

Fingers Crossed? Avoiding Application Downtime: Matching an HP Shadowbase Business Continuity Solution to Your Business Risk



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Agenda

• The Risks and Costs of Extended Downtime

• You may not be as safe as you think you are

Business Continuity Architectures: Pros and Cons

 For <u>critical</u> business services, classic active/passive disaster recovery is not good enough

Business Continuity Architectures: Complexity and TCO

- The best protection does not cost (much) more
- The best protection is (marginally) more complex

The Business Continuity "Sweet Spot"

- Build up from Active/Passive to Sizzling-Hot-Takeover (SZT) or Active/Active to avoid application downtime
- Build up from Async to Sync replication to avoid data loss
- Match Your BC Solution To Your Business Risk
 - The risks are high, but the solutions are available now



"Stuff Happens" – Failure Causes

Fire 17.5% Terrorism 17.5% Hurricane/Tornado 14.0% Earthquake 10.5% Power Outage 9.5% Software Error 8.8% Flood 7.0% Hardware Fault 5.3% Burst Pipe 3.5% Network Outage 3.5% Other 2.9%

Source: Contingency Planning Research Inc.





"Stuff Happens" – Frequency of Occurrence

Have you experienced an unplanned data center outage in the past 24 months?

 100%
 95%

 90%
 80%

 80%
 60%

 50%
 60%

 50%
 60%

 30%
 55%

 20%
 55%

 10%
 55%

 0%
 Yes

"The average number of complete data center outages is 1.24 per year, with an average duration of 107 minutes."

Have you experienced any loss of primary utility power in the past 24 months?

100% "The average number of primary 88% 90% power utility outages is 2.56 per 80% year, with an average duration of 106 minutes." 70% 60% 50% Source: Ponemon Institute 2011 40% Data from 41 benchmarked data centers across a wide-range of industry segments 30% (Financial, Healthcare, Retail, Communications, Services, etc.) 20% 12% 10% 0% Yes No

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93% of companies that suffer a significant data loss are out of business within five years.

(U.S. Bureau of Labor)

 60% of companies that suffer a disaster and have no recovery plan are out of business within three years.

(Univ. of Minnesota)

 40% of companies without access to data for 24 hours go out of business. (Eagle Rock Ltd. Continuous Planning and Mgt. Survey)





In Summary

Serious outages are not 1. uncommon and their consequences can be dire. You may not be as well protected you think you are.



Business Continuity Architectures: Pros and Cons



Key Availability Metrics: RPO and RTO

Recovery Point Objective (RPO) and Recovery Time Objective (RTO) are used to describe business continuity requirements.

- → RPO describes the point in time to which the data must be recovered
 → How much data can my business afford to lose?
- → RTO describes the time from when a failure occurs until the business process must become active again.
 - → How long can my business afford the business process to be unavailable?



RPO/RTO Relationship

Business Continuity Overview



Business Continuity Architectures: Complexity and TCO



How Much An Outage Will Cost Your Business

Average Business Revenue Lost per Hour of Downtime (US\$)

Healthcare	\$636K				
Retail	\$1.	1M			
Financial	e i	\$1.5	Μ		
Manufactu	ring	\$	1.6	M	
CME				\$2	2 M
Average	\$1.4M pe	r ho	ur		

Sources: Network Computing, the Meta Group, Contingency Planning Research





Business Continuity Technology – Outage Costs Example

Outage Cost by Business Continuity Technology



Business Continuity Complexity & Technology Cost vs. TCO



- The better the availability, the lower the outage cost
- The better the availability, the greater the complexity & implementation cost
- As implementation cost *increases*, overall TCO *decreases*



