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2016 Dyn cyberattack

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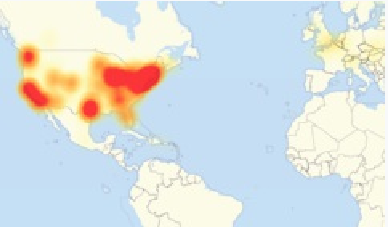
The **2016 Dyn cyberattack** took place on October 21, 2016, and involved multiple distributed denial-of-service attacks (DDoS attacks) targeting systems operated by Domain Name System (DNS) provider Dyn, which caused major Internet platforms and services to be unavailable to large swathes of users in Europe and North America.[2][3] The groups Anonymous and New World Hackers claimed responsibility for the attack, but scant evidence was provided.[4]

Dyn cyberattack



Map of areas most affected by attack, 16:45 UTC, 21 October 2016.[1]

Date	October 21, 2016
Time	12:10 – 14:20 UTC 16:50 – 18:11 UTC 21:00 – 23:11 UTC [*citation needed*][*needs update*]
Location	Europe and North America, especially the Eastern United States
Type	Distributed denial-of-service
Participants	Unknown
Suspect(s)	New World Hackers, Anonymous (self-claimed)

As a DNS provider, Dyn provides to end-users the service of mapping an Internet domain name—when, for instance, entered into a web browser—to its corresponding IP address. The distributed denial-of-service (DDoS) attack was accomplished through a large number of DNS lookup requests from tens of millions of IP addresses.[5] The activities are believed to have been executed through a botnet consisting of a large number of Internet-connected devices—such as printers, IP cameras, residential gateways and baby monitors—that had been infected with the Mirai malware.

Contents

Timeline and impact [edit]

According to Dyn, a distributed denial-of-service (DDoS) attack began at 7:00 a.m. (EDT) and was resolved by 9:20 a.m. A second attack was reported at 11:52 a.m. and Internet users began reporting difficulties accessing websites.[6][7] A third attack began in the afternoon, after 4:00 p.m.[5][8] At 6:11 p.m., Dyn reported that they had resolved the issue.[9][10]

Dyn Chief Strategy Officer and spokesperson Kyle York led the communication response with customers, partners and the market.

Affected services [edit]

Services affected by the attack included:

- Airbnb[11]
- Amazon.com[8]
- Ancestry.com[12][13]
- *The A.V. Club*[14]
- BBC[13]
- *The Boston Globe*[11]
- Box[15]
- *Business Insider*[13]
- CNN[13]
- Comcast[16]
- CrunchBase[13]
- DirecTV[13]
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- *The New York Times*[11][16]
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- Roblox[25]
- Ruby Lane[13]
- *RuneScape*[12]
- SaneBox[21]
- Seamless[23]
- *Second Life*[26]
- Shopify[11]
- Slack[23]
- SoundCloud[11][18]
- Squarespace[13]
- Spotify[12][16][18]
- Starbucks[12][22]
- Storify[15]
- Swedish Civil Contingencies Agency[27]
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- Tumblr[12][16]
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- Visa[28]
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- Wikia[12]
- *Wired*[15]
- Wix.com[30]
- WWE Network[31]
- Xbox Live[32]
- Yammer[23]
- Yelp[13]
- Zillow[13]

Investigation [edit]

The US Department of Homeland Security started an investigation into the attacks, a source.[2][33][34] No group of hackers claimed responsibility during or in the immediate aftermath of the attack.[35] Dyn's chief strategist said in an interview that the assaults on the company's servers were very complex and unlike everyday DDoS attacks.[7] Barbara Simons, a member of the advisory board of the United States Election Assistance Commission, said such attacks could affect electronic voting for overseas military or civilians.[7]

Play media

White House spokesperson Josh Earnest responds on October 21, 2016, the day of the attack

Dyn disclosed that, according to business risk intelligence firm FlashPoint and Akamai Technologies, the attack was a botnet coordinated through a large number of Internet of Things-enabled (IoT) devices, including cameras, residential gateways, and baby monitors, that had been infected with Mirai malware. The attribution of the attack to the Mirai botnet had been previously reported by BackConnect Inc. another security firm.[36] Dyn stated that they were receiving malicious requests from tens of millions of IP addresses.[5][37] Mirai is designed to brute-force the security on an IoT device, allowing it to be controlled remotely.

