

Most Significant Operational Threats

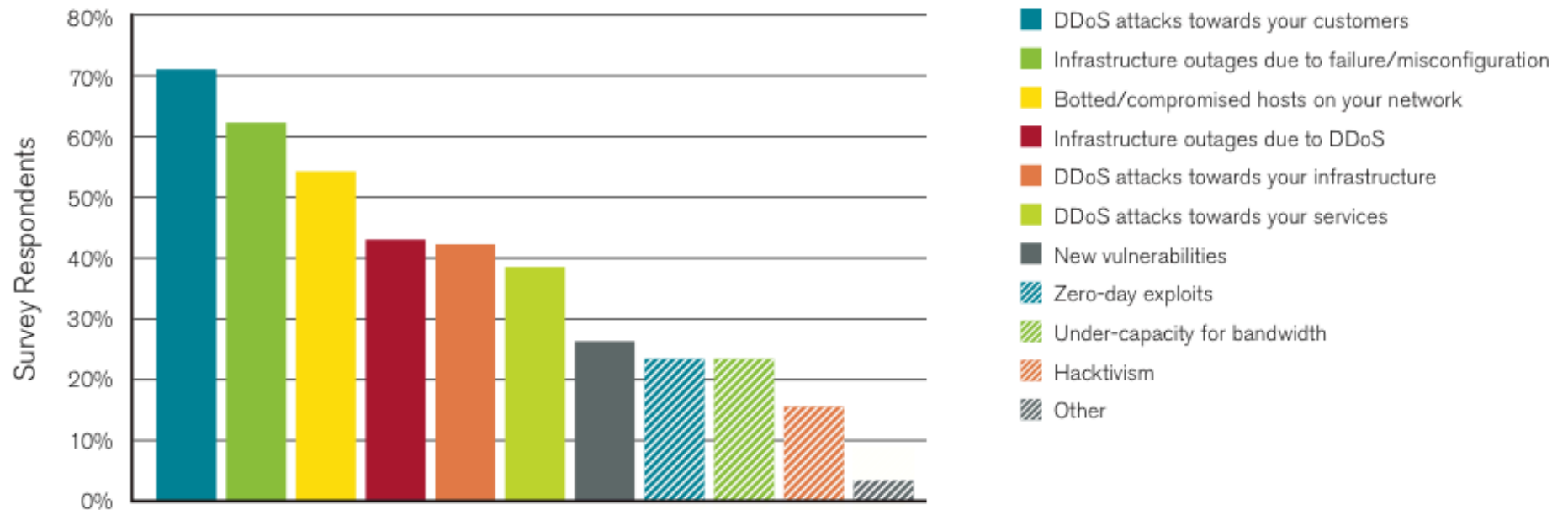


Figure 6 Source: Arbor Networks, Inc.

