



HTTP/2 RPC protocol

Au Programme

Les Sujets Traités

- Motivation:
 - client-server communication
 - problem with client libraries
 - why gRPC was invented
- gRPC:
 - Unary gRPC
 - Server streaming
 - Client Streaming
 - Bidirectional
- Coding
- gRPC pros & cons
- i'm tired of new protocols

Client Server communication

- SOAP, REST, GraphQL
- SSE , WebSockets
- Raw TCP

The problem with client libraries

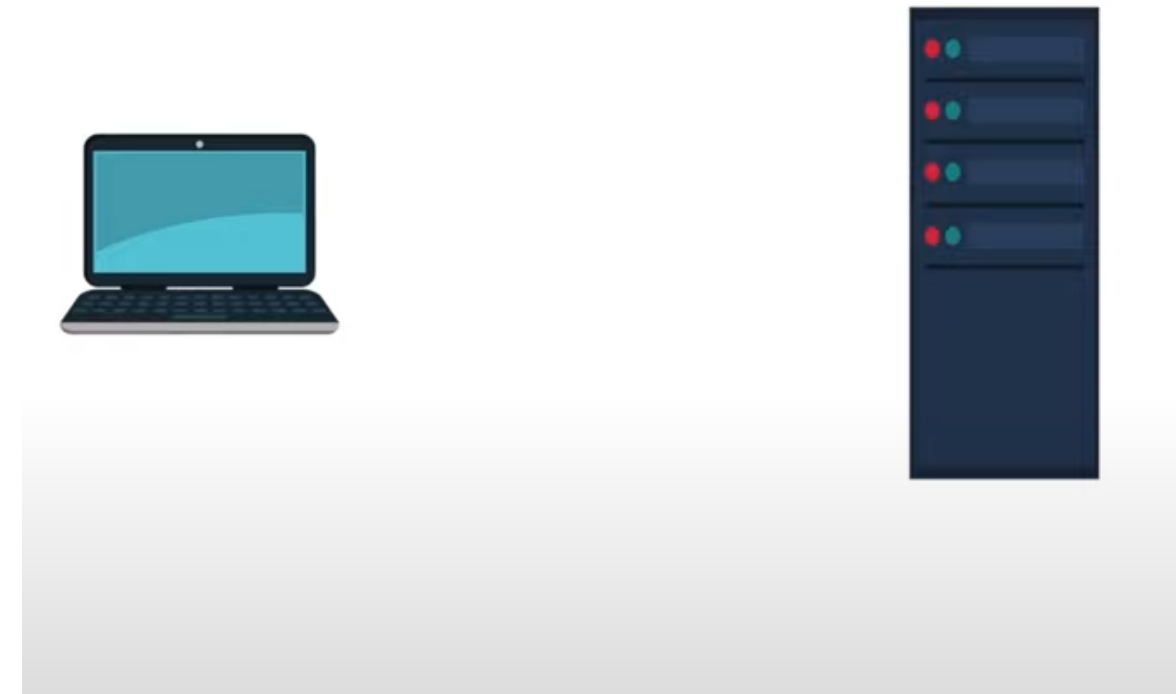
- Any communication protocol needs client library for the language of choice
 - SOAP Library
 - HTTP Client Library
- Hard to maintain and patch client libraries
 - HTTP/1.1 HTTP/2 , new features , security etc .

Why gRPC was invented?

- Client Library : One library for popular languages
- Protocol : HTTP/2 (hidden implementation)
- Message Format : Protocol buffers as format

gRPC modes

- Unary RPC
- Server streaming RPC
- Client streaming RPC
- Bidirectional streaming RPC



