

# 10 Reasons Why Your DR Plan Won't Work

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## DR Vision

- **Imagine...**
  - Prepared to handle multiple categories of disaster
  - Clearly documented policies and procedures
  - Well-documented and *understood* roles and responsibilities
  - Thoughtfully crafted RTOs and RPOs
  - Prioritized applications and servers
  - Highly automated replication and recovery tools

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## DR Reality

- **Balancing Act**
  - Best Practices vs. cost
  - Capabilities vs. expectations
- **DR is one of the biggest challenges in IT**
  - DR requires performing activities that are rarely done under the worst possible circumstances
  - Planning and testing limitations
  - Drag on day-to-day priorities
  - IT expected to walk on water
- **Need for an honest evaluation**

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## 1. Business and IT are not in sync

- **Who sets DR policy?**
  - 71% of companies only involve IT staff in DR strategy (Source: Veritas DR Research 2004)
- **Business continuity vs. disaster recovery**
  - Only 38% of companies have integrated BC/DR plan (Source: Veritas DR Research 2004)
- **The challenge of alignment**
  - Understanding *actual* business requirements
  - Setting and meeting *realistic* expectations
  - Ability to meet *critical* needs

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## 2. You don't really have a DR plan

- **Elements of a DR plan**
  - High-level view: How employees will communicate, where they will go and how they will keep doing their jobs
  - Detail actions BEFORE, DURING, and AFTER disaster
  - Detailed system and device recovery procedures
  - Owners and key contacts for each activity
- **Sequence**
  - Identify dependencies and prioritize

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## 2. You don't really have a DR plan (cont.)

- **Scope of DR plan**
  - System-Network-Application-Data-Facility
  - Minor vs. major disruptions
  - Downtime vs. loss
  - Resuming normal operations
- **Where is the plan?**

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### 3. Your DR plan is not up-to-date

- **DR Planning Lifecycle**
  - Should be baked into all of your other storage lifecycle processes
  - How many system modifications per month?
- **Continuous process**
  - DR maintenance process should be an integral part of change management
  - Areas most often overlooked in change management
    - Backup
    - DR

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### 4. You don't do DR tests

- **Or, you don't test the right things**
- **End-to-end testing to production**
- **Server centric vs. application centric**
  - Addressing application interdependencies
- **Site considerations**
  - Hot vs. warm vs. cold
- **Changing the DR testing mindset**
  - Final exam vs. quality improvement exercise?
  - Finding (and FIXING) bugs is a GOOD thing

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### Testing maturity hierarchy

- **Basics**
  - Establishing connectivity
  - Configuring infrastructure
  - Failover
  - Replication
  - Data recovery
  - Application recovery
  - Plan procedures
- **Advanced**
  - "What-if" Disaster scenarios
  - Role exchange
  - Full interruption

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### Real-life testing experiences

- 60 hrs to recover SAP; 96 hrs to recover PeopleSoft
- Network configuration problems delayed starting UNIX system configurations
  - Incorrect configuration of Ethernet interfaces
  - Incorrect IP addresses assigned to hosts
- Legato version was incorrect at the DR site
- Many clients were waiting for the same tape during restore
- A SAN director failed during the test, causing major delays. Vendor response over 2 hours.

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### 5. Your recovery goals can't be achieved

- Setting realistic objectives
  - Recovery Time Objective (RTO)
    - When does the clock start?
  - Recovery Point Objective (RPO)
- Can your infrastructure support these goals?
  - Limits of tape-based recovery
  - Dealing with cost
  - Technology requirements and limitations
  - DR site considerations
- Technology options

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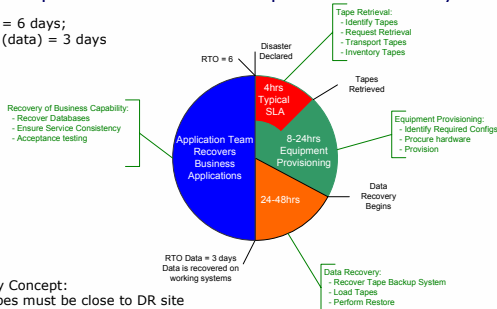
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### Example: RTO timelines – tape-based recovery

