Developer Survey 2020 Report

Rapid API

Introduction and Methodology

Welcome to the 2020-2021 RapidAPI Developer Survey Report!

This year, we had diverse respondents from a variety of roles, organizations, industries, and backgrounds.

The survey was open for one month, and responses came from developers around the world with over 120 countries represented. The most common countries included the United States (20.7%), India (15.3%), the United Kingdom (4.0%), Canada (3.6%), and Germany (2.7%).

Over 40% of respondents identified themselves as professional developers. The three top job titles in this category were Full Stack Developer (41.2%), Back End Developer (24.4%), and Front End Developer (14.1%).

Almost 10% of respondents were in executive roles, and an additional 8% were engineering managers. The remaining respondents were students, hobbyists, or other professional roles.

Respondents also reported a wide variety of coding experience. Approximately half of the respondents had 5 or fewer years of coding experience, and approximately half had more than 5 years of experience.

In this report, you will see references to the previous RapidAPI Developer Survey from 2019-2020. This survey was conducted in a nearly identical manner. To see the previous survey report, click here.

7 Key Findings: Developer Reliance on APIs Continues to Increase

1 Key Finding #1: API Usage is on the Rise

Companies of all sizes continue to rely on APIs. We found 61.3% of developers used more APIs in 2020 compared to 2019. An additional 26.2% of developers used about the same number of APIs in 2020 than in 2019.
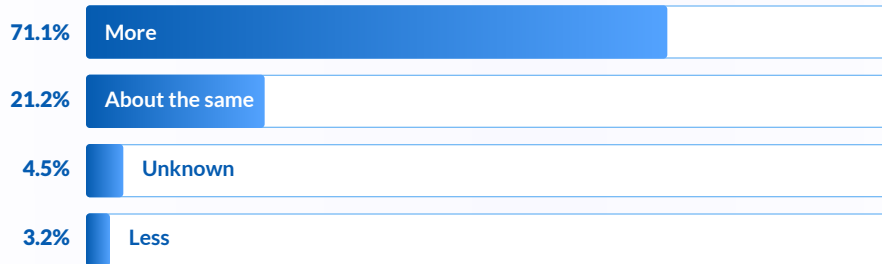
? Compared to 2019, did you use APIs more, less, or about the same in 2020?

61.3%	More
26.2%	About the same
8.5%	Less
4.0%	Unknown

We also found 71% of developers plan to use even more APIs in 2021 compared to 2020, and 21% plan to use them about the same. This points to increasing reliance and utilization of APIs by developers across a wide range of industries.

? Compared to this year, do you expect to use APIs more, less, or about the same in 2021?

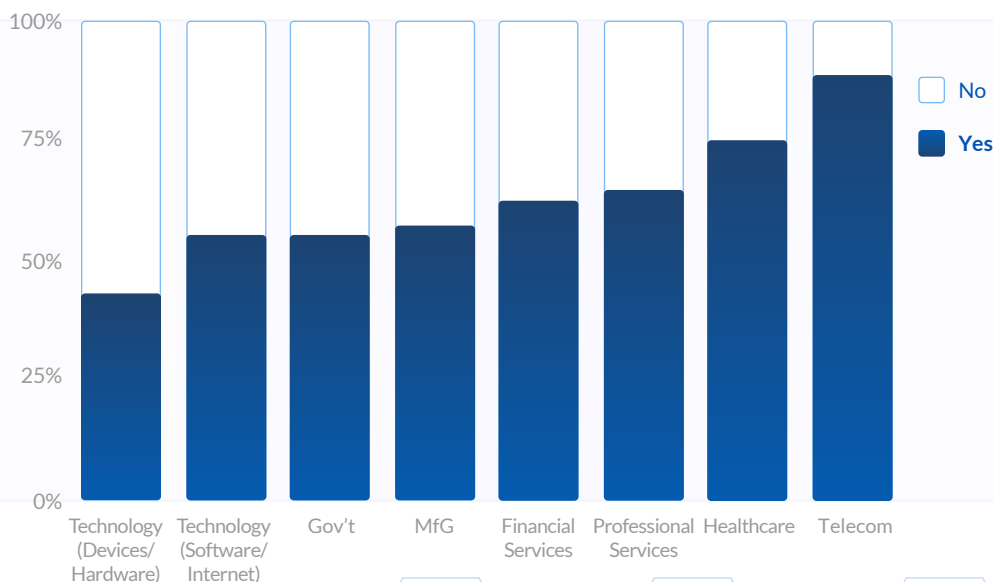|	
71.1%	More
21.2%	About the same
4.5%	Unknown
3.2%	Less

