



# Stop Malicious Bots!

Detect & Prevent Automated Attacks

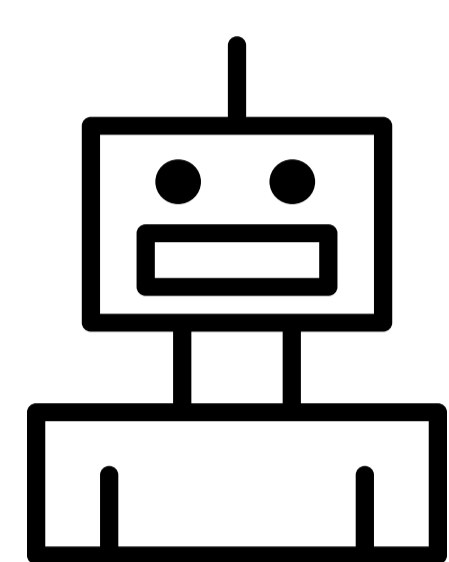
## Web App Attack Trends in 2019

**60%**

of 2018 breaches occurred via web apps

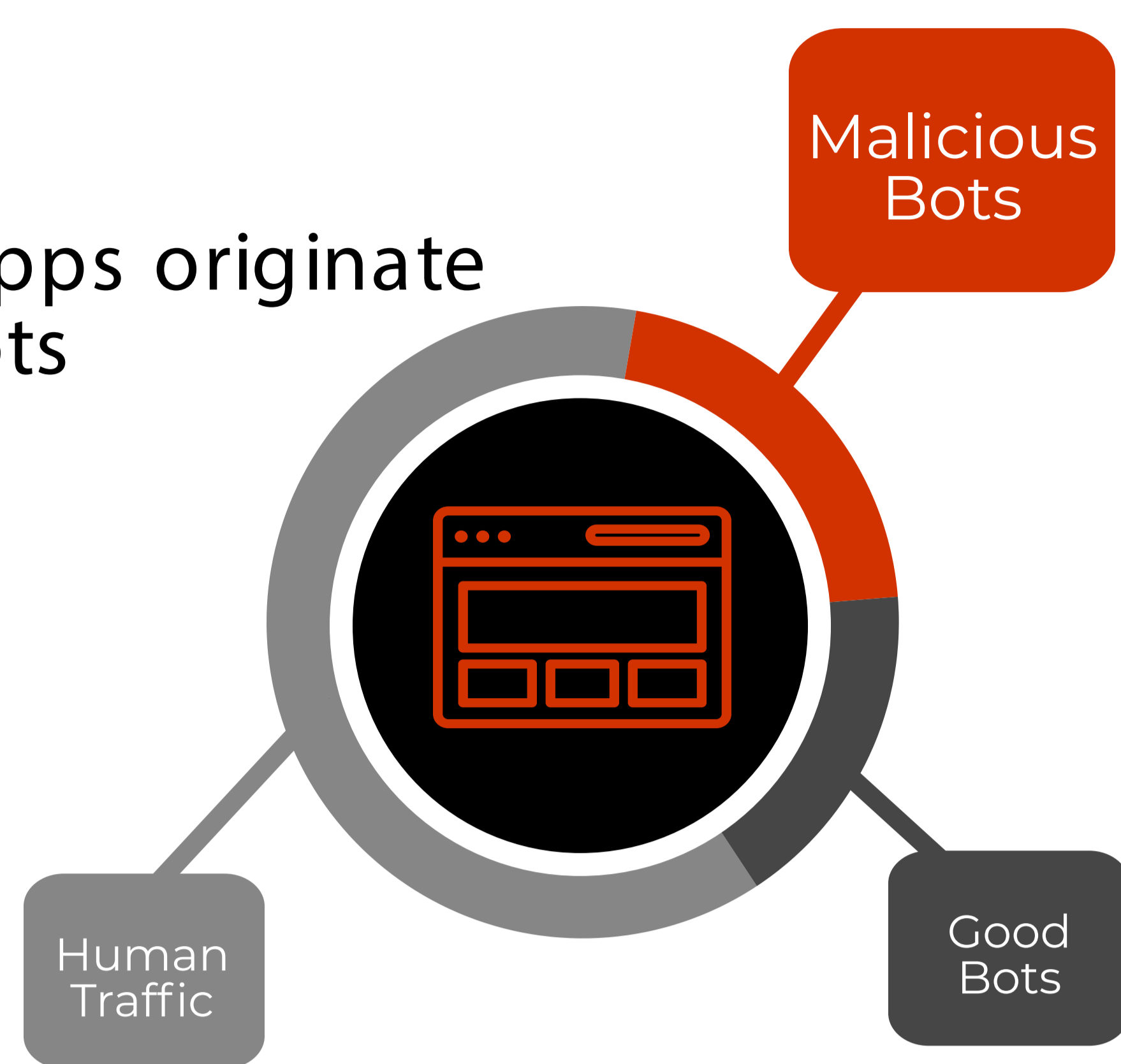
**20%**

of traffic to web apps originate from malicious bots



Most common approaches to cyber attacks:

- stolen credentials
- brute force attacks
- web app attacks
- automated



## Malicious Automation Key Facts

### Top Targets

- Healthcare institutions that store PII
- Retail, hospitality, and financial services organizations with credit card/ bank information
- Social media and review sites where public opinion can be swayed

### Characteristics

- Operate at the App Layer
- Abuse App Functionality Intended for Valid Users
- Coordinate Large Numbers of Attacking Nodes from Different IPs
- Often Invisible to Traditional WAFs

## Top 4 Malicious Automations

**1**

**Distributed Password Attack**



**What:** Bots attempt to break into an account by running a series of username and password combinations. Detection is often avoided through use of various hosts and points of presence.

**Why:** To access high-value information, such as personal information (PII).

