ThreatCanvas

by SecureFlag

My Threat Model

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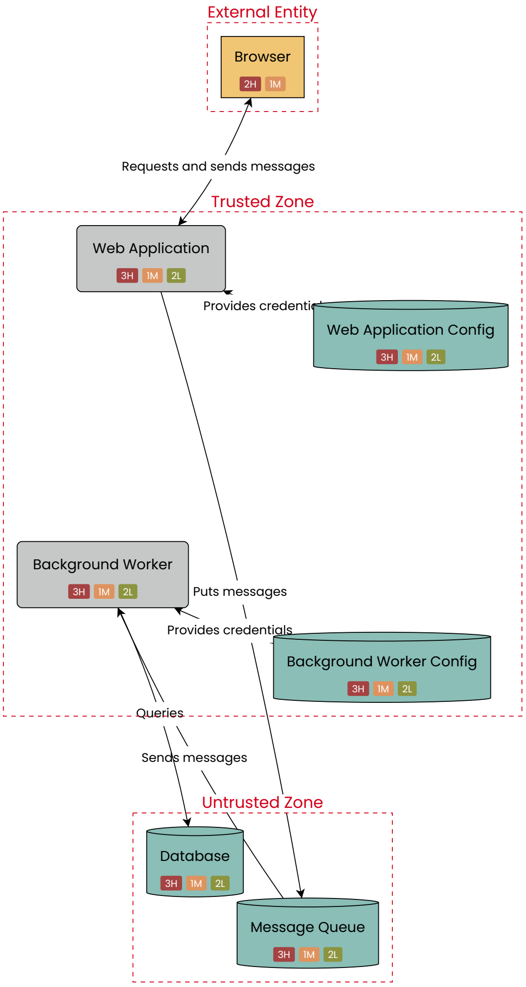
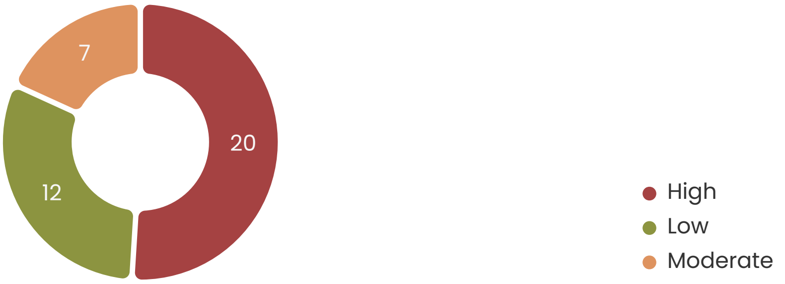
Diagram



Risk modifiers

Project type	Application

Open risks



Threat	Node	Risk rating
Elevation of Privilege	Background Worker	High
Spoofing	Background Worker	High
Tampering	Background Worker	High
Elevation of Privilege	Background Worker Config	High
Spoofing	Background Worker Config	High
Tampering	Background Worker Config	High
Spoofing	Browser	High
Tampering	Browser	High
Elevation of Privilege	Database	High
Spoofing	Database	High
Tampering	Database	High
Elevation of Privilege	Message Queue	High
Spoofing	Message Queue	High
Tampering	Message Queue	High
Elevation of Privilege	Web Application	High
Spoofing	Web Application	High
Tampering	Web Application	High
Elevation of Privilege	Web Application Config	High
Spoofing	Web Application Config	High
Tampering	Web Application Config	High
Denial of Service	Background Worker	Moderate
Denial of Service	Background Worker Config	Moderate
Denial of Service	Browser	Moderate

Threat	Node	Risk rating
Denial of Service	Database	Moderate
Denial of Service	Message Queue	Moderate
Denial of Service	Web Application	Moderate
Denial of Service	Web Application Config	Moderate
Information Disclosure	Background Worker	Low
Repudiation	Background Worker	Low
Information Disclosure	Background Worker Config	Low
Repudiation	Background Worker Config	Low
Information Disclosure	Database	Low
Repudiation	Database	Low
Information Disclosure	Message Queue	Low
Repudiation	Message Queue	Low
Information Disclosure	Web Application	Low
Repudiation	Web Application	Low
Information Disclosure	Web Application Config	Low
Repudiation	Web Application Config	Low

