Why Cloud?

Cloud offers better ROI, shifts CAPEX to OPEX

On-Premises

Cloud Computing

Software Licenses

Subscription Fees

Customization & Implementation

Implementation, Customization & Training

Hardware

IT Personnel

Maintenance

Training

Ongoing Costs

- **Apply Fixes, Patches, Upgrades**
- **Downtime**
- **Performance tuning**
- **Rewrite customizations**
- **Rewrite integration**
- **Upgrade dependent applications**
- **Electricity & Bandwidth**

Ongoing IT Burden

- **Maintain / upgrade hardware**
- **Maintain / upgrade network**
- **Maintain / upgrade security**
- **Maintain / upgrade database**

Lest we Forget

- **Fifth Year Upgrades**
- **Downtime**

Ongoing Costs

- **Subscription fee**
- **Training**
- **Configuration, customization**

Four Js Development Tools
**Software-as-a-Service
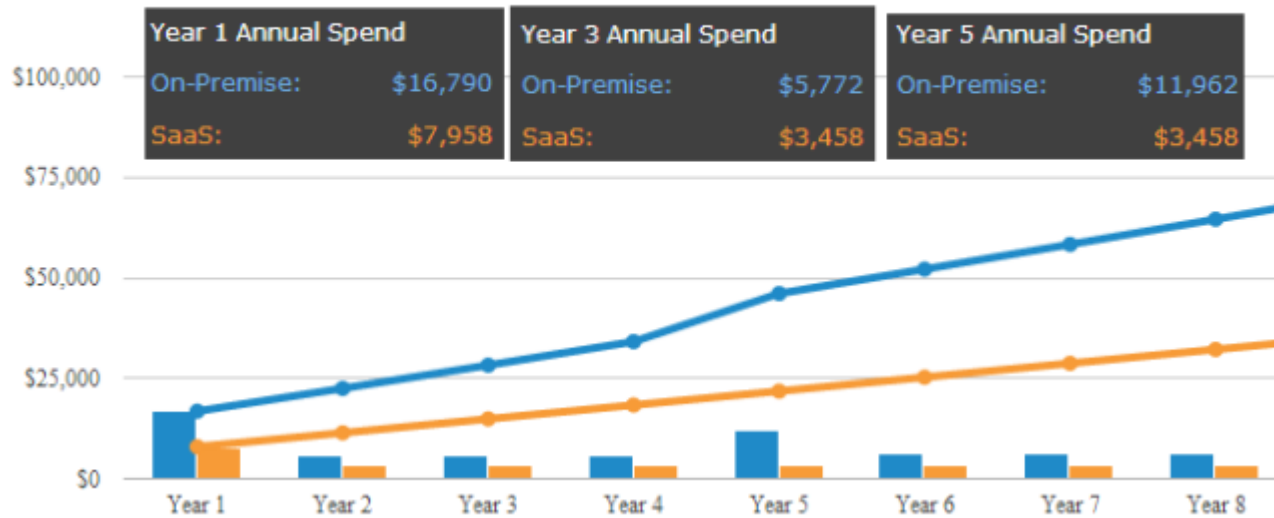With Genero Cloud**

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Cloud TCO Advantage
Those hidden costs add up

On-Premise vs. Software as a Service

On-Premise Server vs Azure (L) Cloud Server
Generic Line of Business app sample case

Year 1 Annual Spend		Year 3 Annual Spend		Year 5 Annual Spend	
On-Premise:	$16,790	On-Premise:	$5,772	On-Premise:	$11,962
SaaS:	$7,958	SaaS:	$3,458	SaaS:	$3,458

Source: http://betanews.com/2013/11/04/comparing-cloud-vs-on-premise-six-hidden-costs-people-always-forget-about/

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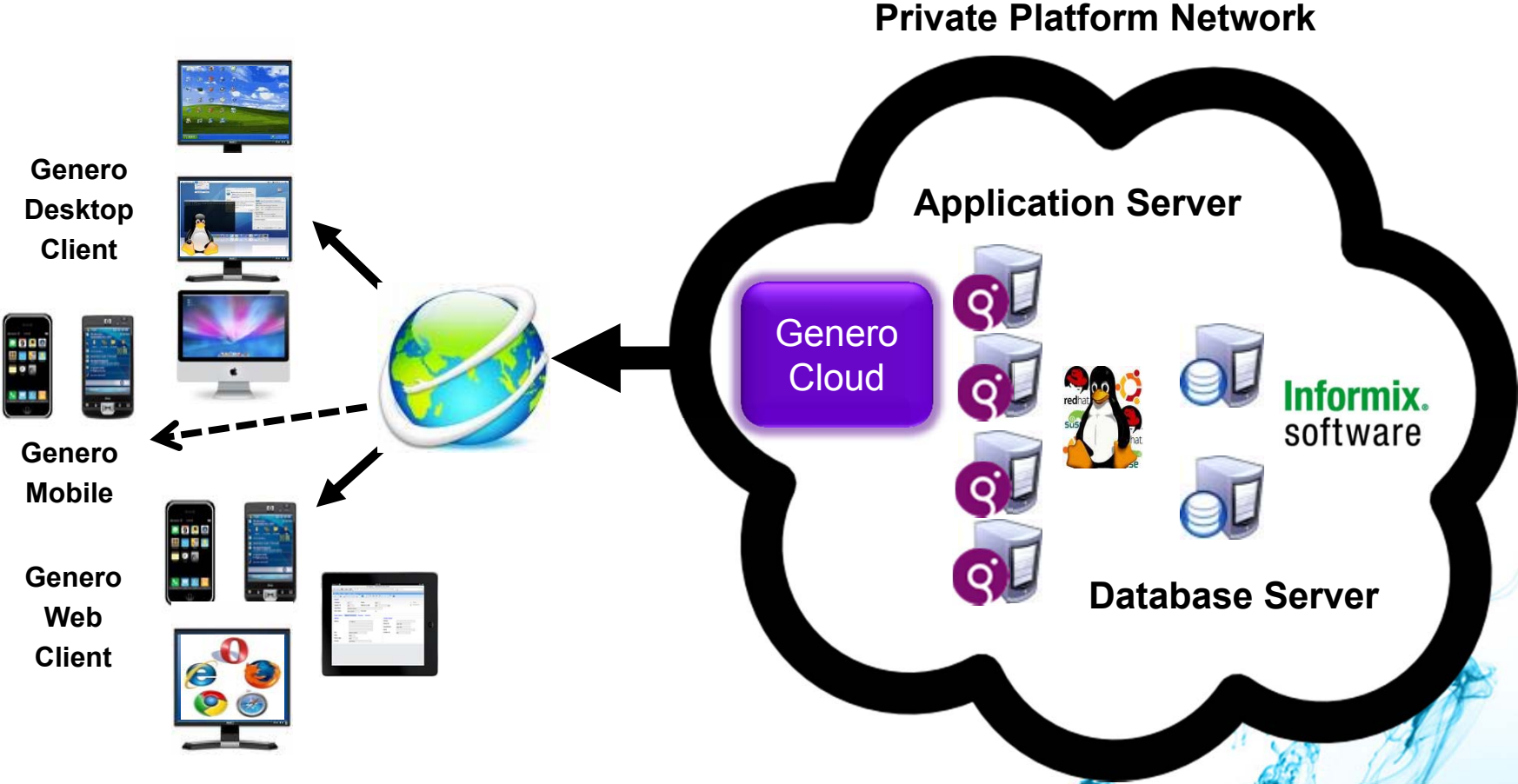
Four Js Development Tools
Software-as-a-Service
With Genero Cloud
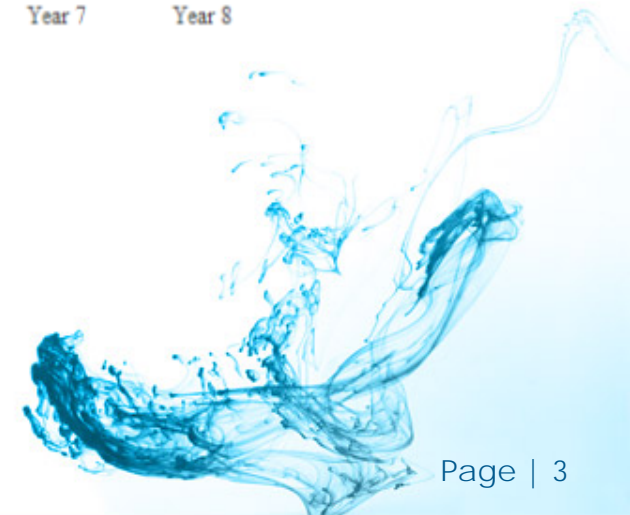
Genero Cloud

