

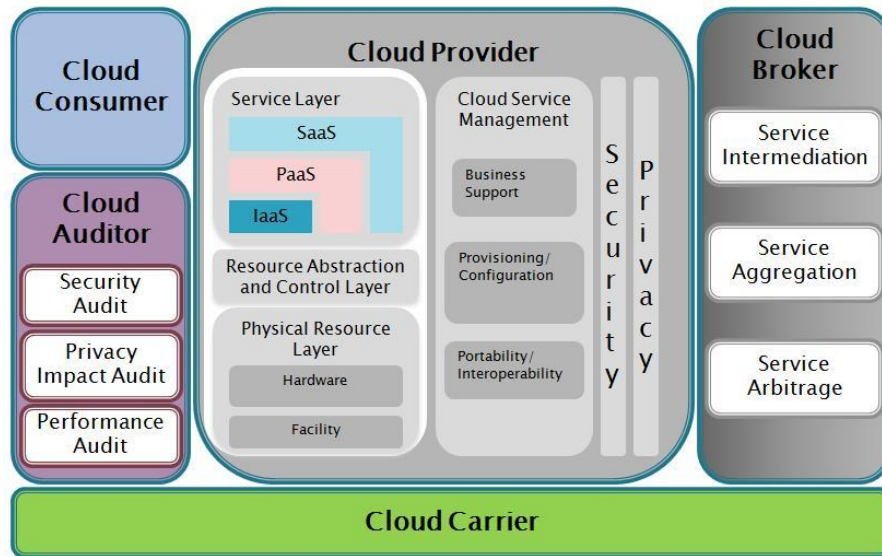
and Threats

Opportunities[^] with Acquisition Planning in a “Cloud First” environment

**Presented by Brett Brunk
GSA Chief Enterprise Architect
November 2012**

Re-thinking Federal acquisition strategies

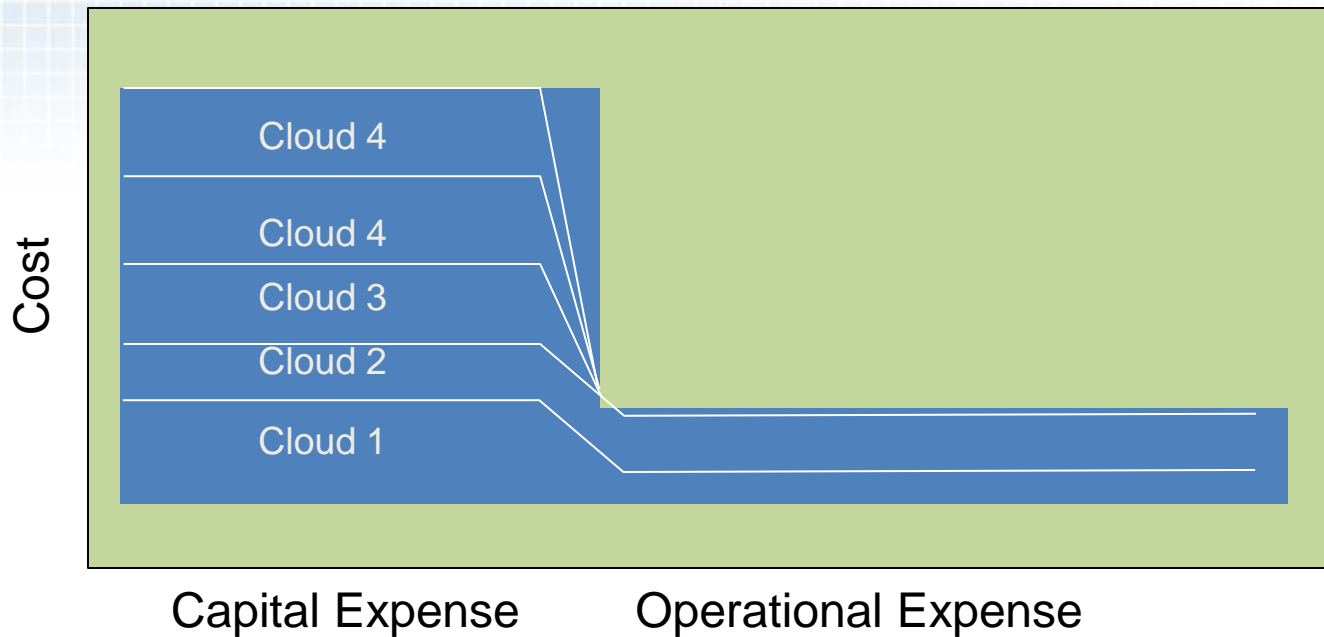
NIST Reference Architecture



Cloud is a disruptive technology that also has the potential to disrupt traditional acquisition processes

- Innovation opportunity
- Ensuring competition
- Lessons for enterprise architects and acquisition professionals
- Acquisition Risks

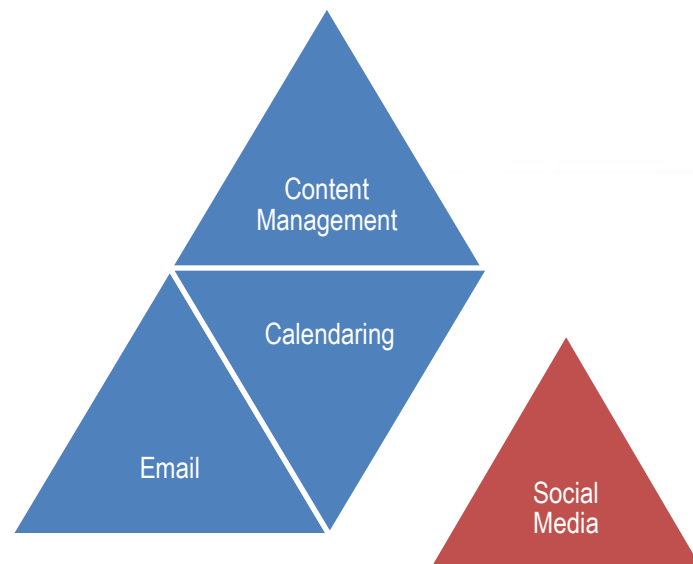
Innovation Opportunity



- Enables Agency to distribute the risk and increase innovation
 - Try out multiple approaches or projects
 - Down select to the viable options
- Change in Agency decision making
 - Changes the risk profile
 - Changes the dynamic from static planning to innovation
 - Agencies would have to learn to say “No” to more pilots
- Changes to Project Manager culture
 - Not all projects will make it to operations

Ensuring competition

What happens when your cloud service provider expands its service offering beyond your original requirements?



- Think carefully before accepting “free services” that go beyond the original scope
 - Antideficiency Act
 - Inconsistency with IT Strategy
 - Interoperability
 - Indemnity
 - Operational readiness
- Establish guidance up front to address this issue

Lessons learned

