The State of the Internet
3RD QUARTER, 2013 EXECUTIVE SUMMARY

INCLUDES INSIGHT ON MOBILE TRAFFIC AND CONNECTED DEVICES FROM ERICSSON
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 issues, and IPv6 growth/transition progress, as well as traffic patterns across 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 in the third quarter of 2013, covering attack traffic, Internet connection speeds and 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 ongoing Syrian Electronic Army attacks, the states 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 2013, Akamai observed attack traffic originating from source IP addresses in 185 unique countries/regions. Note that our methodology captures the source IP address of an observed attack and cannot determine attribution of an attacker. China regained the top slot, growing to 35% of observed attack traffic. After spiking over the last several quarters, Indonesia’s share fell by nearly half, as it originated 20% of observed attack traffic during the quarter. In addition to China’s increase, the United States also saw significant growth in observed attack traffic, responsible for 11%. Overall attack traffic concentration across the top 10 countries/regions was on par with the second quarter, up slightly to 83% of observed attacks. Along with the decline in observed attacks originating in Indonesia, the percentage of attacks targeting Ports 80 and 443 declined in the third quarter as well, accounting for just over 27% combined. Port 445 returned to its position as the most-targeted port, growing to 23% of attacks. During the third quarter, Akamai customers reported being targeted by 281 DDoS attacks, an 11% reduction from the prior quarter. Enterprise and Commerce customers together accounted for just over 70% of the reported attacks. In addition, a group known as the Syrian Electronic Army continued its attacks, compromising domain name registrations to redirect traffic away from legitimate sites.

Internet and Broadband Adoption
In the third quarter, Akamai observed a 1.1% increase in the number of unique IPv4 addresses connecting to the Akamai Intelligent Platform, growing to just under 761 million, or about 8 million more than were seen in the second quarter of 2013. Looking at connection speeds, the global average connection speed grew 10% to 3.6 Mbps, but the global average peak connection speed declined 5.2% to 17.9 Mbps. At a country level, South Korea had the highest average connection speed at 22.1 Mbps, while Hong Kong continued to have the highest average peak connection speed at 65.4 Mbps. Globally, high broadband (>10 Mbps) adoption jumped 31% to 19%, and South Korea remained the country with the highest level of high broadband adoption, growing to 70%. Global broadband (>4 Mbps) adoption grew 5.8% quarter-over-quarter to 53%, with South Korea taking the top slot for this metric as well, with an adoption rate of 93%.

Mobile Connectivity
In the third quarter of 2013, average connection speeds on surveyed mobile network providers ranged from a high of 9.5 Mbps down to a low of 0.6 Mbps. Average peak connection speeds ranged from 49.8 Mbps down to 2.4 Mbps. Based on traffic data collected by Ericsson, the volume of mobile data traffic increased by 80% from the third quarter of 2012 to the third quarter of 2013, and grew around 10% between the second and third quarters of 2013.

Analysis of Akamai IO data collected across the third quarter from a sample of requests to the Akamai Intelligent Platform indicates that, for users of devices on cellular networks, just over 50% more requests came from Android Webkit-based browsers than from Apple Mobile Safari, with Webkit accounting for almost 38% of requests, and less than 24% for Safari. However, for users of mobile devices across all networks (not just cellular), Apple Mobile Safari accounted for just over 47% of requests, with Android Webkit approximately two-thirds of that, at just over 33% of requests.
Where do we find the highest levels of IPv6 adoption?

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Q3’13 IPv6 Traffic %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Romania</td>
<td>7.3%</td>
</tr>
<tr>
<td>2 Switzerland</td>
<td>7.0%</td>
</tr>
<tr>
<td>3 France</td>
<td>5.0%</td>
</tr>
<tr>
<td>4 Luxembourg</td>
<td>4.9%</td>
</tr>
<tr>
<td>5 United States</td>
<td>4.2%</td>
</tr>
<tr>
<td>6 Germany</td>
<td>4.1%</td>
</tr>
<tr>
<td>7 Peru</td>
<td>3.9%</td>
</tr>
<tr>
<td>8 Belgium</td>
<td>3.8%</td>
</tr>
<tr>
<td>9 Ireland</td>
<td>3.8%</td>
</tr>
<tr>
<td>10 Japan</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

