



DR-SITE

Net Pro
GROUP
IT SOLUTIONS & EDUCATION

DISASTER RECOVERY

Prepare yourself today, for the unexpected of tomorrow

Agenda

- Disaster Recovery Plan
- Some facts
- Requirements
- Cost of downtime
- Multiple scenarios based on the requirements (Central Bank)
- Disaster Recovery Solution – option 1 (Physical servers)
- Disaster Recovery Solution – option 2 (Virtualization DR-site)
- Disaster Recovery Solution – option 3 (Virtualization HQ and DR-site)
- Conclusion



Disaster Recovery Plan Definition

An information technology (IT) disaster recovery (DR) plan provides a structured approach for responding to unplanned incidents that threaten an IT infrastructure, which includes hardware, software, networks, processes and people. Protecting your firm's investment in its technology infrastructure, and protecting your firm's ability to conduct business are the key reasons for implementing an IT disaster recovery plan



Disaster Recovery Plan

What's in it?

- Names, responsibilities and phone numbers of colleagues
- External contract with suppliers for hard- and software
- Service contracts + all the relevant information like contact persons, phone numbers, scope.
- Inventory of all the key hard- and software
- Credentials of servers, codes for unlocking the server room
- Scenarios how to recover critical servers
- List of the most important applications

Once a DPR prepared, you are not ready! The organization is changing constantly, so a DRP must be up to date! All the information stated in the DRP must be updated regularly!

Tests must be done at least once a year.



Interesting facts

Did you know?

- 93% of companies that suffer a significant data loss are out of business within five years
- 43% of U.S. businesses never reopen after a disaster, and 29% more close within two years
- 30% of computer users say they spend the equivalent of one week per year reconstructing lost data
- 13% of companies in the Netherlands do have a Disaster Recovery plan
- 40% of companies don't test their disaster recovery plan after each update
- 28% of companies admit they take a wait-and-see approach and test Disaster Recovery processes and people only "after a problem" occurs or "never."

¹ U.S. Bureau of Labor.

² The Hartford & U.S. Small Business Administration, 2002, p. 14.

³ 3M Corporation.

⁴ www.sfix.nl

^{5,6} Business Library



Requirements

Some important questions

- How much downtime is acceptable without affecting the business?
- What are the most important applications?
- Who are the key persons within the company?
- Where do you want to have the DR-site?



Cost of downtime

Impacts on the cost of downtime

Tangible costs

- Lost Revenue
- Lost Wages
- Labor Costs
- Bank Fees / Penalties
- Legal Costs

Intangible costs

- Lost opportunity
- Employee Retention
- Loss in Share Value
- Goodwill
- Brand Damage



Cost of downtime

How much does downtime really cost?

Labor Cost			
# effected people	Wage per hour	Duration of downtime	% Lost Productivity
50	40	14	80%
	Downtime cost	Hourly downtime cost	
	\$22,400.00	\$1,600.00	

Scenario 1 (Central Bank)

