# API chains

APIChain enables using LLMs to interact with APIs to retrieve relevant information. Construct the chain by providing a question relevant to the provided API documentation.

```python
from langchain.chains.api.prompt import API_RESPONSE_PROMPT
```

```python
from langchain.chains import APIChain
from langchain.prompts.prompt import PromptTemplate


from langchain.llms import OpenAI

llm = OpenAI(temperature=0)
```

## OpenMeteo Example

```python
from langchain.chains.api import open_meteo_docs
chain_new = APIChain.from_llm_and_api_docs(llm, open_meteo_docs.OPEN_METEO_DOCS, verbose=True)
```

```python
chain_new.run('What is the weather like right now in Munich, Germany in degrees Fahrenheit?')
```

```
    > Entering new APIChain chain...
    https://api.open-meteo.com/v1/forecast?latitude=48.1351&longitude=11.5820&temperature_unit=fahrenheit&curren

{"latitude":48.14,"longitude":11.58,"generationtime_ms":0.33104419708251953,"utc_offset_seconds":0,"timezone":"(
{"temperature":33.4,"windspeed":6.8,"winddirection":198.0,"weathercode":2,"time":"2023-01-16T01:00"}}


    > Finished chain.




    ' The current temperature in Munich, Germany is 33.4 degrees Fahrenheit with a windspeed of 6.8 km/h and a v
```

## TMDB Example

```
import os
os.environ['TMDB_BEARER_TOKEN'] = ""
```

```
from langchain.chains.api import tmdb_docs
headers = {"Authorization": f"Bearer {os.environ['TMDB_BEARER_TOKEN']}"}
chain = APIChain.from_llm_and_api_docs(llm, tmdb_docs.TMDB_DOCS, headers=headers, verbose=True)
```

```
chain.run("Search for 'Avatar'")
```

> Entering new APIChain chain...
 https://api.themoviedb.org/3/search/movie?query=Avatar&language=en-US

{"page":1,"results":[{"adult":false,"backdrop_path":"/o0s4XsEDfDlvit5pDRKjzXR4pp2.jpg","genre_ids":
[28,12,14,878],"id":19995,"original_language":"en","original_title":"Avatar","overview":"In the 22nd century,
a paraplegic Marine is dispatched to the moon Pandora on a unique mission, but becomes torn between following
orders and protecting an alien
civilization.","popularity":2041.691,"poster_path":"/jRXYjXNq0Cs2TcJjLkki24MLp7u.jpg","release_date":"2009-
12-15","title":"Avatar","video":false,"vote_average":7.6,"vote_count":27777},
{"adult":false,"backdrop_path":"/s16H6tpK2utvwDtzZ8Qy4qm5Emw.jpg","genre_ids":
[878,12,28],"id":76600,"original_language":"en","original_title":"Avatar: The Way of Water","overview":"Set
more than a decade after the events of the first film, learn the story of the Sully family (Jake, Neytiri,
and their kids), the trouble that follows them, the lengths they go to keep each other safe, the battles they
fight to stay alive, and the tragedies they
endure.","popularity":3948.296,"poster_path":"/t6HIqrRAclMCA60NsSmeqe9RmNV.jpg","release_date":"2022-12-
14","title":"Avatar: The Way of Water","video":false,"vote_average":7.7,"vote_count":4219},
{"adult":false,"backdrop_path":"/uEwGFGtao9YG2JolmdvtHLLVbA9.jpg","genre_ids":
[99],"id":111332,"original_language":"en","original_title":"Avatar: Creating the World of
Pandora","overview":"The Making-of James Cameron's Avatar. It shows interesting parts of the work on the
set.","popularity":541.809,"poster_path":"/sjf3xjuofCtDhZghJRzXlTiEjJe.jpg","release_date":"2010-02-
07","title":"Avatar: Creating the World of Pandora","video":false,"vote_average":7.3,"vote_count":35},
{"adult":false,"backdrop_path":null,"genre_ids":
[99],"id":287003,"original_language":"en","original_title":"Avatar: Scene Deconstruction","overview":"The
deconstruction of the Avatar scenes and
sets","popularity":394.941,"poster_path":"/uCreCQFReeF0RiIXkQypRYHwikx.jpg","release_date":"2009-12-
18","title":"Avatar: Scene Deconstruction","video":false,"vote_average":7.8,"vote_count":12},
{"adult":false,"backdrop_path":null,"genre_ids":
[28,18,878,12,14],"id":83533,"original_language":"en","original_title":"Avatar

