DISASTER RECOVERY SEMINAR PRESENTATION DOWNLOAD

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Advanced Disaster Recovery and Business Continuity Planning Techniques and Technologies

Module 3 Testing Techniques

Certified Data Protection Specialist (CDPS)

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Module 3
Testing Techniques

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DATA PROTECTION STRATEGY

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Abstract

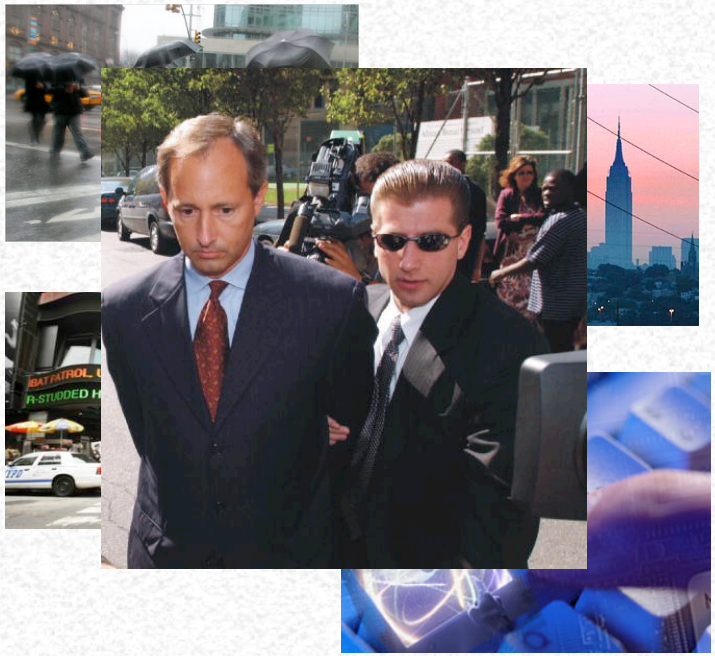
The purpose of continuity planning is not to create a paper document, but a recovery capability for the organization. Such a capability requires management awareness and support, resilient business processes, recovery team selection and training, and testing.

Welcome and Introduction

- In this module, we will discuss
  - Criteria for selecting and methods for testing recovery team members
  - How to build a continuity capability change management system
  - How to test continuity procedures
  - The role of status monitors and infrastructure wrappers in simplifying plan testing
  - Tips for keeping management engaged in the on-going process of business continuity

Everyone is Talking the Talk

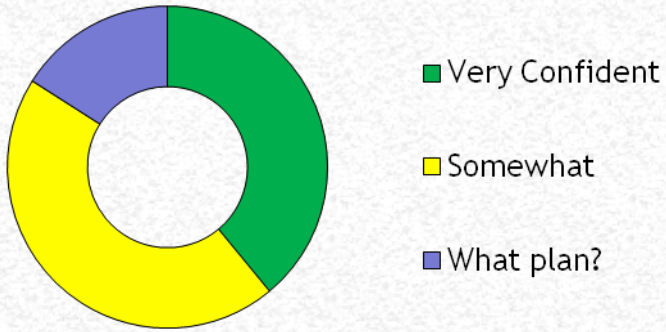
- DR Planning is fashionable
- Management perceives the world as a hostile place filled with
  - Severe weather
  - Failing infrastructure
  - Terrorism
  - Hackers and, worst of all,
  - *Lawyers*



But Are We Walking the Walk?

The latest survey data (IDC, 215 IT Managers)

- 6% of budget is being spent on DR, 72% say no increases this year
- Where they stand on planning…
  - 39% "Rock Solid"
  - 45% "Might work"
  - 16% "Keeping fingers crossed"

