Jak efektivně zabezpečit webové aplikace

Michal Zalewski
Sales Engineer, Barracuda
mzalewski@barracuda.com

Petr Konečný
Senior Account Manager, COMGUARD
petr.koneny@comguard.cz

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Your journey, secured.

Agenda

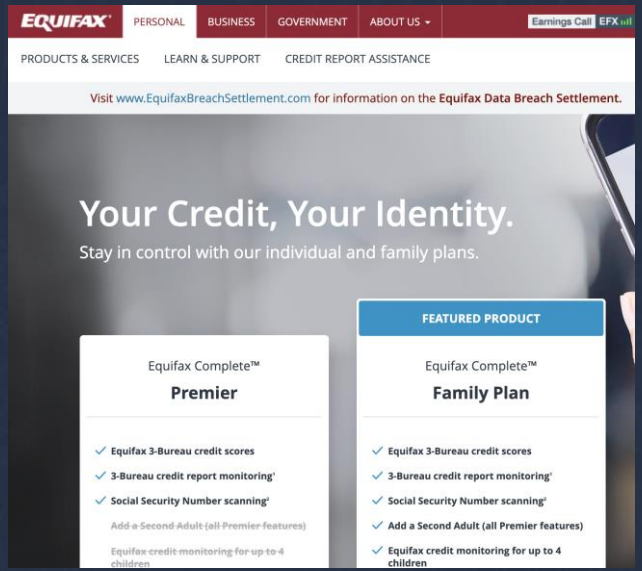
- Proč je ochrana webových aplikací tak důležitá
- Jaké jsou specifické požadavky na moderní zabezpečení
- Co by měla moderní WAF poskytovat

Počet webových aplikací neustále roste

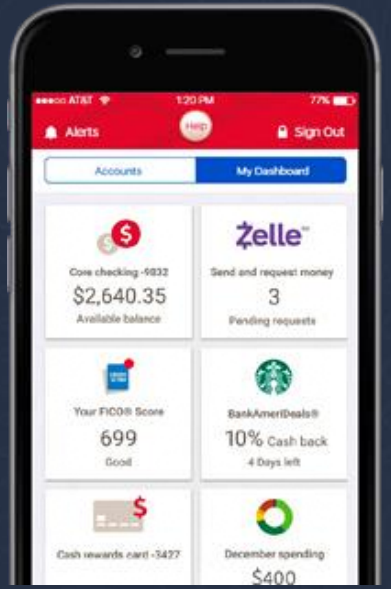
2017

2023

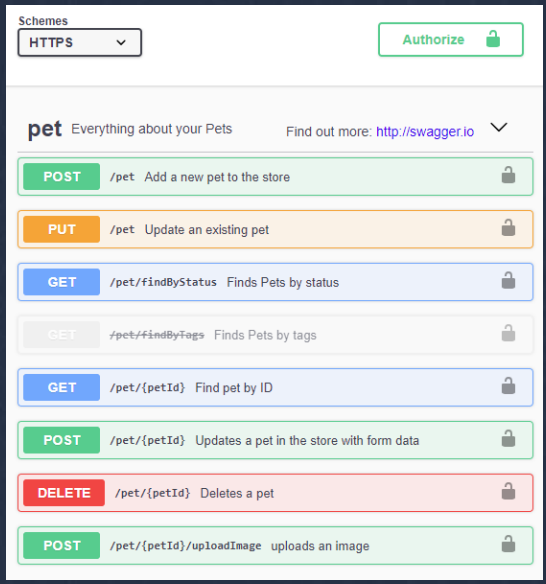
Téměř vše je webová aplikace



Webová stránka



Mobilní aplikace



App Interface (API)

Ztráta dat: nejčastěji ve spojitosti s web. aplikací

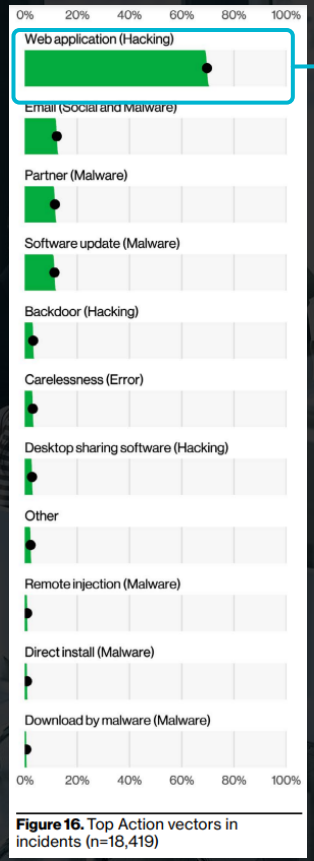


Figure 16. Top Action vectors in incidents (n=18,419)

