Proposal for the Development of a New Website / Upgradation of the Existing Website

An Overview of the Current Website:

The official website of the Vigilance and Anti-Corruption Bureau (https://vigilance.kerala.gov.in/) was developed by the Information, Communication, and Technology Wing, SCRB, by customizing the database and framework used for the official website of Kerala Police. Recently, the website has been experiencing multiple issues, particularly related to login and content management functionalities, which have resulted in difficulties in publishing important updates such as quotations, press releases, and FIRs etc.

In an effort to resolve these issues, Cyber Operations, SCRB, as they had initially developed the website, was consulted. Upon verification, it was found that the website is operating on outdated versions of PHP (7.4) and Laravel (6), which are no longer receiving security updates and support. Additionally, several security vulnerabilities have been identified in the plugins and modules used within the website, which could potentially compromise its integrity and performance.

Key Findings:

1. **Unpatched Framework:** The website is using out-dated Laravel version are exposed to known vulnerabilities not addressed in patches or updates.

2. **Mass Assignment Vulnerabilities:** Model with improperly guarded attributes are at risk of unauthorized data modification.

3. **Out-dated software Components:** Several plugins and modules used in the website are out-dated, creating potential entry points for attackers.

4. **DDoS Attempts:** Unusual traffic patterns indicate distributed denial-of-service attempts aimed at overwhelming the server.

5. **Unauthorized Access Attempts:** Multiple failed login attempts were detected, indicating brute force attack efforts.

6. **Malware activity:** Suspicious files have been identified on the server, potentially signalling malware infiltration.

7. The website faced accessibility issues that impacted content updates for several weeks.

8. The outdated software and framework pose security risks, making the website susceptible to cyber threats.

9. Several vulnerabilities require immediate patching to prevent further disruptions.

10. Other Kerala Police websites such as State, District and Police Station websites are being upgraded through the Kerala Startup Mission.

Proposal for Upgradation

In light of the above findings, it is proposed that the existing website be either upgraded or redeveloped to align with current security and technological standards. The following options are recommended:

1. **Upgradation of the Existing Website:**

   o Upgrade to PHP 8.3 and Laravel 11 for better security and performance.

   o Implementation of enhanced security measures, including SSL, multi-factor authentication, and regular security audits.

   o Optimization of the website to improve speed, accessibility, and overall user experience.

2. **Development of a New Website:**

   o Redesigning the website with modern frameworks such as PHP 8.3, Laravel 11, and ReactJS.

   o Incorporating role-based access control to ensure data security and confidentiality.

   o Enhancing the website with new features, including automated backup, improved analytics, and content management capabilities.

Execution through Kerala Startup Mission

Considering the success of similar projects under the Kerala Startup Mission (KSUM), VACB can collaborate with KSUM to execute the upgradation or redevelopment of the VACB website.

This will allow us to benefit from their expertise, cost-effective solutions, and compliance with government regulations.

Conclusion

Given the critical role of the VACB website in disseminating official information, it is essential to address the current issues at the earliest. It is requested to take immediate steps to contact Kerala Startup Mission and initiate the necessary actions for upgrading or redeveloping the website to enhance security, performance, and user experience.

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