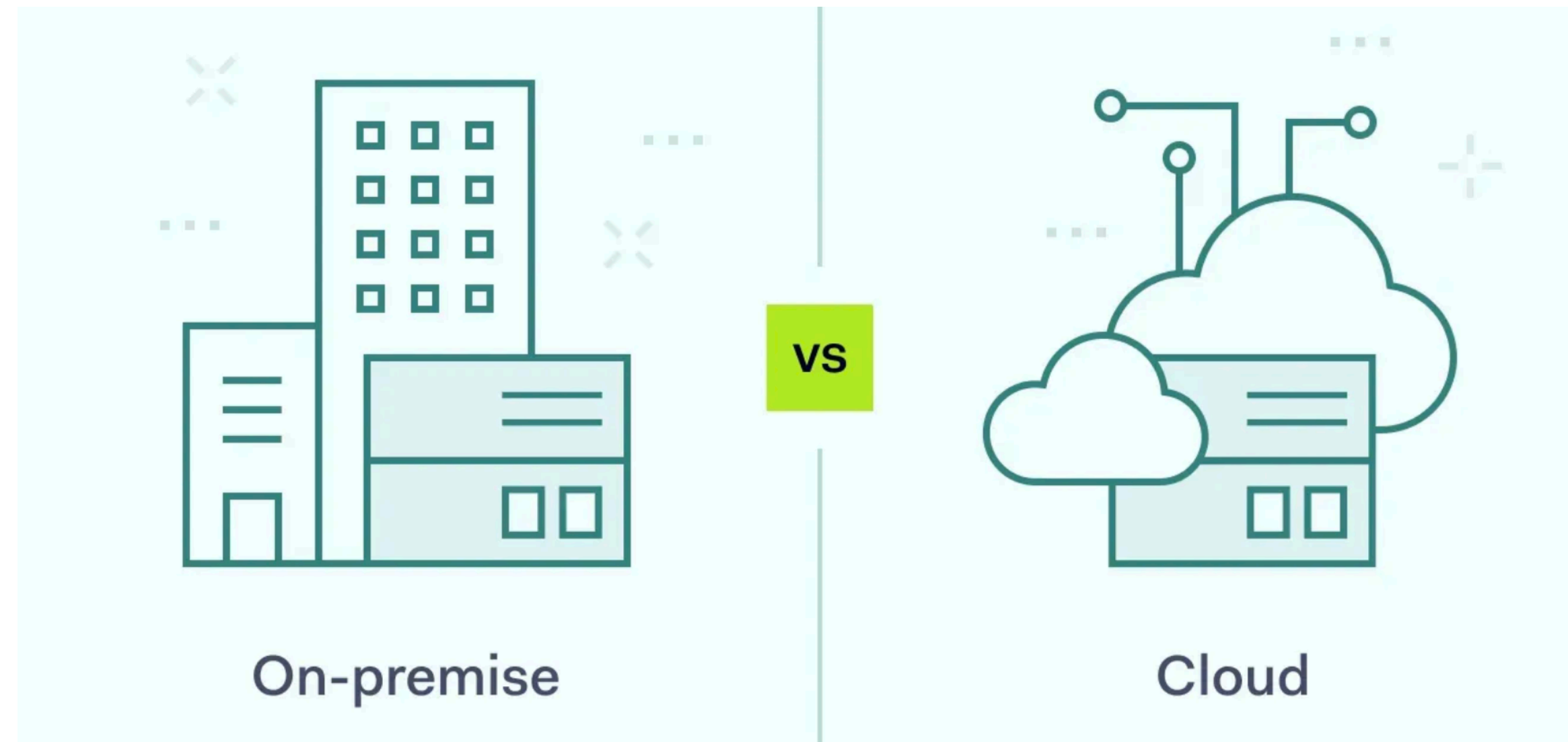


# On Premises VS On Cloud



**On Premises :** In on-premises, from use to the running of the course of action, everything is done inside; whereby backup, privacy, and updates moreover should be managed in-house. At the point when the item is gotten, it is then installed on your servers; requiring additional power laborers, database programming software and operating systems to be purchased. With no prior commitment, you anticipate complete ownership.

