# STRENGTHENING CYBERSECURITY IN SINGAPORE'S HEALTHCARE DOMAIN: A SECURITY ASSESSMENT OF GOVT. HEALTHCARE ORGANIZATION

Web Application VAPT | Case Study

## ABOUT THE CLIENT

The Client is a centralized system that stores and shares healthcare data electronically and allows authorized healthcare professionals to access patient records from different healthcare providers. The system aims to improve the quality of care, reduce medical errors, and enhance patient safety in Singapore.

## BUSINESS REQUIREMENT

The client wanted to safeguard their web application from bad guys & strengthen their digital security, so we carried out a web-app vulnerability assessment and penetration testing assignment.

## AUTOMATED TESTING UTILITIES

- ☑ **BurpSuite Pro**
- ☑ **Metasploit**
- ☑ **Nessus**
- ☑ **Wireshark**
- ☑ **Nmap**

## 50% Faster Results

## 40% Lesser Costs

## Full coverage on OWASP Top 10, NIST & SANS 25

## PROCEDURE FOLLOWED

Followed a DAST methodology & conducted an end-to-end VAPT

Assigned weights to all the security gaps based on their severity and business impact

Recommended an effective remediation plan for an enhanced application security

## OBSERVATIONS

- Detected access control flaws which could permit unauthorized personnel to access the PHI (Protected Health Information).
- Weak data encryption mechanisms and missing controls for ensuring Data Integrity and Availability, making room for data tampering, ransomware attacks etc.
- Vulnerability to Denial of Service attacks & also Cross-Site Scripting (XSS) that poses risks like clickjacking & session hijacking due to insecure session tokens.

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