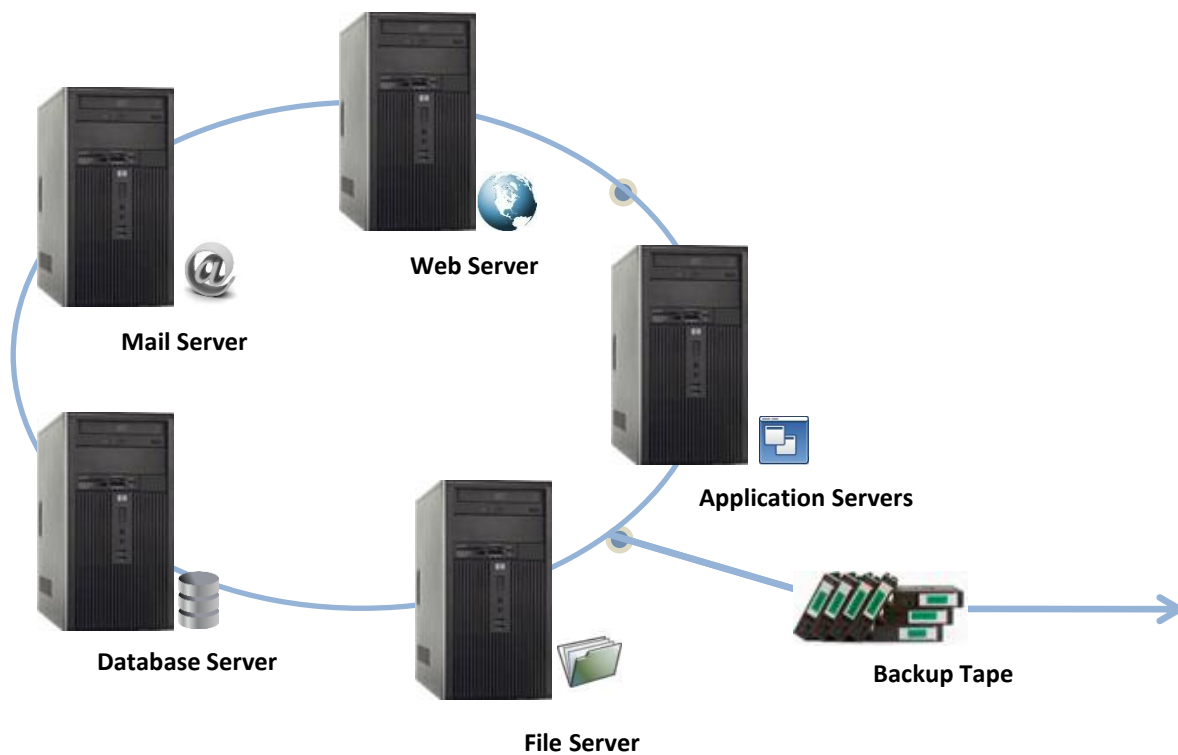
Cold Site

“Is the most inexpensive type of alternate site for an organization to operate. It does not include backed up copies of data and information from the original location of the organization, nor does it include hardware already set up. The lack of hardware reduces startup costs of the cold site, but requires additional time following the disaster to have the operation running at a capacity close to that prior to the disaster. Organizations that can not afford the long startup time of an Cold Site should opt for a Warm or Hot Site.”

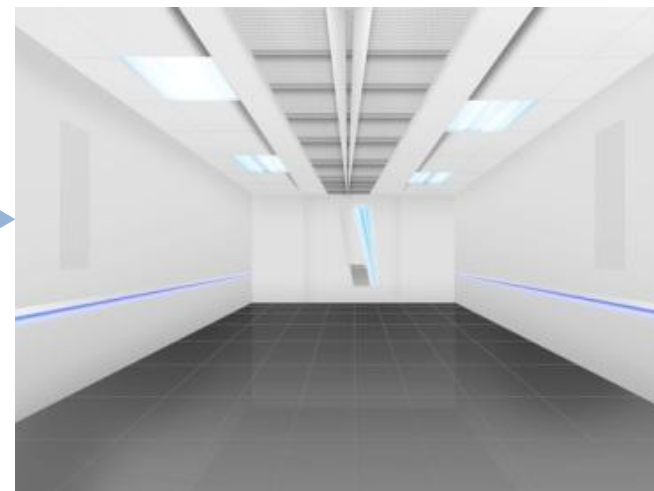


Scenario 1 (Central Bank)

