# imperva

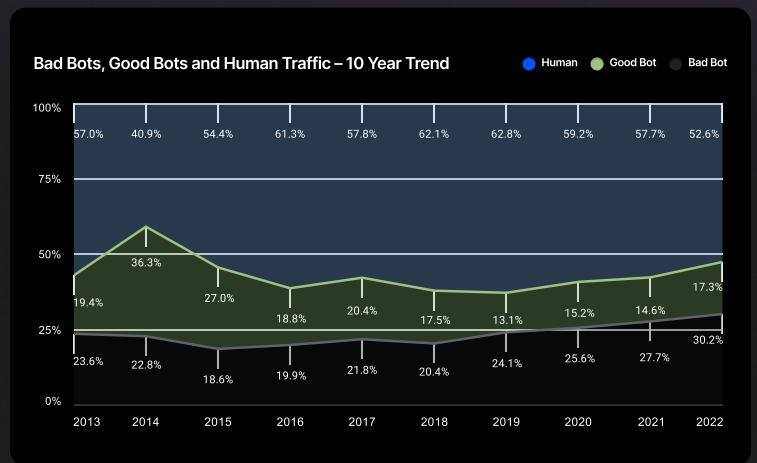# Looking Back At A Decade Of Fighting Bad Bots

**2023 marks the 10th anniversary of the Bad Bot Report – a good opportunity to look back at how the profile of internet traffic has changed throughout the past decade.**

In 2013, the profile of internet traffic somewhat resembled that of recent years, with bad bots accounting for 23.6% of traffic, good bots accounting for 19.4%, and human traffic for 57%.
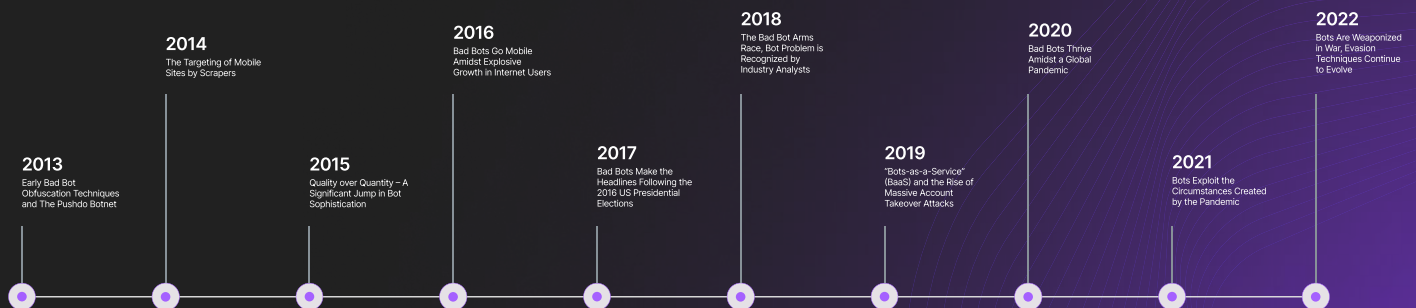
2014 was an interesting year in the sense that we saw a significant move in good bot traffic, which grew from 20.98% to 36.32%, potentially due in part to more aggressive indexing by Bing and upstart search engines during that year.

**Bad Bots, Good Bots and Human Traffic – 10 Year Trend** — Human ● Good Bot ● Bad Bot

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|---|---|---|
| Human | 57.0% | 40.9% | 54.4% | 61.3% | 57.8% | 62.1% | 62.8% | 59.2% | 57.7% | 52.6% |
| Good Bot | 19.4% | 36.3% | 27.0% | 18.8% | 20.4% | 17.5% | 13.1% | 15.2% | 14.6% | 17.3% |
| Bad Bot | 23.6% | 22.8% | 18.6% | 19.9% | 21.8% | 20.4% | 24.1% | 25.6% | 27.7% | 30.2% |

2015 marked the lowest point for bad bot traffic, as human traffic increased to 54.4%. This can be explained by the significant influx of new internet users, especially from China, India, and Indonesia. Additionally, bot operators were opting for quality, instead of quantity, developing more advanced bots that can achieve more with fewer requests.

Other low points for bad bot traffic were in 2016 and 2018, as they accounted for 19.9% and 20.4%, respectively. Since then, however, bad bot traffic levels have been on a 4-year upward trend, going from 24.1% in 2019 to an all-time high of 30.2% of all internet traffic in 2022.

# A 10-Year Evolution of Malicious Automation

**2013** Early Bad Bot Obfuscation Techniques and The Pushdo Botnet

**2014** The Targeting of Mobile Sites by Scrapers

**2015** Quality over Quantity – A Significant Jump in Bot Sophistication

**2016** Bad Bots Go Mobile Amidst Explosive Growth in Internet Users

**2017** Bad Bots Make the Headlines Following the 2016 US Presidential Elections

**2018** The Bad Bot Arms Race, Bot Problem is Recognized by Industry Analysts

**2019** "Bots-as-a-Service" (BaaS) and the Rise of Massive Account Takeover Attacks

**2020** Bad Bots Thrive Amidst a Global Pandemic

**2021** Bots Exploit the Circumstances Created by the Pandemic

**2022** Bots Are Weaponized in War, Evasion Techniques Continue to Evolve

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