3","overview":"","popularity":172.488,"poster_path":"/4rXqTMlkEaMiJjiG0Z2BX6F6Dkm.jpg","release_date":"2024-12-18","title":"Avatar 3","video":false,"vote_average":0,"vote_count":0},
{"adult":false,"backdrop_path":null,"genre_ids":
[28,878,12,14],"id":216527,"original_language":"en","original_title":"Avatar
4","overview":"","popularity":162.536,"poster_path":"/qzMYKnT4MG1d0gnhwytr4cKhUvS.jpg","release_date":"2026-12-16","title":"Avatar 4","video":false,"vote_average":0,"vote_count":0},
{"adult":false,"backdrop_path":null,"genre_ids":
[28,12,14,878],"id":393209,"original_language":"en","original_title":"Avatar
5","overview":"","popularity":124.722,"poster_path":"/rtmmvqkIC5zDMEd638Es2woxbz8.jpg","release_date":"2028-12-20","title":"Avatar 5","video":false,"vote_average":0,"vote_count":0},
{"adult":false,"backdrop_path":"/nNceJtrrovG1MUBHMAhId0ws9Gp.jpg","genre_ids":
[99],"id":183392,"original_language":"en","original_title":"Capturing Avatar","overview":"Capturing Avatar is
a feature length behind-the-scenes documentary about the making of Avatar. It uses footage from the film's
development, as well as stock footage from as far back as the production of Titanic in 1995. Also included
are numerous interviews with cast, artists, and other crew members. The documentary was released as a bonus
feature on the extended collector's edition of
Avatar.","popularity":109.842,"poster_path":"/26SMEXJl3978dn2svWBSqHbLl5U.jpg","release_date":"2010-11-16","title":"Capturing Avatar","video":false,"vote_average":7.8,"vote_count":39},
{"adult":false,"backdrop_path":"/eoAvHxfbaPOcfiQyjqypWIXWxDr.jpg","genre_ids":
[99],"id":1059673,"original_language":"en","original_title":"Avatar: The Deep Dive - A Special Edition of
20/20","overview":"An inside look at one of the most anticipated movie sequels ever with James Cameron and
cast.","popularity":629.825,"poster_path":"/rtVeIsmeXnpjNbEKnm9Say58XjV.jpg","release_date":"2022-12-14","title":"Avatar: The Deep Dive - A Special Edition of
20/20","video":false,"vote_average":6.5,"vote_count":5},{"adult":false,"backdrop_path":null,"genre_ids":
[99],"id":278698,"original_language":"en","original_title":"Avatar Spirits","overview":"Bryan Konietzko and
Michael Dante DiMartino, co-creators of the hit television series, Avatar: The Last Airbender, reflect on the
creation of the masterful
series.","popularity":51.593,"poster_path":"/oBWVyOdntLJd5bBpE0wkpN6B6vy.jpg","release_date":"2010-06-22","title":"Avatar Spirits","video":false,"vote_average":9,"vote_count":16},
{"adult":false,"backdrop_path":"/cACUWJKvRfhXge7NC0xxoQnkQNu.jpg","genre_ids":
[10402],"id":993545,"original_language":"fr","original_title":"Avatar - Au Hellfest
2022","overview":"","popularity":21.992,"poster_path":"/fw6cPIsQYKjd1YVQanG2vLc5HGo.jpg","release_date":"2022-06-26","title":"Avatar - Au Hellfest 2022","video":false,"vote_average":8,"vote_count":4},

