



RemoteSHADOW®



Reducing the time to recovery in the event of a site or system failure!



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Making Data “Continuously Available” is on everyone’s agenda

- The Globalization of business
- New Government Regulations
- Disaster Frequency Changing
- The Cost of Business Downtime
- The Result



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The Globalization of Business



“It is estimated that more than one third of all worldwide businesses are run on a seven-day- a- week and 24- hour- a- day basis, and that number is expected to grow to over 60 percent in the near future



Source: Dataquest / Contingency Planning Research

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The Cost Of Business Downtime

<u>Industry</u>	<u>Operation</u>	<u>Average Cost Per Downtime Hour</u>
Financial	Brokerage Ops	\$6.45 Million
Financial	Credit Card	\$2.6 Million
Media	Pay Per View	\$150K
Retail	Home TV Shop	\$113K
Retail	Catalog Sales	\$90K
Transportation	Airline Reservations	\$89K
Media	Tele-ticket Sales	\$69K
Transportation	Package Shipping	\$28K
Finance	ATM Fees	\$14K



Source: : Dataquest / Contingency Planning Research

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The Business Requirement

The design goal of High Availability Software is to minimize costly system downtime and to “reduce the time to recovery” in order to keep customers and business working together.



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RemoteSHADOW®

Advanced Systems Concepts introduced RemoteSHADOW® to provide business with an affordable, easy to implement, application transparent solution that ensures today's business data is replicated to a remote site for immediate use in the event of a system or site failure.



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RemoteSHADOW for OpenVMS Customer Base

- Worldwide Customer Set Includes:
 - Citigroup
 - Credit Suisse (Switzerland)
 - Union Pacific Railroad
 - SunGard
 - CaremarkPCS
 - Skandinaviska Enskilda Banken (Singapore)
 - The Age Newspapers (Australia)
 - Hundreds more...



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September 11, 2001

 Dresdner Kleinwort Wasserstein

The Banker Magazine

November 2001

“Reporting on September 11th 2001”



Take for example Dresdner Kleinwort Wasserstein (DKW), whose office was in the immediate vicinity of the World Trade Center and which was hit by power losses. Jim O'Connor at DKW says that by using remote shadowing software from Advanced Systems Concepts the company could restart business within an hour of the failure at their Manhattan site.

The problem was communicating and transporting the work of a staff of hundreds to the disaster recovery site. Its most critical system, the payment system, was running and able to continue with business as usual since information was replicated in real time to its disaster recovery site in nearby Queens.

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What RemoteSHADOW helps our customers accomplish "uniquely well"

- Protect data
 - Local and Remote data replication
- Continue business
 - Data is immediately available at the remote site
- Save on Unnecessary Operational Expenses
 - Bandwidth can be sized to average not peak
 - No artificial bandwidth purchases paid monthly
- No Surprises
 - Avoid "Application Slowdown" during unexpected peak periods



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How does RemoteSHADOW work?

- Replicates Data from one system to another
 - Local
 - Remote
- Modes of Operation -- balancing costs and efficiency
 - Synchronous
 - all I/O's must complete before continuing
 - Asynchronous
 - Local I/O's complete at production speed
 - Remote I/O's controlled



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RemoteSHADOW Features

- Unique RemoteSHADOW features
 - Synchronous and Asynchronous Communication
 - Out of Sync Tolerance
 - Save dollars on Operational Bandwidth Expense
 - RemoteSHADOW always works to stay synchronous
 - Production Systems continue
 - Network Restart – Automatic Reconnect
 - No Data Loss
 - Remote “local” SHADOW (2+2 Shadowing)
 - Remove SHADOW Set Members for off line processing
 - Data Collection Reporting
 - Defines actual Bandwidth need
 - Avoid overspending on bandwidth



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RemoteSHADOW Features

- Unique RemoteSHADOW features...
 - Ten (10) Member Shadow Sets Supported for high levels of redundancy
 - Logical Volume Copy Operation
 - OpenVMS Clusters Fully Supported
 - OpenVMS Volume Shadowing Supported
 - Tru64 TruClusters Supported

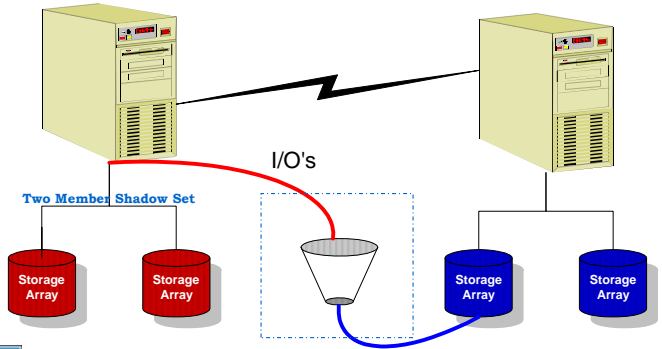


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Synchronization Tolerance -- Dynamic Bandwidth