Match Your BC Solution To Your Business Risk



Match Your BC Solution To Your Business Risk

- The potential costs of outage of critical business systems are high
- Factors causing outages are not rare when, not if
- Critical systems must be protected by a <u>proper</u> Business Continuity architecture
- Current Business Continuity plan may not be sufficient or well supported
- As the availability, marginal cost, and complexity of your Business Continuity solution increases, overall TCO decreases
- Tape backup is an inadequate BC solution, real-time data replication is required
 - However, periodic (virtual) tape backups sure are handy to recover a purged file



Match Your BC Solution To Your Business Risk

- Asynchronous Active/Passive, High Availability
 - Risky, but possibly OK for applications where outages of a few minutes to a few hours and some data loss is acceptable

Asynchronous Active/Almost-Active, Continuous Availability (SZT)

• The best form of uni-directional replication solution with very fast & reliable recovery, and some data loss is acceptable

Asynchronous Active/Active, Continuous Availability

- Required for any application where no outage can be tolerated, but some 0 data loss is still acceptable
- Application must be able to be partitioned, or tolerate data collisions

Synchronous Active/Passive, High Availability

- Good for applications where some outage is acceptable
- Required for any application where no data loss is acceptable
- Synchronous Active/Active, Continuous Availability
 - Required for any application where no data loss is acceptable \bigcirc
 - Required for any application where no outage can be tolerated
 - Required for any application which needs to avoid data collisions \bigcirc automatically



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17

Shadowbase for Business Continuity

HP Shadowbase Product Suite (Sales and Support Now Available from HP!)

- 1. Current-Shadowbase Disaster Recovery (Async, Active/Passive)
- 2. Current-Shadowbase Sizzling-Hot-Takeover (Async, Active/'Almost' Active)
- 3. Current-Shadowbase Continuous Availability (Async, Active/Active)
- 4. Future-Shadowbase Disaster Recovery (Sync, Active/Passive)
- 5. Future-Shadowbase Sizzling-Hot-Takeover (Sync, Active/'Almost' Active)
- 6. Future-Shadowbase Continuous Availability (Sync, Active/Active)



For More Information

Breaking the Availability Barrier Book Series

Volume 1

Survivable Systems for Enterprise Computing

Volume 2

Achieving Century Uptimes with Active/Active

Volume 3

Active/Active Systems in Practice

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19



For More Information – White Papers (1)

Preparing for Your HP Shadowbase Experience

If you are interested in:	Please read these White Papers:
A General Overview About Shadowbase	 <u>Shadowbase® Total Replication Solutions® for HP NonStop®</u> <u>Shadowbase® Total Replication Solutions® for Open Servers®</u> <u>Shadowbase® Total Replication Solutions® Product Datasheet</u>
Building a Business Continuity Environment	 <u>Choosing a Business Continuity Solution to Match Your Business</u> <u>Availability Requirements</u> <u>Achieving Century Uptimes with Shadowbase® Active/Active</u> <u>Technology</u>
Performing a Zero Downtime Migration	 <u>Using Shadowbase® to Eliminate Planned Downtime via Zero</u> <u>Downtime Migrations</u>
Implementing a Data Warehouse Feed	Shadowbase [®] Streams for Data Integration
Building a Real-Time Business Intelligence System	 <u>The Evolution of Real-Time Business Intelligence and How to</u> <u>Achieve it Using Shadowbase[®]</u> <u>Shadowbase[®] Streams for Application Integration</u>
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For More Information – White Papers (2)

Preparing for Your HP Shadowbase Experience

If you are interested in:	Please read these White Papers:
Building a Converged Infrastructure	Shadowbase [®] for the HP Converged Infrastructure
Shadowbase in a Big Data Environment	Shadowbase [®] Solutions in a Big Data World
Shadowbase in the Cloud	<u>Shadowbase[®] Solutions for the Cloud</u>
Recovering/Restoring Corrupted Data	Shadowbase [®] Data Recovery Software
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YOU probably see yourself as the EAGLE. BUT without a proper business continuity plan you're more like the **trout**.



Let us help you become the EAGLE!



Questions?



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23