

# TECHNICAL COMPLIANCE REVIEW REPORT



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CONSULTING ADVISORY SERVICES

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# 1 Project Overview

## 1.1 Description

The scope of a penetration test defines the targets, boundaries, and depth of an assessment. Defining the scope of a penetration test is critical to its success—the scope ultimately drives the goals, effort, cost, and technical steps of the test. Scoping is also key to identifying the right domains of technical expertise necessary to conduct the best penetration test.

For the purposes of this article, let's pretend you just became responsible for the security of a web-based customer relationship management (CRM) application. Your application integrates with multiple software as a service (SaaS) providers, such as a productivity suite (e.g., G Suite or Office 365) and a variety of other APIs that customers use to aggregate lead data. The product is currently hosted in Amazon Web Services (AWS). You're expanding your customer base, and in addition to compliance requirements, your customers are asking for a third-party penetration test.

While your primary reason for getting a penetration test may be to meet a compliance or customer requirement, you also want to find important security vulnerabilities that put your business at risk. With so many offerings at consultancies, how do you prioritize the assessments to undertake given your budget limitations to find the best fit for your product? 1. IDENTIFY YOUR BIGGEST RISKS

Take time to identify your primary business concerns and most important data. This will structure the penetration test, and allow the assessment team to focus on attempting to perform specific malicious actions to target that data. In the resulting assessment report, the consultants can then make strategic recommendations to create a defense-in-depth (multi-layered) approach, raise the bar for attackers, and limit future risk.

For most companies, there are common risks (e.g., breach of customer information or company secrets), but within those broad categories, there are specific items of larger concern.

In our example CRM application scenario, stolen business intelligence could impact future leads; however, an attacker who impersonated employee emails to customers through the Office 365 integration could be much worse.

## 2 Executive Summary

A penetration test report executive summary is a document that states the findings of a penetration test in a clear and concise way. The purpose of this summary is to provide management with a high-level overview of the test, so they can decide whether or not to pursue further action.

Disclaimer: This article is intended to assist our institute's students in writing penetration testing reports. The example offered is not factual, and it has been simplified for educational reasons to provide clear and straightforward instructions. Example

The findings of a penetration test conducted on ABC Hospital's network on March 1, 2019 are summarized in this report. A team of skilled security consultants from XYZ Security conducted the test.

A security penetration test is a simulated cyber-attack on a computer system or network. The goal of this test is to identify and exploit vulnerabilities in the system in order to assess the system's security posture. Penetration tests are an important part of a comprehensive security strategy and can help organizations identify and fix vulnerabilities before they are exploited by attackers.

### Key Findings:

XYZ Security discovered various flaws that may be exploited by a malicious actor. The most important findings were:

- 1 A vulnerability in the firewall that could allow an attacker to gain access to the network from the Internet
- 2
- 3 A vulnerability in the web server that could allow an attacker to gain access to sensitive data
- 4
- 5 A vulnerability in the authentication system that could allow an attacker to gain access to user accounts
- 6
- 7 A vulnerability in the email server that could allow an attacker to spoof emails

These flaws could lead to serious breaches of confidentiality and integrity if they are exploited. Unauthorized access to personal identity information, patient information, and medical data would be gained by adversaries.

The consequences of a major cyber breach caused by these flaws could include lawsuits and financial losses. In one situation, XYZ Security could tamper with the real-time flow of medical information. The effects of a real-world attack could put patients' health at danger.

### 2.1 Summary of Findings Identified

Executive Summary

Breakdown by Categories

**# 1 Critical** SQLI**# 2 Critical** CELAH KERENTANAN PADA SERVER BSSN

## 2.2 Scope

### 2.2.1 In Scope

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### 2.2.2 Out of Scope

Based on the project scope example above, the following requests from the client would be out of scope rather than in scope:

- 1 Creating a QR code to add to marketing materials to make the app easy **for** customers to download
- 2 Publishing the finished app to the app store
- 3 Developing a second app **for** XYZ, Inc. to use **for** their in-house HR functions
- 4 Producing an email marketing campaign to spread the word about the app

Even if Company ABC offers the services named in the above out of scope examples, they do not fit the definition of in scope set by the project scope example. A project manager would need to explain this to the client and then refer them to the appropriate team within Company ABC that can handle that request.



## 2.3 Methodology

### Penetration Testing Methodologies and Standards

There are various standards and methodologies that ensure the penetration test is authentic and covers all important aspects. Some of them are mentioned below:

- 1 OSSTMM
- 2 OWASP
- 3 NIST
- 4 PTES
- 5 ISSAF

What is OSSTMM?