Cold Site



Disaster Recovery Site



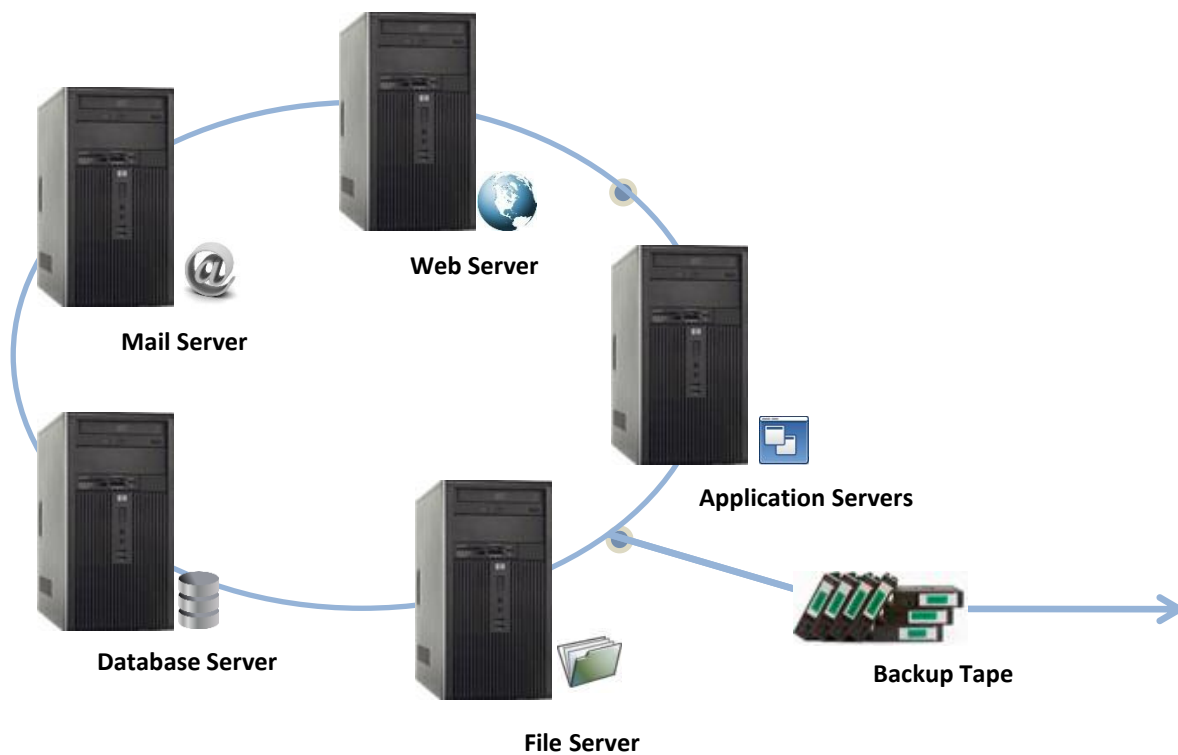
Scenario 2 (Central Bank) Warm Site

“Alternate site that typically contains pre-configured equipment necessary to rapidly start operations, but does not contain live data. Thus commencing operations at a warm site will (at a minimum) require the restoration of current data.”



Scenario 2 (Central Bank)

Warm Site



Disaster Recovery Site



Scenario 3 (Central Bank)

