



Putting The Pieces Together: How to incorporate all the solutions discussed today





Step 1
The first step should be a disaster recovery plan





If you fail to plan, you plan to fail..



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What Is Disaster Recovery

Disaster recovery describes how an organization is to deal with potential disasters. A disaster recovery plan (DRP) consists of the precautions taken so that the effects of a disaster will be minimized, and the organization will be able to either maintain or quickly resume mission-critical functions.

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Disaster Recovery Planning 7 Steps

- Review/refresh or develop security, disaster recovery, and BC plans
 - Develop contingency planning policy
- Conduct business impact analysis (BIA)
 - Identify preventative controls
 - Develop recovery strategies
 - Develop contingency plan
- Plan testing, training and simulations
 - Maintain the plan

Source: NIST

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Recovery Time Objective

Faster RTO=More\$

Recovery Strategy Costs \$

Recovery Time Objective (RTO)

Do Nothing

3-4 Wks

2-4 Wks

7 ... 4 Days

2 24 ... 4 Hours

1 Minutes

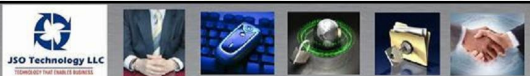
Continuous Operations



Step 2 – After the Plan Comes the Technology


- Hot Site/Cold Site, remote location or a CO-LOC
 - Recovery times identified
 - Data Replicated
 - Hardware needed






Examples Data Replication




- Snapshots using a SAN
- Replicate images to remote location
 - Vmware at DR Locations
 - Vaulting Using Unitrends
- Back Using J50 BDR Service






Data Replication

- SNAP Data Replication using remote snapshots

Main Location San with Data	Remote Snapshots Replicate Data	DR Location SAN with Replicated Data
		

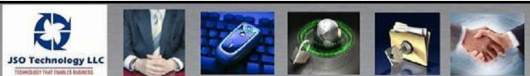




Unitrends in Backup and Disaster Recovery

- No Need for Tape or backup Software, Included in the Appliance
- Ability to backup numerous Operating Systems in one appliance
- Data Can be taken offsite with Archive Drive or with Data Vaulting
- Ability to Bare Metal Restore numerous Operating systems
- Ability To Vault Offsite To a Remote Unit





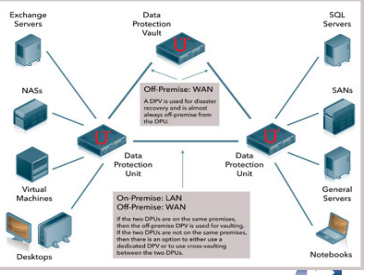
Rapid Recovery:

Integrated. Simple. Elegant.

Unitrends offers disk-to-disk (D2D) data protection in an integrated set of appliances that scales from the smallest to the largest business. Our elegantly simple solution to the real-world issues of business continuity and disaster recovery sets us apart.

We offer support for more than forty operating systems, hot and cold BareMetal Recovery (BMR), optimized compression technology, advanced off-premise data-deduplication mechanisms to conserve precious WAN bandwidth, and optional 256-bit AES encryption for security. We also offer disk-based archiving so that you can free yourself from tape forever.


Unitrends is rapid recovery.




On-Premise: LAN
Off-Premise: WAN

Off-Premise: WAN
A DPU is used for disaster recovery and is almost always off-premise from the DPU.


On-Premise: LAN
Off-Premise: WAN
If the two DPUs are on the same premises, then the off-premise DPU is used for archiving. If the two DPUs are not on the same premises, then the on-premise DPU is used for archiving. A dedicated DPU or file server cross-working between the two DPUs.






Virtualization in DR


- Saves on Hardware, do not need duplicate hardware in DR Location
- Can replicate Virtual Machines to remote location, using SAN or DR.
- Can image machines and restore them in Vmware
- Allows for a fast recovery
- SAN replication and WAN acceleration can be used to replicate data quickly
- Still need some type of Backup or long term archival






Virtualization


Main Location
San with Data




Remote Snapshots
Replicate Data




Virtual SAN on Vmware or
Citrix XenServer




Vmware or Citrix XenServer
Servers Virtualized on Vmware
Can be replicated with SAN snapshots
Other products exist to replicate Virtual Machines



Vmware or Citrix XenServer







What Happening if Email Server Crashes or some Other Disaster


- How Critical is Email to your organization?
- Could you take a 1 day outage to recovery your email system?
- What happens in a Disaster with access to your email being days?





MX Logic

- Automatic service engagement when outage is detected
- Access to email received during outage via secure Web interface
- Full email functionality, including Read, Compose, Reply, Forward and Delete
- Up to 60 days of unlimited rolling storage
- Intelligent post-outage email activity synchronization
- Outage notifications and system updates
- Inbound and outbound message filtering by the MX Logic® Email Defense Service

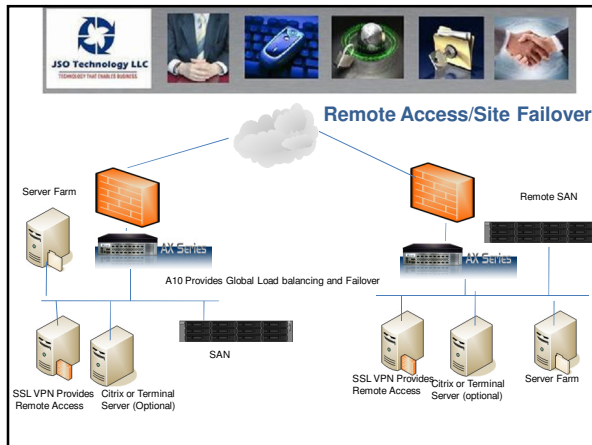




Step 3
Users gaining access to the data

- How are users going to gain access to the data?
- Are they going to work remote from home?
- Are you going to rent Hotel Space?
- Remote Location?







Questions & Answers