SLA governed, elastic, utility billing

Private Platform Network

Application Server

Genero
Cloud

Informix software

Database Server

Genero Desktop Client

Genero Mobile

Genero Web Client

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Business impact

Business transformation through customer growth and a shift in market position

BMS

Time, motion and value technology.

HOME   ECLIPSE   FUSION   DOWNLOADS   CONTACT US   BMS QUICK SUPPORT

Eclipse

Increased bodyshop profits.

An advanced information management system, designed specifically for UK body repairers.

Eclipse tracks each job as it completes a stage of the repair process, reducing downtime and cutting costs.

2 x admin
3 x developers
3 x support
2 x training
1 x sales

- Highly competitive industry,
- *Hands-free* offering – key market need,
- Deal size from 1-2 users to hundreds of users,
- Eclipse has clear market differentiation,
- Security a critical success factor.

Direct Line Group

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Software-as-a-Service
With Genero Cloud

BMS – The Business Impact
Customer Acquisition and a Shift in Market Position

BMS develops and markets Eclipse – a comprehensive software package for automobile body repair shops.

A "hands free" SaaS offering provided competitive value, and was key in winning their largest deal to date, from their biggest brand reference.

Customer Growth

- **Highly competitive UK industry**
  - "Hands Free" is a key requirement for body shops.
  - Similarly Four Js provided a comprehensive 'hands free" solution for BMS
- **Deal Size has shifted**
  - Typical deals are a few end users.
  - Recent deals: 250 users, now 300, 150 to come; 120 users , 200 to come

Market Position Shift

- **Direct Line Group – FTSE 250**
  - Leading UK Insurance company.
  - Owns and manages body shops
- **Critical Cloud and Security Requirements**
  - Cloud "table stakes"
  - Financial industry Security CIO review

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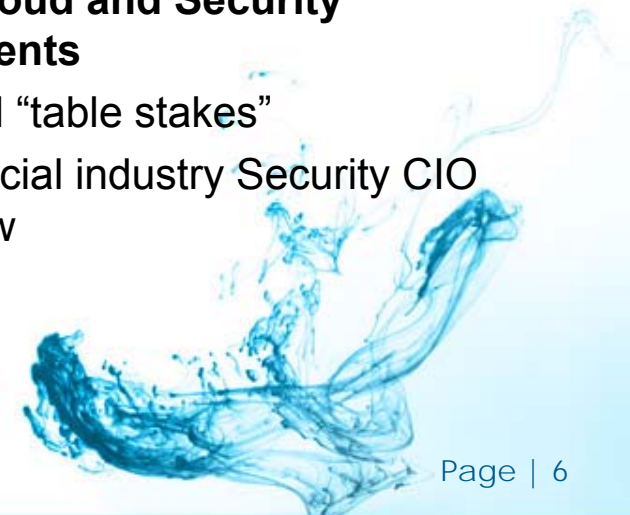
Thinking out Cloud
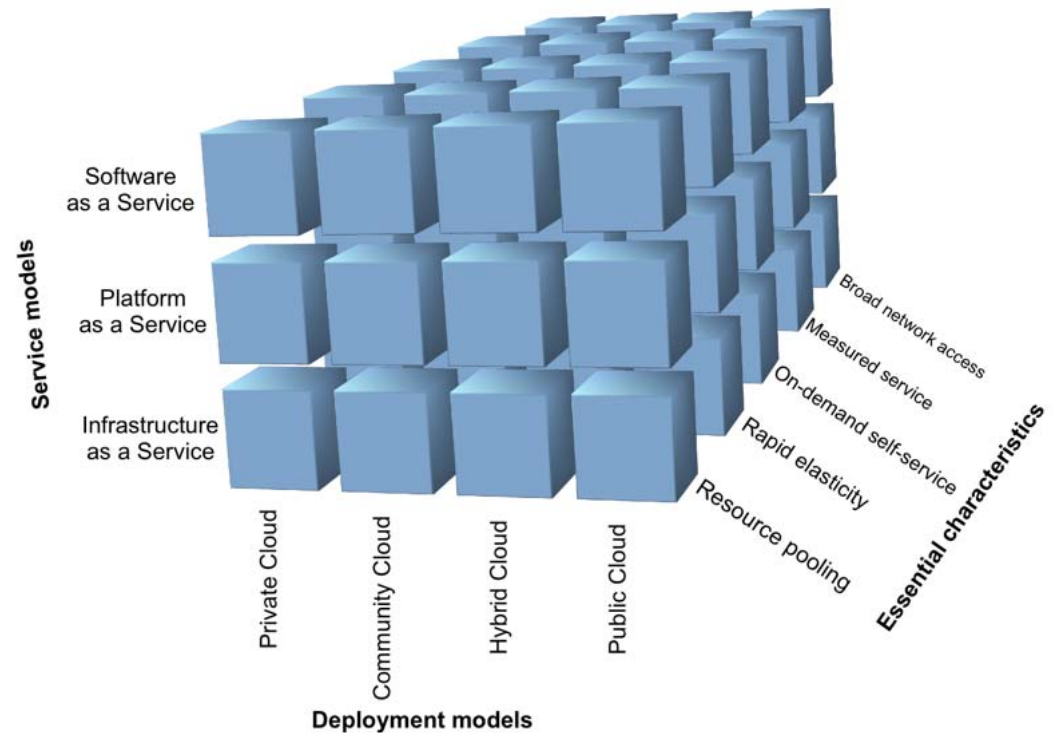
Definitions – what Cloud is not

❯ **Cloud is not hosting**

Thinking out Cloud

Definitions – what Cloud is

Cloud is hosting plus:
- Virtual
- Elastic
- Self-service
- Utility billing
- Predictable cost

The value of the Cloud

Our vision

> **For ISVs:**

- Address new markets, new geographies,
- Remove 'implemention' bottlenecks,
- Shorten sales cycles,
- Reduce support & admin. burden,
- Delegate security to trusted third parties,
- Eliminate system refreshes.

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The value of the Cloud

Our vision

> **For enterprises:**

- ○ 'Back to business',
- ○ 'Pay-as-you-go',
- ○ Move CAPEX to OPEX,
- ○ Save on system and facility overheads,
- ○ 'Green IT',
- ○ Improve agility.

