Tech Firms Seek to Get Agencies on Board With Cloud Computing

By Kim Hart
Washington Post Staff Writer
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"The government may be outsourcing functions to contractors now, but this takes it to a whole new level," said Jimmy Lin, assistant professor of information studies at the University of Maryland, which has received funding from Google and IBM to research cloud computing.

"And what happens if Google gets hacked by a third party?" he said. "The answer is, nobody knows."

What is policy?
Why is policy important?

What is information policy?
Why is information policy important?

Perception vs. Reality

Cloud Computing: Public Perception

- "Use of Cloud Computing Applications and Services"
  - Study conducted by the Pew Research Center
  - April-May, 2008: sample of 1,553 Internet Users
- Users may not know the term, but it’s already here...
Cloud computing activities
Percent of Internet users who do the following…

<table>
<thead>
<tr>
<th>Activity</th>
<th>All</th>
<th>18-29</th>
</tr>
</thead>
<tbody>
<tr>
<td>User webmail services</td>
<td>56%</td>
<td>77%</td>
</tr>
<tr>
<td>Store personal photos online</td>
<td>34%</td>
<td>50%</td>
</tr>
<tr>
<td>Use online applications</td>
<td>29%</td>
<td>39%</td>
</tr>
<tr>
<td>Store personal videos online</td>
<td>7%</td>
<td>14%</td>
</tr>
<tr>
<td>Pay to store computer files online</td>
<td>3%</td>
<td>9%</td>
</tr>
<tr>
<td>Back up hard drive to an online site</td>
<td>5%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Reasons people use cloud applications

<table>
<thead>
<tr>
<th>Reason</th>
<th>Major</th>
<th>Minor</th>
<th>Not</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy and convenient</td>
<td>51%</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>Ubiquitous access</td>
<td>41%</td>
<td>25%</td>
<td>32%</td>
</tr>
<tr>
<td>Easily shared</td>
<td>55%</td>
<td>28%</td>
<td>23%</td>
</tr>
<tr>
<td>Won't lose information</td>
<td>34%</td>
<td>23%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Attitudes about policy of services
How concerned would you be if a company…

<table>
<thead>
<tr>
<th>Activity</th>
<th>Very</th>
<th>Somewhat</th>
<th>Not too</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sold your files to others</td>
<td>90%</td>
<td>5%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Used your information in marketing campaigns</td>
<td>8%</td>
<td>10%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Analyzed your information to display custom ads</td>
<td>14%</td>
<td>19%</td>
<td>14%</td>
<td>3%</td>
</tr>
<tr>
<td>Kept a copy of your deleted files</td>
<td>83%</td>
<td>19%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>Gave law enforcement files when asked</td>
<td>46%</td>
<td>16%</td>
<td>14%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Pew Study: Key Issues Identified
- Trust
- Control
- Reliability
- Security

Cloud Computing Issues
- Reliability
- Security, Privacy, and Anonymity
- Access and Usage
- Control and Monopolization

Reliability
- Accuracy of results?
- Consequences of failure?
- Who bears the risks?
- Liability for losses?
- Corruption of data?
And you thought it was safe?

EPIC filed a complaint with the FTC seeking an investigation of Google Docs, in light of the company’s data breach reported on March 7, 2009...

The Google Docs Data Breach reported earlier this month highlights the hazards of cloud computing conjoined with inadequate security practices. The complaint seeks that the FTC’s provide remedies for consumers that includes greater transparency, security, and privacy rights for Google Cloud Computing users.

Press Release
EPIC (Electronic Privacy Information Center)
March 17, 2009

Security, Privacy, Anonymity
- Need for protection, particularly sensitive information
  - Personal (SSNs, photos, etc.)
  - Corporate (client accounts, internal memos, etc.)
  - Scientific (experimental data, results, etc.)
- Technology isn’t enough!

Security, Privacy, Anonymity
- Spying by other users of the cloud service
- Monitoring by the cloud provider
  - Quality control
  - Data mining
- Government surveillance
  - Cross-national issues

Existing Regulations
- HIPPA for medical records
- Sarbanes-Oxley for corporations
- ...

Access and Usage
- Intellectual Property
- Licenses
- Export and data sharing prohibitions
“I think there is a world market for maybe five computers”
Quote often (mistakenly) attributed to Thomas J. Watson, former president of IBM

Location, Location, Location

Standards?

Who’s driving policy today?
- Telecommunications policy and law
  - What is a cloud provider (legally speaking)?
    - ...closest to a teleco
- Contractual law
  - Often unilaterally dictated by the cloud provider
“you acknowledge that you bear sole responsibility for adequate security, protection and backup of Your Content.”

Possible Futures
- Governmental regulations?
  - Laws do not keep pace with technology
- Let the market handle it?
  - Service differentiation
  - Danger of monopolies
- Combination of the two?