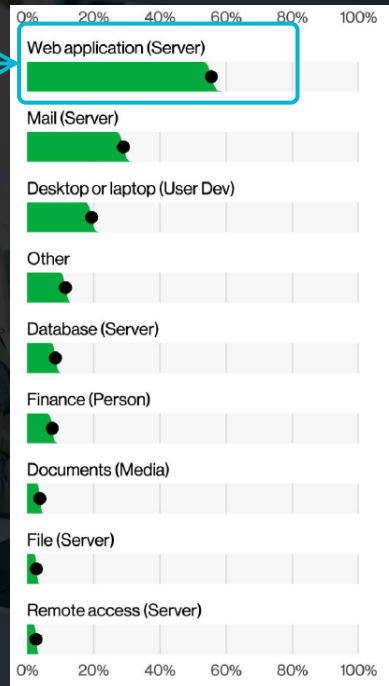
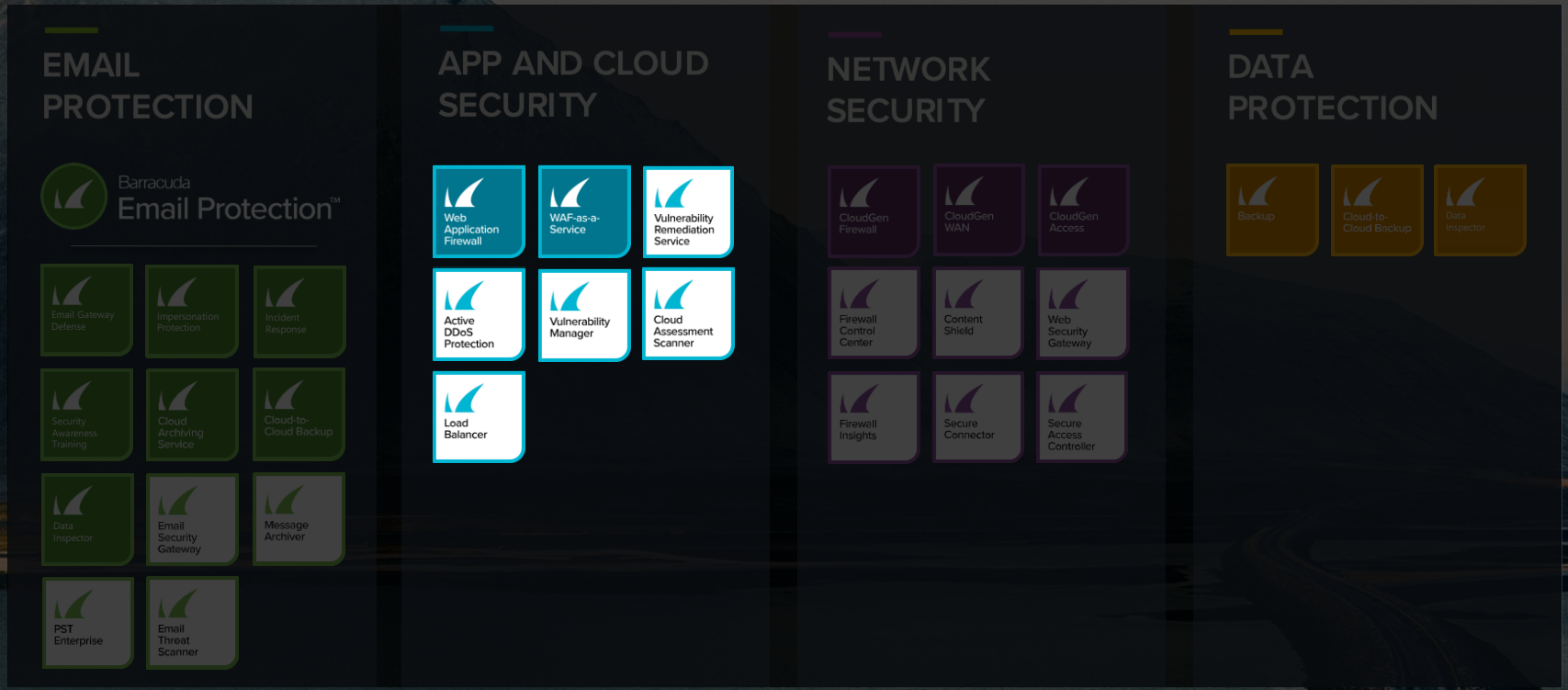


Figure 24. Top Asset varieties in breaches (n=2,796)

Source: Verizon, 2022 Data Breach Investigation Report

Web Application Protection – portfolio Barracuda



WAF: *hardwarová nebo virtuální appliance*

WAF-as-a-Service: *rychlé nasazení, jednoduchá správa*

Fyzické zařízení

Virtuální appliance

Podporuje:

- VMware
- Hyper-V
- KVM

Virtuální appliance

Podporuje:

- Azure
- AWS
- Google Cloud

WAF-as-a-Service

Why WAF-as-a-Service?