Hot Site

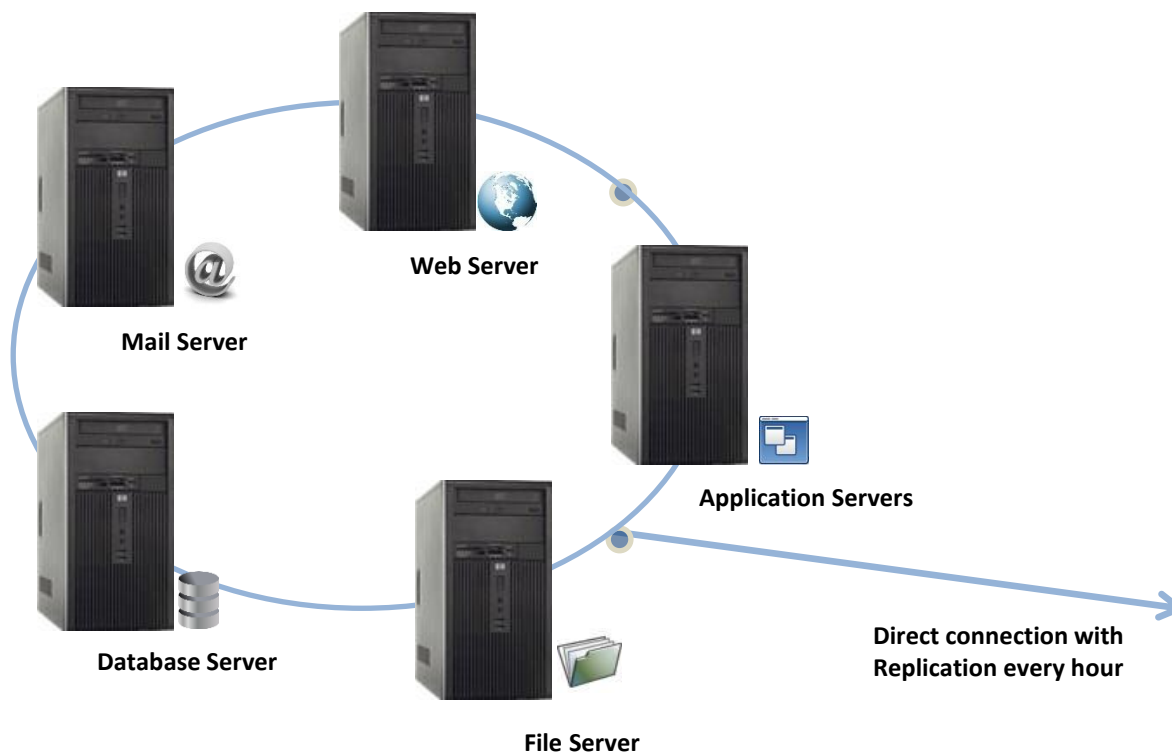
“A duplicate of the original site of the organization, with full computer systems as well as near-complete backups of user data. Real time synchronization between the two sites may be used to completely mirror the data environment of the original site using wide area network links and specialized software. Ideally, a hot site will be up and running within a matter of hours or even less.”

The capacity of the hot site may or may not match the capacity of the original site depending on the organizations requirements. This type of backup site is the most expensive to operate. Hot sites are popular with organizations that operate real time processes such as financial institutions, government agencies and ecommerce providers.”



Scenario 3 (Central Bank)

Hot Site



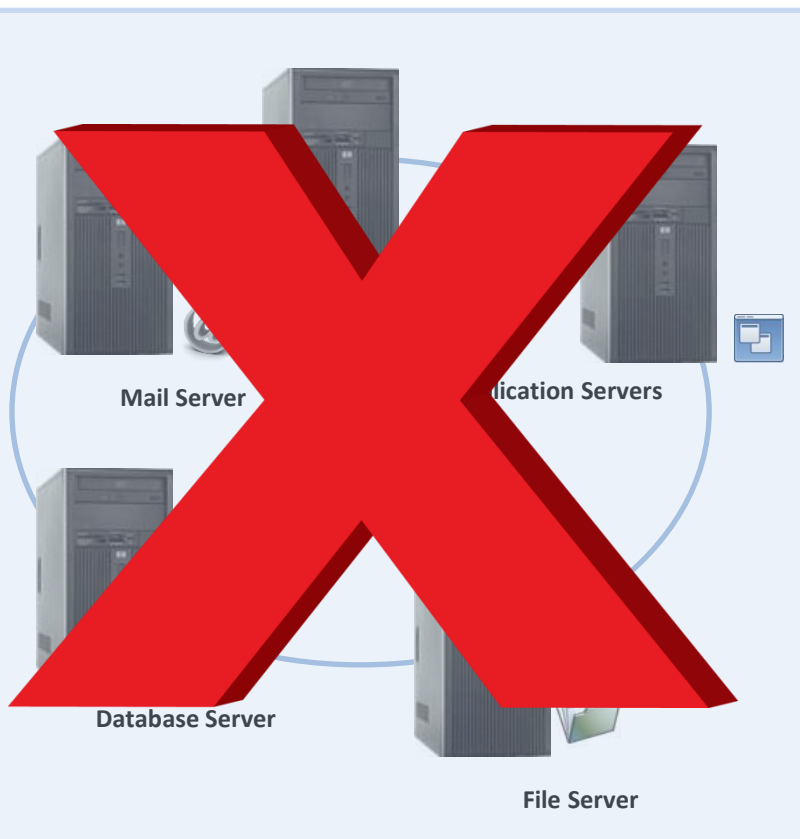
Disaster Recovery Site



Disaster Recovery Solution – option 1

Physical servers (DR-site)