2011 Report

Most Significant Operational Threats Experienced

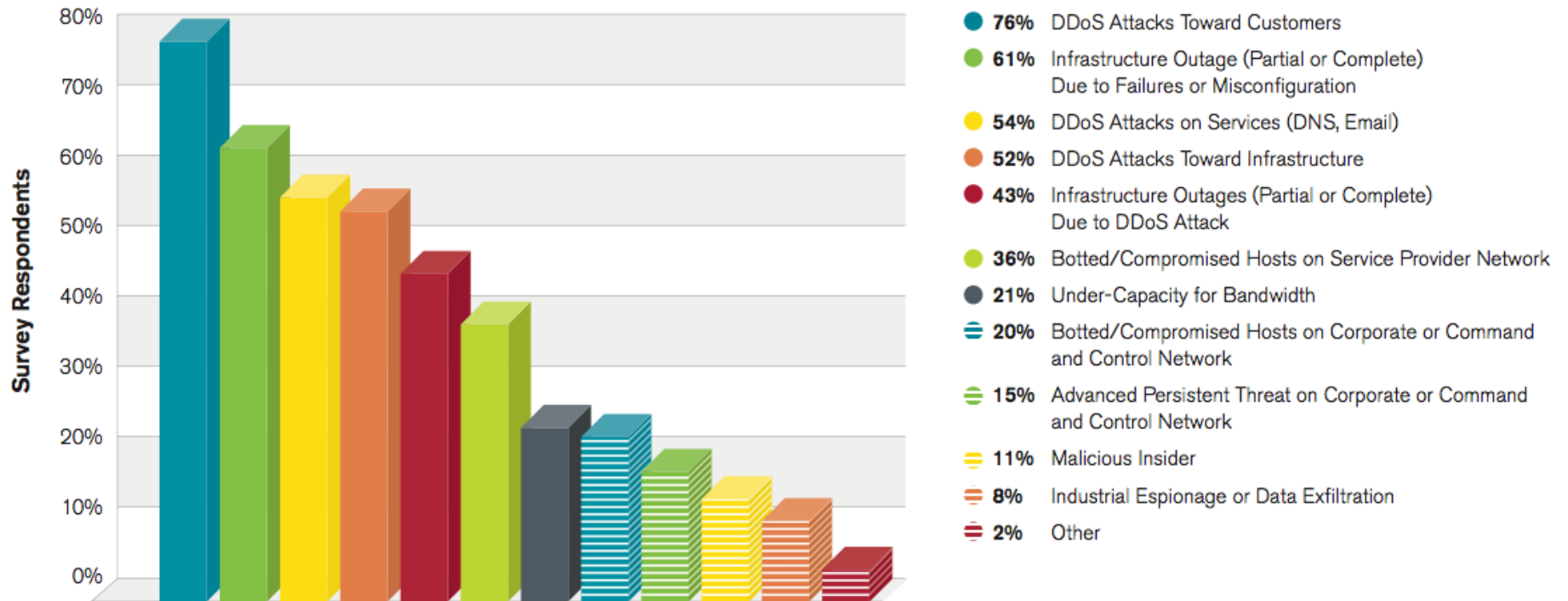


Figure 10 Source: Arbor Networks, Inc.

Botnets Beat Spartan Laser on *Halo 3*

By Kevin Poulsen  February 4, 2009 | 12:13 pm | Categories: [Cybarmageddon!](#)



What's the most powerful weapon you can wield when playing *Halo 3* online?

I know. You can control the entire map with a battle rifle and a couple of sticky grenades. But that teenybopper you just pwned has you beat with the tiny botnet he leased with his allowance money.

Botnets Beat Spartan Laser on *Halo 3*

By Kevin Poulsen  February 4, 2009 | 12:13 pm | Categories: [Cybarmageddon!](#)



“Do you get annoyed all the time because of skids on xBox Live? Do you want to take down your competitors’ servers or Web site?,” reads the site’s ad, apparently recorded by [this paid actor at Fiverr.com](#). “Well, boy, do we have the product for you! Now, with asylumstresser, you can take your enemies offline for just 30 cents for a 10 minute time period. Sounds awesome, right? Well, it gets even better: For only \$18 per month, you can have an unlimited number of attacks with an increased boot time. We also offer Skype and tiny chat IP resolvers.”



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Extortion via DDoS on the rise

By [Denise Pappalardo](#) and [Ellen Messmer](#), *Network World*, 05/16/05

Criminals are increasingly targeting corporations with distributed denial-of-service attacks designed not to disrupt business networks but to extort thousands of dollars from the companies.

Ivan Maksakov, Alexander Petrov and Denis Stepanov were accused of receiving \$4 million from firms that they threatened with cyberattacks.

The trio concentrated on U.K. Internet gambling sites, according to the prosecution. One bookmaker, which refused to pay a demand for \$10,000, was attacked and brought offline--which reportedly cost it more than \$200,000 a day in lost business.



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This link runs a sloow SQL query on the RIAA's server. Don't click it; that would be wrong. (tinyurl.com)

814 points posted 8 days ago by keyboard_user 211 comments



reddit

hot

new

browse

stats



Clicking this link loads 120,000 copies of the RIAA's captcha. Clicking would be wrong, don't do it. (antisocial.propagation.net)

452 points posted 4 days ago by mridlen 292 comments

December 8, 2010, 4:18 PM

'Operation Payback' Attacks Fell Visa.com

By ROBERT MACKEY



Operation: Payback Operation:

A message posted on Twitter by a group of Internet activists announcing the start of an attack on Visa's Web site, in retaliation for the company's actions against WikiLeaks.

Last Updated | 6:54 p.m. A group of Internet activists took credit for crashing the Visa.com Web site on Wednesday afternoon, hours after they launched [a similar attack on MasterCard](#). The cyber attacks, by activists who call themselves Anonymous, are aimed at punishing companies that have acted to stop the flow of donations to WikiLeaks in recent days.

The group explained that its [distributed denial of service attacks](#) — in which they essentially flood Web sites site with traffic to slow them down or knock them offline — were part of a broader effort called Operation Payback, which

Distributed Denial of Service Attacks Against Independent Media and Human Rights Sites

Ethan Zuckerman, Hal Roberts, Ryan McGrady, Jillian York, John Palfrey[†]

The Berkman Center for Internet & Society at Harvard University

December 2010

9. In the past year, has your site been subjected to a denial of service attack, meaning an attacker prevented or attempted to prevent access to your site altogether?

#	Answer	Bar	Response	%
1	yes		21	62%
2	no		8	24%
3	not sure		5	15%
	Total		34	

NOV 06

8

DDoS makes a phishing e-mail look real

Posted by Munir Kotadia @ 12:00

 0 comments

Just as Internet users learn that clicking on a link in an e-mail purporting to come from their bank is a bad idea, phishers seem to be developing a new tactic -- launch a DDoS attack on the Web site of the company whose customers they are targeting and then send e-mails "explaining" the outage and offering an "alternative" URL.

