

Cloud computing: the good, the bad, and the ugly

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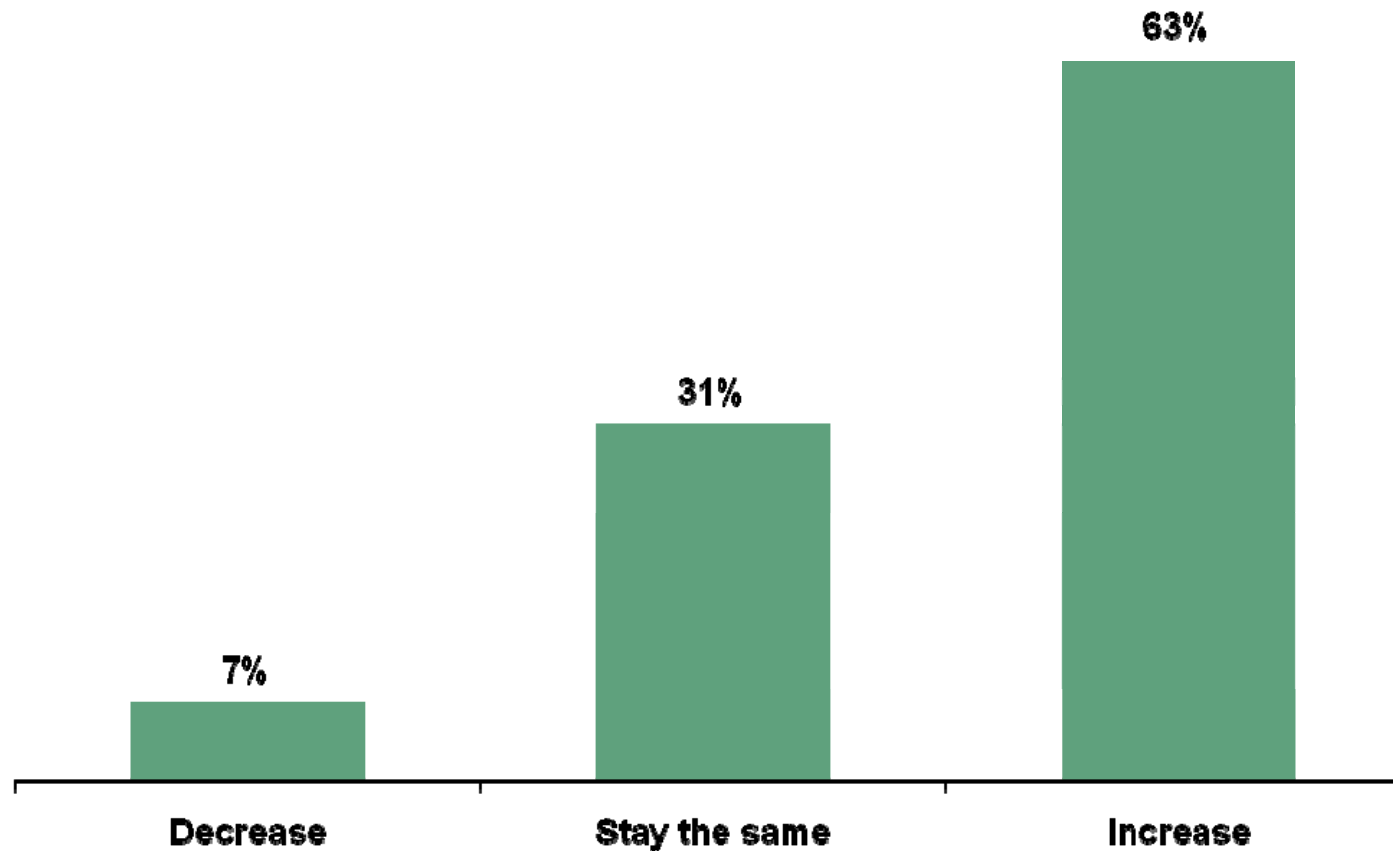
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Cloud computing: what is it?

Applications/functionality delivered via the cloud

- Accessible via standard Internet protocols
- Always available and scale to demand
- Programmable interface
- “Pay as you use”
- Full self-service features

“How do you anticipate your organizations use of Web 2.0 applications to change in the next 12 months?”



