

## **TRANSITION TO THE CLOUD. STRATEGIES FOR A FLAWLESS MIGRATION**

Online sales services have become one of the most used purchasing methods worldwide, given this, hundreds of e-shops have appeared both big and small. All those e-shops must be structurally solid to avoid problems with the shoppers and internal problems inside the company. The transition to a cloud-based service means a huge step but at the same time a very delicate one. Going from an own data center to a cloud service has a lot of advantages as well as disadvantages, therefore a strategy must be followed to take full advantage of the rewards and shielding the company to the disadvantages that appear on the migration process.

Taking into account that the migration from an own data center into a cloud-based service's main reason is the sales increase on the e-shop during the tax-free days. Situations like these ones cannot occur again, therefore, it's of vital importance to have enough cloud space not to compromise the scalability of the company. The system has to be able to maintain its quality and don't present failures on the days with high demand like the already mentioned tax-free days, Christmas, etc. Giving proper use to the flexibilities provided by a cloud-based informatics system, it's possible to reach many more buyers and likewise expand company portfolios without incurring extra expenses. Factors like flexibility are also involved in the capacity that the cloud has. Cloud storage capacity must be enough for the proper response of the servers. Those must be effective enough so that the server's processes like selling, registers of products, etc. can be fast and completely accurate.

In order to guarantee those factors, cloud computing components must be taken into account. Beyond a big storage space in the cloud, there must be efficient servers and well designed and developed virtual platform that will allow full use, search, and extraction of the information stored. This platform must be compatible both with client's mobile devices and their home desktops.

Because it is a shopping website, it's evident that there is a manipulation of customer's personal and bank data. For this same reason, the security of this data must be one of the main concerns of this migration process. For this issue, there are some factors that contribute to the security of this info, all of this under the CIA triad (Confidentiality, Integrity y Availability) framework:

- Taking into account that each client has to register into the e-shop server, as many identity authentication methods as possible have to be implemented at the moment of logging in. "Something that you know" methods like password, pin or pattern, "something that you have" methods like physical tokens, confirmation sms, etc. And "something that you are" methods like fingerprint and facial recognition can be implemented. The user is free to choose how many and which of this MFA (multifactor authentication) wants to use.

- Once the users get registered on the e-shop servers they will receive a message asking them for permission to start the own e-shop's VPN, that will be activated from the moment the user logs in until he logs out, this to avoid possible problems for the user when connecting to a free access network, giving him a private and secure connection. This service will be optional and will have an extra cost on the customers receipt.
- It is vitally important to make a commercial alliance with a password management Company that helps the e-shop providing top secure passwords to the users, those passwords having the hardest to guess difficulty level. In turn, implement a discount on the password management subscription. This to encourage the customers to be aware of their own digital security giving the e-shop some help with this.

Beyond the responsibilities that users have with their own computer security, the e-shop has to have its own internal security protocols to avoid users and company's information leak or internal server problems. For this reason, the use of least privilege principle is unavoidable. It helps the e-shop to restrict the info the customers see and their actions on the e-shop. Likewise, there are some figures that must exist inside the e-shops server management. There must be an administrator that is who has all the permissions inside the server (reading and writing), a report generator that only has "reading" permissions, this person cannot manipulate info or change things on the e-shop, and last the customer that only has access to the necessary actions and info to do research, buy, etc. on the website.

It's safe to say that this migration process brings many changes, challenges, and precautions but those are completely necessary because beyond helping the customers and company's security, it allows the spectrum of where the Company can be in the future to be expanded and allows the e-shop as well to have a much better performance.

## **BIBLIOGRAPHY:**

1. <https://support.google.com/webmasters/answer/6073543?hl=es>
2. Hochstadt, A. (2020). The Pros and Cons of VPNs – Everything You Need to Know in 2020. *VPNmentor*. [https://www.vpnmentor.com/blog/pros-cons-vpn/?keyword=&geo=21508&device=&gclid=Cj0KCQjwvb75BRD1ARIsAP6Lcqt\\_k\\_aNj9nrHBdMR8tzpkRqklj\\_szeN9S1Zvu80TXq4S6hzv\\_jKKqN8aAoRTEALw\\_wcB](https://www.vpnmentor.com/blog/pros-cons-vpn/?keyword=&geo=21508&device=&gclid=Cj0KCQjwvb75BRD1ARIsAP6Lcqt_k_aNj9nrHBdMR8tzpkRqklj_szeN9S1Zvu80TXq4S6hzv_jKKqN8aAoRTEALw_wcB).
3. Rouse, M. (2020). confidentiality, integrity, and availability (CIA triad), *WhatIs*, <https://whatIs.techtarget.com/definition/Confidentiality-integrity-and-availability-CIA>.