November 17th, 2008

Anti fraud site hit by a DDoS attack

Posted by Dancho Danchev @ 4:01 pm

Categories: [Botnets](#), [Denial of Service \(DoS\)](#), [Hackers](#), [Malware](#), [Pen testing...](#)

Tags: [Security](#), [Cybercrime](#), [DDoS](#), [Fraud](#), [Bobbear...](#)



9 TalkBacks

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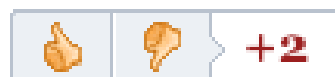
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WORTHWHILE?

4 VOTES



The popular British anti-fraud site

Bobbear.co.uk is currently under a DDoS attack (distributed denial of service attack) , originally launched last Wednesday, and is

continuing to hit the site with 3/4 million hits daily from hundreds of thousands of malware infected hosts mostly based in Asia and Eastern Europe, according to the site's owner. Targeted DDoS attacks against anti-fraud and volunteer [cybercrime fighting communities](#) clearly indicate the impact these communities have on the revenue stream of scammers, and with Bobbear attracting such a high profile underground attention, the site is indeed doing a very good job.

UK Anti-Fraud Crusader BobBear STILL Under Attack. No Abatement.

By [Marc Handelman](#) on December 8th, 2008


0

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[BobBear](#), an anti-fraud site based in the UK is still (*first reported here at [Infosecurity.US](#) on November 19th*) under constant distributed denial of service attack (DDoS), [reports The Shadowserver Foundation](#). More information regarding BobBear, and the unfortunate attacks they are being subjected to appears after the break.

U.S. Charges 37 Alleged Mules and Others in Online Bank Fraud Scheme

By [Kim Zetter](#)  September 30, 2010 | 3:07 pm | Categories: [Crime](#), [Cybersecurity](#), [Hacks and Cracks](#)

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Beyrouti, Babbo and Vitello worked with hackers who breached brokerage accounts at E-Trade and TD Ameritrade. The hackers then executed fraudulent sales of securities and transferred the proceeds from the sale to the mules' accounts. The receiving accounts were set up in the names of shell companies and linked to the hacked accounts.

Meanwhile, the victims' phones received a barrage of calls to prevent the brokerage firms from contacting them to confirm the legitimacy of the transactions. When the victims answered their phone, they would hear silence or a recorded message. About \$1.2 million was transferred to shell accounts opened by the suspects, who then transferred the money to other accounts in Asia or withdraw the money from ATMs in the New York area.



30 DDoS Attacks Spell ‘Gameover’ for Banks, NOV 11 Victims in Cyber Heists

Security experts aren’t certain about the strategy behind the DDoS attacks, which are noisy and noticeable to both victims and their banks. One theory is that the perpetrators are hoping the outages will distract the banks and victims.

“The belief is the DDoS is used to deflect attention from the wire transfers as well to make them unable to reverse the transactions (if found),” the FBI said.

That strategy seemed to have worked well against **Sony**, which focused on weathering a DDoS attack from Anonymous while information on more than 100 million customers was being siphoned by hackers.

Russia accused of unleashing cyberwar to disable Estonia

- Parliament, ministries, banks, media targeted
- Nato experts sent in to strengthen defences

Ian Traynor in Brussels
 The Guardian, Thursday 17 May 2007
[Article history](#)



Bronze Soldier, the Soviet war memorial removed from Tallinn. Nisametdinov/AP

A three-week wave of massive cyber-attacks on the small Baltic country of Estonia, the first known incidence of such an assault on a state, is causing alarm across the western alliance, with Nato urgently examining the offensive and its implications.

August 11th, 2008

Coordinated Russia vs Georgia cyber attack in progress

Posted by Dancho Danchev @ 4:23 pm

Categories: [Black Hat](#), [Botnets](#), [Denial of Service \(DoS\)](#), [Governments](#), [Hackers...](#)
Tags: [Security](#), [Cyber Warfare](#), [DDoS](#), [Georgia](#), [South Osetia...](#)

62 TalkBacks ADD YOUR OPINION
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+18 WORTHWHILE? 24 VOTES

In the wake of the [Russian-Georgian conflict](#), a week worth of speculations around Russian Internet forums have finally materialized into a coordinated cyber attack against Georgia's Internet infrastructure. The attacks have already managed to compromise several government web sites, with continuing DDoS attacks against numerous other Georgian government sites, prompting the government to switch to hosting locations to the U.S, with [Georgia's Ministry of Foreign Affairs](#) undertaking a desperate step in order to disseminate real-time information by moving to a Blogger account.