**On Cloud** : Cloud refers to the delivery of on-demand computing services over the internet on “Pay As U Use “services, in simple words rather than managing files and Services on the local storage device you can do the same over the Internet in a cost-efficient manner. With a Cloud-based enrolment model, there is no convincing motivation to purchase any additional establishment or licenses.

Difference between On-Premises and On Cloud :

**Scalability –**

When it comes to scalability we pay more for on-premises set up and get lesser option too and once you scale up it is difficult to scale down and turn into heavy loss like infrastructure and maintenance cost while on the other hand Cloud allows you to pay only how much you use with much easier and faster for scaling upper and down.

**Server Storage –**

On-premises need a lot of space, power, and maintenance to store while on the other hand cloud solution are offered by the provider and maintain the server which saves your money and space.

## **Data Security –**

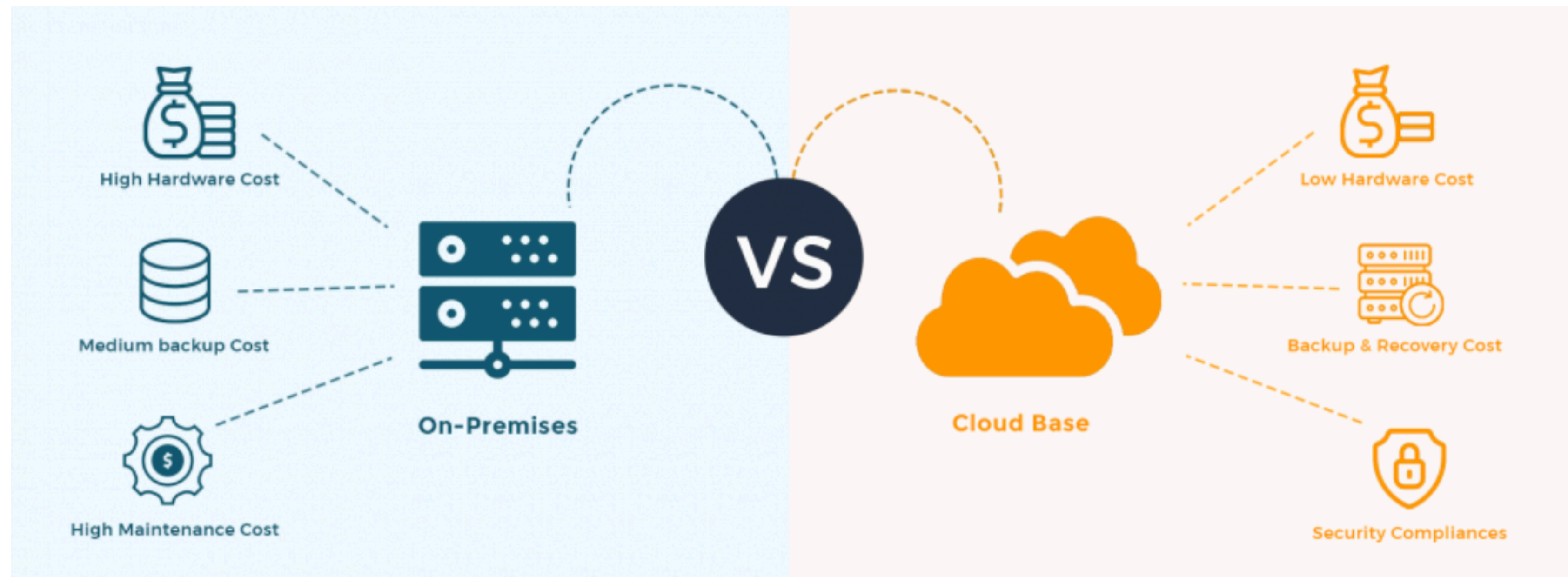
On premises offers less security and for security, we need physical and traditional IT security measures whereas the cloud offers much better security, and I avoiding all other physical and other security options.

