

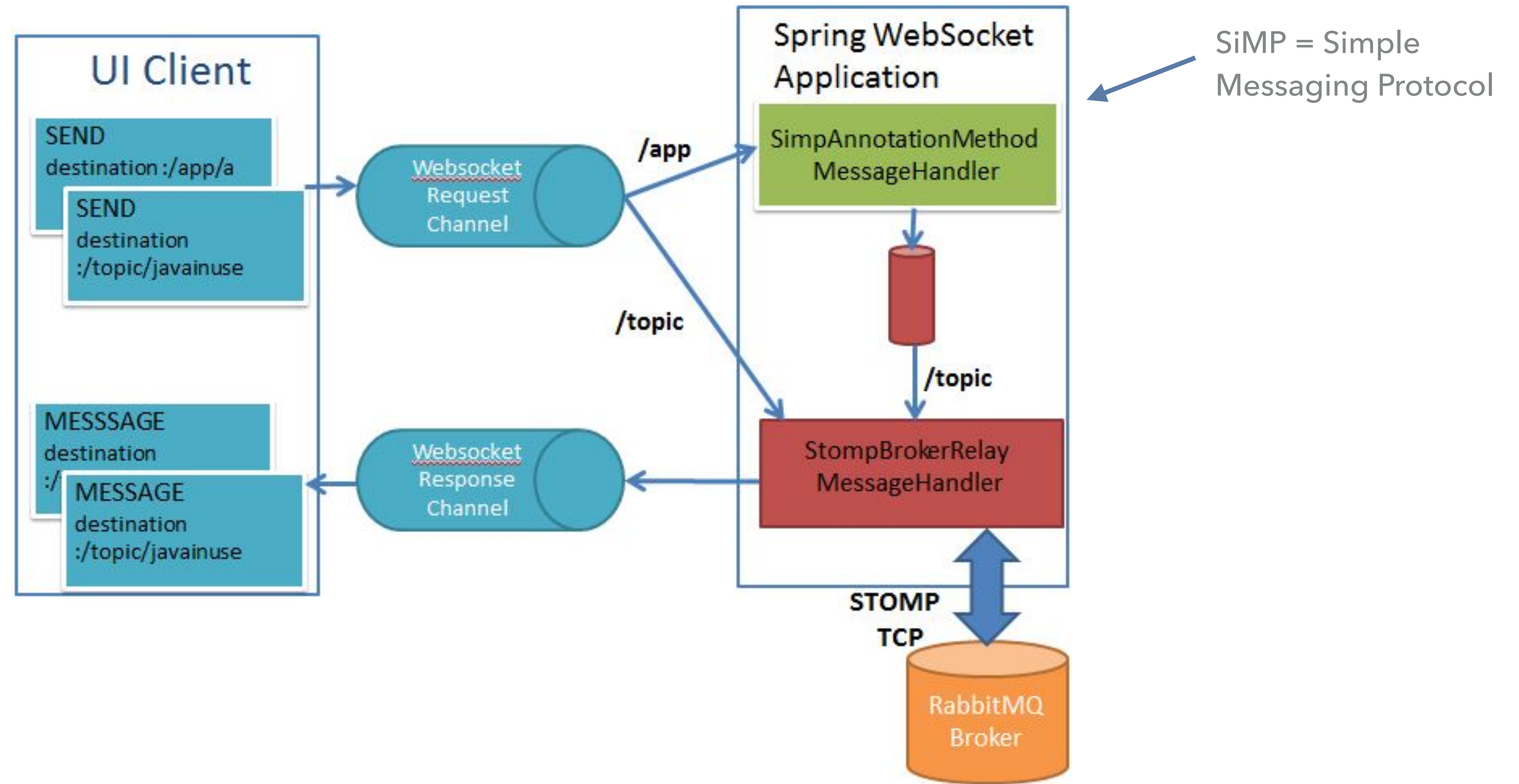
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WEBSOCKET & RABBIT MQ

ÜBERBLICK

- ▶ Konzepte
 - ▶ Websocket
 - ▶ Rabbit MQ
 - ▶ STOMP
- ▶ Implementierung einer Chat-Applikation
- ▶ Erweiterung mit „whisper“-Funktion

