



Akamai's Response to TRAI Pre-Consultation Paper on Net Neutrality

Introduction

Akamai Technologies, Inc. (Akamai) welcomes the opportunity to comment on TRAI's *Pre-Consultation Paper on Network Neutrality* (Paper).¹ As an Internet pioneer whose industry-leading technology innovations have afforded a multitude of Internet content and application service providers the services needed for their own innovation, Akamai values open Internet principles that support continued innovation.

Akamai offers content delivery network (CDN) services worldwide using its extensive distributed architecture. So far, Akamai has deployed more than 200,000 servers in over 120 countries and within more than 1,500 networks around the world. The Internet content, applications, and services provided by Akamai's customers (websites, web application providers, and enterprises) are thus distributed across these networks, and consumer requests for the particular content or application are processed in the most geographically efficient location. Additionally, Akamai does this by using primarily a virtual, rather than a physical, system. This enables Akamai to facilitate delivery of content to end users faster, more reliably and more securely, while using fewer physical infrastructure resources. The result is a better-

¹ TRAI, Pre-Consultation Paper on Net Neutrality, May 30, 2016, available at http://www.trai.gov.in/WriteReaddata/ConsultationPaper/Document/Net_Neutality_Preconsultation_30_may_2016.pdf.

performing and more cost-effective Internet for everyone, whether or not they are accessing content on Akamai servers.

Akamai's services benefit consumers, content providers, and Internet service providers. Akamai is able to offer consumers better performance and by locating Internet content, applications and services closer to consumers, enabling them to access the desired information more quickly. Akamai services also benefit Internet service providers (ISPs) in several ways. For example, CDNs, like Akamai, identify the least-congested path for traffic to reduce network congestion. They also alleviate network capacity limits of the "middle mile" by caching or storing content close to end users, which means that content does not need to transit and re-transit the entire ISP network with each individual request. Additionally, Akamai improves Internet security by mitigating attacks closer to the attacker at the edge of the Internet and further away from the content providers' origin servers, and provides protections across all pathways to data centers. As a result, Akamai's congestion-management and capacity-enhancement practices benefit not only Akamai's customers, but also other content providers and carriers, which gain in general from networks with reduced congestion and increased available capacity. Taken together, Akamai's services create efficiencies that ripple through the Internet ecosystem for the benefit of all.

To encourage these efficiencies and innovation, Akamai advocates a relaxed regulatory environment for the Internet ecosystem, including a light-touch approach to net neutrality. As addressed below, Akamai urges the Telecom Regulatory Authority of India (TRAI) to clarify that CDN services should be outside the scope of any proposed net neutrality framework. To this end, we also urge TRAI to clarify that, based on the technological nature of the CDN service, CDNs do not engage in discriminatory practices that would be prohibited under the core principles of net neutrality. Additionally, TRAI should allow ISPs the flexibility to differentiate with regard to third-party network access, such as by offering network access to some CDNs but not others. Further, we encourage TRAI to advocate for a more flexible and principles-

based approach to net neutrality as the best method of achieving TRAI's aim of promoting innovation and investment in broadband infrastructure.

Set forth below are Akamai's specific responses to the questions posed by TRAI in its consultation.

1) What should be regarded as the core principles of net neutrality in the Indian context? What are the key issues that are required to be considered so that the principles of net neutrality are ensured?

As a key issue to be considered, Akamai recommends that TRAI specify that CDNs should not be subject to net neutrality rules because they do not provide telecommunications or Internet access services, and therefore should not be subject to licensing or other regulatory obligations. This position would be in line with the findings of the U.S. Federal Communications Commission (FCC), as cited by TRAI in the Paper.² In February 2015, the FCC adopted net neutrality rules through the Open Internet Order (FCC Order), and clarified that CDNs do not offer broadband Internet access service and, because the FCC's net neutrality rules apply only to broadband Internet access services, CDN services are outside the scope of the net neutrality rules. Notably, the European Union similarly excluded CDNs from its net neutrality rules adopted in November 2015.

The FCC's position accurately reflects the technical nature of CDN services. Whereas ISPs offer Internet access services to end users (*i.e.*, the "last mile"), CDN providers are part of the facilities between the core telecommunications networks and the local network plant (*i.e.*, the "middle mile"). As noted in the FCC Order, unlike Internet access services offered by ISPs, CDNs should not be within the scope of net neutrality rules because they do not "provide the capability to receive data from all or substantially all Internet endpoints."³ In other words, CDNs as a standalone service do not provide Internet access service, the core service addressed by net neutrality principles.

Specifically regarding prioritization, Akamai again refers to the FCC Order for guidance, which expressly states that CDN service—as a content storage and delivery system that includes interconnection with ISPs—does not constitute prioritization, and does not fall under the FCC's ban against paid prioritization.⁴ The FCC's assessment is well-founded. CDNs localize content – caching or storing content

² See paras. 36-38 of the Pre-Consultation Paper.

