Application Security: To the future and beyond
OWASP LATAM TOUR 2014

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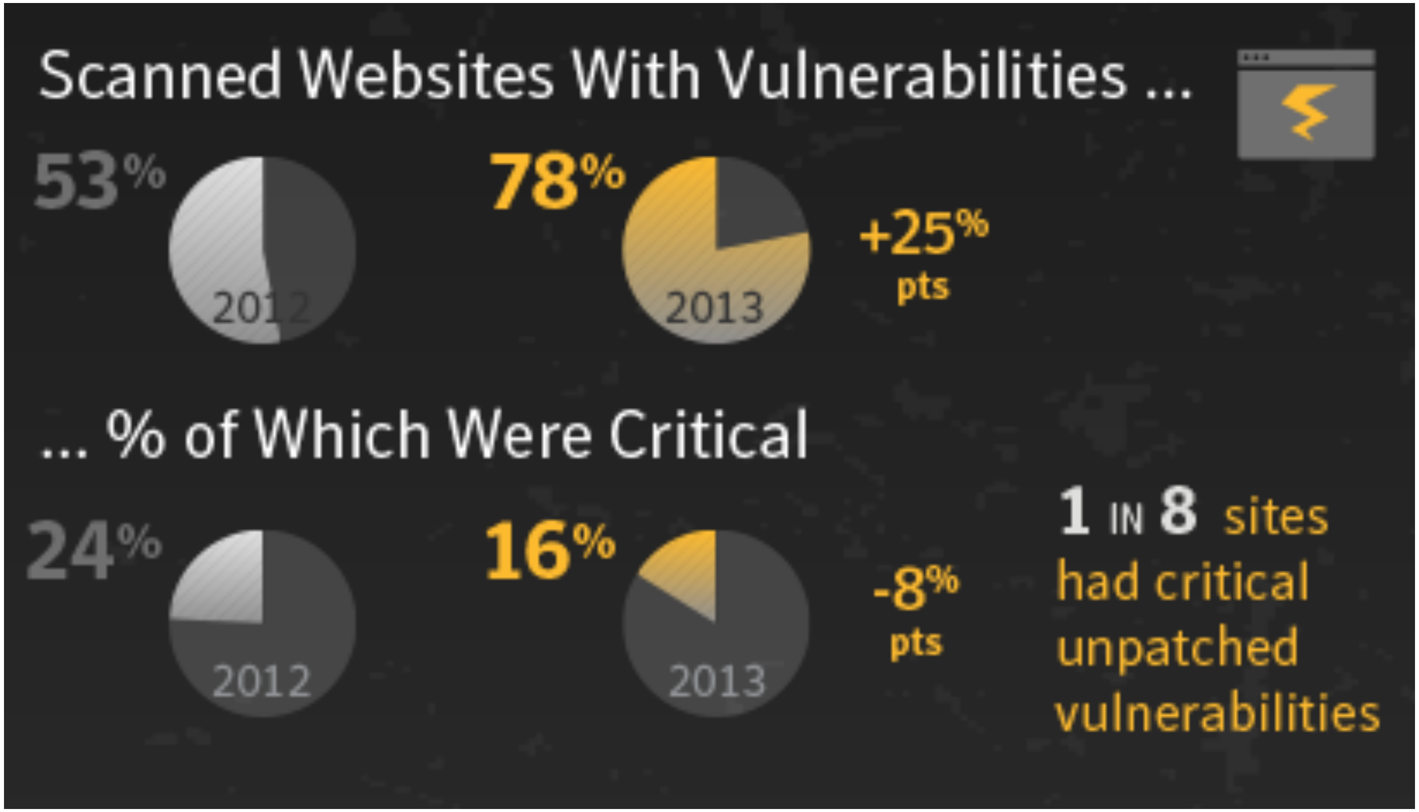
Software Threats



Scanned Websites With Vulnerabilities ...