TECH-STACK

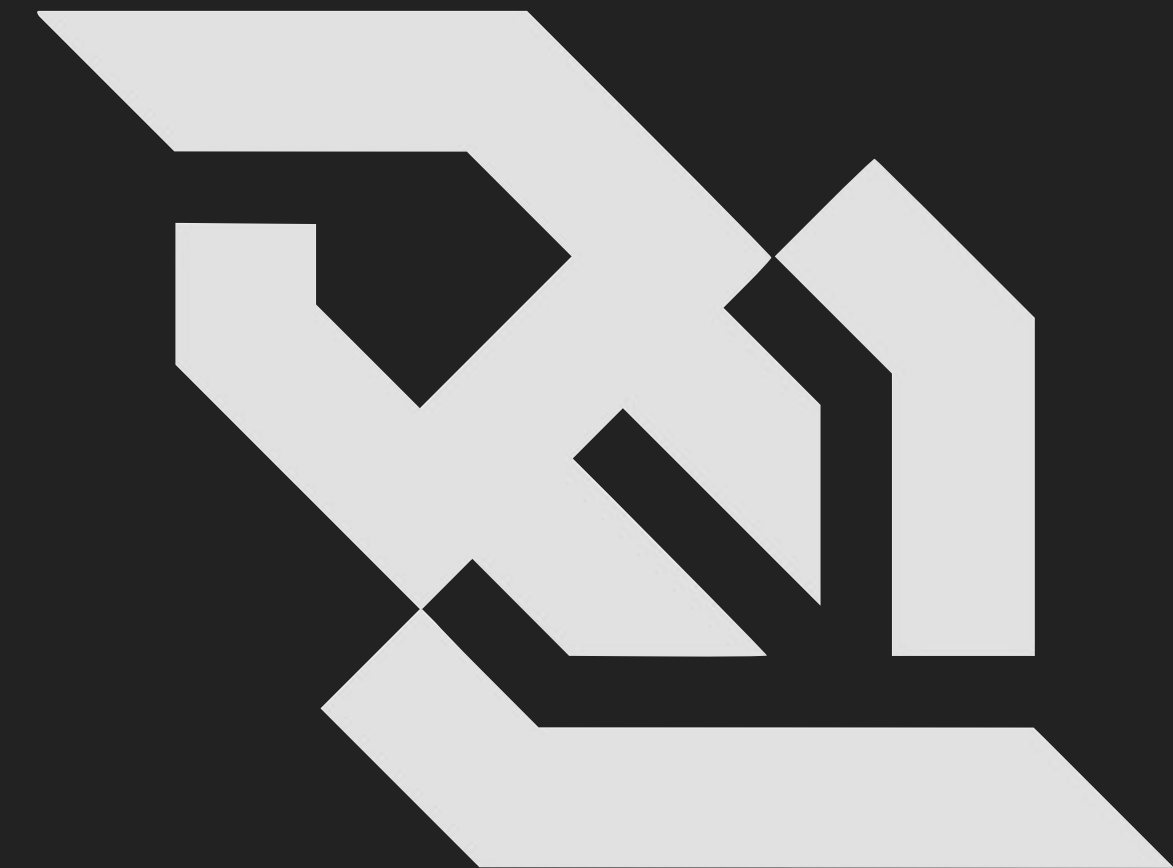


KONZEPT

WEBSOCKET

SERVER-CLIENT KOMMUNIKATION

- ▶ Request → Response (HTTP/HTTPS)
 - ▶ REST
 - ▶ RPC
 - ▶ SOAP
- ▶ Websocket
- ▶ RTMP (Real Time Messaging Protocol)
- ▶ WebRTC (Web Real Time Communication)
- ▶ ...