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Four Js Development Tools
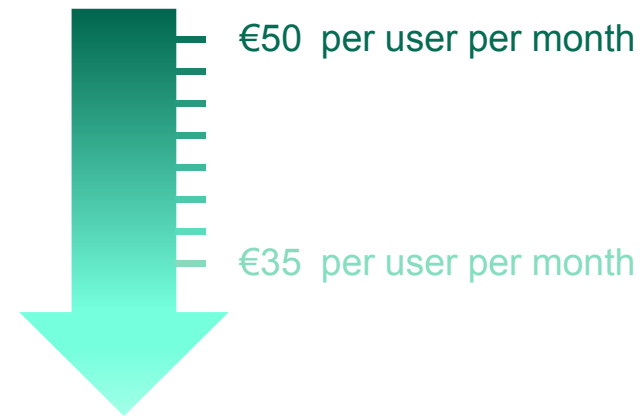**Software-as-a-Service**
With Genero Cloud

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The value of the Cloud

Pricing

> **A function of commitment**

- Duration
  - 1,2,3 months…
  - 1,2,3 years…

- Volume
  - 1,2,3 users…
  - 10,20,30 users…
  - 100, 200, 300 users…
  - 1000, 2000 users…

€50 per user per month

€35 per user per month

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**Software-as-a-Service
With Genero Cloud**

Raining pain

Worst Cloud outages 2014

Jan 10 **– DropBox:** **2 days**

March 17 **– Google:** **3 ½ hours**

April 20 **– Smasung smart TV meltdown:** **4 ½ hours**

May 16 **– Adobe:** **28 hours**

June 10 **– Evernote:** **10 ½ hours**

June 12 **– iCloud:** **several hours**

June 23 **– Microsoft Office 365, Lync service:** **several hours**

June 24 **– Microsoft Exchange:** **9 hours**

and…

SLAs typically don't cover:

Data loss, application downtime or security…

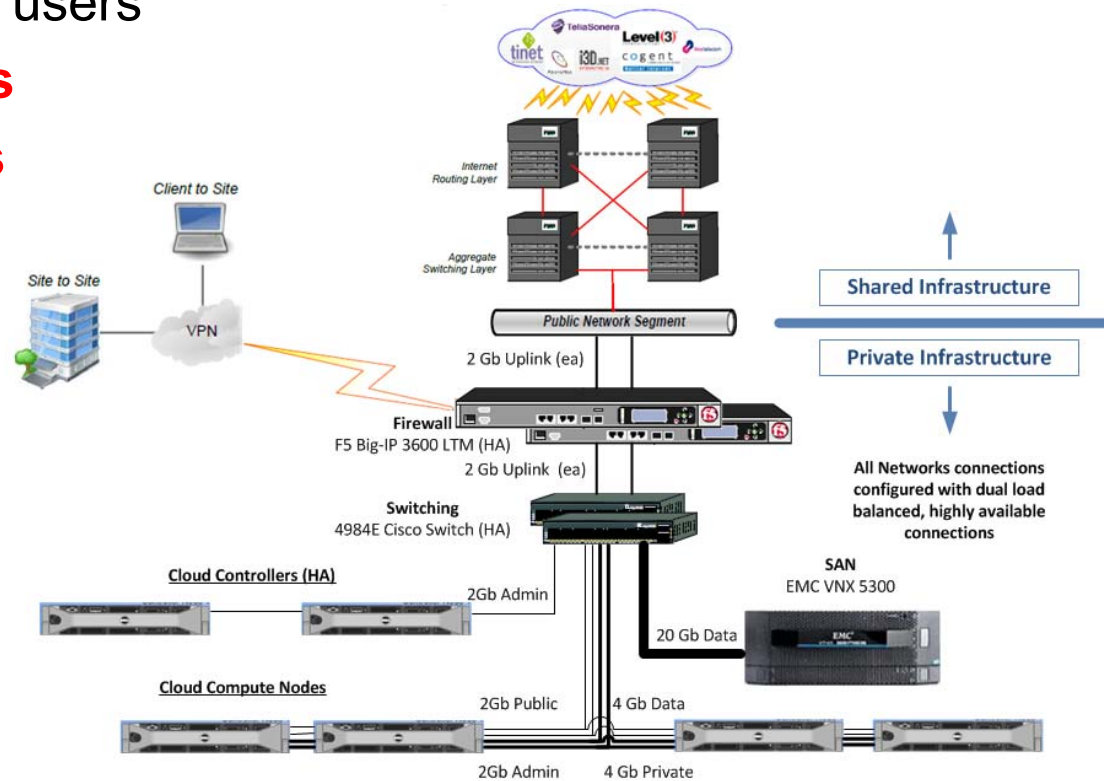Source: http://www.infoworld.com/article/2606209/cloud-computing/162288-The-worst-cloud-outages-of-2014-so-far.html

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Software-as-a-Service
With Genero Cloud

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The value of Genero Cloud

Scalable Highly Available Private Genero Cloud production platform

- 1,400 – 15,000 users
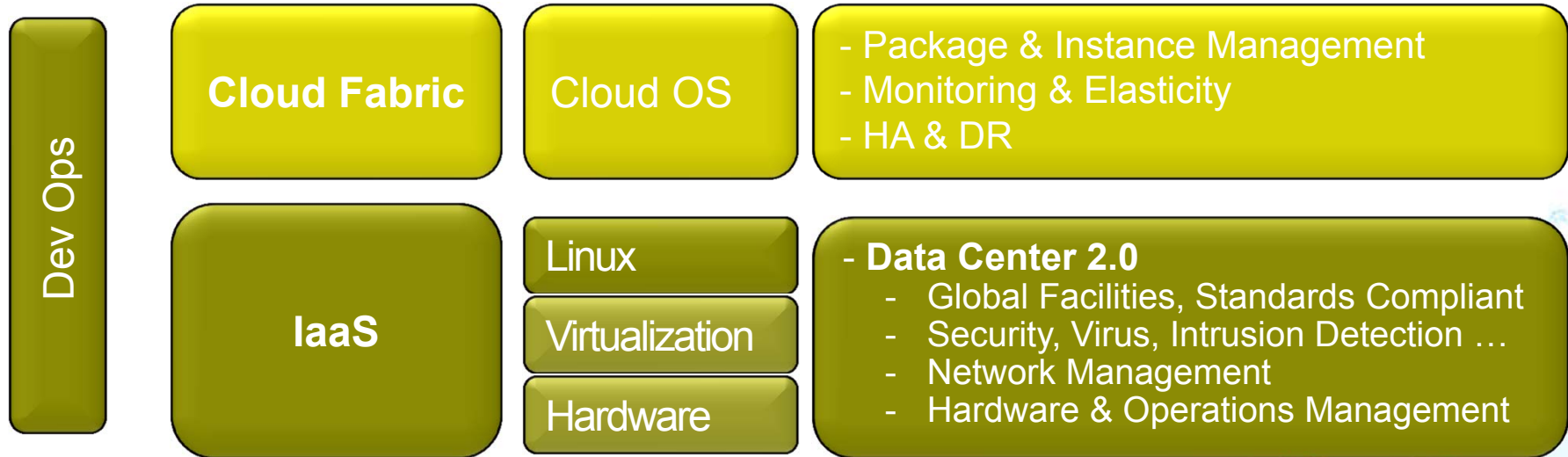- RPO – **15 mins**
- RTO – **4 hours**