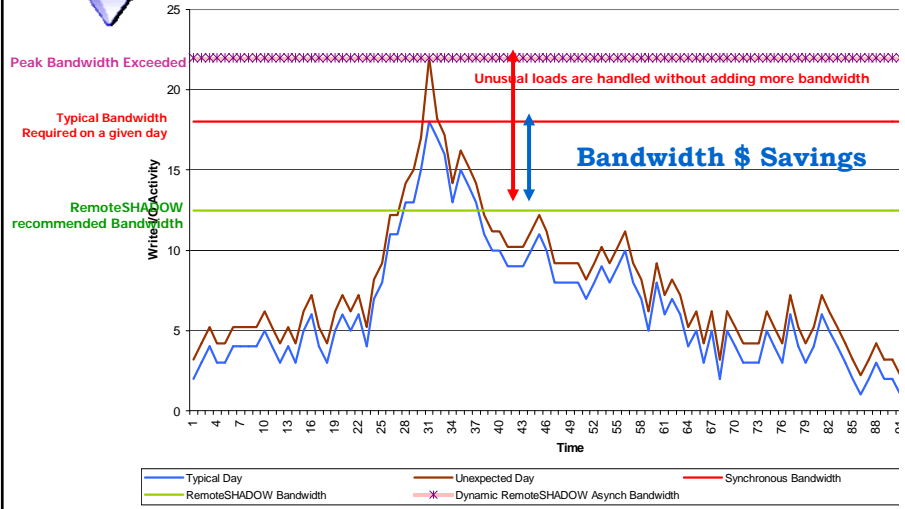
- Balance Bandwidth Expense and Performance



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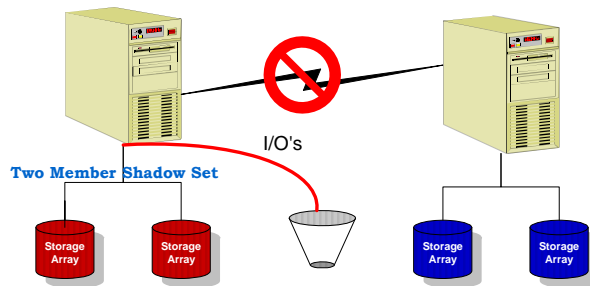
RemoteSHADOW's Dynamic Bandwidth reduces Operational Costs





Network Restart Tolerance

- Isolates Production Systems from Network Outages
 - Recovery is automatic and transparent



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Network Restart Tolerance

- RemoteSHADOW reconnect:
 - Specifiable in seconds or minutes
 - Dynamic can be reset even during a failure
 - Automatic Reconnection
- I/O's continue upon a successful restart,
- Remote member is removed if time out occurs
- Size of the "funnel" or tolerance can be updated dynamically
- Synchronization Tolerance may be updated dynamically

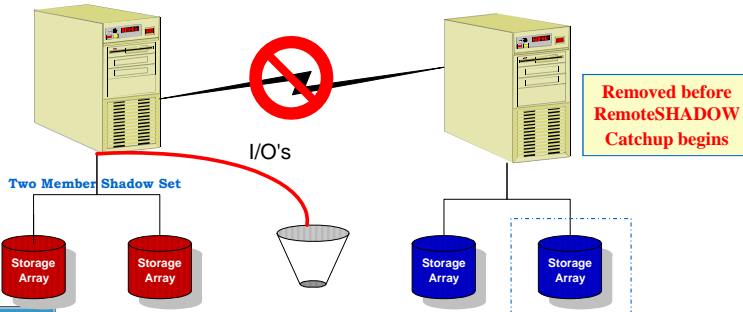


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Remote Site Shadowing...

- 2 + 2 Remote Shadowing
 - Double Failure
 - No Additional Impact on Network Performance



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Why RemoteSHADOW?

- RemoteSHADOW Experienced and Proven
 - SHADOW introduced in 1983
 - RemoteSHADOW introduced in 1990
 - RemoteSHADOW defined the concepts
 - Tested under "fire" at hundreds of sites
 - Our customers back us up!
 - Worldwide Customer Base
 - Large Financial Industry presence



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RemoteSHADOW® meeting Customer Expectations with...

- RemoteSHADOW low “Cost of Operations reduces the time to recovery”
 - Supports installed hardware and storage
 - Reduces network traffic by mirroring only critical data
 - Flexible Mode of Operation
 - Synchronous
 - Asynchronous
 - Business Recovery within minutes upon application switchover
 - Data Integrity/Data Security
 - Minimal Impact on Production Systems Performance
 - 100% Application Transparent
 - General Purpose (file systems/databases)
 - Isolates Production Site from Network Outages
 - Multi Platform Support



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Would your business come back
if your data didn't?

RemoteSHADOW -- the proven solution



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