VMware vCloud Initiative

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hepia – 12 mars 2010

VMware Overview

Founded in 1998

Headquarters in Palo Alto, California – 40+ offices worldwide

Employees: 7000+ Worldwide

Revenue:

2008: $2billion

2007: $1,3billion

Customers: 170'000+

Technology Partners: 1'500+

Channel Partners: 25'000+

VMware Certified Professionals: 35'000+

Why are public clouds important?

accenture

More clouds are predicted to form—get ready

58% of surveyed IT decision makers feel cloud computing will cause a radical shift in information technology driving the next wave of innovation.

Is Cloud Computing On Your Organization's Tech Roadmap?	
Yes, currently using or implementing	30%
No, not on our technology roadmap	29%
Yes, on the radar or actively researching	17%
Yes, plan to use within one year	10%
Yes, plan to use within one to three years	5%
Not sure	5%
Yes, plan to use within three to five years	2%

SOURCE: CIO Research:
http://www.cio.com/article/455832/Cloud_Computing_Survey_IT_Leaders_See_Big_Promise_Have_Big_Security_Questions

Primary Reasons You're Using or Plan to Use Cloud	
Scalability on demand/flexibility to the business	50%
Reduced hardware infrastructure costs	38%
Reduced IT staffing/administration costs	35%
Access to skills/capabilities we have no interest in developing in-house	28%
Not using or planning to use cloud computing offerings	19%
Capacity - data center	16%
Capacity - storage	11%
Frequent software updates	10%
Other	5%

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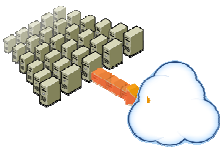
share 9 / 12 close

How Does VMware Define The Cloud?



Cloud Computing according to VMware

- Lightweight entry/exit service acquisition model
- Consumption based pricing
- Accessible using standard internet protocols
- Elastic
- Improved economics due to shared infrastructure

> Cloud computing comes into focus only when you think about… a way to increase capacity or add capabilities on the fly without investing in new infrastructure, training new personnel, or licensing new software. Cloud computing encompasses any subscription-based or pay-per-use service that, in real time… extends IT's existing capabilities.

InfoWorld

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Cloud Computing is the Next Stage in IT

Mainframe

+ Centralized mgmt
+ Secure
- Limited access
- Inflexible
- Costly

Client/Server

+ Distributed CPU utilization
+ Added flexibility
- Complex / costly to deploy & manage
- Not secure
- Not efficient

Web

+ Simple to deploy and manage
+ Broader access
+ Scale

Cloud

+ Maximum efficiency with optimized resource utilization
+ Increased agility with on-demand computing
+ User-centric

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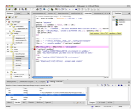
Different Personalities of Cloud Computing

Application/Information (SaaS)

Sometimes referred to as Software-as-a-Service, a wide ranging services delivered via varied business models normally available as public offering.

Expedia.com Google salesforce.com



Development (PaaS)

Sometimes referred to as Platform-as-a-Service, application development platforms enable application authoring and runtime environment.

Google rPath salesforce.com

Infrastructure (IaaS & ITaaS)

Sometimes referred to as elastic compute clouds or Infrastructure-as-a-Service, virtual hardware made available for varied uses.

amazon web services flexiscale terremark

Private

Behind a firewall for use by limited, pre-determined audience

Hybrid

Community Clouds or Managed Private Hosted Clouds

Public

Accessible over the Internet for general consumption

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Requirements Driving Cloud Computing

- Need for New, Highly Efficient and Flexible Computing Infrastructure
  - Must be highly performing
  - Must be highly scalable
  - Need new more coarse grained units of management and actions
  - Needs to be elastic

- Application Compatibility
  - Need application model optimized for cloud
  - Need to leverage existing skills and code base
  - Will not be 100% immediate transfer to cloud, need bridge
  - Need better containers that allow for true application level operations
  - Applications "sticky" to location

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Requirements Driving Cloud Computing

- Lack of standardization creates complexity and switching costs
  - Each compute cloud vendor has different application model
  - Proprietary, vertically integrated stacks limiting choice, increasing switching costs

- Fully Virtualized Policy Controls
  - Need to find the balance between the security of dedicated infrastructure with economics of shared infrastructure
  - Service level agreements need to move to richer application level semantics

