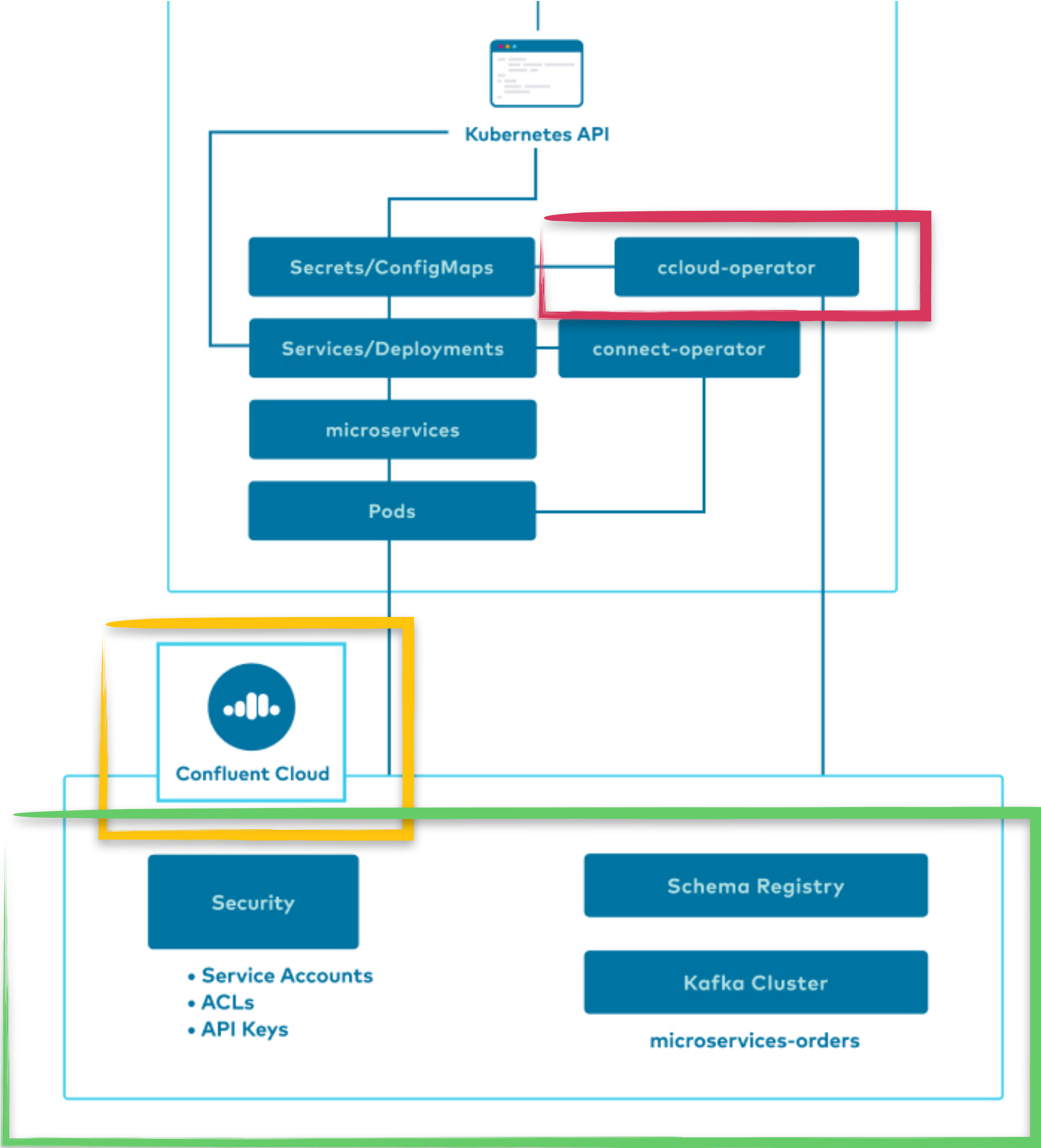
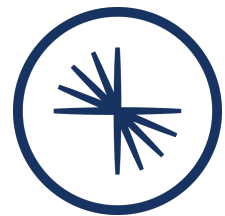


