

The Cloud

Cloud Computing in the Digital Age

Cloud computing is a term used to refer to a computer situation where a program runs on a remote server rather than on a local computer, tablet or smartphone. Instead of using YOUR system's resources, it relies on the remote computer's system resources to process the task(s).

Generally speaking, "Cloud" services are ways that you can use other peoples' computers (servers) as storage for your own personal files, programs, and other such things.

You might think of the cloud as just another way of saying "Internet". You can prefix the term "Cloud" to just about anything, and it basically means "an online/internet accessible version of" whatever you are referring to.

For example:

Cloud Storage = Online storage of your personal files

Cloud Router = A router which can be used to share access to your computer/files from anywhere there is internet

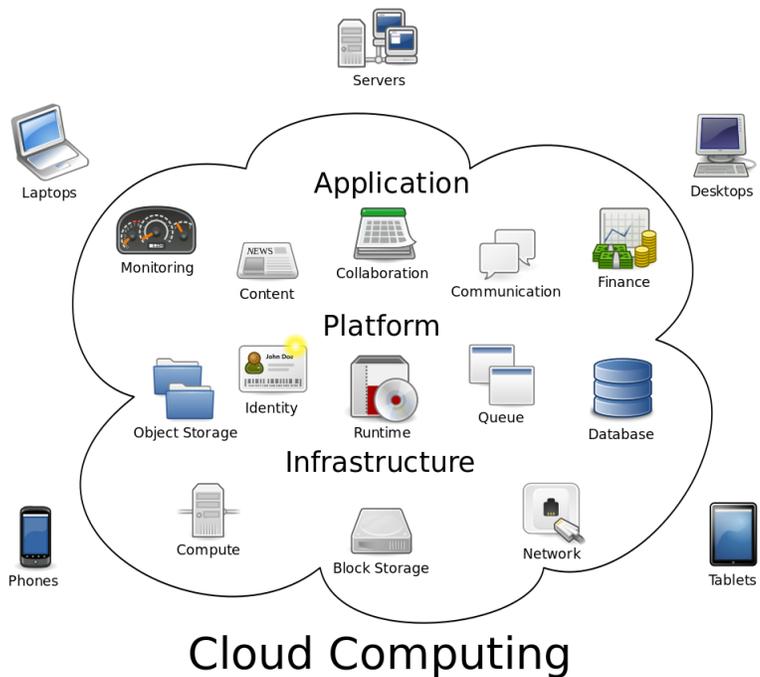
Cloud Music = Storing your music on a remote server for playback via internet anywhere in the world

Why Use The Cloud?

- Access your files from any computer (e.g., resumes)
- Playing movies/music anywhere
- Conserving storage space on your device

Origin

The term “The Cloud” came from the cloud symbol that computer engineers used on network diagrams to represent the unknown segments of a network (computers accessed via the internet in a networked environment they don’t manage themselves).



Cloud computing has 5 essential characteristics:

- **On-demand self-service:** A user can access and use the service as much as needed automatically without requiring human interaction with each service provider.
- **Broad network access:** Capabilities are available via standard means over the internet and on any system (mobile phones, tablets, laptops, and desktop computers).
- **Resource pooling:** The cloud provider's computing resources are pooled to serve multiple consumers.
- **Rapid elasticity:** Capabilities can be dynamically increased and decreased, to scale rapidly outward and inward with demand. To the consumer, the capabilities available often appear unlimited.
- **Measured service:** Cloud systems automatically control and optimize resource usage by metering usage of service. Resource usage can be monitored, controlled, and reported, for both the provider and user.

Types of Clouds

Private cloud: The provider uses a separate system for each user.

Public cloud: The provider uses the SAME system for multiple users.

Partner cloud: Same as private, but hosted by a third-party company.

Distributed cloud: Handled by different systems at multiple locations, but offering the same service throughout, often including redundancy.

Types of Cloud Services

Software as a Service (SaaS): “On-demand software” running on a remote computer rather than the one you are using.