³ See para. 190 of the FCC Order.

⁴ See para. 128 of the FCC Order, which states, "We also clarify that the ban on paid prioritization does not restrict the ability of a broadband provider and CDN to interconnect."

on servers closer to end users so that they can gain access to the content more quickly because it is physically closer to them -- but the content is not prioritized. The FCC further sought to ensure that ISPs have the flexibility to determine with whom they interconnect and how they grant CDNs access to their networks. The FCC emphasized that Internet traffic exchange agreements, including interconnection agreements between CDNs and ISPs, “have historically been and will continue to be commercially negotiated.”⁵ On this basis, the FCC concluded that the flexibility to differentiate among CDNs is not considered unreasonable discrimination, and ISPs are therefore permitted to agree to provide network access to some CDNs but not others.

TRAI would be supporting continued innovation in the “middle mile” by specifying that CDNs should not be subject to net neutrality rules. This would benefit not only Akamai’s customers, but also other content providers and carriers, which gain in general from networks with reduced congestion and increased available capacity, creating a better-performing and more cost-effective Internet for all Indians.

2) What are the reasonable traffic management practices that may need to be followed by TSPs while providing Internet access services and in what manner could these be misused? Are there any other current or potential practices in India that may give rise to concerns about net neutrality?

Akamai supports TRAI’s assertion that to increase Internet use, particularly of services that consume a large amount of bandwidth, ISPs may find it necessary to adopt reasonable measures to protect the integrity of the network and provide appropriate quality of services to end users.⁶ Rather than establish a restrictive framework for traffic and network management practices, Akamai encourages TRAI to advocate for a flexible reasonable network management standard. Under this standard, ISPs would be prohibited from arbitrarily discriminating against (such as by blocking, throttling or prioritizing) certain types of Internet traffic, subject to reasonable network management practices. The reasonable network management framework will ensure the “fine line” articulated by TRAI -- promoting rules that allow for reasonable traffic management practices to ensure a high quality of service in India while not unduly interfering with Internet traffic.⁷

⁵ See 47 C.F.R. § 8.2(f) of the FCC’s Rules. Also see, for example, para. 70 and para. 85 of the FCC Order.

⁶ See para. 12 or the Pre-Consultation Paper.

⁷ See para. 16 or the Pre-Consultation Paper.

3) What should be India's policy and/or regulatory approach in dealing with issues relating to net neutrality? Please comment with justifications.

Akamai strongly believes that the remarkable investment in and innovation resulting from the Internet ecosystem is due to a flexible, principles-based approach to regulation. Akamai advocates for protecting fundamental Internet freedoms, which includes ensuring that: (1) consumers are entitled to access the lawful Internet content of their choice; (2) consumers are entitled to run applications and services of their choice, subject to the needs of law enforcement; (3) consumers are entitled to connect their choice of legal devices that do not harm the network; and (4) consumers are entitled to competition among network providers, application and service providers, and content providers. Additionally, Akamai supports consumer protections to ensure that there is no harm from traffic degradation, traffic blocking, and traffic throttling.

A significant concern is the creation of regulatory uncertainty through vague or stringent rules that discourage innovation and investments in broadband infrastructure. Thus, Akamai supports the above-mentioned flexible, principles-based approach to regulation as the best method to achieve TRAI's objective, which is to provide a clear regulatory framework on net neutrality and avoid the implementation of overly strict requirements that impede ISPs from being able to mitigate congestion and deliver the desired quality of service to end users.⁸

4) What precautions must be taken with respect to the activities of TSPs and content providers to ensure that national security interests are preserved? Please comment with justification.

While we appreciate the importance of national security, Akamai believes that such issues should not be intertwined with a discussion relating to net neutrality. If there are national security concerns, these are better addressed in a separate proceeding that specifically addresses national security matters.

5) What precautions must be taken with respect to the activities of TSPs and content providers to maintain customer privacy? Please comment with justification.

Similar to our comment on the prior question, we recognize that issues of privacy are ones that raise regulatory concerns regarding consumer protection. However, such issues are discrete and should not be blended with discussions regarding net neutrality.

⁸ See para. 18 or the Pre-Consultation Paper.

6) What further issues should be considered for a comprehensive policy framework for defining the relationship between TSPs and OTT content providers?

Akamai considers that a principles-based net neutrality approach, as outlined above, will serve as guidance to TSPs and OTT providers. In addition, flexible net neutrality provisions will also afford consumers the necessary protections to ensure that they can continue accessing the lawful Internet content, applications and services of their choice.

Conclusion

Akamai supports policies that protect and promote an open Internet. Thus, Akamai strongly supports excluding CDNs from the scope of net neutrality regulation, and encourages TRAI to advocate a flexible, light-touch approach to net neutrality for ISPs that focuses on enhancing competition, innovation, and efficiency.