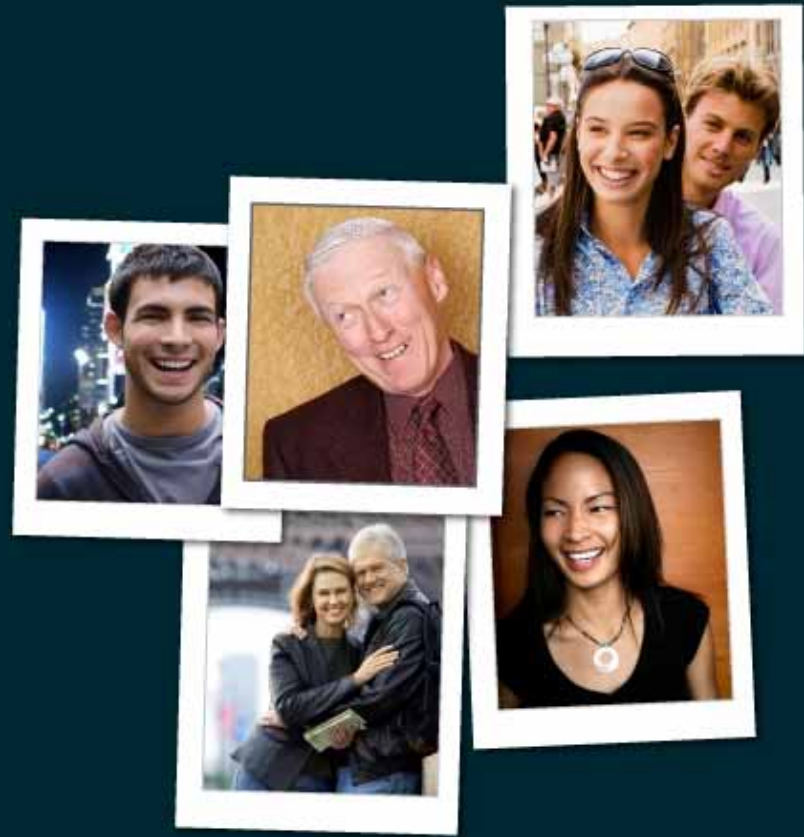


SUMMIT 08



Behind the Scenes

RightNow World Class Hosting

RIGHT
NOW.

- On Demand at RightNow (Laef Olson - CIO)
 - SaaS Industry Trends - Enterprise Adoption
 - RightNow as SaaS Innovator
 - Unique approach to SaaS from traditional model
 - Operational Model
 - Security Capabilities
- Behind the Scenes in Hosting (Pete Stoneberg, VP Hosting)
 - RightNow as SaaS Leader
 - Operational Excellence
 - Capacity
 - Service Delivery
 - Infrastructure Management Model
 - Data Centers
 - Infrastructure Model
 - Disaster Recovery
 - Monitoring and System Management
 - Hosting Management System
- What's on Deck (Pete Stoneberg, VP Hosting)
 - On Demand Roadmap
 - New capabilities

RIGHTNOW TECHNOLOGIES: SAAS INNOVATOR

Laef Olson
Chief Information Officer

“Software that's owned, delivered and managed remotely by one or more providers.”

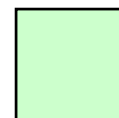
Gartner

The provider delivers software based on a single set of common code and data definitions that are consumed in a one-to-many model by all contracted customers anytime, on a pay-for-use basis, or as a subscription based on use metrics.

- The debate is over - 70% of Large Enterprises are currently using SaaS in production deployments.
- SaaS is forecast to have a 23.8% compound annual growth rate through 2012 for the aggregate enterprise application markets, far exceeding the total market CAGR of 11.4%.
- All forms of SaaS-delivered customer service applications in the call/contact center will grow more than 20% per year through 2012.

Gartner, Sept 2008

	Managed Hosting Service	Isolated Tenancy	Shared Execution	Multi-tenant/ Single-Version	Multi-tenant/ Multi-version
Application Infrastructure	Dedicated	Dedicated	Shared	Shared	Shared
Application Environment	Multiple	Shared	Shared	Shared	Logically Dedicated
Application Versioning	Multiple	Single	Single	Single	Multiple
Data Separation	Physical	Physical	Physical	Logical	Both
Examples	ASPs like Totality, EDS, IGS	Oracle On-Demand	Microsoft On-Demand	Salesforce, Workday, Netsuite	RightNow



Supports SaaS

Leverage the transformational nature of SaaS to deliver on key responsibilities of IT:

1. Functional **solution** driven by a clear value and internal customer success
2. Enterprise solution with the **delivery** capability required for rapid and successful deployments
3. Comprehensive **services** that IT can use to augment internal capabilities

VIRTUAL CIO OPERATIONAL MODEL

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Your Responsibility

Responsibility of SaaS

Business Technology Services

Strategy, Business Analysis, Solution Architecture, Functional Specification and Planning, System Integration, Reporting and Business Analysis



