Sogeti Guru Night

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Changes in Software Development

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Demands

- Mobile devices
- Multicore
- Cloud computing
- Interactive & real-time
- Responsive
- Collaborative
- Frequent changes
- Data increase

Trends

Microservices

Event Driven

Scalable

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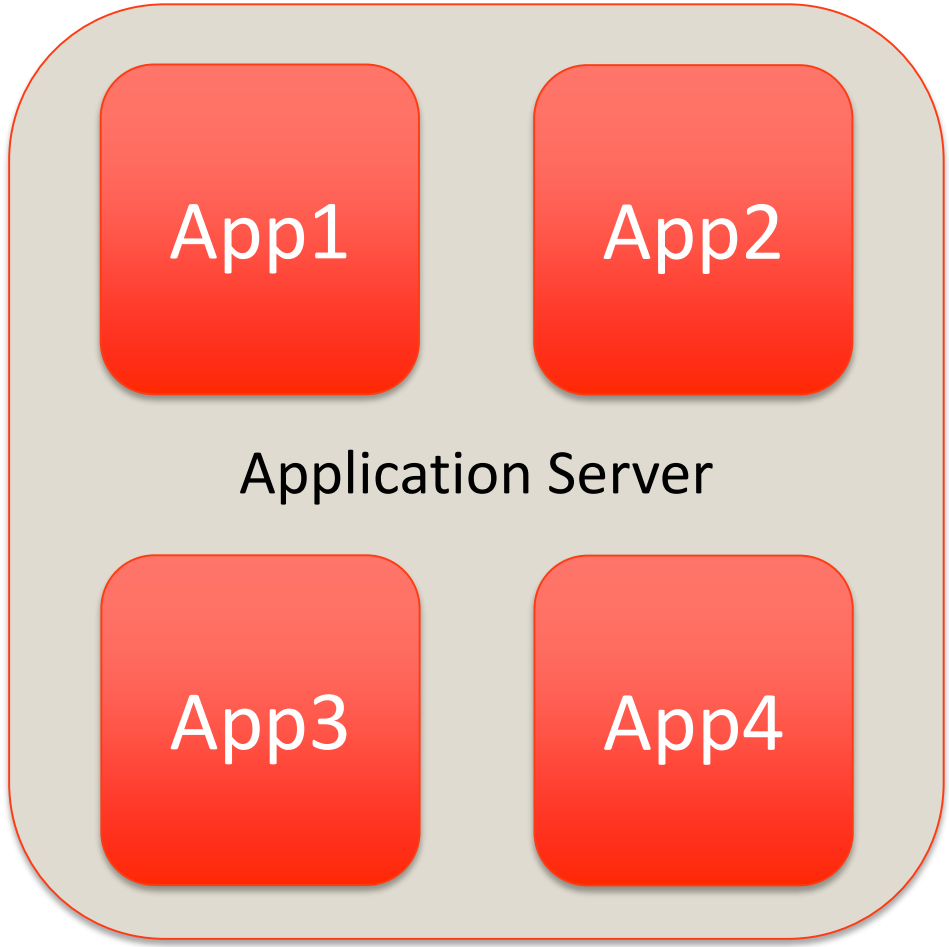
The Java application server



