

Web Security Essentials

A vulnerable web application is often the first stage in a larger attack sequence

Web service has 3 main component:

- Application
- Web server
- Host machine

Protecting Application:

- Secure coding
- Input validation and sanitization to prevent injection
- Access control

Protecting web server:

- Logging
- Web Application Firewall (WAF)
- Content delivery Network (CDN)

Protecting the Host Machine:

- Least Privilege
- System Hardening
- Antivirus

Strong Authentication

Patch Management

Content Delivery Network (CDN)

CDNs store and serve cached content from servers closer to the user to reduce latency.

Also help in a security sense by acting as a buffer between the user and the origin server.

Security Benefits:

- IP Masking : Hides origin server IP
- DDoS protection
- Enforced HTTPS
- Integrated WAF

WAF

- inspect incoming HTTP traffic

WAF Feature

- Signature-Based Detection
- Heuristic-Based Detection: Analyzes the context and behavior of requests
- Anomaly and Behavioral Analysis: Flags deviations from normal traffic behavior
- Location and IP Reputation filtering