

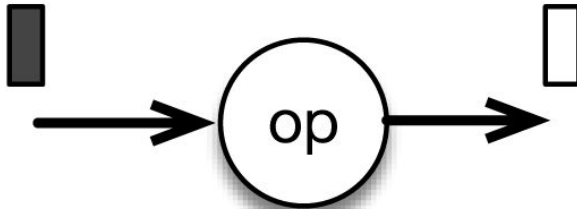
Microservices and Monolith

Agenda

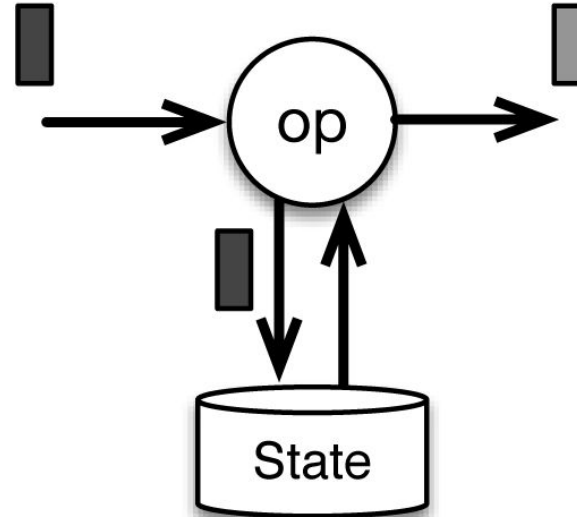
- Stateless vs Stateful
- Scaling
- Load balancing
- Monolith vs Microservices

Stateless vs Stateful

Stateless stream processing



Stateful stream processing



Scaling



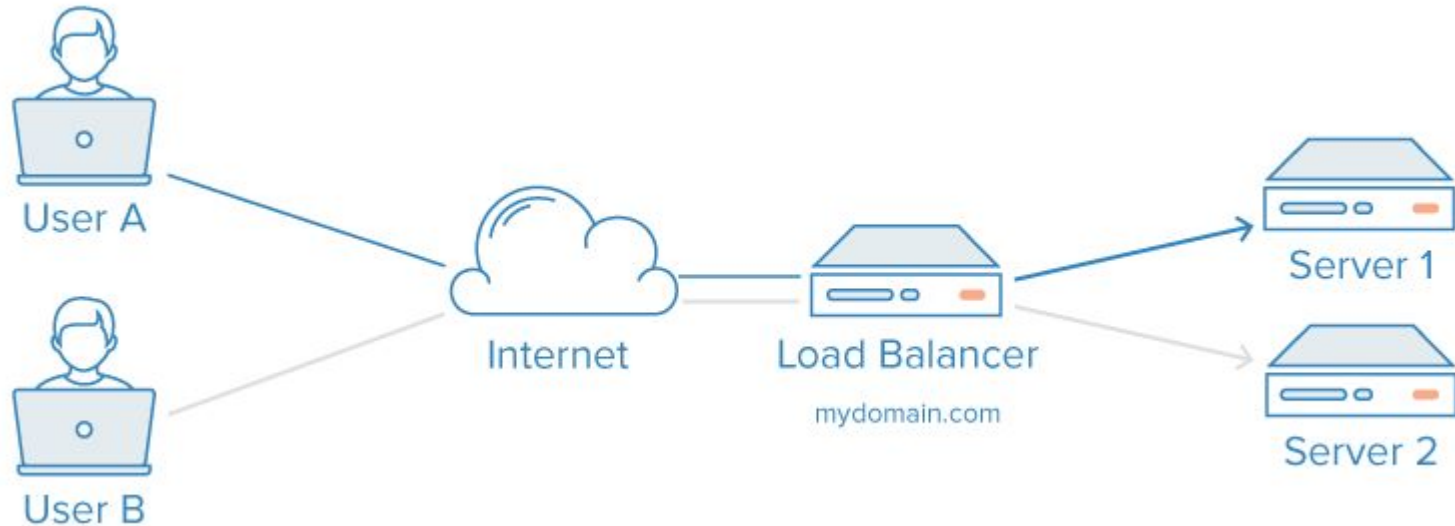
Vertical

vs.

