Web Attacks of Past, Present, and Future

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2 types of Web Attacks

High-Impact, Low Frequency
- DDoS
- Data Breaches
- Defacement
- Third-Party Content Compromise
- DNS Hijacking
- Datacenter Outages
- Scrapers

Low-Impact, High-Frequency
- Vulnerability Scanners
- Web Attack Farms
- Login Abuse/Account Checkers
- “Noise of the Internet”
- Scrapers
Police arrest "Mattfeuter" site operators, break up $200M carder racket

International authorities have broken up a ring of scammers who sold consumers personal and financial information through a 'dump' site, resulting in $200 million in fraudulent charges.

The group was disbanded when its alleged leaders, Van Tien Tu and Duy Hai Truong, were arrested last week in Vietnam. At least 10 others, including some who are unnamed, were apprehended by police in Vietnam and the United Kingdom.

Truong, 23, was charged in the United States with conspiracy to commit bank fraud in New Jersey for his role in the racket, in which fraudsters charged credit cards issued here and in Europe from 2007 until their arrest. Victims also include consumers in Vietnam.
Ho Chi Minh City jails 7 for abetting $200 mln transnational credit card fraud

Thanh Nien News

HO CHI MINH CITY - Friday, January 08, 2016 18:47
Account Takeover in a Nutshell

- Set up a tools site
- Cultivate proxy list (“socks”)
- Obtain username/password list
  - Phishing
  - Data dumps
  - Buy them
- Check accounts on multiple sites with account checker (1:12 success rate!)
- Cash out
- ??????
- Profit!
UG Sites

A CHECKING SERVICE SINCE 2011

Username: 
Password: 
Captcha: 

>> Login <<  Register  ResetPwd

Automated Payment: BTC & WMZ

API Checking: Download sample Code, Howto. Click here...
Our template may look not so fancy, but everything working just smooth over 5 years

Official domains: UG-Market.COM and UG-Market.IS
Our service is for Checking only, we DON'T sell anything
Cashout Schemes

- Pre-paid credit cards
- Gift cards (physical and digital)
- Other cash equivalents
- Purchase vouchers
- Loyalty points
- High-value items such as electronics
Fighting Account Takeover

- Better workflow for profile changes
  - Shipping address
  - Email
- “Factor and a Half” authentication
- Rate Controls for /path/to/login/login.php
- Googledork for account checkers aimed at you
- Harvest socks IP addresses
  - Observed traffic (and share)
  - From attackers’ own sites
- Takedown/forensics on tools sites
- Get public password dumps and compare them to your users
Bots and Scrapers

- Booking agents
- Competitors
- Stock price calculators
- Natural language translators
- Consumer Price Index calculators
- Real estate price calculators
- Aggregators
- Business partners
During a full day sample, bot traffic accounted for 30% of all web traffic.

**Bot Category Distribution**
- Declared bots: 40%
- Detected automation tools & scraping campaigns: 50%
- Other detected bots: 10%

**Declared Bots Breakdown / 40% of Bot Traffic**
- Web search engines & indexers: 50%
- Media aggregators (social media, news, RSS): 5%
- Commercial aggregators (price comparisons, enterprise data aggregators, scraping enterprise services): 3%
- Analytics & research bots (advertising, SEO analyzers, audience analytics, business intelligence): 15%
- Web monitoring services (performance & health, link checkers): 23%
- Other declared bots: 4%

**Detected Automation Tools & Scraping Campaigns / 50% of Bot Traffic**
- Web-browser impersonators: 55%
- Search-engine impersonators: 8%
- Development frameworks: 30%
- Other detected web scrapers: 7%

**Other Detected Bots / 10%**
- Other bots: 10%
- Categorized bots: 90%
Fighting Bots

- Identification is key: know your traffic
  - Friendly
  - Hostile
  - Ambiguous

- Business rules for each bot type
  - Off-hours v/s peak time
  - Don’t just block: slow down, misdirect, give “cheaper” content
Resources for You to Use

- 2 Quarterly Reports at https://www.stateoftheinternet.com/
  - Internet: broadband speeds, content consumption
  - Security: web application, DNS, and DDoS attacks

- Quarterly Threat Brief Webinar
  - SotI data
  - Incident response lessons

- Read the security piece of our blog at https://blogs.akamai.com/security/
  - Advisories
  - Vulnerability and patch information
  - Product updates