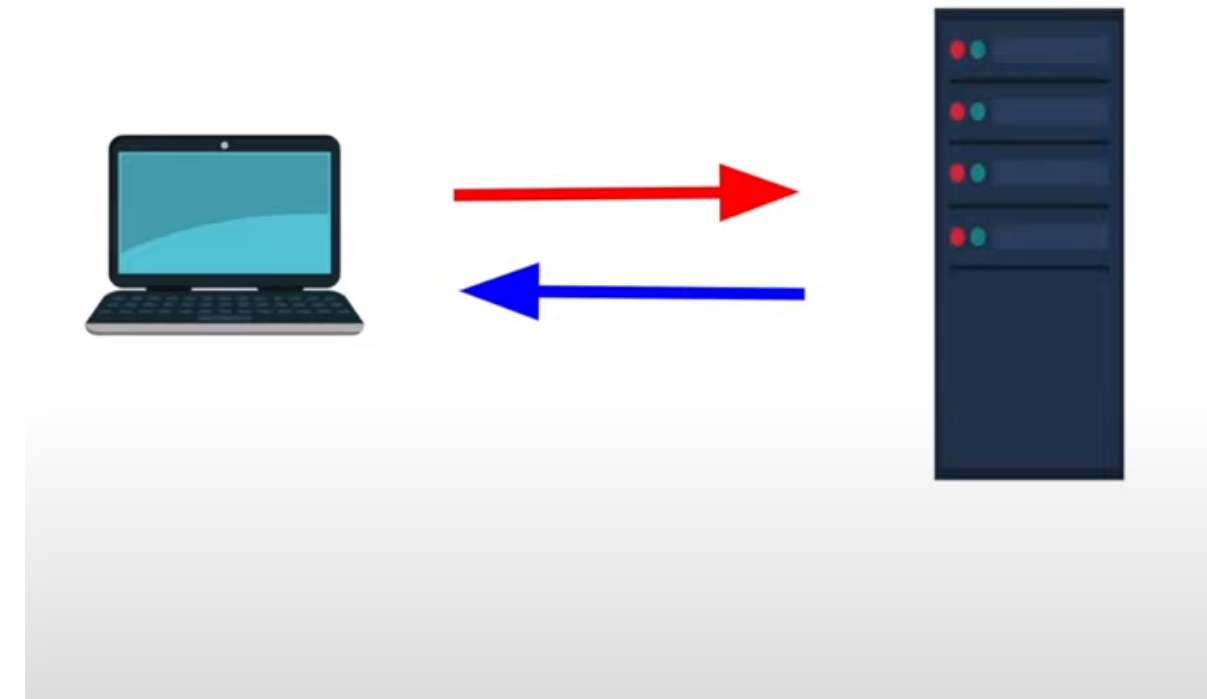
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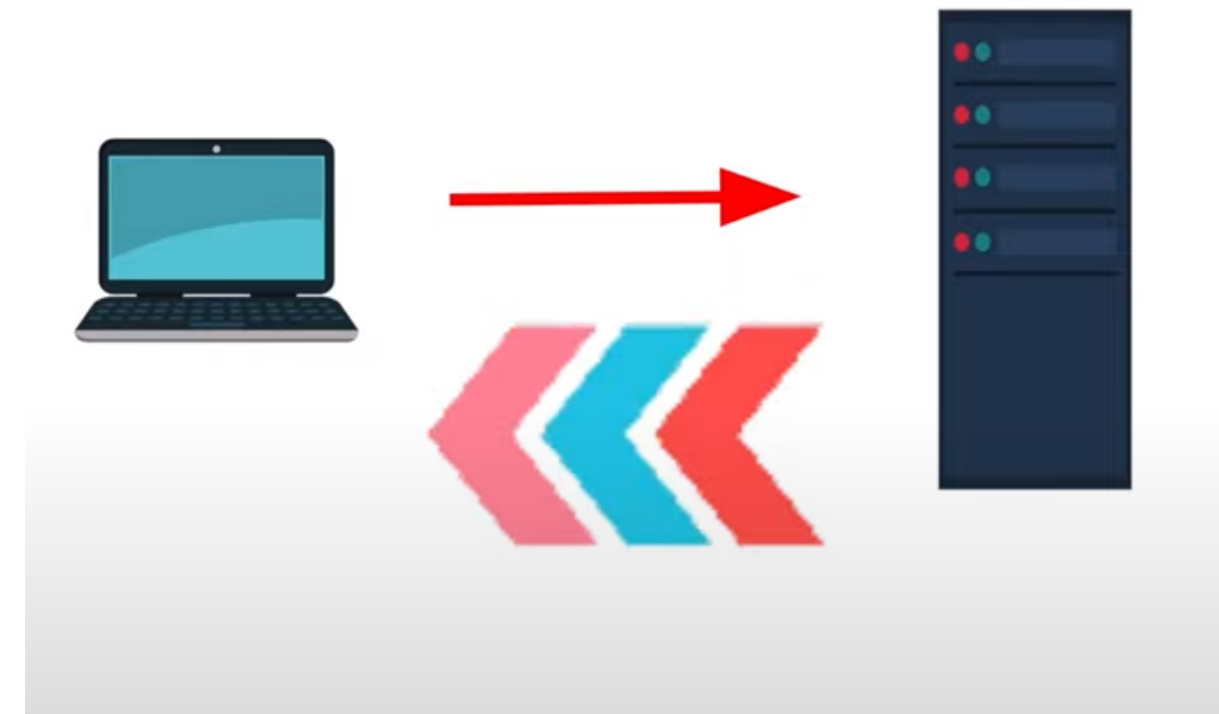
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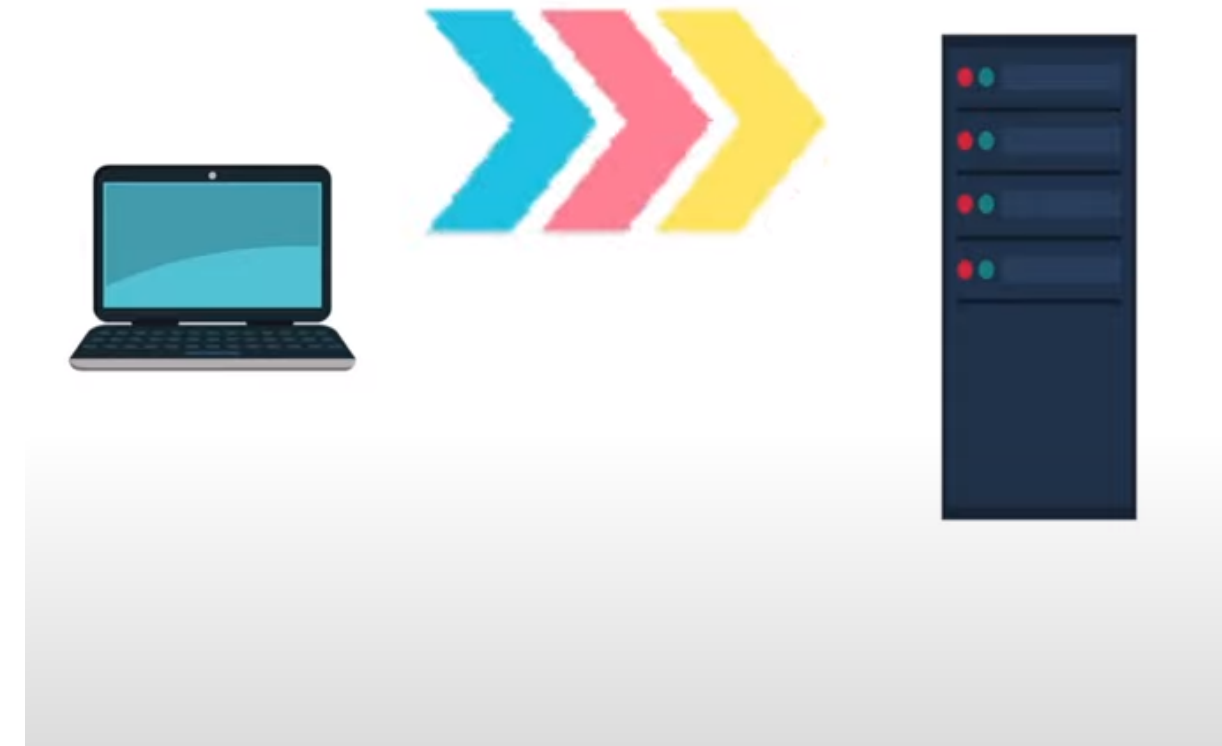
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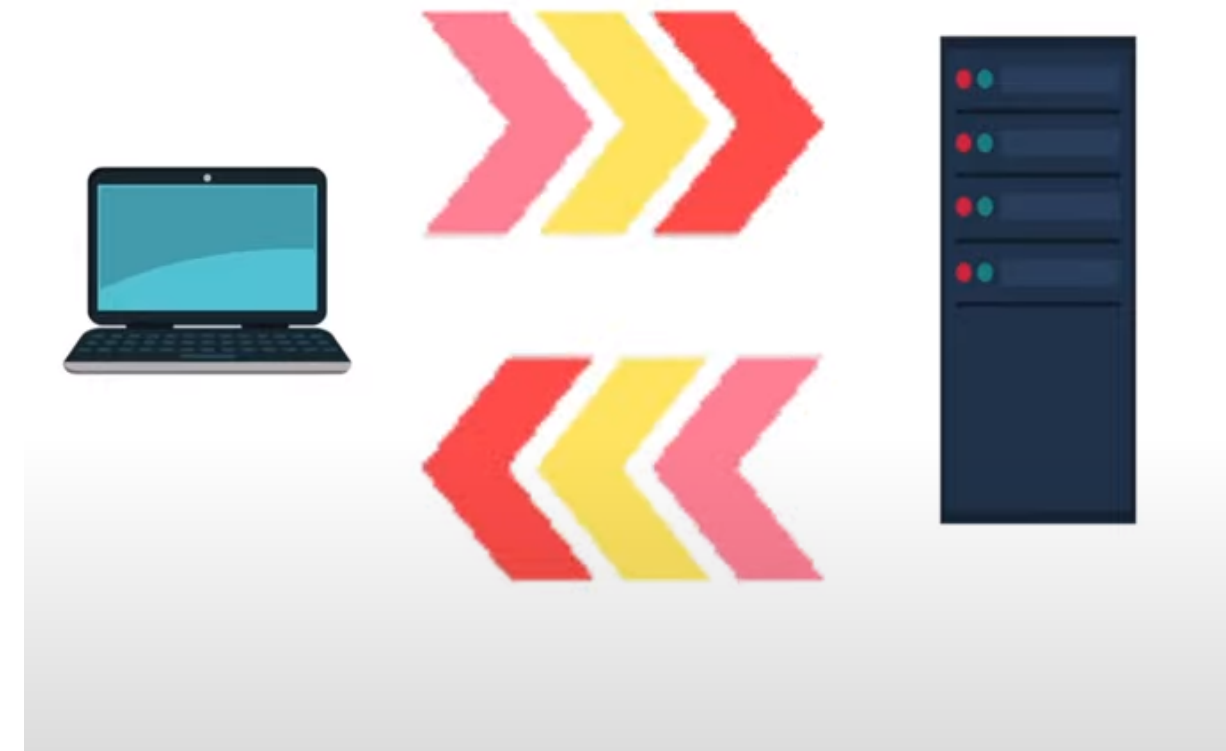
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Coding Time!

- Todo application (client , server) with gRPC
- createTodo ()
- readTodos () // synchronous
- readTodos () // server stream

gRPC pros & cons

- Fast & Compact
- One Client Library
- Progress Feedback (upload)
- Cancel Request (H2)
- H2/Protobuf
- Schema
- Thick Client
- Proxies
- Still young (support)
- Error handling
- No native browser support
- Timeouts (pub/sub)

Can i write my own protocol too?

- Yes , you can, Spotify did (Hermes) but guess what
- Only you will be using it so ...
- Spotify moved to gRPC not because of limitation of Hermes but because they are isolated.

Merci !

si vous avez des questions
n'hésitez pas