Taking a Proactive Approach to Crisis Management while Maintaining Business Continuity in a Tiered Environment

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Taking a Proactive Approach to Crisis Management while Maintaining Business Continuity in a Tiered Environment

- Defining Business Continuity
- Developing a Tiered Environment
- Managing a Crisis
Defining Business Continuity

Assuring that Business process continue in the face of an event that causes employees to leave their normal work environment and conduct business in an unusual manner

- Key elements of a Business Continuity Program
  - Technology – Disaster Recovery
  - Business Process management
  - People Skills

- Disaster Recovery Should be a Service
  - Recovery Objectives Defines
  - Recovery Procedures Tested

- People Should understand Their Role
  - Who Declares a Disaster
  - How is the “Drill” Managed

- Business Processes need to be prioritized
  - Key information flows
  - Understanding Supporting Resources
Developing a Tiered Environment

Business Processes and Applications should be prioritized by their impact to the Business in the case of an Event. Their Recovery Objectives need to match the investment that the Business will make based upon the impact of an outage.

- **Understanding Impact**
  - Who defines it
  - How is Remediation Maintained

- **Not all Applications or Processes are Created Equal**
  - Recovery objectives are equal to Impact
  - Less Important Processes have a lower Priority
  - Plans should stratify the severity of an Event

- **Tiered Environments include:**
  - Technology across all aspects of the “Stack”
  - Defined Business Requirements
  - Associated Reference Architectures
  - Supporting Processes
  - Operational (Acquisition) Cost Model
Developing a Tiered Environment

Plan
- Assess Program
- Define Requirements
- Evaluate Availability & Recovery Alternatives
- Design Infrastructure
- Implementation Planning

Build
- Test & Implement Technologies
- Develop Recovery Failover Plans
- Conduct Recovery Testing

Manage
- Develop / Update Program Definitions
- Manage Resources, Improvements & Measurements

Program Management & Integration
Developing a Tiered Environment

### Characteristics
- **Archiving (AR)**: Inactive (policy based) application data storage services
- **Operational Recovery (OR)**: Application data version storage services for recovery of data in case of a catastrophic server/application failure or data corruption/deletion
- **Disaster Recovery (DR)**: Application data version storage services for recovery of systems/data in case of a catastrophic data center failure

### Specifications

<table>
<thead>
<tr>
<th>Primary Storage</th>
<th>Archiving Storage</th>
<th>Operational Recovery</th>
<th>Disaster Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alignment Scheme</strong></td>
<td><strong>Alignment Specification</strong></td>
<td><strong>Tier 1</strong></td>
<td><strong>Tier 2</strong></td>
</tr>
<tr>
<td>Guaranteed Performance</td>
<td>Performance Throughput Per Port (I/O sec)</td>
<td>5,000+</td>
<td>up to 5,000</td>
</tr>
<tr>
<td>Response Time (ms)</td>
<td>&lt; 8ms</td>
<td>7-14ms</td>
<td>12-30ms</td>
</tr>
<tr>
<td>Availability</td>
<td>Maximum Unplanned Downtime Per Year (Min)</td>
<td>&lt; 26.5</td>
<td>&lt; 28.5</td>
</tr>
<tr>
<td>Cost</td>
<td>$/Usable GB</td>
<td>$111</td>
<td>$65</td>
</tr>
<tr>
<td>Performance</td>
<td>Response Time</td>
<td>&lt; 1 Second</td>
<td>&lt; 1 Second</td>
</tr>
<tr>
<td>Throughput</td>
<td>&lt; 300 Mbps</td>
<td>&lt; 700 Mbps</td>
<td>&lt; 268 Mbps</td>
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<tr>
<td>Availability</td>
<td>Downtime (Yr)</td>
<td>&lt; 5.25 Min</td>
<td>&lt; 5.25 Min</td>
</tr>
<tr>
<td>Retention &amp; Disposition</td>
<td>Retention Period</td>
<td>&lt; 30 Years</td>
<td>&lt; 10 Years</td>
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<tr>
<td>Data Shredding Compliance</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Accessible</td>
<td>Read/Annual Access Frequency</td>
<td>&lt; Hourly</td>
<td>&lt; Hourly</td>
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<tr>
<td>Data Integrity</td>
<td>Guarantee of Authenticity</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Off-Site</td>
<td>Recovery Point Objective</td>
<td>&lt;1 Minute</td>
<td>&lt;28 Hours</td>
</tr>
<tr>
<td>Cost</td>
<td>$/Usable GB</td>
<td>$35</td>
<td>$25</td>
</tr>
<tr>
<td>Operational Recovery Point Objective (RPO)</td>
<td>Amount Of Data Lost</td>
<td>1 Hour</td>
<td>24 Hours</td>
</tr>
<tr>
<td>Time Required For Recovery</td>
<td>&lt; 30 Minutes</td>
<td>&lt; 30 Minutes</td>
<td>7 GB/Min</td>
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<tr>
<td>Recoverability</td>
<td>Ability To Recover Backed Up Data</td>
<td>100%</td>
<td>100%</td>
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<tr>
<td>Retention Period</td>
<td>Length of Time That Data is Retained</td>
<td>2 Hours</td>
<td>24 Hours</td>
</tr>
<tr>
<td>Cost</td>
<td>$/Usable GB</td>
<td>$46 - $13</td>
<td>$44 - $13</td>
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<tr>
<td>Disaster Recovery Point Objective (RTO)</td>
<td>Amount Of Data Lost</td>
<td>0 Minutes</td>
<td>&lt; 4 Hours</td>
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<tr>
<td>Time Required To Restore Data</td>
<td>&lt; 2 Hours</td>
<td>&lt; 12 Hours</td>
<td>&lt; 48 Hours</td>
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</table>

### Tier Metrics
- Service level attributes supported by IT and offered to customers

### References
- Architecture by Service Attribute
- Defined Recovery Requirement by Service Attribute
- Ownership and Operation Financial Model
- Prioritized of Service Characteristics to Align Application
Managing a Crisis

….And all the Kings Horses and all the Kings Men couldn't put him back together again…. 

• Have a Plan for Crisis Management, Communications, and Disaster Recovery 
  – Identify Roles and Responsibilities 
  – Identify Prioritized Activities, and Interdependencies 
  – Establish and Manage your command post 

• Stratify your planning to respond to the severity of the event 
  – Application Outages 
  – Temporary Denial to Workspace Without Damage 
  – Temporary Denial to Workspace with Damage 
  – Long Term Denial to Workspace 

• You can plan for the response of an event, but you can’t always plan on the event itself. 

• Know your Chain of Command 
  – Know who can declare a disaster 
  – Know who manages the program 
  – Have a Plan B; Be sure to have an Accountability Plan
Managing a Crisis

….And all the Kings Horses and all the Kings Men couldn't put him back together again…. 

• Remember Human Interest
  – People will put their family and personal interests before their company

• Test you plan
  – Disaster Drills – with defined objectives

• Establish you Business Continuity Program Office
  – Have a Charter
  – Define your Initiatives
  – Define the Companies Key Performance Indicators
  – Define the Audit Policies and Process

• Business Continuity is about
  – Cultural Change
  – Risk Mitigation
Thank You

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