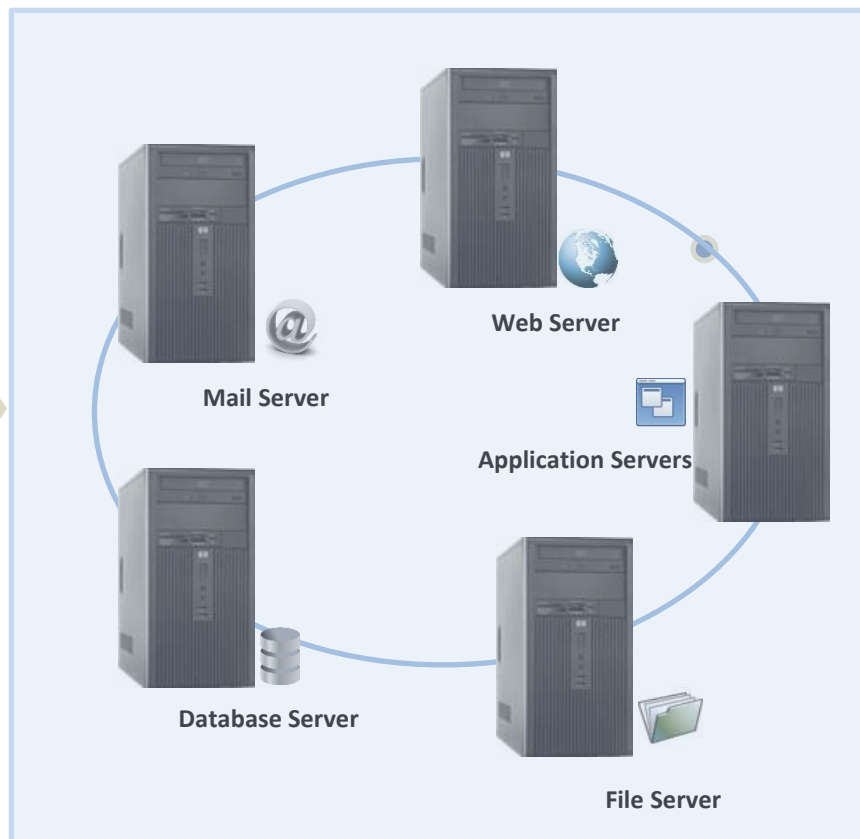
Customer (Server Farm)



Hourly replication



Disaster Recovery Site



Disaster Recovery Solution – option 1

Physical servers (DR-site)