Use architecture to define scope

- Use a Service catalog or taxonomy to drive your cloud discussion

Level 1 Domain	Level 2 Function	Level 3 Function				
Customer Management	Marketing	Market-Making Strategies Development	Product and Service Offerings Establishment	Pricing and Incentives Development	Marketing Activities	
	Strategic Customer/Account Relationship Planning & Management	Customer Needs & Requirements Management	Customer Relationships Establishment & Maintenance	Customer Solutions Development	Customer Agreements Development and Negotiations	Customer Agreements Maintenance
	Customer Information Management	Customer Information Collection and Maintenance	Customer Data Analysis and Mining	Customer Information Access		
	Customer Care	Customer Training		Issue Management		

Specify what is in and out of scope for Cloud service

Provides you objective criteria for determining when changes in Cloud features affect service scope

Lessons Learned

Portability and Lock-In still occur with the cloud

- The ability to easily change cloud vendor

Service	Low	Moderate	High
SaaS			X
PaaS		X	
IaaS	X		

Risk of Vendor Lock-In

Lessons Learned

Understand indemnity and accountability

- Vendor can do the right thing
- Vendor is doing the right thing
- Who is responsible when things go wrong?
 - Requires detailed Service Level Agreements
 - Strict penalties
 - Strong remedies
 - Agencies lack experience with SLAs