Existing Solutions are Ineffective…

WAF appliances are hard to deploy and manage

Customers lack sufficient AppSec skillsets / resources

SaaS solutions lack advanced functions

Add-on solutions (e.g. DDoS and bot protection are not integrated)

Barracuda WAF-as-a-Service

Enterprise-proven application security delivered in minutes

Built on the same proven technology

Simple **3-step** setup wizard adds protection in minutes

Intuitive component-based structure for fine-tuning policies

Fully featured REST API

Unmetered DDoS protection included

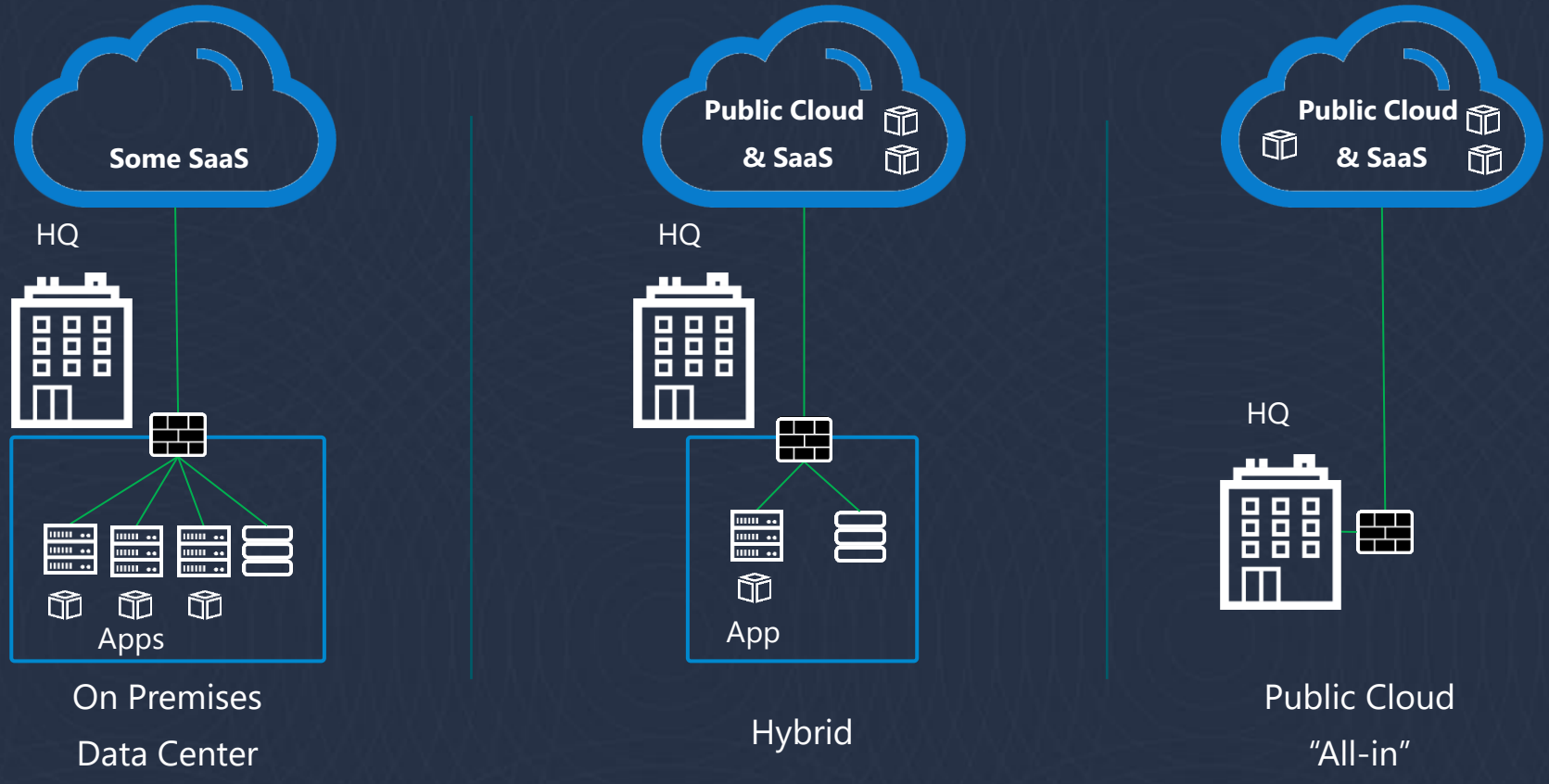
Automated vulnerability identification and remediation