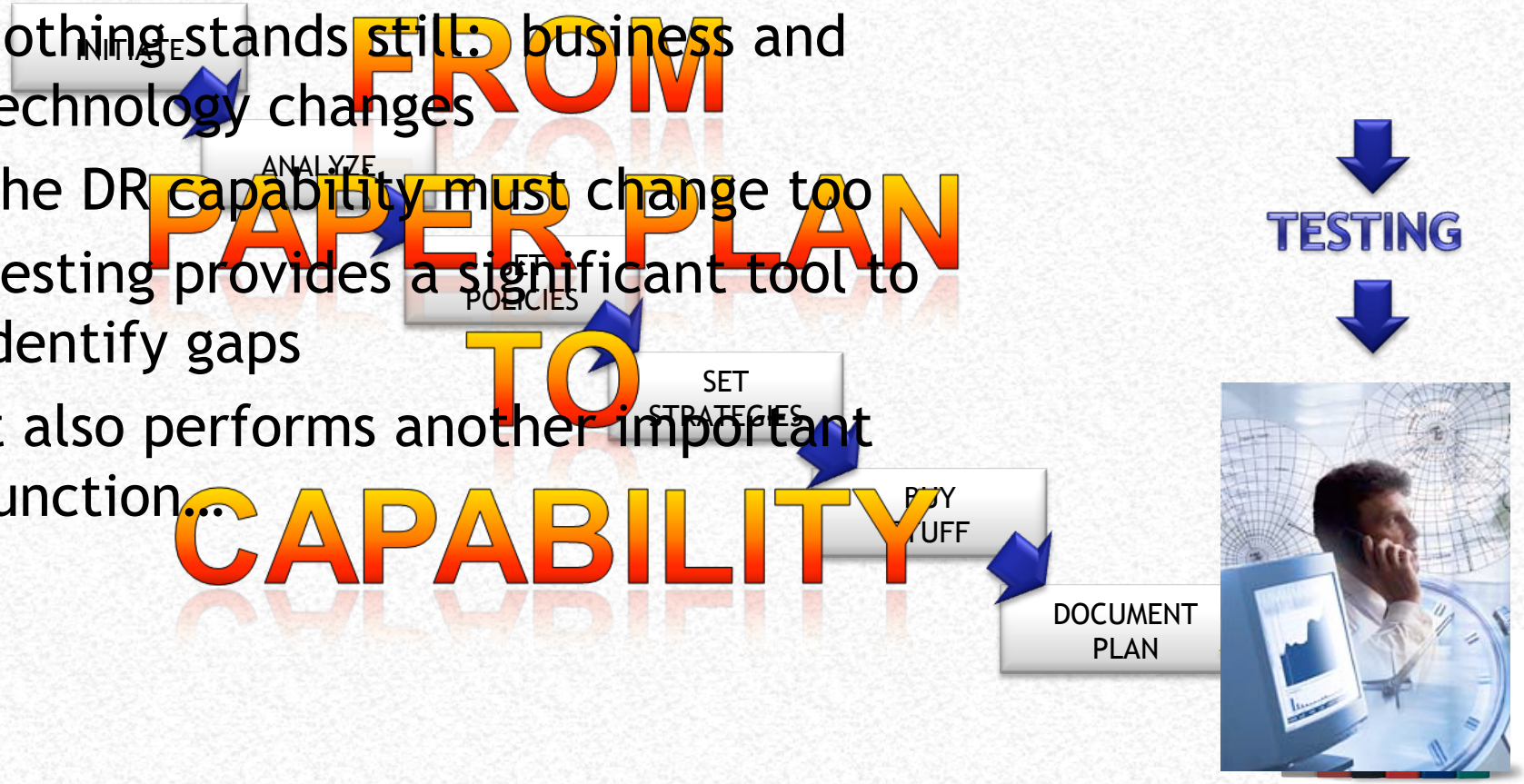


BUT…

- Most (76%) review their plans only once a year
- 44% *haven't told anyone* in their company about the existence of a plan

DR/BCP usually conceived as a project: testing makes it a process

- Nothing stands still: business and technology changes
- The DR capability must change too
- Testing provides a significant tool to identify gaps
- It also performs another important function…



Rehearsal

- Training team members to think rationally in the face of a great irrationality…
- Helping them to deal with the "smoke of battle" that often obscures the centralized command, control and communications capabilities of emergency decision-makers