... % of Which Were Critical

1 IN 8 sites had critical unpatched vulnerabilities

Software Threats

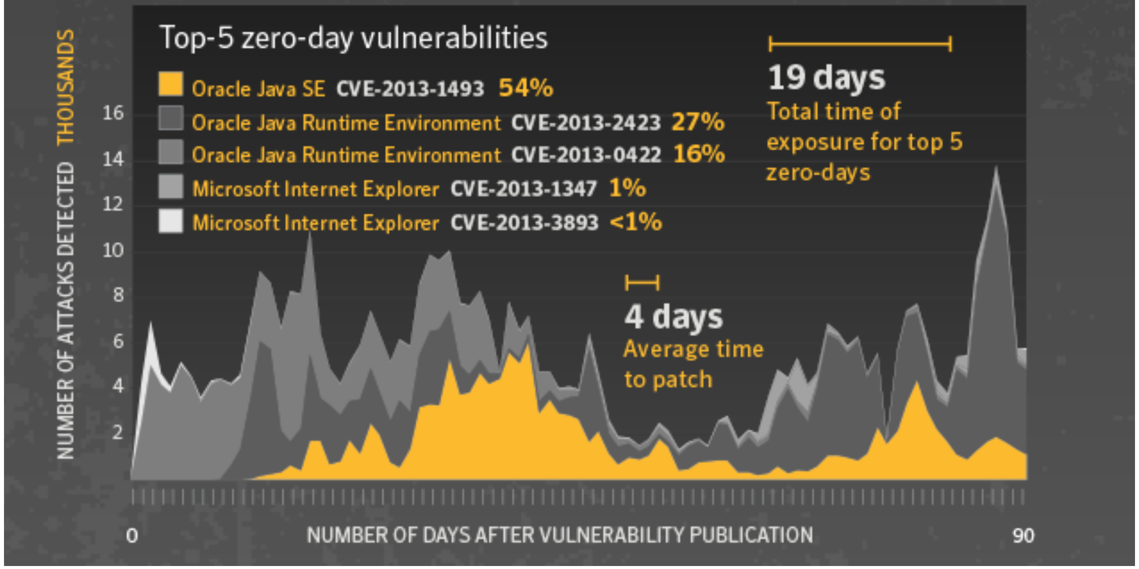
Zero-day Vulnerabilities

DAY 0

23 software vulnerabilities were zero-day,
5 of which were for Java

97% of attacks using exploits for vulnerabilities identified as zero-day were Java-based

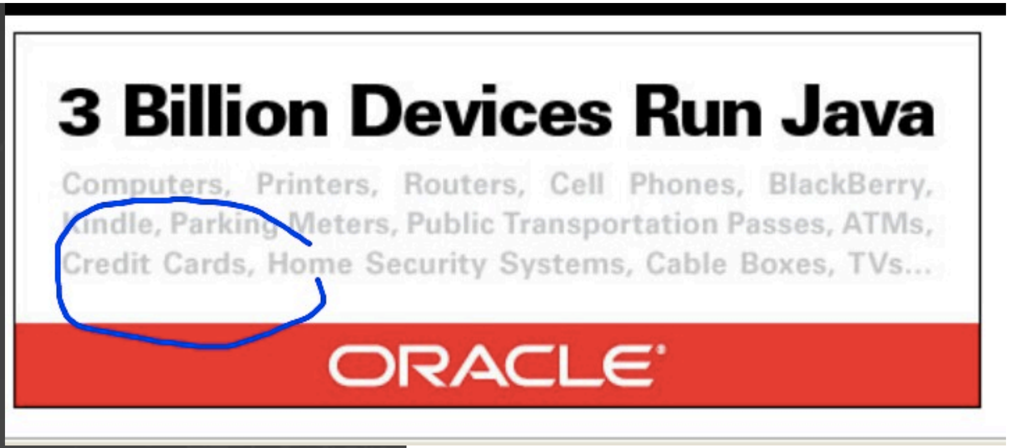
14 2012 **+64%** **23** 2013



Top-5 zero-day vulnerabilities

19 days Total time of exposure for top 5 zero-days

4 days Average time to patch



3 Billion Devices Run Java

Computers, Printers, Routers, Cell Phones, BlackBerry, Kindle, Parking Meters, Public Transportation Passes, ATMs, Credit Cards, Home Security Systems, Cable Boxes, TVs...