* Recovery Point Objective, Recovery Time Objective

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Software-as-a-Service
With Genero Cloud
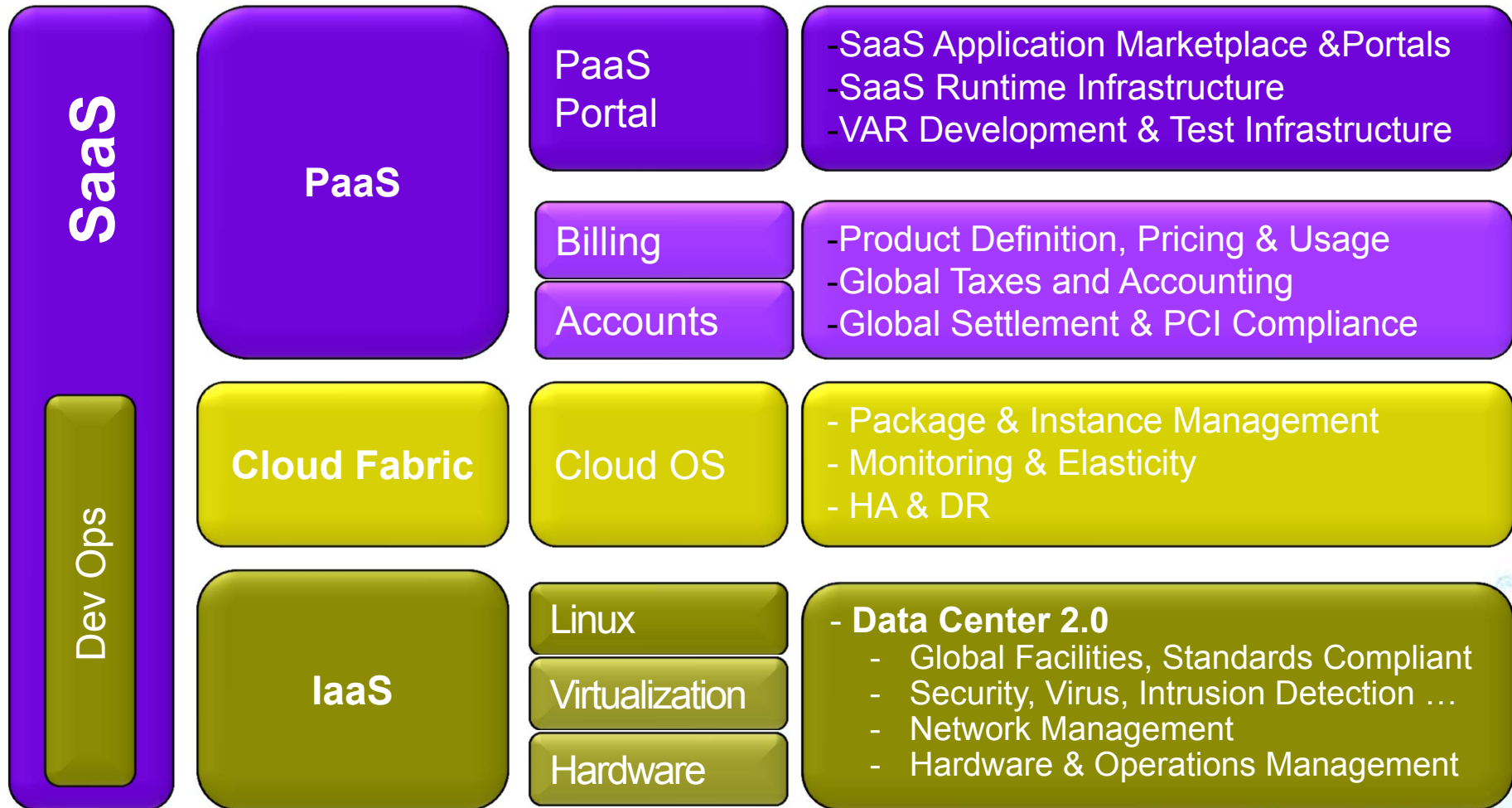
Genero Cloud

The Platform Architecture

appfog   **heroku**   **dotCloud**   cloudControl

RIGHT SCALE®   SCALR CLOUD MANAGEMENT   OneOps   puppet labs   Chef   collectd   Nagios®

cloudstack open source cloud computing   openstack™   CLOUD FOUNDRY™   Eucalyptus Systems

| Dev Ops	**Cloud Fabric**	Cloud OS	- Package & Instance Management - Monitoring & Elasticity - HA & DR

	IaaS	Linux
		Virtualization
		Hardware
			- **Data Center 2.0**
			  - Global Facilities, Standards Compliant
			  - Security, Virus, Intrusion Detection …
			  - Network Management
			  - Hardware & Operations Management

A Platform with a Strategic Difference

A SaaS *not DevOps* Infrastructure

|			
SaaS	**PaaS**	PaaS Portal	-SaaS Application Marketplace &Portals -SaaS Runtime Infrastructure -VAR Development & Test Infrastructure
		Billing Accounts	-Product Definition, Pricing & Usage -Global Taxes and Accounting -Global Settlement & PCI Compliance
Dev Ops	**Cloud Fabric**	Cloud OS	- Package & Instance Management - Monitoring & Elasticity - HA & DR

	IaaS	Linux
		Virtualization
		Hardware
			- **Data Center 2.0**
			  - Global Facilities, Standards Compliant
			  - Security, Virus, Intrusion Detection …
			  - Network Management
			  - Hardware & Operations Management

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Genero Cloud v1

Building the Foundation

PaaS

- ISV Runtime Infrastructure
- ISV Development & Test Infrastructure

Cloud Fabric

collectd

Chef
Chef

cloudstack
open source cloud computing

- Package & Instance Management
- Monitoring & Elasticity
- HA & DR

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CentOS

vmware

Xen

amazon
webservices™

rackspace®
HOSTING

SOFTLAYER®

- **Data Center 2.0**
  - Global Facilities, Standards Compliant
  - Security, Virus, Intrusion Detection …
  - Network Management
  - Hardware & Operations Management

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Cloud Platforms On Demand
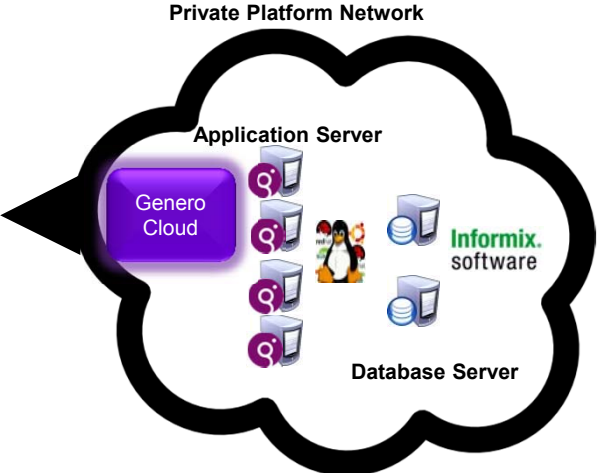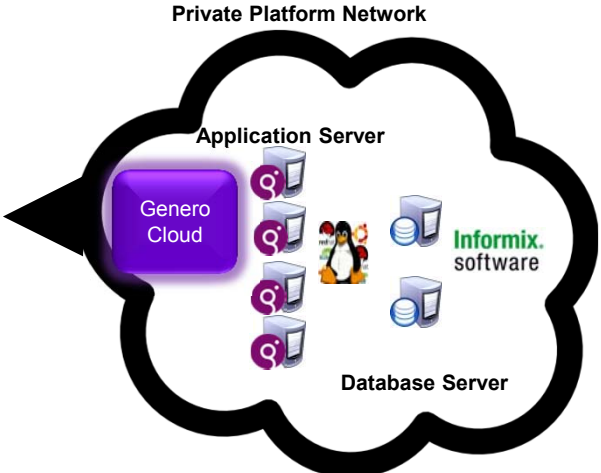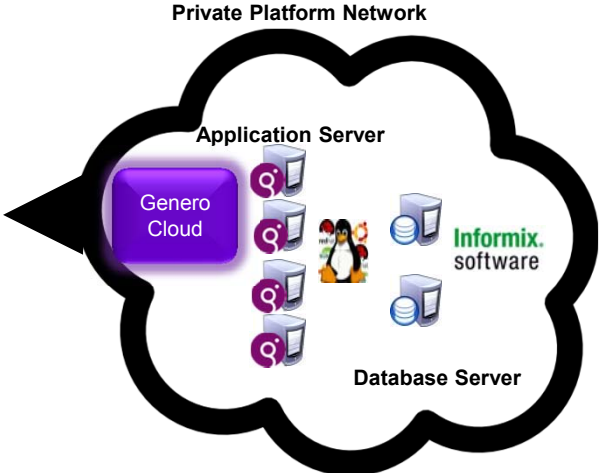
The Genero Cloud Platform

You only need install and configure your application, and any additional third-party software.