2 Key Finding #2: Participation in the API Economy is a Top Priority

Overall, 58% of executives said participating in the API Economy was a top priority for their organization. This number was even higher in certain industries including telecommunications, healthcare, and financial services.

Most prominently, **89% of telecommunications executives said participation in API Economy is a top priority.** With companies like Twilio offering APIs that enable telecommunications services, traditional Telcom providers have been increasing their investments in making their APIs available.
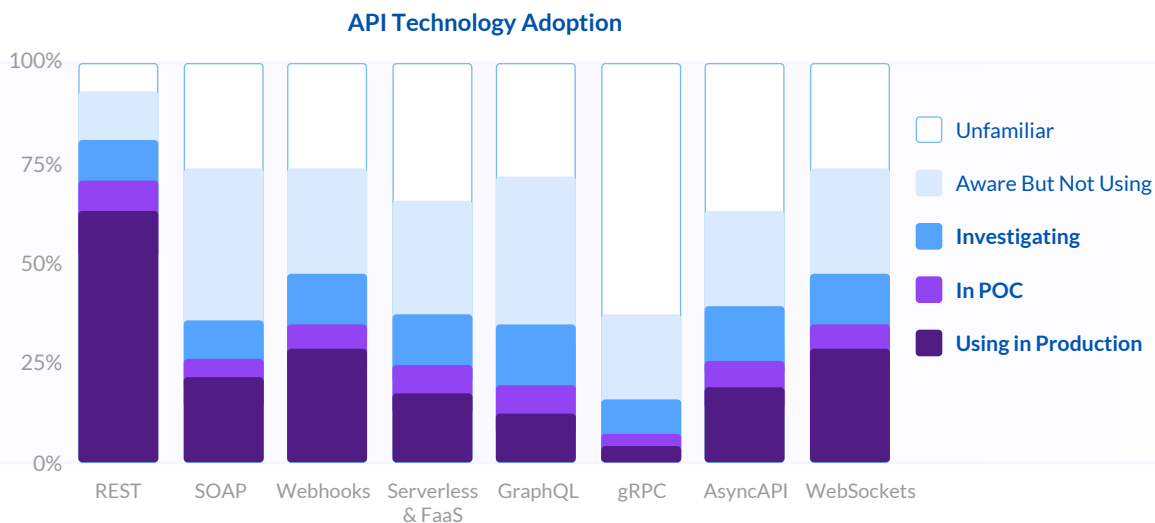
For Healthcare and Financial Services, standards and regulations such as Fast Healthcare Interoperability Resources (FHIR) and the Open API Initiative are driving increase adoption in Healthcare and Financial Services with over 75% of healthcare executives and 62% of financial service executives demonstrating intent to participate in the API economy.