Project and Delivery Services

Project Management, Project Development Life Cycle, Quality Assurance, Delivery Management, Architecture, Application Development, Deployment Services



Application Management Services

Application Expertise, Application Administration, Technical Support, Training, Application Upgrades, Functional Expertise



Operational Services

Incident Management, Problem Management, Change Management, Monitoring, Capacity Planning, Disaster Recovery, Security Management, Compliance Management



Infrastructure and Network Services

Data Center Management, Systems Administration, Performance and Capacity Management, Patch Management, Telco Management, Provisioning and Configuration



Layered security policies direct physical, server, network, storage, and backup, application, and procedural security



- 🔒 Full-time Corporate Security Officer & Dedicated Security Team
- 🔒 Daily external vulnerability assessments using QualysGuard
- 🔒 Third party quarterly security audits by Digital Defense
- 🔒 All systems monitored 24x7 with pager and email alerts
- 🔒 Network intrusion detection across all data centers
- 🔒 Secure, encrypted access provided to customers
- 🔒 Application design ensures data separation and security
- 🔒 Remote administration encrypted and controlled
- 🔒 Administration performed through HMS authentication
- 🔒 Auditable access and transaction logging



ISO 27002

ISO 27002 represents a broad global standard and the basis for our program



PCI Audit

PCI is a frequent customer request and an important mandatory standard



SAS 70 Audit

SAS 70 Type II is ideal to highlight the maturity and consistency of our controls

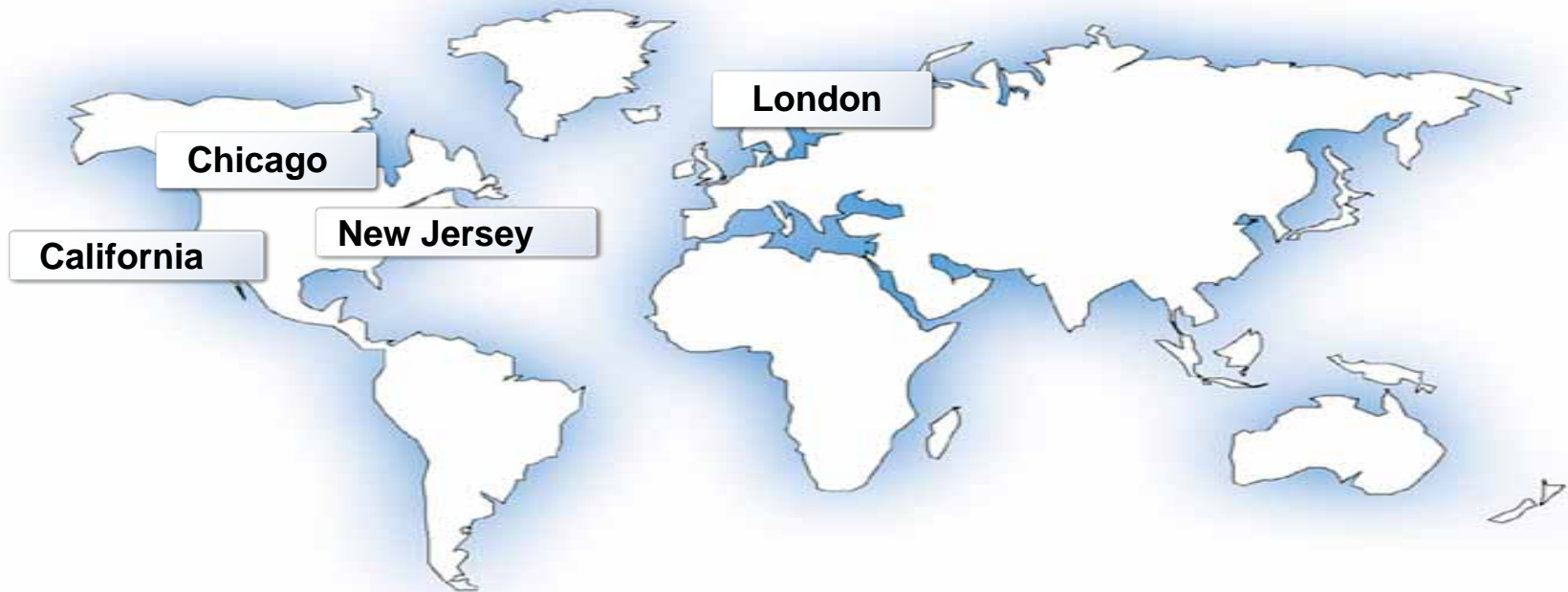
RIGHTNOW TECHNOLOGIES: SAAS LEADER

Pete Stoneberg
Vice President, Hosting

- SaaS Leadership
 - Why the POD architecture?
 - World Class Hosting in World Class Datacenters
 - Operations and Change Control
 - Automation via HMS (Hosting Management System)
 - On Demand Roadmap

