Cloud Computing Explained

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WHERE THE HELL IS MY DATA?

IT'S THERE, UP IN THE CLOUDS.
Cloud computing refers to the delivery of computing as a service not a product. “The Cloud” is used as a metaphor for Internet.

**Definition:**

“Cloud computing is a new approach that reduces IT complexity by leveraging the efficient pooling of on-demand, self-managed virtual infrastructure, consumed as a service.”

(Available at: [http://www.vmware.com/ap/cloud-computing.html](http://www.vmware.com/ap/cloud-computing.html).)
What is Cloud Computing ... cont.?

*Wikipedia* defines Cloud Computing as:

“... Internet-based computing, whereby shared resource, software, and information are provided to computers and other devices on demand, like the electricity grid.”

**Uses of the Cloud:**

- Helps to use application without installation;
- Access personal files at any computer with Internet;
- This technology allows well-organized computation by centralizing storage memory, processing and bandwidth.
Cloud Computing Market Leaders

(in Lakshmanan 2009)
Deployment Models

- **Private**: Used for a single organization; can be internally or externally hosted.
- **Community**: Shared by several organizations; typically externally hosted, but may be can be internally hosted by one of the organizations.
- **Hybrid**: Composition of two or more clouds (private, community or public) that remain unique entities but are bound together, offering the benefits of multiple deployment models; is internally & externally hosted.
- **Public**: Provisioned for open use for the public by a particular organization who also hosts the service.

Image Credit: *Ohio ERC*
Types of Cloud Computing

- **SaaS**
  - Google Docs
  - NetSuite
  - FreshBooks
  - Salesforce
  - BaseCamp

- **PaaS**
  - Force.com
  - App Engine
  - Azure

- **IaaS**
  - RackSpace.com
  - Go Grid
  - AWS

Image Source: TheGadgetSquare
Cloud Computing Benefits

• Cost efficient
• Almost unlimited storage
• Backup and recovery
• Automatic software integration
• Easy access to information
• Quick deployment
Cloud Computing Limitations

- Security and privacy
  - security
  - identity management
  - application security
- Technical issues
- Prone to hackers
- Legal issues
How does Google Drive fit into the Cloud?

According to Google, Google Drive is: “one safe place for all your stuff”. Google Drive:

– employs the concept of cloud computing to create, store and edit documents as well as spread sheets;
– is the home of Google Docs;
– is a powerful and free online tool for collaborating and editing, and it offers
– a full Office-like suite of functions.
Google Apps

- Email
- Google Talk

Communicate
email, chat, voice calls

- Show & Share
  publish web pages

- Docs & Spreadsheets
  online documents

Create & Store

- Calendar
- Start Page

Organize
events, meetings, contacts, content
## Google Drive’s Pros and Cons

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Limitations</th>
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<tbody>
<tr>
<td>24/7</td>
<td>Security</td>
</tr>
<tr>
<td>Device independency</td>
<td>Internet dependency</td>
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<tr>
<td>Stores and tracks changes</td>
<td>Conversion</td>
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<tr>
<td>Sends large files</td>
<td></td>
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<tr>
<td>Social integration</td>
<td></td>
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<tr>
<td>It supports +20 file formats</td>
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Google Drive Apps

Google Docs
A Microsoft Word like, word processor that is web-based and allows the collaboration of many individuals work on a single document.

Google Slides
A Powerpoint like, presentation application that is easy to share and allows the collaboration of other individuals work on one slideshow.

Google Sheets
An Excel like, Spreadsheet application that allows the collaborations of many individuals work on a single spreadsheet.

Google Keep
A digital online note taker for text, pictures and lists

Google Drawings
An online based drawing application

Google Forms
A digital online roster/survey application that automatically converts into a spreadsheet

Video: [http://www.youtube.com/watch?v=UbvkHEDvow-o](http://www.youtube.com/watch?v=UbvkHEDvow-o)

Collaboration within Google Drive?

- Because documents are cloud-based the owners of files can share their files with others.
- Authorised individuals can edit and critique the shared documents.
- It is great for group presentations or office spreadsheets.
Application Screenshots

Sharing in Google Drive
Are Libraries using Cloud Computing?

Yes, libraries are using cloud computing for the following:

• bibliographic data and preservation;
• licenses and subscriptions;
• institutional repositories;
• virtual library services;
• virtual training and virtual tours;
• research and peer-based collaboration, and
• teaching and learning support.
Library Services in the Cloud
Conclusion

• Cloud Computing is growing rapidly, but Internet access remains the key element in this technology;

• According to Arthur Goldstuck “the digital divide is vanishing as the masses embrace smartphones but people are experiencing the data divide”. He claims that, by 2020, all phones will be smartphones.

• Siyavula has suggested that free access be allowed to sites like global Wikipedia and local open source maths and science syllabus sites.

• Libraries in developing countries are providing free Wi-Fi to their clients.
Conclusion ... cont.

- The security of this technology poses a lot of issues as indicated by the Government Technology Research Alliance (GTRA).

- Cloud Computing is of value to libraries in that related software and data are made available in mobile technologies, including smartphone devices. Therefore, library and information services are accessible 24/7 across boarders.

- Cloud Computing is not yet well understood.
THUNDER AND LIGHTNING ISN'T GOD BEING ANGRY! IT'S MICROSOFT AND GOOGLE FIGHTING IN THE CLOUDS.

Any questions?

Thank you, have fun
References