Horizontal



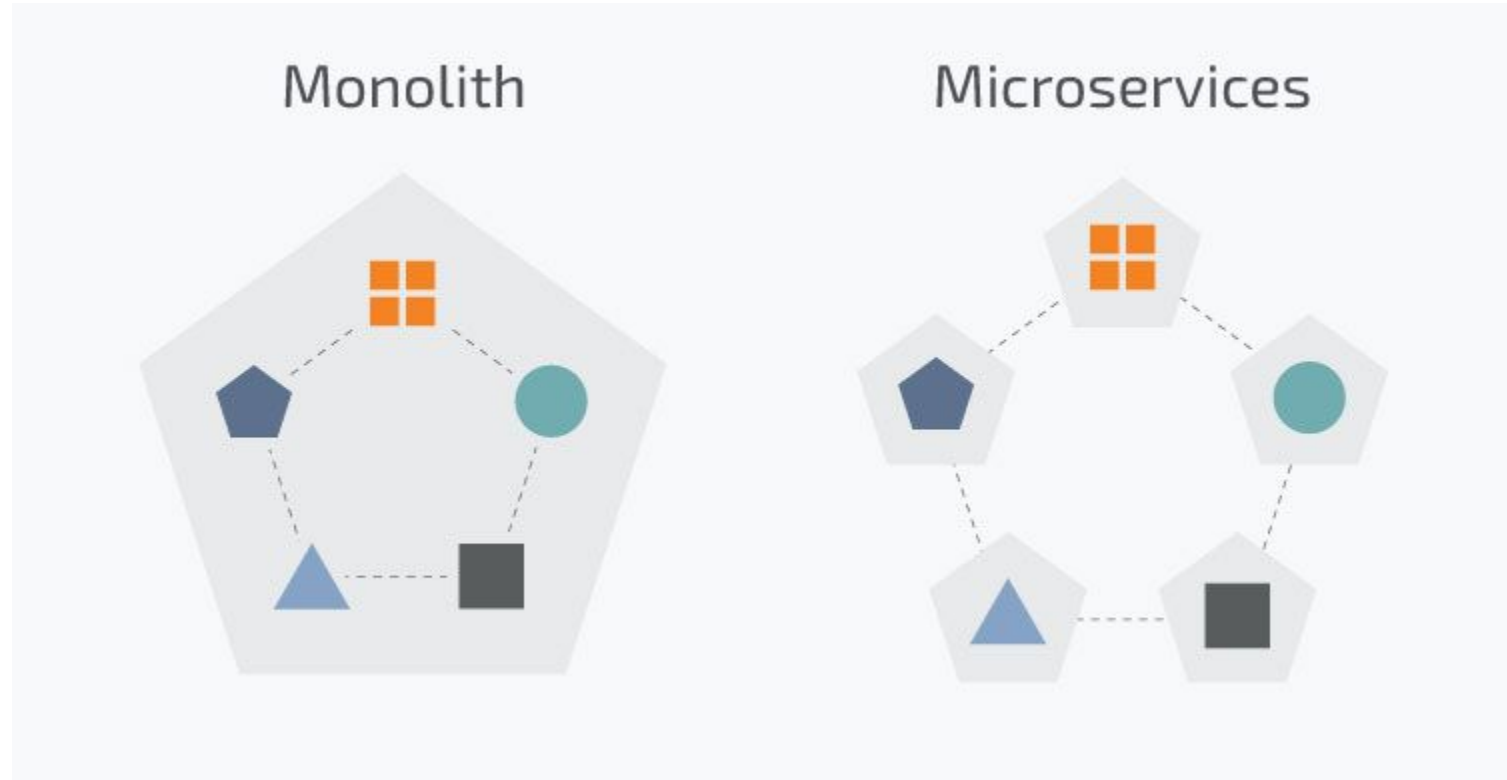
Load balancing



Load balancing

1. Round-Robin Load Balancing
2. Least Connections Load Balancing
3. Least Time Load Balancing
4. Power of Two Choices

Monolith vs Microservices



Pros

Monolith

- Less cross-cutting concerns
- Easier debugging and testing
- Simple to deploy
- Simple to develop

Microservices

- Independent components
- Easier understanding
- Better scalability
- Flexibility in choosing the technology
- The higher level of agility

Cons

Monolith

- Understanding
- Making changes
- Scalability
- New technology barriers

Microservices

- Extra complexity
- System distribution
- Cross-cutting concerns
- Testing