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FACTS ABOUT APIs

The Hidden Technology Powering the Internet

APIs are the unseen language of the Internet. They power digital transformation across industries by allowing applications to talk to one another and operate as crucial backend services to websites and mobile apps. As a dynamic and somewhat hidden technology, it can be challenging to find detailed information about the API space. We combined findings from our recent API survey of business leaders from over 400 leading technology companies with industry data to compile four need to know facts about APIs.

1) THE API EXPLOSION IS REAL, WITH NO SIGNS OF SLOWING DOWN.

WHAT THE DATA SAYS:

ENTERPRISES ARE BUILDING MORE AND MORE APIS.

- API traffic has grown 2.8 times year-over-year*
- 51.5% of API providers only began developing APIs in the last five years, and 20% began developing in the last two years†
- 44% of surveyed enterprises are building and maintaining 100 or more APIs∞

WHAT IT MEANS: We are in the midst of a digital revolution, and the time to build and optimize APIs is now. Enterprises building APIs to grow their digital business and those looking to monetize their APIs must ensure that the APIs they produce are easy to use, scalable, and secure.

2) APPS CONTINUE TO DRIVE THE API REVOLUTION

WHAT THE DATA SAYS:

APPS ARE THE PRIMARY USE CASE FOR ENTERPRISES TO BUILD APIS.

- 35% of enterprises have built APIs to support single-page apps∞ (Akamai)
- 22% of enterprises have built APIs to support native mobile apps∞ (Akamai)

WHAT IT MEANS: The increase of app creation directly correlates with the API explosion. Because APIs are a critical component of apps, enterprises must optimize and accelerate APIs to improve app performance, reliability, and user experience.

3) API SECURITY IS CHALLENGING, AND OPEN APIS AREN'T HELPING

WHAT THE DATA SAYS:

SECURITY IS THE #1 TECHNOLOGY CHALLENGE FACING APIS.

- 41% of organizations cited security as the top challenge they want to see solved in the near future†

MOST ENTERPRISES ARE CREATING OPEN APIS TO MEET THEIR NEEDS, FOLLOWED BY PRIVATE AND THEN INTERNAL APIS.

- 44% of surveyed companies are creating open APIs∞
- Traffic grew 3x for companies with public API programs*

WHAT IT MEANS: API security is critical. Yet, open APIs come with more significant security burdens than private or internal APIs, which have smaller audiences and greater control. Securing open APIs requires going beyond traditional threat protection and employing consumption-based security to protect the API in runtime.

4) PERFORMANCE IS CONSIDERED PARAMOUNT, YET COMPANIES ARE STILL NOT BUILDING FOR FAST, LEAN APPS

WHAT THE DATA SAYS:

INCONSISTENT PERFORMANCE IS THE #1 API DELIVERY CHALLENGE.

- API publishers see performance/responsiveness as the most important characteristic of an API†
- Inconsistent performance was cited as the top challenge enterprises face with API delivery∞
 - » API response size, distant server location, and infrastructure availability were other top challenges cited

MOST ENTERPRISES AREN'T CACHING THEIR APIS TODAY.

- Only 30% of enterprises cache their APIs today, leaving 70% who do not∞
 - » The primary reason why is because they believe their content changes too quickly to cache

WHAT IT MEANS: Many developers are making the same mistakes with APIs that they did for websites – not building for scalability or performance. This may be fine at the outset, but as API traffic and response size grows, latency can creep in, negatively impacting user experience and business results. Developers should build APIs considering what's cacheable and what's not, so down the road they can utilize granular caching to optimize for performance, scale, offload, and reliability.

So what does all of this mean? While APIs are unique in their own right, it's essential to remember that at their core they are online properties, just like a website or mobile app. Therefore, the same solutions used to solve today's web performance challenges — building and optimizing for performance, security, and reliability — apply to APIs as well. Read this [focus sheet](#) for a more in depth look on how to solve these API challenges, or [visit our website](#).

WORKS CITED

* **Apigee. 2016. The State of APIs: 2016 Report on Impact of APIs on Digital Business.**

Retrieved from Apigee Website: https://pages.apigee.com/ebook-State-of-APIs-reg.html?int_source=blog&int_campaign=ebook&int_content=state-of-apis-report

† **SmartBear. 2016. The State of API 2016: A Global Survey Looking at the Growth, Opportunities, Challenges, & Processes for the API Industry in 2016.** Retrieved from SmartBear Website: <https://smartbear.com/resources/ebooks/state-of-api-survey-report-2016/>

∞ **Akamai. 2016. Akamai API Enterprise Survey**



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