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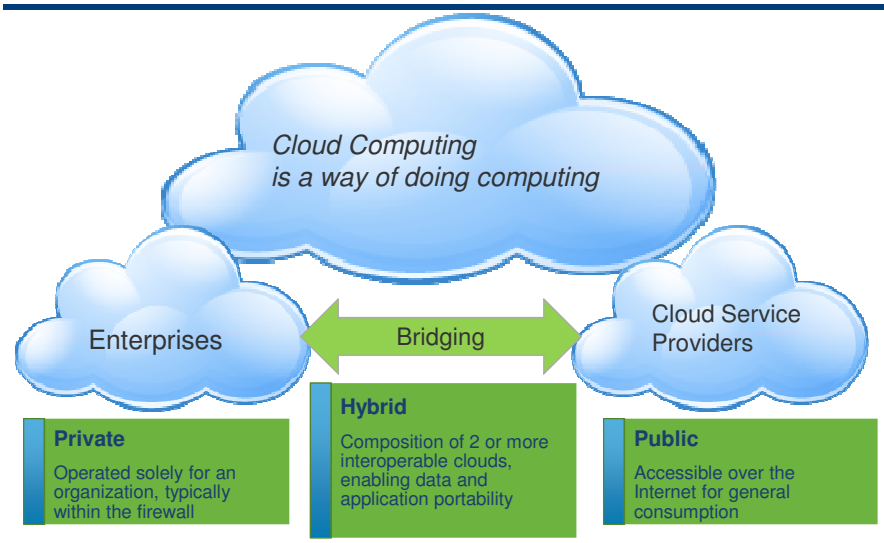
Flexible Cloud Deployment Models = Choice



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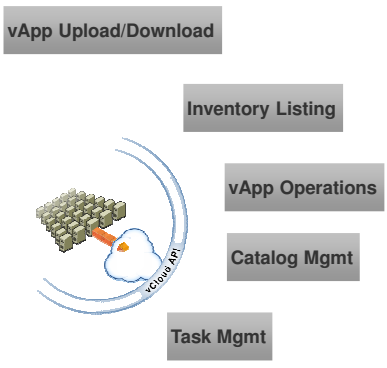
vCloud API



- RESTful
- Designed for web infrastructure
- Extensible, Modular
- Released in "Open" form
- Version 0.8 currently public
- Spans vCenter Instances
- 100% Virtual
- VIM API Unchanged
- Initial active service providers:
  - Terremark
  - Hosting.com
  - BlueLock
  - Melbourne IT (APAC)
  - Logica (EMEA)

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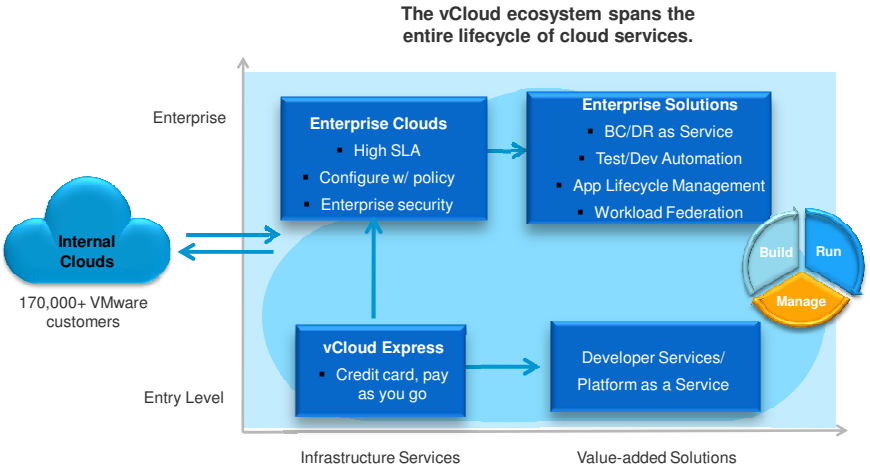
vCloud: the only comprehensive ecosystem for the cloud



vCloud Express

A new class of cloud compute services offered by vCloud partners:

Logica, bluelock, HOSTING.com, Melbourne IT, terremark

- Self-Service Portal
- vCloud API
- Automated Web-based Signup
- Pay by the Hour
- Credit Card Billing
- Interoperability Across Service Providers and with Internal IT
- Priced comparably with respect to Amazon EC2, etc