Lessons learned

Rethink acquisition lifecycles and decision points in a post-Cloud environment

- Increase innovation by leveraging Cloud's cost advantages over traditional capital expense acquisitions
- Enforce gate reviews to ensure only viable cloud projects make it to operations
- Reinforce good procurement practices and good contract management practices
 - The FedRAMP security framework will greatly lower the barrier to entry for both Federal Agencies and vendors to leverage cloud
 - Cloud BPAs further reduce the burden for agencies to acquire and deploy cloud

Conclusions

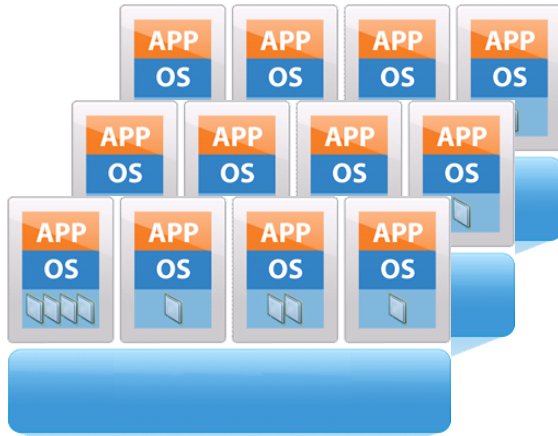
- Be proactive in your response to how cloud fits within your Agency's acquisition policies and strategies
 - Capital planning - innovation
 - New services offered by Cloud vendor
 - Investment gate reviews

- Take steps to
 - Define strategy for dealing with new service offerings
 - Mitigate the risk of Sprawl – Data, Financial, Servers, Portability
 - Establish consistent approach to Cloud provider accountability

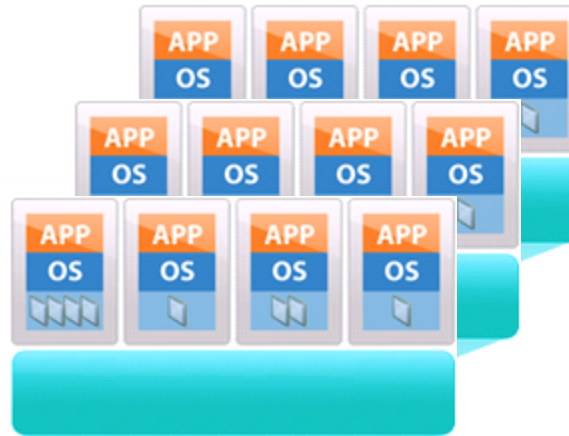
Acquisition Risks

Risks – Vendor Sprawl

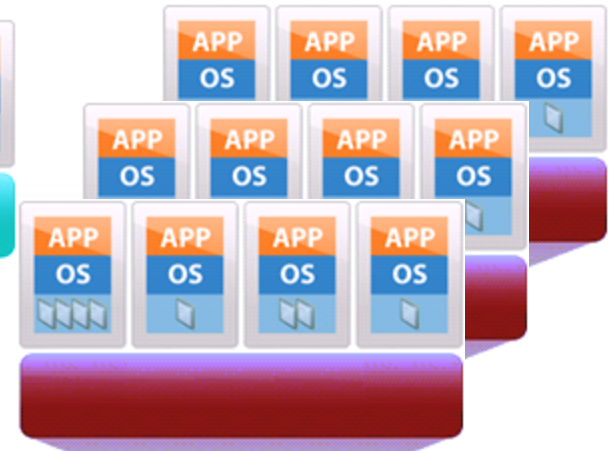
Vendor A



Vendor B



Vendor C



Acquisition Risks

Data Sprawl

- Data sovereignty
 - Where is your data?
 - Who really owns it?
 - Who really controls it?
 - Who can access it?
- What about the metadata?
 - Usage patterns?
 - Annotations?
 - Comments?
 - User identification?