- CentOS Based Appliances
- Firewall Protected Private Networking with SSL Certificates
- Storage and Offsite Backup
- DR with a 4 Hr RTO and 15 Min RTO

- Production monitoring with SMS and email alerts and a browser based dashboard
- Genero
- IBM Informix
- Any Open Source software you may need

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Genero Cloud Managed Services

➤ ***We manage the Cloud***

➤ ***You can be Hands ON***

   • *You manage your virtual machines, including the operating system and all installed software.*

➤ ***Or with Optional Services, Hands OFF***

   • *We manage your virtual machines, including the operating system, Genero, and the database.*

   • *You manage your application and any third party software.*

➤ **Optional Services**

   • *Capacity Planning*

      • Based on monitoring and analysis of current production systems

   • *Health Checks*

      • Identify where and how the application and database can be tuned to improve application performance.

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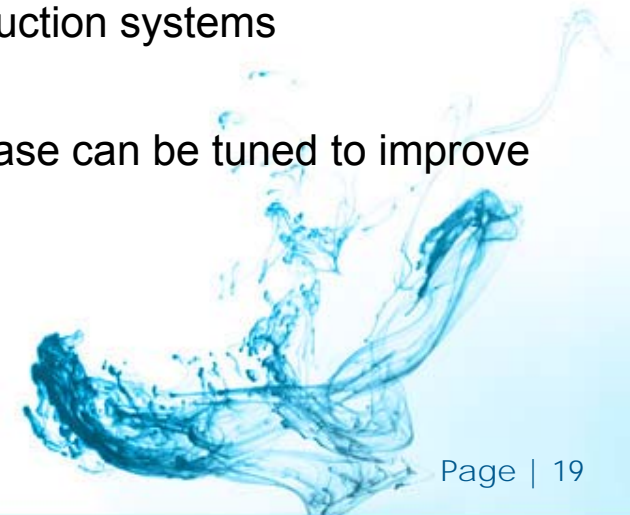
Managed Service Options

Support	24x7x365	
	RHEL & OS Support	
NOC Monitoring	Business Hours	
	24x7x365	
OS	Firewall management	
	Security Patch Management	
	Fully Managed	
Genero	Fully Managed	
IBM Informix	Fully Managed	
HA/DR	Test and Recover in case of DR event	
	Configure and manage HA DB	
	Configure and manage HA SaaS	
	Configure and manage DR DB	
	Configure and manage DR SaaS	

Cloud Automation
Chef Based Platform Creation & Management

Single Base VM Template

- All software and configuration "on demand"

Automated Configuration

- Genero
- Informix
- Security
- Monitoring
- Backup Automation

Extensible Infrastructure

- Core recipes support Genero Cloud & ISV Platforms
- ISV "specials" supported

Lifecycle Management

- Fully version controlled
- Repeatable test, operational platforms
- Automated updates
- Automated rollback

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Four Js Development Tools
**Software-as-a-Service
With Genero Cloud**

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Cloud Automation
Chef Based Platform Creation & Management
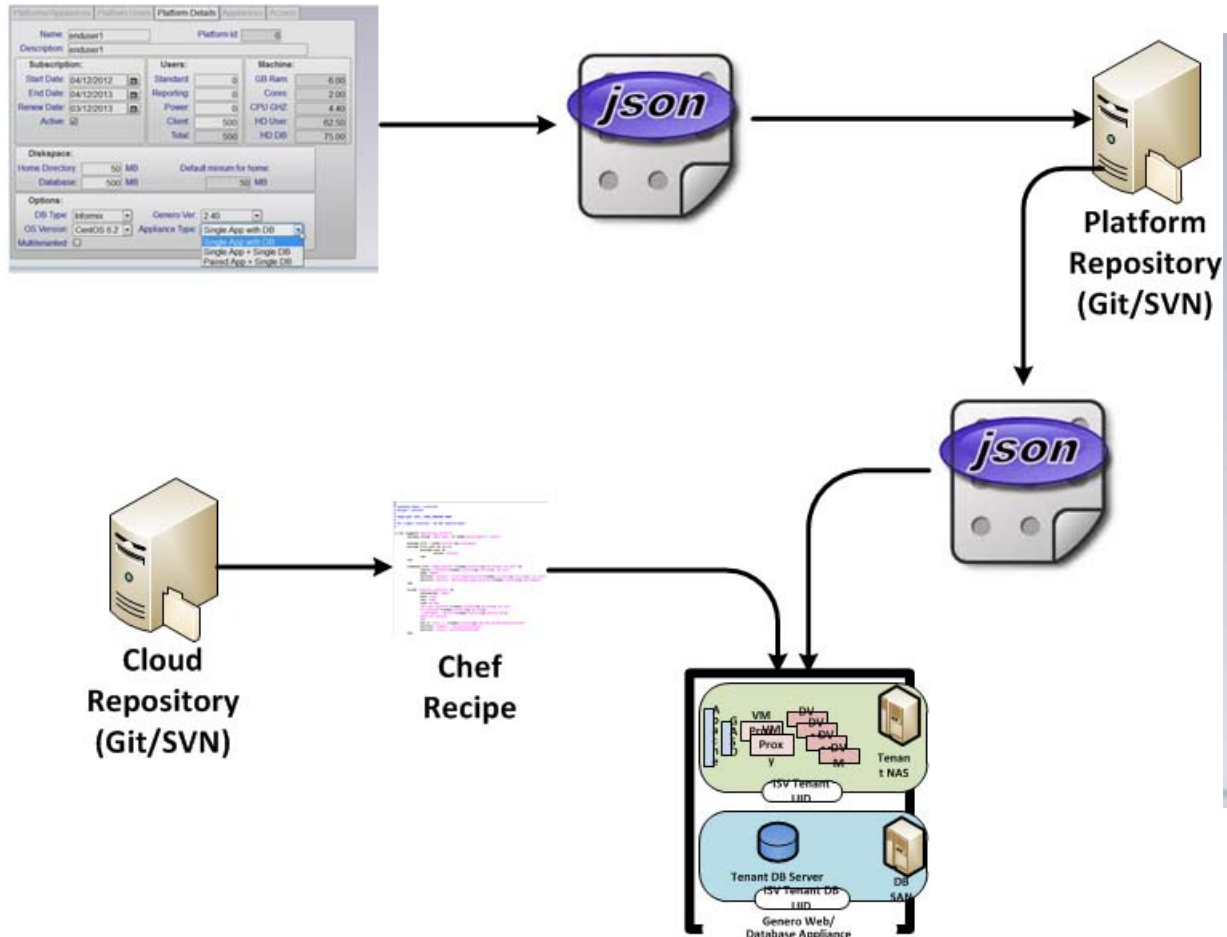
Production Operations

SaaS Application Performance and Availability

- **Early Adopter Based Platform Automation**
  - Live Production SaaS Offering (Since September 2012)
  - UK ISV: >1000 end users
  - 32+ Accounts; 4-300+ users/account
  - "Cash register" mission critical application (runs the business)
  - SMB to Enterprise (DLG, DHL UK)
- **Focus: Availability, Availability, Availability**
  - DR: Automated Offsite Backups
  - Managing IBM Informix Server
  - Monitoring & Alerting: Proactive awareness and response
  - Application and Disk Performance Testing
  - Application Performance Tuning
- **Focus: Security Security, Security**
  - Secure, logged, auditable management access control
  - Locked down firewall
  - Flexible site certificates

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BMS revs motor industry Private Cloud

London, England - November 26, 2013 -- Bodyshop Management Systems (BMS) announced today 'Eclipse IMS', its most ambitious 'Software as a Service' Industry Management System to date for motor insurers working with the 'bodyshop' car repair industry. *Read more*

Genero. cloud

Username

Password

Login

Need help logging in?