Node analysis

Browser

Component	Generic Entity
Trust boundary	External Entity

Denial of Service

Risk rating	Moderate
Status	Open

Firewall

Implemented	No

Mitigate Automated Attacks

Implemented	No

Spoofing

Risk rating	High
Status	Open

Enforce Authorization

Implemented	No

Secure Connections with Strong Encryption

Implemented	No

Tampering

Risk rating	High
Status	Open

Encrypt Sensitive Information

Implemented	No

Input Sanitization

Implemented	No

Input Validation

Implemented	No

Secure Connections with Strong Encryption	
Implemented	No

Web Application

Component	Generic Process
Trust boundary	Trusted Zone

Denial of Service

Risk rating	Moderate
Status	Open

Firewall

Implemented	No

Mitigate Automated Attacks

Implemented	No

Elevation of Privilege

Risk rating	High
Status	Open

Apply Least Privilege

Implemented	No

Enforce Authorization

Implemented	No

Information Disclosure

Risk rating	Low
Status	Open

Encrypt Sensitive Information

Implemented	No

Redact Sensitive Data

Implemented	No

Secret Management

Implemented	No

Secure Connections with Strong Encryption

Implemented	No

Repudiation

Risk rating	Low
Status	Open

Enforce Authentication

Implemented	No

Enforce Authorization

Implemented	No

Logging and Monitoring

Implemented	No

Spoofing

Risk rating	High
Status	Open

Enforce Authorization

Implemented	No

Secure Connections with Strong Encryption

Implemented	No

Tampering

Risk rating	High
Status	Open

Encrypt Sensitive Information

Implemented	No

Input Sanitization

Implemented	No

Input Validation	
Implemented	No

Secure Connections with Strong Encryption	
Implemented	No

Background Worker

Component	Generic Process
Trust boundary	Trusted Zone

Denial of Service

Risk rating	Moderate
Status	Open

Firewall

Implemented	No

Mitigate Automated Attacks

Implemented	No

Elevation of Privilege

Risk rating	High
Status	Open

Apply Least Privilege

Implemented	No

Enforce Authorization

Implemented	No

Information Disclosure

Risk rating	Low
Status	Open

Encrypt Sensitive Information

Implemented	No

Redact Sensitive Data

Implemented	No

Secret Management

Implemented	No

Secure Connections with Strong Encryption	
Implemented	No

Repudiation

Risk rating	Low
Status	Open

Enforce Authentication	
Implemented	No

Enforce Authorization	
Implemented	No

Logging and Monitoring	
Implemented	No

Spoofing

Risk rating	High
Status	Open

Enforce Authorization	
Implemented	No

Secure Connections with Strong Encryption	
Implemented	No

Tampering

Risk rating	High
Status	Open

Encrypt Sensitive Information	
Implemented	No

Input Sanitization	
Implemented	No

Input Validation	
Implemented	No

Secure Connections with Strong Encryption	
Implemented	No

Web Application Config

Component	Generic Data Store
Trust boundary	Trusted Zone

Denial of Service

Risk rating	Moderate
Status	Open

Firewall

Implemented	No

Mitigate Automated Attacks

Implemented	No

Elevation of Privilege

Risk rating	High
Status	Open

Apply Least Privilege

Implemented	No

Enforce Authorization

Implemented	No

Information Disclosure

Risk rating	Low
Status	Open

Encrypt Sensitive Information

Implemented	No

Redact Sensitive Data

Implemented	No

Secret Management

Implemented	No

Secure Connections with Strong Encryption

Implemented	No

Repudiation

Risk rating	Low
Status	Open

Enforce Authentication

Implemented	No

Enforce Authorization

Implemented	No

Logging and Monitoring

Implemented	No

Spoofing

Risk rating	High
Status	Open

Enforce Authorization

Implemented	No

Secure Connections with Strong Encryption

Implemented	No

Tampering

Risk rating	High
Status	Open

Encrypt Sensitive Information

Implemented	No

Input Sanitization

Implemented	No

Input Validation	
Implemented	No

Secure Connections with Strong Encryption	
Implemented	No

Background Worker Config

Component	Generic Data Store
Trust boundary	Trusted Zone

Denial of Service

Risk rating	Moderate
Status	Open

Firewall

Implemented	No

Mitigate Automated Attacks

Implemented	No

Elevation of Privilege

Risk rating	High
Status	Open

Apply Least Privilege

Implemented	No

Enforce Authorization

Implemented	No

Information Disclosure

Risk rating	Low
Status	Open

Encrypt Sensitive Information

Implemented	No

Redact Sensitive Data

Implemented	No

Secret Management

Implemented	No

Secure Connections with Strong Encryption

Implemented	No

Repudiation

Risk rating	Low
Status	Open

Enforce Authentication

Implemented	No

Enforce Authorization

Implemented	No

Logging and Monitoring

Implemented	No

Spoofing

Risk rating	High
Status	Open

Enforce Authorization

Implemented	No

Secure Connections with Strong Encryption

Implemented	No

Tampering

Risk rating	High
Status	Open

Encrypt Sensitive Information

Implemented	No

Input Sanitization

Implemented	No