Example: Webmail, GoogleDocs

Hardware as a Service (HaaS): Using other peoples’ hardware (computers or other systems) instead of your own directly attached devices.

Example: remote printing/processing

Infrastructure as a service (IaaS): Virtual Machines running from a remote computer (server) outside of the location you are accessing them from.

Example: A server being run from a remote location rather than the location it is being accessed from. This is often accessed using a VPN (Virtual Private Network) for a secure connection.

Platform as a service (PaaS): Web tools for programming software for a different device than what you are coding for (tablets, smartphones, Macs, etc.)

Example: Microsoft Azure

Specific Cloud Services

Cloud Storage: Storing your files on a remote computer, to be accessible anywhere there is internet.

Type: IaaS

Example: Dropbox, Amazon Cloud Drive, Google Drive

Cloud Backup: Backing up your computer or device to a remote server, as opposed to your own computer.

Type: SaaS/IaaS

Example: Apple devices

Cloud Hosting: Storing your website on a remote computer, rather than hosting it through the company you bought the domain name from.

Type: IaaS

Example: SoftLayer.com

Cloud Printing: Printing something to your home or office printer while you are away for that location.

Type: HaaS

Example: Most new HP printers offer this.

How Much Will This Cost?

The answer is really "It depends". You may find that some of these services are available for free. Most of the time, this is because of advertising located somewhere in the service. The provider may also offer more advanced features in a paid offering, and is just offering a smaller simpler version as a sample, with some limitations. The only way to know is to try, and they cannot charge you for anything if you don't give them your payment info, so you usually have nothing to lose!

Privacy/Security Concerns

As with any service, putting YOUR files on somebody else's computers may cause a concern for privacy. Naturally, you will want to go with a reputable vendor, and be sure you read the provider's Privacy/Security section on their website (usually located at the bottom), or read through their FAQ section for a quick rundown on their service.

You might even email them asking for more details. If you can't get the information you are looking for, I would consider it an unsafe web service and forget about it...

Web host	Free GB	Max. file size	Direct access	bandwidth limit	File expiration	Remote upload	Developer API	FTP upload
Baidu Cloud	2000	?	Yes	None	None	?	?	?
Fileserve	500	1 GB	No	None	60 days after last download (free)	No	?	Yes (except for non-accounts)
Firedrive	50	50 GB	No	None	60 days after last download	Yes for all users	No	Yes
Mega	50	browser mem capability	No	Free (50 GB): 10 GB traffic/30 minutes	None	No	Yes	No
Google Drive	15	1 TB	Yes	None	None	No	OAuth2	No
Box	10	250 MB (free Personal)	Yes	10 GB/month (free)	None	No	Yes	Bus./Ent. customers only
RapidShare	10	100 GB	No	limit removed (1100 kbit/s)	None for any Rapid users.	5 at a time	Yes	?
MediaFire	10	10 GB (free)	No	None	1 year but "no data warehousing"	Yes	Yes	No
Tencent Weiyun	10	4GB (regular upload)	Yes	None	None	?	?	?
OneDrive	7	2 GB	Yes	None	270 days of account inactivity	No	Yes	?
Synaptop	5	5 GB	Yes	None	None			Yes for enterprise
IBM Connections	5	2 GB	Yes	None	None	No	CMIS, REST, Atom & OAuth2	No
iCloud	5	1 GB	Yes	200/400 GB/month	None	No	WebDAV	?
Amazon Cloud Drive	5	2 GB	No	Amazon S3 limits	None	No	No	?
ASUS WebStorage	5	500 MB (free)	No	Daily limit: 0.5 GB	?	No	No	?
CloudMe	3	150 MB (free)	No	None	None	No	REST, SOAP, WebDAV ^[16]	?
SpiderOak	2	?	Yes	None	None	No	Yes	No
Dropbox	2	10 GB.	Yes	20 GB/day (free)	None	No	Yes	No