DATA CENTER DIVERSITY

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**Unparalleled
Security**



**Space and Support
Considerations**



**State of the Art
Network Systems**



**Service Levels:
99.999%
Uptime Target**



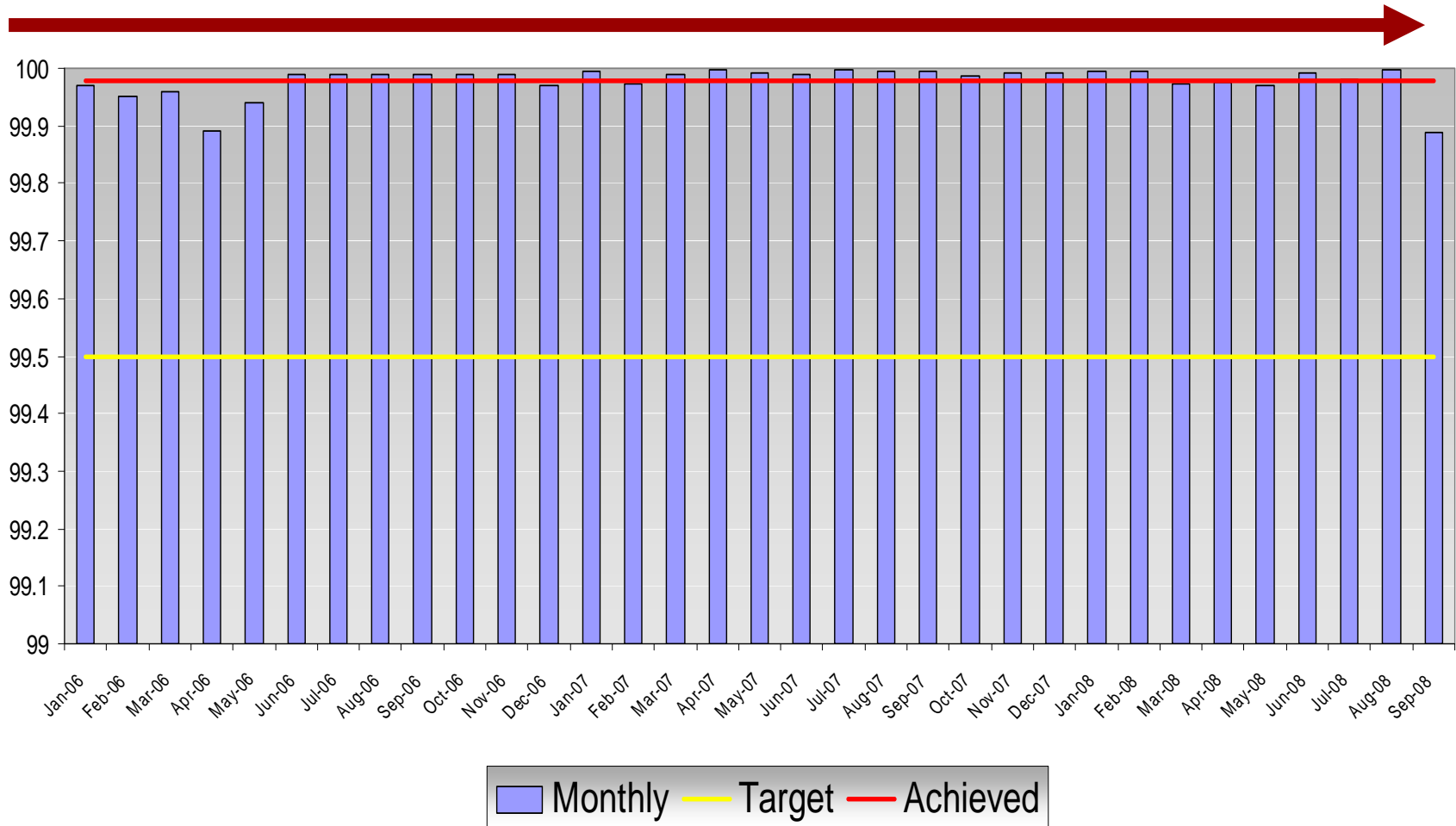
**State of the Art
Power & HVAC
Systems**



- What is it?
- Allows for a transaction based design.
 - Web and database transactions (page turns) are a measurement of our products use across customers in a POD.
 - POD components can be grown based on usage and growth of customers in that POD.
 - Horizontally scalable model.
- Allows for isolation of most issues to the affected POD.
- Ability via HMS to load balance sites across PODs.