Input Validation	
Implemented	No

Secure Connections with Strong Encryption	
Implemented	No

Message Queue

Component	Generic Data Store
Trust boundary	Untrusted Zone

Denial of Service

Risk rating	Moderate
Status	Open

Firewall

Implemented	No

Mitigate Automated Attacks

Implemented	No

Elevation of Privilege

Risk rating	High
Status	Open

Apply Least Privilege

Implemented	No

Enforce Authorization

Implemented	No

Information Disclosure

Risk rating	Low
Status	Open

Encrypt Sensitive Information

Implemented	No

Redact Sensitive Data

Implemented	No

Secret Management

Implemented	No

Secure Connections with Strong Encryption

Implemented	No

Repudiation

Risk rating	Low
Status	Open

Enforce Authentication

Implemented	No

Enforce Authorization

Implemented	No

Logging and Monitoring

Implemented	No

Spoofing

Risk rating	High
Status	Open

Enforce Authorization

Implemented	No

Secure Connections with Strong Encryption

Implemented	No

Tampering

Risk rating	High
Status	Open

Encrypt Sensitive Information

Implemented	No

Input Sanitization

Implemented	No

Input Validation	
Implemented	No

Secure Connections with Strong Encryption	
Implemented	No

Database

Component	Generic Data Store
Trust boundary	Untrusted Zone

Denial of Service

Risk rating	Moderate
Status	Open

Firewall

Implemented	No

Mitigate Automated Attacks

Implemented	No

Elevation of Privilege

Risk rating	High
Status	Open

Apply Least Privilege

Implemented	No

Enforce Authorization

Implemented	No

Information Disclosure

Risk rating	Low
Status	Open

Encrypt Sensitive Information

Implemented	No

Redact Sensitive Data

Implemented	No

Secret Management

Implemented	No

Secure Connections with Strong Encryption

Implemented	No

Repudiation

Risk rating	Low
Status	Open

Enforce Authentication

Implemented	No

Enforce Authorization

Implemented	No

Logging and Monitoring

Implemented	No

Spoofing

Risk rating	High
Status	Open

Enforce Authorization

Implemented	No

Secure Connections with Strong Encryption

Implemented	No

Tampering

Risk rating	High
Status	Open

Encrypt Sensitive Information

Implemented	No

Input Sanitization

Implemented	No

Input Validation	
Implemented	No

Secure Connections with Strong Encryption	
Implemented	No

Threat reference

Denial of Service

The node is susceptible to DoS attacks, which can render the node unavailable or unresponsive to legitimate users.

Elevation of Privilege

The node is vulnerable to elevation of privilege attacks, where an attacker gains higher- level permissions than intended.

Information Disclosure

The node leaks pieces of information, such as internal data or authentication material, which could be used to facilitate further attacks.

Repudiation

The node is prone to repudiation threats, where an attacker can deny their actions without the possibility of traceability.

Spoofing

The node is susceptible to identity spoofing, where an attacker may impersonate another user or entity.

Tampering

The node is vulnerable to data tampering, allowing unauthorized modification of data in transit or storage.

Control reference

Apply Least Privilege

Limit access privileges to those essential for performing the intended function.

Encrypt Sensitive Information

Ensure the sensitive information processed by the node is encrypted to comply with security and regulatory requirements.

Enforce Authentication

Enforce robust authentication mechanism to access the node's resources and functionalities, such as passwords, pre-shared tokens, or digital certificates.

Enforce Authorization

Ensure that the node uses strict access policies against unauthorized access.

Firewall

Use network appliances to filter ingress or egress traffic. Configure software on endpoints to filter network traffic.

Input Sanitization

Check untrusted input and remove anything that might be potentially dangerous.

Input Validation

Ensure that only properly formed data is entered into the system.

Logging and Monitoring

Keep detailed audit logs with timestamps for activities such as user logins, sensitive data access, access control changes, and administrative actions.

Mitigate Automated Attacks

Protect against automated attacks such as content scraping, password brute-force, or denial of service attacks.

Redact Sensitive Data

Redact, obfuscate, or tokenize sensitive information such as credit card numbers.

Secret Management

Securely encrypt, store, and manage access to secrets such as passwords, tokens, and encryption keys. This includes using centralized vaults, regular rotation, and auditing trails.

Secure Connections with Strong Encryption

Ensure that the node enforces network connections using protocols such as TLS or SSH, with approved versions and strong cipher suites to protect data in transit from exposure.