WAF-as-a-Service Architecture

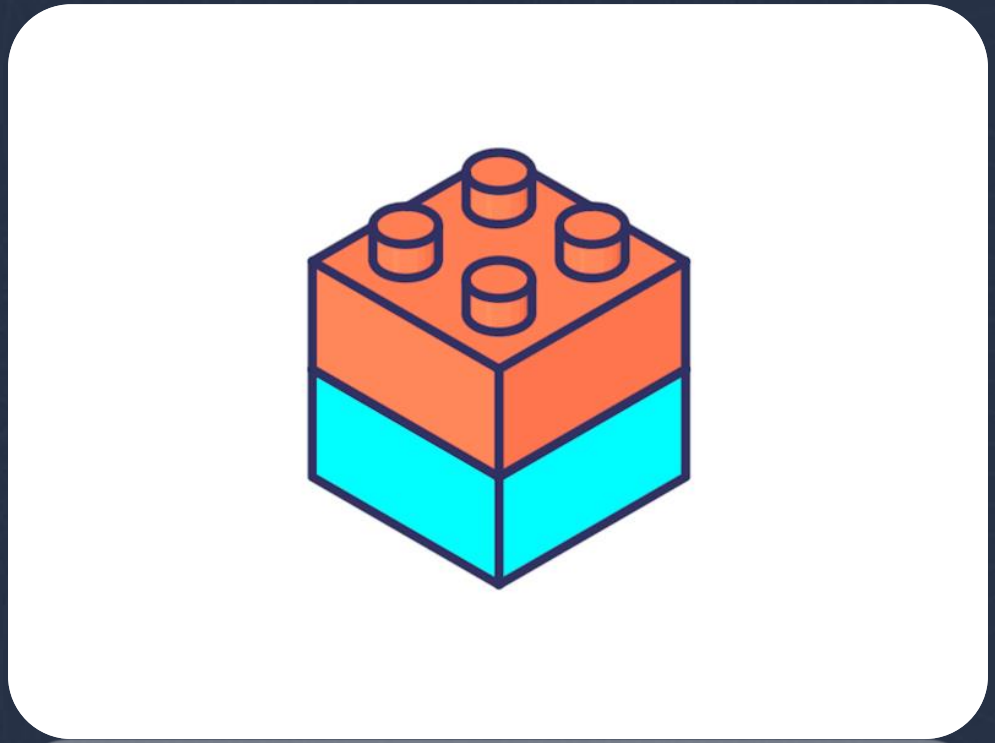
How it works


User
(Browser)
Perimeter
Firewall
App Servers
A: www.securedapp.com
CNAME: app123456.prod.cudawaas.com
WAF
Barracuda
WAF-as-a-Service
Barracuda Cloud Scrubbing Centers
(Multiple Global Locations)