OPERATOR PATTERN

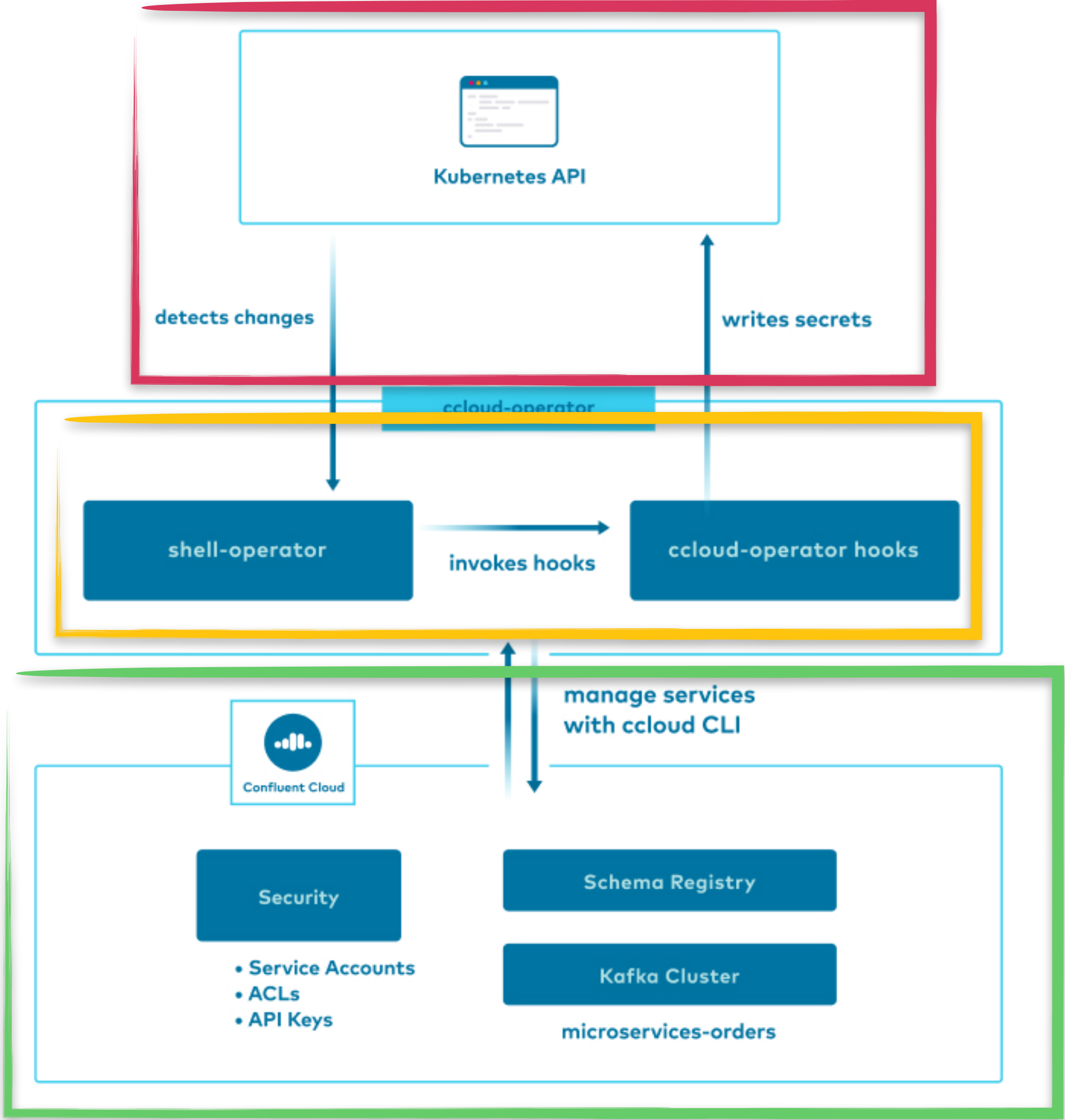
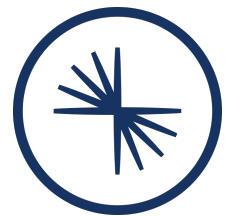