ORACLE

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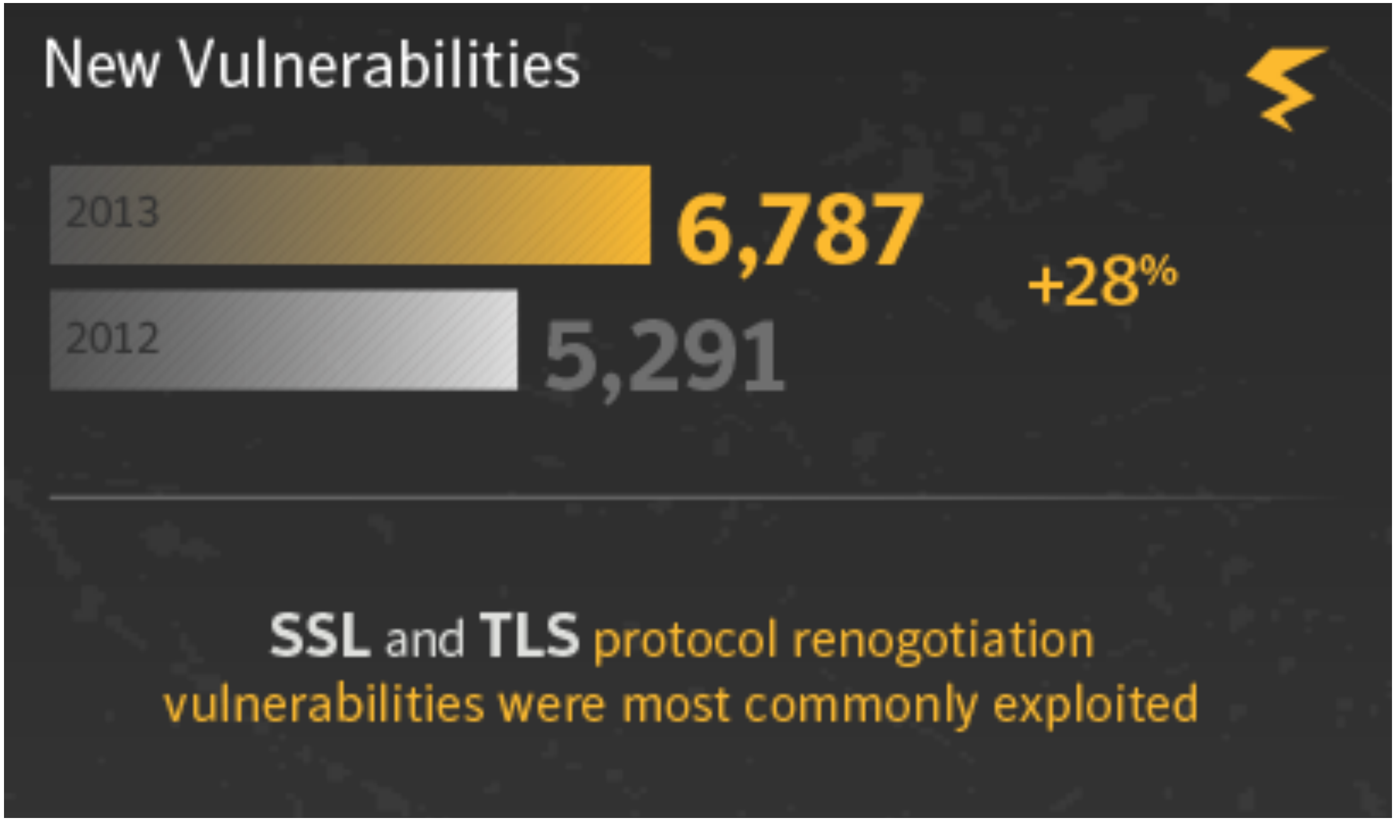
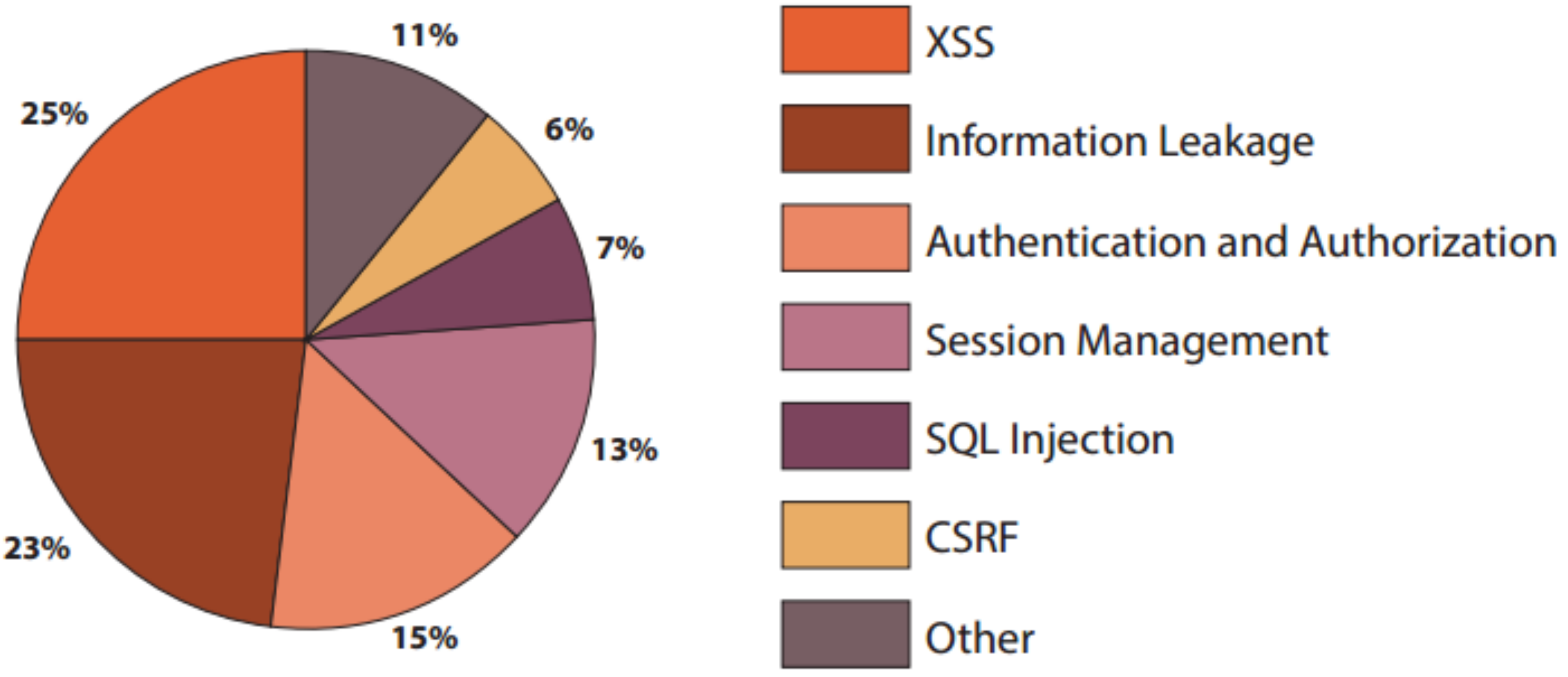
Software Threats