Sign up for Genero Cloud now

GENERO. cloud

Platform   Help   john.driscoll@bms.com   Logout

London 14h00 UTM+1

Tuesday 3 December 2013

● **Platforms**   9 ⚠ 1 ● 1   Custom ▾   New platform

CLOUD	London (LON)
ISV	SELECT
☐	BMS
✔	Fujitsu
✔	Connect
☐	Langdon
Tenant	ALL

Manage	Fujitsu :: LBH	🟩 🟩 🟩 🟩
Manage	Fujitsu :: MultiTenant	🟩 🟩 🟩 🟩
Manage	Connect :: MultiTenant	🟩 ⚠ ●

Events

Filter 🟩 ⚠ ● ⚙ 🤖

2013-11-13 13:59	●	Fujitsu AppDB1	CPU Overloaded
2013-11-13 13:57	⚠	Fujitsu AppDB1	CPU Busy
2013-11-13 12:14	⚙	Fujitsu AppDB9	DEPLOYED
2013-11-13 02:27	⚠	ConnectD9Server3	CPU Busy
2013-11-12 13:57	⚠	Fujitsu AppDB1	CPU Busy
2013-11-13 12:14	🤖	Fujitsu AppDB10	BACKUP

System messages

2013-11-12 22:00 GC-UK1 Network Maintenance Planned for 2013-12-01 01:00 to 02:30

2013-11-12 16:00 GC-UK2 SAN Network issue resolved

2013-11-12 14:58 GC-UK2 A small number of customers are experiencing increased latency network connections to SAN storage

Status

	GC-UK1	GC-UK2	GC-AP1	GC-AP2
Network	🟠	🟢	🟢	🟢
Compute	🔴	🟢	🟢	🔴
Storage	🟢	🟢	🔴	🟠

Production Operations

Managing the Platform: Comprehensive Monitoring

View real-time and historical platform status, in comprehensive detail.

Production Operations

Managing the Platform: Status Dashboard and Alerts

Real-time dashboard with configurable, threshold based alerts.

Dashboard   **Drilldown**

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**Software-as-a-Service
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Production Operations

Managing the Platform: Email and SMS Alerting

Configurable, threshold based alerts sent via email and SMS.

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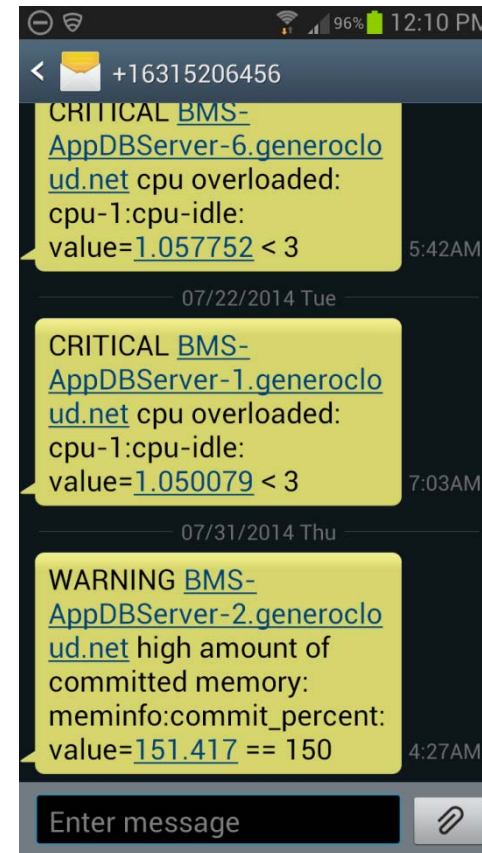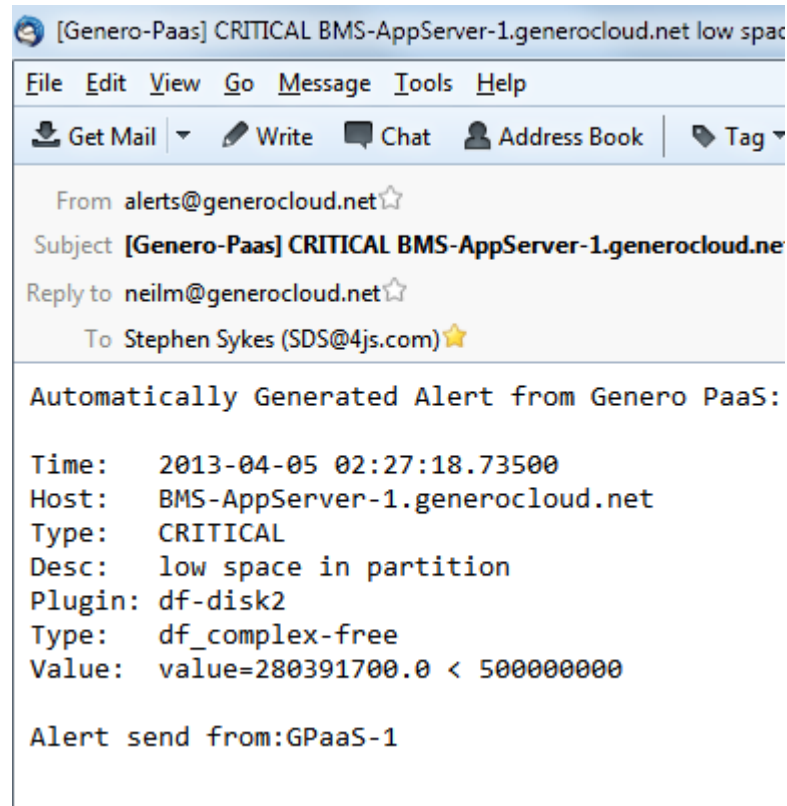
Production Operations

Managing the Platform: Status Dashboard and Alerts

See alert history and drill further into the monitor status at the time of the alert.