**What:** Password combinations, typically acquired from a previous data breach, are plugged into registration or sign-in forms until a valid credential is found.

**Why:** To break into a targeted website, identify valid credentials to sell, steal or use to make a purchase.

**2**

**Credential Stuffing**

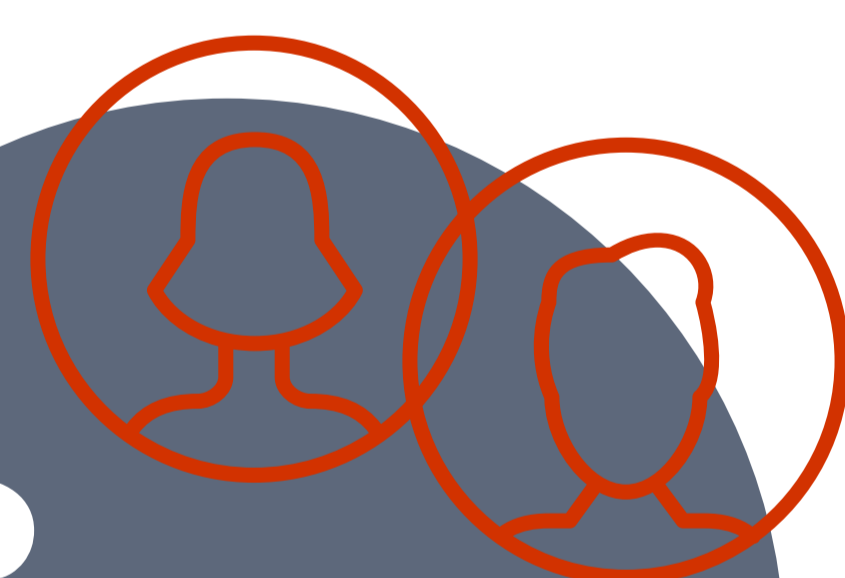


**What:** Automated generation of numerous fake accounts that appear to be legitimate.

**Why:** Tying up retail inventory in online shopping carts or voting fraud, for example.

**3**

**Fake Account Creation**



**What:** Hackers use credit card numbers or gift card IDs acquired on the dark web to attempt automated and fraudulent purchases across numerous sites. Purchases are small and often go unnoticed.

**Why:** To validate the credit card and gift card IDs and resell the information back on the dark web.

**4**

**Carding**



## Best Practices for Blocking Malicious Bots



**2,880**

Average # of minutes to detect a bot\*

- Add MFA to admin and customer interfaces.
- Automatically detect abnormal login failures.
- Monitor aggregate login behavior for all apps.
- Add behavioral profiling to important workflows.
- Add anonymizers as a risk factor when analyzing connections.

Annual spend on bot management personnel\*

**\$177K**

Based on a 2018 study by Osterman