Everything as a service

HP’s point of view on

cloud computing and cloud services

Rebecca Lawson
April 2010
Everything as a Service

A world of information, opportunities and experiences—from computing power to business processes to personal interactions, are delivered wherever, however and whenever you need it.
It’s All About the Service

Service providers

- Business services
- Application services
- Data services
- Infrastructure services

Service consumers

- Field engineer
- Finance executive
- Campaign director
- Sales person
- Logistics manager
- App developer
- Call center representative
- QA engineer
- Service manager

GO!
Driving Outcomes That Matter

Business Strategy

Technology-enabled services

Business Outcomes

Improve value

Become more agile

Enable innovation
Source and Govern Services That Result in Outcomes That Matter

- Cloud service providers
- Hosted/managed service providers
- Network service providers
- Internal service providers

Service portfolio

IT organization
Strategic service broker

Services sourced

Services delivered

Outcomes that matter
- Accelerate growth
- Lower costs
- Mitigate risk
Perspective on the IT Service Supply Chain

Cloud service provider
- Global-class software
- Massive scale-out infrastructure

Hosted, managed, outsourced service provider
- Enterprise-class software
- Dedicated / shared infrastructure

IT organization
Service portfolio
- S
- S
- S
- S

Enterprise-class software
Dedicated / shared infrastructure

Business users
- S
- S
- S
- S

Business outcome
The Real Question: Which Services, From Which Source?

- Corporate website service
- E-mail service
- Linux Dev lab service
- Supply Chain service
- Sales forecasting service
Cloud Services Deliver New Kinds of Value

Cloud services are highly scalable and elastic technology-enabled services, delivered and consumed over the internet through an as-needed, pay-per-use business model.
Characteristics of Cloud Services

Service provider capabilities

- Self service, on demand …
- Policy-driven, automated …
- Location independent availability …
- Metering, billing …
- Volume and economies of scale …
- Specialized offerings…
- Security for access and data …

Service consumer requirements

- … Easy access
- … Service level agreement
- … Ubiquitous network access
- … Pay for what you use
- … Low up-front cost; Op-Ex
- … Clearly defined value
- … Vendor trust
Characteristics of Cloud Services

Service provider capabilities:
- On-demand, self service
- Policy-driven management
- Highly automated provisioning
- Location independent availability
- Billing, metering, variable pricing
- Volume and economies of scale
- Specialized offerings
- Security for access and data
- Standardized, ubiquitous services

Service consumer requirements:
- Rapid access and control
- Service level agreement
- Quick time-to-implement
- Ubiquitous network access
- Pay for what you use
- Low up-front cost; Op-Ex
- Clearly defined value
- Vendor trust
- Subscription orientation
Services Can Be Optimized Through Different Delivery Models

<table>
<thead>
<tr>
<th>Shared</th>
<th>Off premises</th>
<th>On premises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure resources are shared across workloads (and customers)</td>
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<td>Infrastructure resources are shared across workloads</td>
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<tr>
<td>Dedicated</td>
<td>Infrastructure resources are dedicated to each workload (and customer)</td>
<td>Infrastructure resources are dedicated to each workload</td>
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</table>
How to Move to a Shared Model?

- **Optimize**
  capacity and workload management

- **Consolidate**
  other services into the standard

- **Automate**
  provisioning and de-provisioning

- **Standardize**
  starting with a few configurations
HP Can Help You Get to the Right Mix of Services

- Servers, storage, networking, software, services
- Professional services
- Converged infrastructure
- Service management
- Shared services expertise
- Managed services
- Hosted services
- Outsourced services
- Servers, storage, networking, software, services
- Professional services
HP Can Help You Get to the Right Mix of Services

- Servers, storage, networking, software, services
- Professional services
- Converged infrastructure
- Virtualization and automation
- Professional services
- Scale-out infrastructure
- Infrastructure as a service
- Service provider enablement
- Managed services
- Hosted services
- Outsourced services
- IT Transformation
- Service portfolio management
- Security
- Automation
- Professional services
- Converged infrastructure
- Virtualization and automation
- Service provider enablement
- Managed services
- Hosted services
- Outsourced services
- IT Transformation
- Service portfolio management
- Security
- Automation
- Professional services
Native Cloud Services are Designed for Scale and Interoperability

<table>
<thead>
<tr>
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<th>On premises</th>
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<td>Native cloud</td>
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<tr>
<td>Public business services</td>
<td>Private business services</td>
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<tr>
<td><em>Integrative software and system design</em></td>
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<td>Shared</td>
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HP Offerings Span the Ecosystem

- **Native cloud**
  - **Off premises**
    - Extreme scale-out infrastructure
  - **On premises**
    - Application design services

- **Shared**
  - **Off premises**
    - Infrastructure as a service
    - Applications as a service
  - **On premises**
    - Converged infrastructure
    - Service management
    - Shared services expertise

- **Dedicated**
  - **Off premises**
    - Managed services
    - Outsourcing services
    - Hosting services
  - **On premises**
    - Servers, storage, network, software
    - Consulting, professional, technical services
Three Concrete Steps to Harness the Trend Towards Cloud Services

<table>
<thead>
<tr>
<th></th>
<th>What</th>
<th>Why</th>
<th>How</th>
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<tbody>
<tr>
<td>1</td>
<td>Frame your cloud services strategy</td>
<td>Choose services based on outcomes</td>
<td>HP Cloud Discovery Workshop</td>
</tr>
<tr>
<td>2</td>
<td>Implement a converged infrastructure</td>
<td>Offer flexible, shareable resources</td>
<td>HP BladeSystem Matrix</td>
</tr>
<tr>
<td>3</td>
<td>Secure and govern cloud services</td>
<td>Ensure security and performance</td>
<td>HP Cloud Assure</td>
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</tbody>
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Frame Your Cloud Services and Sourcing Strategy

