

MICROSERVICES

A COMPLETE PICTURE

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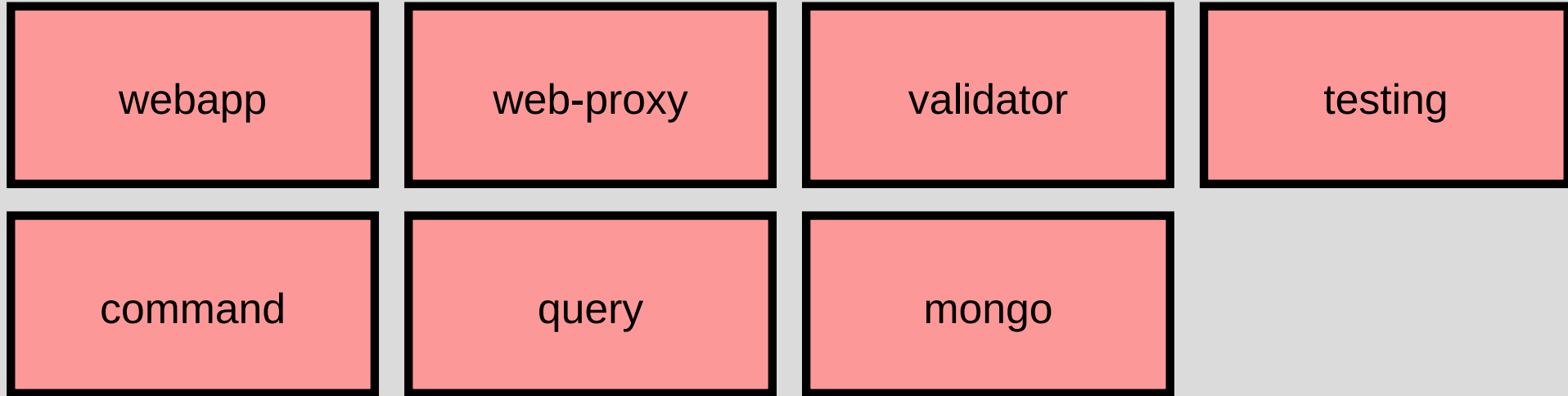
OLIVER STURM

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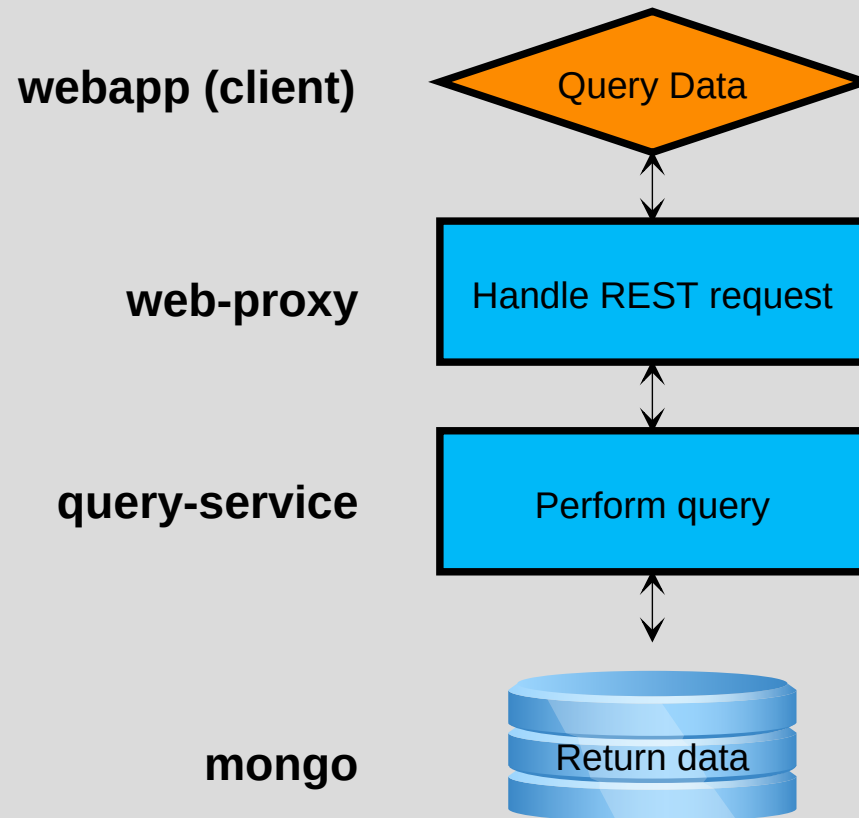
AGENDA

