1950s - increasingly complex and ever-changing system of mainframe computers to process data

1960s and 1970s - time-sharing - rent the mainframe computer, use them and pay according to usage - Pay by use

1993 - The term *cloud* was used to refer to platforms for [distributed computing](https://en.wikipedia.org/wiki/Distributed_computing)

1996 - In Compaq Computer office, small group of technology executives plotted the future of Internet Business calling it “Cloud computing”

2006 - Google and Amazon started using term “Cloud computing” frequently.

And from then on, popularity grew.

Before cloud: For hosting a website, we need to

Buy a stack of servers

Keep the peak traffic in mind and buy more servers

Monitoring and Maintenance of your own servers.

Problems:

Setup expensive

Troubleshooting problems - tedious

Traffic is varying - some servers stay idle most of the time

After Cloud:

No more buying expensive servers - Put your data on Cloud servers

Scalability - Server capacity varies according to traffic

What is cloud computing:

Remote servers on the internet to store, manage and process data rather than local server on your PC

Basic premise of cloud - shared computational power.

Cloud doesn’t nix or refuse the need for the hardware, software and systems management—it merely encapsulates and shields the user from those aspects.

Structure:

<https://www.uniprint.net/en/7-types-cloud-computing-structures/>

<https://www.youtube.com/watch?v=IT1X42D1KeA>

**Topic slide**

**Definition of cloud**

**History - Year of Intro, How it evolved, Cloud Vs DC**

**Struture of Cloud and its impact on IT Mgmnt - IaaS, SaaS, PaaS, and others, Public, Private, Hybrid clouds**

**Application - IT Mgmnt - > Administration, Service Delivery support, IT Strategy**

**present uses and tools associated/products used in real time (important : IBM Bluemix vs AWS vs Azure Vs Google Cloud)**

**opinion: useful or not?**

**if useful? why? advantages. if not? disadvantages**

**current trend ? recent news and figures/ interesting facts**

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Reference: <https://www.technologyreview.com/s/425970/who-coined-cloud-computing/>

But *Technology Review* tracked the coinage of the term back a decade earlier, to late 1996, and to an office park outside Houston. At the time, Netscape’s Web browser was the technology to be excited about and the Yankees were playing Atlanta in the World Series. Inside the offices of Compaq Computer, a small group of technology executives was plotting the future of the Internet business and calling it “cloud computing.”

Their vision was detailed and prescient. Not only would all business software move to the Web, but what they termed “cloud computing-enabled applications” like consumer file storage would become common. For two men in the room, a Compaq marketing executive named George Favaloro and a young technologist named Sean O’Sullivan, cloud computing would have dramatically different outcomes. For Compaq, it was the start of a $2-billion-a-year business selling servers to Internet providers. For O’Sullivan’s startup venture, it was a step toward disenchantment and insolvency.

Cloud computing still doesn’t appear in the Oxford English Dictionary. But its use is [spreading rapidly](http://www.google.com/trends?q=cloud+computing) because it captures a historic shift in the IT industry as more computer memory, processing power, and apps are hosted in remote data centers, or the “cloud.”

Reference:<https://www.computerworld.com/article/2470751/cloud-computing----more-philosophy-than-technology.html>

At least once a week I end up in a conversation about [cloud computing](http://en.wikipedia.org/wiki/Cloud_computing) with someone who really has no idea what it is. It's hard to blame them as there are so many different things that get lumped into this bucket and the explanations seem to keep changing. With that in mind, I thought I'd provide some very basic definitions that even the neophytes out there can understand in hopes of finding some common ground.

The term "cloud computing" started out as pure marketing and has now found its way into just about every conversation about technology that we have these days. However, before we can start talking about cloud we have to define it.

First, cloud computing at its core is really more of a philosophy than a technology. During [Cisco Live](http://ciscolive.com/) this year I heard it said that "cloud is the journey, not the destination."

Reference: <https://www.ibm.com/blogs/cloud-computing/2014/11/10/cloud-revolutionizing-roles-department/>

Cloud doesn’t nix or refuse the need for the hardware, software and systems management—it merely encapsulates and shields the user from those aspects.

Reference: <https://www.ecpi.edu/blog/a-brief-history-of-cloud-computing>

Millennials may feel like [cloud computing is something from their generation](https://www.ecpi.edu/programs/cloud-computing-bachelor-degree?cmpid=WEBBLOG-ECPI), but the truth is that it actually traces its roots back over 60 years. Since the 1950s, organizations have been using an increasingly complex and ever-changing system of mainframe computers to process their data. In the early days, mainframe computers were huge and prohibitively expensive.