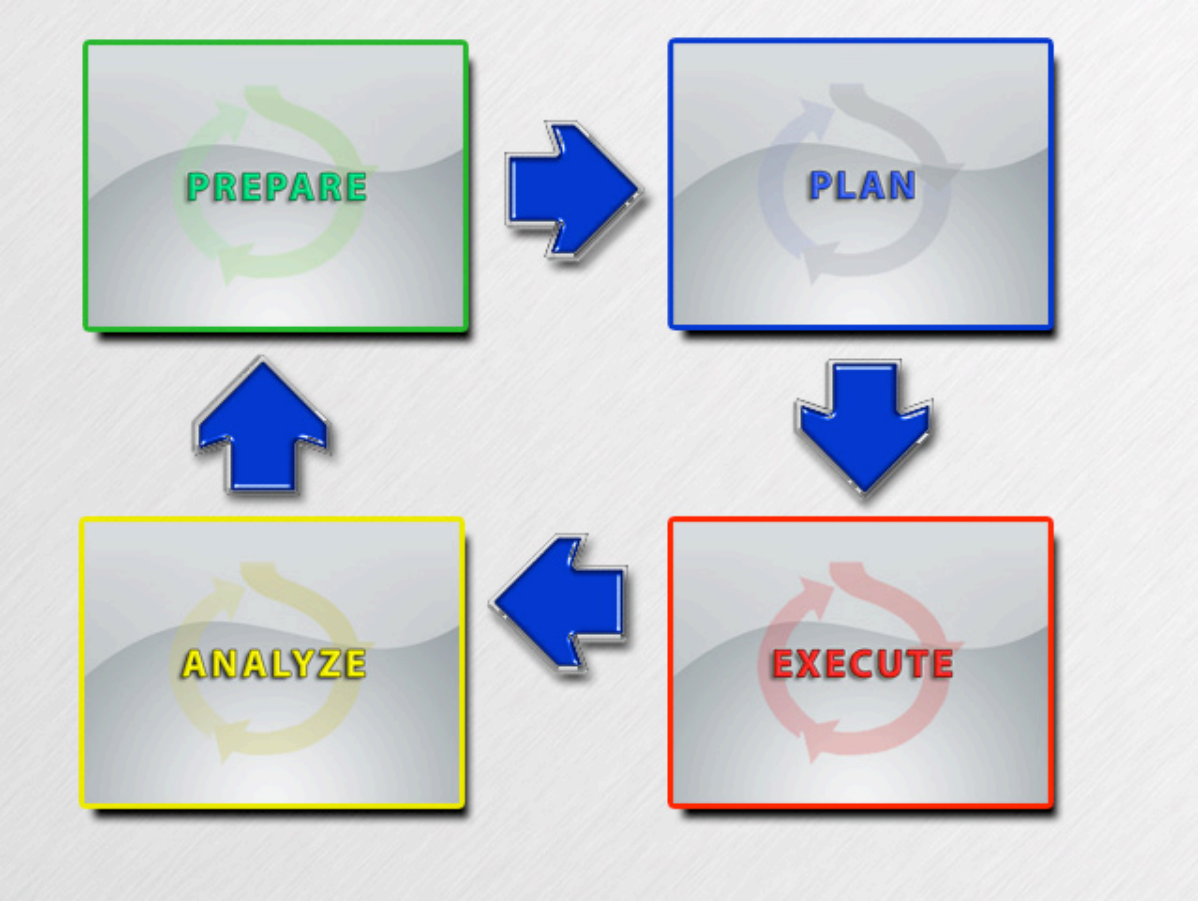
In an Actual Disaster…

- Plan documents and procedures are rarely referenced
  - Some logistical preparations are important (sources of supply for replacement equipment, prearranged vendor contacts, lists of equipment and software, etc.)
  - But, procedures themselves may vary widely in an actual emergency: teams must often innovate to get the recovery accomplished

The Well Trained Team

- Understands individual roles and interdependencies in the recovery process
- Does not require micro-management when executing their tasks
- Can include virtually anyone in the organization possessing
  - Requisite technical or business skills to perform the work
  - Demonstrated ability to think and act creatively under pressure
  - Enthusiasm in the face of challenge
  - Goal orientation is a plus
- Get “The Right Stuff” imagery out of your mind: frequent tests, not rocket sleds, required!

There is a Method to Testing…



Preparation Steps are Critical

Preparation includes…

- Activities intended to provide scope and order to the test
  - Pre-planning
  - Scenario-building
  - Scheduling personnel and facilities
  - Pre-Test Reviews
  - Finalization of plan

- Intended to ensure that all relevant resources are available when needed to perform the test itself
- Required to get continued management funding

Comprehensive but Non-Linear

- Testing should be undertaken regularly and per schedule
- Testing should also occur after significant changes in business or infrastructure
- Selective testing of non-interdependent elements is a design goal with 100% of strategy tested by the end of each calendar year
- Make allowances for re-testing

Next comes the Detailed Plan Specification

Plan Specification includes…

- Developing the scope of the plan (what functions or procedures will be tested)
- Developing explicit objectives (testing to objectives is the only way to perform a measured evaluation of capability efficacy)
- Selection of the testing method and resource/staff requirements
- Practical matters of budget and timing require management approval

Clear Objectives are Critical

PERFORMANCE-BASED OBJECTIVES

CONDITIONS
Under what conditions and using what tools must a task be performed?