Country	IPs	Blocked	Blocked	Blocked	Blocked
Florida, U.S.A.	Okay	19.4	19.9	19.1	
Washington, Netherlands	Okay	149.3	144.6	170.4	
Melbourne, Australia	Okay	179.5	174.1	178.9	
Singapore, Singapore	Okay	209.5	214.0	209.6	
New York, U.S.A.	Packet Loss (100%)				
Amsterdam, Netherlands	Packet Loss (100%)				
Atlanta, U.S.A.	Packet Loss (100%)				
London, United Kingdom	Packet Loss (100%)				
Stockholm, Sweden	Packet Loss (100%)				
Oslo, Norway	Packet Loss (100%)				
Chicago, U.S.A.	Packet Loss (100%)				
Seattle, U.S.A.	Packet Loss (100%)				
Amsterdam, Netherlands	Packet Loss (100%)				
Helsinki, Finland	Packet Loss (100%)				
Paris, France	Packet Loss (100%)				
Copenhagen, Denmark	Packet Loss (100%)				
San Francisco, U.S.A.	Packet Loss (100%)				
Toronto, Canada	Packet Loss (100%)				
Madrid, Spain	Packet Loss (100%)				
Shanghai, China	Packet Loss (100%)				
Lille, France	Packet Loss (100%)				
Dresden, Germany	Packet Loss (100%)				
Munich, Germany	Packet Loss (100%)				
Cape Town, South Africa	Packet Loss (100%)				
Porto Alegre, Brazil	Packet Loss (100%)				
Sydney, Australia	Packet Loss (100%)				
Mumbai, India	Packet Loss (100%)				
Stockholm, U.S.A.	Packet Loss (100%)				

Mullen Offers 40-year Perspective on Social, Military Issues

By Karen Parrish
American Forces Press Service

WASHINGTON, Sept. 20, 2011 – As the last month ticks down in a career that began with his graduation from the U.S. Naval Academy in 1968, Navy Adm. Mike Mullen, chairman of the Joint Chiefs of Staff, today offered his view of how war, peace, society and the world have changed over those 40-plus years.

He's seen some of the most significant military changes ever during his tenure as chairman, he told the audience gathered here at the Carnegie Endowment for International Peace.

"I talk about two existential threats to the United States right now," he said. "One is obviously the nuclear weapons that exist in Russia; we think that we've got that well controlled inside the [current strategic arms reduction, or New START] treaty and inside the relationship."

The other is cyber attacks, which "I think ... actually can bring us to our knees," he added.

The cyber threat has no boundaries or rules, and can issue from other nations, nongovernment actors – "You pick it," – but the danger it poses warrants a structure of doctrine and regulation like that used to control the nuclear threat, he said.

"We're a long way from that right now," he said.

It Begins: Military's Cyberwar Command Is Fully Operational

By [Spencer Ackerman](#) November 4, 2010 | 12:00 am | Categories: [Spies](#), [Secrecy and Surveillance](#)

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Fifteen thousand military computer networks became protected on November 3, 2010. Those ensconced within the informational phalanx [called the event Cyber Command Day](#). They lived only to face a new challenge — the war against the Machines.

In truth, yesterday wasn't quite so dramatic. The Department of Defense announced that the military's new command for protecting its networks against cyberassault had achieved "full operational capability," meaning the new U.S. Cyber Command, which [opened for business in May](#), is 100 percent ready for duty, just [a month behind schedule](#). Not that "full operational capability" fills in many of the blanks about when it's acceptable for Cyber Command to attack a foreign network or how deeply it'll be involved in the civilian internet.

US general: 'We're cleared to cyber-bomb enemy hackers'

Curiously, his command website went down after he said it

By [Brid-Aine Parnell](#) • [Get more from this author](#)

Posted in [Security](#), 17th November 2011 12:51 GMT

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The US military is now legally in the clear to launch offensive operations in cyberspace, the commander of the US Strategic Command has said.

"I do not believe that we need new explicit authorities to conduct offensive operations of any kind," Air Force General Robert Kehler told [Reuters](#).

But he added that the military was still figuring out the rules of engagement for cyber-warfare outside the "area of hostilities", which are the places they've already been approved to do battle in.

Kids responsible for Estonia attack

Author: [Ian Grant](#)

Posted: 15:25 13 Mar 2009

Topics: [Security](#)



The distributed denial of service attack that [took down Estonia](#) was run by a bunch of kids, it has emerged.

Two years ago, the former Soviet satellite found its banking and government websites paralysed for several weeks by a distributed denial-of-service (DDoS) attack.

The incident prompted a [massive reorganisation and upgrade of network security](#) and early warning systems among Nato members, and Nato even set up a cyber-security research house in Estonia.

At the time Russia was suspected of orchestrating the attack, but Moscow always denied it, and indeed Estonian officials never accused the Kremlin directly.

Yesterday, Konstantin Goloskokov (22) claimed he and some friends set up the attack to protest the removal of a Red Army monument from a downtown site in Estonia's capital Tallinn. The move had earlier led to rioting by pro-Soviet protesters.

