The State of the Internet
2nd Quarter, 2013 Executive Summary

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Executive Summary

Akamai’s globally-distributed Intelligent Platform allows us to gather massive amounts of information on many metrics, including connection speeds, attack traffic, network connectivity/availability/latency problems, and IPv6 growth/transition progress, as well as traffic patterns across leading Web sites and digital media providers. Each quarter, Akamai publishes the State of the Internet Report.

This quarter’s report includes data gathered from across the Akamai Intelligent Platform in the second quarter of 2013 about attack traffic, broadband adoption, and mobile connectivity, as well as trends seen in this data over time. In addition, this edition of the report includes insight into attacks for which a group known as the Syrian Electronic Army has claimed responsibility, the states of IPv4 exhaustion and IPv6 adoption, Internet disruptions that occurred during the quarter and observations from Akamai partner Ericsson on data and voice traffic growth on mobile networks.

Security
During the second quarter of 2013, Akamai observed attack traffic originating from source IP addresses in 175 unique countries/regions. Note that our methodology captures the source IP address of an observed attack and cannot determine attribution of an attacker. Indonesia grew its share of observed attack traffic, nearly doubling from the first quarter, growing to 38% and pushing China down to second place, with 33% of observed attack traffic. Attack traffic from the United States once again declined, dropping to 6.9%. Attack traffic continued to become more concentrated, with the top 10 ports seeing 82% of observed attacks. Thanks to the increased attack traffic seen from Indonesia, Ports 80 and 443 were the most commonly targeted ports, accounting for 41% of observed attacks combined. Port 445, the perennial top target, fell from first place for the first time since the first quarter of 2008, dropping to 15% of observed attacks. During the second quarter, Akamai’s customers reported being targeted by 318 DDoS attacks, 54% more than the prior quarter. Enterprise customers were the most frequently targeted, hit by 42% of the reported attacks. In addition, a group known as the Syrian Electronic Army claimed responsibility for a number of attacks launched against high-profile news and media sites.

Internet and Broadband Adoption
In the second quarter, Akamai observed a 2.0% increase in the number of unique IPv4 addresses connecting to the Akamai Intelligent Platform, growing to over 752 million, or approximately 18 million more than were seen in the first quarter of 2013. Looking at connection speeds, the global average connection speed climbed 5.2% to 3.3 Mbps, but the global average peak connection speed increased just 0.1% to 18.9 Mbps. At a country level, South Korea had the highest average connection speed at 13.3 Mbps, while Hong Kong once again remained the region with the highest average peak connection speed at 65.1 Mbps. Globally, high broadband (>10 Mbps) adoption grew 13% quarter-over-quarter to 14%, and South Korea remained the country with the highest level of high broadband adoption, declining slightly to 45%. Global broadband (>4 Mbps) adoption grew 11% to reach the 50% mark, with Switzerland remaining in the top spot with 90% broadband adoption.

Mobile Connectivity
In the second quarter of 2013, average connection speeds on surveyed mobile network providers ranged from a high of 9.7 Mbps down to a low of 0.5 Mbps. Average peak connection speeds ranged from 54.9 Mbps down to 2.2 Mbps. Based on traffic data collected by Ericsson, the volume of mobile data traffic almost doubled from the second quarter of 2012 to the second quarter of 2013, and grew 14% between the first and second quarters of 2013, while mobile voice traffic increased 5% from the second quarter of 2012 to the second quarter of 2013.

Analysis of Akamai IO data collected across the second quarter from a sample of requests to the Akamai Intelligent Platform indicates that for users of devices on cellular networks, slightly more requests came from Android Webkit-based browsers than from Apple Mobile Safari, with Webkit accounting for 38% of requests, and Safari 34%. However, for users of mobile devices across all networks (not just cellular), Apple Mobile Safari accounted for just over 54% of requests, with Android Webkit approximately half that, at over 27% of requests.
What kinds of Web sites/applications are being targeted by DDoS attacks?

The number of DDoS attacks reported by customers in Asia nearly tripled in the second quarter, while customers in the Americas accounted for nearly two-thirds of all attacks reported to Akamai. The number of attacks targeting customers in the Enterprise sector nearly doubled in the second quarter, with attacks largely concentrated on customers in the Business Services and Financial Services verticals. However, Web sites and applications in all sectors, across all geographic regions, are potential attack targets.

Have you taken steps to protect your mission critical Web sites and applications from DDoS attacks?

Have you made your Web sites/applications available over IPv6?

Peak daily IPv6 request volume on the Akamai Intelligent Platform grew by nearly 40% in the second quarter as an increasing number of both mobile and fixed users around the world gained native IPv6 connectivity. As available IPv4 address space is becoming an increasingly scarce resource across the Internet, making content available over IPv6 is becoming increasingly important. Do you have plans and timelines for IPv6 adoption within your organization? Do you have plans and timelines for making all of your Web-facing content accessible over IPv6, in addition to IPv4?

To read the full 2nd Quarter, 2013 State of the Internet Report on broadband adoption, connection speeds, Internet penetration, mobile usage, attack traffic, and more, or to use the associated data visualization tools, go to: www.akamai.com/stateoftheinternet