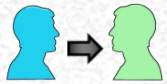
TASK
What is the task the must be performed?

STANDARDS
How will we measure task completion?

Executing the Test

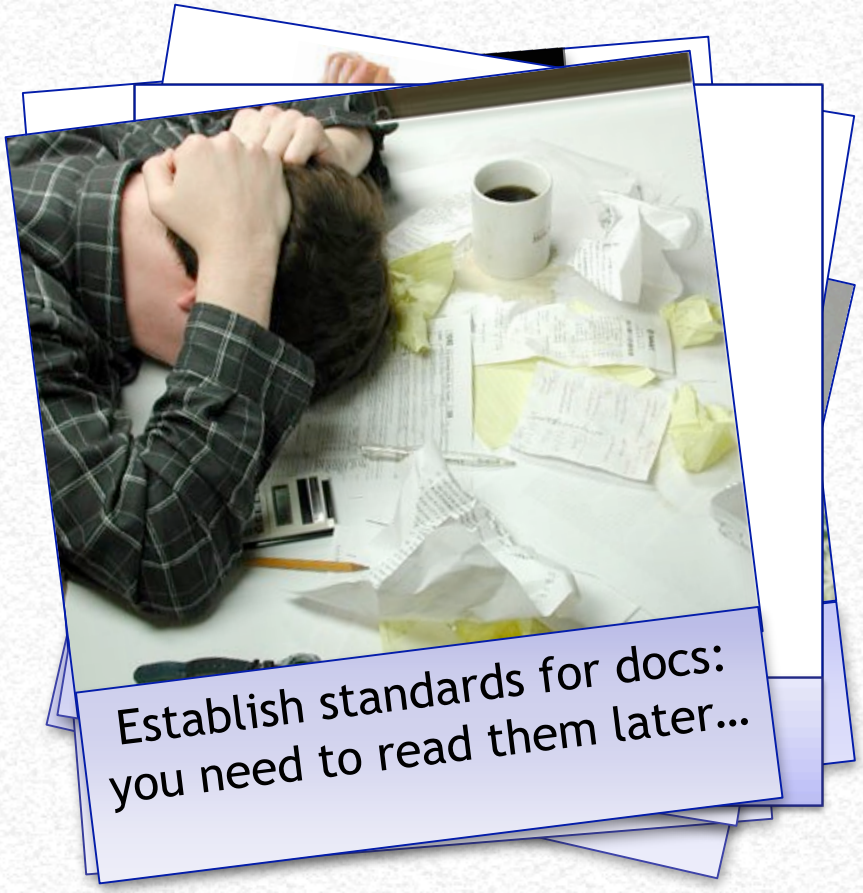
Execution entails

- Dissemination of the scenario
- Declaration of the disaster
- Implementation of mock recovery activities and monitoring of processes
- Documentation of work performed, timing, and problems encountered
- Test progress management
- Orderly completion of testing and documentation of results

Common Execution Mistakes

- Surprise testing
- Failure to account for resources
- Deviating from the Test Plan
- Allowing bystanders
- Failure to manage progress
- Improper documentation

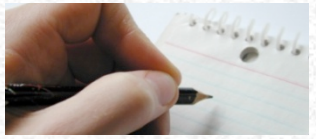


Analysis is the Final Step

Analysis Steps

- Conclude the test and perform a post-mortem analysis of results
- Conduct debriefings with team to identify what worked and what didn't, and why
- Identify re-testing requirements
- Document test results for Management and Auditors
- Identify amendments required to DR/BC Plan and submit to change management process
- Begin preparations for next test






A Broad Range of Testing Types

- Many ways to test (most non-disruptive)
  - Checklist test
  - Structured Walk-through
  - Simulation
  - Parallel
  - Full interruption

Validation

Failure

Objectives

- Different testing goals
- There are no failed tests, except for those that are poorly planned…

Yet, Few Organizations Perform Them…

- Less that 50% plan, less than 50% of those test their plans…
- Why?
  - Budgetary constraints
  - Resource constraints
  - Misunderstanding of testing
  - Fear of results
  - Lack of management buy-in
  - Laziness

