

4. OpenRouter Large Model API Aggregation Platform Text Interaction Tutorial

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Concept Introduction

1.1 What is "OpenRouter"?

OpenRouter is a **large model API aggregation platform**. You can think of it as a "universal remote control for large models". Normally, if you want to use OpenAI's GPT-4, Anthropic's Claude-3, and Google's Gemini, you need to register accounts on three platforms separately, obtain three sets of API Keys, and write three different sets of calling code for their respective API formats.

However, OpenRouter solves this problem. It provides a **unified API interface** (compatible with OpenAI's API format), where you only need one OpenRouter API Key to call all the above models and hundreds of other open-source and closed-source models through this single entry point.

The **core advantages** of integrating OpenRouter in the `Targemode1` project are:

- **Ultimate Flexibility:** You can seamlessly switch between GPT, Claude, Llama, and any other models by simply modifying a model name in the configuration file, without changing any code.
- **Cost-effectiveness:** OpenRouter provides clear pricing for each model, allowing you to easily compare and select the most cost-effective model to perform specific tasks.
- **Explore Cutting-edge Models:** Many new and excellent open-source models are included on OpenRouter as soon as they are released, allowing developers to quickly try them out.

In the `Targemode1` project, you can enable this powerful aggregation platform by configuring the `llm_platform` parameter to `openrouter`.

2. Practical Operations

2.1 Obtain API Credentials

1. **Register for OpenRouter:** Visit OpenRouter.ai and register an account using Google or email. If the link is not working, you need to search for "OpenRouter" platform yourself.
2. **Top Up:** OpenRouter uses a prepayment model. You need to top up a small amount (e.g., \$5) on the "Credits" page before you can start using it. Alternatively, you can use the free models they provide, but there are rate limits.

3. Create API Key: On the "Keys" page, click "Create Key" to generate a new API Key and immediately copy and save it.

2.2 Graphical Process

1. First, visit the following website. If the link is not working, you need to search for "OpenRouter" platform yourself, then look for large model keywords.

[OpenRouter](#)

The Unified Interface For LLMs

Better prices, better uptime, no subscription.

Start a message...

Featured Models

- Gemini 2.5 Pro by google 207.9B 2.7s +4.03%
Tokens/wk Latency Weekly growth
- Horizon Alpha New by openrouter 1.4B 792ms -- Weekly growth
- Claude Sonnet 4 by anthropic 610.3B 2.1s +28.53%
Tokens/wk Latency Weekly growth

8.4T Monthly Tokens 2.5M+ Global Users 60+ Active Providers 400+ Models

2. Register and log in to your account
3. After registering your account, click to enter the model marketplace

Models 477 models Reset Filters

Horizon Alpha 34.6B tokens

This is a cloaked model provided to the community to gather feedback. Note: It's free to use during this testing period, and prompts and completions are logged by the model creator for feedback an...
by openrouter | 256K context | \$0/M input tokens | \$0/M output tokens

Qwen: Qwen3 30B A3B Instruct 2507 307M tokens

Qwen3-30B-A3B-Instruct-2507 is a 30.5B-parameter mixture-of-experts language model from Qwen, with 3.3B active parameters per inference. It operates in non-thinking mode and is designed...
by qwen | 131K context | \$0.20/M input tokens | \$0.80/M output tokens

Z.AI: GLM 4.5 15.6B tokens

GLM-4.5 is our latest flagship foundation model, purpose-built for agent-based applications. It leverages a Mixture-of-Experts (MoE) architecture and supports a context length of up to 128K ...
by z.ai | 131K context | \$0.20/M input tokens | \$0.20/M output tokens

4. You can type "free" in the search bar to find models that can be called for free.

5. Hover your mouse over the clipboard icon next to the model to see the name used when calling the model, click once to copy it.

DeepSeek: DeepSeek V3 0324 (free) 212B tokens

DeepSeek V3, a 685B-parameter, mixture-of-experts model, is the latest iteration of the flagship chat model family from the DeepSeek team. It succeeds the DeepSeek V3 model and performs ...
by [deepseek](#) | 164K context | \$0/M input tokens | \$0/M output tokens

6. Move your mouse to the top right corner next to the avatar, it will expand, you can click Keys to go in and create a key.

Models Chat Rankings Docs

54 models Reset Filters

Sort

DeepSeek: DeepSeek V3 0324 (free) 212B tokens

DeepSeek V3, a 685B-parameter, mixture-of-experts model, is the latest iteration of the flagship chat model family from the DeepSeek team. It succeeds the DeepSeek V3 model and performs ...
by [deepseek](#) | 164K context | \$0/M input tokens | \$0/M output tokens

7. Click to apply for API key



8. After applying, you will get a string of API key



2.3 Configuration File Modification

1. Open `large_model_interface.yaml`:

```
# Open configuration file  
vim ~/yahboom_ws/src/largemode1/config/large_model_interface.yaml
```

Then change `sk-xxxxxxxxxxxx` in `openrouter_api_key` to the API key you just copied.

`openrouter_model` is used to configure the large model for conversation.

```
# OpenRouter platform configuration  
openrouter_api_key: "sk-xxxxxxxxxxxxxxxxxxxx"  
openrouter_model: "moonshotai/kimi-k2:free" # Model to use, for example  
"google/gemini-provision"
```

2. Open `yahboom.yaml`:

```
# Open yahboom configuration file  
vim ~/yahboom_ws/src/largemode1/config/yahboom.yaml
```

3. **Switch Platform:** Modify the `llm_platform` parameter to `openrouter`.

```
# Set large model platform to openrouter  
lm_platform: 'openrouter'
```

After switching the platform parameters, return to the workspace and recompile to take effect.