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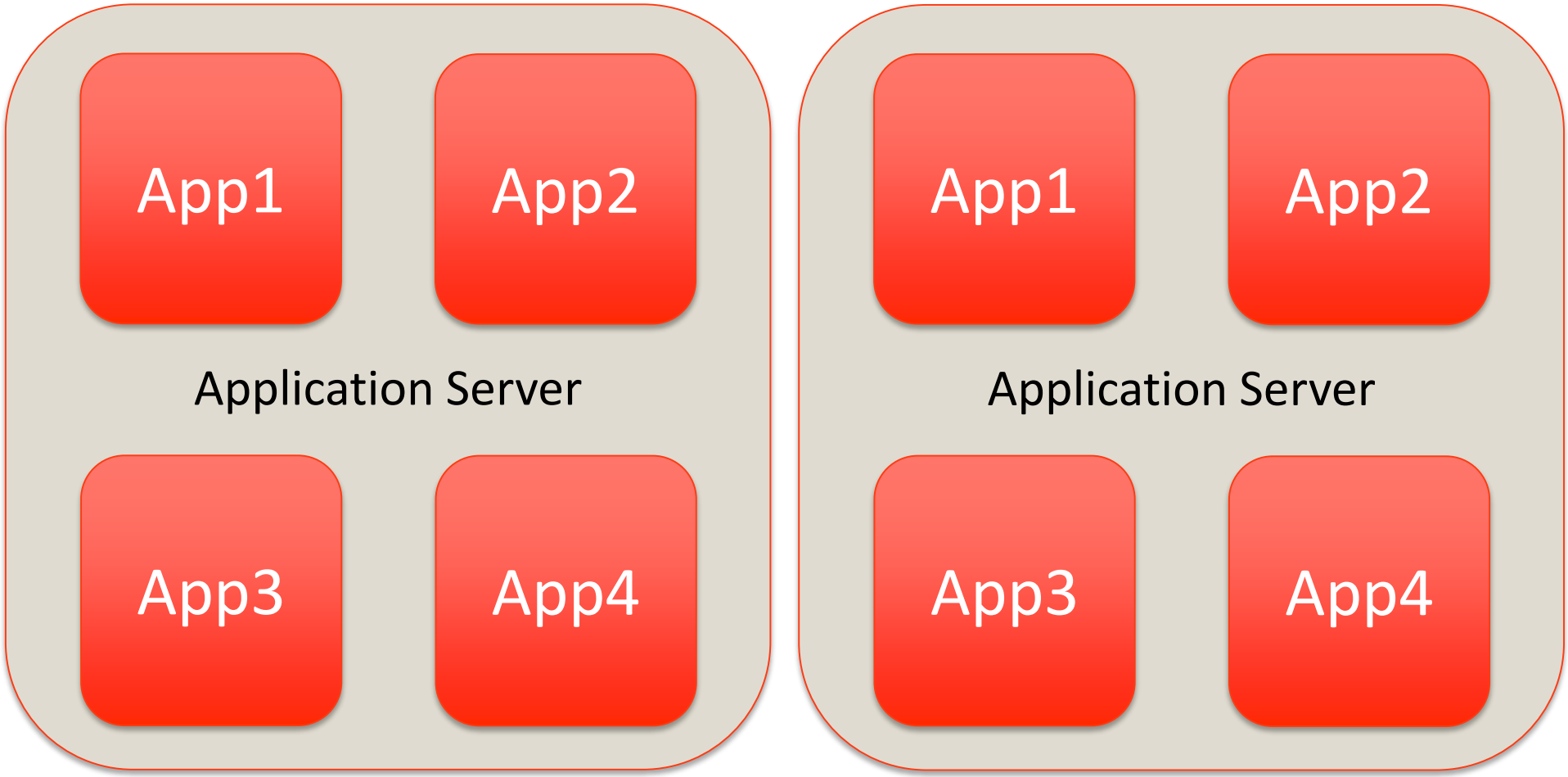
The Java application server