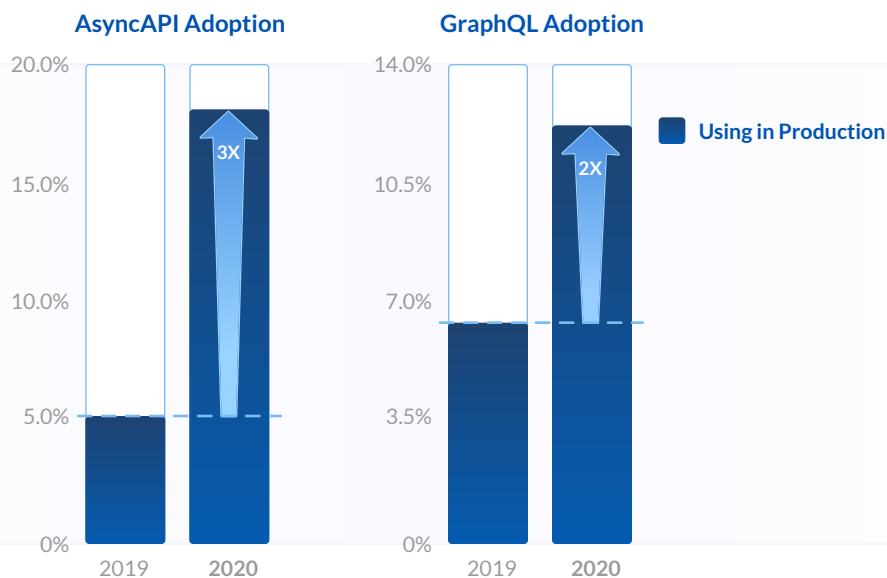**API Economy Participation by Industry**

☐ No
■ Yes

3 Key Finding #3: The Adoption of New API Technologies Continues to Accelerate

Compared to last year's results, we found API technology and usage is becoming more varied. Of the trends we surveyed, REST continues to be the most popular. We saw strong interest in emerging technology, including Serverless & FaaS, Websockets, and gRPC.

API Technology Adoption

Legend:
- Unfamiliar
- Aware But Not Using
- **Investigating**
- **In POC**
- **Using in Production**

We also specifically saw major increases in two categories — AsyncAPIs and GraphQL. The number of developers using AsyncAPIs in production tripled from 5% in 2019 to 19% in 2020. The number of developers using GraphQL doubled from 6% in 2019 to 12% in 2020.
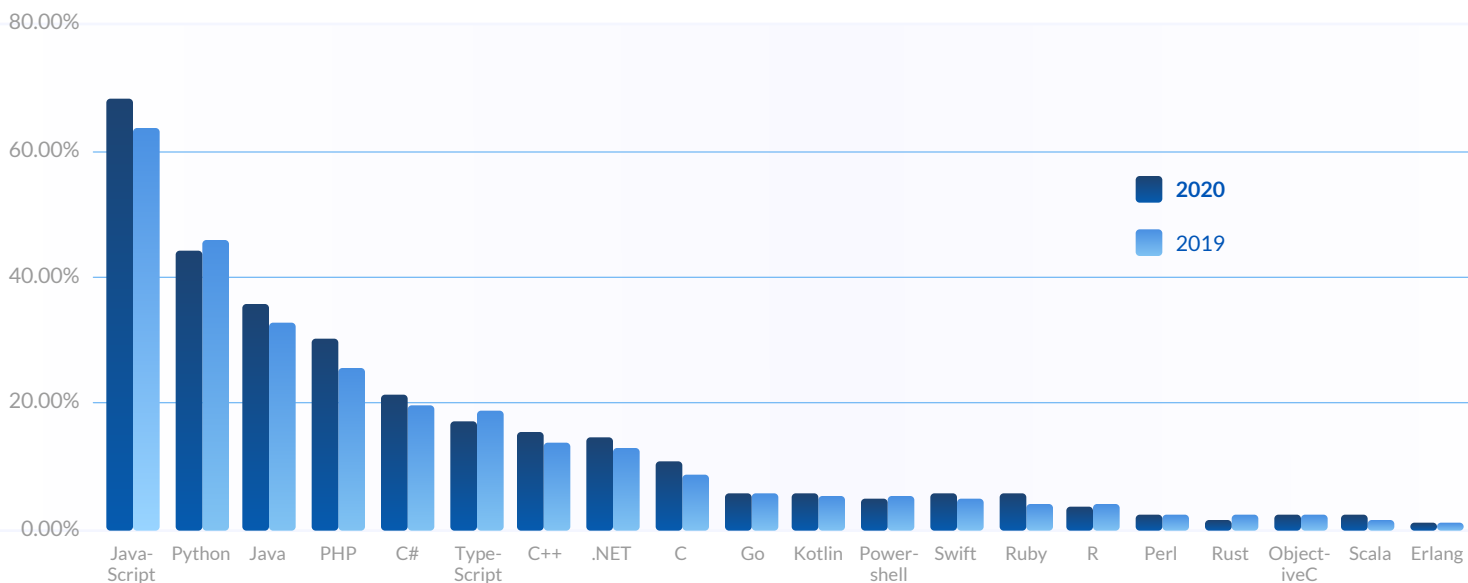
AsyncAPI Adoption