Goloskokov told Reuters the attack was an act of civil disobedience, and, therefore, completely legal. "I was not involved in any cyber-attack," he said.

DDoS attacks take out Asian nation

Myanmar fades to black

By [Dan Goodin in San Francisco](#) • [Get more from this author](#)

Posted in [Crime](#), [3rd November 2010 22:26 GMT](#)

[Free whitepaper – Low-latency switches power high-frequency trading](#)

Myanmar was severed from the internet on Tuesday following more than 10 days of distributed denial of service attacks that culminated in a massive data flood that overwhelmed the Southeast Asian country's infrastructure, a researcher said.

The DDoS assault directed as much as 15 Gbps of junk data to Myanmar's main internet provider, more than 15 times bigger than the 2007 attack that [brought some official Estonian websites to their knees](#), said Craig Labovitz, a researcher at Arbor Networks. It was evenly distributed throughout Myanmar's 20 or so providers and included multiple variations,

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The attacks come ahead of the November 7 general elections set by the military junta that rules Myanmar. Many critics of the government say it launched the attacks in an attempt to manipulate the outcome. Others have blamed external forces. The data flood [began 10 days ago](#), according to *The People's Daily* in China, which borders Myanmar. ®

Row over Korean election DDoS attack heats up Ruling party staffer accused of disrupting Seoul mayoral by-election

By [John Leyden](#) • [Get more from this author](#)

Posted in [Security](#), 7th December 2011 09:23 GMT

[Free whitepaper – IBM System Networking RackSwitch G8124](#)

A political scandal is brewing in Korea over alleged denial of service attacks against the National Election Commission (NEC) website.

Police have arrested the 27-year-old personal assistant of ruling Grand National Party politician Choi Gu-sik over the alleged cyber-assault, which disrupted a Seoul mayoral by-election back in October.

However, security experts said that they doubt the suspect, identified only by his surname "Gong", had the technical expertise or resources needed to pull off the sophisticated attack.

Gong continues to protest his innocence, a factor that has led opposition politicians to speculate that he is covering up for higher-ranking officials who ordered the attack.

Democratic Party politician Baek Won-woo told [The HankYoreh](#): "We need to determine quickly and precisely whether there was someone up the line who ordered the attack, and whether there was compensation." ®

Most Common Motivations Behind DDoS Attacks

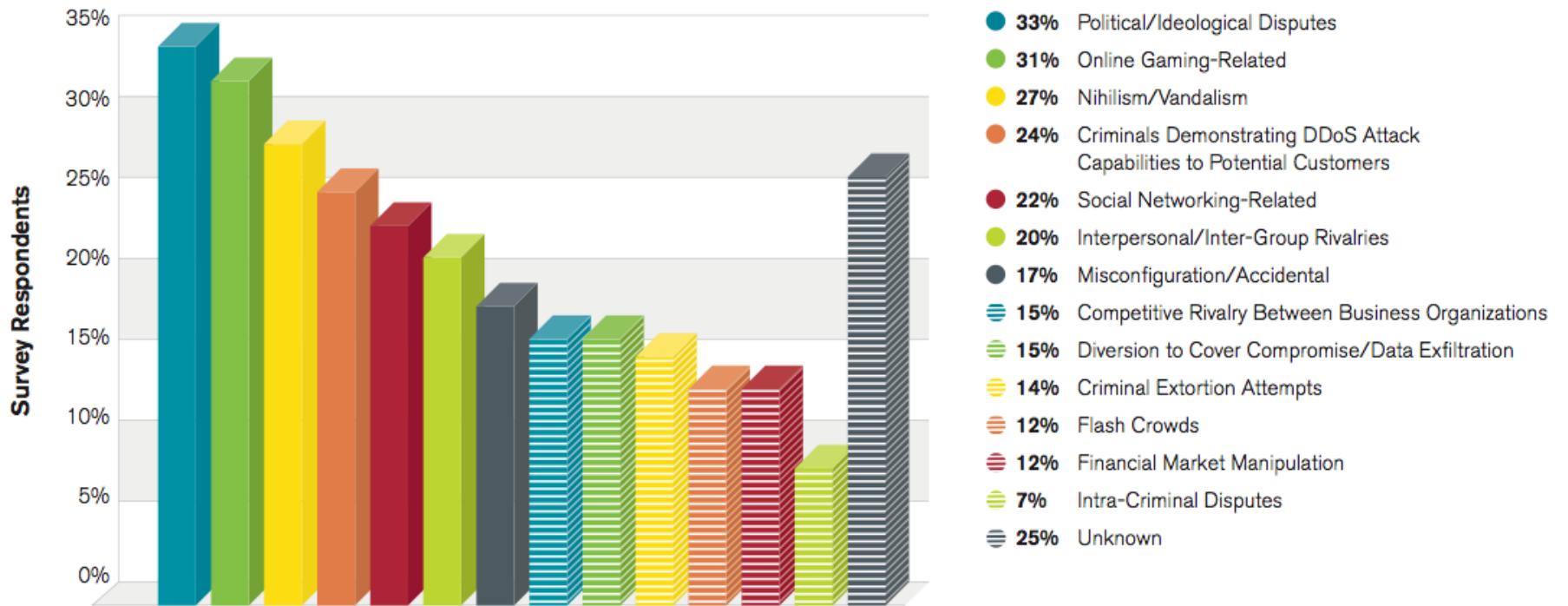


Figure 16 Source: Arbor Networks, Inc.

