



# Risk Analysis

SkillsBridge

## Stranger Thinks

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## Nmap Risks

| Ports   | Services | Details                                     | Risk Level    |
|---------|----------|---|---------------|
| 80/tcp  | HTTP     | Vercel Proxy, Redirects to HTTPS            | Low           |
| 443/tcp | HTTPS    | TLS/SSL configured, but missing HSTS header | High          |
| 443/tcp | HTTPS    | No stored XSS vulnerabilities detected      | Informational |
| 443/tcp | HTTPS    | No SQL injection vulnerabilities detected   | Informational |
| 443/tcp | HTTPS    | DoS risk - Slow HTTP attacks                | Medium        |
| 443/tcp | HTTPS    | Missing X-Frame-Options                     | High          |
| 443/tcp | HTTPS    | SSL/TLS Grade A (strong ciphers)            | Informational |

## Nmap Mitigation

- Configure Strict-Transport-Security (HSTS) header with max-age=31536000 to prevent protocol downgrade attacks.
- Add X-Frame-Options: DENY to prevent clickjacking.
- Implement Content-Security-Policy to restrict resource loading.
- Configure X-Content-Type-Options: nosniff to prevent MIME-sniffing.
- Configure connection/request timeouts to limit incomplete requests.
- Apply rate limiting and restrict max concurrent connections per IP.
- Disable older TLS versions if not required (keep TLS 1.2 and 1.3 only).
- Review and remove weak cipher suites.
- Enable OCSP stapling for certificate validation.

## Nikto Risks

| Findings                              | Details   | Risk Level |
|---------------------------------------|---|------------|
| Missing HSTS Header                   | Man-in-the-middle and protocol downgrade attacks possible   | High       |
| Missing X-Frame-Options               | Clickjacking possible                                       | High       |
| Missing X-Content-Type-Options        | Misinterpretation risk                                      | Medium     |
| Private IP Address Disclosure         | Attackers gain insight into backend/internal infrastructure | Medium     |
| Vercel Headers Information Disclosure | Reveals internal IDs/tokens useful for reconnaissance       | Medium     |

|   |   |        |
|---|---|--------|
|   | and infrastructure fingerprinting   |        |
| Archive.zip File Accessible                     | Source code or sensitive data leakage risk  | Medium |
| Error Message Disclosure (DEPLOYMENT_NOT_FOUND) | Error messages and misconfigured redirects expose environment details (DEPLOYMENT_NOT_FOUND errors visible) | Medium |
| Uncommon Header 'refresh'                       | May expose redirect URLs or application logic to attackers  | Low    |
| Uncommon Header 'x-vercel-error'                | Error messages expose deployment details and environment information  | Low    |
| Wildcard SSL Certificate                        | Increased attack surface if one subdomain is compromised  | Low    |
| Cache-Control Suboptimal                        | May impact performance but secure   | Low    |

## Nikto Mitigation

- Add X-Frame-Options: DENY or SAMEORIGIN to block clickjacking attacks.
- Configure X-Content-Type-Options: nosniff to prevent MIME sniffing.
- Implement Strict-Transport-Security: max-age=31536000; includeSubDomains; preload to enforce HTTPS.
- Add Content-Security-Policy: default-src 'self'; script-src 'self' to restrict resource loading.
- Remove or sanitize unnecessary Vercel-specific headers (x-vercel-id, x-vercel-cache, x-vercel-challenge-token, x-vercel-mitigated) from production responses.
- Suppress exposure of internal/private IP addresses in HTTP headers.
- Configure custom error pages to hide deployment and environment details.
- Remove or restrict access to archive files (archive.zip) and backup files
- Use reverse proxy to filter and strip internal headers before reaching clients.
- Implement header filtering rules in Vercel configuration or CDN layer.
- Review wildcard certificate usage and consider dedicated certificates for sensitive applications.

## Burpsuite Risks

| Findings                      | Details   | Risk Level    |
|-------------------------------|---|---------------|
| SQL Injection Vulnerabilities | Database protected from unauthorized access       | Informational |
| Input Property                | No malicious code execution possible              | Informational |
| WAF Protection                | Network-level defense operational                 | Informational |
| Error Handling                | No SQL errors or stack traces leaked to attackers | Informational |

|                |                                      |               |
|----------------|--------------------------------------|---------------|
| Queries In Use | Single quotes handled without errors | Informational |
|----------------|--------------------------------------|---------------|

## **Burpsuite Mitigation**

Continue regular security testing

Monitor WAF logs for attack patterns and adjust rules as needed.

Keep application frameworks and dependencies updated.

Conduct code reviews focusing on database query construction.

Implement security logging and alerting for suspicious activity.