MIT Enterprise Forum of Texas (Houston) Flagship Event: <u>Cloud Computing</u>

Information Technology's Next Big Transformation!!!

"Cloud Computing": What is it ...and why every (non-technical) business person should care.

Glenn M. Jenkinson

The MIT Enterprise Forum Texas – Houston (MITEF-TX) held its last Flagship meeting of the 2008/09 season this week at the Houston Renaissance Hotel. The topic was Cloud Computing, the latest transformation in computing and IT infrastructure. The meeting was very well attended by members and guests from a wide variety of business and technical disciplines. MITEFTX assembled a blue chip panel of IT and business experts from across the country. The discussion was moderated by **Houston Chronicle CIO** Roberta Kowalishin, and joined by **Google/Postini** Founder Scott Petry, **Oracle**'s Bill Hodak, **SalesForce.com**'s Dave Levitt, and Mark Settle, CIO for **BMC Software**

Blue Chip Panel (Left to Right: Roberta Kowalishin, Mark Settle, Scott Petry, Bill Hodak, and Dave Levitt).

Cloud Computing
Cloud Computing (CC) can be defined as an outsourced IT capability with virtually infinite and near-real-time scalability. In CC, all of the hardware, software, management, maintenance, and upgrading is housed and managed by the CC services provider. CC clients are charged only for the capabilities they use, which significantly reduces costs and improves the customer IT department "profit and loss" ratio. One analogy made by the panel is that pre-CC is like each user generating their own electricity on site, while CC is like the whole user base purchasing power from a much smaller number of high output generating stations. This provides economies of scale and much better IT service levels than what the individual companies could provide alone, on the same budget.
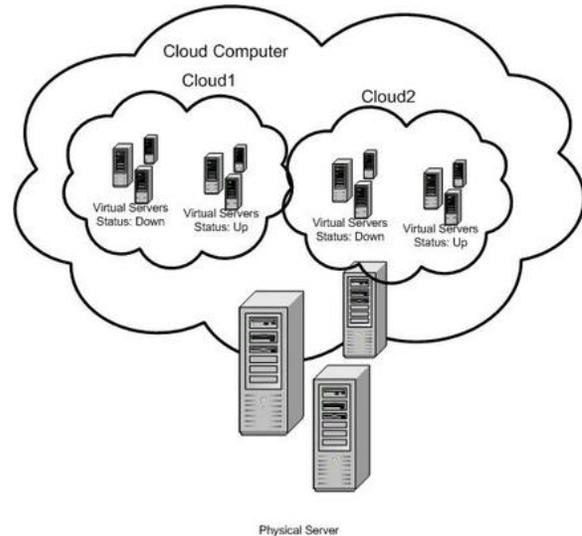
(Image: Courtesy Oracle Wiki)

CIO Control and Security Concerns
Cloud computing is in its infancy and is not well understood by many CIOs. Therefore, Cloud computing is still often shunned by IT departments. They are not comfortable with loosing some or all control of the infrastructure, hardware, software, security, personnel, and data. The panel emphasized however that all of these aspects would still be present, virtually, to

the CIOs via the CC provider. In fact, with CC, these aspects will be of higher quality and service level than what the company can provide. This is due to the economies of scale and cost effectiveness of installing world class security enclosures along with world class hardware, software, and personnel that an individual company could not justify providing for themselves. It was emphasized that security might actually be enhanced because companies with in-house infrastructure tend to get complacent about security risks, while a cloud vendor understands their viability depends on maintaining confidentiality of data. The panel did agree the in house IT staff would be reduced, but many would simply relocate to the CC providers.

Protecting the Crown Jewels
The panel recognized that some data, processes, IP, etc. may be deemed ne plus ultra critical to the company. In such cases, these "Crown Jewels" can stay in house, while all the less critical functions can safely located with the CC provider.

