CLOUD COMPUTING vs. ON-PREM ENVIRONMENT

The difference between cloud computing and on-premises(on-prem) environment hinges heavily on their definition.

CLOUD COMPUTING

This refers to the use of hosted servers, such as data storage, servers, databases, networking, and software over the internet. Although this data are stored on physical servers, they are maintained and secured over a cloud service provider usually referred to as “web”.

ON-PREM ENVIRONMENT

Contrary to “cloud”, on-premises environment is a physical setting in which software and hardware are installed locally on a system, structured within a facility.

Below are a few features of both services and how they differ:

- **COST**

Cloud computing services are significantly cheap and is charged according to usage. Budget friendly as organizations can predict cost over time and do not have to border about additional hardware investments whereas;

The initial up-front investment for an on-prem set-up is unarguably large considering that organization will be required to pay for infrastructure, hardware install, maintenance, IT personnel cost, e.t.c

- **CUSTOMIZATION**

Cloud computing service providers offers a flexible and customized structure from the vendor, user-friendly interface in which greater stability and regular updates is constant. This gives it an edge over;

On-prem environment where the organization controls, implement and customize the solution. This may lead to issues like latency, software malfunction due to updates, software down-time and so on.

- **SECURITY**

Cloud computing service providers ensures an that high security measures are being put into place to secure data. There are different levels to the security levels implemented by most CSP vendors in that it is almost impossible to access information without permission, a good example is the “Virtual private cloud” that enables users to launch AWS resources logically in an isolated section in the AWS cloud. On the other hand;

On-prem environment, security is solely controlled by the organization. The authenticity of the security provided depends on the validity and expertise of the organisation’s IT personnel.

- **DEPLOYMENT**

With cloud-based solutions, servers can be located remotely and accessible online. The physical housing and maintenance of these servers fall under the responsibility of cloud service providers. It eliminates the need for on-site space or upkeep.

On-premise solutions are based on a company's IT infrastructure to create solutions. They use the enterprise's resources, space, and power within the company's domain. The company has to maintain all processes associated with this solution.

ADVANTAGE OF ON-PREM ENVIRONMENTS

Although Cloud-based systems offer ease, highly customized service for solution amongst many others. On-prem environments to a certain level pose to be more suitable in specific cases.

Here are a few cases:

- **Control**: On-premise solutions offer more control over their data and hardware. Companies manage their servers and software configurations. It is ideal for regulated industries that require high data privacy.

- **Compliance**: Certain sectors like banking and government require enhanced security. It is generally achievable with an on-premise environment. Despite being costlier and having limits, it is preferred for its ability to ensure high-level data privacy.

- **Little or zero internet dependency**: On prem solutions can function independent of internet access as data are secured within the organization's framework and can be accessed easily.

- **Security**: Everything is in-house, data are stored privately within the organization's framework making it difficult for third-party access or any case of data breach.

- **Terms & conditions**: The terms and conditions for implementation and services are solely managed by the organization and can be adjusted periodically to suit specific needs to achieve targeted goals.

Whether you should choose on-premise or the cloud-based systems is highly dependent on the requirement.