## **Data Loss or Recovery –**

If data loss occurs recovery in on-premises is very least while cloud offers you the backup for easier and faster data recovery.

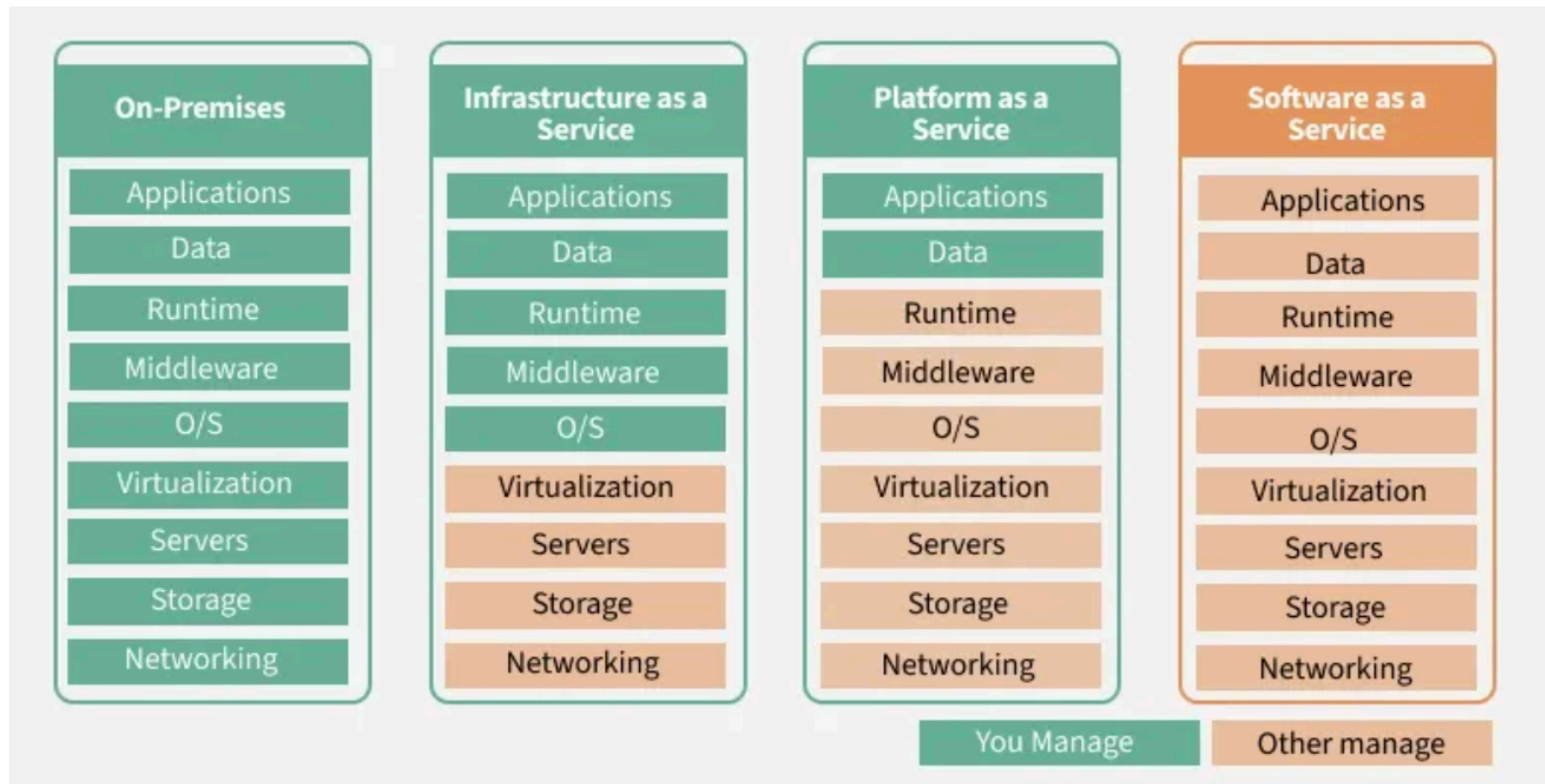