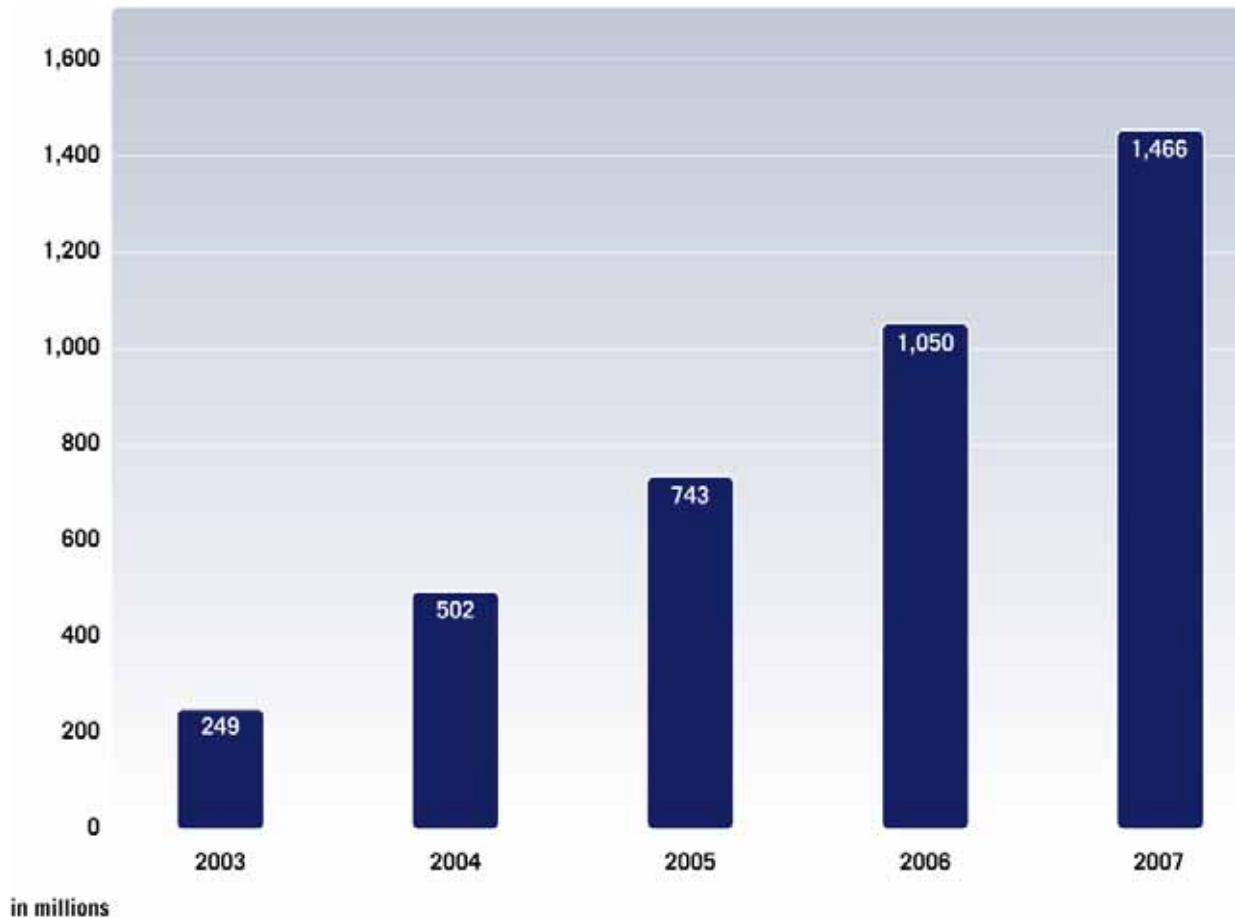
- Globally diversified datacenter locations
 - Santa Clara, CA (Savvis Facility)
 - CA POD
 - WC POD
 - AP POD
 - Sacaucus, NJ (ATT Facility)
 - NJ POD
 - EU POD
 - London, UK (IBM Facility)
 - UK POD
 - Chicago, IL (Savvis Facility)
 - DR POD1
 - DR POD2

Consistent Track Record of High Availability 99.9% Uptime or Better



SCALABILITY - TOTAL CUSTOMER INTERACTIONS

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**>4.3 billion
queries
processed each
week**

