CLOUD COMPUTING
A CIO’s Perspective

Mr. Robert J. Carey
Department of the Navy
Chief Information Officer
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KEY ISSUES FOR CLOUD COMPUTING

• Not a new concept in the Navy… but one whose technology maturity now supports the promise.

• Gartner defines cloud computing as "a style of computing where massively scalable IT-related capabilities are provided 'as a service' using Internet technologies to multiple external customers."

• **Cloud computing services are far-reaching**
  - Computational Services “independent” of the physical infrastructure
  - Storage Services – Reduces the need for Server Farms

• **Virtualization**
  - Separate applications from underlying infrastructure

• **Budget**
  - Shift from capital budgets to operating budgets
TRANSITION CHALLENGES

• Moving from “concept” to “reality”
  – Cultural shift
  – Storage online vice on server
  – Maintaining control of data
  – ROI – teaching Senior leadership about the value of this investment

• Move mission critical services to the cloud or just peripheral?

• Lack of standardization from vendor to vendor

• Security
  – Third party data storage
  – SOA – security paradigm as a service centrally controlled

• One Size Fits All
  – Customization can lead to expense
What Should We Consider?

Advantages

- Rapid Response & Agile Deployment to a Business Problem
- Improved User Mobility and Global Access
- Enables Collaboration
- COOP – self healing and resistant to DNS
- Platform Agnostic
- Reduced Development & Test Costs
- Reduced End-User Maintenance Costs
- “2 heads are better than 1” leads to alternative approaches outside the corporate paradigm
- Efficiency though group policing and “Best –in Class” Solutions

Disadvantages

- More Frequent Changes to the Application Could Impact User Acceptance & Training
- More Frequent Changes could break Legacy Systems
- Investment required…ROI not well understood
- Perceived Operations Loss of Control over Software Releases
- Solutions need to consider impacts to Records Retention, Security, and Privacy Laws & Policies
- Networking large groups of servers conflicts with present security paradigms
- Determining Intellectual Property Ownership