Migration of an e-shop

Currently, cloud computing has gained strength because it offers high scalability and flexibility capabilities, for this reason, various companies are interested in adopting them, however, many of these do not know how to efficiently migrate their services and applications to the cloud, without causing a negative impact to the company. For this reason, a plan that serves as a reference is necessary to migrate the services offered to the cloud.

In e-commerce, which is primarily focused on the customer journey, which has many different attributes. These attributes can be grouped into four main areas: Discovery, Evaluation, Purchase, and Post Purchase. Customer behavior is captured as data and the world of shopping is a collection of more data and additionally, there are connections to other services. Therefore, knowing how an e-shop works, we can begin to give strategies to carry out the migration to the cloud.

The first thing to consider is the migration of physical servers and virtual machines as is to the cloud. This can be implemented in different ways since different companies provide this service, an example is Amazon Web Service, which presents the EC2 service that allows deploying instances with different characteristics, obtaining the benefits of cost savings, security, and necessary reliability. Savings come from strategies like running workloads on appropriately sized virtual machines. Today, the capabilities of virtual machines exceed daily needs, that is, virtual machines are capable of dealing with spikes in sales on special days. This implies that you are paying for the services you are using only. For the process of hosting your servers in the cloud, you should consider the following: Identify and inventory local resources such as applications, workloads, networks, and security. To begin the migration, each on-premises subsystem will need to function in such a way that the provider is an extension of your data center and ensuring that applications continue to communicate, so you can gradually see which services are needed and which are not. Now if we focus on the security part, we can think as a first step to carry out an audit to be able to know if it is necessary to implement new infrastructures, however, it is necessary to consider other factors before relying on processes and data in the cloud.

Credentials: It is a fact that you must verify the credentials of the provider you choose to understand what you receive and whatnot. An important part is being able to give the least privilege to the people who use the services of the e-shop since in this way we can reduce the area that can be affected in an attack. The providers give different tools such as IAM of the Amazon service which allows them to control the users who help in the development of the e-shop.

Encryption: As much information and traffic must be encrypted in the cloud as much as can be managed. This adds a layer of complexity and increased processing load, but not excessively. Encrypting the stored data and its sending is important since it deals with sensitive information and since in the cloud you do not have all the control over the data, then a possible solution is to encrypt. To encrypt the data and procedures in its delivery, that is, from the moment a person accesses the e-shop until when it is stored on the servers. For this, we can obtain the HTTPS certificates so that our store has security with the sending of the information. Now for the encryption of the information, we can activate this service with our provider and thus obtain this security.

Double authentication factor: The cloud service provider can promise that the information is secure on its servers, but this does not remove responsibility for controlling access to certain specific individuals according to need, as the developers of thee- mentioned before. shop. Considering double factor authentication is a fairly accessible strategy for users to log in. A tool that helps in this is for example the Authenticator, which gives temporary codes to enter the e-shop.

In conclusion, moving the e-shop to the cloud requires analysis, planning. We discuss a gradual adaptation approach with cloud services. This allows the e-shop to move from one work state to another while minimizing the amount of change in each step that is taken. It is clear that not all migration processes occur in a few steps, sometimes it is necessary to go a long way to achieve the objective. In the end, with the experience you get, you will be able to reduce costs and improve the system in general.

Daniel Felipe Rambaut Lemus