Cloud Computing

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P.A.A.S.
platform as a service

PAAS
The company provides the platform and infrastructure while the Software is maintained by the user.

This means:

User - manages applications

Provider - manages everything else (runtime, middleware, virtualization, servers, storage, networking)

allows you to launch and create new applications in their cloud

ADDITIONALLY,

Providers can provide public cloud, private cloud and/or hybrid PaaS alternatives.

PaaS SCENARIO

Company A needs to build a new console app

with PaaS, Company A can Own the apps,
but rent the resources by contracting a provider(i.e. Microsoft)
to give them said resources (I.e. the .Net framework).

Benefits: **Less time coding** since dev tools for the framework
and resources are provided. **Use sophisticated tools affordably**
with a pay as you go model to avoid outright costs periodically.

S.A.A.S.
software as a service

SAAS
Company provides software, platform and infrastructure to users.

This Means:

Users: have the ability to use the provided services under whichever model the provider chooses.

Providers: provide the full software package that is maintained by the author in their cloud.

They want everything to be owned & operated by the provider. Updates are easier to publish.

ADDITIONALLY,

The software is delivered as a service,
usually pay as you go.
Providers typically want to own &
operate everything.

SAAS SCENARIO

Group TWO LLC. needs to host weekly meetings

with SaaS, Group TWO LC. can own the apps,
while the contracted provider (i.e. Google) maintains the
resources needed for the software to work as intended(I.e. the
Google Meet).

Benefits: **Pay only for what you use** since the software can scale
up or down elastically. **Use free client software** since most SaaS
apps can run directly from your browser.

IAAS SCENARIO – Public Cloud Computing Type

Create the apps, Create the resources, Rent the infrastructure.
Service: IBM Iaas Solutions

Company C needs to create their own applications in the cloud but needs the most control possible over their platforms to distribute it. A company in this situation needs fundamental control over computer resources and has operating control over operating systems, storage and networks.

PUBLIC VS. PRIVATE VS. HYBRID

PUBLIC CLOUD

Company shares hardware, storage, and network infrastructure with other companies, aka "cloud tenants."

"It is like you are renting a room in an apartment complex."

- Cheap or free
- No maintenance fee
- Automated deployment
- Reliable

Disadvantages:
- **No control over infrastructure.**
- **Security at high risk**
- **As company expands, the cost can grow exponentially**

WHO USES PUBLIC?
- SAAS, PAAS, IAAS
- AZURE, DROPBOX

Private cloud

Physically located at the company's datacenter (or operated by a third-party vendor off-site).

It's like you own a house.

- Control over everything
- Secure
- Private from other companies

Hybrid cloud

It is a type of integrated cloud infrastructure that includes both public and private options according to specific business needs and requirements.

It's like renting an apartment.

- Cost effective
- Data separation
- Security

Disadvantages:
- Incompatibility.
- Complex
- Close maintenance

WHO USES PUBLIC?
- NETFLIX
- PINTEREST
- EVERNOTE