**>1.4 billion
customer
interactions
annually**

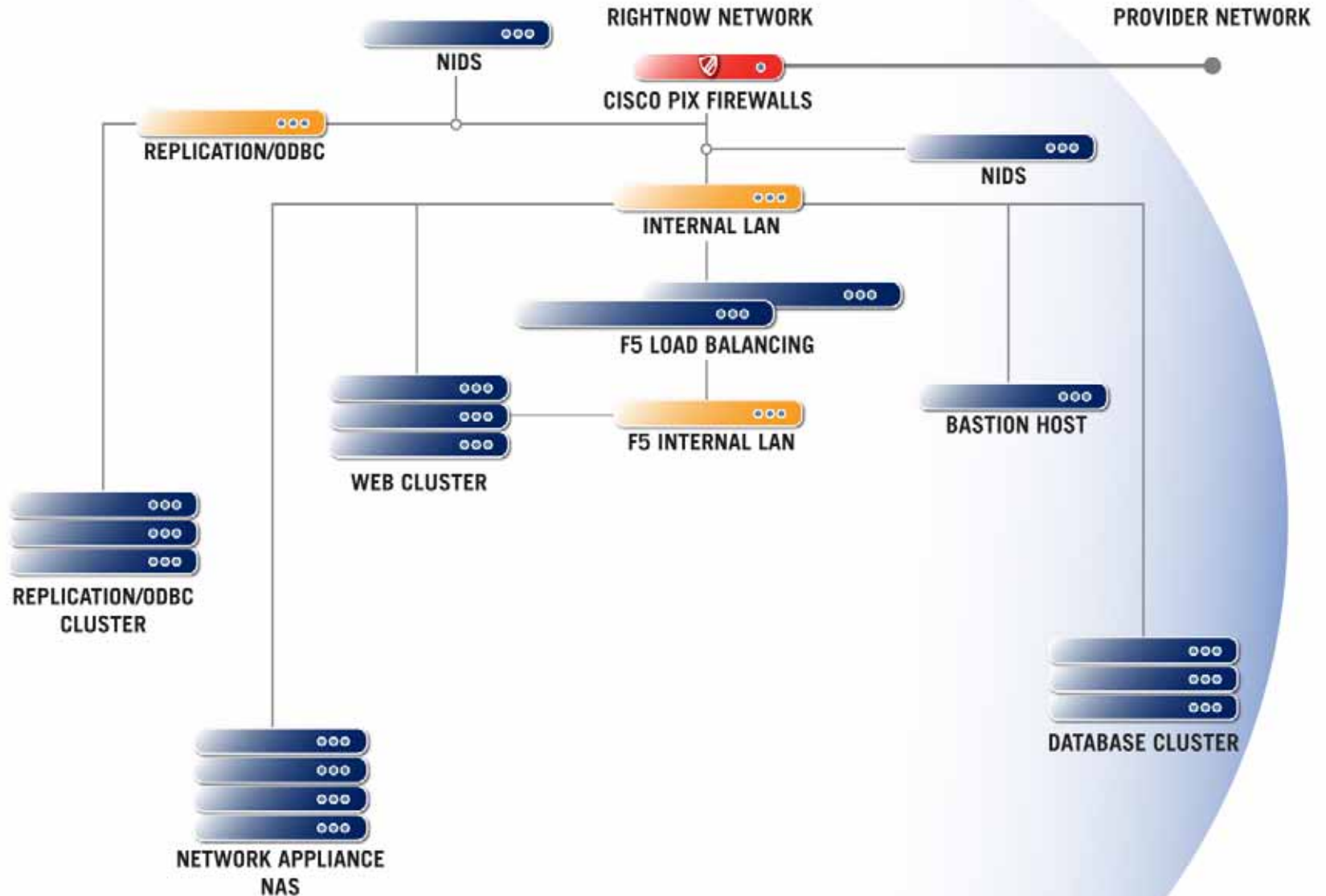
**>200 million
end-user
sessions per
month**

**>500 million
“page turns”
every month**

**>300 million
contacts on 30
terabytes of storage**

- Leverage the flexibility and capabilities of MySQL
- Dual Master Architecture
 - Shared Nothing architecture between servers
 - Disk issues are not cluster impacting
 - Allows for running customers on both A and B sides of the cluster
 - Controlled via HMS
- Real-time replication
 - Local datacenter copy
 - Reports and other batch use
 - DR copy stored offsite
- Daily backups. Weekly backups kept for 1 year.