Attack Frequency per Month

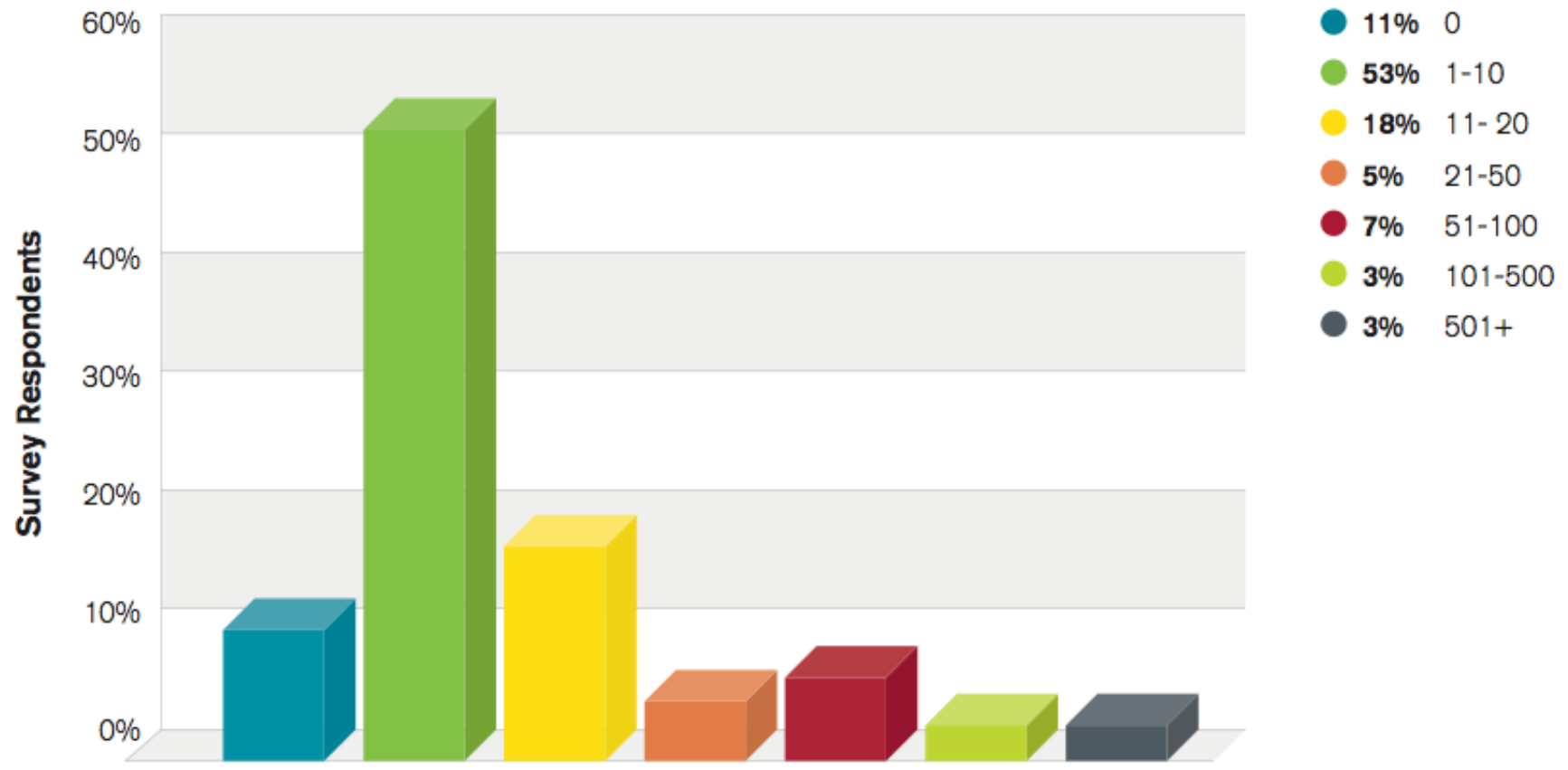


Figure 27 Source: Arbor Networks, Inc.

