

What the [] is “The Cloud”?

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Do you Use the Cloud?



Do These Definitions Clarify It?

- "Clouds are vast resource pools with on-demand resource allocation" (Pritzker).
- "The 'Cloud' concept is finally wrapping peoples' minds around what is possible when you leverage web...infrastructure...in an on-demand way. "Managed Services", "ASP", "Grid Computing", "Software as a Service", "Platform as a Service", "Anything as a Service"... all terms that couldn't get it done. Call it a "Cloud" and everyone goes bonkers. Go figure" (Edwards).
- "Cloud computing enables companies to consume compute resources as a utility -- just like electricity -- rather than having to build and maintain computing infrastructures in-house" (Rouse).

Still Confused?

- The Cloud is actually a term that is more accurately termed Cloud Computing.
- Cloud Computing refers to computing that is done on servers or devices accessed over the Internet.
- Cloud Computing is ubiquitous and distributed as long as you have an Internet connection.
- The physical location your data and programs is unknown.
- As a user, you typically connect to cloud computing through a web browser or App.

The Old Way

You connect to physical servers owned by your organization that contain the software you use to do your job.



Company Server



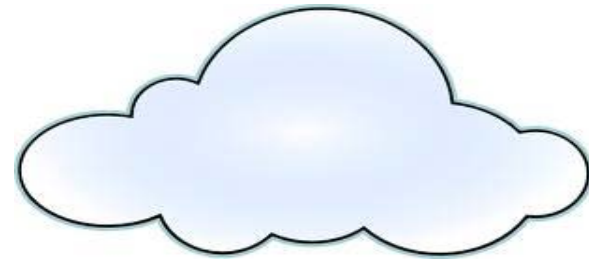
Project Management
Accounting Software
Enterprise Software
Sales and CRM
Storage & Documents
Email/Web/Collaboration

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SUGARCRM.

The New Way



You connect to the Internet where servers owned by your vendors contain the software you use to do your job.

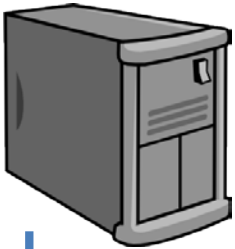


Project Management
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Old



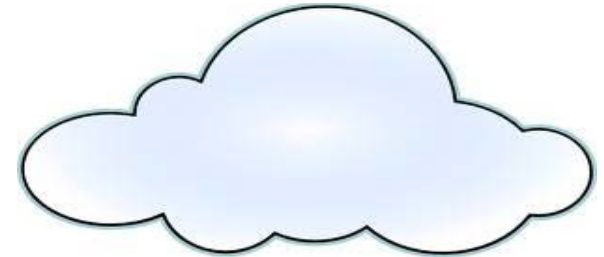
Company Server



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Side by Side
Comparison

New



Project Management
Accounting Software
Enterprise Software
Sales and CRM
Storage and Documents
Email/Web/Collaboration

Consider Email As An Example



Most people have a free email account with one of these companies. If you have one of these accounts you:

- Do not know where the physical email server is located
- Do not know the IP address of the physical server (computer)
- Never need to provide maintenance or upgrades to software
- Do not know what software is operating the email server

You also DON'T CARE!

As long as your email is reliable and secure.

This is how *The Cloud* works...

Buy vs. Rent for Technology

Your IT Infrastructure is like the house:

- You own software/hardware
- You pay a fixed amount
- You pay for maintenance and upgrades
- Unlike a house, technology does not appreciate
- Moving is complex and messy



The Cloud treats your Infrastructure like an apartment:

- You do not own software/hardware
- You pay a subscription fee
- Do not pay for maintenance or upgrades
- No depreciation of software and hardware
- Moving is relatively easy



Types of Cloud Service

- Storage
- Database
- Information processing
- Application
- Platform
- Integration
- Security
- Management/governance
- Testing
- Infrastructure

Types of Clouds

PUBLIC Cloud : The Public Cloud allows systems and services to be easily accessible to the general public. Public cloud may be less secure because of its openness, e.g., e-mail.

PRIVATE Cloud : The Private Cloud allows systems and services to be accessible within an organization. It offers increased security because of its private nature.

HYBRID Cloud: The Hybrid Cloud is mixture of public and private cloud. However, the critical activities are performed using private cloud while the non-critical activities are performed using public cloud.