WEBSOCKET

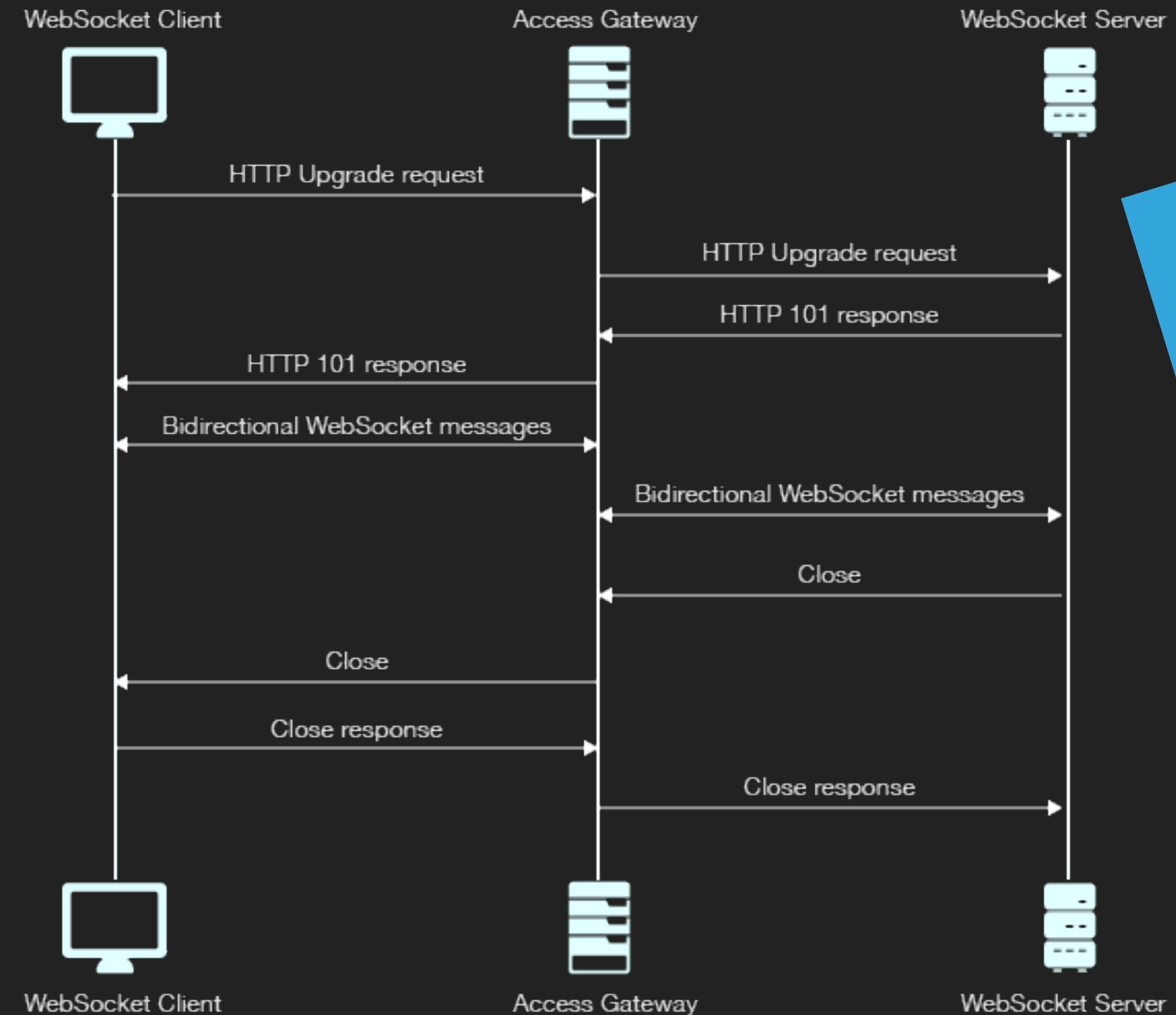
- ▶ Punkt-zu-Punkt
- ▶ Bidirektional (Full Duplex)
- ▶ Erweiterung zu HTTP

REQ

```
GET /chat HTTP/1.1
Host: server.example.com
Upgrade: websocket
Connection: Upgrade
Sec-WebSocket-Key: dGh1IHhnbXBsZSBub25jZQ==
Sec-WebSocket-Version: 13
```

RES

```
HTTP/1.1 101 Switching Protocols Upgrade:
websocket Connection: Upgrade Sec-WebSocket-
Accept: s3pPLMBiTxaQ9kYGzzhZRbK+x0o=
```

