

akamai's [state of the internet]

Akamai's globally distributed Intelligent Platform allows us to gather massive amounts of data on many metrics, including connection speeds, attack traffic, network connectivity/availability issues, and IPv6 adoption progress, as well as traffic patterns across the leading Web properties 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 during the third quarter of 2014, covering attack traffic and Internet connection speeds/broadband adoption across both fixed and mobile networks, as well as trends seen in this data over time. In addition, this quarter's report includes insight into several high-profile security vulnerabilities, attacks, and toolkits, the state of IPv4 exhaustion and IPv6 adoption, Internet disruptions that occurred during the quarter, and observations from Akamai partner Ericsson regarding data and voice traffic growth on mobile networks.

SECURITY / During the third quarter of 2014, Akamai observed attack traffic originating from source IP addresses in 201 unique countries/regions. Note that our methodology captures the source IP address of an observed attack, and cannot determine attribution of an attacker. China remained the top source, growing once again to reach 49% of observed attack traffic. Second place United States saw a nominal quarterly increase, to 17%, while Indonesia, which was second to China last quarter, saw its share of observed attack traffic drop from 15% to 1.9% in the third quarter. The overall concentration of observed attack traffic decreased slightly in the third quarter, with the top 10 countries/regions originating 82% of observed attacks. Attack traffic targeting Port 23 was up 30% from the second quarter to 12%, making it the most targeted port in the third quarter, displacing Port 445 from the top slot for the second consecutive quarter, and the fourth time in the history of the report. During the third quarter, Akamai customers reported being targeted by 270 DDoS attacks, which was the same number reported in the second quarter. Just more than half of the total attacks were reported by customers in the Americas region, while nearly twice as many were reported by customers in the Asia Pacific region than in EMEA. An increasing number of the reported attacks targeted customers in the Enterprise and Media & Entertainment verticals, while customers in the High Tech, Commerce, and Public Sector verticals reported fewer attacks. In addition, the third quarter saw the emergence of multiple significant security vulnerabilities, the growth of several new DDoS and crimeware toolkits, and a set of attacks targeting sites associated with countries participating in World Cup matches.

INTERNET AND BROADBAND ADOPTION / In the third quarter, Akamai observed a 0.3% quarterly increase in the number of unique IPv4 addresses connecting to the Akamai Intelligent Platform, growing to just over 790 million, or about two million more than were seen in the second quarter of 2014. Belgium remained the global leader in IPv6 adoption, with 27% of connections to Akamai in the third quarter occurring over IPv6. Looking at connection speeds, the global average connection speed dropped 2.8% to 4.5 Mbps, and the global average peak connection speed fell 2.3% to

24.8 Mbps. At a country/region level, South Korea continued to have the highest average connection speed at 25.3 Mbps but Hong Kong again had the highest average peak connection speed at 84.6 Mbps. Globally, high broadband (>10 Mbps) adoption dropped 0.5% but remained at 23%, and South Korea remained the country with the highest level of high broadband adoption, growing to 81%. Global broadband (>4 Mbps) adoption grew 1.0% quarter-over-quarter to 60%, and South Korea's broadband adoption rate increased slightly to 96% in the third quarter. "4K-ready" (>15 Mbps) connections declined 2.8% on a global basis; in global leader South Korea, 66% of connections to Akamai were at those speeds.

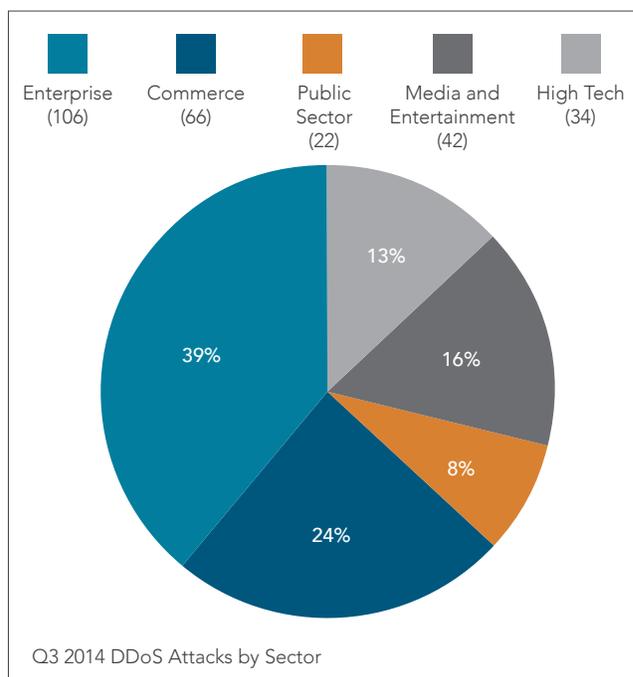
MOBILE CONNECTIVITY / In the third quarter of 2014, average mobile connection speeds (aggregated at a country/region level) ranged from a high of 18.2 Mbps in South Korea down to a low of 0.9 Mbps in Iran. Average peak mobile connection speeds ranged from 98 Mbps in Singapore down to 3.3 Mbps in Iran. Sweden had 94% of its mobile connections to Akamai at speeds above the 4 Mbps "broadband" threshold, while four countries had 1% or fewer of connections at those speeds. Based on traffic data collected by Ericsson, the volume of mobile data traffic grew by approximately 10% between the second and third quarters of 2014.

Analysis of Akamai 10 data collected during the third quarter from a sample of requests to the Akamai Intelligent Platform indicates that for traffic from mobile devices on cellular networks, Apple Mobile Safari accounted for nearly 39% of requests, with Android Webkit trailing at nearly 31%. For traffic from mobile devices on all networks, Apple Mobile Safari was responsible for just over 50% of requests, while Android Webkit drove just under 30%.

HOW LIKELY IS YOUR COMPANY TO BE TARGETED BY A DDoS ATTACK? / In the third quarter, Akamai's Enterprise customers accounted for nearly 40% of reported DDoS attacks, while nearly a quarter of reported attacks targeted Commerce customers. This represented an increase in the raw number of Enterprise-targeted attacks from the previous quarter, while the number of reported attacks targeting Commerce customers declined. Is your company in an industry vertical that is more likely to be targeted by DDoS attacks? Has your business taken steps yet to protect itself from DDoS attacks?

To read the full *3rd Quarter, 2014 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.stateoftheinternet.com

HOW ARE AVERAGE PEAK CONNECTION SPEEDS TRENDING OVER TIME? / While average connection speeds are the more commonly cited metric, average peak connection speeds are more representative of actual Internet connection capacity. Short-term trends (quarter-over-quarter) may be mixed and even somewhat limited, but the true measure of progress is to look at the long-term trends (year-over-year) in average peak connection speeds. The top 10 countries/regions have seen strong growth over the last year, with similar trends seen across the world. What is your country/region's average peak connection speed, and how has it changed over time?



	Country/Region	Q3 '14 Peak Mbps	QoQ Change	YoY Change
-	Global	24.8	-2.3%	38%
1	Hong Kong	84.6	14%	29%
2	Singapore	83.0	28%	65%
3	South Korea	74.2	3.0%	17%
4	Japan	65.1	5.9%	25%
5	Israel	61.8	-9.9%	30%
6	Romania	58.7	-6.9%	29%
7	Uruguay	58.6	18%	334%
8	Latvia	58.1	8.0%	25%
9	Taiwan	55.1	-5.3%	26%
10	Luxembourg	54.4	67%	130%

Average Peak Connection Speed by Country/Region

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