This led most organizations to purchase one or two machines and then implement “time-sharing” schedules so that their return on investment (ROI) was as great as possible. With time-sharing, several users could access a mainframe computer from connected stations that carried no processing power of their own. This type of shared computational power is the basic premise of the cloud.

Reference: <https://en.wikipedia.org/wiki/Cloud_computing#Early_history>

During the 1960s, the initial concepts of time-sharing became popularized via RJE ([Remote Job Entry](https://en.wikipedia.org/wiki/Remote_Job_Entry));[[17]](https://en.wikipedia.org/wiki/Cloud_computing#cite_note-17) this terminology was mostly associated with large vendors such as [IBM](https://en.wikipedia.org/wiki/IBM) and [DEC](https://en.wikipedia.org/wiki/Digital_Equipment_Corporation).

The term *cloud* was used to refer to platforms for [distributed computing](https://en.wikipedia.org/wiki/Distributed_computing) as early as 1993, when [Apple](https://en.wikipedia.org/wiki/Apple_Inc.) spin-off [General Magic](https://en.wikipedia.org/wiki/General_Magic) and [AT&T](https://en.wikipedia.org/wiki/AT%26T) used it in describing their (paired) [Telescript](https://en.wikipedia.org/wiki/Telescript_(programming_language)) and PersonaLink technologies.

Balaji:

IT Management:

Monitoring and Administration of an Organization’s Information Technology Systems: hardware, software and networks.

Goal Of IT Management:

Efficient

High Availability

Reliable

High Performance

IT Management - Infrastructure: On Premises, Cloud, or Hybrid

IT management responsibilities and tasks include:

Determining business requirements for IT systems

Managing IT budgets and costs

Storage Management & Data Protection Management

Monitoring safety and compliance

Controlling system and network security

Implementing new software, hardware and data systems

Troubleshooting Problems, Providing technical or help desk support

Cloud Vendors Through their Suites Provide Features like:

· Provisioning

· Cost Management

· Resource Optimization

· Monitoring

· User Management

· Application Migration

· Usage Analysis through Dashboards and Reporting

· Discovery and Inventory Management

· Patch Management

· Software Distribution

· Security

|  |  |  |
| --- | --- | --- |
| Cloud Vendor | Strengths | Weaknesses |
| AWS | • Market Position  • Offerings  • Large Organizations  • Extensive Training  • Global Reach | • Difficult to Use  • Cost Management  • Overwhelming Options  • Singular Focus - Public Cloud  • Interoperability |
| Microsoft Azure | • Second largest  • Integration - own tools  • Broad feature  • Discounts  • Hybrid Cloud  • Support for Open Source  • Interoperability | • Documentation Issues  • Less Enterprise Focussed |
| Google | • Cloud-native businesses  • Supports Open source  • Portable  • Deep discounts  • Flexible contracts  • DevOps expertise  • Provides Containers  • Machine Learning/Big Data Analytics  • Load Balancing | • Late entrant to IaaS  • Fewer features/services  • Not Enterprise focused  • Not having Global Outreach (Data centers) |

Tools from 3 Vendors Provide(Some Key Features):

App Hosting

Batch Processing

File Storage

RDBMS

No SQL

Machine Learning

IoT

Big Data Analytics

Identity Access Management & Security

Source: <https://www.forbes.com/sites/johnwebster/2019/10/17/it-management-in-the-cloud--how-much-is-really-getting-done-for-you/#172598946736>

<https://www.ibm.com/topics/it-management>

<https://www.ibm.com/cloud/learn/iaas-paas-saas>

<https://aws.amazon.com/what-is-cloud-computing/>

<https://www.datamation.com/cloud-computing/aws-vs-azure-vs-google-cloud-comparison.html>

<https://www.futureofeverything.io/future-of-cloud-computing/>

<https://shastatek.com/cloud>

Fog and edge computing

<https://www.cisco.com/c/en/us/solutions/enterprise-networks/edge-computing.html>

A4 Adv se assignment

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4.1.c root causes of high defecr rate = table

high press on prg to meet deadlines - hi

poor test - hi

no prop docu - med

team mem slec - med

few prog - low

5.1.a root cause 1

5.1.a root cause 2

5.1.a root cause 3

5.1.a root cause 4

root cause for each problem in five whys

old company policies that are used which are responsible for delays

as company shifted to agile proc thr is less docu

same like 1 technolo

lack of mangmnt

poor docu - high

not allow prog multi issue - high

longer approv times from ccb - medium

no pair prog - med

not using methiods suited for proc - low