



Pentest Report

Penetration test of **Contoso**

Consultant: John Doe

01/11/2019

Confidential

Executive Summary

Overview

Issue2Report performed a Web Application Penetration Test on Contoso applications. The scope of the testing was the following.

- a.client.com
- b.client.com
- c.client.com
- d.client.com
- e.client.com
- f.client.com

Issue2Report found that with a few minor exceptions the quality and coverage of security controls in the Contoso applications were very solid.

Resume

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Finding Classification

Each finding is classified as a High, Medium, or Low risk based on Issue2Report considerations of potential threats, the likelihood of attack, and the possible impact of a successful attack against Instructure's Contoso applications. Each of these factors is assessed individually and in combination to determine the overall risk designation. These assessments are based on Issue2Report professional judgment and experience providing consulting services to enterprises across the country. This report outlines the findings Issue2Report collected from the testing, as well as Issue2Report recommendations that will assist Instructure in reducing its risks and helping remove the vulnerabilities found.

Vulnerabilities and Recommendations

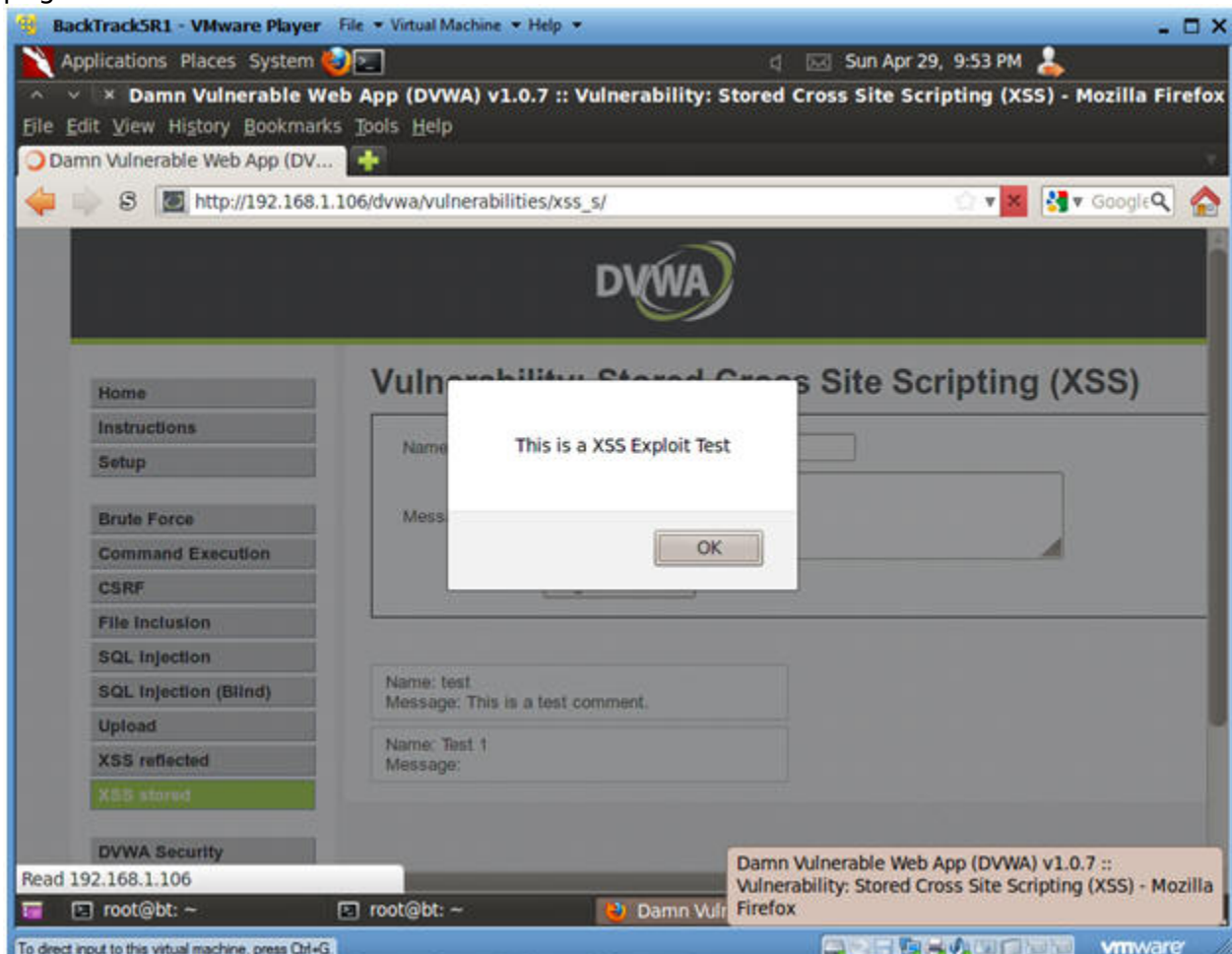
Persistent Cross-Site Scripting

high

Description

Cross-Site Scripting (XSS) attacks are a type of injection, in which malicious scripts are injected into otherwise benign and trusted websites. XSS attacks occur when an attacker uses a web application to send malicious code, generally in the form of a browser side script, to a different end user. Flaws that allow these attacks to succeed are quite widespread and occur anywhere a web application uses input from a user within the output it generates without validating or encoding it.

An attacker can use XSS to send a malicious script to an unsuspecting user. The end user's browser has no way to know that the script should not be trusted, and will execute the script. Because it thinks the script came from a trusted source, the malicious script can access any cookies, session tokens, or other sensitive information retained by the browser and used with that site. These scripts can even rewrite the content of the HTML page.



Recommendation

The primary defenses against XSS are described in the OWASP XSS Prevention Cheat Sheet.

Also, it's crucial that you turn off HTTP TRACE support on all web servers. An attacker can steal cookie data via Javascript even when document.cookie is disabled or not

supported by the client. This attack is mounted when a user posts a malicious script to a forum so when another user clicks the link, an asynchronous HTTP Trace call is triggered which collects the user's cookie information from the server, and then sends it over to another malicious server that collects the cookie information so the attacker can mount a session hijack attack. This is easily mitigated by removing support for HTTP TRACE on all web servers.

The OWASP ESAPI project has produced a set of reusable security components in several languages, including validation and escaping routines to prevent parameter tampering and the injection of XSS attacks. In addition, the OWASP WebGoat Project training application has lessons on Cross-Site Scripting and data encoding.

Conclusion

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