IPv6 Traffic Percentage, Top Countries/Regions

<table>
<thead>
<tr>
<th>College/University</th>
<th>Q3’13 IPv6 Traffic %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Universidade Estadual de Ponta Grossa (Brazil)</td>
<td>80%</td>
</tr>
<tr>
<td>2 Bmo University of Technology (Czech Republic)</td>
<td>66%</td>
</tr>
<tr>
<td>3 Gustavus Adolphus College (U.S.)</td>
<td>65%</td>
</tr>
<tr>
<td>4 Rensselaer Polytechnic Institute (U.S.)</td>
<td>48%</td>
</tr>
<tr>
<td>5 University of Waterloo (Canada)</td>
<td>48%</td>
</tr>
<tr>
<td>6 Virginia Tech (U.S.)</td>
<td>47%</td>
</tr>
<tr>
<td>7 Marist College (U.S.)</td>
<td>45%</td>
</tr>
<tr>
<td>8 University of Saskatchewan (Canada)</td>
<td>44%</td>
</tr>
<tr>
<td>9 University of Vermont (U.S.)</td>
<td>39%</td>
</tr>
<tr>
<td>10 Curtin University (Australia)</td>
<td>39%</td>
</tr>
</tbody>
</table>

IPv6 Traffic Percentage, Top Colleges/Universities

In the third quarter, the countries with the highest levels of IPv6 adoption as observed by Akamai were largely clustered in Europe. Interestingly, Japan was the only Asia Pacific country within the top 10, which is surprising, given that the region is closest to exhausting its available IPv4 address space pool. In addition, colleges and universities are early adopters of IPv6, with schools in Brazil, Australia, Canada, the Czech Republic, and the United States showing some of the highest levels of IPv6 adoption. Have you taken steps to adopt IPv6? Are your key Web sites and applications available to users over IPv6?

How can Real User Monitoring improve situational performance?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>China</td>
<td>4121 ms</td>
<td>4141 ms</td>
<td>1.0x</td>
</tr>
<tr>
<td>Asia</td>
<td>India</td>
<td>5887 ms</td>
<td>8705 ms</td>
<td>1.5x</td>
</tr>
<tr>
<td>Asia</td>
<td>Japan</td>
<td>1798 ms</td>
<td>2992 ms</td>
<td>1.7x</td>
</tr>
<tr>
<td>Asia</td>
<td>Malaysia</td>
<td>4586 ms</td>
<td>6391 ms</td>
<td>1.4x</td>
</tr>
<tr>
<td>Europe</td>
<td>Italy</td>
<td>2850 ms</td>
<td>3820 ms</td>
<td>1.3x</td>
</tr>
<tr>
<td>Europe</td>
<td>U.K.</td>
<td>3481 ms</td>
<td>5285 ms</td>
<td>1.5x</td>
</tr>
<tr>
<td>N. America</td>
<td>U.S.</td>
<td>2794 ms</td>
<td>4410 ms</td>
<td>1.6x</td>
</tr>
<tr>
<td>S. America</td>
<td>Brazil</td>
<td>6086 ms</td>
<td>12304 ms</td>
<td>2.0x</td>
</tr>
<tr>
<td>S. America</td>
<td>Chile</td>
<td>4616 ms</td>
<td>7121 ms</td>
<td>1.5x</td>
</tr>
</tbody>
</table>

Average Page Load Times Based on Real User Monitoring

“Situational performance” requires new thinking about how to measure the end user experience and seamlessly apply this insight into optimizing content for each unique user situation. Real User Monitoring (RUM) takes passive performance measurements from actual users of a Web experience to provide insight into performance across devices and networks. Average page load times, measured across selected Akamai customers using RUM, range from being roughly even across mobile and broadband connections in China to being twice as slow over mobile in Brazil. How are you measuring and optimizing the end user experience for your Web sites and applications?

To read the full 3rd 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