Seguridad en Arquitecturas Web

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Agenda

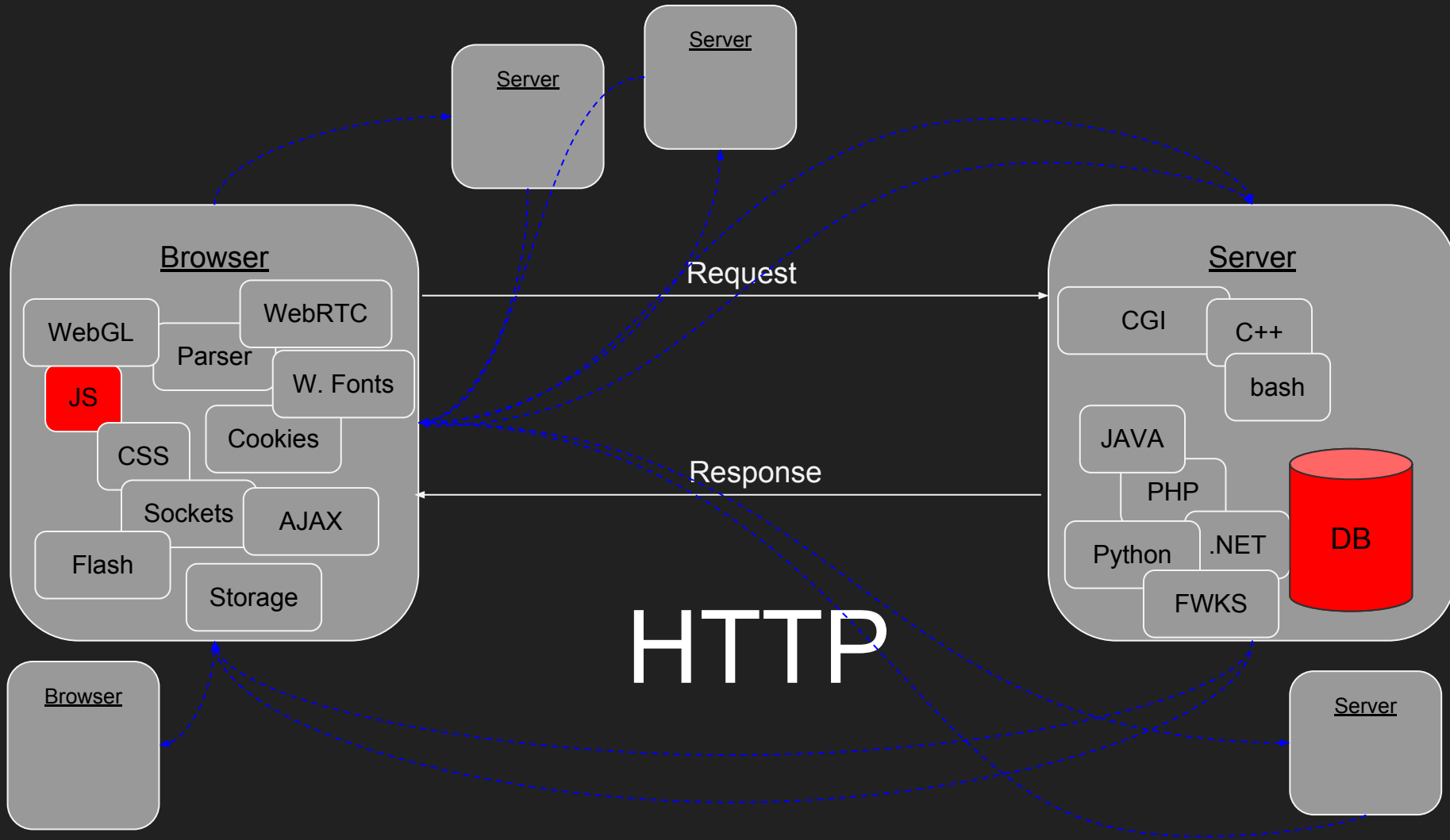
1. Evolución de las aplicaciones web
2. Qué es una vulnerabilidad? Por qué existen?
3. Familias de vulnerabilidades. El camino recorrido. OWASP Top 10.
4. Conclusiones
5. Referencias útiles