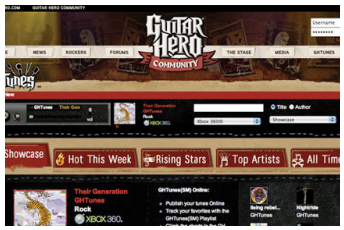
vCloud customer examples

NCAA (AT&T)

easyJet (Savvis)

USA.gov Government Made Easy (Terremark)

MARIAN UNIVERSITY (BlueLock)



jetBlue AIRWAYS (Verizon)

(Terremark)

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9/10 Companies Develop Custom Apps

FORRESTER

- **Web-facing apps**
  - Online trading
  - Internet banking
  - Travel portals
- **Internal-facing apps**
  - Enterprise integration
  - Business processing
- **2M new servers per year**

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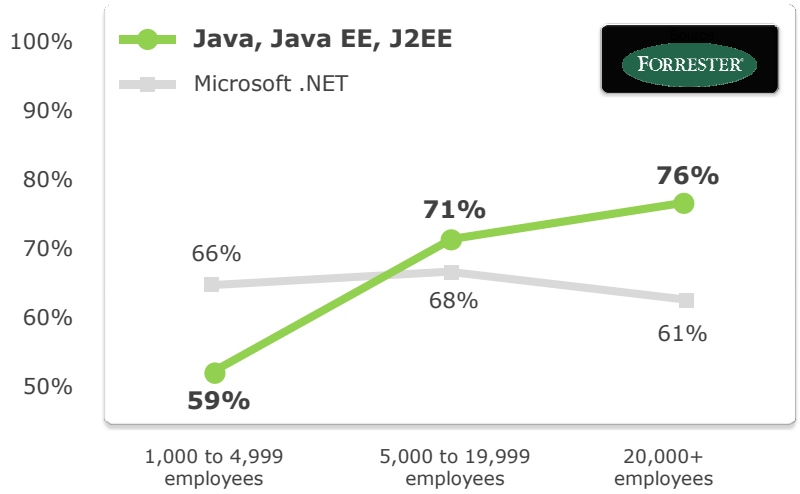
Java Is The Enterprise Platform Choice



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Why Virtualize Java Applications?

Consolidation

Custom Java applications are everywhere
- Cut infrastructure and software license costs
- Achieve 5X - 10X server consolidation for large apps

Scalability

Custom Java applications are very dynamic
- Customer facing apps that require dynamic scalability
- Custom Java apps undergo frequent updates
- Most likely applications to be pushed to cloud first

Quality of Service

Guarantee Application Quality of Service
- Manage application performance with top-to-bottom insight
- Policy driven "top down" management

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SpringSource Solution: Modern Application Platform

Build	Run	Manage
Spring & Grails	**tc Server**	**Hyperic**
		
Frameworks and Tools	Lightweight Application Platform	Application Management

- **Efficiency**: Cut cost, complexity and time to deliver apps by over 50%
- **Control**: Meet business goals via proactive, top-to-bottom management
- **Flexibility**: Promote IT agility from developer to datacenter to cloud

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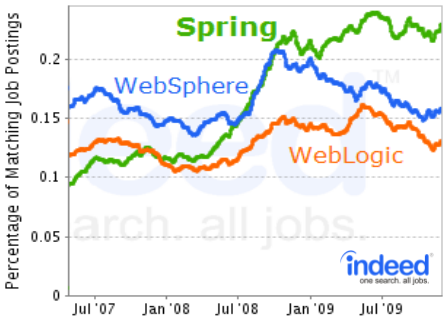
Build: Spring/Grails - Best tool to Build Java applications



Spring Leadership

- Used by **3 million Java developers**
- Powers 50% of apps on IBM, Oracle, Red Hat and Apache Tomcat
- Used by 83% of organizations with large development teams
- Improves efficiency by over 50%!

