Microservice Communication Styles

inner-process vs. inter-process communication

Performance

Changing Interfaces

Error Handling

Crash Failure - server crashed, Reboot!

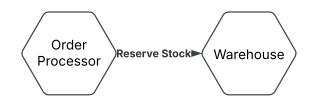
Omission Failure - we send something (not recieved), event not published.

Timing Failure something happens too late, or too early.

Response Failure - either don't get a response, missing data in the response that we expected.

Arbitrary Failure - Can't come to a consensus on whether we succeeded or failed.

HTTP protocol - response codes 400 - 500 reserved for errors.



400 - something is wrong with the request (non retryable)

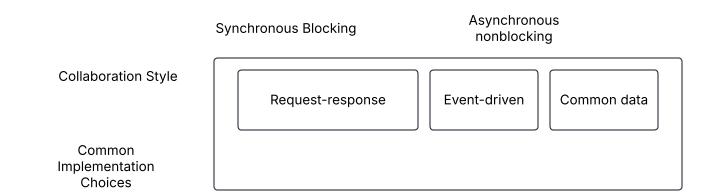
500 - something is wrong with the downstream service (retryable*)

404 - not found

401 or 403 - security (unauthorized)

503 - service unavailable.

Mental Model



Synchronous blocking

Advantages - generally familiar to us and easy to understand

Disadvantages temporal coupling between services. Asynchronous nonblocking

Advantages - avoid temporal coupling, in cases where it's not real time.

Disadvantages - different from how we usually think about computing, we have choices to make (request-response, event-driven, common data).

When to use - simple microservice architecture.

