TechMagic

aws partner network

Elements.cloud

Security Case Study

Executive Summary

Elements.cloud is a B2B SaaS platform that helps to visualize and organize business processes in the companies. Like many other companies, we use different technologies to build a practical, user-friendly and highly customisable application. The main concern was to handle security issues that were introduced through different application modules and techniques, deal with modern threat actors and top exploitation flows. By implementing regular security assessment practice and increasing awareness among the development team, we managed to build a threat resistant application that can handle current vulnerabilities and exploitation flaws.

The Challenge

Vulnerability

The primary security challenge was to set up a regular vulnerability assessment process to detect application vulnerabilities on early stages and deal with them.

CI/CD

One of the main technical issues was to integrate various application security tools into a CI/CD process and automate the scan results gathering process.

Team practice

In addition to the automated security assessments, we had to integrate the code security review practice to improve the secure coding skills of our development team.

Security on AWS

Amazon Web Services (AWS) places security at the heart of every offering to help you fully realize the speed and agility of the cloud. AWS integrates comprehensive security controls, superior scaling, visibility, and automated security processes into its cloud infrastructure to enable a secure foundation on which you can build. The Shared Responsibility Model (SRM) makes it easy to understand your choices for protecting your unique AWS environment, and it provides you with access to resources that can help you implement end-to-end security quickly and easily. Choose from the many cloud-ready software solutions offered by AWS and AWS Security Competency Partners to meet the highest standards of data security in the cloud.

Elements cloud

About Elements.cloud

Elements.cloud is a B2B SaaS platform which helps to visualize and organize business processes in the companies. It has a centralized interactive space for process mapping in the cloud that allows bringing a new level of operational excellence. The web application uses Salesforce integrations and is fully GDPR compliant. Among the main features, users can capture requirements, map processes, document Salesforce Organization, deliver user training, and provide governance.

https://elements.cloud/

> "TechMagic has a very good balance of understanding our goals, knowing when to take pragmatic decisions."

Adrian King,
Co-founder and CTO

> "I cannot express how impressed we are by the commitment and dedication of your team. The recent set backs are frustrating but we will work through them. The comments and enthusiasm from early users is really, really encouraging. We are building a fantastic product, with a clear need, and a huge audience."

Ian Gotts,
Co-founder and CEO

Why TechMagic

TechMagic is a software development and cloud consulting company with a strong focus on AWS and JavaScript stack. We are official AWS Consulting Partners with a great ambition to receive Service Delivery designations for our Serverless and Security competencies.

TechMagic was established in 2014, and now we are more than 130+ full-time employees.

The Solution

We managed to automate vulnerability assessments using automated tests for simulating user behaviour and such security tools like OWASP ZAP, BurpSuite. Also, we evaluated dependencies that are being used and established regular dependencies scanning using Snyk tool. Dependency scanning helps to prevent the usage of components with known security issues. In addition to the previously described activities, we conduct regular manual penetration testing of our application to detect the problems in business logic and some advanced security flaws that cannot be identified by automated scanners. Due to all of these activities, we managed to establish regular vulnerability assessments of our application in the scope of SDLC and significantly increase the application security for its users.

Besides the regular vulnerability assessments using various tools, we implemented a code security review practice. It has helped us to increase security awareness among the development team and engage them to write secure code. Also, we conduct regular training for the QA team to improve their skills in penetration testing and vulnerability assessments.

> "I have worked with TechMagic for 4 years and they have become our core strategic partner of Elements.cloud providing development and architecting our solution on the AWS platform."

Adrian King,
Co-founder and CTO

Results and Benefits

Top-notch level of application security

We built a secure, threat resistant application that deals with modern web application security threats.

Automated vulnerability assessments

We conduct regular automated vulnerability assessments to detect vulnerabilities in our application on early stages and fix them to protect our users.

Maintained trust and confidence

Even minor cyber-attack or data breach affects the loyalty of customers and partners. Regularly scheduled penetration tests is a proactive way to stay on top of your security and can help prevent the financial loss of a breach while protecting brand and reputation.

Successful security reviews from third parties

Due to a high level of application security, we managed to pass security reviews from 3rd party providers successfully.

High level of security awareness

Each team member is familiar with top security threats and mitigation techniques which help to prevent them. Also, we share the latest news from a cybersecurity area and discuss them to keep up to date with modern security assessment tools, latest threat actors techniques and security solutions.

Our approach

The initial stage of any security assessment or penetration test is to define a scope and discuss its goals. We also describe the required legal aspects of future evaluations, possible limitations, tools to use, communication channels, disaster recovery plan. The next step is to notify 3rd party providers and get the permissions from them. Also, we gather info about the app itself and the development team. After the previous steps with all permissions and information for an assessment, we start a penetration test. At this stage, we analyze an app using approved tools and techniques, collect and consolidate our findings. Depending on a selected model of the penetration test (black-box, grey-box or white-box testing), we conduct a static code analysis, both manually and using automated tools.

Then we create a final report that contains a prioritised list of our findings, flows to reproduce the issues, recommendations for engineering teams. We present the report to a client with the discussion of detected items. Based on this report, we help to create tasks for the development team and provide support during the implementation. The final step is to perform a retest of the target app to verify security fixes.

Benefits

Highest app security

We built a secure, threat resistant application that deals with modern web application security threats.

Zero vulnerability

We conduct regular automated vulnerability assessments to detect and fix them in our apps on early stages.

3rd party reviews

Due to a high level of app security, we managed to pass security reviews from 3rd party providers successfully.

Trust of customers

Regularly scheduled penetration tests help prevent cyber-attacks or data breaches that affect the loyalty of customers.

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TechMagic was established in 2014, and now we are more than 130+ full-time employees. We mainly work with startups and mature organisations, helping them to build highly-scalable, secure, and cost- efficient products.

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