> *A majority of [enterprise Java] users interviewed by Forrester use Spring*
>
> FORRESTER

Tools Developers Love to Use

Aetna HSBC LinkedIn Vanguard VISA

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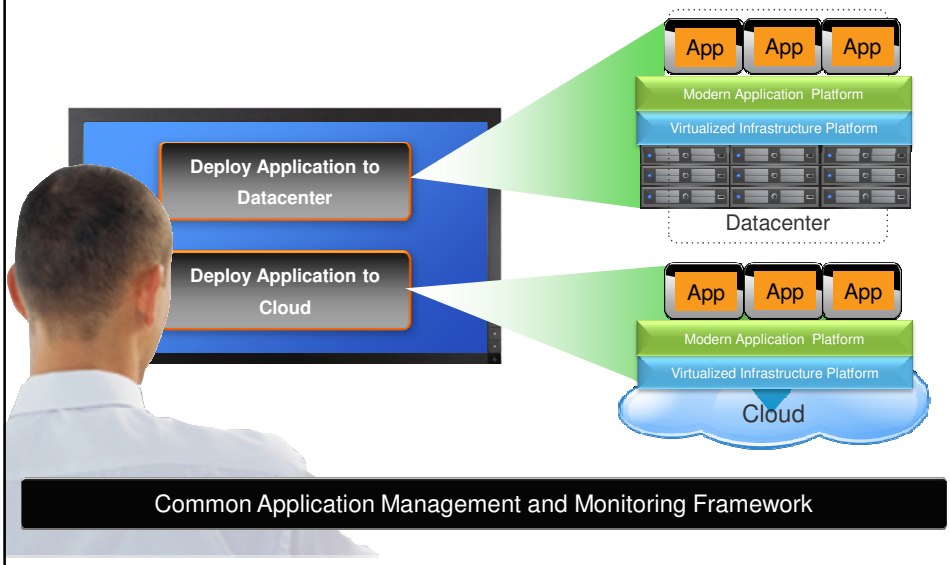
Enabling IT as a Service: Developer to Datacenter to Cloud



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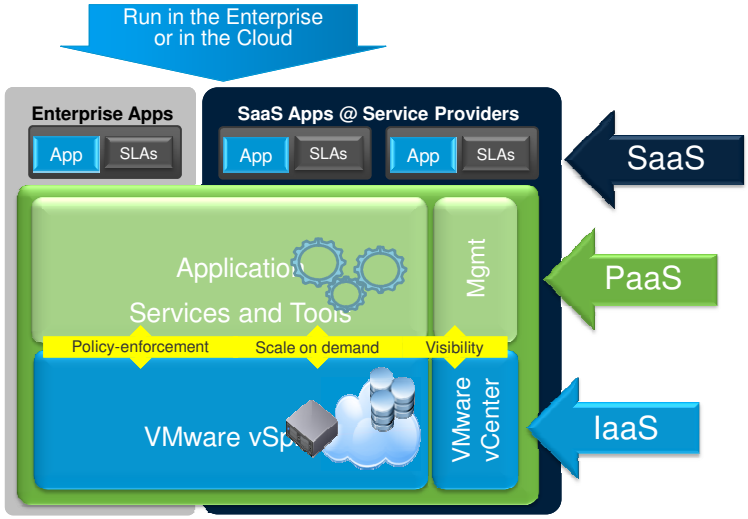
VMware Platform as a Service (PaaS)



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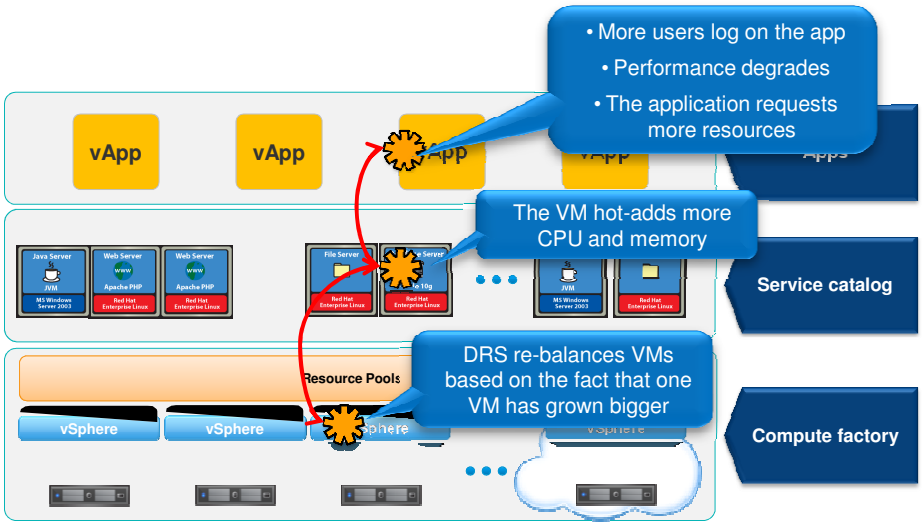
The Ultimate Goal – Apps on Autopilot



