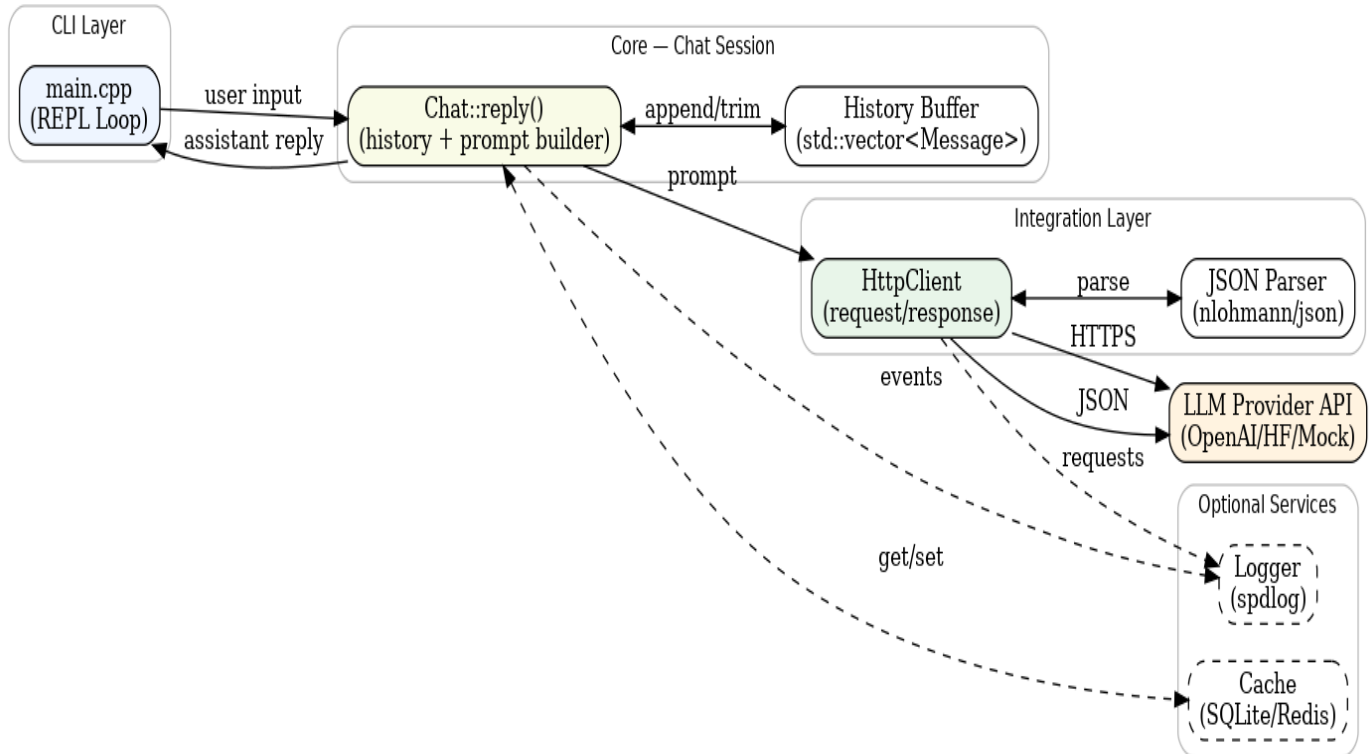


# C++ LLM Chat Client — Design Diagrams

Component architecture, data flow, error handling, and deployment view.