**HTTP 101**
SWITCHING PROTOCOL

KONZEPT

RABBIT MQ

MESSAGING BROKER

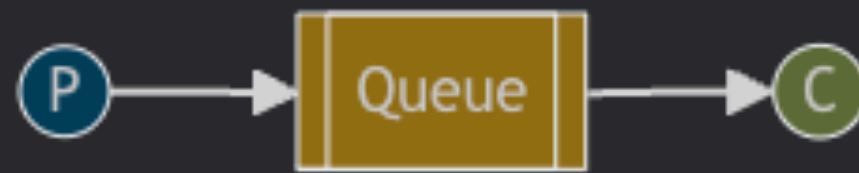
- ▶ Queues
- ▶ Unterstützt verschiedene Messaging-Protokolle
 - ▶ AMQP (Advanced Message Queuing Protocol)
 - ▶ MQTT (Message Queuing Telemetry Transport)
 - ▶ STOMP (Simple Text Oriented Messaging Protocol)
- ▶ Nachrichten im RAM bis zur Verarbeitung
- ▶ Markierung als „persistent“ → HD/DB



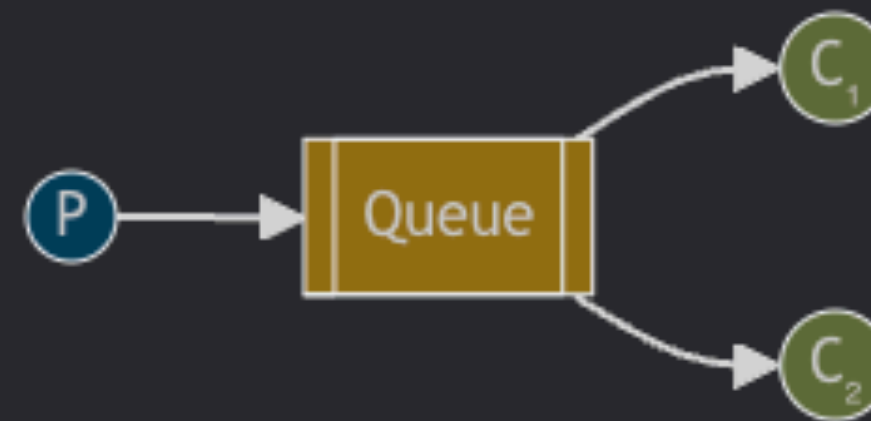


MESSAGING BROKER

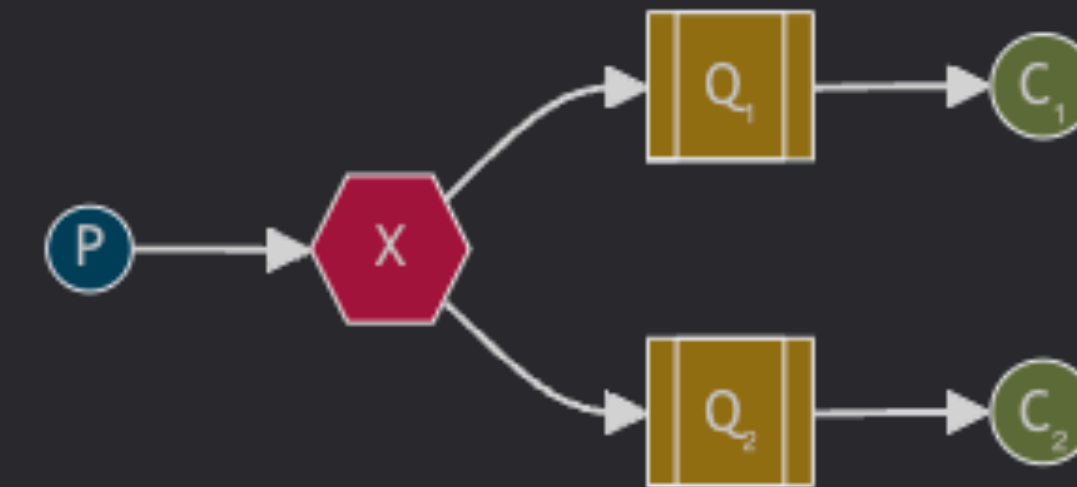
1. "Hello World!"