Private Clouds
Another approach available is for a company to establish subscribe for "private" cloud computing (PCC); which is the same as a CC except PCC is physically separate from all other clouds. The CC provider would handle and manage this private cloud just like the others in their facilities; but only the single client company would have user access. The PCC provider would still be able to provide near-instant scalability for utilization spikes. And the client would still only be charged for the actual services used. The CC or PCC and client could actually pre-schedule rescaling events based on historical utilization patterns.

Pay Only for What You Use
Currently, CC providers typically charge based on actual services used. This pay-what-you-use model via CC can mean very significant savings for companies that have very large but infrequent utilization spikes, such as those seen by airlines and retailers during the Thanksgiving and Christmas

Holiday seasons. These types of companies typically have to design, buy, provide space, and install the complete infrastructure required to handle these spikes. Then they are saddled with the costs to cool, maintain and manage this excess capacity all year long, even though it is not needed most of the year. For example, Scott Petry observed that startup companies could use the cloud to inexpensively access infrastructure that would have required (as it did in the case of his startup, Postini) a large investment measured in the millions of dollars just a few years ago;

Private/Protected Personal Information
The panel cited medical records as an example of the type of data that would be a perfect fit for CC. A person's medical records can be very complicated, voluminous, and difficult to manage amongst multiple doctors. With CC, this information can be quickly available to multiple doctors worldwide. This accessibility will improve their health care treatment wherever they are.

Due to HIPPA and other privacy laws, patient privacy is a real challenge when using CC. The panel mentioned one company that is experimenting with creating Avatars to act as aliases for patients. This would facilitate protecting the patient's privacy rights by ciphering the link between the data and the patient.

"CC" Ten Successful Years
Panel member David Levitt explained how his company, SalesForce.com, has in effect been using CC for the last 10 years. His company primarily provides applications for sales and customer service (also known as customer relationship management or CRM), which runs entirely in the cloud. These applications provide CRM capability, on a daily as needed basis, to companies worldwide. The apps track people, customers, sales, finance, expenses, and much of the other data needed to run a large global sales force, simultaneously in near real-time. This could not be done effectively without using CC principals.

Conclusion

Using Cloud Computing, a business of any size can securely increase net profits by outsourcing most of their IT requirements; thereby avoiding the burden of having to create an internal IT infrastructure, train employees, as well as maintain, and manage a support function that is not a company's core business.

Panel Members

Mark Settle - CIO, BMC Software

Scott Petry - Product Management Director, Google Enterprise

Bill Hodak - Principal Product Manager, Oracle Corporation

Dave Levitt - Regional Sales Manager, SalesForce.com

Moderator: Roberta Kowalishin - CIO, Houston Chronicle

Additional Resources

o Collaborate 2009 – Oracle on a Cloud, by Bill Hodak

o Cloud Architectures Whitepaper, by Jinesh Varia - Amazon Web Services (pdf)

o Oracle Cloud Computing Center

o SalesForce.com Cloud Computing

Event Images

Pre-Meeting Reception & Networking

Diverse Audience of over 100 Members and Guests in Attendance

Scott Petry of Google talking with attendees

Bill Hodak of Oracle

Moderator Roberta Kowalishin meeting with attendees after the panel session

Roberta Kowalishin – Panel Moderator; VP & CIO, Houston Chronicle

Dave Levitt of Salesforce.com

Attendees Kathie Forney (President, CEO; i.focus), Phil Schwarz (Director of Client Services for Sfile, LLC) and Jaime Valencia, Sc. D.; ExxonMobil Upstream Research Co.

About the Author

Glenn M. Jenkinson is an entrepreneur and degreed Engineer with over 28 years of business and engineering experience. He writes on diverse topics ranging from computing, oil & gas, technology, manned space exploration, aeronautics and business as well as fine arts, creativity and psychology. Glenn is an Associate Fellow of the American Institute of Aeronautics and Astronautics and a member of multiple professional societies.

Mark Wargo – Chairman, MIT Enterprise Forum of Texas