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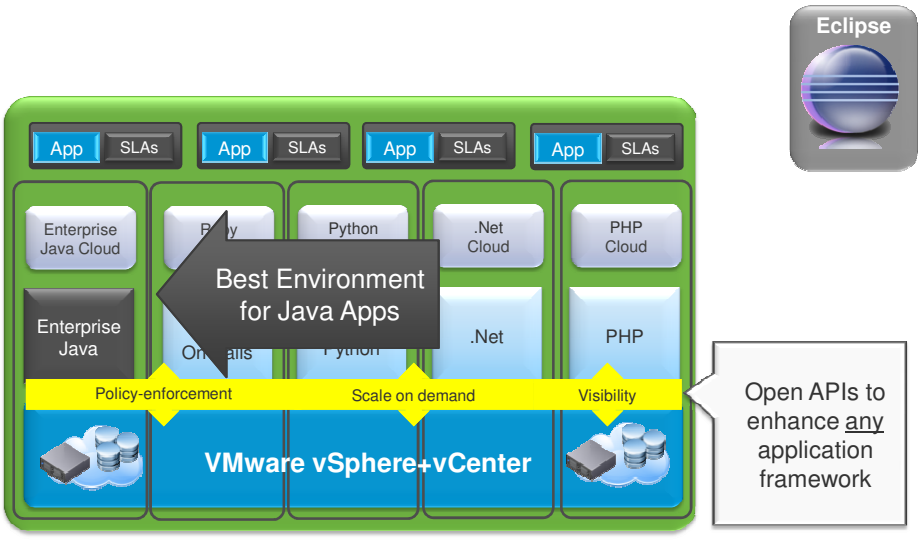
VMware PaaS Vision



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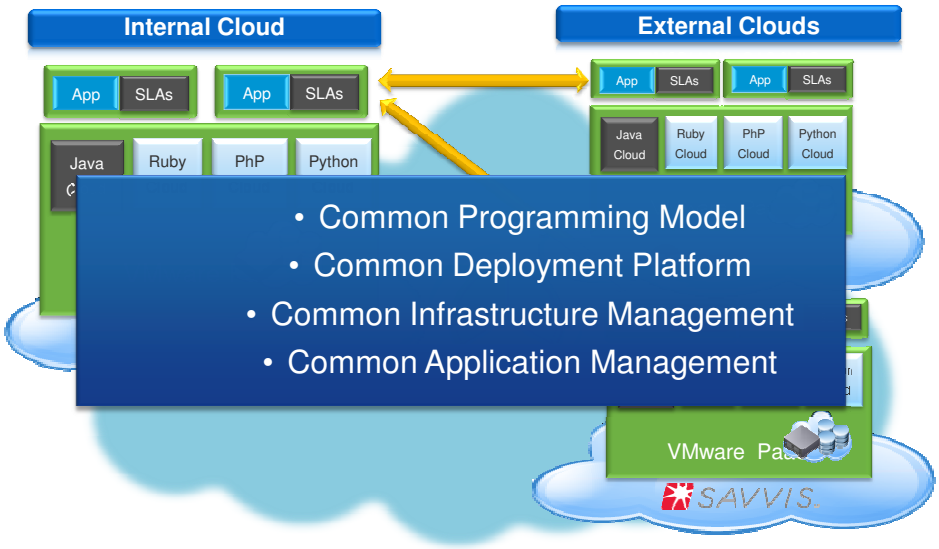
VMware: PaaS for the Internal AND External Cloud



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Only VMware …

is the world's most trusted virtualization platform

89% of all virtualized applications in the world run on VMware.

Gartner, December 2008

brings the broadest set of ecosystem partners, extending the value of your investment

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Thank You

Stephane Broquere, vCloud Market Development, EMEA