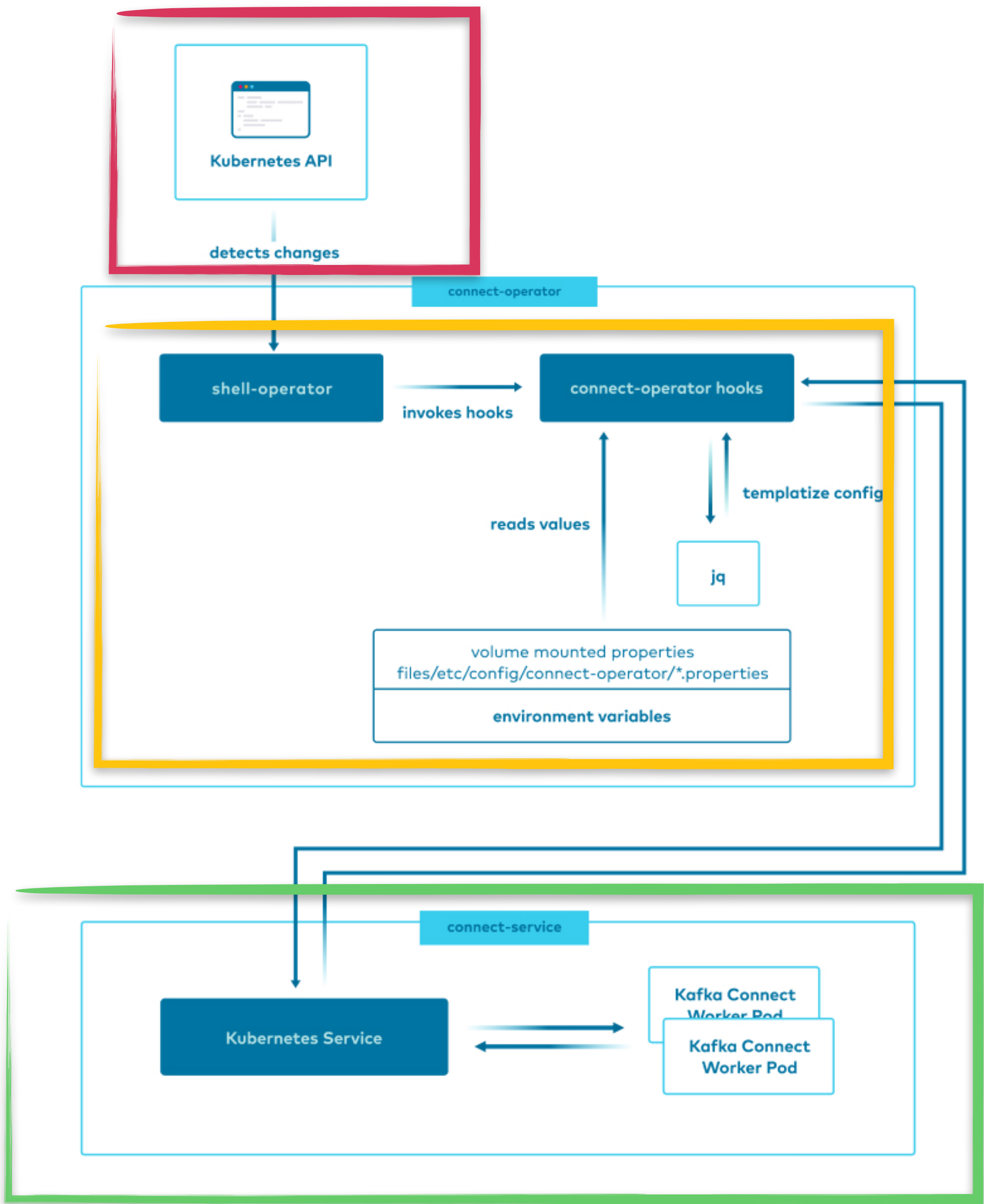
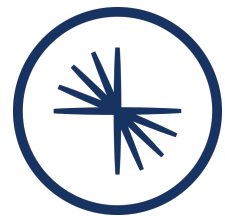
GITOPS WITH FLUX

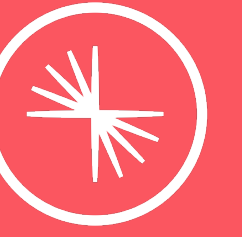


CCLLOUD-OPERATOR

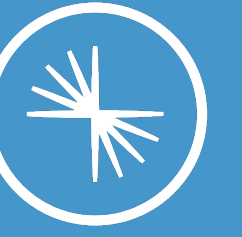


CONNECT OPERATOR





STOP! DEMO TIME



LET'S SCALE CONNECT



Want to learn more?