Common Models

- **Software as a Service:** SaaS is when software is run on the Internet and not from your computer.
 - Usually billed based on usage
 - Usually multi tenant environment
 - Highly scalable architecture

Common Models

- **Platform as a Service:** PaaS provides a platform for you to deploy software or virtual computers.
 - Typically applications must be developed with a particular platform in mind
 - Multi tenant environments
 - Highly scalable multi tier architecture

Common Models

- **Infrastructure as a Service:** IaaS provides computers, storage, databases and other types of infrastructure components.
 - Usually billed based on usage
 - Usually multi tenant virtualized environment
 - Can be coupled with Managed Services for OS and application support

'Software as a Service'



Google apps

Dropbox

Salesforce

This box contains logos for various SaaS providers. On the left, a circular arrangement of icons represents Google's suite of applications. To the right, the logos for Dropbox and Salesforce are displayed.

SaaS

'Platform as a Service'



Windows Azure

Google App Engine

force.com platform as a service

This box contains logos for PaaS providers. It features the Windows Azure logo, the Google App Engine logo, and the force.com logo with the tagline 'platform as a service'.

PaaS

'Infrastructure as a Service'



amazon web services

Rackspace cloud

This box contains logos for IaaS providers. It features the Amazon Web Services logo and the Rackspace Cloud logo.

IaaS

Benefits of Cloud Computing

- System automatically handles supply and demand issues.
- System permits you to scale resources to match your organization.
- Utility model - you pay for computing & storage as you use them.
- Low barriers to entry.
- Instant software updates.
- Unlimited CPU, Memory, and Storage capacity.
- Increased data reliability.

The Cloud is Device Independent



Since most assets are accessed via apps or browsers, there is a large amount of device independence.



Disadvantages of Cloud Computing

- Requires a constant Internet connection.
- Does not work well with low-speed connections.
- Stored data might not be secure.
- Stored data can be lost.
- Each cloud systems uses different protocols and different APIs.
- Cloud providers create their tools and workflow systems.
- Features might be limited.
- That cloud can be slow.

Growing uses for SMBs

Microsoft surveyed small and medium businesses (SMBs) and found that in the next three years those SMBs paying for cloud services will be using 3.3 services, up from fewer than two services today.

SMB Examples

- CRM (Salesforce.com)
- Storage (Dropbox)
- Email (Gmail for your company.com)
- Accounting (Quicken.com)
- Marketing (Hootsuite)
- Project Management (Basecamp)
- Collaboration (Huddle)
- Helpdesk and Support (ZenDesk)

Revenue Models - Consumer Cloud

- Often free applications in exchange for advertising.
- Privacy invasion and selling of personal data.
- Targeted and untargeted marketing.
- Reliability is good but no accountability if service is free.
- Services is not reliant.

Consumers already use The Cloud

The Facebook logo, consisting of the word "facebook" in white lowercase letters on a blue rectangular background.

facebook®

The Gmail logo, featuring the word "Gmail" in its signature multi-colored font with a red envelope icon for the letter 'M', and "by Google" in a smaller grey font below it.

Gmail™
by Google

The YouTube logo, with the word "You" in black and "Tube" in white inside a red rounded rectangle.

You Tube

The Google Drive logo, featuring a colorful triangular icon (green, yellow, blue) and the text "Google Drive" to its right.

Google Drive

The Netflix logo, with the word "NETFLIX" in white, bold, sans-serif capital letters on a red rectangular background.

NETFLIX

The iCloud logo, featuring a silver metallic square icon with a cloud shape inside, and the word "iCloud" in black text below it.

iCloud

Revenue Models – Business Cloud

- Often charge a flat subscription fee.
- Or charge for each person using the service (per seat).
- Pay-as-you-go.
- No advertising.
- No privacy invasion.
- High Reliability – Accountability from subscription.
- Security and compliance issues may arise from offsite data.

Some Popular Business Cloud Apps:

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Take Away's

- The Cloud and Cloud Computing lets you purchase reliable, state-of-the-art technology as a subscription.
- The Cloud lets you scale services.
- The Cloud puts the burden of upgrade, maintenance, and security on the vendor.
- Even an SMB can benefit from having cloud computing companies run your technology systems.
- Security, compliance, and governance can still be an issue.
- IaaS – Build
- SaaS – Buy
- PaaS - Deploy

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Questions?

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