Weather API comparison

Name	Source	geo resolution	time resolution	pricing (monthly)
Open-Meteo	multiple, AROME for Prague	1-25km	15min	29€ 1M calls, 99€ 5M calls, custom
weatherstack	multiple, not specified	?"up to the zip code"	1hour	9€ 50k 44€ 300k 85€ 1M
WeatherAPI	multiple	1-11km? probably 8~	plan dependant daily / hourly / 15mins	free 1M 7\$ 3M 25\$ 5M 35\$10M custom
TomorrowAPI	Combines satellite data, weather models, and IoT sensor networks	High-resolution , hyperlocal	Real-time, minutely, hourly, daily	Free plan: 500 requests/day, 25/hour, 3/second. Enterprise plans: Contact sales for pricing.
WeatherBit	47,000+ weather stations, Doppler radar, satellite data, Al models	Hyperlocal (<1	Real-time, minutely, hourly, daily	40\$ per month 25000 requests per day 25 per second
VisualCrossin g	Historical weather data, global weather models, satellite data, Al models they also have a lot of stations in Prague	High-resolutio n, sub-hourly available	Real-time, hourly, daily, sub-hourly (Enterprise plan)	Free plan: 1,000 records/day. Professional: \$35/month, Corporate: \$150/month, Enterprise: Custom pricing.

Accuweather API	multiple	No precise information	5-10 min	25€ 10k /month 100€ 675k/month
Meteomatics	multiple, mostly drones	1km for Europe	no information	1k calls??

Open-meteo

https://open-meteo.com/en/docs/dwd-api

Combination of different sources, uses Météo-France's AROME and ARPEGE weather models for Prague. Updates every 15 min for central Europe, up to 1 km resolution.

Provides much more than temperatures, also provides historical data- 4 day delay. Option to access "old forecast data"(Past Days feature) is there, which may sound like it is not actual data, but the forecast data itself? But on part of the web they state: "With our "Past Days" feature, you can also access historical weather data from the past months." so it should be fine.. Pricing is 29€ per month for 1M calls, 99€ monthly for 5M calls or a custom plan.

Weatherstack

https://weatherstack.com/

The pricing is quite clear, but the data sources and the granularity isn't really specified anywhere from what we could have found.

"Granularity: APIs offer data down to the zip code or even latitude/longitude level."

"The weatherstack API is licensing weather data from some of the largest weather stations and weather data providers in the world, all of which are closely monitored for consistency and data accuracy around the clock."

WeatherAPI

https://www.weatherapi.com/

The pricing and tiers are a bit different here and the time granularity depends on it, it is hourly - or daily in the lower tiers, up to 15 minutes in the highest tier.

Geo granularity is said to be 1 to 11km. For Prague the options are searched by IP address (not sure how precise that is, from what we have read, not that much) and by long lat coordinates, which are up to 0.1°, which is around 11km for latitude and 7.1km for longitude.. Given the statement that they provide 1-11km and 15 min refreshment, it could be assumed that they use the French satellites, which do provide 1km 15 min granularity, but given that u can only ask for EU location by IP address or long lat limited to decimals, it might be a bit bottlenecked by that.

TomorrowAPI

https://www.tomorrow.io/weather-api/

We have not found any pricing for this API neither does it say anywhere exactly where the information comes from, it is supposed to be from satellital views, from what i have been looking up you can search almost any place you want information from.

VisualCrossing

https://www.visualcrossing.com/weather-history/Prague/us/ Here are some stations that they use for predictions and real time forecast

Accuweather API

https://developer.accuweather.com/

The pricing is a bit high for what it offers and we couldn't find information about the granularity in Czech Republic despite its multiples sources.

Meteomatics

Weather API | Meteomatics

This API seems to use mostly drones that act as flying stations, the granularity is pretty good because it ensures 1km, but surprisingly there is almost no information about pricing

Other weather resources:

https://openweathermap.org/current - so expensive - 2000 \$/month for comercial use

https://rapidapi.com/meteostat/api/meteostat/pricing - no, only stations

<u>https://www.ecmwf.int/en/forecasts/accessing-forecasts</u> - a large number of different licenses, but it is very expensive

https://www.eumetsat.int/ - without API