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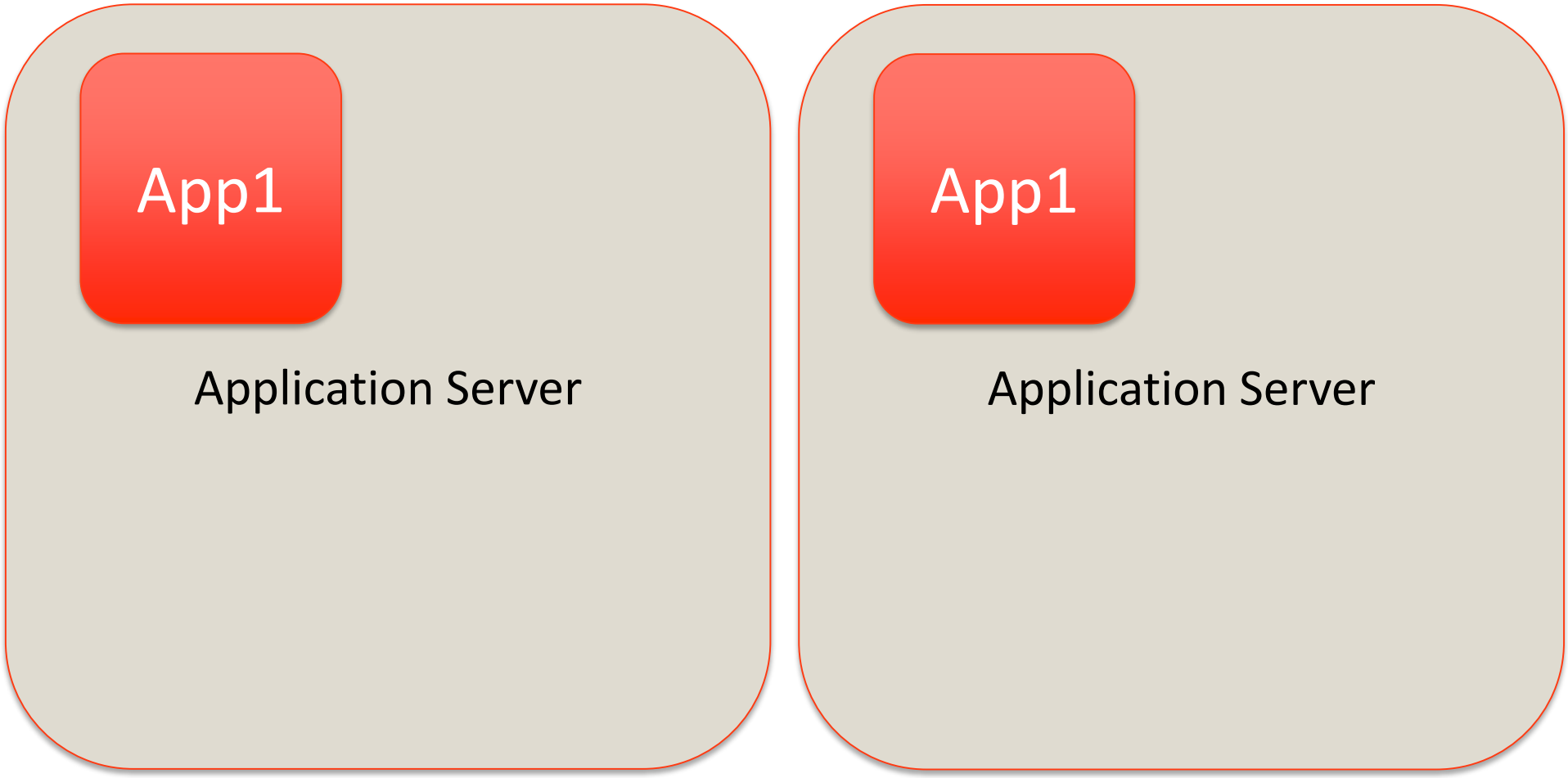
The Java application server