Posted on Tuesday, August 12th, 2008 | Bookmark on [del.icio.us](#)

Georgia DDoS Attacks - A Quick Summary of Observations

by Jose Nazario

The clashes between Russia and Georgia over the region of South Ossetia have been shadowed by [attacks on the Internet](#). As we noted in July, the [Georgia presidential website fell victim to attack](#) during a [war of words](#). A number of DDoS attacks have

Raw statistics of the attack traffic paint a pretty intense picture. We can discern that the attacks would cause injury to almost any common website.

Average peak bits per second per attack	211.66 Mbps
Largest attack, peak bits per second	814.33 Mbps
Average attack duration	2 hours 15 minutes
Longest attack duration	6 hour

Size of Largest Reported DDoS Attack (Gbps)

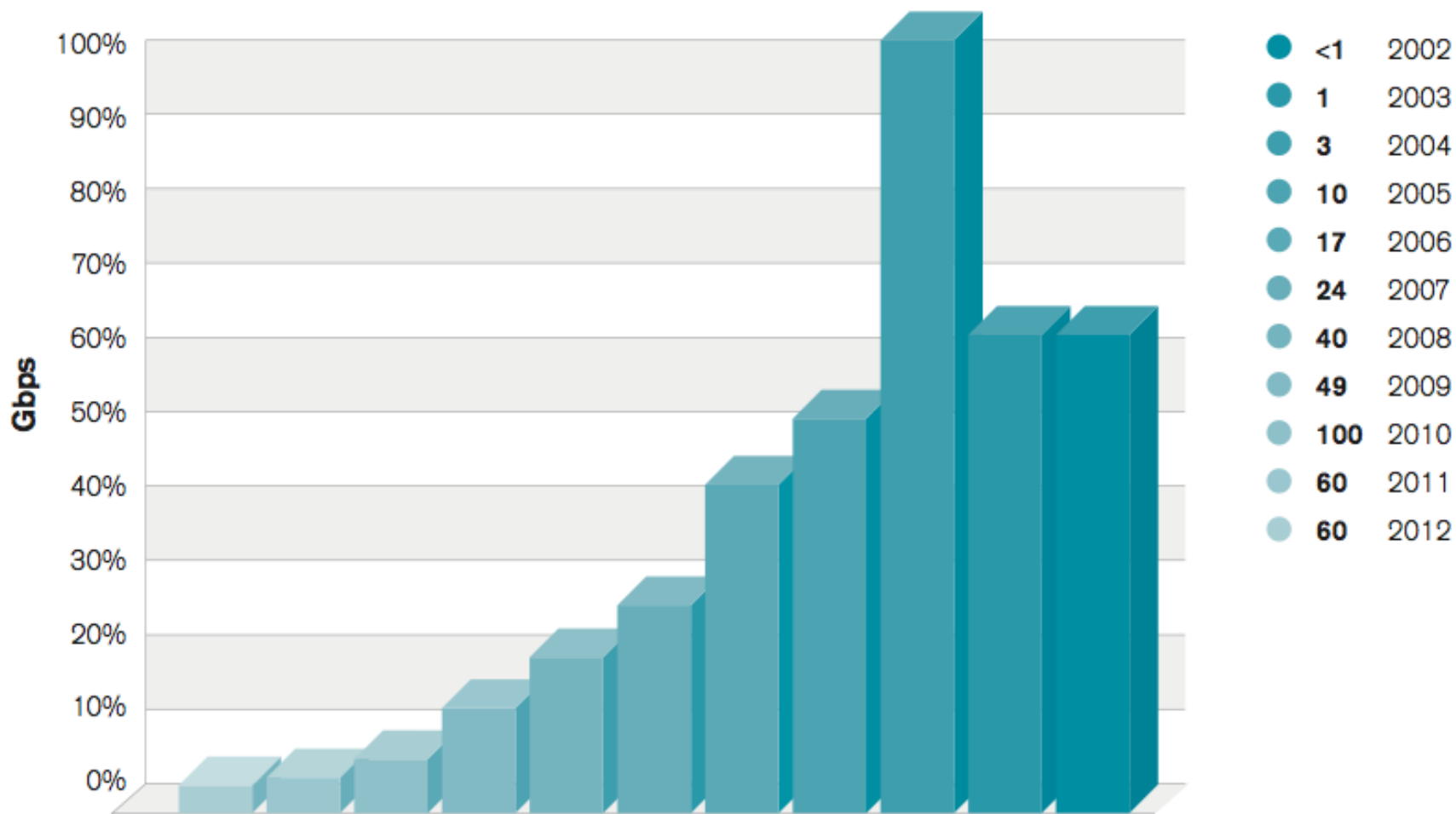


Figure 19 Source: Arbor Networks, Inc.

