Reporting & Stakeholder Communication Lab

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Executive Summary

This assessment targeted the DVWA application hosted on a vulnerable test environment to simulate OWASP Top 10 exploitation. Systematic testing revealed critical vulnerabilities including SQL Injection and Reflected Cross-Site Scripting (XSS). These flaws allow unauthorized access to sensitive data and client-side script execution. Exploits were successfully demonstrated using Burp Suite. Immediate remediation is recommended to prevent real-world exploitation and improve application security posture.

Findings

- SQL Injection was identified in the id parameter of the SQLi module. Malicious input allowed unauthorized database queries and data exposure.

- Reflected XSS was found in the name parameter of the XSS (Reflected) module. Unsanitized input was reflected in the response, enabling script execution in the browser.

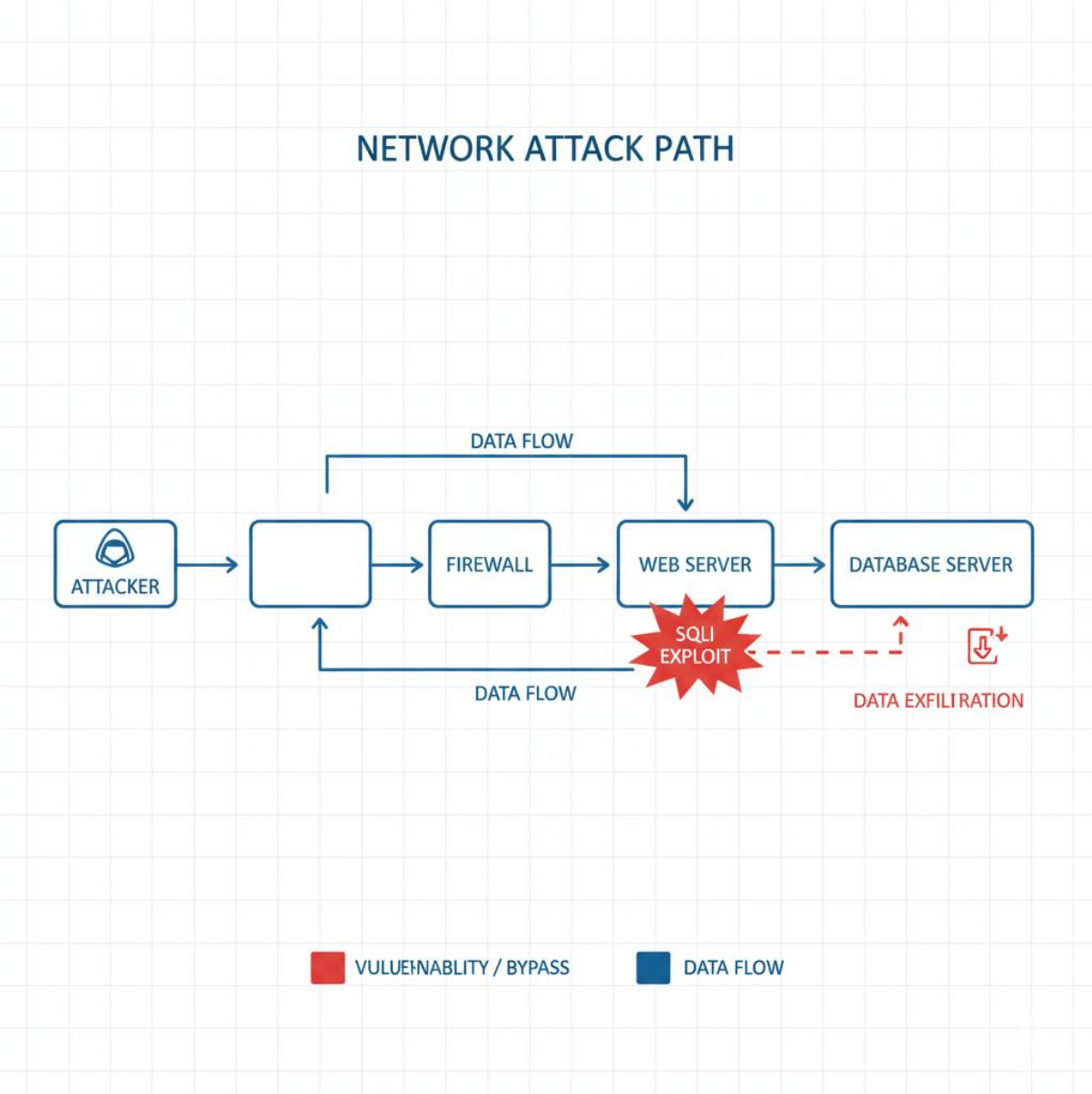
Remediation Plan

- Implement strict input validation and parameterized queries to prevent SQL Injection.
- Apply output encoding and input sanitization to mitigate XSS risks.
- Upgrade DVWA to a hardened version for training or isolate it from production networks.
- Conduct regular code reviews and automated security scans.

Findings Table

ID	Vulnerability	CVSS Score	Remediation
1	SQL Injection	9.1	Input validation
2	XSS Reflected	7.5	Output encoding & sanitization

Diagram


NETWORK ATTACK PATH
DATA FLOW
ATTACKER
FIREWALL
WEB SERVER
DATABASE SERVER
SQLI EXPLOIT
DATA FLOW
DATA EXFILTRATION
VULNERABILITY / BYPASS
DATA FLOW

Briefing

During a controlled security test of the DVWA training environment, we identified two critical vulnerabilities: SQL Injection and Reflected Cross-Site Scripting. These flaws allow attackers to extract sensitive data and execute malicious scripts in users' browsers. Exploits were successfully demonstrated using Burp Suite, confirming the risk. While DVWA is a deliberately vulnerable app, these findings highlight common weaknesses in real-world systems. We recommend implementing input validation, output encoding, and isolating training environments from production. Addressing these issues will reduce exposure and strengthen our overall security posture.