Alerts

▼ 🟢 cpu-idle		cpu-idle
■ 🟢 OKAY		Last: 2013-04-18 01:16:47
■ 🔴 cpu overloaded		Last: 2013-04-18 01:16:26
■ 🟡 cpu busy		Last: 2013-04-18 01:11:06
■ 🟢 OKAY		Last: 2013-04-17 10:06:26
■ 🟡 cpu busy		Last: 2013-04-17 10:02:27
■ 🔴 cpu overloaded		Last: 2013-04-17 09:57:07

Monitor Details

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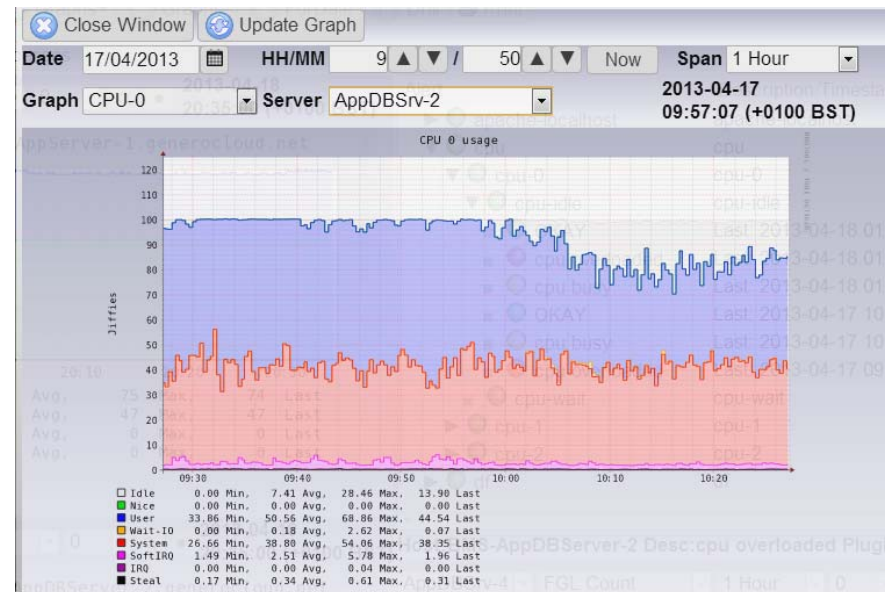
Platform Security

Platform access control

> **Current focus with ongoing development**
> - Nat West (Major UK Bank) Security Team Driven

> **Public Facing Servers**
> - Nessus scans of public facing servers
> - Firewall lockdown except for port 443 and 22

> **SSH access**
> - Separate Extranet and Intranet Key Pairs
> - Access controlled by type, individual, and server
> - iptable control of source systems

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Platform Security

Platform access control

> **User Management**
>> • Separate operations (ISV, fourjs) and individual accounts
>> • No operations or root login – all access as individuals
>> • Automated, dynamic control of user access (ssh key & login)
>> • Automated, dynamic, role based operations (sudoers) control

> **All access logged**
>> • Shell integration with history logging
>> • 'sudoer' logging
>> • 'rsyslog' shipping of logs to logging server
>> • Manual operator logging of all access to production machines
>> • Logs backed up to Amazon S3

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Platform Security

Platform access control

> **Amazon S3 Backups**
> - Per ISV access control
> - Server side encryption
> - Per ISV client side encryption

> **Credential Management**
> - User password management
> - Genero Cloud Certificate Authority
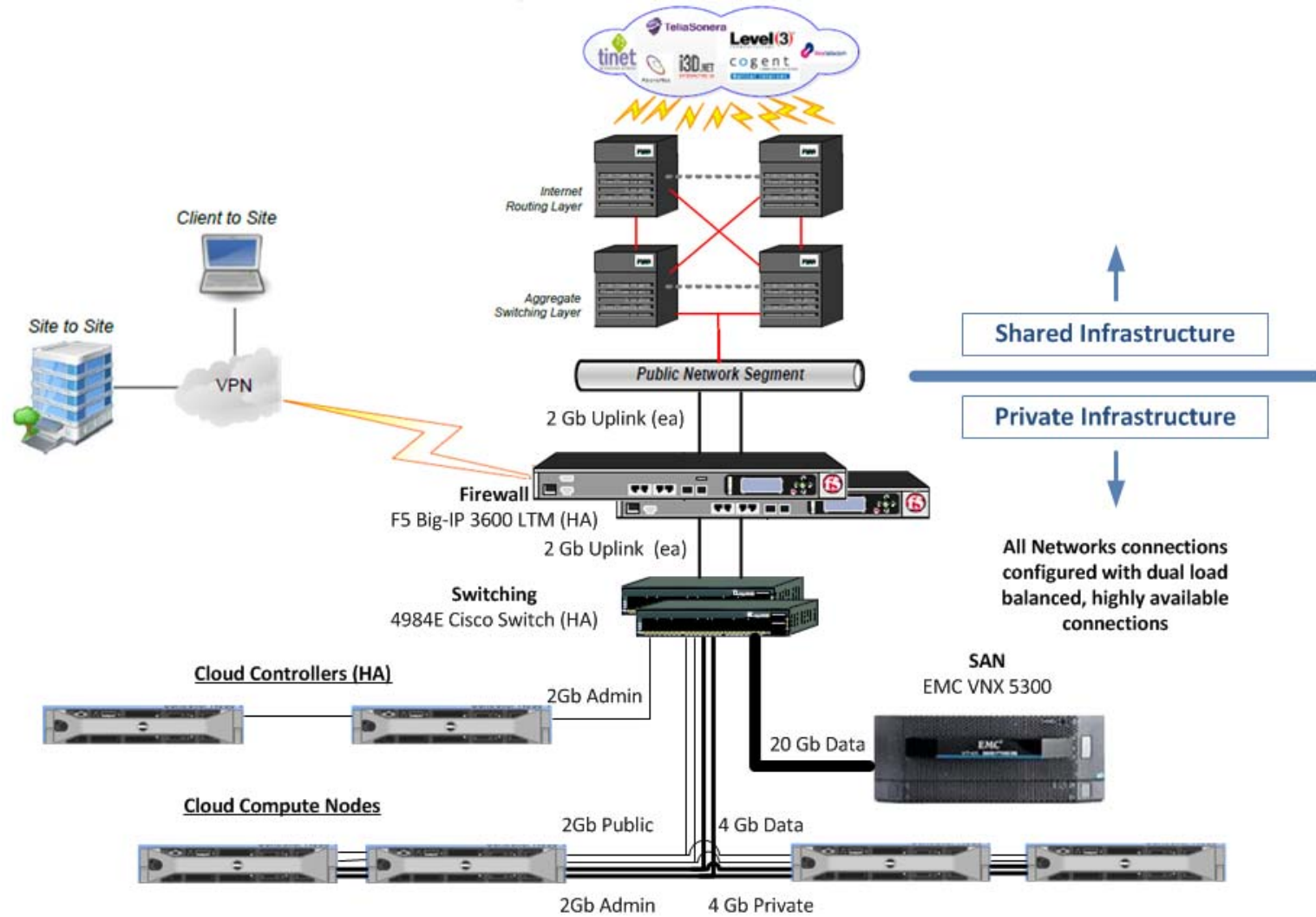> - Automated SSH key management
> - Secure internal credentials management

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Production Platform
Scalable Highly Available Private Genero Cloud

Production Platform

Dedicated, High Speed EMC 5300 SAN

EMC F.A.S.T Cache

SSD 200GB Cache

EMC F.A.S.T Tiering

Expandable for Capacity & Performance

Enterprise 15K 600 GB SAS
RAID 10

.....

Enterprise 15K 600 GB SAS
RAID 10

Hot Spares

Expandable for Capacity

Enterprise 7200 2 TB NL-SAS
RAID 10

.....

