

Akamai Technologies' response to the public consultation on the draft BEREC report on the entry of large content and application providers into the markets for electronic communications networks and services

19th April, 2024

#### Introduction

Akamai Technologies welcomes the opportunity to provide comments on the draft BEREC Report on the entry of large content and application providers (CAPs) into the markets for electronic communications networks and services. The report refers to "the importance of providing a sound and evidence-based analysis" (page 5), and we are delighted to contribute to this.

Akamai Technologies arose from the Massachusetts Institute of Technology (MIT) in the late 1990s as an effort to solve the growing problem of internet congestion, popularly known as "the World Wide Wait". By replicating content over our large network of distributed servers Akamai has helped make the internet experience faster and more reliable for European and global users. Today, Akamai has servers in all 27 EU member states and partnerships with national operators. A decade ago Akamai added cybersecurity solutions to its offerings, and two years ago the company entered the cloud compute market to bring more competition and choice to cloud users.

The provision of commercial CDNs services is nothing new, Akamai Technologies has indeed been doing it for over a quarter of a century. Even the decision by certain large CAPs, often referred to as hyperscalers, to deliver their own traffic and compete directly against smaller commercial CDNs, like Akamai, isn't that new. Amazon CloudFront, the content delivery network operated by Amazon Web Services, was for instance launched over a decade ago.<sup>2</sup>

Our comments all relate to the draft report's CDN case study, notably; 1) the inaccurate description of competition in the commercial CDN market; 2) the usage of the terms "major CAPs" versus "large CAPs", and; 3) CDNs' impact on ISP's transit profits.

### 1. Competition in the commercial CDN market

The report's executive summary, chapter 4, and conclusions make the claim that "The commercial CDN services market in Europe currently appears to be concentrated around few players" and that "such concentration is expected to grow significantly in the coming years." We find this specific wording inaccurate for the following reasons:

<sup>&</sup>lt;sup>1</sup> Public consultation on the draft BEREC Report on the entry of large content and application providers into the markets for electronic communications networks and services:

https://www.berec.europa.eu/en/public-consultations/ongoing-public-consultations-and-calls-for-inputs/public-consultation-on-the-draft-berec-report-on-the-entry-of-large-content-and-application-providers-into-the-markets-for-electronic-communications-networks-and-services

<sup>&</sup>lt;sup>2</sup>https://aws.amazon.com/blogs/networking-and-content-delivery/ten-years-of-securing-accelerating-and-scaling-apps-around-the-world-amazon-cloudfront-marks-its-10th-anniversary/



## Large number of CDN providers:

Akamai competes against numerous other commercial CDN providers such as Cloudflare, Fastly, Edgio, CDNetwork, as well as large CAPs such as Amazon, Alibaba, Google, and Microsoft.<sup>3</sup>

### <u>Increased competition from large CAPs / hyperscalers:</u>

The report correctly assesses how large CAPs used to rely heavily on commercial CDNs (e.g. Akamai, Cloudflare, etc.) but now have developed their own CDNs, and in some cases compete directly against commercial CDNs (page 24). The report notes that "...large CAPs such as Amazon, Alibaba, Google, and Microsoft are also commercially operating CDNs to support services that are used by their cloud customers" (page 22).

Indeed, commercial CDNs, like Akamai, now compete against the world's largest and most profitable tech companies. It is therefore incorrect to state that the commercial CDN services market in Europe is "concentrated around few players".

#### CDN customer choice:

The report correctly notes (page 25) that CAPs have the choice between; a) Private CDN (self-provisioning); b) Public CDN, and; c) Mixed-use CDN. Indeed, the CDN market is today highly customised. CDN customers can easily change CDN providers and/or use multi-CDNs as the report notes: Indeed, it has become increasingly common for clients to use multiple CDNs at the same time, e.g. for cost or coverage purposes.

#### **CDN** market share:

The report recognises (page 27) that "It is not straightforward to obtain CDNs' market share" yet it still claims that "...it can be concluded from the information gathered that this market is concentrated". Justifications for this controversial claim is based on three inaccurate measures:

- A. "Traffic": Measuring the use of "CDNs for HTML requests on mobile" gives a misleading picture where the company "Cloudflare tops the list by serving 52%".
- B. Number of "customers or websites": Using the number of websites served from the "top 10 million" list" as the reference would give Cloudflare "over 80% of the market share"
  - The report states that "the global CDN market around the world is expected to grow from 14 billion euros in 2021 to 36 billion euros in 2026". Cloudflare's global annual revenue was US\$ 1.3B in 2023.<sup>4</sup> It seems self-evident that a company with less than 10 percent of the total CDN revenues doesn't hold a 52% to 80% market share.
- C. "Several measures, including revenues": The report states that "Akamai, Amazon CloudFront, and Cloudflare are the leaders of the market". However, the referenced report<sup>5</sup> clearly talks about "estimated" industry numbers (page 11), not facts. The

<sup>&</sup>lt;sup>3</sup> 23 content delivery networks have edge servers in Europe according to CDN Planet (2024): https://www.cdnplanet.com/cdns-by-continent/europe-cdn/

