SECURITY BRIGADE

Immunity for your IT

Case Study: Mobile Application Security Assessment for a Private Sector Bank

Date: 23rd October 2013

About the Customer

Our Client is an Indian financial services company and deals with three key business segments - Wholesale Banking Services, Retail Banking Services, and Treasury.

The Challenge

One of our Client's one of the business requirements was to implement a mobile banking solution for its large user base. The key concern for them was to enable customers to securely transact using their mobile application.

The Solution

By using Security Brigade's unique in-house developed EDITE framework, the consultants completed Mobile Application Security Process. Our initial evaluation found the architecture was composed of a mobile application, with a simple user-interface, and a backend server that routed data to its users. Key highlights of the audit are listed below.

Our technicians downloaded the travel application on one of the test Blackberry phones and subjected it to initial scans to thoroughly understand the application functionality.

1. Reverse engineering the **iOS** and **Android** mobile application in order to better understand the interactions between the application layer and server.
2. Vulnerabilities were identified and used to bypass current security controls.
3. Understanding of the application's inner-workings.
4. Exploiting the above findings to access the backend server.
5. The testing yielded several key security vulnerabilities on the server, including one that would have resulted in a denial of service for users attempting to authenticate with the application.

The Deliverables

The reports and remediation information provided were customized to match the Client's operational environment and development framework. The following reports were submitted to the customer:

- **Executive Report:** Overview of the entire engagement, the vulnerabilities discovered and the recommendations made to mitigate the threats identified on the Client's websites.
- **Technical Report:** Comprehensive information, proof of concept examples and detailed exploitation instructions of all the threats identified and remediation for the same.
- **Excel Tracker:** Simple and comprehensive vulnerability tracker aimed at helping the IT asset owner keep track of the vulnerabilities, remediation status, action items, etc.

The Benefits

Our Penetration Test helped the bank to identify the potential threats / vulnerability that could have compromised their network and systems. We also assisted them in assessing the magnitude of potential business and operational impacts of successful attacks.

Additionally, the Client gained the following benefits:

- **Risk Benefits:** Security Brigade minimized security risks by assessing the mobile applications vulnerabilities and recommended solutions with proven methods to enhance security.

- **Cost Savings:** Security Brigade suggested cost-effective risk-mitigation measures based on the customer's business requirements that would ensure security and continuity of the business.
- **Customer Satisfaction:** Security Brigade identified key high risk vulnerabilities which if exploited by an attacker would have compromised sensitive customer information. Thus helped the customer in safe-guarding information.
- **Compliance:** As an added bonus, the Client was able to utilize the information gained from this test to easily gain industry certifications and provide a higher level of service to its customers.

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