- Service structure
 - A look at a microservices architecture
- Communication
 - Considerations pro and con frameworks
 - Working with individual services
- Packaging/deployment
 - Developer concerns
 - Real-world deployment with AWS
- Developer stuff
 - Debugging

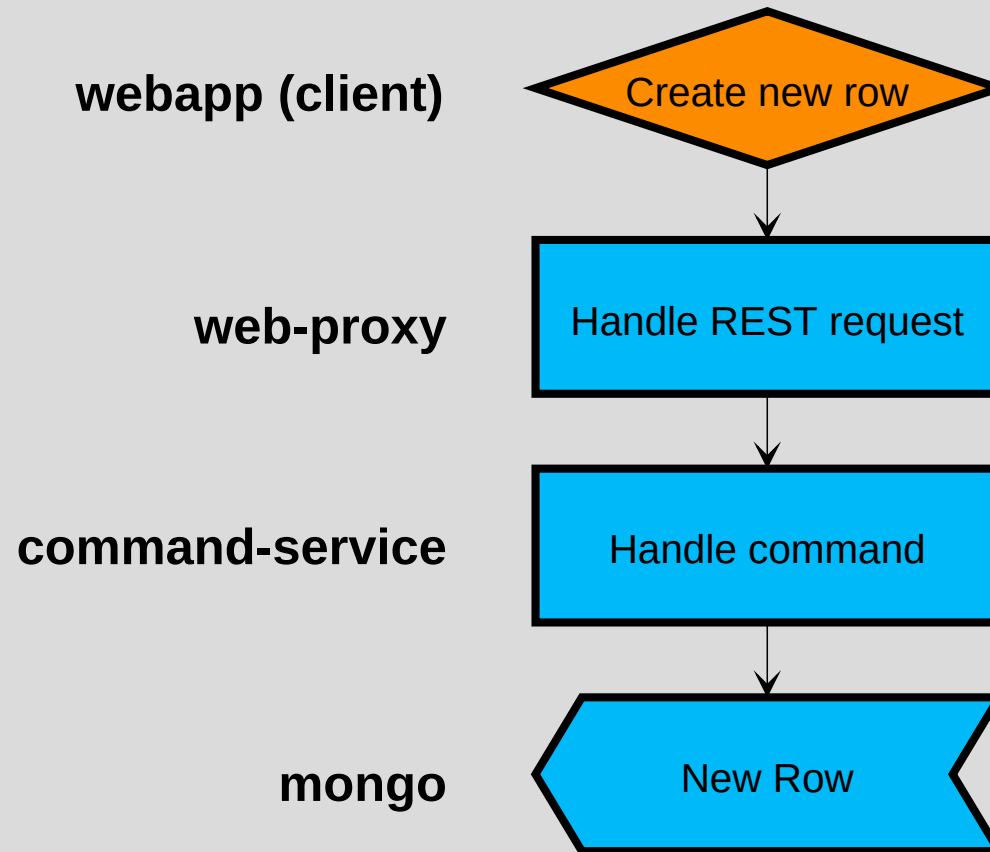
SEVEN SERVICES OF THE DEMO APPLICATION



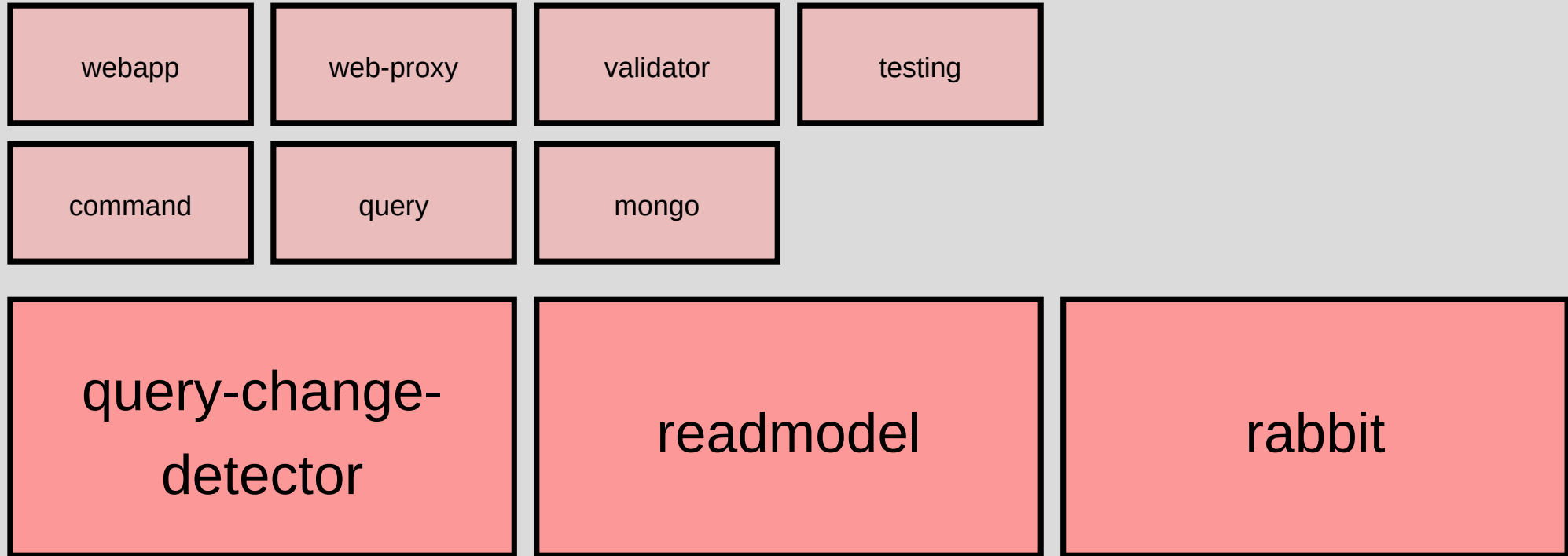
QUERYING DATA



