1DV032 – Examination Report

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In this report I investigate of the possibility to move software to the cloud that are currently hosted in a private data center. The cloud provider that will be investigated is Google Cloud Platform.

**1. IaaS**

**We want a up-time of at least 98%. What will happen if the cloud provider do not live up to this?**

According to Google Cloud SLA (Service Level Agreement) they have a SLO (Service Level Objective) and it states a monthly uptime percentage of 99.9% for interconnect services for non-critical applications, as for this would be categorized as. If they do not succeed to meet this agreement, we will be eligible to receive financial credits.

The financial credits for interconnect services for non-critical applications if monthly uptime percentage are between 99.0% and 99.9% are 10% of monthly bill and will be credited for future monthly bills as well. If less than 99% the monthly bill will be credited 25% instead.

**Is there any kind of load balancing service for our front-end servers?**

Google Cloud provides their product “Cloud Load Balancing”. It comes with global load balancing with single anycast IP, software-defined load balancing, supports 1 million plus queries per second, internal load balancing for internal services, support for cutting-edge protocols. The Cloud Load Balancer even comes integrated with Cloud CDN for content delivery.

**If our traffic and number of users grow. Is there any way to dynamic scale our instances behind the load balancer?**

Google Cloud Platform offers “Autoscaling”. It lets us automatically add or delete instances from a managed instance group when the increase of load appears. We can define a autoscaling policy and it scales automatically based on the measured load.

We can also choose to scale using policies with average CPU utilization and HTTP load balancing serving capacity or using Stackdriver monitoring metrics.

**We want to be sure of that we owns our data and that the IaaS are not able to take our intellectual property or miss-abuse our clients thrust.**

Google Cloud ensures in their “Data Processing and Security Terms (Customers)” that we will own the data that are on their services and they do not process our data for advertising purposes. We are in full control of the customer data, Google Cloud process it according to our instructions.

**We want to know if that when we delete some data (for example a user) the data can not be reproduced in some way.**

Google Cloud Platform implements and maintain organizational measures to protect the Customer Data. The measures include encrypt personal data to ensure ongoing confidentiality, integrity, availability and resilience of Google’s systems and services.

**We are interesting in storage of static files. In the future we may want to store more data like video. Is there services available for this and how will it affect the cost? We estimate it to be about 1000 hours of 1080p videos.**

Google Cloud Platform have a service called “Cloud Storage” for serving files such as movies, images or other static content.

Pricing is $0.026 per GB per month for standard storage. It will be around 3.6 GB/h and totalt 3.6TB and round up to 4 TB and it will be around 106.5 USD per month.

**We are interesting to implement a more fine-grained monitoring system for our application. Are the any specific services for this?**

Google Cloud Platform provides a monitoring and management for services, containers, applications and infrastructure. It aggregates metrics, logs and events from the infrastructure.

It doesn’t require extensive integration. It has native Google integration with tools like Cloud Storage which we will need to use for our storing of static files.

**How much will our current infrastructure cost in the cloud each month (tips - most cloud providers have some kind of calculator-application)?**

x

<https://cloud.google.com/compute/sla>

<https://cloud.google.com/load-balancing/>

<https://cloud.google.com/compute/docs/autoscaler/>

<https://cloud.google.com/terms/data-processing-terms?utm_medium=et&utm_source=google.com%2Fcloud&utm_campaign=privacy&utm_content=privacy_commitments_to_data>

<https://cloud.google.com/stackdriver/>

<https://cloud.google.com/storage/pricing#price-tables>