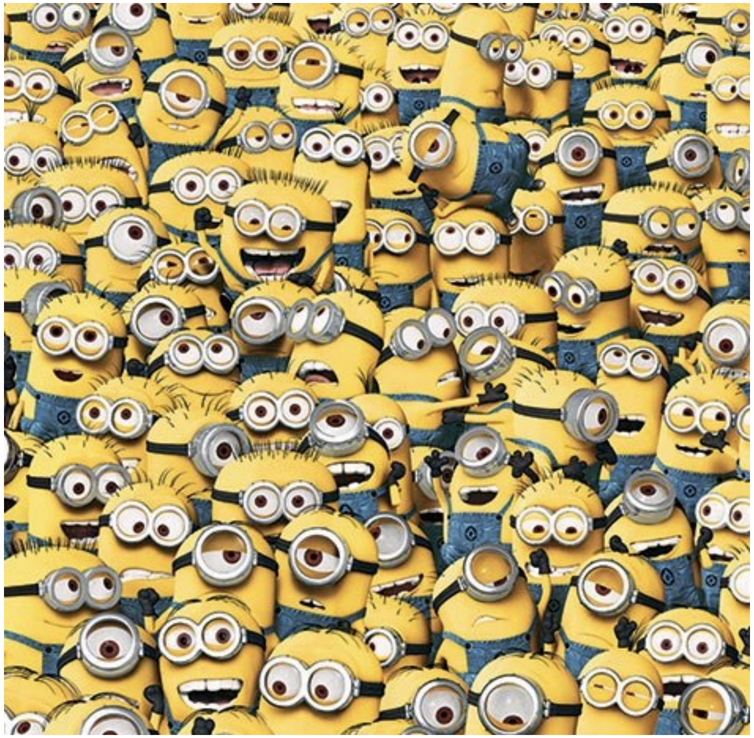
SSL and TLS protocol renogotiation vulnerabilities were most commonly exploited