Cybersecurity investigator Brian Krebs noted that the source code for Mirai had been released onto the Internet in an open-source manner some weeks prior, which will make the investigation of the perpetrator more difficult.[38] Since then, Mirai has been adapted in other malware projects.[39]

On 25 October 2016, US President Obama stated that the investigators still had no idea who carried out the cyberattack.[40]

On 13 December 2017, the Justice Department announced that three men (Paras Jha, 21, Josiah White, 20, and Dalton Norman, 21) had entered guilty pleas in cybercrime cases relating to the Mirai and clickfraud botnets.[41]

Perpetrators [edit]

In correspondence with the website Politico, hacktivist groups SpainSquad, Anonymous, and **New World Hackers** claimed responsibility for the attack in retaliation for Ecuador's rescinding Internet access to WikiLeaks founder Julian Assange, at their embassy in London, where he has been granted asylum.[4] This claim has yet to be confirmed.[4] WikiLeaks alluded to the attack on Twitter, tweeting "Mr. Assange is still alive and WikiLeaks is still publishing. We ask supporters to stop taking down the US internet. You proved your point."[42] New World Hackers has claimed responsibility in the past for similar attacks targeting sites like BBC and ESPN.com.[43]

On October 26, FlashPoint stated that the attack was most likely done by script kiddies.[44]

A November 17, 2016 *Forbes* article reported that the attack was likely carried out by "an angry gamer".[45]

See also [edit]

- WannaCry ransomware attack
- Mirai (malware)
- Vulnerability (computing)

Computer security portal

Internet portal

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v · t · e	Hacking in the 2010s	
← 2000s	Timeline	2020s →
Major incidents	2010	Operation Aurora · Australian cyberattacks · Operation Payback
	2011	HBGary Federal · DigiNotar · RSA SecurID compromise · Operation Tunisia · 2011 PlayStation Network outage · Operation AntiSec
	2012	Stratfor email leak · LinkedIn hack
	2013	South Korea cyberattack · Snapchat hack · 2013 Yahoo! data breach
	2014	Anthem medical data breach · Operation Tovar · iCloud leaks of celebrity photos · Sony Pictures hack · Russian hacker password theft · 2014 Yahoo! data breach
	2015	Office of Personnel Management data breach · Hacking Team · Ashley Madison data breach · VTech data breach · SWIFT banking hack
	2016	Bangladesh Bank robbery · Hollywood Presbyterian Medical Center ransomware incident · Commission on Elections data breach · Democratic National Committee cyber attacks · DCCC cyber attacks · **Dyn cyberattack** · Russian interference in U.S. election
	2017	WannaCry ransomware attack · Westminster cyberattack · Petya cyberattack (2017 cyberattacks on Ukraine) · Equifax data breach · Deloitte breach · Disqus breach
Groups		Anonymous (associated events) · Bureau 121 · Cozy Bear · CyberBerkut · Derp · Equation Group · Fancy Bear · GNAA · Goatse Security · Guccifer 2.0 · Hacking Team · Iranian Cyber Army · Lizard Squad · LulzRaft · LulzSec · New World Hackers · NullCrew · NSO Group · PayPal 14 · PLA Unit 61398 · PLATINUM · Pranknet · RedHack · Rocket Kitten · The Shadow Brokers · Syrian Electronic Army · TeaMp0isoN · Tailored Access Operations · UGNazi · Yemen Cyber Army
Individuals		George Hotz · Guccifer · Hector Monsegur · Jeremy Hammond · Junaid Hussain · Kristoffer von Hassel · Mustafa Al-Bassam · MLT · Ryan Ackroyd · Topiary · The Jester · weev
Major vulnerabilities publicly disclosed		Evercookie (2010) · iSeeYou (2013) · Heartbleed (2014) · Shellshock (2014) · POODLE (2014) · Rootpipe (2014) · Row hammer (2014) · JASBUG (2015) · Stagefright (2015) · DROWN (2016) · Badlock (2016) · Dirty COW (2016) · Cloudbleed (2017) · Broadcom Wi-Fi (2017) · EternalBlue (2017) · DoublePulsar (2017) · Silent Bob is Silent (2017) · KRACK (2017) · ROCA vulnerability (2017) · BlueBorne (2017) · Meltdown (2018) · Spectre (2018)
Malware		Bad Rabbit · Careto / The Mask · CryptoLocker · Dexter · Duqu · Duqu 2.0 · FinFisher · Flame · Gameover ZeuS · Mahdi · Metulji botnet · Mirai · NSA ANT catalog · Pegasus · Petya · R2D2 · Shamoon · Stars virus · Stuxnet · Vault 7 · WannaCry · X-Agent

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This page was last edited on 5 January 2018, at 22:17.