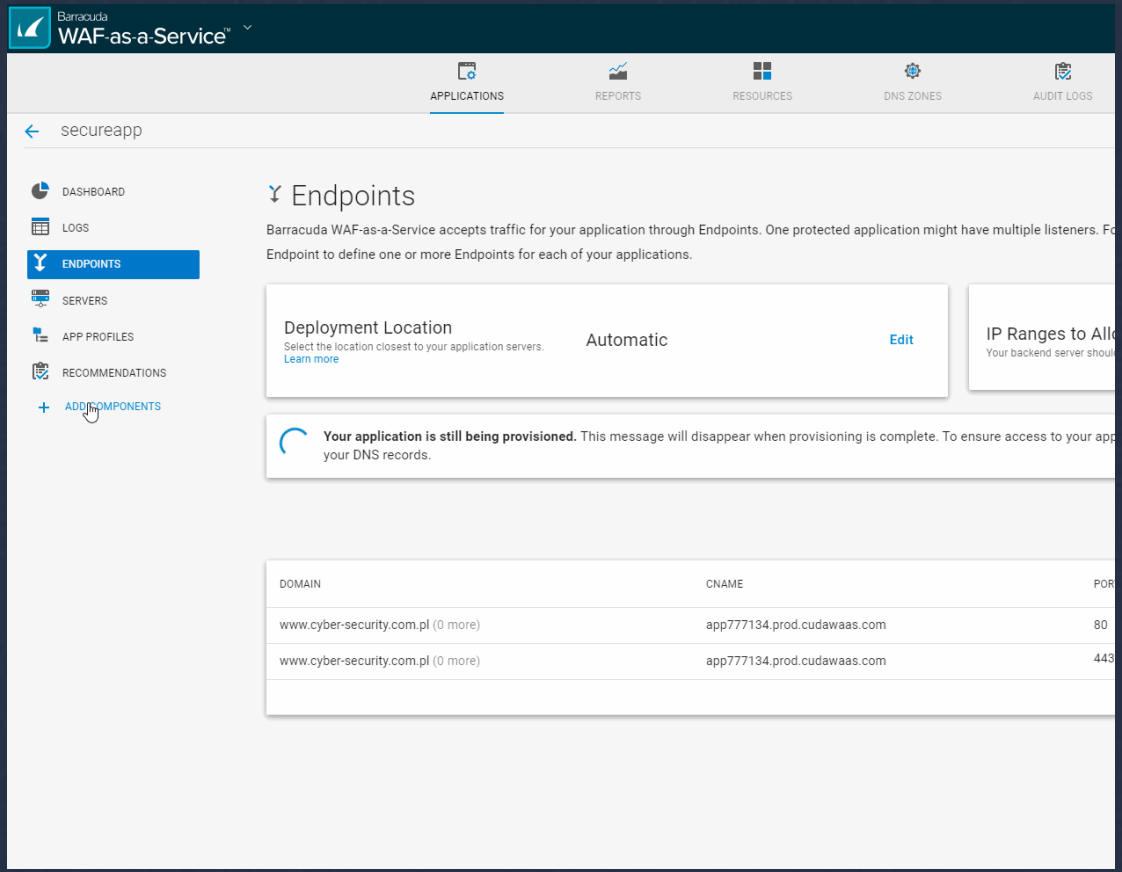
Protects your apps hosted everywhere



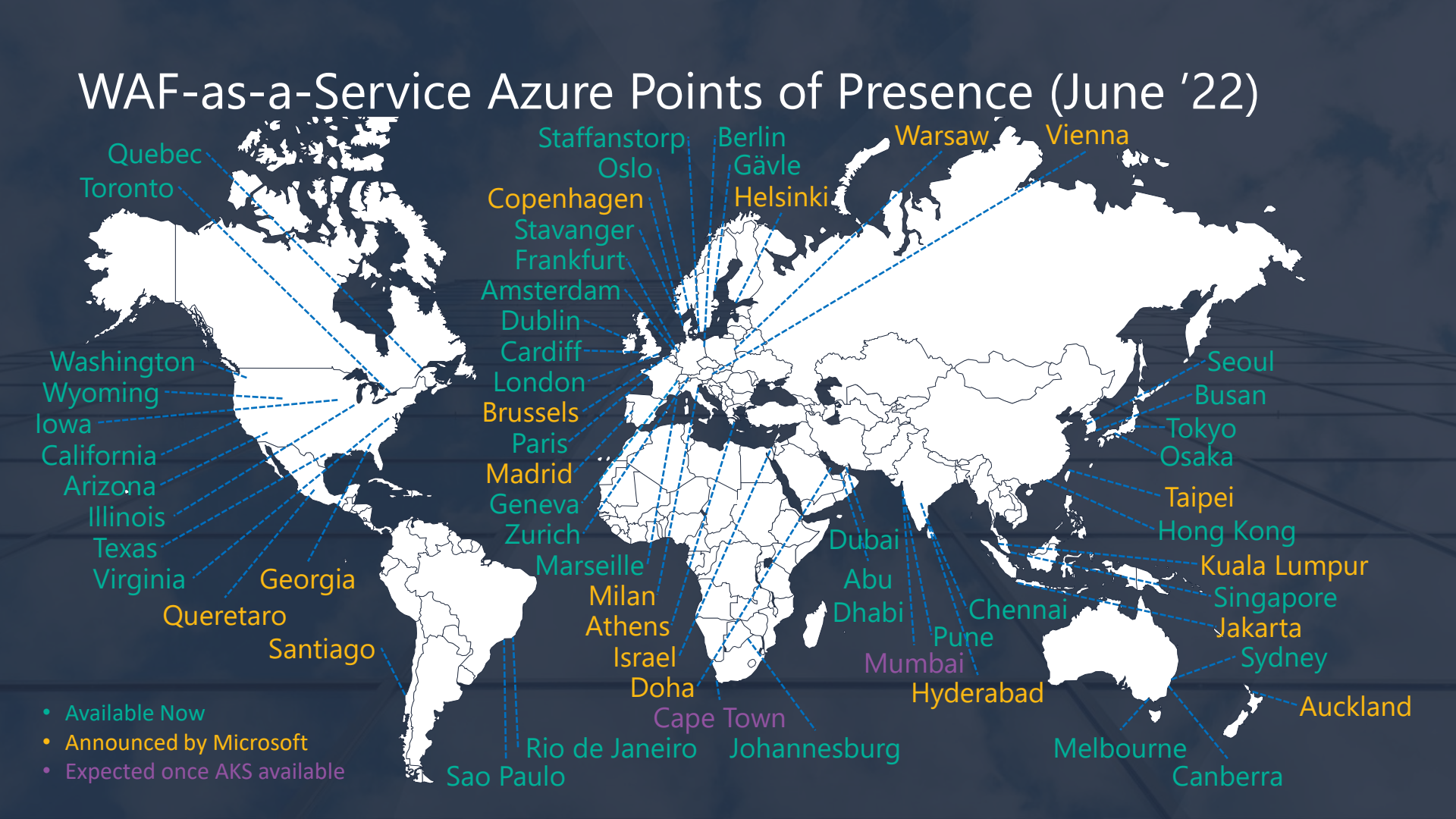
WAF-as-a-Service Components



WAF-as-a-Service Components



WAF-as-a-Service Azure Points of Presence (June ’22)



- Available Now
- Announced by Microsoft
- Expected once AKS available

API Protection

API Discovery

- Identifying and securing APIs is a massive problem
- Old API endpoints that are left unsecured can be very risky
- Configuring API Security can be complex
  - Most API Gateways offer limited security capabilities
  - Lack of knowledge and complexity in setting up security is a barrier
- First Steps to removing this complexity
  - API Discovery using configuration files
    - XML Schema validation / WS-I Security Validation
    - OpenAPI metadata file import for JSON Based API Validation