RNT POD ARCHITECTURE



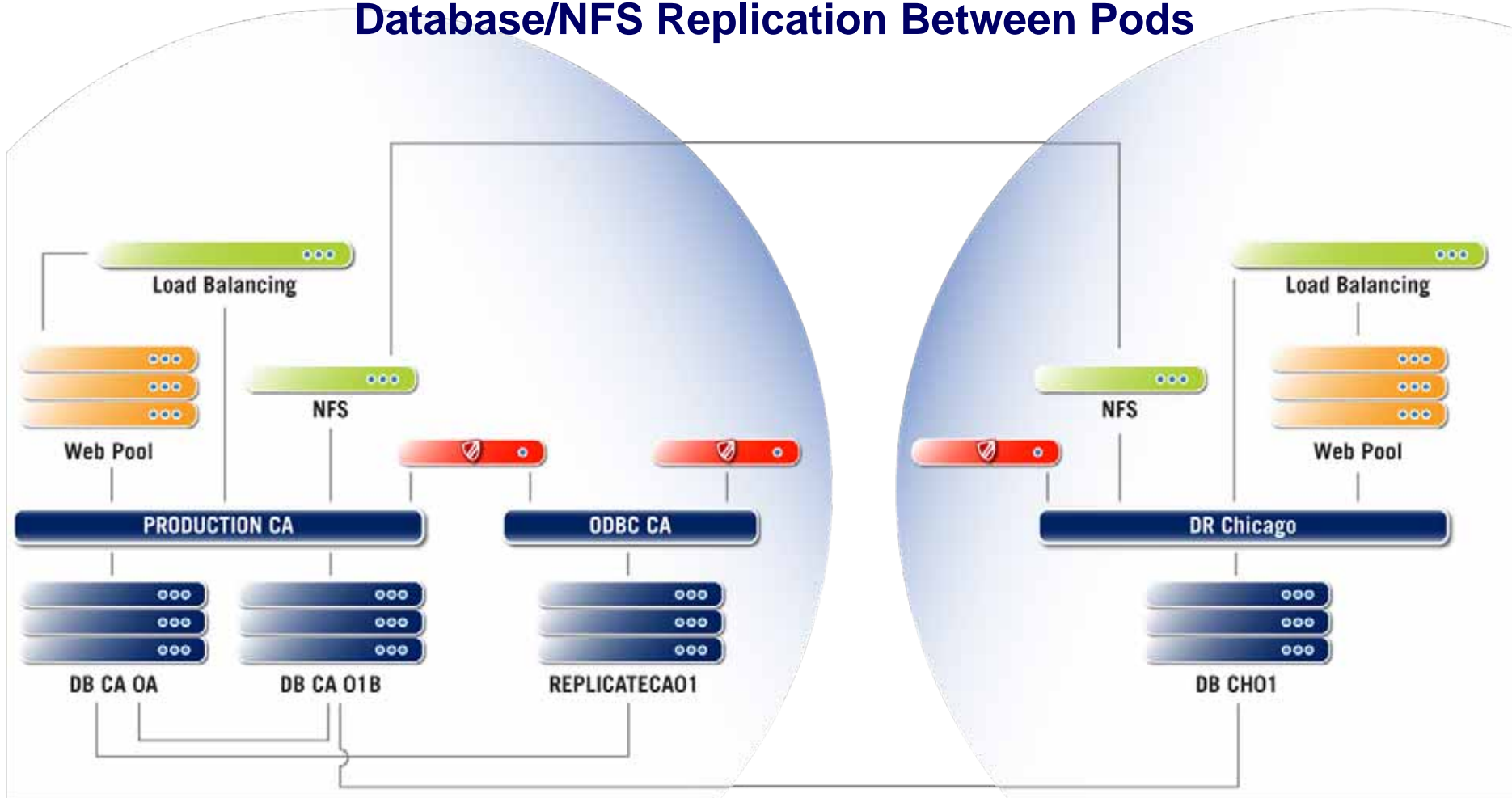
- We are committed to the highest level of data integrity.
 - All customer data is copied to our DR facility.
 - Database data is replicated real time.
 - Individual site data is replicated every 4 hours (NFS Snapshot)
 - In the event of a disaster (data) we will restore the individual site to the restored copy of the data.
 - This may in fact be in another datacenter.
 - Customer presence in one datacenter and the active database in the DR facility.
 - This failover can take from 2-4 hours to complete.

- In the event of a localized datacenter outage, we will work with all partners to restore capability to that datacenter and affected PODS as quickly as possible.
- If RNT believes this to be an extended datacenter wide outage >24-36 hours, we will execute our datacenter DR plan.
- All affected customers will be migrated to the Chicago DR facility.
- Inbound IP's will be modified to DR facility AS ranges.
 - Customers IT contacts will be notified of these changes. All necessary firewall rules will need to be modified by the customer.
 - Marketing email will not be run until such time as the new IP reputation can be attained (usually measured in a gradual ramp up of email deliveries spread over days/weeks).

DISASTER RECOVERY - WHAT DOES IT MEAN?

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Database/NFS Replication Between Pods



Systems Management

Dedicated 24x7 team of database administrators

24x7 service monitoring and paging notifications

Environment optimally tuned for RightNow application stack

JIRA tool for internal project and workload management within the team.

Future hires to build out Hosting Excellence Centers to enhance monitoring of all datacenters and customer sites. Warm hand-offs between Customer Care and Hosting.

Provisioning

RNT Hosting Management System (HMS) is a centralized site command automating key operational functions

Customers have visibility into operational status and control over testing and upgrade site creation

- Real-time diagnostics

- Upgrade and maintenance schedules

- Site Stats

- Utility Stats

- Disk Usage

Monitoring

Based on Groundwork OpenSource and Nagios

Provides complete infrastructure level view of hardware, server applications, networks, and site utilities

Customer experience monitored via Coradiant Truesight and internal site specific tools

All systems monitored 24x7 for security events

- Customer affecting changes are made and coordinated at 2 times each month, 2nd and 4th Friday night.
 - Customers are notified 2 weeks in advance of these changes where impact to customers will occur.
- Emergency changes are communicated as soon as they are known and are timed on the critical nature of the change required.
- Upcoming changes are discussed and approved at the weekly Hosting meeting prior to the change window.
- Emergency changes are submitted and approved by VP of Hosting prior to execution.

- Why build our own software delivery system?
 - Ability to manage and deploy a true multi-tenant release methodology.
 - Provide a powerful tool for customers to control their own release schedule for both new releases and Service Pack deployments.
 - Provide both Customers and Professional Services the ability to create “clones” to test out new releases without impact to production sites.
 - Provide Hosting with an automated method to perform traditionally manual functions within a hosted architecture that are prone to human editing error.