The Cloud

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Containers

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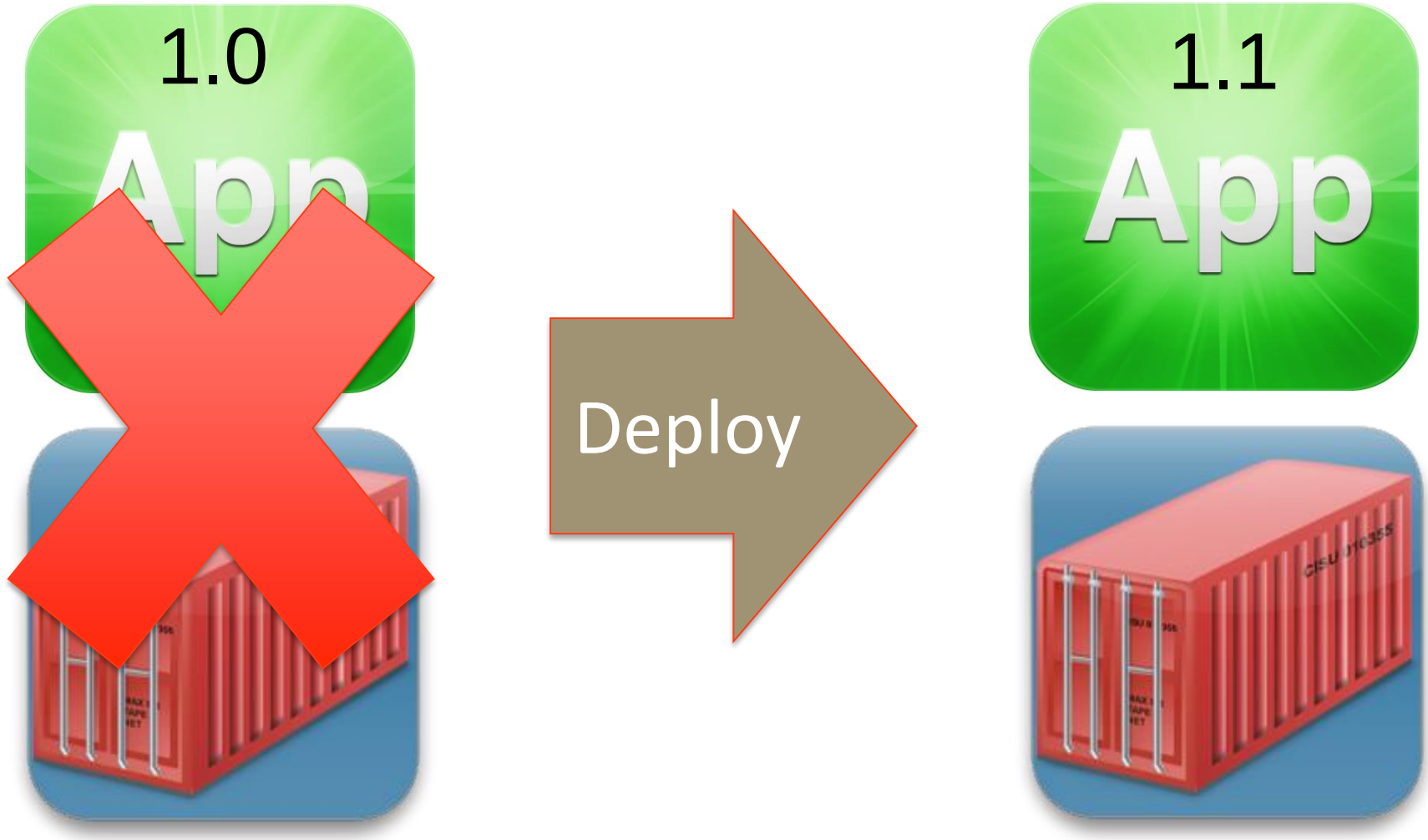
Container deployment



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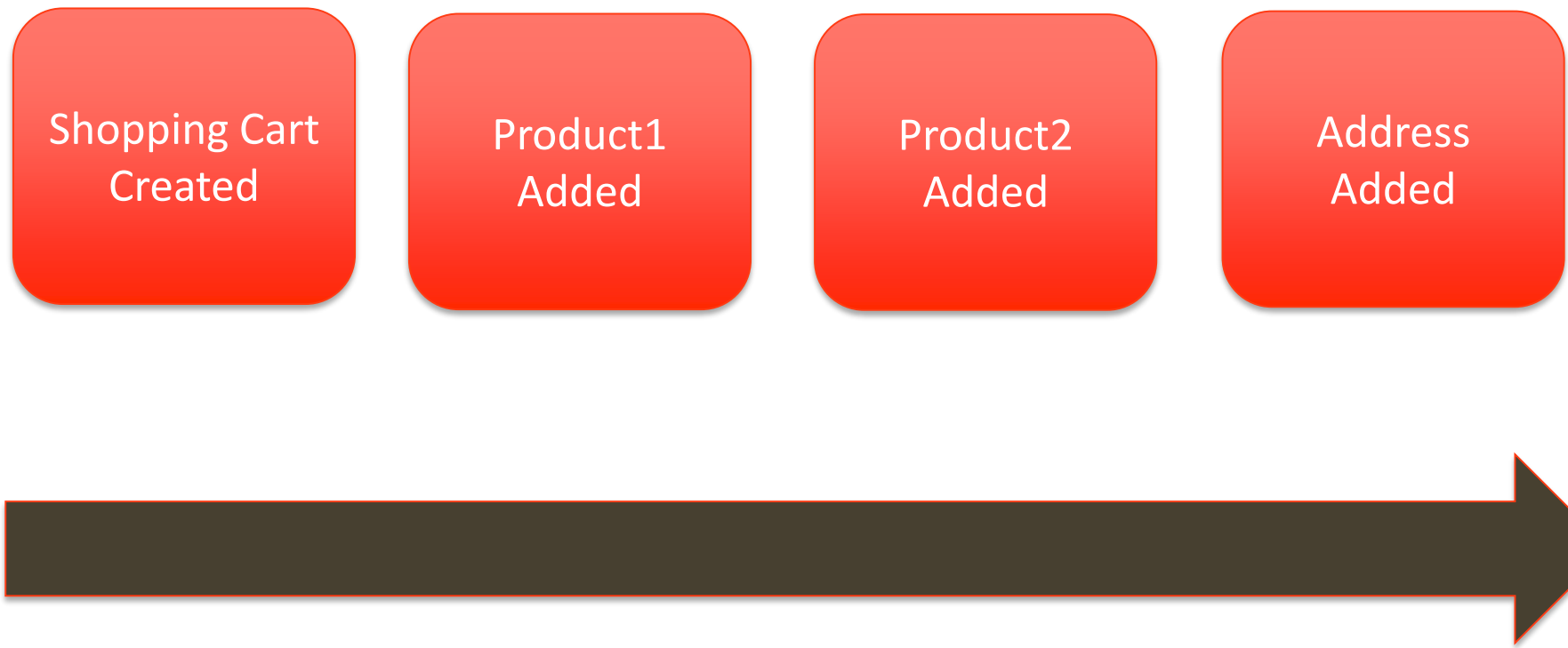
Microservices