HP Cloud Discovery Workshop

**Workload Types**
- Batch
- Session-based
- Transaction
- Other

**Service delivery profile**

- On prem: 2
- Off prem: 6
- Off prem, shared: 2
- Off prem, native: 4
- On prem, native: 2
- On prem, shared: 4
- Unknown: 0
- N/A: 0

**Current count** vs **target count**
# Capability Framework

## HP Cloud Roadmap Services

<table>
<thead>
<tr>
<th>Technical infrastructure &amp; architecture</th>
<th>IT &amp; Service management</th>
<th>Governance, finance, security</th>
<th>Culture &amp; staff</th>
<th>Best practices &amp; processes</th>
<th>Service portfolio management</th>
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</thead>
<tbody>
<tr>
<td>Service provider</td>
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<td>Differentiated service sourcing</td>
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<td>Service enabled</td>
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<td>Optimized</td>
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<td>Standardized</td>
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Evolve With HP’s Converged Infrastructure
Secure and Govern Cloud Services
Enabling business confidence in the cloud

SECURITY
Application Security Center

PERFORMANCE
Performance Center

AVAILABILITY
Business Availability Center

COST CONTROL
Elastic Test, Diagnostics & SiteScope

HP Cloud Assure
A comprehensive, turnkey solution consisting of HP software, services and expertise
Pentagon: Our cloud is better than Google's

U.S. military says its cloud computing platform is more secure, reliable than commercial offerings

By Carolyn Duffy Maran, Network World, 10/05/2009

The U.S. Defense Department is offering cloud computing services that military officials claim are safer and more reliable than commercial providers such as Google.

At a press conference Monday, the Defense Information Systems Agency (DISA) announced that it is allowing military users to test cloud services in an environment based on its cloud computing platform, which is called RACE for Rapid Access Computing Environment.

FAQ: Cloud computing demystified

Since its launch a year ago, RACE has been available for test and development of new applications, but not for operations.

Military officials say RACE is now ready to deliver cutting-edge applications to military personnel.
With So Many Service Sources, Shadow IT Flourishes

IT organization

Service portfolio

Business users

Cloud service providers

Hosted/managed service providers

Enterprise-class software

Dedicated / shared infrastructure
IT Evolves into the Strategic Service Broker

Cloud service providers
Hosted/managed service providers
Network service providers
Internal service providers

IT organization strategic service broker
Service portfolio
Lines of business
Business functions

Outcomes that matter
Accelerate growth
Lower costs
Mitigate risk
### Implications for IT organizations

<table>
<thead>
<tr>
<th>From...</th>
<th>...To</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT management</td>
<td>Service management</td>
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<tr>
<td>Technology cost</td>
<td>Service value</td>
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<tr>
<td>Technology provider</td>
<td>Service sourcing</td>
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<tr>
<td>Cost center</td>
<td>Growth enabler</td>
</tr>
</tbody>
</table>
HP Cloud Strategy

Enable service providers

Enable IT to transform into a service provider model

Provide cloud services
Enable Service Providers
Enable IT to Transform Into a Service Provider Model

**Cloud Assure (SaaS)**
- Software for service providers and consumers
- Ensures performance, availability, security
- Helps control costs around external IaaS deployments

**Cloud Discovery Workshop**
- Build consensus on cloud vision and concepts
- Review cloud opportunities and implications
- Detail key considerations for the business

**Cloud Roadmap & Design Services**
- Conduct gap analysis and program planning
- Multi-year roadmap; architectural analysis and validation
- Detailed design and implementation plan
## Provide Cloud Services

<table>
<thead>
<tr>
<th>Domain</th>
<th>Examples</th>
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<tbody>
<tr>
<td>Consumer</td>
<td>Snapfish</td>
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<tr>
<td>Print/Publish</td>
<td>MagCloud</td>
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<tr>
<td>IT management</td>
<td>ITSM, BSM</td>
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<tr>
<td>App management</td>
<td>Testing</td>
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<tr>
<td>Selected verticals</td>
<td>Transportation</td>
</tr>
<tr>
<td>Service provider ecosystem</td>
<td>Cirious</td>
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</tbody>
</table>
HP Cloud-related Innovations

Enable service providers
- Utility computing
- Scalable Computing
- Critical Facilities Services (EYP)
- Performance Optimized Datacenters
- Service delivery platform
- Scalable Computing Infrastructure business unit
- Massive scale-out servers and storage
- Communications as a Service
- Shared services practice
- Labs Research Test Bed
- Government Secure Infrastructure
- Cloud Discovery, Roadmap, Design, Security Assessment Services
- ITIL V3 authorship, training, consulting
- Service management framework & services
- Business service management
- BladeSystem Matrix
- HP Moab for Extreme Scale-out
- Cloud Assure

Enable IT to transform into a service provider model
- SaaS for IT management and application management
- Cloud service solution for MDI
- Elastic Test
- Snapfish
- LogoWorks
- MagCloud
- CloudPrint
- Gabble

Provide cloud services

2004 2005 2006 2007 2008 2009 2010
HP Delivers Value Across the Ecosystem

**Build**  
Leading data center design company

**Power**  
With leading servers, storage and networking

**Design**  
Expertise in application modernization

**Automate**  
With virtualization and management software

**Secure**  
Defend resources, protect data, validate compliance

**Support**  
With tens of thousands of IT professionals

**Govern**  
HP wrote the books on service management

**Measure**  
Measure the outcomes that matter

**Deliver**  
Through purchased, financed, outsourced, cloud
Thank you

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