Enterprise 7200 2 TB NL-SAS
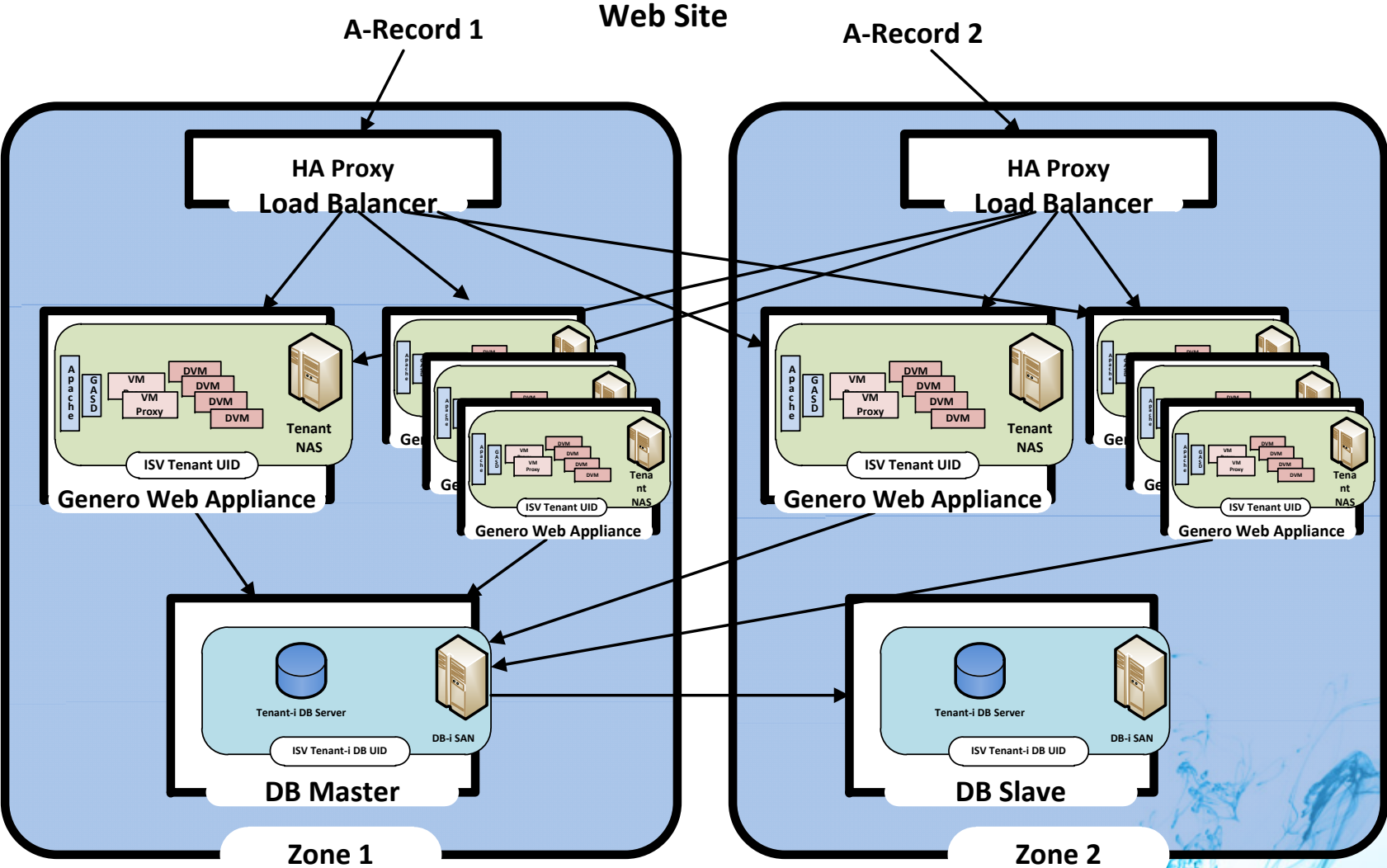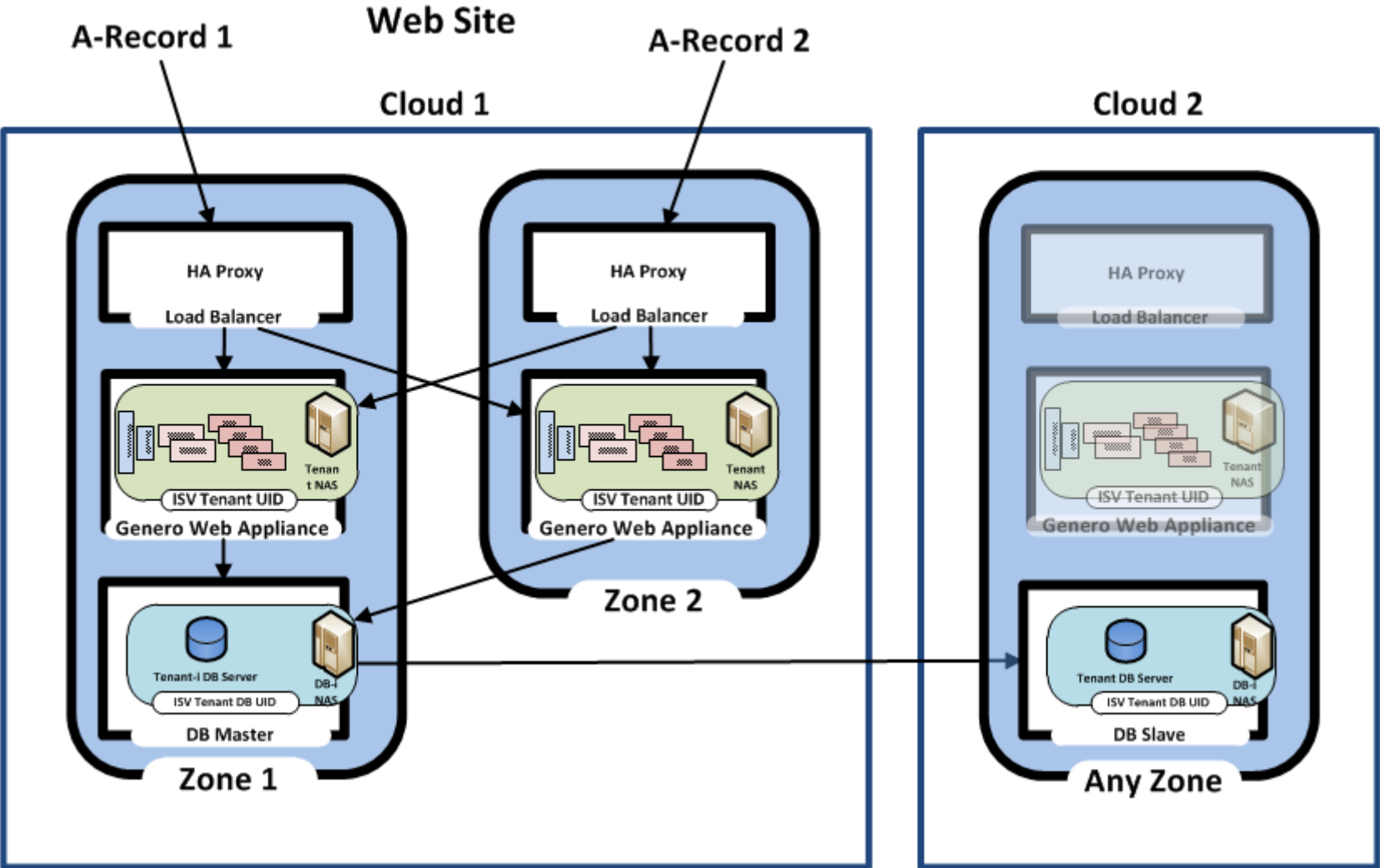RAID 10

Hot Spares

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High Availability & Elasticity

High Availability & Disaster Recovery

Let's Engage

Technical conversation leading to POC and live customer

❯ Technical Conversation

- Current deployment architecture?
- Platform requirements?
- Client mechanism?
- Some migration likely:
  - Performance Tuning
  - User access control
  - Standardizing installation, security methods

❯ Proof of concept – leading to a live customer

- We'll provide the platform,
- You install your application and test,
- We'll hand-hold.

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The Fastest Path to Success

Discussion