

Web Application Firewall Service (Cloudflare)

Travis Penny – Web Security Success Specialist
Enterprise Applications – Digital Solutions

November 15, 2024

Service Features

- Web Application Firewall (WAF)
- Application-Layer(7) DDoS protection.
- Reverse proxy of public facing applications to obscure or eliminate exploitable attack vectors.
- Advanced Bot Management – Crawlers and Scrapers
- Turnstile – Captcha Replacement & Verification Tool
- Aegis – Dedicated IPs for secure ingress/egress traffic.
- SaaS user dashboard to manage applications and security posture at a granular level.

Service Features Continued

- Managed/Authoritative DNS – Primary and Secondary DNS
- Dedicated Technical Account Manager (TAM) Support
- 24/7 Emergency enterprise support – Call/Chat
- Renewal agreement secured to provide “Whole-of-State” service model to NC.
- State agencies, city and local gov, higher education and community colleges may utilize WAF service through NCDIT

Where NC stands with WAF service deployment

- **NC Wildlife (DNCR)** – Onboarded to Cloudflare, protecting apps .
- **NC Ports** – Onboarded to Cloudflare, protecting and testing.
- **Higher Education & Community Colleges** – Onboarded, protecting applications. Utilizing DNS and enterprise features.
- **City and Local Gov Agencies** – Strong interest in utilization of enterprise features offered through NCDIT-Cloudflare service agreement.
- Over 100 root domains being protected within Cloudflare, with 425 DNS records under those root domains spread across 22 agency accounts.

Value Proposition of WAF service

- Cloudflare Dashboard: real-time threat analysis and assessment of WAF solutions
- Managed WAF Rulesets: Robust "living" threat protection, enabled in seconds. OWASP Top 10
- Custom Rulesets: Extreme granularity in threat response:
 - Rate limiting
 - Geo-blocking
 - Exceptions for special cases, IP CIDR range allowlists/denylists
- Managed/Authoritative DNS – Easy migration and management of DNS to host and protect applications.
- Advanced Bot Management & Turnstile – Block or manage unwanted bots, scraping and crawling.
- What once took 2-4 teams across multiple agencies, emails, and headaches to block a threat, may now take 1 trained application owner to deploy in seconds, within Cloudflare.



Travis F Penny

Web Security Success Specialist

travis.penny@nc.gov