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Understanding the cloud

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AS THE WAVE of digitalization continues to surge in the Philippines as a direct result of the coronavirus disease 2019 (COVID-19) pandemic, forcing businesses to move their operations to digital platforms, several conversations are emerging around the data being generated: the amount of it, how it is collected, gathered, and stored, how to use it properly, and the ever-looming aspect of cybersecurity over it all.
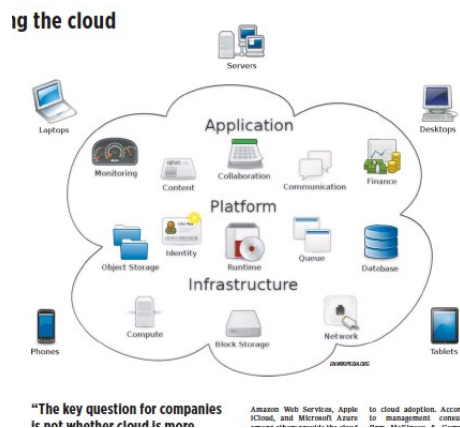
With trillions upon trillions of bytes of data being generated daily, these conversations are necessary. But for the oncebrick-and-mortar family business that has just recently transitioned over to digital platforms, it is often daunting to understand how it all works together.

Cloud adoption is but one of the numerous aspects of going digital. What exactly is it, and how can it improve one's business?

To start with the basics, one must understand how data is stored. In decades past, important files and photos were stored in folders and albums, tucked away in cabinets or storage vaults. It only differs slightly today.

Bytes of data, which could contain important documents, photos, audio recordings, or video, can be stored locally through hardware like disk drives, or internationally through the cloud. The cloud is essentially a storage vault where files are sent and received via the internet.

"At its most basic, the cloud refers to any type of software or service that isn't located on your personal computer or devices but instead runs on the internet. The files, images and videos that you save on cloud services are stored on the servers of third parties, companies such as Amazon, Google, and Microsoft," technology firm Norton wrote on its website.

"You can then get at these files whenever you are using a device connected to the internet. If you've saved photos from your most recent trip to the beach, you don't have to wait until you're at your laptop computer to access them. You can find them by logging onto the internet from any computer or device anywhere."

In fact, cloud services are so popular that you might have been using it without knowing. Google Cloud Platform, Amazon Web Services, Apple iCloud, and Microsoft Azure among others provide the cloud services of websites — from Hulu and Dropbox to Gmail and Office 365.

THE BENEFITS OF THE CLOUD

So why should businesses use the cloud? Or put in another way, why should you hand over your important, private data over to other companies through the internet?

Historically, many businessmen have asked the same question, citing the security of public cloud infrastructure as one of their top concerns and a barrier to cloud adoption. According to management consulting firm McKinsey & Company, however, in recent years all major cloud service providers (CSP) have made significant strides in assuaging fears over security.

"A CSP's business model depends on best-in-class security, and they have each invested billions in cloud security and in hiring thousands of the top cyber experts. They have developed an array of new tools and methods to make cloud secure, in many cases requiring developers to take on the security responsibility, rather than relying on a traditional security team to carry the burden," McKinsey wrote on their website.

McKinsey noted that this is particularly important because public cloud breaches have almost all been driven by enterprise customers' insecure configurations.

"The key question for companies, therefore, is not whether cloud is more secure to begin with, but what measures they need to take themselves to enhance their cloud security," the firm added.

Norton further explained that cloud services are backed by massive corporations that can provide robust and powerful security measures to protect their data. Usually, servers where data is stored are located in warehouses that are inaccessible to most workers. To add to that, most files stored on cloud servers are encrypted, or are coded to make it far harder for cybercriminals to access.

Cloud servers are also consistently updated with the latest security measures to keep abreast of cyber risk, and are using advanced technologies like artificial intelligence to protect your data.

"This is important: It's not easy to find experienced security professionals to oversee data. Cloud providers, though, can instead turn to AI to tackle at least the first level of security analysis. These programs rely on built-in algorithms to seek out and identify possible vulnerabilities in security measures," Norton wrote.

Finally, there is redundancy in the cloud, meaning that they copy data several times and store them on many different data centers, protecting them from outages and other problems and keeping the data in them accessible to their owners. —

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