KEEP
CALM
AND
goto fail;

Web Application Threats



Web Application Threats

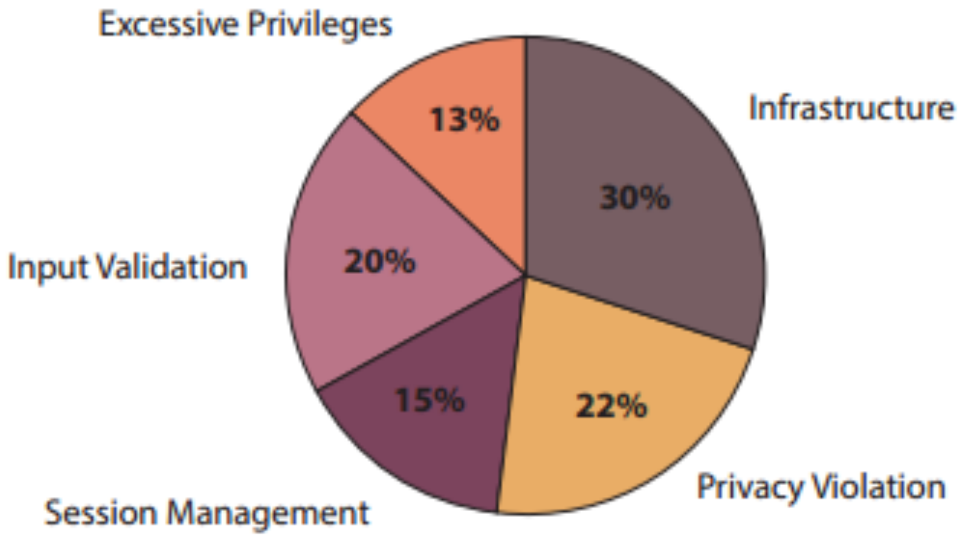


OWASP Top 10 2013

A9 – Using Components with known vulnerabilities

Proliferation of APIs
Code Reuse
COTS

Mobile Application Threats



& 2+ Million Apps combined

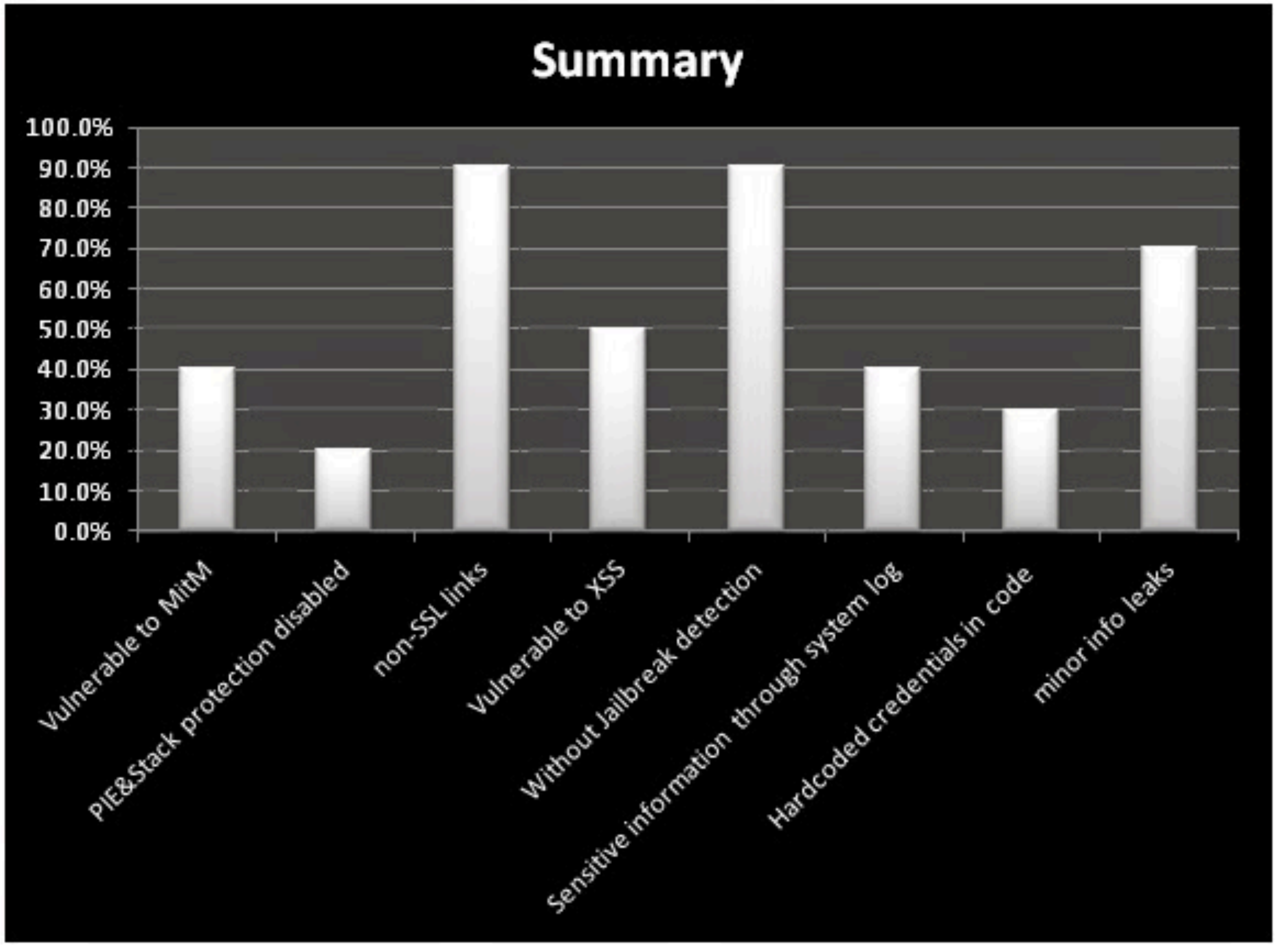
Mobile Application Threats

Android WebView Exploit, 70% Devices Vulnerable (Feb 2014)

- Android 4.0-4.2
- Javascript vulnerability
- Discovered 2012
- Google Glass
- Metasploit

https://docs.google.com/file/d/0B3_TQgTE2uPcMkdBOExKNjh0N28/edit

Mobile Application Threats



iOS Mobile Banking Apps

- 40 apps sampled from major financial institutions. 90% contain vulnerabilities.
- New vectors of attack.

Mobile Application Threats

Tesla Model S API Authentication Flaws via Mobile App

6 chars password

Token valid for 3 months

No track of valid tokens

Caching of token

Storage of credentials

Embedded systems

Toyota Prius “Intelligent” park hack

Hacked Smart Refrigerators sending spam

Nissan Recalls Over 1M Cars for Air Bag Glitch

Recommendations

Developer Awareness

Risk Based approach

Security Testing & Code Review

Web Application Firewall/SIEM

Stringent Review of 3rd Party Apps/APIs

Mobile App Reverse-Engineering Protection

Thank you

Questions?

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Sources:

[Symantec Internet Security Threat Report 2014]

[Cenzic Vulnerability Trends Report 2014]

[OWASP Mobile Security Project]

About Cycubix Limited:

Founded in 2011, Cycubix provides information security goods and services including:

- **Risk Management:** Identification, assessment and mitigation of information security risks. Implementation of risk metrics and supporting management information (e.g. risk dashboards).

- **Application Security:** Technical consultancy in the areas of penetration testing, secure code review and secure application development; assuring that IT application software and infrastructure are designed, implemented, and operated in accordance with applicable security standards and best practices (OWASP, SANS).

- **Security Assurance & Compliance:** Implementation and management of information security policies, processes and projects that adhere to industry standards such as ISO27001, PCI.

- **Security Training:** Delivery of trainings in various information security topics for technical and business audiences.

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