Cloud Computing

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SaaS

Software as a Service

Advantages

- Works with cloud programs

Limitations

- Third party
- Software Integration Problems

When to Use

- Start Ups
- Short term
- Applications

Hypothetical Situation

- Support chat

PaaS (Platform as a Service)

When to Use:

- When you need a virtual cloud environment to allow of the development, testing, delivering, and updating of software when you do not have the servers or other infrastructure that is needed to host it.
- Beneficial to use when there are multiple developers working on the same project.
- Often used with hybrid model where there is a public and private cloud.

Advantages:

- Cheap, rapid, scalable, and simple deployment.
- Developers do not need as much code to develop the app

Limitations:

- Integration between company and 3rd party clouds.
- Proprietary data may now be stored on 3rd party servers.
- Platform may not have be able to integrate legacy systems.

IaaS

Infrastructure as a Service systems allow a client to avoid the cost and complexity of managing and maintaining local server systems and data centers themselves.

Hypothetical: A server farm for hosting video game servers for clients to purchase and play on over the internet. The model is a monthly fee for $X.XX / month per player slot on the server, or $X.XX per GB of memory allocated to their server per month, (whichever value accrues a higher price point.)

Type of Cloud: Public. Clients access servers provided to their accounts by using a web browser. They may then modify their server configurations via such an interface.

Advantages: Pay for what you use. Stone-set price points makes budgeting easy to account for.

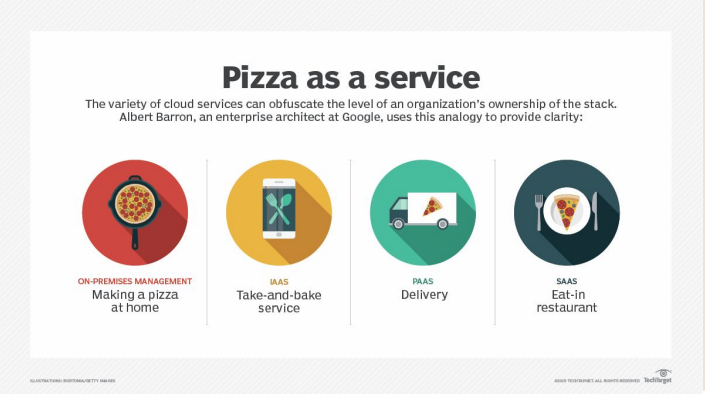
Limitations: Managing service availability / striving for perpetual uptime. Troubleshooting, maintenance and support staff are essential. International laws and regulations can also prove to be a hurdle in some instances.

When to Use:

- When you need servers, but also need to manually install, configure, and manage your own software. You are essentially renting property from a digital landlord.

Real-World Example: Microsoft Azure (SQL Database)

Examples



- SaaS: Zoom as a hosted software service to hold online meetings and video conferencing without needing to download software
  - Ideal for smaller company or divisions that need web access as well as easy and affordable collaboration
  - Popular during the initial work from home cohort during Pandemic despite security and privacy concerns
- PaaS: Microsoft Azure as a platform for development, database management and business analytics
  - Developers can “plug and play” applications and data which allows building customized solutions rapidly as well as resource scaling up or down as needed
  - Data sitting with a third party vendor could pose security and privacy risks
- IaaS: AWS providing on demand networking, storage and infrastructure components over the internet.
  - No need to utilize and maintain expensive, physical servers whether you are a large or small company. Netflix uses AWS with over 100,000 server instances
  - With resource allocation, you may not be able to access resources as quickly as you need them. But having 100% availability can be *extremely* costly.
  - Need we mention privacy again….