

## Case Study

# Cyber Security Implementation for File Upload

### PROBLEM STATEMENT

- ❖ Insurance Online (IOL) is the Client's group insurance member self-service portal. The system's UI/UX and functionality changes depending on the member's policy manager. The policy manager is a partner that Client interacts with to provide group insurance and may be an industry superannuation fund, Master Trust, or corporation.
- ❖ Any new member can register the insurance online and can see the new member benefits. Member can apply for Death Cover, Total and Permanent Disablement Cover and Income Protection cover based on the occupation.
- ❖ Already existing member can Change the insurance cover, transfer the insurance cover, and cancel the insurance cover at any time.
- ❖ Member's insurance cover can be changed when the job description changed with "Change Work Rating" widget.
- ❖ Member can apply to increase the cover when their life changes. Member needs to answer a few health questions and apply within 60 days of the life event.
- ❖ Member can apply for increasing income protection within 30 days of receiving salary increase with "Salary Increase" widget.
- ❖ Member needs to upload the documents when they apply, transfer, and change the insurance.
- ❖ Uploaded files need to be passed against security vulnerabilities.

### SNAPSHOT

**Industry:** Insurance  
**Business Unit:** IT Services  
**Services:** Development

#### Team Size: 14+

- ❖ 6 x Dot Net Developers
- ❖ 2 x Testers
- ❖ 1x Product Owner
- ❖ 1x Development Manager
- ❖ 4x Business Analysts

#### Technology Stack:

- ❖ **Framework:** .Net framework 4.8
- ❖ **Database:** SQL Server
- ❖ **Infrastructure:** Azure Cloud

#### Key Tools Used:

- ❖ Visual Studio

## OBJECTIVE

The objective is to check the range of common web application vulnerabilities with File upload.

## DEVELOPMENT CHALLENGES

- ❖ Know-how Insurance online system is working and implement cyber security feature to be added in existing system.
- ❖ Understanding some of the Insurance related terminologies and workflow of the system for the different policy manager.
- ❖ Cyber security for file upload is not part of the requirement documentation but is part of the Penetration test plan.

## SOLUTIONS AND KEY LEARNINGS

### Transfer the file through File Scanner services via APIs

- ❖ IOL has mainly three widgets where file upload functionality is used. “Life Events, Salary increase & Transfer Insurance”.
- ❖ To check the vulnerability in the uploaded file, it will first go with the basic file validation checks such as to validate file size, file content, file extension, duplicate file for the same member and same fund.
- ❖ After basic validation, file will be passed to the file scanner system where file will be scanned with the new OPSWAT anti-virus scanning platform.
- ❖ File will be uploaded to the SharePoint location when it successfully passed from file scanner service.

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