TALLINN UNIVERSITY OF TECHNOLOGY
School of Information Technologies

Silver-Ed Sillaots 193557IADB

Development of an Internal Support and Analysis Application for Email Data on the Global Scale for Pipedrive

Short summary of the diploma thesis

Supervisor: Kristiina Hakk
PhD
Co-supervisor: Yito Mok
BSc

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Purpose of the thesis

This thesis deals with the development of an internal email data support and analysis application for Pipedrive. One of the services offered by Pipedrive is “Email Sync”, which allows customers to fully synchronize between their chosen email service provider and their Pipedrive account. Pipedrive has several data centres globally and currently does not have a central application from which to access the technical data of each customer's connection, regardless of the location of the customer's data in a specific region. It is also very important to ensure the security of this application and the traceability of the activities performed, as this application ensures access to sensitive customer data.

The purpose of the dissertation is to create a secure in-house application where developers, support engineers and customer support have access to the technical data of each specific customer association to analyse the current state of the connection and perform the necessary actions.

The lack of such a central platform slows down the day-to-day work of developers and support engineers, as problems with customer associations are diagnosed through different applications, all located in different regions.

Summary of analysis and development

An Agile development mission was conducted in order to fulfil the criteria that was used to define a successful result. It started with the initial planning phase which consisted of finding different possible approaches to solving the problem and trying to account for any upcoming difficulties. Then followed a more thorough analysis phase where the results from initial planning were presented to all the included parties such as: Support Engineers, Developers and Privacy & Security team. After the analysis was concluded, the platform itself was developed based on the functional and business requirements that were agreed on.

Important part of the analysis was to figure out how to meet the functional and business requirements that were required such as: communication between different data regions, integration with other applications, security of the platform and technologies to be used. Instead of developing everything from the ground up, it was decided that the best approach would be to integrate this platform with other existing internal tools in the company.

Security requirements for the platform were quite extensive. The main features were: two-factor authentication, security audit logging and different access roles. Because the data which the platform provides access to, can contain sensitive client data, it was required to restrict access to some of it with different user access roles. Those roles are confirmed by two-factor authentication and security audit logs are stored for each request that contains sensitive client data.

Results

The released structure of the platform which was developed consisted of two different newly developed services: a web app and an agent service. The web app's goal was to provide an user interface for the whole platform from the management region. The second part of the platform was the agent service which acts as layer between the web app and different API (Application Programming Interface) libraries in client regions.

The analysis and development of this platform can be considered a success since all the functional and business requirements were met. The application has been providing a central platform for all the Support's, Support Engineers and Developers in Pipedrive to analyze, manage and use data, related to customers that use the "Email Sync" product in Pipedrive, most relevantly to their function.