## **Maintenance –**

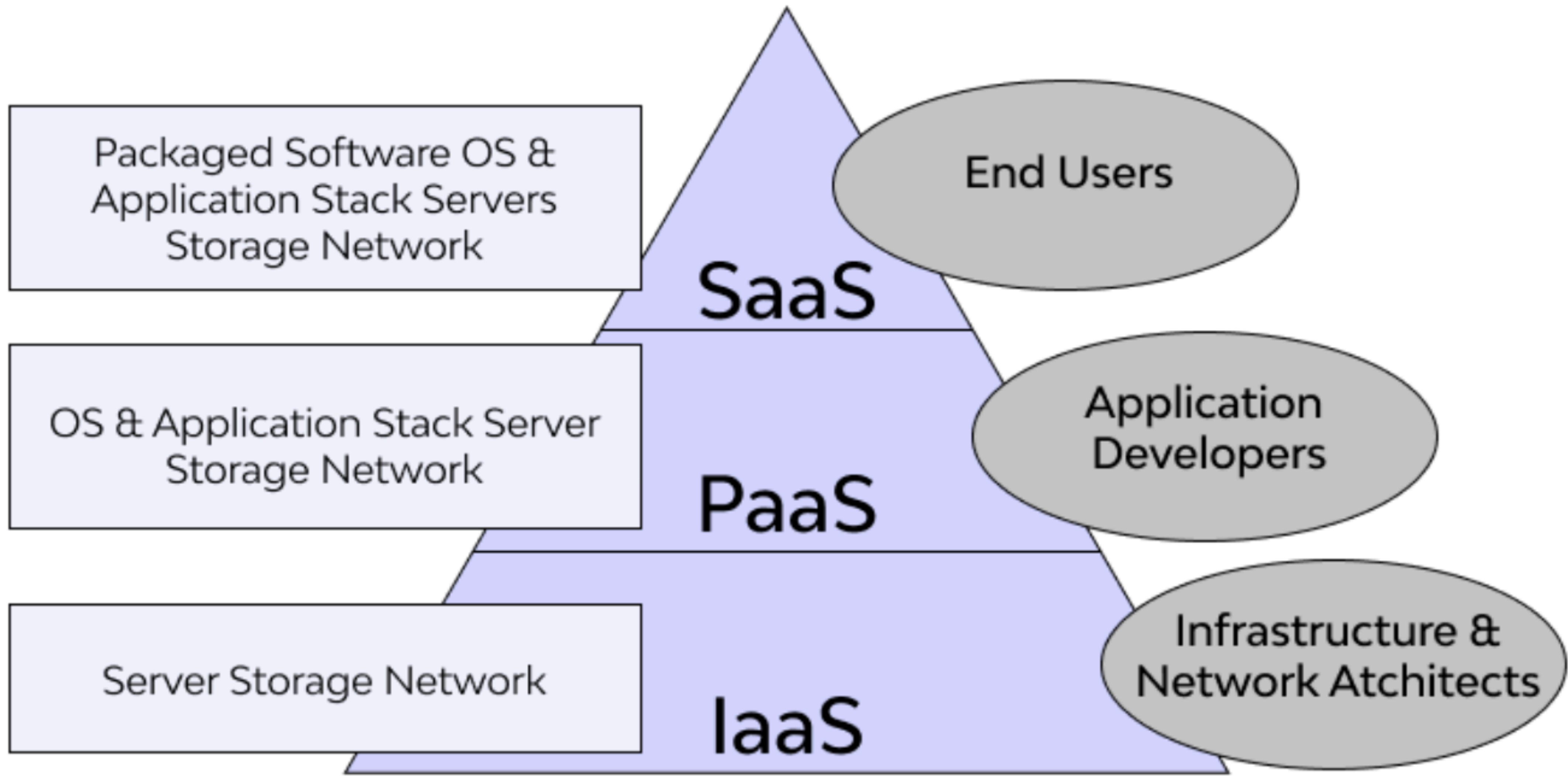
On premises require an extra team for maintenance which increases the cost while the cloud is maintained by the provider.