- Independent lightweight processes
- Platform agnostic
- (Immutable) containers
- Standardized DevOps tooling
- Technology diversity

Event Driven Architecture



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Event Driven Architecture

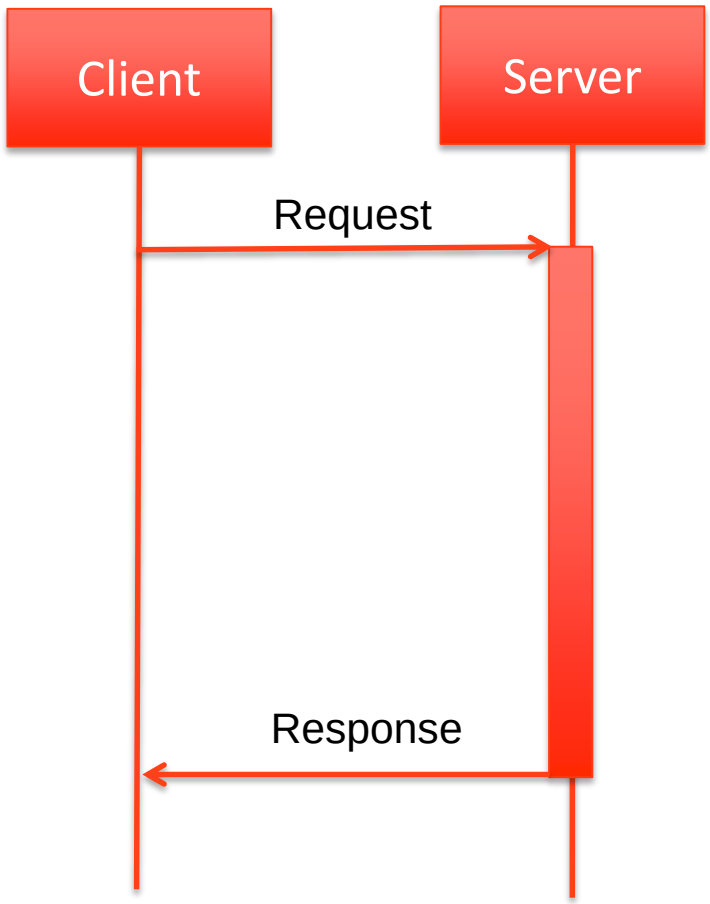
- Producers
- Consumers
- Functions react to events
- Events are state changes
- Asynchronous
- Loose coupling
- Responsiveness