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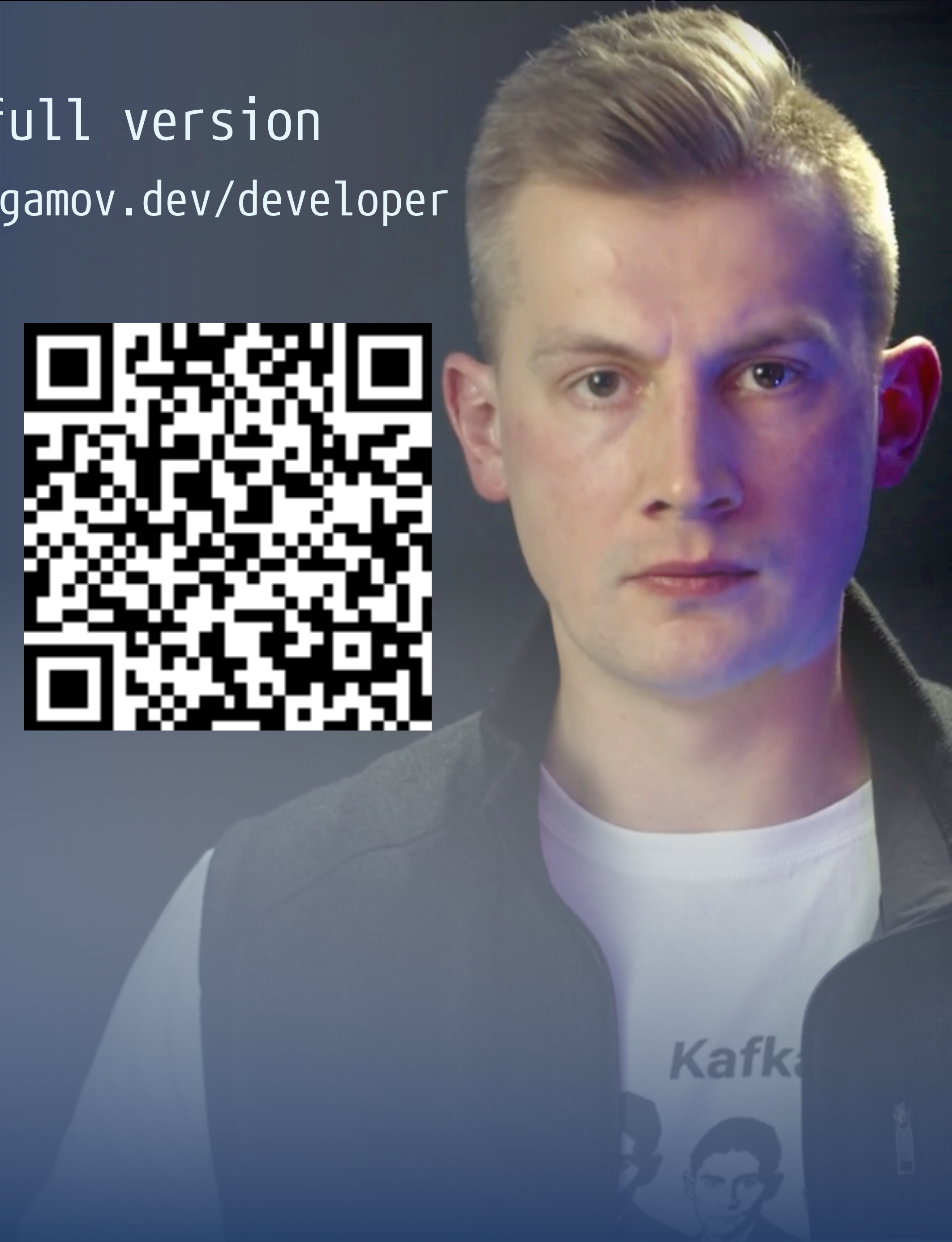
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