An Untested Plan

- Has no efficacy: no one knows what to do in an emergency
- Quickly falls out of step with reality: business/technology change leaves the DR/BC capability in the dust
- Delivers no business value

Testing Utopia

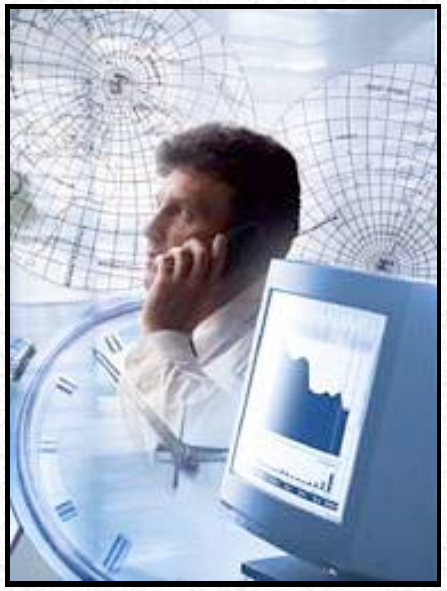
- Data Protection Process Status Monitoring in Real Time
  - Data (and personnel) protection is key to any DR/BC plan
  - Needed: real time status monitoring of replication processes
- Real-Time Infrastructure Failover
  - Capability to simulate or actively failover infrastructure with minimal or no interruption of business process
  - Needed: real-time failover capability with granular scenario definition

Real Time Status of Data Protection

- "Defense in Depth"
  - Many data protection processes occurring simultaneously
  - If part of strategy, matching right protection service to right data based on criticality assessment
  - Often less a result of strategy than of infrastructure evolution
    - Several backup software products
    - Several proprietary array mirroring schemes
    - Other "continuous data protection" processes
- Monitoring the Kluge a Challenge

Need to Know

- Is data being copied correctly and completely?
  - Many shops don't use read/verify on backups: "Not enough time in the schedule."
  - Verifying a mirror means breaking the mirror
- Are data growth trends outstripping data replication methodology?
  - A big issue, especially in poorly classified environments
  - Essentially asking whether recovery time objectives can be achieved: shouldn't need to test to figure this out
- Real time information would be a boon



Simulated and Actual Failover

- A capability to failover infrastructure to a recovery facility (redundant facility, hot site, ISP, branch office, etc.) could be an asset for testing
  - Scenario based for selective recovery strategy testing (by application, by business process)
  - Simulation capability to prevent accidental business interruptions(!!!)
  - Full control and monitoring of failover process
- Could significantly reduce the cost and complexity of recovery testing in shops that use failover as a recovery strategy

We're Getting There

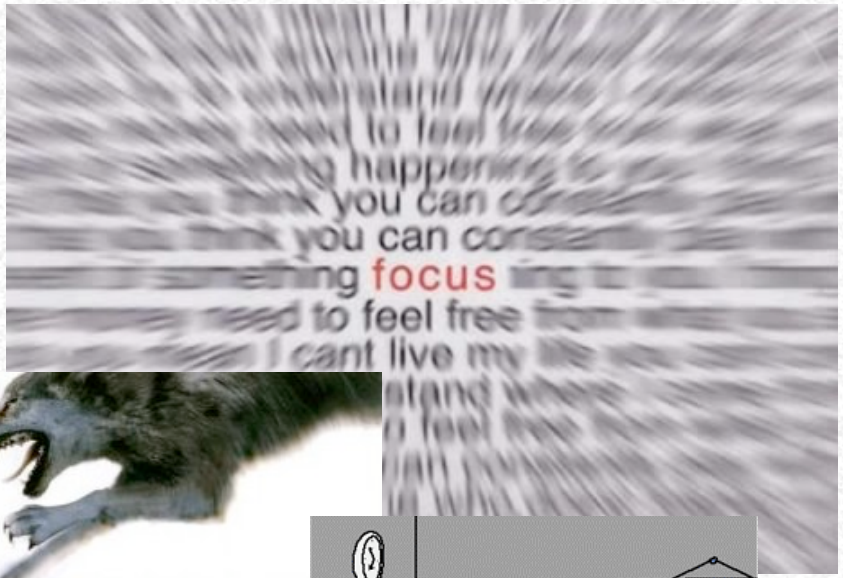
- Failover "wrapper" software
  - Encapsulating all infrastructure components associated with a business process
  - Providing a consolidation point for all failover logic (scenarios)
  - Enabling unified monitoring of real-time application status, architectural synchronicity, and data change
  - Coordinating data replication on a file and block level in a hardware agnostic way
- Potential "Dual Value" Use
  - Operational cost reduction as well as risk reduction
  - Useful in maintenance, upgrades, patching: no scheduled downtime