OSSTMM is short for Open-Source Security Testing Methodology Manual. It is one of the most widely used and recognized standards of penetration testing. It's based on a scientific approach to penetration testing that contains adaptable guides for testers. You can use this to conduct an accurate assessment.

What is OWASP?

OWASP stands for Open Web Application Security Project. Widely known, this standard is developed and updated by a community keeping in trend with the latest threats. Apart from application vulnerabilities, this also accounts for logic errors in processes.

What is NIST?  
National Institute of Standards and Technology (NIST) offers very specific penetration testing guidelines for pentesters to help them improve the accuracy of the test. Both large and small companies, in various industries, can leverage this framework for a penetration test.

What is PTES?  
PTES or Penetration Testing Execution Standards is a pentest methodology designed by a team of information security professionals. The goal of PTES is to create a comprehensive and up-to-date standard for penetration testing as well as to build awareness among businesses as to what to expect from a pentest.

## 2.4 Recommendations

### Recommendations

Purpose: Guide the organization in fixing the identified issues before they can cause damage.

You can add your recommendations to the previous section. However, it's best to create a separate section because it will help readers see the way forward clearly.

Make sure to avoid generic suggestions – they are rarely helpful. Instead, write detailed and specific remediations that help developers fix issues and ideally achieve Defense-in-Depth. Also, use action words, like install, upgrade, or implement, to minimize confusion and encourage action. Conclusion

Purpose: Clarify the next steps.

The Conclusion section wraps up your report and includes the planned or in-progress steps.

For example, you could say any or all of the following:

- 1 X vulnerabilities were found and need to be addressed by..
- 2 To finalize **this** report, the risk score must be completed.
- 3 A retest is scheduled **for** Y to verify **if** remediations were completed and ensure compliance with **this** report.



## 3 Findings and Risk Analysis

### 3.1 SQLI



**Severity:** Critical

**CVSS Score:** 9.8 (CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:U/C:H/I:H/A:H)

#### CWE

89 - Improper Neutralization of Special Elements used in an SQL Command ('SQL Injection')

#### Description

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## Location

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## Impact

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### **Recommendation**

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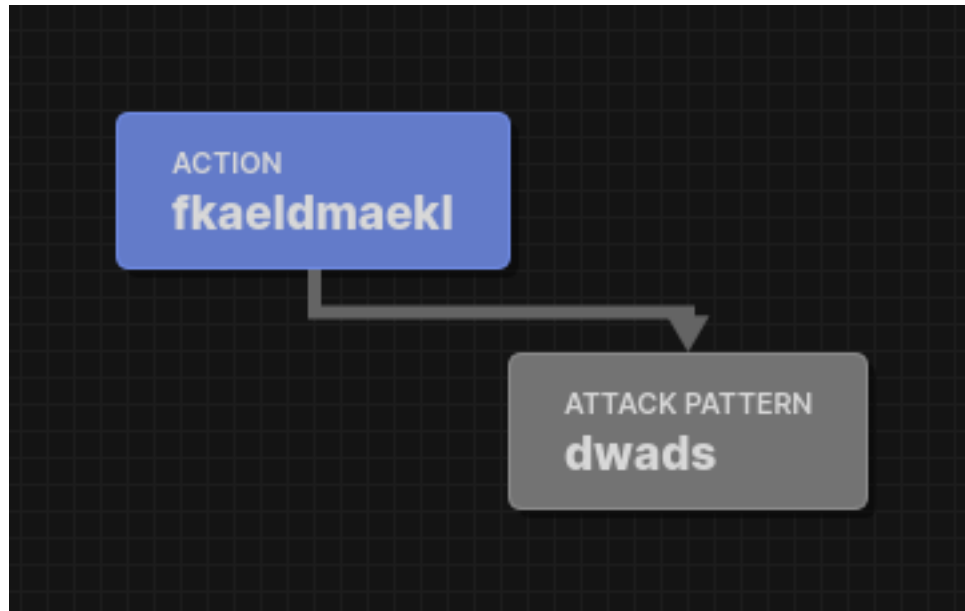
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## Additional notes

TEST

**Attack Flow**

Untitled Document

**Figure 1:** Untitled Document

### 3.2 CELAH KERENTANAN PADA SERVER BSSN



**Severity:** Critical

**CVSS Score:** 9.8 (CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:U/C:H/I:H/A:H)

#### CWE

0 - Insufficient Information

#### Description

ENGINEER COPO

#### Location

DATA CENTER

#### Impact

SERVER DOWN

#### Recommendation

REKRUT KAMI!

#### References

SUROSOWANCYBER.ORG

## **4 Additional Notes**

### **4.1 TEST**

GGDHHH