What exactly is the ‘cloud’ that we hear so much about these days? We know what it isn’t: it isn’t about weather conditions or a commentary on the current state of the economy. Rather, the cloud or cloud computing is about shared services via the Internet, a growing trend that promises to transform the way that businesses operate.

“The cloud allows you to do more with less,” said Sai Gundavelli, speaking at an International Executive Roundtable hosted by UC Denver’s Institute for International Business. “Less” means less physical ownership of software, servers and network equipment. Instead companies buy these functions from a service provider as needed thus reducing capital expense (CapEx) and operating expense (OpEx).

With this purchasing method, called Software as a Service (SaaS), the customer pays a consumption fee for the length of time the service is used; there are no vendor license fees and ownership of the software remains in the hands of the provider.

Other cloud services based on the consumption-based model:

- **Infrastructure-as-a-Service (IaaS)** - provides server capacity and storage. Customers can buy the power they need as a fully outsourced service without the IT management headaches and with the flexibility of resources that can be quickly scaled up or down to match demand.

- **Platform-as-a-Service (PaaS)** - a web hosted application development platform or framework. The service provider lays the foundation which includes an operating system, server applications and a development environment. The customer then installs or develops the desired applications.

The cloud’s pay-as-you-grow services are a boon to small-and-medium enterprises that cannot budget for an in-house data center. “In that sense the cloud creates a level playing field where size doesn’t matter,” said Gundavelli.

What does matter is the type of cloud a company deploys for its data.

- **Private cloud** - a dedicated server that the customer uses exclusively to achieve greater security and control. However, the platform and applications are maintained by the cloud provider.
- **Public cloud** - a standard cloud computing model in which a service provider makes resources such as applications and storage available to the general public over the Internet. More affordable than a private cloud but not as secure.
- **Hybrid cloud** – combines aspects of both private and public clouds for customers who may need both a local server running specific applications and a cloud service that hosts additional applications, files or databases.

Ultimately the decision about which cloud to choose will come down to considerations such as cost and security and the company’s specific needs.

**New landscape**

“Ten years from now the office landscape will look completely different as companies eliminate bulky equipment and store and access their data with a few strokes on the computer keyboard,” said Gundavelli.

Sounds simple? Eventually.

Getting from here to there is no simpler than it was to transition business records from paper to the computer back in the olden days. Nor is it without risk as the challenges have grown ever more complex.

As cloud computing continues to evolve, “more attention needs to be paid to how organizations will move existing assets to the cloud because the harsh reality is that significant complexity exists,” said Gundavelli.
"Hard choices have to be made about which applications should migrate to the active cloud and which applications should be retired, placing their data in an archive or offline cloud where access can be preserved longterm in the event some future need arises.

Information overload

Today, companies struggle with vast quantities of information acquired over years of doing business. It's information overload in the extreme. Consequently "the existing IT infrastructure has become bloated and the result is overly complex systems that contribute to higher operational costs, slower adaptability and reduced budgets," said Gundavelli, adding that "cloud computing is the remedy for the operational inefficiencies now impacting profits."

While archiving can help keep a lid on the data growth problem, "doing so successfully requires advanced database archiving solutions that enforce best practices."

Database archiving gives organizations the tools to save storage, improve database and reporting performance and lessen the burden on IT resources. Additionally, under-utilized data can be moved to lower cost Tier-2 storage while seamless data access is maintained.

The organization also needs to see if obsolete applications are clogging the system. These are often allowed to languish long after they have been replaced by newer applications.

"Applications that have become obsolete but still contain business-critical data can be migrated to the cloud thus freeing data center resources while maintaining data access at a much lower cost," said Gundavelli. "Such a strategy also allows the enterprise to gain experience with cloud computing without the pressure of supporting quality-of-service for production systems."

"The ability to classify data appropriately will be a major enabler in this transition."

Brave new world

Gundavelli, like other industry professionals, sees the future of cloud computing as a "brave new world" in which Utopian-like conditions prevail for IT users.

However, there are steps a company must take in order to achieve the promised savings from cloud computing: they must consolidate and rationalize (standardize) their application portfolios onto the newly simplified cloud infrastructure, and they must be able to retire legacy applications in a safe and orderly fashion.

"Only by eliminating the complex legacy infrastructure can organizations truly achieve any of the cloud's promised savings," said Gundavelli.

"Should they fail to do this the cloud will be simply one more thing that must be managed, ultimately adding more complexity and cost."

Solutions, not problems

Solix Technologies, based in Santa Clara, CA, has been a leader in helping businesses climb aboard the cloud by "delivering cloud enabling solutions that provide more security, more flexibility and more cost efficiencies in the way that data is stored, accessed and managed."

Gundavelli described Solix as "a risk-taking company" unafraid to go head-to-head with much bigger competitors. His entrepreneurial confidence combined with knowledge of the market and IT industry pointed to a niche he could fill and the idea for Solix took root. In 1986 he arrived in the United States from India and in 2002 he founded Solix Technologies to provide "best-in-class data management solutions for effective Information Lifecycle Management."

His team of executives, engineers, programmers, developers and marketing professionals keeps revenues growing year after year. Despite heavy competition Solix has managed to carve out a $10 million slice of the IT pie with 100-plus employees around the globe.

The company's flagship product is the Solix Enterprise Data Management Suite (EDMS), "the solution for managing data holistically to ensure compliance, manage cost, improve performance and operation efficiencies and maximize data security." All Solix applications have been developed to address specific problems for specific industries which keep the company ahead of the curve.

Gundavelli's advice to business students: "No matter what kind of company you build it is critical that it be a sales and marketing company first and foremost."

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Problems Solix is solving

OPERATIONAL INEFFFICIENCIES
- Storage costs
- Productivity
- Time

DATA BREACH
- Security
- Compliance
- Risk Mitigation