Security and Data protection

research document

for

HeardIT

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1. Introduction

The purpose of this document is to outline the research that was undertaken to determine the security strategies and methods for protecting the users and their data by the HeardIT application. The research is split into the following sections *– Main research question*, where the main question is defined, *Sub-questions*, where the sub-question derived from the main questions are defined and answered and *Conclusion*, where the answers to the sub-questions are combined in order to answer the main question. The final section is the *References* section where the sources of the information used during the research are presented.

1. Main question

In this section the main question will be established. In order to complete the research, the main question needs to have a concrete answer. For this reason, it is important to define the main question well. This will also allow us to create the sub-questions that will help us answer the main question.

The main research question is:

*How can I ensure that HeardIT provides its users with sufficient data security mechanisms and follows the modern standards and regulations for data protection?*

Answering this question will allow us to determine the most relevant security measures and protection mechanisms that need to be implemented in the HeardIT application. In the next section I will establish the sub-questions that were derived from the main question and I will formulate an answer to each of them.

1. Sub-questions
2. What?

The very first thing that needs to be established from the very beginning is what types of data HeardIT will have to utilize.

Methods used:

* Domain modelling – this method was used when researching what kinds of data HeardIT will have to store and handle
* Problem analysis – this method was used to determine what kind of issues and problems can arise when working with the different kind of information

1. What is the most suitable approach for storing and handling the data for the songs?

Storing song data while also being easily accessible to HeardIT users is one of the main challenges. There are several

Let’s

Methods used:

* Literature study – this method was used to determine the how do file management systems and other databases work
* Problem analysis – this method was used to determine exactly the challenges with storing song files
* Available product analysis – this method was used to determine what platforms like Spotify and SoundCloud do to tackle this problem
* Document analysis – this method was used to find out how to implement Google Cloud Storage as my file management system

1. What is the most suitable approach for storing and handling user data?

The next aspect of data storing and handling that I need to address is the user information. This includes user credentials, used for

Methods used:

* Literature study – this method was used to determine how can I protect my users’ data
* Available product analysis – this method was used to determine what kind of authentication and authorization service providers there are
* Document analysis – this method was used for finding out how to integrate Auth0 into my application
* Ethical check – this method was used to determine the credibility of Auth0 and possible drawbacks of using a third-party service

1. What is the most suitable approach for storing and handling other kinds of needed data?

The final set of data that HeardIT is working with is the more general and less sensitive types of information. This includes published song metadata, playlist information, public comments and announcements and

Methods used:

* Domain modelling – this method was used to determine the specifics of the kinds of metadata I will have to work with
* Community research - this method was used to see how can I best store and handle my metadata

1. Conclusion

To conclude this research, I am going to design the HeardIT application’s data distributive system to include multiple different types of approaches. This will be done in order to allow for the best possible storage and handling performance, security, capacity and effectiveness of the database systems. For my music I am going to use a Google Cloud Storage database, where I will keep my song files, and a MySQL database for my songs’ metadata. For my users, I decided to take the opportunity to use a professional security provider - Auth0. They provide an excellent, secure, reliable and compliant with the modern standards for cyber-security services to store, handle and protect my user data, while also being more than sufficient at efficiency, scalability and performance. For the rest of my data, I am going to use the proven and reliable MySQL relational databases, that provide me with all of the needed functionality and utility for HeardIT’s data requirements.

With this, I complete my data distribution research.

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