Resilience: The Silver Lining to Cloud Computing

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What is Cloud Computing?

A user experience and a business model
- Standardised offerings
- Rapidly provisioned
- Flexibly priced
- Ease of access

An infrastructure management and services delivery method
- Virtualised computing resources via the network as a utility
  - Managed as a single large resource
- Delivering services with elastic scaling

Similar to Banking ATMs and Retail Point of Sale,
Cloud is driven by:
- Self-Service
- Economies of Scale
- Technology Advancement
Cloud Computing Delivery Models

**Public** ...
- Access by Service provider owned and managed.
- Subscription.
- Delivers select set of standardised business process, application and/or infrastructure services on a flexible price per use basis.

**Private** ...
- Privately owned and managed.
- Access limited to client and its partner network.
- Drives efficiency, standardisation and best practices while retaining greater customisation and control.

**Hybrid** ...
- Access to client, partner network, and third party resources.
- .... Standardisation, capital preservation, flexibility and time to deploy
- .... Customisation, efficiency, availability, resiliency, security and privacy

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Make change work for you
Any resilient cloud implementation must have some key attributes
IBM can help you use Cloud Computing to address your challenges

Cloud consulting

Resiliency consulting and certification services for cloud computing

Cloud enabling

Helping a hosting business providing 99.99% uptime guarantee with IBM cloud computing technology

Cloud delivered

A non-profit human services agency, serving over 200,000 citizens was able to recover services within 24 hours after a major hurricane using IBM Information Protection Services
Information Protection Services – Cloud Delivered
Provides a range of onsite and offsite data protection

Protect the core: Remote data protection
Disk-based backup and recovery for data centres, and remote sites

Protect the edge: Fastprotect online
Disk-based backup and recovery for Desktops and laptops

Scalable on-demand services architecture

- Cloud delivered managed service including scalable hardware, software, monitoring, management and reporting
- Near 100% backup success rate in 24hr period
- Usage based, monthly fee based on data protected
Anywhere, Anytime Data Protection via Cloud

Branch Office

Regional Office

Off-Site Vaulting

Central Data Centre

Cloud

Mobile Workers

Hot Site / Replication Target Site

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Remote Data Protection

Automatic, reliable protection for your critical data that can be restored virtually anywhere, anytime

Peace of Mind • A managed service that automatically protects business critical data Servers and PCs

Secure and Efficient • Provides secure, bandwidth efficient, network-based daily backups to a “data vault” at a remote Internet Data Center

Quick Restores • Delivers rapid, user-initiated Restores

No Capital Investment • Fully automated service that includes all hardware, software, expert staffing, and 24x7 monitoring & management

Global Support • A global help desk that is available 24x7

Predictable and Affordable • Usage-based monthly billing, based on total amount of data protected

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**Fastprotect online**

Off-site data protection at a price you can afford

Our service uses robust, file-based IBM Tivoli® software to help provide near real-time, truly continuous data protection, with:

- Automatic, user-transparent backup as soon as files are saved, with the option of scheduled backups for email and calendar files.
- File backup to local cache, for standalone protection even when users are offline.
- Security-rich, advanced encrypted data transfer and storage at an IBM-hosted data center, where your data is continually managed and monitored.
- Point-in-time restoration, with multiple versions of files retained.
- Strong reporting capabilities to monitor users’ data backup activities.

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Case Study:
Combine a cloud delivered backup service with the latest virtual server recovery methods to reduce cost and improve recovery times

**PROBLEM:**

- **SHARED recovery subscription**
  - **ADVANTAGES**
    - Very cost effective
    - No on going management or maintenance of hardware
  - **DISADVANTAGES**
    - *Long recovery times* – need to build system from scratch
    - Largely manual recovery process

- **DEDICATED hardware or recovery subscription**
  - **ADVANTAGES**
    - Fast recovery time
    - Options for high availability
  - **DISADVANTAGES**
    - *High costs*
    - Additional hardware to maintain
**Solution - Virtual Server Recovery**

- Virtual Server Recovery (VSR) sits between *Shared* and *Dedicated* options

- IBM provides a *shared hardware platform* dedicated to virtual environments

- *Client has control* over how allocated resources are used within their virtual environment

- Clients can *pre-load virtual images* onto the system

- Data restoration via *Information Protection Services*
Solution – Virtual Server Recovery + Information Protection Services

- Customer network
- Internet / Private network
- Information Protection Services
- Virtual Server Recovery
# Benefits - Virtual Server Recovery + Information Protection Services

<table>
<thead>
<tr>
<th></th>
<th>Shared</th>
<th>Dedicated</th>
<th>Virtual + IPS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RTO</strong></td>
<td>24hrs +</td>
<td>2-4hrs</td>
<td>10mins-8hrs</td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Recovery Complexity</strong></td>
<td>High</td>
<td>Low</td>
<td>Low</td>
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<tr>
<td><strong>Hardware Maintenance</strong></td>
<td>Included</td>
<td>Client Responsibility</td>
<td>Included</td>
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<tr>
<td><strong>Usage Contention</strong></td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Remote Access Option</strong></td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>VMWare Support</strong></td>
<td>No</td>
<td>Client Responsibility</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Capacity Management</strong></td>
<td>Client Responsibility</td>
<td>Client Responsibility</td>
<td>Yes</td>
</tr>
</tbody>
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NOTE: All data is approximate. Assuming a Virtual environment is used for Shared and Dedicated options.

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European Investment Bank

- **Company:** Investment bank, with mid-market sized operation in Australia
- **Problem:** Business demanded faster recovery times within small tape-based budget.
- **Challenge:** Protect virtualised production environment and processes, move off tape, provide offsite, scalable storage and all for an affordable, pay as you go price.
- **Solution:** Implemented *IBM Remote Data Protection* to protect virtual production servers and data. Coupled with *IBM Virtual Server recovery* service, client was able to achieve dedicated recovery times, for a shared price point!
Thank You

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Whitepaper Downloads on Forum website:

1) Solving The Data Problem
2) Virtualising Data Recovery
3) BCRS Cloud Computing