API Protection

1. DDoS Prevention
2. Bot Mitigation, IP Reputation, Rate Controlling
3. SSL/TLS Security
4. API Message Security
5. Protocol Security
6. Access Control

Inbound Inspection

Outbound Inspection

API Server

7. Cloaking
8. Data Theft Prevention

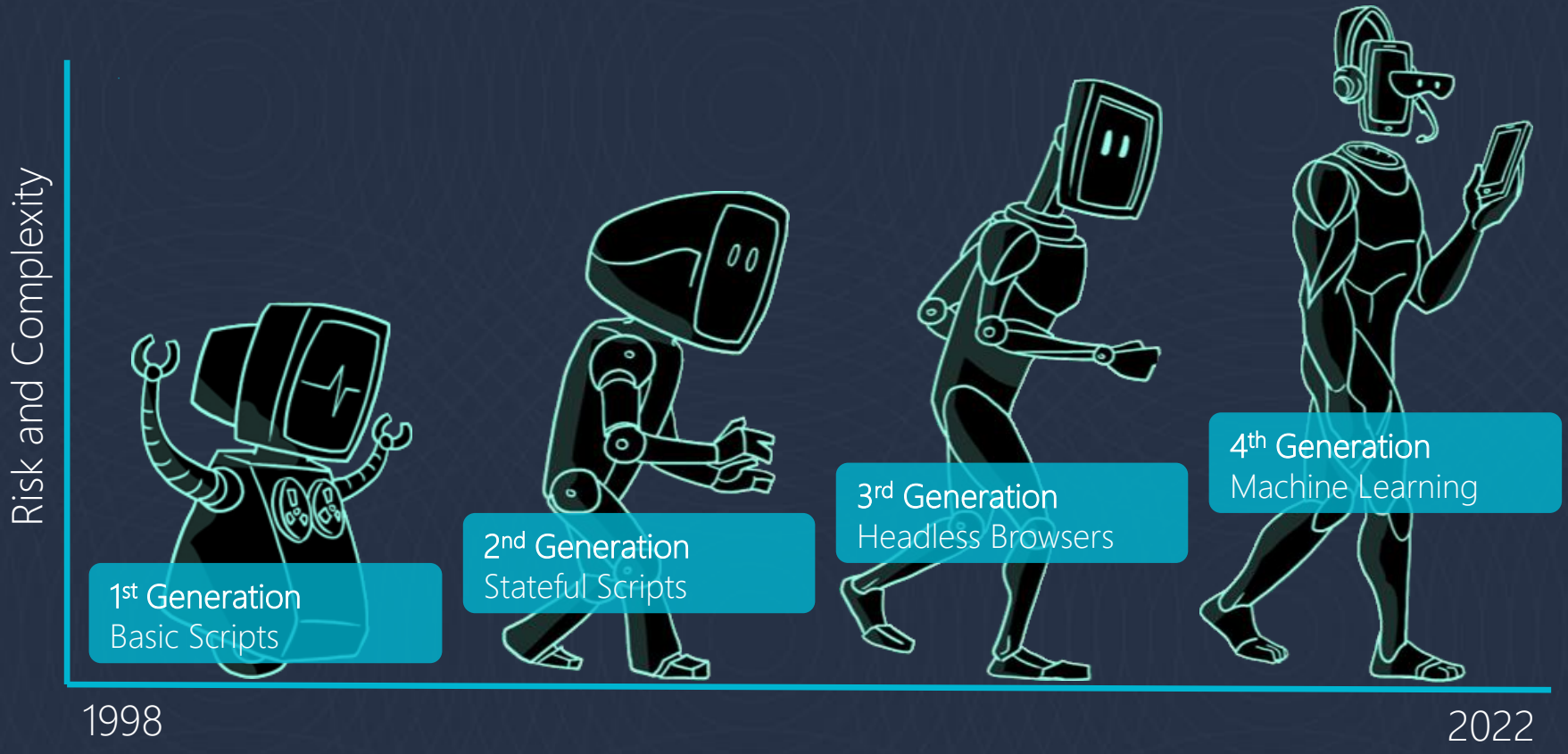
Advanced Bot Protection & Active DDoS Prevention

Bad bots – why?

Bad bots are the #1 contributing factor to application compromise

Source: "The state of application security in 2021", Barracuda Networks
https://www.barracuda.com/appsec-report-2021

Bots are becoming more sophisticated



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Threat Intelligence Service™

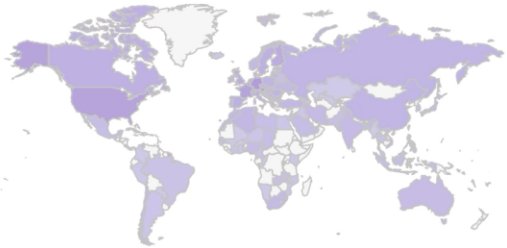
Web Application Firewall [1556467] | SIGN OUT