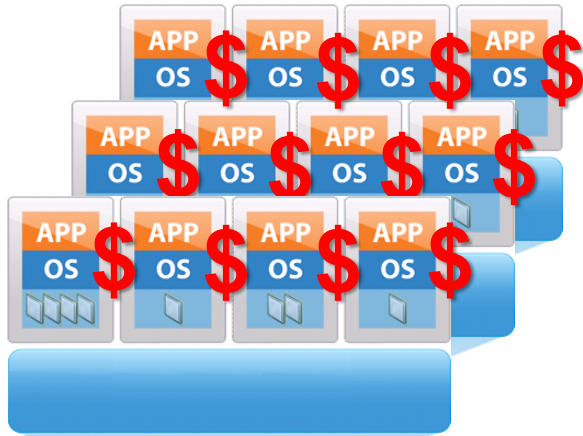
Acquisition Risks

Financial Sprawl

Vendor A

Vendor B

Vendor C



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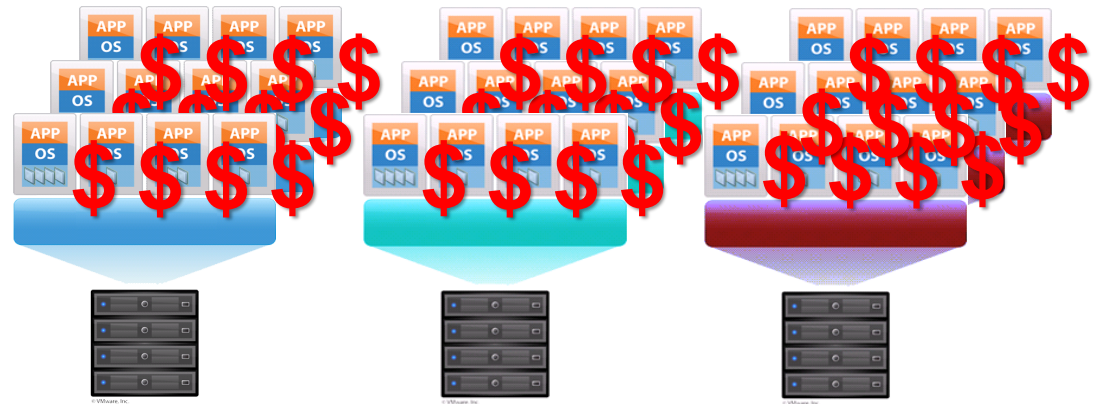


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Acquisition Risks

Financial Sprawl

- Right or wrong, hardware capacity has previously served as a “limiter” on *ever increasing consumption*.
- When this limiter is removed, do we have *ever increasing costs*?



Acquisition Risks

Financial Sprawl

- Billing logistics issues
 - Who reviews and validates charges?
 - Who allocates costs to clients?
 - How are allocations determined?
 - Who ensures active machines are still needed?

BACK UP

Agency Hurdles

- Security and compliance
- Portability
- Visibility and accountability
- Federal budgeting process

Agency Hurdles

Security & Compliance

- FedRAMP
 - Agencies initiate and fund C & A
 - Does this stifle new vendors?
 - Agencies will “Leverage Authorizations”
 - History tells us...
 - Continued reliance on NIST 800-53
 - 604 page FedRAMP Assessment Procedures
 - Continuous Monitoring
 - Monthly vulnerability scans (good enough?)
- Trusted Internet Connection (TIC)
 - What is the impact?

