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# Cloud Formations

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# Agenda

Cloud Computing  
Impact to “traditional” ICT  
Benefits and Why Now?  
Who are Interested?  
Rental Model  
Questions and Directions

## Cloud Definition

- National Institute of Standards and Technology ([www.nist.gov](http://www.nist.gov))
- Model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (networks, servers, storage, applications, services) that can be rapidly provisioned and released with minimal management effort or service provider interaction

## NIST Terms

Hosting: External or Internal

### Three Service Models

- Software as a Service (SaaS)
- Platform as a Service (PaaS)
- Infrastructure as a Service (IaaS)

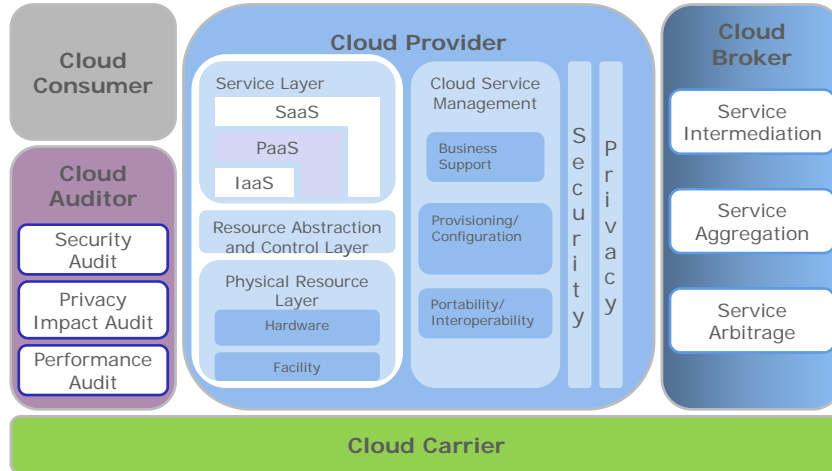
### Four Deployment Models

- Private cloud
- Community cloud
- Public cloud
- Hybrid cloud

### Five Essential Characteristics

- On demand self-service
- Broad network access
- Resource pooling
- Rapid elasticity
- Measured service

# NIST Reference Architecture



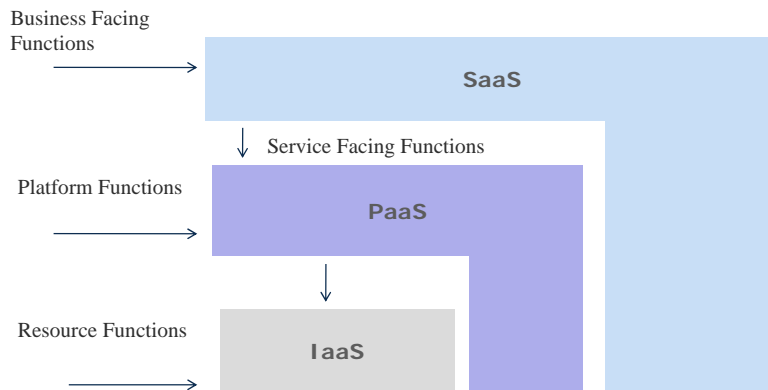
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# Services "Inverted L"

## One Product Can Cross Services

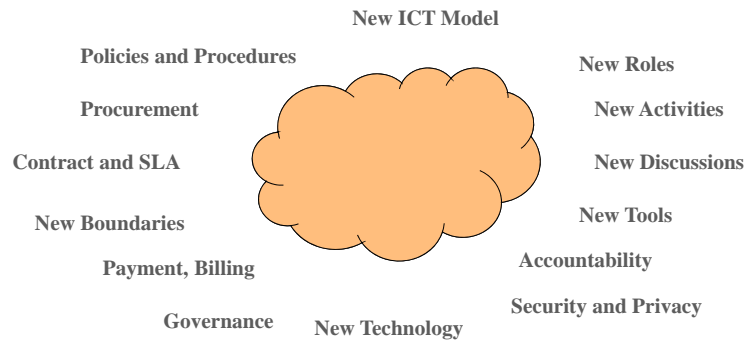


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## Changes for ICT and Applications



### Cultural

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## Cloud Computing Expectations

- Reduce capital expenses
- Faster provisioning
- Elastic provisioning
- Leverage virtualization and efficient technology
- Consolidation (servers and applications)
- Reuse
- Reduce development & support costs
- Focus on business

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## Timing is Right

- Mature virtualization technology
- Various communities building policies, standards, models and best practices
- Available capacity (revenue opportunity)
- Collaboration
- Maturing products (security, analytics)
- Devices that embrace cloud (Pads, Smart-phones)
- Actually in common use!
  - Most have experience as cloud consumers
  - Experience with application stores and integration

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## Interested

- Governments
  - United States
  - Canada
  - United Kingdom
  - European Union
  - China
  - South America
- Telecommunication
- Financial Institutions
- Small and Medium Businesses



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## United States



- Vivek Kundra U.S. CIO, 25 Point Plan
- Cloud First Policy
  - Each Agency to identify 3 services (1 deployed in 12 months others in 18 months)
  - Reduce # of data centers by at least 800 by 2015
  - NIST as an enabler
- GSA – Email services to cloud resulted in \$15 million savings
- “Cash for Clunkers” – scalability performance challenges

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## United Kingdom



- G-Cloud
  - Reduce duplication
  - Reduce ICT silos and excess capacity
  - Budgetary pressures
  - Savings estimated at 20% of the £16 billion public ICT budget
  - Green – initiatives, including Sustainable Operations on the Government Estate (SOG E)
  - ICT procurement streamlining
  - Digital Britain (access to services)

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## Telecommunication Sector

- Several Roles and Perspectives
  - Additional revenue from available capacity
  - Need fair compensation (network data explosion)
  - Consolidation internally (servers and applications)
  - Reduce costs
  - Centralize and simplify ICT
  - Elasticity
  - Ease multi-device interfaces
  - Leverage reuse
  - Not just a “dumb pipe”



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## Financial Sector

- Simplify and centralize ICT
- Reduce costs
- Ease multi-device interfaces
- Consolidation (servers and applications)
- Reuse
- Collaboration
- Scalability
- Rather have others be ICT accountable
- NYSE, NASDAQ and CME Group leading the way
- Leading and providing requirements



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## Small Medium Enterprises

- Don't have the resources
- Don't have the finances, especially to fund research and scale up
- Simplify administration
- Ease licensing
- Reduce costs
- Improve efficiency
- Reduce costs



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## The Rental Model



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# My Rental

Buy

Rent



Lease

Public Transit

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# My Rental Experience

- Economy Car
- Without Air
- Unlimited Mileage
- Automatic
  - €21.74/ Day
  - 4 Days
  - Taxes Fees €43.52
  - Total €130.48
- €21.74/ Day
- 4 Days
- Taxes Fees €43.52
- “Total” €130.48
- Ireland Insurance
- N. Ireland Insurance
- Airport Fee
- Actual Total €23

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## Current Core Questions

- Is cloud right for us at this time?
- What portfolios and applications have the greatest ROI at the lowest risk?
- Are there specific functions or entities that have higher ROI at lower risk?
- Do we have operational, application and business perspectives to clarify opportunities?
- How can we avoid “lock-in” and mitigate security concerns?

**Remember you are the driver  
on the “cloud road-trip”**

**You have options and  
decisions!**

**Have a great conference!**