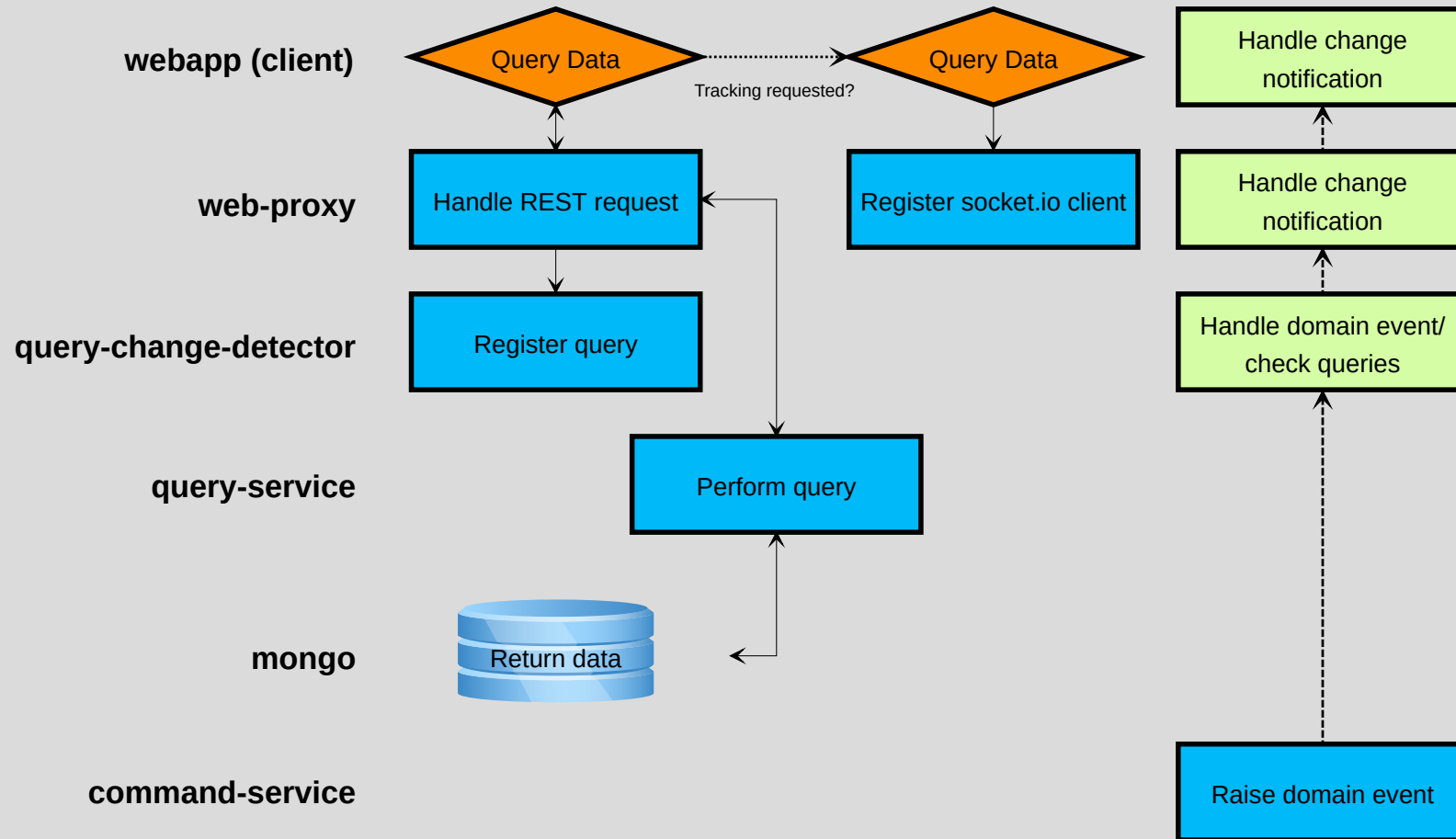
CREATING A NEW ROW



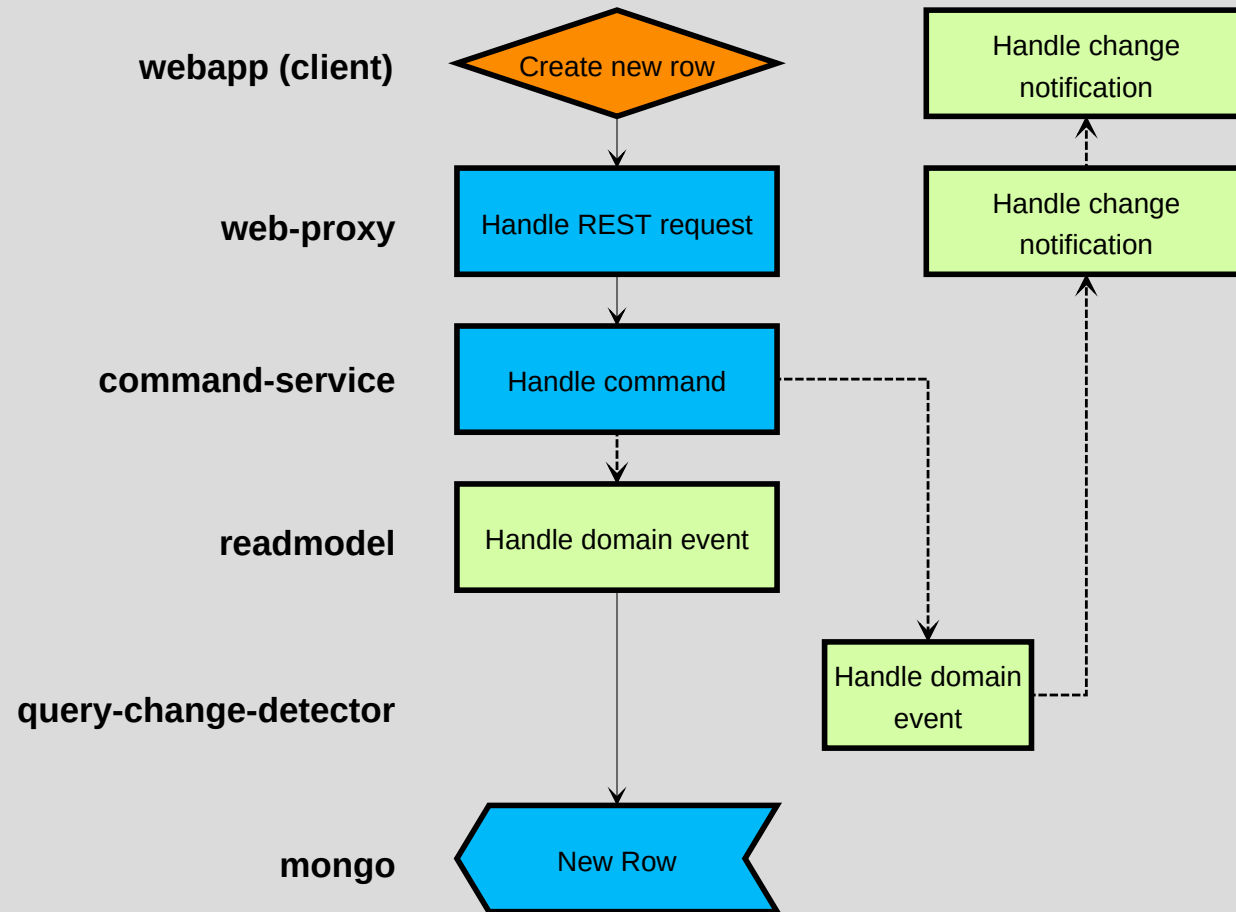
ADDITIONAL SERVICES FOR ADVANCED ARCHITECTURE