Base: 253 global IT decision makers

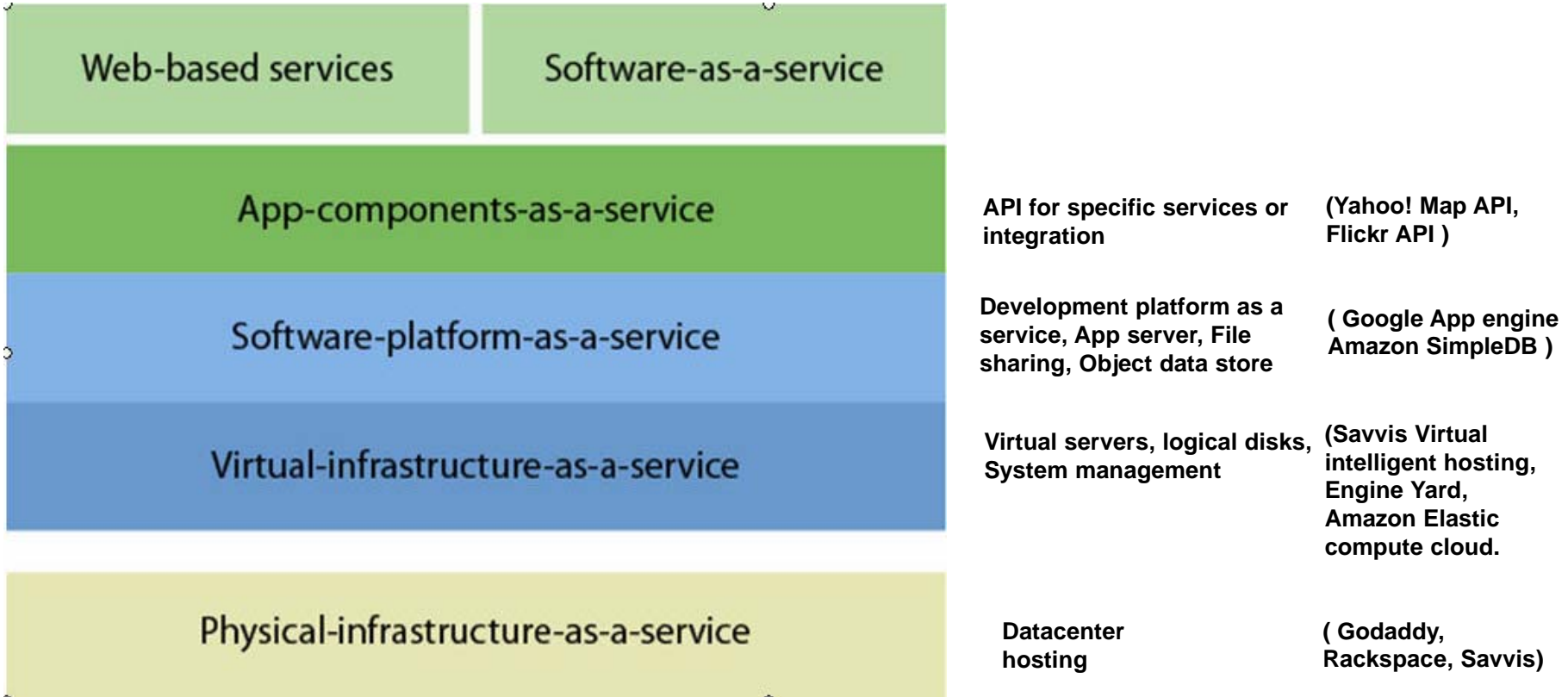
Source: A commissioned study by Forrester Research on behalf of Secure Computing, November 2008.



Cloud computing classification

Rich Internet applications (Flickr, YouTube, Zillow)

Application offered in the cloud (Exchange online services)



August 2008 “Future View: The New Tech Ecosystems Of Cloud, Cloud Services, And Cloud Computing”

- Cost – Reduced TCO ?
- Flexibility – Dynamically scaling resources?
- Availability – Always on, always available
- Community computing – beyond local information
- Speedy provisioning of services (expedite time to market, maybe a competitive advantage).
- Enabling collaboration – Provide a platform for easier and faster sharing and collaboration
- Core-based services?

- Data protection (confidentiality, privacy, personnel control)
 - How is my data stored and handled?
 - What about data leak risks?
- Operational integrity
 - Will my computation be done correctly and timely?
 - Multi-tenant, but non-interfering
- Compliance and regulations
 - Can you help me achieve compliance goal?
 - What about laws and regulations that impact operations? (e.g., data location)

- **Transitive trust issues**
 - Do you use other cloud providers?
 - Can my trust (and SLA) with you be carried over to their providers?
- **Security trust**
 - Is your application secure? Are your systems free of vulnerabilities and holes?
- **Auditing**
 - Can you be audited and how?
 - What support (if any) do you provide for investigative initiatives?

- **Disaster recovery and business continuity**
 - What is your BC plan? Can I continue to have access to your services during disasters and how?
- **Loss of seamless user-level integration**
 - Cloud services typically keep its own user accounts
 - Typical organizations have 5-15 cloud apps
- **End-of-service support**
 - Can you prove that you have cleansed my data?
 - What support, if any, can you provide to package up my data/app to move to another location?
- **Intellectual property**
 - Who owns what data/app in the context of collaboration?
- **Liability & assurance**
 - Who is liable for what?

- SLA is the only weapon that clients have
- Very little internal visibility is afforded
- “SLAs are often confusing and non-standard”
- “It’s difficult to compare and contrast service to service”
- “Difficult to map SLA items to all required enterprise controls

- Policy enforcement in a centralized manner, using scalable, auditable, repeatable methods
- Maintain control over information
 - Keep confidential information confidential
 - Proper access control for privacy and security reasons
- Compliance and regulation needs
 - PCI, SoX, GLB, ITAR
- Obtain visibility of activities

This is in fundamental conflict with the essential values of cloud computing

- At the core, cloud computing is about being
 - Convenient & easy to use
 - Flexible, available, scalable
 - Efficient interaction between individuals, data, and applications
 - Personable & richly interactive

What should we do as a community?

- We need standardization
 - Metrics: to measure and contrast vendor services
 - This includes security metrics
 - Auditing methods: to understand the inner works of cloud services and gauge trust
 - SLAs: help users understand agreements and their rights
- This needs vendors and users work together

As a user organization, what should you do?

- Do not go to cloud for pure cloud sake
- Avoiding it for fear of loss of control is not a solution either
- Exercise caution in choosing cloud services
 - Business driver is number one
 - Security and compliance concerns follow
- User communities can drive standards adoption and vendor strategies

Questions?

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