Agency Hurdles

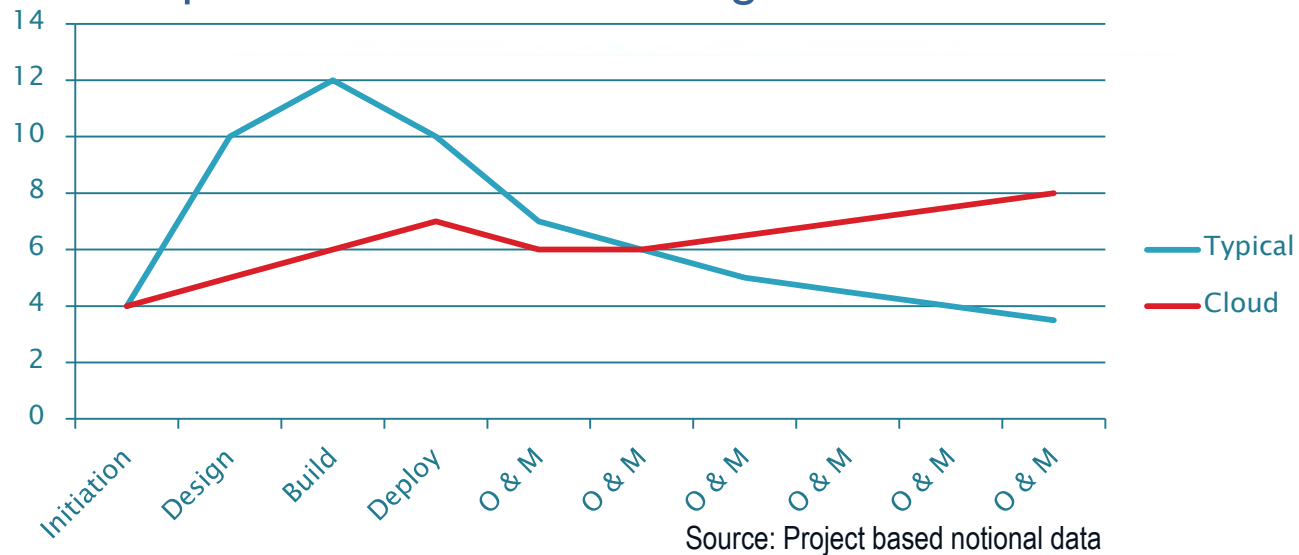
Federal Budgeting Process

- Cloud is based on variable pricing
 - Only pay for what is used
- Government funding typically not variable
 - Cost increases are bad
 - Cost decreases can also be 'bad'
- What about fixed-price contracts?

Agency Hurdles

Federal Budgeting Process

- BSO Syndrome
- Agencies typically struggle with O&M
 - Cloud requires solid O&M funding