{"adult":false,"backdrop_path":null,"genre_ids":
[],"id":931019,"original_language":"en","original_title":"Avatar: Enter The World","overview":"A behind the
scenes look at the new James Cameron blockbuster "Avatar", which stars Aussie Sam Worthington. Hastily
produced by Australia's Nine Network following the film's
release.","popularity":30.903,"poster_path":"/9MHY9pYAgs91Ef7YFGWEbP4WJqC.jpg","release_date":"2009-12-
05","title":"Avatar: Enter The World","video":false,"vote_average":2,"vote_count":1},
{"adult":false,"backdrop_path":null,"genre_ids":
[],"id":287004,"original_language":"en","original_title":"Avatar: Production
Materials","overview":"Production material overview of what was used in
Avatar","popularity":12.389,"poster_path":null,"release_date":"2009-12-18","title":"Avatar: Production
Materials","video":true,"vote_average":6,"vote_count":4},
{"adult":false,"backdrop_path":"/x43RWEZg9tYRPgnm43GyIB4tlER.jpg","genre_ids":
[],"id":740017,"original_language":"es","original_title":"Avatar: Agni
Kai","overview":"","popularity":9.462,"poster_path":"/y9PrKMUTA6NfIe5FE92tdwOQ2sH.jpg","release_date":"2020-
01-18","title":"Avatar: Agni Kai","video":false,"vote_average":7,"vote_count":1},
{"adult":false,"backdrop_path":"/e8mmDO7fKK93T4lnxl4Z2zjxXZV.jpg","genre_ids":
[],"id":668297,"original_language":"en","original_title":"The Last Avatar","overview":"The Last Avatar is a
mystical adventure film, a story of a young man who leaves Hollywood to find himself. What he finds is beyond
his wildest imagination. Based on ancient prophecy, contemporary truth seeking and the future of humanity,
The Last Avatar is a film that takes transformational themes and makes them relevant for audiences of all
ages. Filled with love, magic, mystery, conspiracy, psychics, underground cities, secret societies, light
bodies and much more, The Last Avatar tells the story of the emergence of Kalki Avatar- the final Avatar of
our current Age of Chaos. Kalki is also a metaphor for the innate power and potential that lies within
humanity to awaken and create a world of truth, harmony and
possibility.","popularity":8.786,"poster_path":"/XWz5SS5g5mrNEZjv3FiGhqCMOQ.jpg","release_date":"2014-12-
06","title":"The Last Avatar","video":false,"vote_average":4.5,"vote_count":2},
{"adult":false,"backdrop_path":null,"genre_ids":
[],"id":424768,"original_language":"en","original_title":"Avatar:[2015] Wacken Open Air","overview":"Started
in the summer of 2001 by drummer John Alfredsson and vocalist Christian Rimmi under the name Lost Soul.  The
band offers a free mp3 download to a song called \"Bloody Knuckles\" if one subscribes to their newsletter.
In 2005 they appeared on the compilation "Listen to Your Inner Voice" together with 17 other bands released
by Inner Voice Records.","popularity":6.634,"poster_path":null,"release_date":"2015-08-01","title":"Avatar:
[2015] Wacken Open Air","video":false,"vote_average":8,"vote_count":1},

{"adult":false,"backdrop_path":null,"genre_ids":
[],"id":812836,"original_language":"en","original_title":"Avatar - Live At Graspop 2018","overview":"Live At
Graspop Festival Belgium 2018","popularity":9.855,"poster_path":null,"release_date":"","title":"Avatar - Live
At Graspop 2018","video":false,"vote_average":9,"vote_count":1},
{"adult":false,"backdrop_path":null,"genre_ids":
[10402],"id":874770,"original_language":"en","original_title":"Avatar Ages: Memories","overview":"On the
night of memories Avatar performed songs from Thoughts of No Tomorrow, Schlacht and Avatar as voted on by the
fans.","popularity":2.66,"poster_path":"/xDNNQ2cnxAv3o7u0nT6JJacQrhp.jpg","release_date":"2021-01-
30","title":"Avatar Ages: Memories","video":false,"vote_average":10,"vote_count":1},
{"adult":false,"backdrop_path":null,"genre_ids":
[10402],"id":874768,"original_language":"en","original_title":"Avatar Ages: Madness","overview":"On the night
of madness Avatar performed songs from Black Waltz and Hail The Apocalypse as voted on by the
fans.","popularity":2.024,"poster_path":"/wVyTuruUctV3UbdzE5cncnpyNoY.jpg","release_date":"2021-01-
23","title":"Avatar Ages: Madness","video":false,"vote_average":8,"vote_count":1},
{"adult":false,"backdrop_path":"/dj8g4jrYMfK6tQ26ra3IaqOx5Ho.jpg","genre_ids":
[10402],"id":874700,"original_language":"en","original_title":"Avatar Ages: Dreams","overview":"On the night
of dreams Avatar performed Hunter Gatherer in its entirety, plus a selection of their most popular songs.
Originally aired January 9th
2021","popularity":1.957,"poster_path":"/4twG59wnuHpGIRR9gYsqZnVysSP.jpg","release_date":"2021-01-
09","title":"Avatar Ages:
Dreams","video":false,"vote_average":0,"vote_count":0}],"total_pages":3,"total_results":57}


    > Finished chain.



    ' This response contains 57 movies related to the search query "Avatar". The first movie in the list is
    the 2009 movie "Avatar" starring Sam Worthington. Other movies in the list include sequels to Avatar,
    documentaries, and live performances.'

# Listen API Example

```python
import os
from langchain.llms import OpenAI
from langchain.chains.api import podcast_docs
from langchain.chains import APIChain

# Get api key here: https://www.listennotes.com/api/pricing/
listen_api_key = 'xxx'

llm = OpenAI(temperature=0)
headers = {"X-ListenAPI-Key": listen_api_key}
chain = APIChain.from_llm_and_api_docs(llm, podcast_docs.PODCAST_DOCS, headers=headers, verbose=True)
chain.run("Search for 'silicon valley bank' podcast episodes, audio length is more than 30 minutes, return only 1 results")
```