

tRPC-Agent-Go: Empowering Go Developers to Build Intelligent AI Applications

1. Project Introduction

The tRPC team previously open-sourced the A2A development framework [tRPC-A2A-Go](#) and MCP development framework [tRPC-MCP-Go](#). Especially tRPC-A2A-Go has gained many users and contributors both domestically and internationally. Now we are launching the [tRPC-Agent-Go](#) development framework to complete the Go language AI ecosystem development framework.

Most mainstream Agent frameworks (AutoGen, CrewAI, Agno, ADK, etc.) are Python-based, while Go has natural advantages in microservices, concurrency, and deployment. Go also has large-scale applications within Tencent, and there are relatively few Agent frameworks based on Go in the industry. Most are orchestrated workflow frameworks, lacking true "decentralized, collaborative, emergent" autonomous multi-Agent capabilities. tRPC-Agent-Go directly leverages Go's high concurrency and tRPC ecosystem to bring LLM reasoning, negotiation, and adaptability to Go scenarios, meeting complex business requirements for both "intelligence + performance".

2. Architecture Design

tRPC-Agent-Go adopts a modular architecture design, consisting of multiple core components that are all pluggable. Component communication is decoupled through an event-driven mechanism, supporting callback insertion for custom logic:

- Agent: Core execution unit, responsible for processing user input and generating responses

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Architecture Design tRPC-Agent-Go adopts a modular architecture design, consisting of multiple core components that are all pluggable. Component communication is decoupled through an event-driven mechanism, supporting callback insertion for custom logic:

- Agent:** Core execution unit, responsible for processing user input and generating responses
- Runner:** Agent executor, responsible for managing execution flow and connecting Session/Memory Service capabilities
- Model:** Supports multiple LLM models (OpenAI, DeepSeek, etc.)
- Tool:** Provides various tool capabilities (Function, MCP, DuckDuckGo, etc.)
- Session:** Manages user session state and events
- Memory:** Records user long-term memory and personalized information
- Knowledge:** Implements RAG knowledge retrieval capabilities
- Planner:** Provides Agent planning and reasoning capabilities
