

Secure Online Transactions

Myway is a newly established company, which wanted to start their online sales and hence was involved in the development of an online e-commerce Web site. They wanted a Web site which would facilitate online transfer of funds. Myway had outsourced its payment processing to a third-party Internet enabled financial transaction payment firm.

The third party payment software had several customized interfaces to enable an easy payment process between the customers and Myway's account.

A high-level security risk analysis was conducted on the system to check the security measures of the third party software. The assessment identified several transactions between the payment interfaces and the application. A fraudulent transaction would have serious impact on both the customers and the company ('Myway'). Some customers might also face financial hardships due to the unauthorized transactions which may deplete an account. Such situations can damage the reputation of the company.

In view of such circumstances, a white box testing was carried out on all the modules which were using the payment interfaces. The following steps were followed:

The component interfaces were identified.

1. Trust relationship boundaries were recognized along with the component interactions.
2. The data flows between the components were monitored.

Abuse test cases (*These cases describe the ways in which the application can be misused*) were developed and tested. One of the abuse test cases was to create a payments processing functionality as an anonymous user. The trust relationship mapping and data flow showed a path where inputs from the users were not validated or authenticated.