- HMS - Hosting Management System - A system of record and management system for all hosted sites. Site and interface creation, mailbox creation, manages DNS, configure site/interface modules (chat, odbc, etc.) as well as site upgrades.
- Created in 2001 to manage and automate the quickly growing number of hosted sites and associated upgrades.
- Separate HMS installations exist for each environment. (TEST, QA, TRAINING, DEMO, PRODUCTION, etc).
- Production HMS currently hosts ~3,500 sites, spread out over 4 datacenters and 7 pods.

HOSTING MANAGEMENT SYSTEM - DEMO

i

HMS Summary Page

Data Centers	Companies	Production Sites	Test Sites	All Sites
DEMO	4	1000	209	1209
DEMOUK	2	30	50	80
TOTALS	6	1030	259	1289

Web Servers

Name	Type	Datacenter	Notes	# Sites
[2] lbdemo-vip01.int.rightnowtech.com	vip	DEMO		1209
- demowebsc01.int.rightnowtech.com	f5slave	DEMO		
- demowebsc02-lbint.int.rightnowtech.com	f5slave	DEMO		
- demowebsc03-lbint.int.rightnowtech.com	f5slave	DEMO		
[127] demovipuk01.int.rightnowtech.com	vip	DEMOUK		80
- demowebuk01-lbint.int.rightnowtech.com	f5slave	DEMOUK		
- demowebuk02-lbint.int.rightnowtech.com	f5slave	DEMOUK		

Database Servers

Select a datacenter: DEMO v 'DEMO' database servers - (2)

Name	DB Type	Datacenter	Notes	# Sites
[3] demodbsc03a.int.rightnowtech.com	mysql 5.0.44	DEMO		1208
[102] demodbsc03b.int.rightnowtech.com	mysql 5.0.44	DEMO		1

Version/Upgrade Summary

Sites Pending Deletion (1065)

Access Control Summary

Reports

HMS Transactions

Transaction Types:

patch
 patch:import
 patch:product
 patch_product
 product_langs
 servers
 templates

Choose Site

1. Specify the site you intend to upgrade by selecting the radio button corresponding to that site. Options applicable to the selected site will highlight.
2. Select the appropriate action:
 - o **Schedule Upgrade** - Select the upgrade version and the date and time of your upgrade.
 - o **Reschedule Upgrade** - Change the upgrade date and/or time of an existing upgrade site.
 - o **Cancel Upgrade** - Cancel an existing upgrade.
WARNING: Selecting this option will destroy your upgrade site. Any changes made to the site will be lost, including customized PHP.
 - o **Change Upgrade Version** - Delete your existing upgrade site and recreate the site using the latest version.
WARNING: Selecting this option will destroy your upgrade site. Any changes made to the site will be lost, including customized PHP.

Site	Current Version	Test Site (When Available)	Scheduled Upgrade Date	Upgrade Status
<input checked="" type="radio"/> global_wireless <ul style="list-style-type: none"> • global_wireless [admin] 	mnw-7.0.2.1	mnw-8.0.0.2	2008-10-31 08:00:00 PST PDT	scheduled: ready to create test site
<input type="button" value="Schedule Upgrade"/>	<input type="button" value="Reschedule Upgrade"/>	<input type="button" value="Cancel Upgrade"/>	<input type="button" value="Change Upgrade Version"/>	

Upgrade
Details

site name: global_wireless
upgrading from mw-7.0.2.1 to mw-8.0.0.2
cutting over on 2008/10/31 at ?
with a utility delay of ? hours

Choose Upgrade Time

Choose a time to schedule your upgrade:

Times are in Pacific Standard Time - USA

- | | |
|-----------------------------|---------------------------------------|
| <input type="radio"/> 12 AM | <input type="radio"/> 12 PM |
| <input type="radio"/> 1 AM | <input type="radio"/> 1 PM |
| <input type="radio"/> 2 AM | <input type="radio"/> 2 PM |
| <input type="radio"/> 3 AM | <input type="radio"/> 3 PM |
| <input type="radio"/> 4 AM | <input type="radio"/> 4 PM |
| <input type="radio"/> 5 AM | <input type="radio"/> 5 PM |
| <input type="radio"/> 6 AM | <input type="radio"/> 6 PM |
| <input type="radio"/> 7 AM | <input type="radio"/> 7 PM |
| <input type="radio"/> 8 AM | <input checked="" type="radio"/> 8 PM |
| <input type="radio"/> 9 AM | <input type="radio"/> 9 PM |
| <input type="radio"/> 10 AM | <input type="radio"/> 10 PM |
| <input type="radio"/> 11 AM | <input type="radio"/> 11 PM |

Continue

Reset

Upgrade
Details

site name: global_wireless
upgrading from mw-7.0.2.1 to mw-8.0.0.2
cutting over on 2008/10/31 at 8 PM PST
with a utility delay of 1 hour

Confirm Upgrade Date & Time

Your upgrade will be scheduled for:

10/31/2008 8:00 PM PST/PDT.

Your utilities have a reactivation delay of 1 hour.