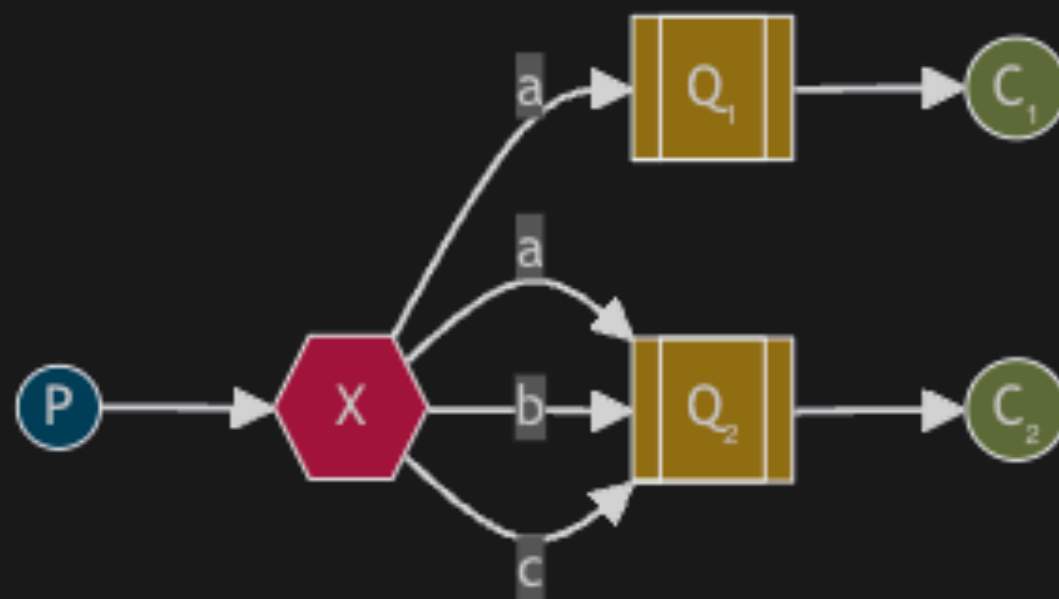
2. Work Queues



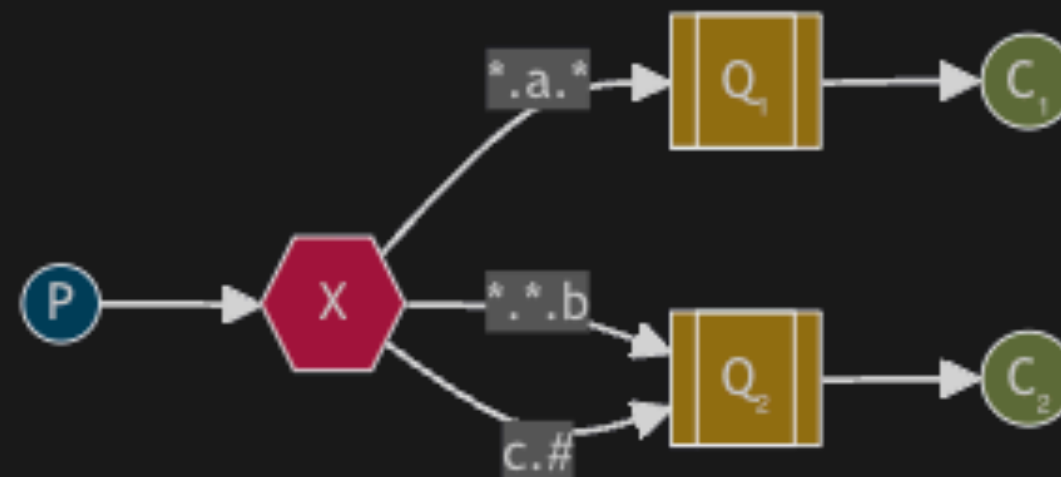
3. Publish/Subscribe



4. Routing



5. Topics



6. RPC



KONZEPT

STOMP

NACHRICHTENPROTOKOLL

- ▶ Definiert Befehle und Nachrichtenformate
- ▶ Text-basiert
- ▶ Grundlegende Methoden:
 - ▶ connect
 - ▶ send
 - ▶ subscribe
 - ▶ unsubscribe
 - ▶ begin
 - ▶ commit
 - ▶ abort
 - ▶ disconnect





NACHRICHTENPROTOKOLL

SEND

destination:/queue/a

content-type:text/plain

hello queue a

^@