GraphQL Adoption

- **Using in Production**

We anticipate these trends will continue, and API technology will continue to expand in 2021.

4 Key Finding #4: JavaScript Continues to Lead as the Most Popular Programming Language

Despite the changes in API technology, we found the top 5 most popular programming languages remained the same in 2020 compared to 2019, with JavaScript leading the list as the most popular programming language.

Python, Java, PHP, and C# followed closely behind to round out the five most popular and five most preferred languages.
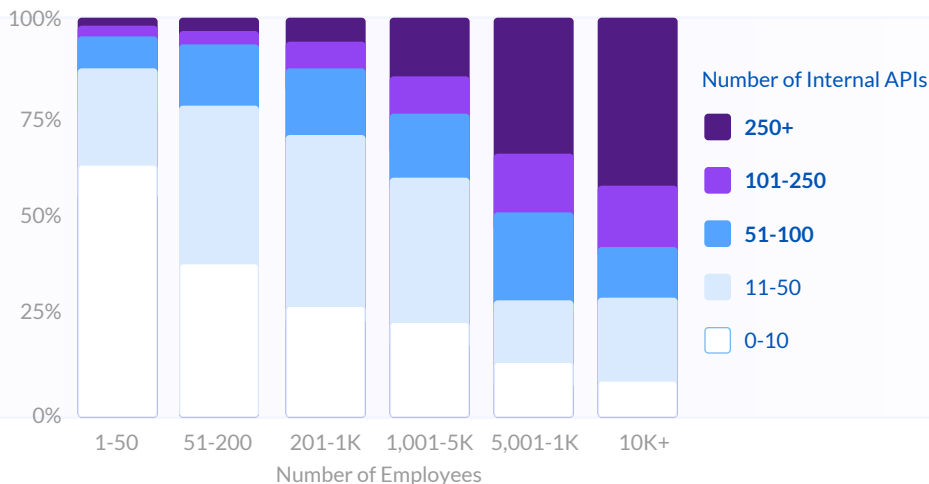
Most Popular Programming Language

Note: Multiple responses allowed

5 Key Finding #5: APIs Scale with Organization Size

Unsurprisingly, we found the number of APIs grows with the size of the Organization. Nearly 40% of the largest organizations we surveyed reported having over 250 internal APIs. This closely matches our findings from last year.
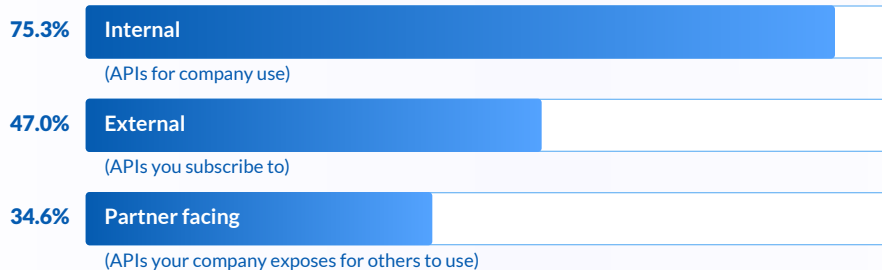
Number of APIs Grow With Size of Organization

Taking a deeper look, we found 75% of professional developers reported working on internal APIs. An additional 47% reported working on external APIs, and 34% reported working on partner-facing APIs. This builds on our findings from last year that companies tend to use more internal APIs than external APIs.

