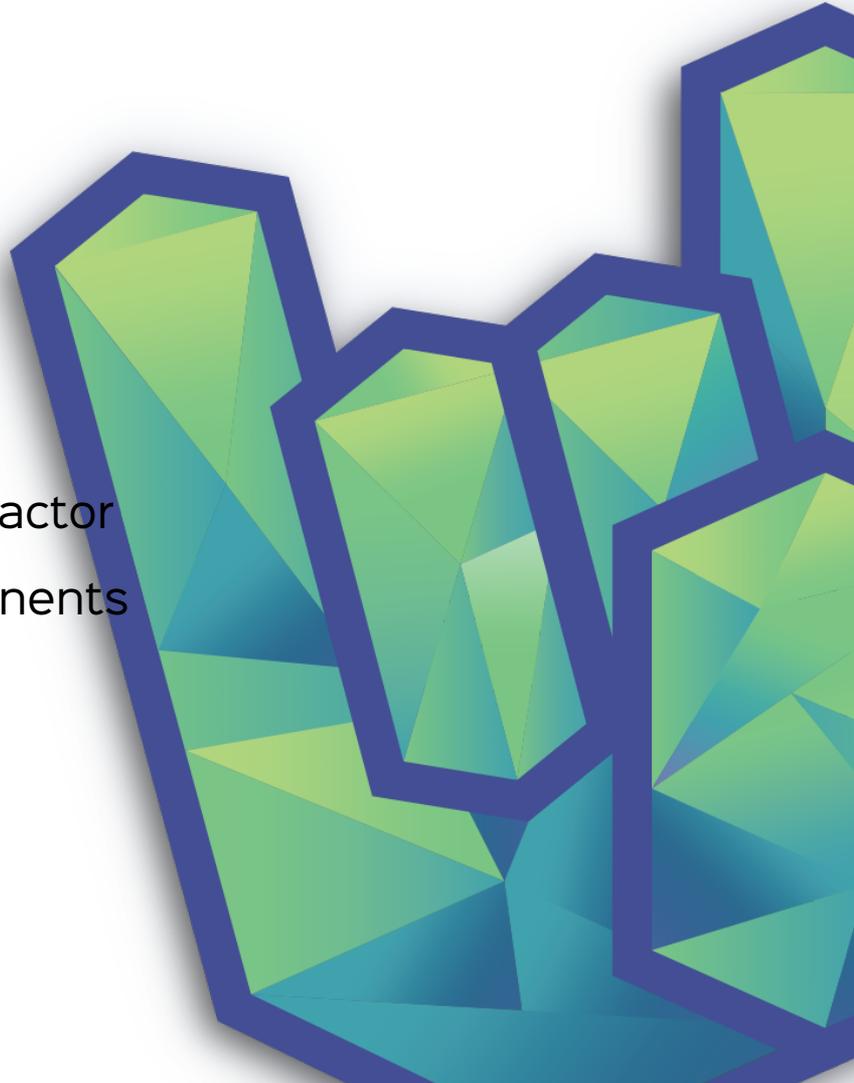


Operator Fusion

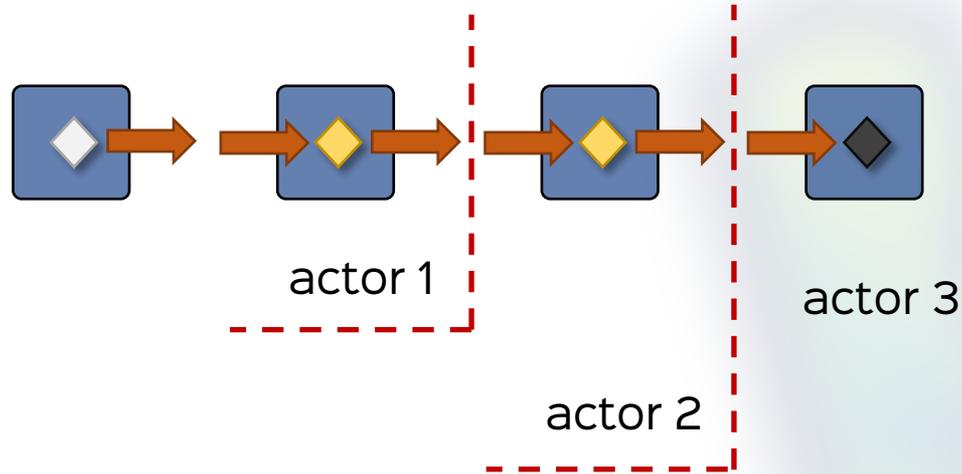


Goal

stream components running on the same actor
async boundaries between stream components



Async Boundaries



An async boundary contains

- everything from the previous boundary (if any)
- everything between the previous boundary and this boundary

Communication based on actor messages

Recap

Akka Streams components are fused = run on the same actor

Async boundaries

- components run on different actors
- better throughput

```
source.async
  .via(Flow[Int].map(x => x + 1)).async
  .via(...).async
  .to(Sink.foreach(println))
```

Best when: individual operations are expensive

Avoid when: operations are comparable with a message pass

Ordering guarantees

Akka rocks