QUERYING DATA WITH CQRS/ES



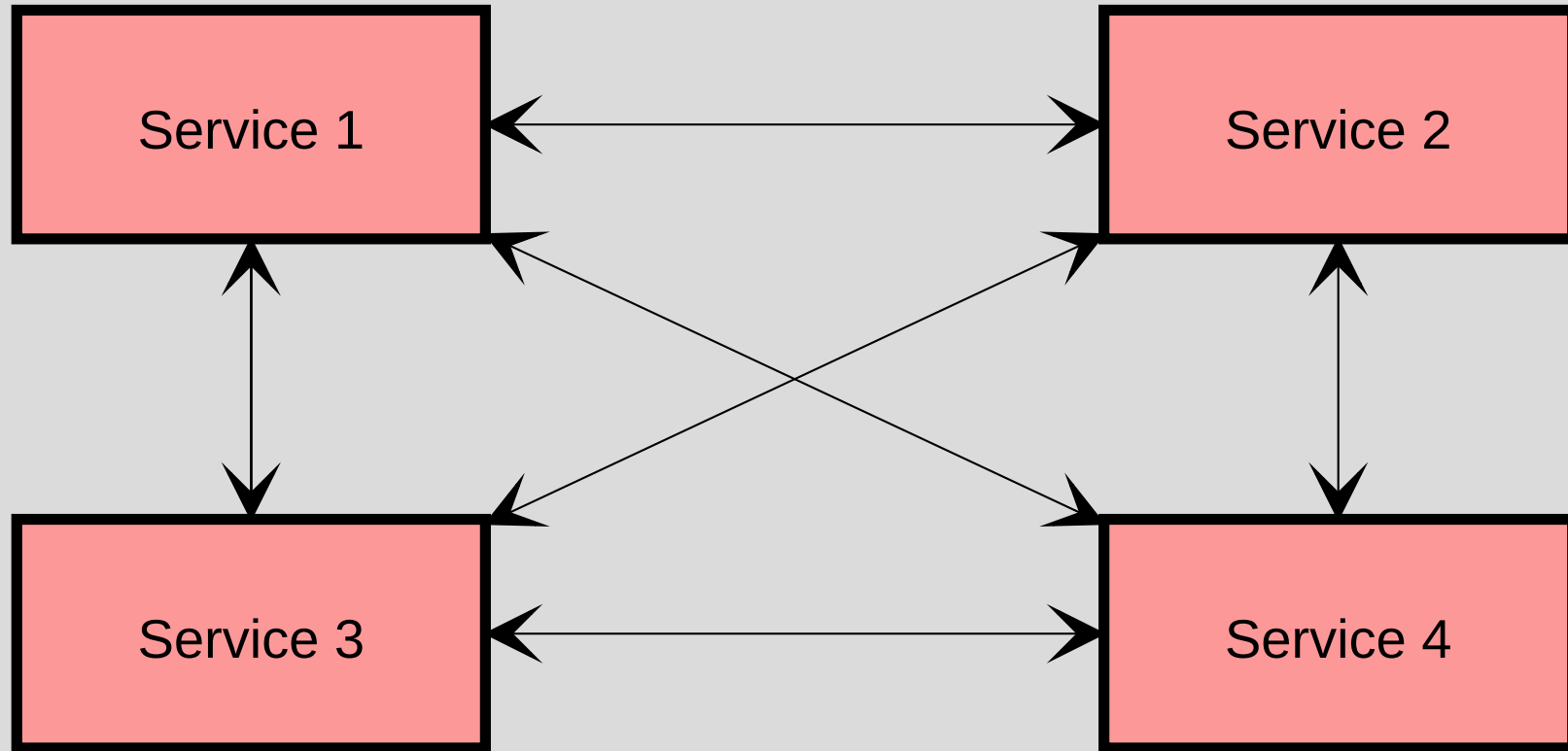
CREATING A NEW ROW WITH CQRS/ES



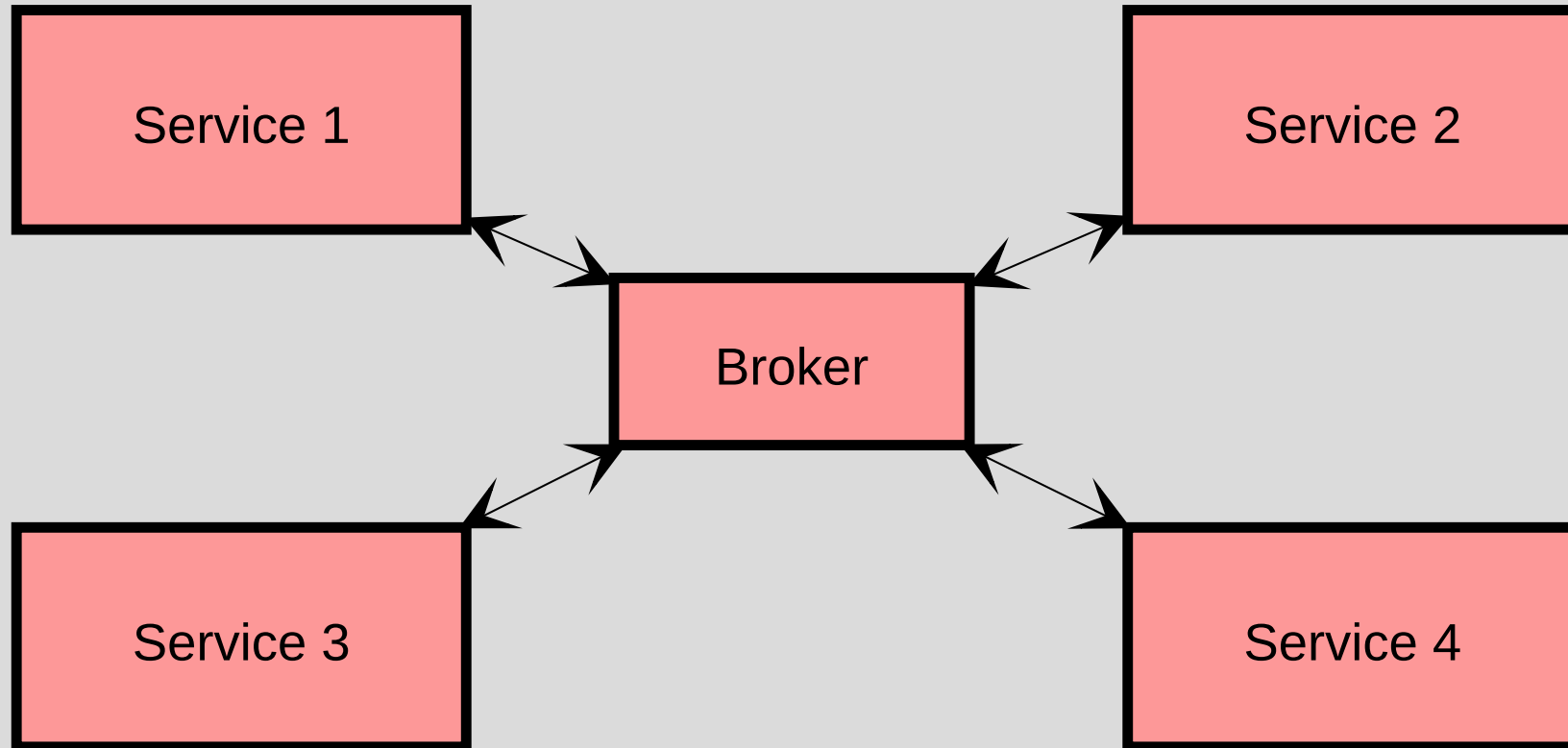
COMMUNICATION

- Structural question: *who talks to who?*
- Implementation question: *how does the talking work?*

DIRECT COMMUNICATION



USING A BROKER



HOW DOES THE TALKING WORK?

- Each service could be an *open web service* with its own external interface. REST? Proprietary? Your choice.
- Each service could be implemented to *talk to the broker exclusively*
- *Libraries* exist that implement communication

PACKAGING/DEPLOYMENT

- Running lots of services manually isn't much fun
 - Consider *automation*
- Services may need *individual runtime environments*
- *Container systems* to the rescue!

DEBUGGING

- *Granularity* of services makes it easy to test
- Services can be debugged as *individual autonomous entities*
 - Best regards from functional programming!

SOURCES

- This presentation:
 - <https://oliversturm.github.io/microservices-complete-picture>
 - PDF download:
<https://oliversturm.github.io/microservices-complete-picture/slides.pdf>
- Demo code:
 - <https://github.com/oliversturm/cqrs-grid-demo> (check *master* and *event-sourcing* branches)

THANK YOU

Please feel free to contact me about the content anytime.

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