RTO = 6 days;  
RTO (data) = 3 days



Key Concept:  
Tapes must be close to DR site

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## 6. You lack clearly defined DR roles

- Coordination is critical
- Chaos is a given
- Identifying the processes and workflows needed
- Logistics
- Identifying the teams involved
- Clear understanding of points of intersection and handoff

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## Possible DR teams

- Management team
- Business recovery team
- Departmental recovery team
- System recovery team
- Damage assessment team
- Security team
- Facilities support team
- Administrative support team
- Logistics support team
- User support team
- Computer backup team
- Off-site storage team
- Software team
- Communications team
- Applications team
- Human relations team
- Marketing/customer relations team

Source: IBM DR Redbook

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## 7. Your DR plan doesn't address the right risks

- What constitutes a disaster?
  - 33 FEMA-declared "Major Disasters" in 2005 (as of 9/1/05)
  - Site outage vs. application outage vs. server outage
- How much insurance do you need?
  - DR GAP: Do you buy what you need or what you can afford?
- Business Impact Analysis
  - Quantify and rank risks appropriately
- Weighing event probability vs. cost vs. impact
  - Risk = Probability

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## 8. Your backups don't work!

- **Tape is still the number one recovery vehicle in many environments**
- **Nightly failures**
- **Poor tape management**
- **Offsite media production**
- **Bare metal recovery**
- **Application recoverability validation**
- **Monitoring and management**

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## Technology options and DR

- **Replication**
- **Disk-based backup**
- **Virtualization**
- **Archiving impact – reducing the data that needs to be recovered**
- **Continuous data protection**

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## 9. Who will be there to recover?

- **Toughest topic of all, but must be considered**
- **Redundancy in roles**
  - Each member of team understanding key responsibilities
- **Underscores the need for comprehensive documentation and training**
- **DR plan access**
- **Best DR approach – leverage multiple data centers within an enterprise**

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## 10. DR is just too expensive!

- "We simply can't afford to test DR"
- Time for honesty and transparency
  - Truth in advertising
- Setting and meeting realistic RTO/RPO
  - Aligned with capabilities and business needs
- Integrating DR into standard operations where possible
- Making an informed decision
  - Spend money or accept risk

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## Additional Considerations

- How long can you operate in DR mode?
- What is the DR plan for your DR site?
- What is your return to normalcy plan?

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## Keys to DR success

- Realistic, well-understood objectives based on business requirements
- Planning and preparation
  - Business Impact Analysis
  - Data classification/prioritization
  - System and technology preparation
  - Comprehensive documentations, including DR Plan
- Integrating DR hardware into production
- Continuous review and update
- Developing confidence
  - Well-understood roles and responsibilities
  - Regular testing/demonstrating competency
- Solid technology -- including backups!

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## Resources

- **Dynamic Markets, "Veritas DR Research 2004",**  
[http://eval.veritas.com/mktginfo/products/White\\_Papers/High\\_Availability/dynamic\\_markets\\_executive\\_summary.pdf](http://eval.veritas.com/mktginfo/products/White_Papers/High_Availability/dynamic_markets_executive_summary.pdf)
- **DR Institute, [www.drri.org](http://www.drri.org)**
- **DR Journal, [www.drj.com](http://www.drj.com)**
- **Disaster-Resource.com, <http://www.disaster-resource.com>**
- **IBM TotalStorage Solutions for DR,**  
<http://www.redbooks.ibm.com/redbooks/pdfs/sg246547.pdf>
- **"The Search for Cost Effective DR", Marc Staimer, *Storage*, Nov. 2004**
- **"Data Determines the Right DR", Marc Staimer, *Storage*, Jan. 2005**

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