? What types of APIs do you work on?

75.3% **Internal**
(APIs for company use)

47.0% **External**
(APIs you subscribe to)

34.6% **Partner facing**
(APIs your company exposes for others to use)

Note: Multiple responses allowed

6 Key Finding #6: API Testing and API Security Are Top Priorities

Testing and Security are top priorities for almost all developers with 95% of developers reporting security as a top consideration, and 92% planning to test APIs in 2021.

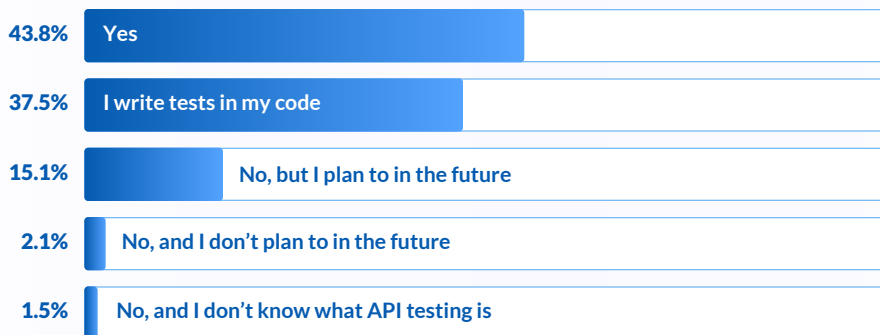**? Do you test or plan to test your APIs?**

92.3% **Yes**

7.7% **No**

? Is security an important priority for you when building APIs?

94.7% **Yes**

5.3% **No**

When it comes to API Testing, over 43% of developers reported using tools to write or manage tests. An additional 37% reported writing tests in their code, and 15% plan to use a tool in the future.

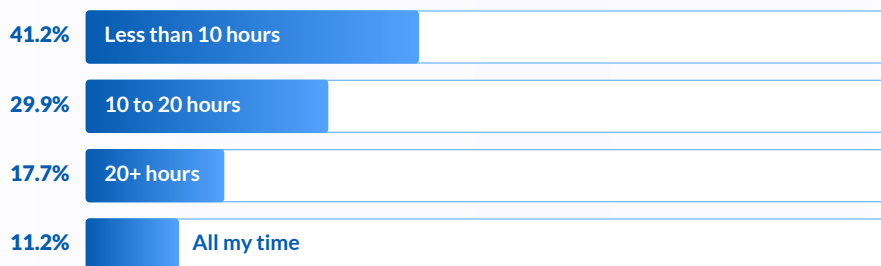### ? Do you use a tool for API testing?

43.8%	Yes
37.5%	I write tests in my code
15.1%	No, but I plan to in the future
2.1%	No, and I don't plan to in the future
1.5%	No, and I don't know what API testing is

7 Key Finding #7: Over 50% of Professional Developers Spend 10+ Hours a Week Working on APIs

Organizations dedicate a lot of resources to API development, including time. We found that 58% of professional software developers spent 10 or more hours a week working with APIs. Nearly 30% said they spend more than 20 hours a week working with APIs.

? How much time do you spend at your job working on APIs per week?

41.2%	Less than 10 hours
29.9%	10 to 20 hours
17.7%	20+ hours
11.2%	All my time

Final Thoughts

Thank you so much to everyone who participated in the RapidAPI Developer Survey! We hope this report gave you some additional insight into the API landscape and emerging technology trends.

What is RapidAPI?

RapidAPI, the world's largest API Marketplace, is used by millions of developers to find, test, and connect to thousands of APIs - all with a single account, API key, and SDK. Software development teams can also collaborate on APIs using RapidAPI for Teams. RapidAPI for Teams offers a common workspace to publish internal APIs and share public API subscriptions. In turn, organizations can use RapidAPI to create a centralized hub environment to help developers reuse and connect to existing APIs faster while providing IT with enterprise-wide visibility and governance of API consumption.