Haaga-Helia
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Cloud Service Technologies

Project Plan: Migration to Cloud

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September 18th, 2019

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1. Determination of the Project Work

1.1 Project Background

This project is a part of the Cloud Service Technologies course at Haaga-Helia. We chose migration as our topic for this project because cloud services are becoming increasingly popular, and more and more companies are having to migrate their data to cloud. We are interested to examine the migration processes and different cloud service providers to determine which one appears to offer the most advanced or supportive platform for data migration.

1.2 Project Task

The project task is to observe, analyse and describe the process a company might go through to migrate their services and infrastructure from their existing system to the new cloud system, as well as examine the solutions offered by different cloud providers. We will do this by researching several cloud providers and narrowing down our selection to a few most suitable or most interesting ones, migrating some simple data, and observe the process and the suitability of the different providers.

1.3 Objectives and Outcomes

The objectives of this project are as follows:

- If found viable and beneficial, create a fictional company with generic data migration requirements to generalise our findings
- Analyse and compare the cloud solutions of a few different cloud providers
- Migrate some simple data
- Conclude the findings of the analysis to form a verdict of the most efficient cloud provider in terms of time and cost savings

The outcomes of this project are as follows:

- Gaining a profound understanding of the fundamentals of the cloud migration process
- Ability to perform simple data migration
- Gaining an overview of the differences between several cloud service providers

1.4 Scope / Outline

The purpose of our project is to examine and describe the different aspects of the process that a company might go through when considering migrating from their traditional platform to a cloud platform such as Amazon Web Services, Azure or IBM. Therefore, we will investigate if it makes economic sense to migrate to cloud, how much cost is involved and how much could be saved financially in comparison with the old system. Furthermore, we will examine the differences between our chosen cloud providers regarding their cost-benefit ratio as well as their security.

In addition, we will try to estimate the financial benefit for a company of having their data stored in cloud instead of in-house. The financial costs involved with in-house data storage include building a server room, purchasing equipment, such as servers, air-conditioning and a fire security system, and maintenance costs. Regarding our chosen cloud services, we will examine whether we need to obtain them as SaaS or PaaS.
Further, we wish to determine which cloud service provider(s) is the “simplest” to migrate to and maintain and has the best support materials.

1.5 Analysis of the Risks

The potential risks that may negatively influence the outcome of the project are the topic being too extensive or too complicated, the project being too expensive to complete, or the project team not being successful in gathering an adequate amount of data to form an arguable verdict.

1.6 Project Organization

The organization of the project is based on regular team meetings and communication through WhatsApp, Slack, and Microsoft Teams. We will each carry out individual research which we then share to the rest of the team in the team meetings. In addition, we will create a collaborative word document, so that we can all work on the project remotely and efficiently. We hope to be able to track the progress via Trello to be able to follow it lifetime.

1.7 Environment

1.7.1 Stakeholders and/or Partners

The main stakeholder for this project is the project team, as they are the foremost party involved in the project. In addition, we plan to contact companies that have already gone through the process of migration to get an insight into their motivations, procedures and

experiences. This might be one of the key challenges for our project, since some data may be classified, or the migration process may have been outsourced.

1.7.2 Implementation Environment

As the decision of the cloud services to be used in this project has not been made yet, further research must be done to determine the most suitable ones. We plan to research and test the procedures on the different platforms chosen. This project will primarily be theoretical with the support of some testing in the selected environments. This means that we will run tests on the chosen cloud services/providers to prove our concept.

1.8 Project Schedule

The project team will hold weekly meetings every Friday to do research and work on the project together. If necessary, spontaneous meetings will be organised on any weekday. The meetings will last at least two hours, so it can be ensured that in-depth research and work will be done.

By October 11th (checkpoint 1), we aim to have finished the preliminary research, brainstorming and the potential creation of our sample company.
By November 15th, we aim to have finished most part of the main research (which is going to be a continuous task), narrowed down our focus and collected test data.
By November 29th, we aim to have completed our analysis, formed a conclusion and be able to present our, at least, first draft of the report.
Finally, by December 6th, we aim to have finished the report successfully.
The presentation will be prepared in the week before the final deadline.

2. Work Plan

2.1 Work Phasing

The project starts by initiation, where we form the project team and receive our assignment. The next phase is planning, where we decide on a topic and the overall contents for our project. After planning, we will do research and eventually narrow down the selection of cloud providers that will examine in the project. Then, we will do testing and analysis, and finally write out our findings in the final report.

2.2 The Tasks, Workloads and the Final Results

Here we have determined a list of tasks that must be completed for the project to be successful. The project will be completed in the conventional waterfall style, so each step will follow the next with a revision at the end of each step. We find the waterfall methodology to be the most effective one for this project, as the knowledge gained from each step will be needed in the following step.

2.2.1 Preliminary Research

In this first step, we will collect all the information we need to form an in-depth understanding of the fundamentals of our chosen topic area. Therefore, we will familiarize ourselves with the cloud, and check if there is any information or data that we are already familiar with and what we need to examine further. In addition, we will aim to narrow down the selection of the service providers that we will look at for the first time. This step is crucial for us to understand what is possible to do within the scope of this project and what would be too extensive, unnecessary or overwhelming.

2.2.2 Brainstorming

After the preliminary research, we will have a brainstorming session where we combine our learnings to form a profound overview of the topic and the contents of the project.

2.2.3 Creating a Company

This step is not definite yet, as it is unclear whether it will be necessary for our testing to have an actual company. In case this step is ignored, we will run individual tests to analyse the cloud services. In case we create a fictional company, we will use our preliminary research to create a generic company with simple data.

2.2.4 Main Research

Next, we will be doing the main research. The purpose of the preliminary research was to familiarize ourselves with the topic and different cloud providers, so that we could form a plan of the contents of the project. The purpose of the main research, however, is to further investigate the key characteristics of cloud services, the differences between different providers, the main features of their solutions, and the specific steps included in the process of migrating data into cloud.

2.2.5 Narrowing Down

After gathering data on several different cloud service providers, we will narrow down our selection to a few most suitable ones, regarding time, scope and possibly budget limitations. The selection will be based on which cloud providers have solutions that are most easily available, most effective for our test cases, and include the key features of most cloud services. The number of cloud providers chosen for our project will be decided after we have gathered enough research to see how extensive their solutions are, since we will have to take into consideration the previously mentioned limitations.

2.2.6 Testing

While performing our research we will continuously test our learnings. This will hopefully support our theories, points and will help us gain a better understanding.

2.2.7 Analysis and Conclusion

After gathering an adequate amount of test data, we will start analysing our findings. Our aim is to form a final verdict about our findings, whether we reached our objectives and outcomes.

2.2.8 Writing the report

Finally, our last step is writing the final report about our project, after all the tasks have been completed either successfully or unsuccessfully. The style of the report will be based on the guidelines given by the course teacher and Haaga-Helia guidelines.

3. Quality Plan

3.1 Documentation and Version Management Procedures

As we are not developing a full application but will be doing testing for our theories, we will maintain documentation of what has been done when testing. This will contain the steps, ponderings, issues and results. When it comes to version management, we will keep an order to our tests so we can see when which test has been done by whom.