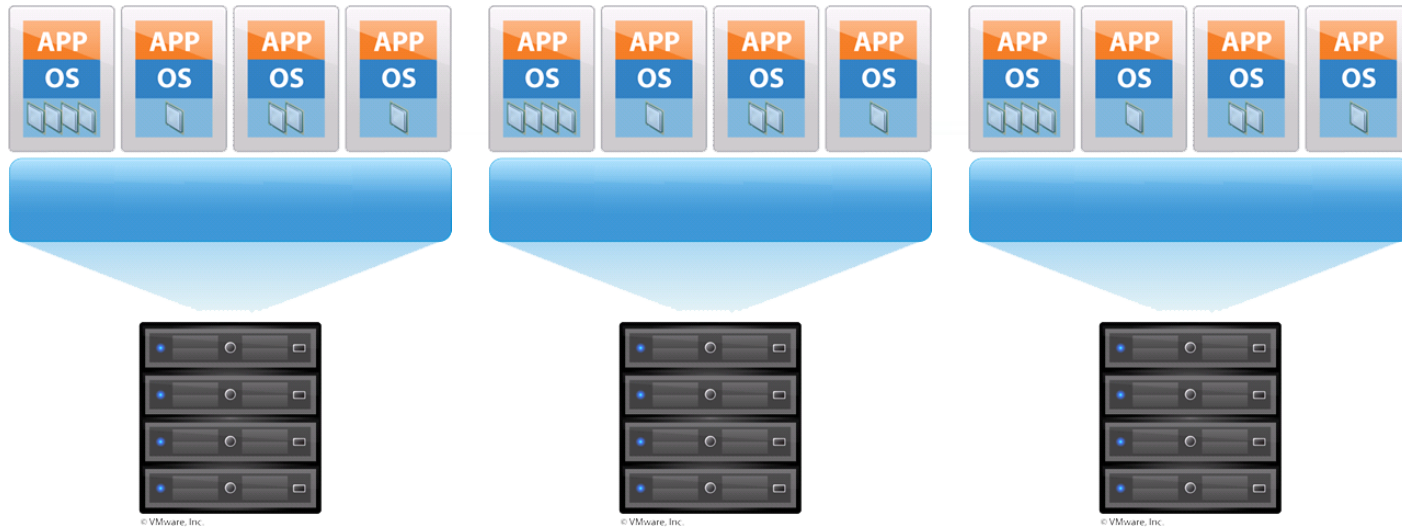


Unique Sprawl Risks

- Server sprawl
- Vendor sprawl
- Data sprawl
- Financial sprawl

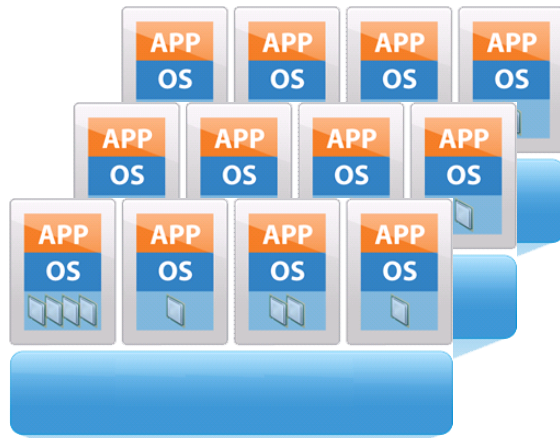
Risks – Server Sprawl

Cloud Vendor



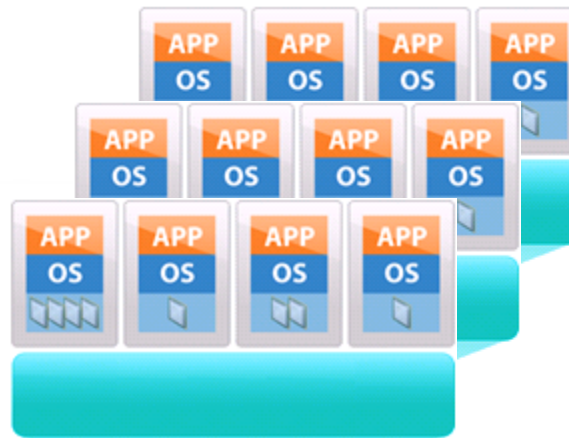
Risks – Vendor Sprawl

Vendor A



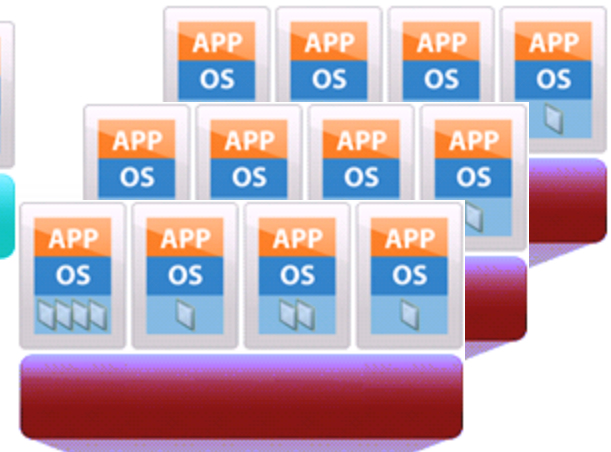
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Vendor B



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Vendor C



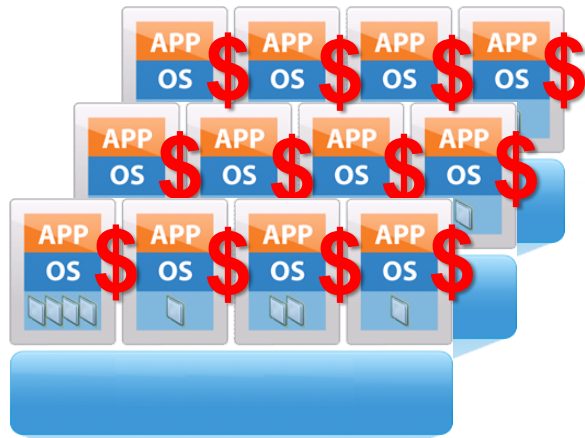
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Risks – Data Sprawl