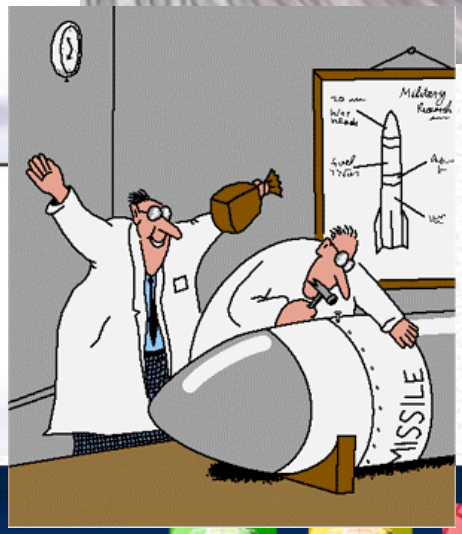
Testing is an On-Going Expense

- Management will need to be sold on its efficacy, as with DR planning generally
- Tips
  - Emphasize dual use value – use DR testing to vet new technologies and processes as well as to mitigate risk
  - Keep costs low by using non-disruptive testing techniques
  - Report test results in a positive fashion: what you learn is as important as what happened
  - Give awards -- to business stakeholders, team members, vendors, and/or management sponsors for their participation and support
  - Use awareness programs to increase visibility

Your Journey is Underway

- Stay focused
- Stay confident
- Test often





And Depend on Fellow Practitioners for Advice and Support

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RESOURCES FROM OUR SPONSORS

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- BEST PRACTICES GUIDE: VMware Data Backup and Recovery Design Best Practices with Data Domain
- BEST PRACTICES GUIDE: Backup and Recovery for Microsoft Exchange Best Practices with Data Domain
- BEST PRACTICES GUIDE: Symantec NetBackup (NBU) Design Best Practices with Data Domain
- The ROI and TCO Benefits of Data Deduplication for Data Protection in the Enterprise
- BEST PRACTICES GUIDE: Oracle RMAN Design Best Practices with Data Domain

About DataDomain:

Data Domain is the leading provider of deduplication storage systems for disk backup and network-based disaster recovery. Companies worldwide have deployed Data Domain's storage systems to reduce costs and simplify data management. Data Domain delivers the performance, reliability and scalability to address the data protection needs of enterprises of all sizes. Data Domain's products integrate into existing customer infrastructures and are compatible with leading enterprise backup software products. To find out more about Data Domain, visit www.datadomain.com. Data Domain is headquartered at 2421 Mission College Blvd., Santa Clara, CA 95054 and can be contacted by phone at 1-866-933-3873 or by e-mail at sales@datadomain.com.

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RESOURCES FROM OUR SPONSORS

- VMware White Paper: Transforming Disaster Recovery
- The Top Ten Most Forgotten Things When Building a Disaster Recovery Plan

About DataDomain:

VMware(NYSE: VMW) is the global leader in virtualization solutions from the desktop to the datacenter. Customers of all sizes rely on VMware to reduce capital and operating expenses, ensure business continuity, strengthen security and go green. With 2007 revenues of $1.3 billion, more than 100,000 customers and nearly 14,000 partners, VMware is one of the fastest growing public software companies. Based in Palo Alto,California, VMware is majority-owned by EMC Corporation (NYSE: EMC) and on the web at www.vmware.com.

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Module 1 Business Resiliency: The Context for Business Continuity Planning

This module provides an overview of the context of contemporary business continuity planning. Participants will learn about the root causes of unplanned interruption events and the role of planners in preventing them or minimizing their business impact.

Continuity planning is part of the broader program designed to minimize risk and build resiliency into the business enterprise by improving the process by which technology is acquired, applications are developed, data is managed and change is administered. It is not solely about building a disaster recovery plan, though this is one component of business resiliency.

Module 2 Testing Techniques

The best metric for measuring business resiliency is "time to data"—the amount of time required to restore access to business critical data assets to business decision-makers. This module provides the latest information on data protection technologies and provides best practices for applying appropriate protection services to data assets.