

## FACT SHEET

August 26, 2015

**Cloud Computing**

“Cloud computing” describes how computer-related services and software increasingly have been provided over the Internet and other networks since the late 1990s. Each user can access many types of applications and services on demand, regardless of the physical location of his computer. Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned, accessed and updated with minimal management effort or service provider interaction. Examples of common cloud uses are e-mail, e-commerce, and mobile phone apps. The National Institute of Standards and Technology offers a [detailed outline](#) of cloud computing, and the office of the U.S. Federal Government Chief Information Officer has a [video](#) explaining cloud computing.

**Overview****These issues arise in discussions of cloud computing:**

- Increasingly, governments and businesses are looking at moving their internal systems to the cloud to save money and simplify staying up-to-date on technology. The City of Los Angeles and the State of Minnesota have moved to cloud platforms, however, Los Angeles backed away from utilizing the email cloud for their law enforcement agencies after the technology was not able to meet their strict security guidelines. The former U.S. CIO, Vivek Kundra pushed the federal government towards utilizing the cloud with the launch of apps.gov, an aggregator of cloud services for federal agencies.
- The infrastructure needed to provide adequate cloud service is large. Since the major companies that offer “platforms” serving many firms and individual users – Google, Microsoft, and Amazon – have all stated they are moving to the cloud, there are questions about how many other companies will be able to compete in the infrastructure space. However, most agree that barriers to platform and software as a service entry are relatively low.
- As with any new technology, there is debate on the economic impact of the cloud: will this truly be a source of cost savings? What kind of new innovations and businesses will be created?
- As data is increasingly held in a central network location rather than at the user’s premises, there is a growing debate about whether the current regulatory framework is adequate. This is particularly the case for privacy, security, and data ownership; also, as data crosses national borders in the course of traveling the cloud’s network, jurisdictional issues arise.
- As more information flows over the Internet, there is a focus on encouraging the growth and use of broadband services, and on issues of “net neutrality” – that is, whether providers should be allowed to limit high-bandwidth uses in order to ensure reliable Internet access to all subscribers.

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*For media inquiries on a range of TAP topics, or for assistance facilitating interviews between reporters and academics, contact [TAP@techpolicy.com](mailto:TAP@techpolicy.com).*

## Cloud Computing Sources

These sources are a good place to start in understanding cloud computing issues. [Christopher Yoo](#) offers an overview of cloud computing technology and its economic implications in “[Cloud Computing: Architectural and Policy Implications](#).” In “[Cloud Computing and Electricity: Beyond the Utility Model](#),” [Eric Brynjolfsson](#) and his colleagues compares services provided by cloud computing firms to those provided by electric utilities. [Jonathan Zittrain’s](#) op-ed “[Lost in the Cloud](#)” raises concerns about storing personal files on the Internet. [Marco Iansiti’s](#) paper “[Six Years Later](#)” reviews Internet-based platforms and services against antitrust decrees based on software utilized on individual systems. Peter Klein outlines familiar economics ideas that help one understand how technology has changed the economy in “[Does the New Economy Need a New Economics?](#)” In “[The Economic Consequences of the Diffusion of Cloud Computing](#),” Federico Etro discusses the expected effects of the spread of cloud computing on macroeconomic growth.

Please note that all links on this fact sheet are accessible from the online version at [www.techpolicy.com/cloudcomputing.aspx](http://www.techpolicy.com/cloudcomputing.aspx).

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