Evolución de las Aplicaciones Web

http://www.evolutionoftheweb.com/#/evolution/night

Qué es una Vulnerabilidad? Por qué Existen?(*)


Browser
Parser
doc
Business / Investment Opportunity
TRADERS INN CHILIWACK!
Past, present and future,
the facts and figures,
occupancy, size and profit margins
Motel
Details
Location
Motel for sale in beautiful
British Columbia, Canada
Server
doc
FS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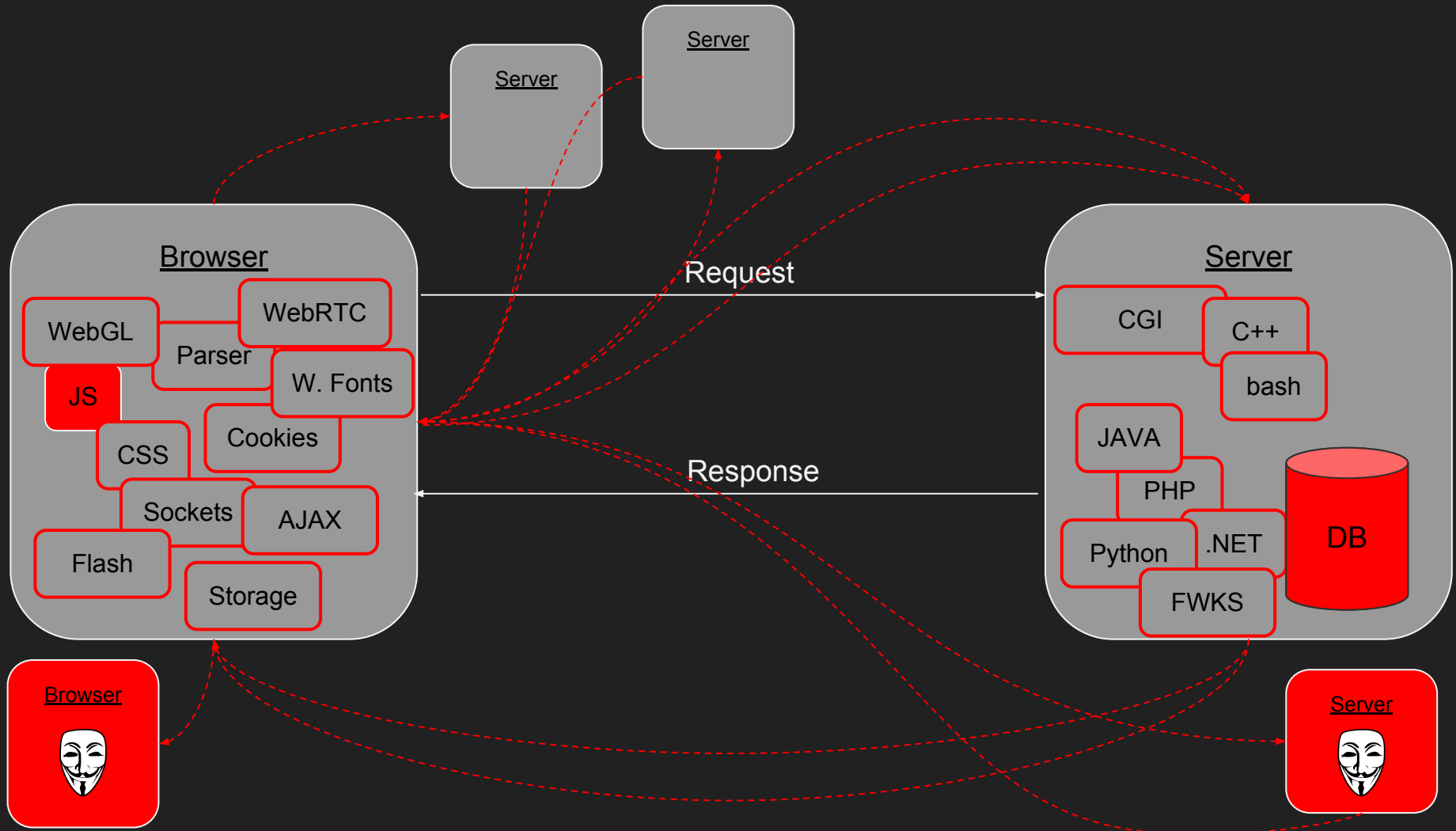
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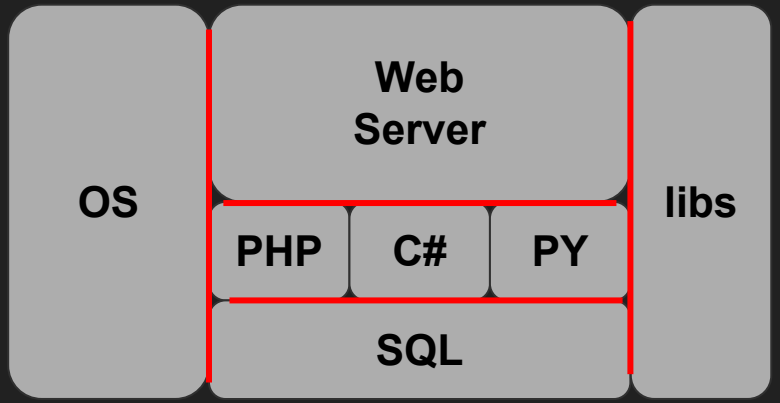
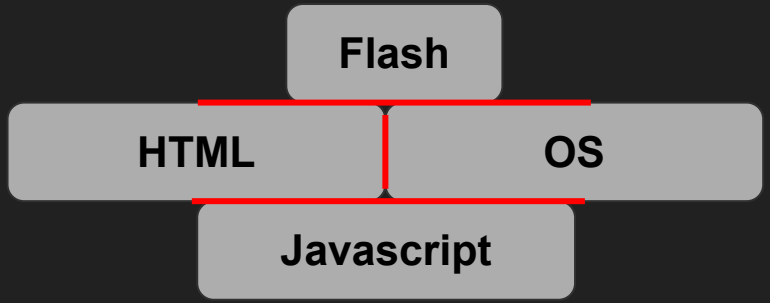
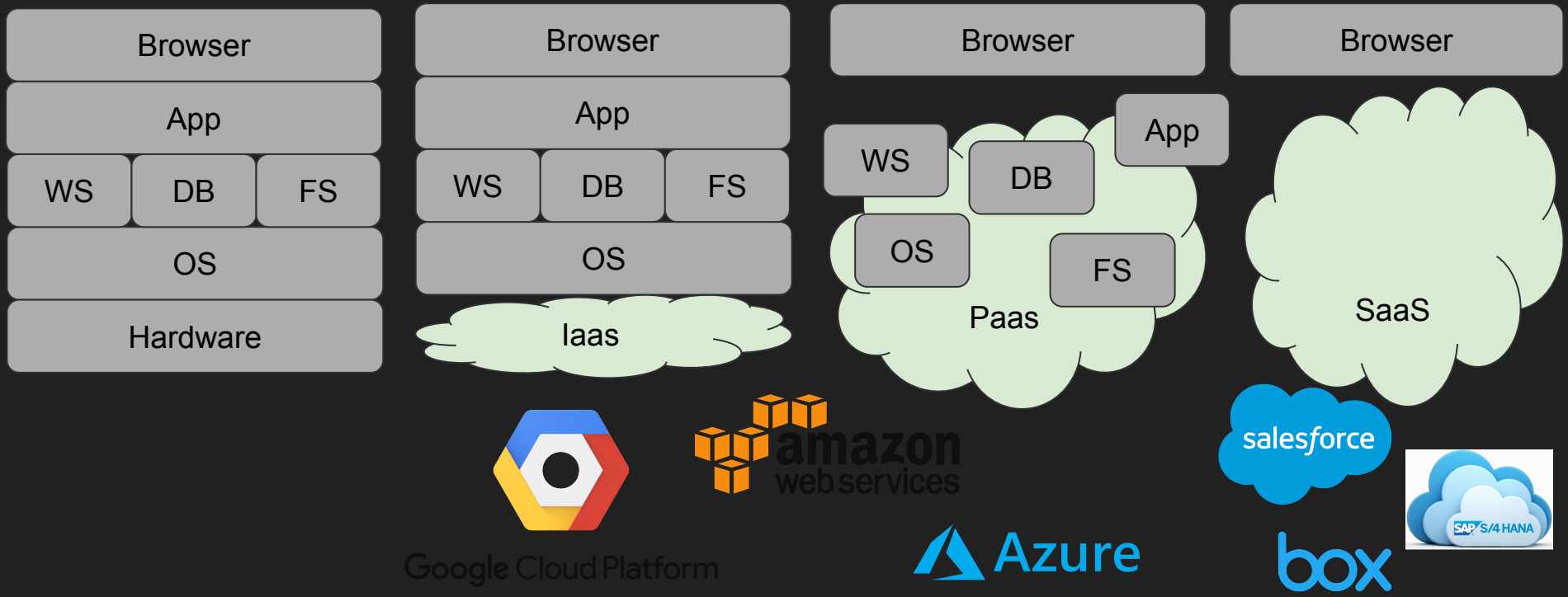
Fronteras



