

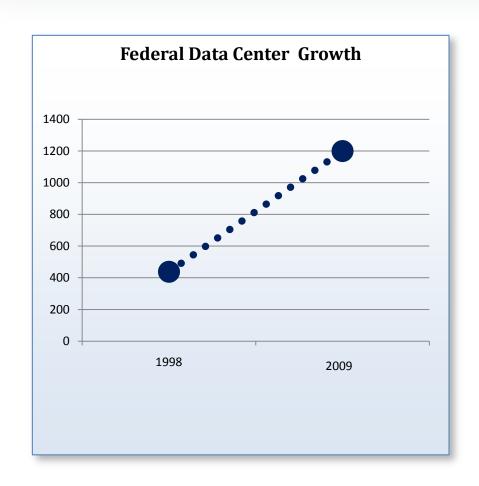
### The Economic Gains of Cloud Computing

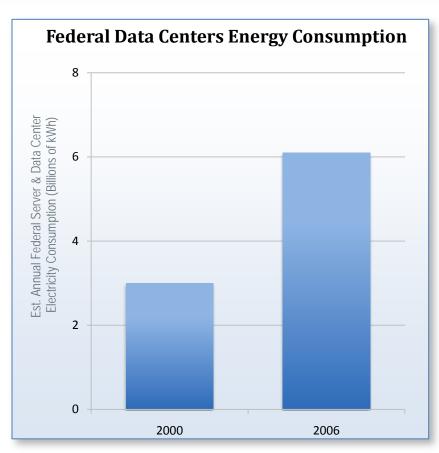
Vivek Kundra Federal Chief Information Officer

www.whitehouse.gov April 7, 2010



### The Case for Change





SOURCE: Report to Congress on Server and Data Center Energy Efficiency Public Law 109-431, U.S.
Environmental Protection Agency ENERGY STAR Program, August 2, 2007



# Federal Leadership in Cloud Computing

- 1. Shift to a "cloud-first" policy
- 2. Identify opportunities through data center consolidation
- 3. Centralize certification of cloud solutions
- 4. Establish standards for security, interoperability & data portability





### Centralized Certification

### **Government-wide Risk Management Program**

- Provides security authorization and continuous monitoring
- Agencies participate by leveraging the results for covered products

#### **Vendor Benefits**

Government-wide authorization and security compliance cost reduction

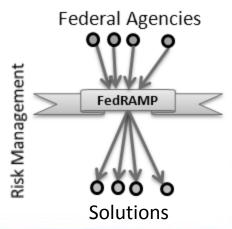
#### **Agency Benefits**

- Cost savings through reduced duplication
- Rapid acquisition
- Increased security assurance

**Problem:** Independent agency risk management has inefficiencies



**Solution:** Unified risk management eliminates inefficiencies





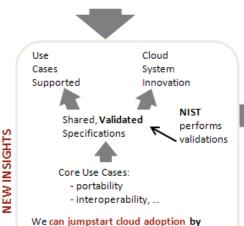


STATUS QUO

### Standards Strategy

#### (years) New Standard Fast Tracked Examples Revision

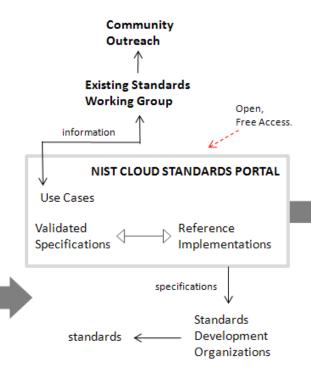
- · New cloud computing standards scope is too broad and complex to be Fast Tracked.
- · Standards are necessary for industry to provide interoperability and portability.
- · But, new standard development is inherently slow because it is consensus driven



validating key cloud specifications:

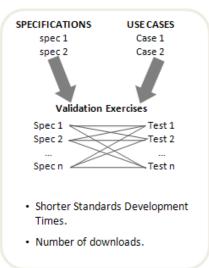
will serve as standards, temporarily;

extensibility will foster innovation.



#### NIST will develop and populate the portal:

- 1. By direct insertion and validation of legacy specifications.



QUANTITATIVE IMPACT

12-MONTH GOALS

SAJACC Concept Defined

Introduce & initiate dialogue with Industry, Standards, & CIO community

Aug. Proof of concept Use Cases & Test Reference Implementations Selected

Dec. SAJAAC process validation complete

2. By validating contributed specifications.





### A Shift to the Cloud

#### **OPPORTUNITY**

#### **CLOUD SOLUTION**



Support doctors and healthcare providers in implementation of Electronic Health Records (EHR)

- Nationwide solution for 2,000 users in 6 weeks
- Track and coordinate EHR implementations



Consolidate more than 12 email systems serving 80,000 users

- Moving 80,000 mailboxes to the cloud
- 66% expected cost savings



Modernize enterprise data centers

- Halted procurement of up to \$1.5 billion in data center efforts
- Reevaluating enterprise strategy in context of "Cloud First"



Provide scientists and researchers on-demand access to raw data storage and computing resources

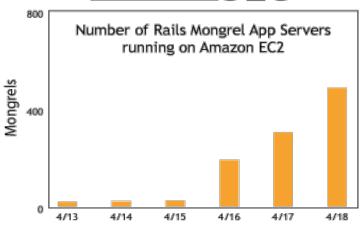
\$32 million investment

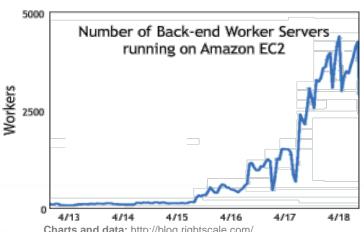


### A New Model

- Animoto's multimedia service went from 25,000 users to more than 250,000 users within 3 days
- Scaled from 50 virtual machines to 4,000
- Supporting 20,000 new customer registrations per hour at peak
- Massive capital investment no longer a barrier to entry
- Great ideas powered by the cloud can scale to transform markets faster than ever before







Charts and data: http://blog.rightscale.com/ 2008/04/23/animoto-facebook-scale-up/



### Shifting Power to the American People

- Data is being democratized
- Cheaper and more powerful processors
- Faster and more ubiquitous networks
- Billions of sensors are becoming part of a hybrid Internet





Health IT



Performance Dashboards







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