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Risks – Financial Sprawl

Vendor A



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Vendor B



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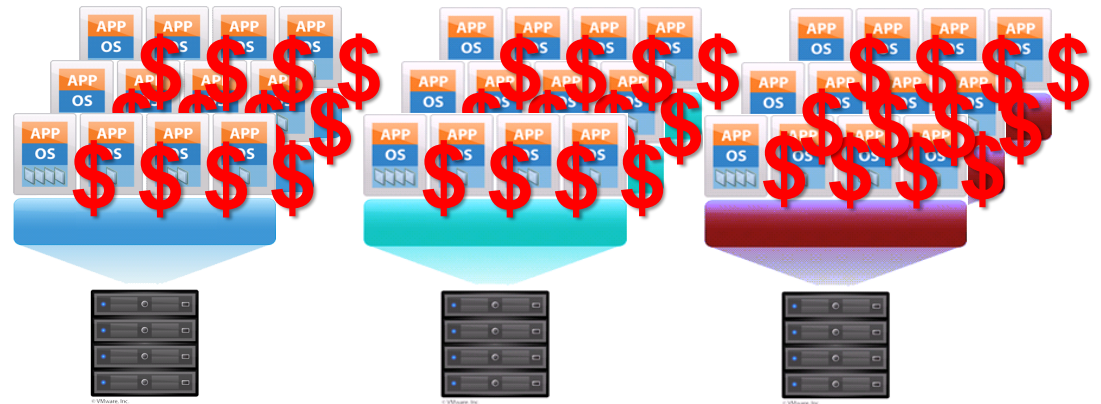
Vendor C



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Risks – Financial Sprawl

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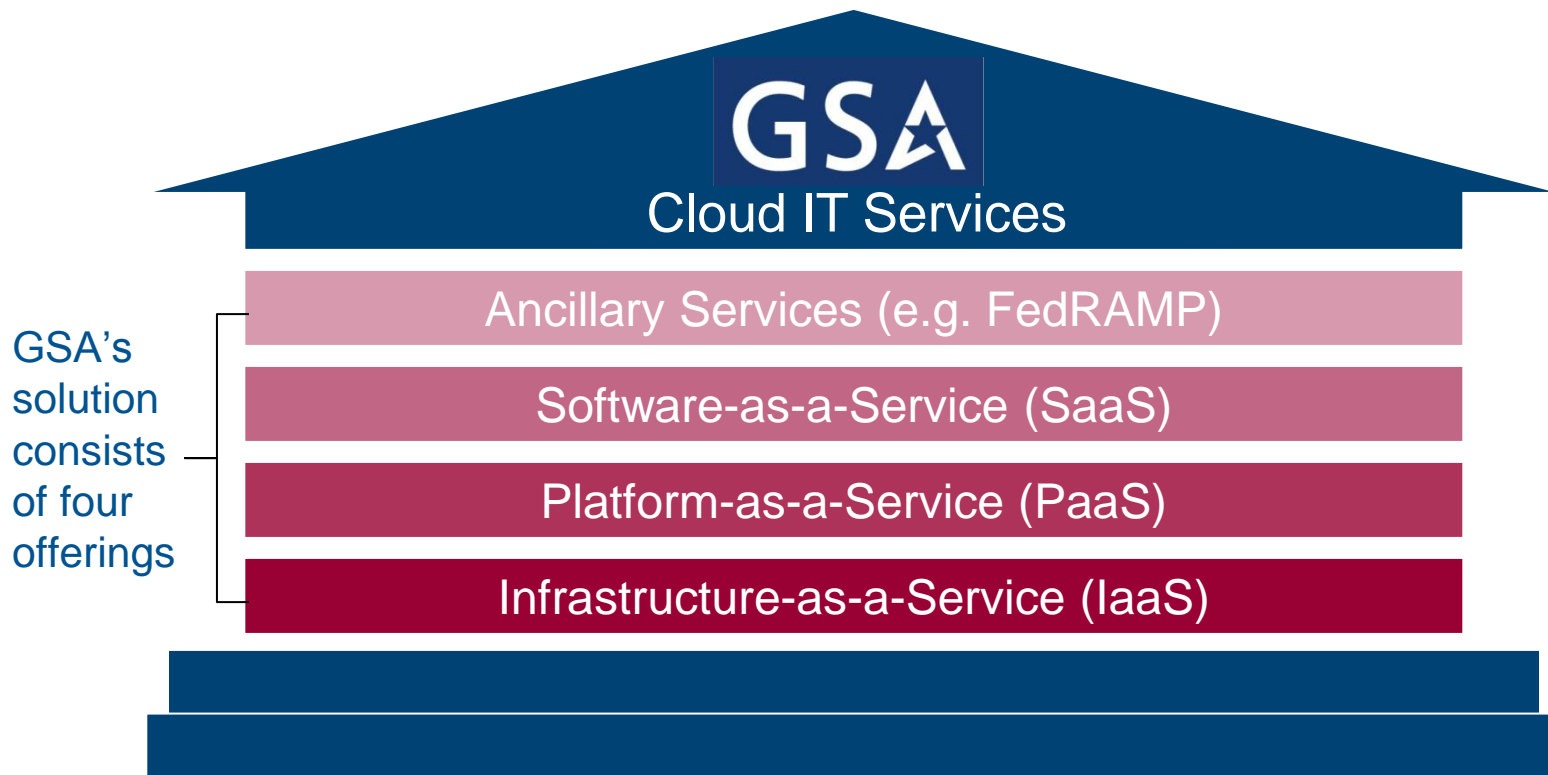
Risks -Financial Sprawl