Confirm

Quit

Please send Web site comments to upgrades@rightnow.com

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[Privacy Statement](#)

Scheduling Completed

Your upgrade date has been changed. Your site will now upgrade at 8:00 PM on 10/31/2008.

NOTE: before cutover of your site can occur you will need to sign off that you have completed the tasks in your task list. You may push the [UMS Checklist] button to view the checklist now.

UMS Checklist

The following contacts for your organization were found in the RightNow Technologies' customer database. Email notification has been sent to each of these addresses.

```
bthompson@rightnow.com.invalid
tjinneman@rightnow.com.invalid
gdickie@rightnowtech.com.invalid
jadams@rightnowtech.com.invalid
fcathala@rightnow.com.invalid
nmiles@rightnow.com.invalid
```

Next Site

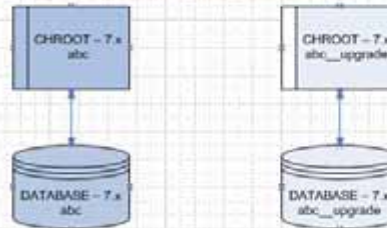
Finished

- Upgrade Steps:
 - clone
 - upgrade
 - cutover
 - (retreat)
- The hosted upgrade process is designed to allow a customer to review and customize their upgrade site prior to it being applied to their production site.
- Should a failure be experienced during upgrade of a production site (cutover), the upgrade script itself has recovery points that allow an admin user to resume the cutover after fixing the error.
- There is also a retreat process that will restore a production site to the pre-upgrade/cutover state.

HOSTED UPGRADE PROCESS

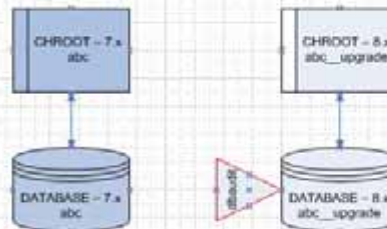
clone

- production site 'abc' cloned to 'abc_upgrade'
- production database dumped from replication server to __upgrade site.
- cloned database scrubbed to prevent emails from going to customers.



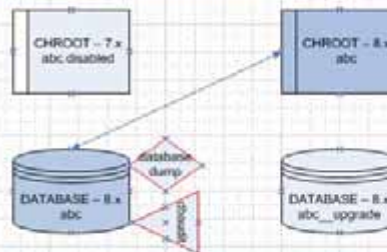
upgrade

- __upgrade site upgraded using standard hosting upgrade scripts (which runs product binaries such as dbaudit, merrpg, etc).
- email sent to customer letting them know their __upgrade site is available for testing/ modifications.



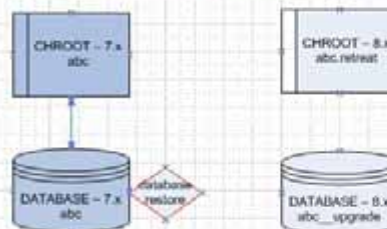
cutover

- production and __upgrade site taken offline.
- 7.x database dumped to file in case of retreat.
- original chroot (abc) renamed to abc.disabled
- __upgrade chroot renamed to abc.
- config settings updated to point to abc database.
- dbaudit run to bring former production database up to current version.
- disabled site kept around in case of retreat but is not a viable site.



retreat

- In case there are problems with the newly upgraded/cutover site, or customer just wants to go back to original version, upgrade-cutover-retreat can be run.
- abc chroot renamed to abc.retreat.
- abc.disabled chroot renamed to abc.
- database dump performed during cutover restored into database.



- A Global Data Center strategy.
 - Consolidation of US based datacenters.
 - Growth of UK Hosting capabilities
 - Investigating additional Hosting capacity within the UK and future DR for EU in the UK.
 - Growth and support for APAC
- Introduction of MPLS network topology and introduction of GSLB WAN load balancing between RNT data centers.
 - Possible ability for customers to connect directly to RNT MPLS WAN cloud.
 - Increased availability of voice to global call centers at significantly reduced latency.
- Single global data center provider to power true back-end connectivity.
 - Makes Active-Active a reality in terms of a DR strategy.

- Enhanced HMS site management system.
 - Customer managed test sites.
 - API for external systems.
 - Master queue to consolidate various functions and provide a more granular control and configurability.
 - HMS dashboard.
 - Voice integration.
- Complete manned 24x7x365 Hosting Excellence Centers.
 - Complete 24 hour Operations coverage to quickly triage and resolve problems.
 - Globally focused on incident warm hand-off between teams.
 - Tied directly to Customer Care specialists for a complete customer care experience.

QUESTIONS?

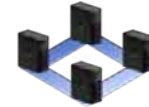
**RIGHT
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**World Class
Hosting**



**Unsurpassed
Reputation**



**Platform &
Architecture**



**C&A & Risk
Management**



**Comprehensive
Security**



**Performance
Management**



**Capacity
Management**



**Availability
Management**



**Superior
Scalability**



**Technical
Support**



**Service
Provider Management**



**Disaster Recovery
Management**