HTTP

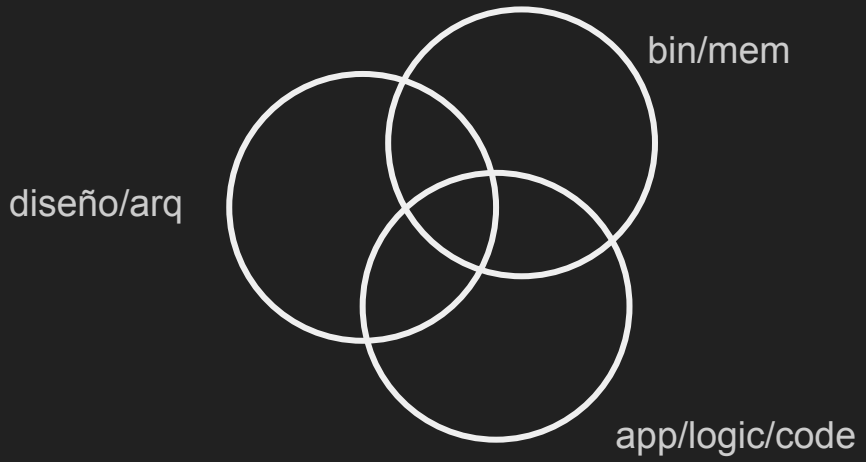


Arquitecturas web...



Vulnerabilidades

“In computer security, a vulnerability is a weakness which can be exploited by a Threat Actor, such as an attacker, to perform unauthorised actions within a computer system. To exploit a vulnerability, an attacker must have at least one applicable tool or technique that can connect to a system weakness. In this frame, vulnerability is also known as the attack surface.” https://en.wikipedia.org/wiki/Vulnerability_(computing)



Familias de Vulnerabilidades (OWASP)

1. Injection (SQL, NoSQL, LDAP, OS, etc)
2. Broken Authentication (auth, session mgmt, etc)
3. Sensitive Data Exposure (financiera, credit cards, passwords, etc)
4. XML External Entities (XXE - Parsers viejos!)
5. Broken Access Control
6. Security Misconfiguration
7. Cross Site Scripting (XSS - JS, browser API/HTML, etc)
8. Insecure Deserialization
9. Using Components With Known Vulnerabilities (:P)
10. Insufficient Logging & Monitoring

VER: https://cwe.mitre.org/data/index.html | https://www.owasp.org/index.php/Top_10-2017_Top_10

Conclusiones

- Seguridad como atributo de calidad != feature
- Quién la gestiona en ambientes cloud?
- Acoplamiento entre componentes / dependencias
- Seguridad de la app/infra
- Penetration Testing
- Secure Coding
- Conocimiento *profundo* de las tecnologías y protocolos
- Como atributo de calidad → RNF

Referencias

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- https://www.owasp.org/index.php/Category:OWASP_AppSec_Conference
- https://developers.google.com/web/fundamentals/performance/http2/ - HTTP/2 fundamentals. SPDY origins

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PGP fingerprint: 2A8E A3DB 562A F5BE DEC0 4346 987B 703F 6947 5746