Connection scaling

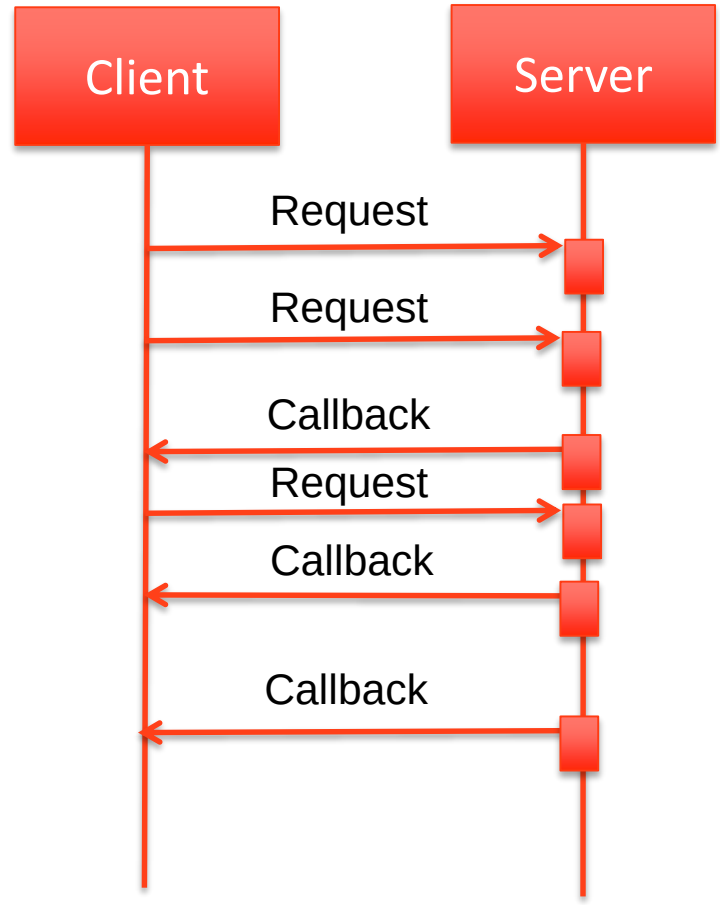
Connection scaling

- “Classic” model of scaling threads per connection is limited
- CPU and memory bound
- c10k problem
- non blocking event loop

Blocking vs non-blocking



One thread per connection (1 client)



One thread per event-loop (multiple clients)

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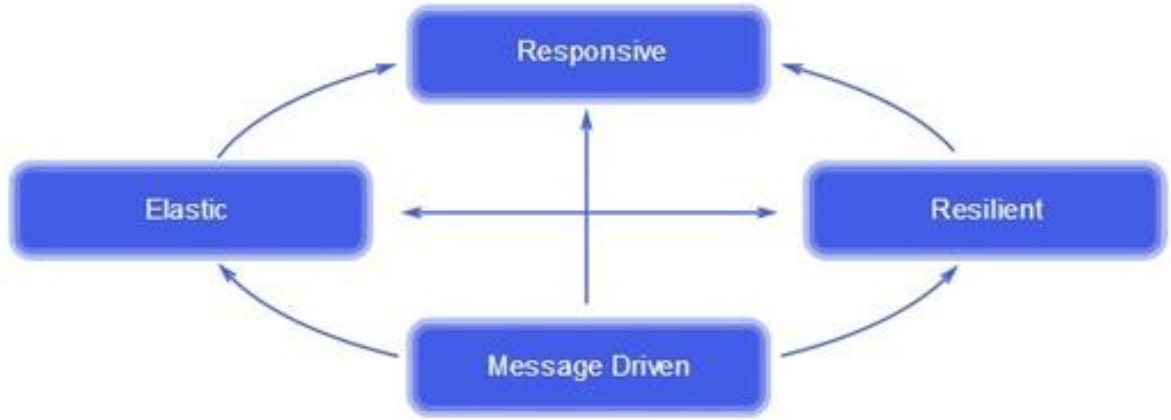
Reactive manifesto

- react to events (message driven)
- react to load (scalable)
- react to failure (resilient)
- react to users (responsive)



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Need for a new solution

- Deployment of light-weight processes
- Asynchronous stack
- Reactive programming
- Polyglot
- Distributed
- Event driven

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