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More Than Just Hype for Feds

- The Office of Management and Budget (OMB) mandates “Cloud-First” policy
 - Each Agency CIO will be required to identify three “must move” services and create a project plan for migrating each of them to cloud solutions and retiring the associated legacy systems. Of the three, at least one of the services must fully migrate to a cloud solution within 12 months and the remaining two within 18 months.

GSA will meet Agencies' future needs with a full range of specialized Cloud IT Services



GSA's Infrastructure-as-a-Service BPA was awarded in October 2010

GSA solutions address cloud computing concerns, while meeting Agencies' evolving needs

Ease of Use	<ul style="list-style-type: none">• Commoditized pricing via Apps.gov• Place task orders off of BPAs• Use of GSA-created SOW templates and Ordering Guide
Security	<ul style="list-style-type: none">• Products and services certified at the FISMA Moderate Impact Data level
Control	<ul style="list-style-type: none">• Retain data ownership and prohibition of data mining or monetizing• 99.95% availability requirement• Trouble tickets and order management capabilities
Compliance	<ul style="list-style-type: none">• GSA will monitor cloud services• Vendors required to adapt to changing regulations and requirements• Address CIO and OMB mandates and EO 13514.
Interoperability	<ul style="list-style-type: none">• Built-in interoperability• Maintain their active directory outside of the cloud
Productivity	<ul style="list-style-type: none">• Decreased time-to-market to deploy or implement IT solutions• Simplified IT maintenance• Allows key resources to focus on mission-critical activities• Self-serve provision services as needed

GSA's IaaS BPA provides access to world-class industry partners and cutting-edge technology

Vendor	Cloud Storage	Virtual Machines	Web Hosting
Apptis, Inc.	✓	✓	✓
AT&T		✓	
Autonomic Resources		✓	
Carahsoft		✓	
CGI Federal Inc.		✓	✓
Computer Literacy World	✓	✓	✓
Computer Technology Consultants	✓	✓	✓
Eyak Tech LLC	✓	✓	✓
General Dynamics Information Technology		✓	
Insight Public Sector	✓		
Savvis Federal Systems		✓	✓
Verizon Federal Inc.		✓	
Total Awards by Lot	6	11	5