- “Approximately \$250,000 USD/incident.”
- “\$8,000 USD/incident.”
- “Approximately 1,000EUR/incident.”
- “Roughly \$1M USD to \$1.5M USD/incident.”
- “\$300,000 USD/incident.”
- “\$1M USD/incident.”
- “More than \$100,000 USD/month.”
- “Net revenue-generator—we offer commercial DDoS mitigation services.”

MAP OF THE INTERNET

THE IPv4 SPACE, 2006



Packet sent	Response from victim
TCP SYN (to open port)	TCP SYN/ACK
TCP SYN (to closed port)	TCP RST (ACK)
TCP ACK	TCP RST (ACK)
TCP DATA	TCP RST (ACK)
TCP RST	no response
TCP NULL	TCP RST (ACK)
ICMP ECHO Request	ICMP Echo Reply
ICMP TS Request	ICMP TS Reply
UDP pkt (to open port)	protocol dependent
UDP pkt (to closed port)	ICMP Port Unreach
...	...

Table 1: A sample of victim responses to typical attacks.

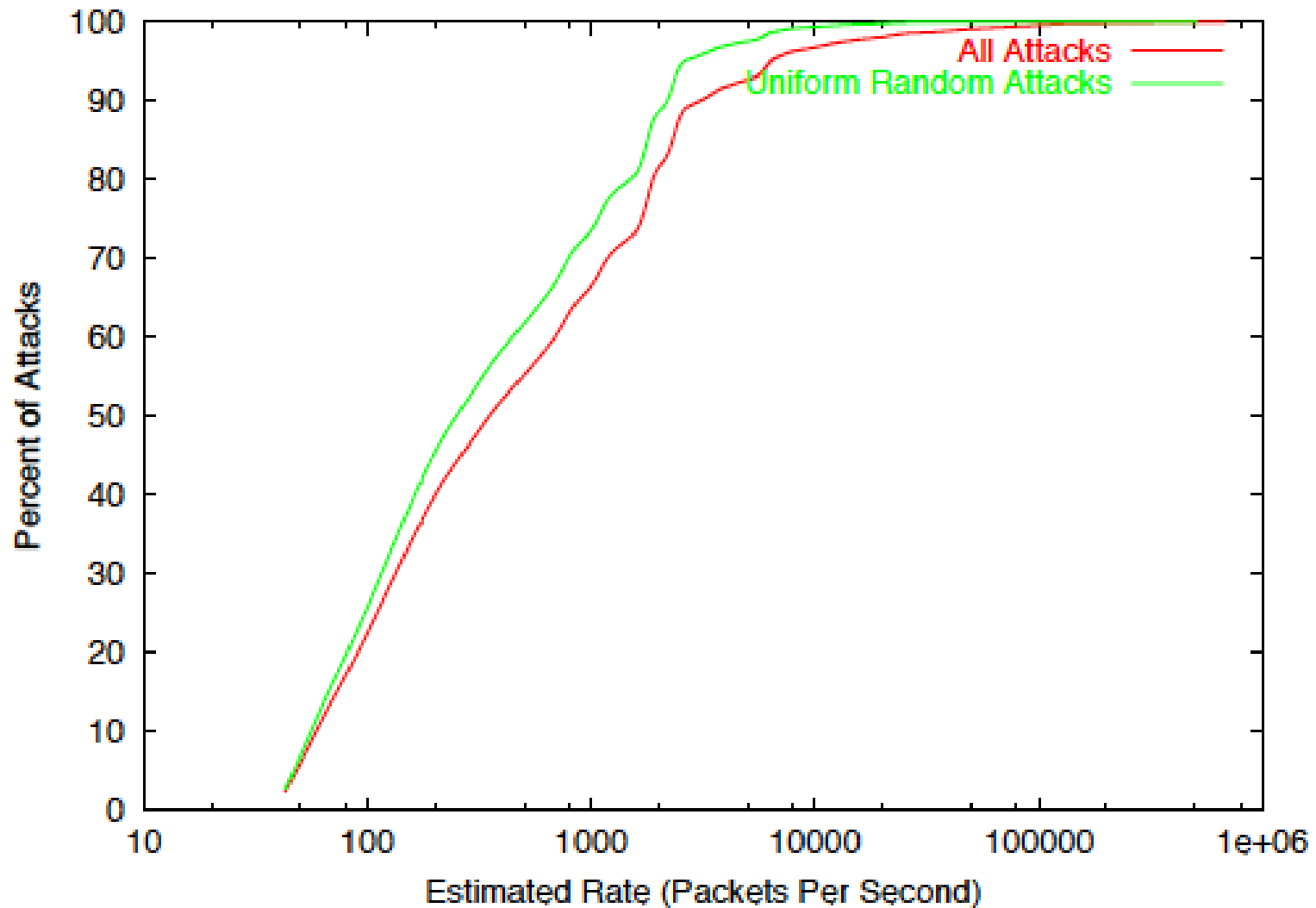


Figure 4: Cumulative distributions of estimated attack rates in packets per second.