**Cloud Computing** has transformed the way companies access, manage, and expand their IT resources. Among the many cloud services models, IaaS(Infrastructure as a Service), PaaS(Platform as a Service), and SaaS(Software as a Service) are the most popular. Each of these models provides different services, which are appropriate for various business requirements and technical capabilities.





# Difference between SaaS, PaaS and IaaS

## **Software as a Service(SaaS)**

SaaS is cloud-hosted application software delivered over the internet to compatible computing devices. SaaS providers operate, manage and maintain the software and the infrastructure on which it runs. Instead of buying application software and installing on a local device, SaaS users simply create an account, subscribe to the application and get to work.

**Examples:** Google Workspace (Gmail, Google Docs), Microsoft 365, Salesforce, Dropbox, Netflix.

## **SaaS – Key Features**

- SaaS vendors provide users with software and applications via a subscription model.
- SaaS providers manage, install or upgrade software and not the user
- Data is secure in the cloud; equipment failure does not result in loss of data.
- Use of resources can be scaled depending on service need
- Applications are accessible from almost any internet-connected device, from virtually anywhere in the world.



# **Platform as a Service(PaaS)**

PaaS is a cloud computing model that provides a complete on-demand cloud platform (hardware, software and infrastructure) for developing, running, maintaining and managing applications. The PaaS provider hosts everything—including servers, networks, data storage, operating system (OS) software, databases and development tools—at their data center.

PaaS enables businesses to build, test, deploy, run, update and scale applications faster and cheaper than they would with an internally developed and managed, on-premises platform.

**Examples:**Google's App Engine, IBM BlueMix, Apache's Stratos

## **PaaS – Key Features**

- PaaS provides a platform with tools to test, develop and host applications in the same environment.
- Enables organizations to focus on development without having to worry about underlying infrastructure.
- Providers manage security, operating systems, server software and backups.
- Facilitates collaborative work even if teams work remotely.

## **Infrastructure as a Service(IaaS)**

IaaS is a form of cloud computing that delivers on-demand access to cloud-hosted compute, storage and networking—the backend IT infrastructure for running applications and workload in the cloud. It enables businesses to scale resources as needed, and reduces the need for significant upfront capital expenditures or complex on-premises infrastructure configurations. Businesses often rely on IaaS tools to manage their high-performance workloads, especially in the case of "spiky" workloads that are prone to sudden surges of user activity.

**Examples:**Amazon EC2, IBM SoftLayer, and Google's Compute Engine (GCE),Microsoft Azure Virtual Machine

### **IaaS— Key Features**

- Instead of purchasing hardware outright, users pay for IaaS on demand.
- Infrastructure is scalable depending on processing and storage needs.
- Saves enterprises the costs of buying and maintaining their own hardware.
- Because data is on the cloud, there can be no single point of failure.
- Enables the virtualization of administrative tasks, freeing up time for other work





Infrastructure



Platform



Software



IaaS

PaaS

SaaS

**Key Benefits**

- Scalability
- Cost & time savings
- Flexibility

**Key Benefits**

- Speed
- Customization
- Flexibility

**Key Benefits**

- All-inclusive
- Cost-efficient
- Accessible

**Challenges**

- Integration
- Security
- Staff Training

**Challenges**

- Integration
- Compatibility
- Control

**Challenges**

- Customization
  - Interoperability
  - Control
- 