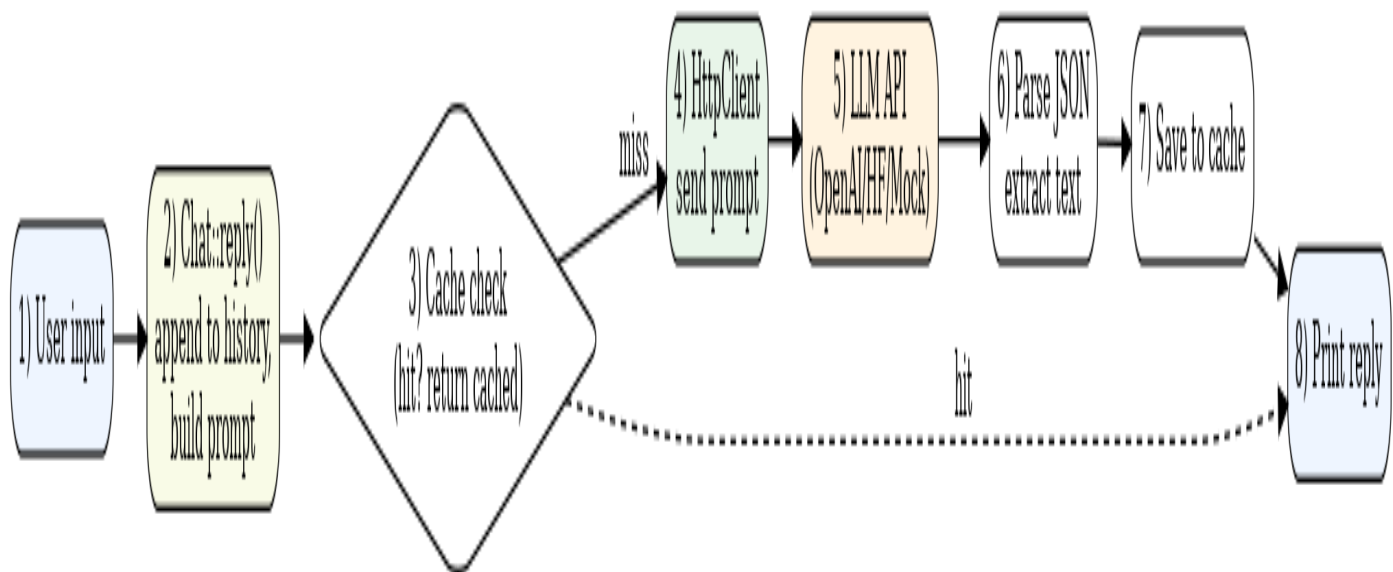
## 1) Component Architecture

Modules grouped by responsibility. Optional services (cache, logging) are plug-ins the core can run without.



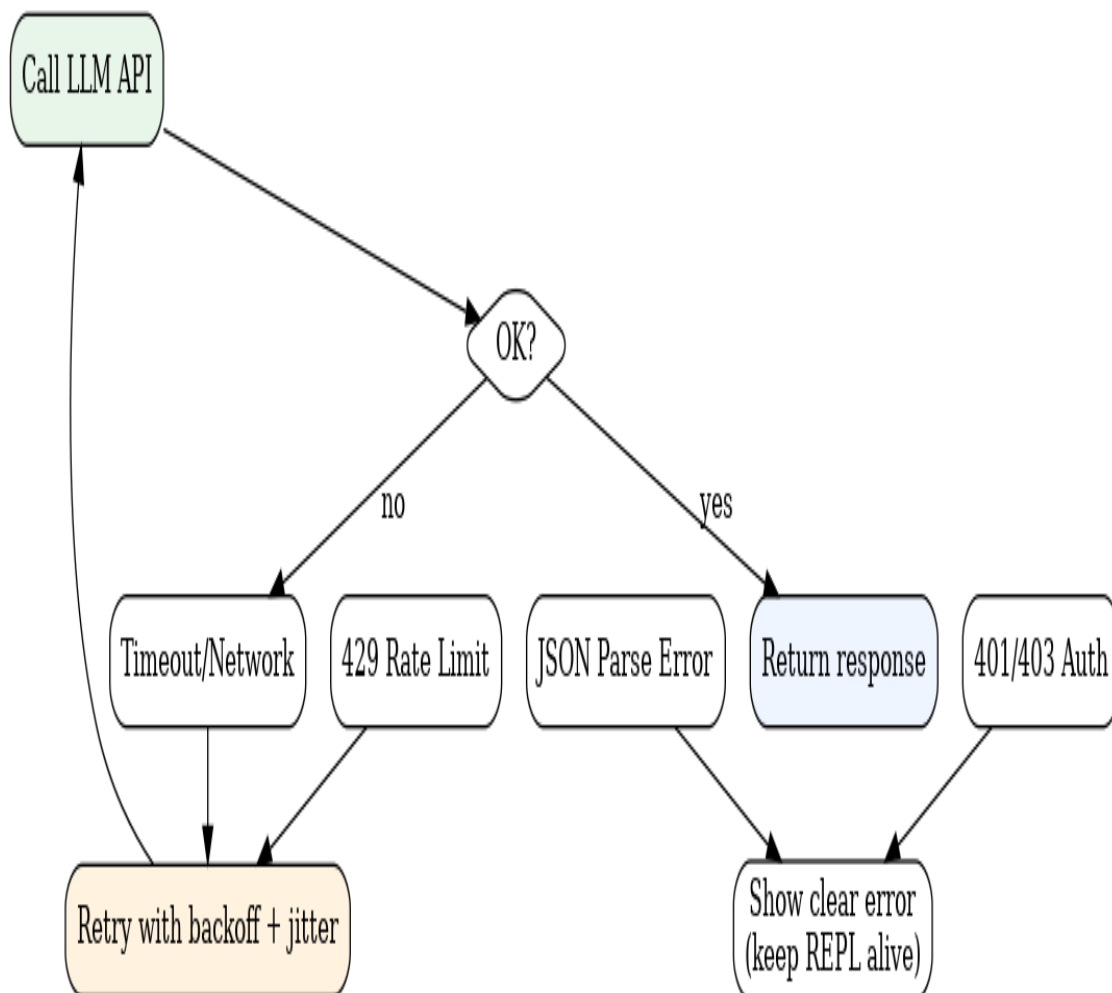
## 2) One Chat Turn — Numbered Flow

The request path from user input to API and back. Cache short-circuits on hit.



### 3) Error Handling & Retries

Network/transient failures retry with backoff; auth and parse errors surface clear messages without crashing the REPL.



#### 4) Deployment View

Local build links to dependencies and calls provider over HTTPS. A mock backend can be swapped in for tests.