Adv Bot Protection | Client Side Protection

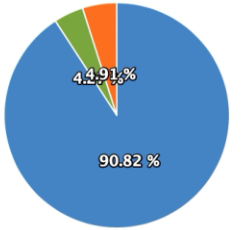
Last 24 Hours

Origins

ALL TRAFFIC | GOOD BOTS | BAD BOTS



Humans vs Bots



Human
Bad Bots
Good Bots

Requests

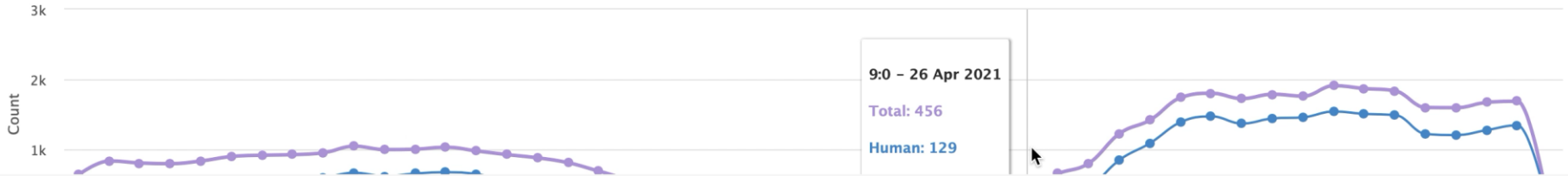
Requests

2,339,215

Attacks

114,876

Clients



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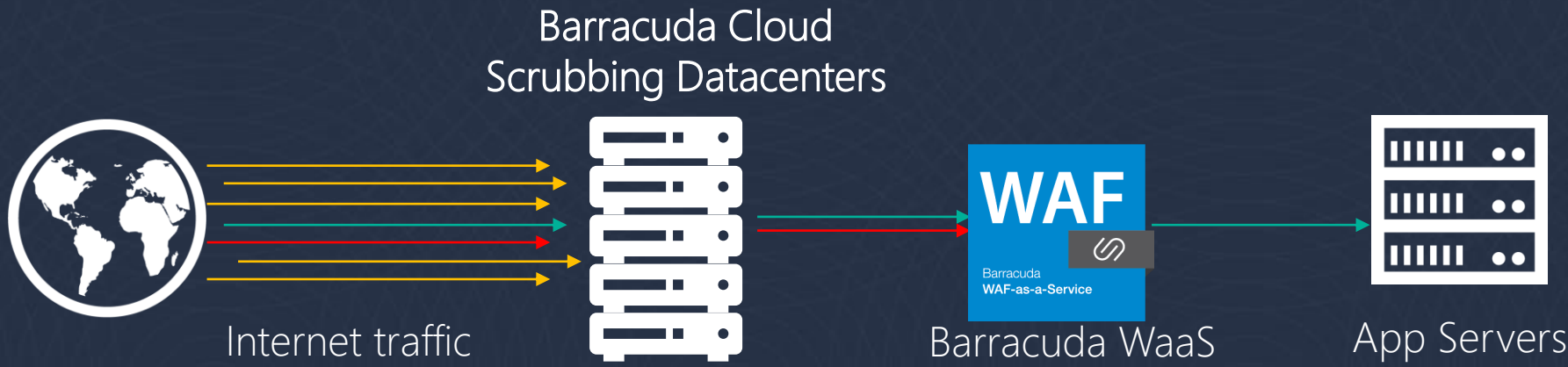
Why is DDoS protection important?