<sup>&</sup>lt;sup>4</sup> "Cloudflare Announces Fourth Quarter and Fiscal Year 2023 Financial Results" (2024) <a href="https://cloudflare.net/news/news-details/2024/Cloudflare-Announces-Fourth-Quarter-and-Fiscal-Year-2023-Financial-Results/default.aspx">https://cloudflare.net/news/news-details/2024/Cloudflare-Announces-Fourth-Quarter-and-Fiscal-Year-2023-Financial-Results/default.aspx</a>

<sup>&</sup>lt;sup>5</sup> "2020 CDN Market Report", Intricately (2020) https://go.hginsights.com/rs/214-HYO-692/images/2020IntricatelyCDNMarketReport.pdf



report is moreover from 2020 and potentially slightly outdated in light of the BEREC report's talk of a "significant shift" in the past decade. Finally, unlike BEREC's paper, the referenced report isn't focused on the EU market but on "the global CDN market". We recommend that BEREC qualifies that this statement is based on global industry estimations from 2020.

Furthermore, BEREC's draft report (page 28) problematically states that "the top three CDN providers controlled in 2020 more than half the market." The accompanying footnote (page 28) however, notes that "By customers, we mean small and medium-sized CAPs..." It is unclear why BEREC chooses to ignore large CAP customers that continue to be major users of commercial CDNs.

The BEREC report, moreover, later contradicts its statement about three CDN providers controlling more than half the market. On page 28, it notes that ten companies "together account for more than 50% of the market share."

For these reasons we kindly request that the BEREC removes the incorrect sentence: "the top three CDN providers controlled in 2020 more than half the market".

#### Akamai's falling CDN revenues:

Akamai's financial reporting shows that our delivery (CDN) revenues continue to decline. From 2020 to 2023 our delivery revenues dropped 22,3 percent, from \$1,93 bn in 2020 to \$1.5 bn in 2023.67

Delivery revenues are also falling as a percentage of our company-wide revenues. Currently, less than half of Akamai's revenue comes from our delivery business.

The BEREC draft report estimates, as previously mentioned, the value of the global CDN market to "14 billion euros in 2021 to 36 billion euros in 2026". Akamai's delivery market share (\$1,5 bn in 2023, approximately €1,4 bn) would be worth less than a tenth of this.

To conclude, the draft paper fails to deliver on its promise of "sound and evidence-based analysis" to substantiate the following claims:

- "The commercial CDN services market in Europe currently appears to be concentrated around few players".
- "such concentration is expected to grow significantly in the coming years."
- "the top three CDN providers controlled in 2020 more than half the market".

We kindly request that BEREC delete the first two statements from the report's executive summary, chapter 4, and the conclusions, and delete the last statement from section 4.3.

https://www.ir.akamai.com/static-files/c0fb8f75-e721-447b-8472-8ec137ae0eeb

Note that Akamai does not publish CDN revenue data broken down by geography but the EU market tends to follow our global numbers.

<sup>&</sup>lt;sup>6</sup> "Akamai 2022 Annual Report" (page 29):

<sup>&</sup>lt;sup>7</sup> "Akamai reports fourth quarter 2023 and full-year 2023 financial results" (2024) <a href="https://www.ir.akamai.com/news-releases/news-release-details/akamai-reports-fourth-quarter-2023-and-d-full-year-2023-financial">https://www.ir.akamai.com/news-releases/news-release-details/akamai-reports-fourth-quarter-2023-and-d-full-year-2023-financial</a>



# 2. "Major CAPs" vs "large CAPs"

# Confusing phrasing of "large CAPs"

The draft report uses the term "large CAPs" throughout when referring to large tech companies such as Amazon, Apple, Google, Meta, Microsoft, and Netflix. However, the report introduces the similar-sounding new term "major CAPs" (pages 5, 11, 21, 24, and 61). We propose changing the term "major CAPs" to "surveyed companies" or "selected companies" to avoid confusion with the term "large CAPs".

# Most CDN and cloud providers are not "large CAPs"

The Executive Summary and Conclusions chapters make the point that "large CAPs and ECS/ECN operators" can be "direct competitors", e.g. for "cloud service provision" and "CDNs". While this isn't incorrect, we note that most providers of cloud or CDN services aren't large CAPs. Indeed, many smaller competitors have very limited infrastructure and limited service offerings in the EU. We hope that regulators will remain conscious of this distinction to avoid inadvertently harming smaller CDN and cloud providers' continued ability to compete against large CAPs in the EU.

# 3. CDNs' impact on ISP's transit profits

### CDNs vs ISPs' transit profits

Section 4.4 (pages 29-30) notes that "As CDNs moved closer to the consumer, smaller ISPs started to host CDNs, resulting in lower wholesale revenues for the Tier 1 ISPs." One of the main sources for this argument is a BEREC report from 2012. We find this argument somewhat outdated and missing the point that investments made by CDN providers have greatly benefited all ISPs and reduced their need to invest in costly infrastructure to carry duplicate traffic. Indeed, most transit providers want to have Akamai caches next to their routers so that they can serve content to their downstream customers directly without carrying the content on their backbone. Finally, some commercial CDNs are moreover large transit customers.

### Conclusion

Akamai Technologies thanks BEREC for the opportunity to provide comments on the draft report. We stand ready to provide additional information if useful.

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