How ADP works

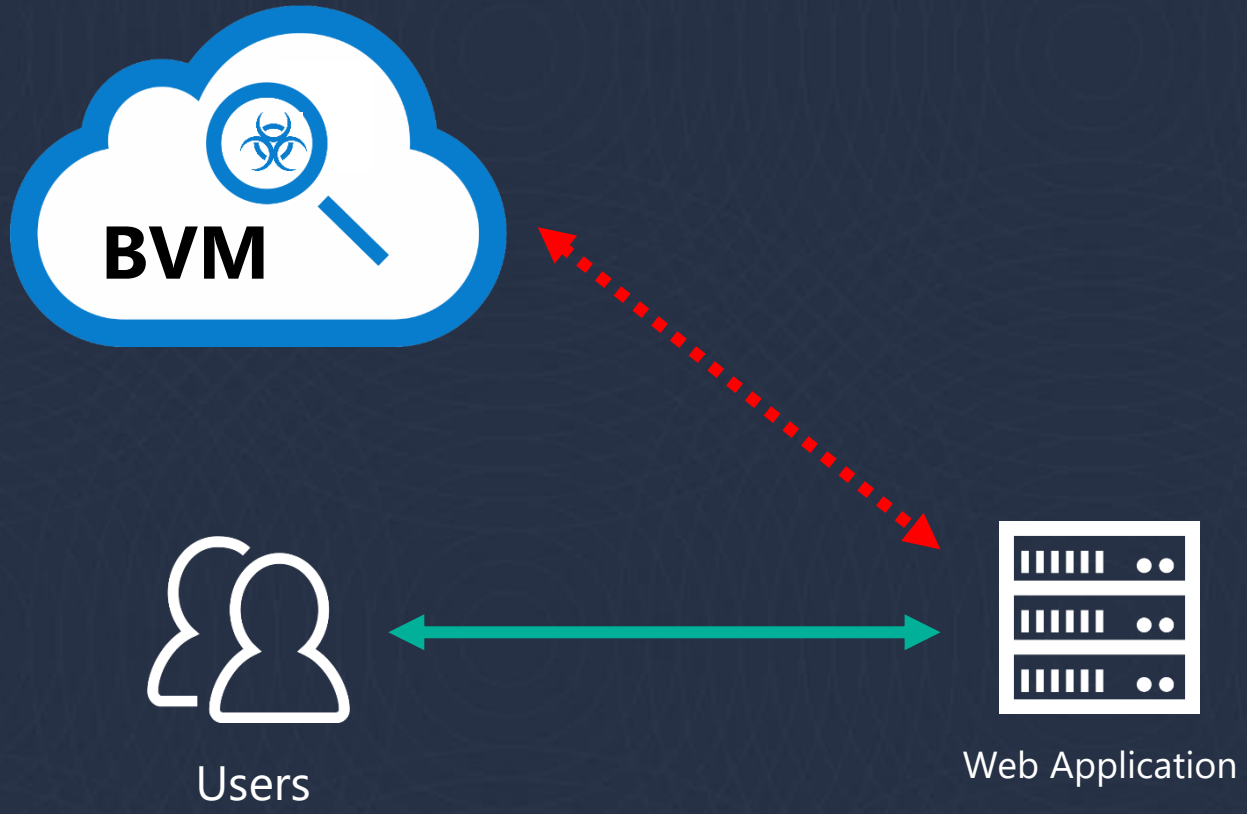
Always integrated with WaaS



Next steps…

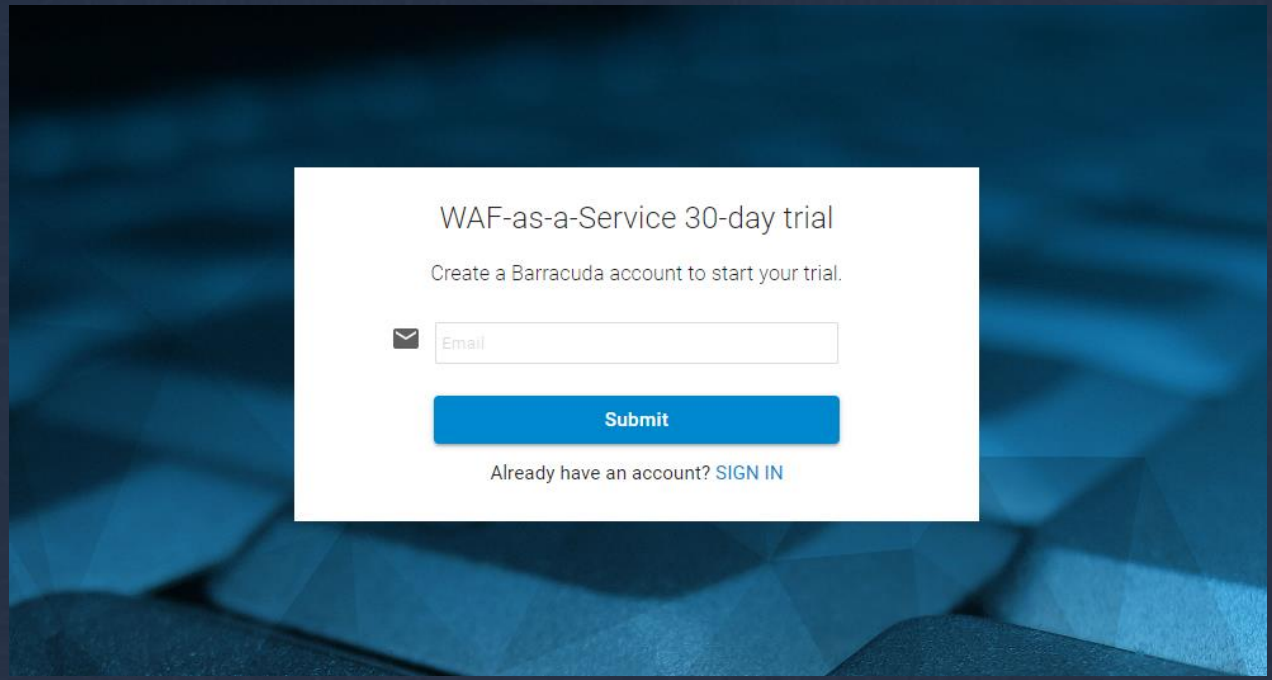
Run a free scan of your application:

https://bvm.barracuda.com/



Sign up for a free trial of WAF-as-a-Service:

https://waas.barracudanetworks.com/start-trial/




Thank you!
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Your journey, secured.