Advantages

- Known setup
- Separate servers

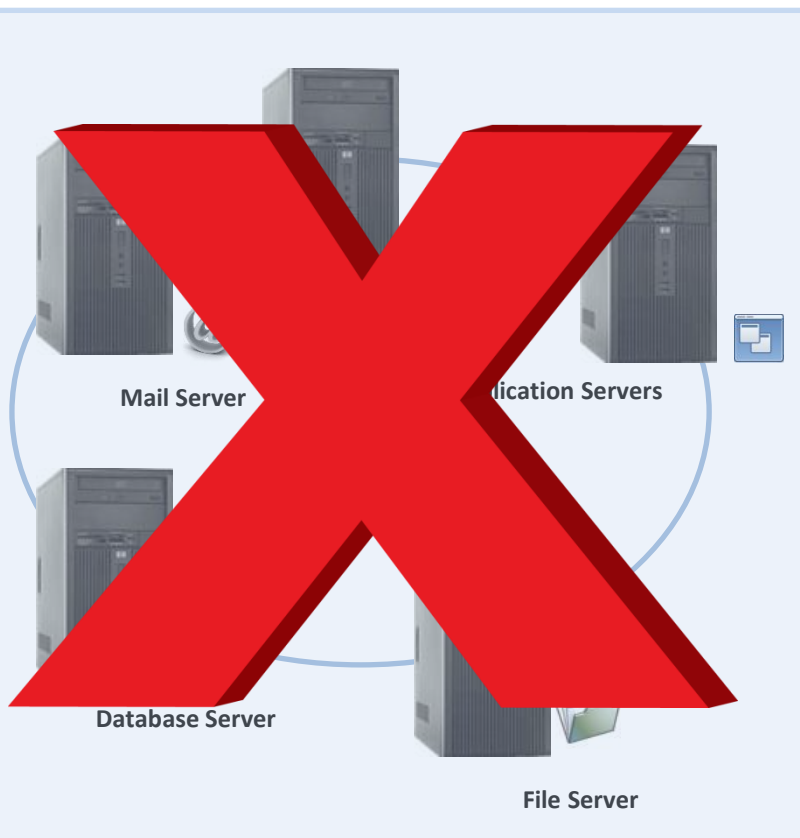
Disadvantages

- High Investment
- A lot of hardware
- Higher power consumption
- More difficult to maintain
- Low hardware utilization
- Expensive Replication Software
- Main site is still running with obsolete hardware

Disaster Recovery Solution – option 2

Virtualization (DR-site)

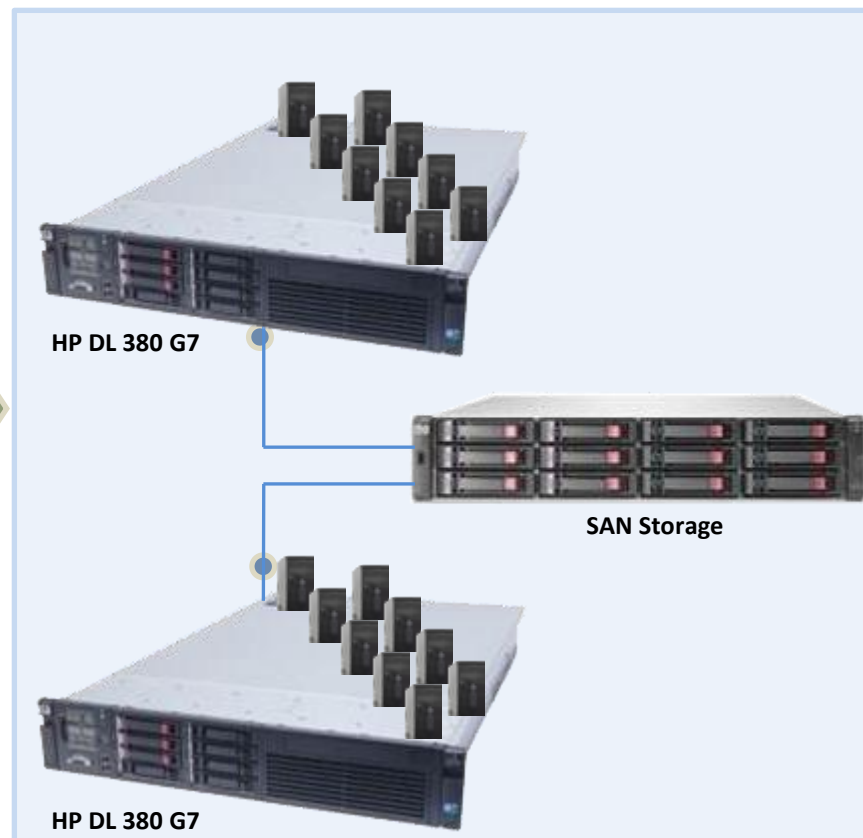
Customer (Server Farm)



Hourly replication



Disaster Recovery Site



Disaster Recovery Solution – option 2

Virtualization (DR-site)

Advantages

- Less power and cooling
- High hardware utilization
- Less hardware
- Rapid Deployments
- Hardware independent
- OS independent
- Simplify maintenance

Disadvantages

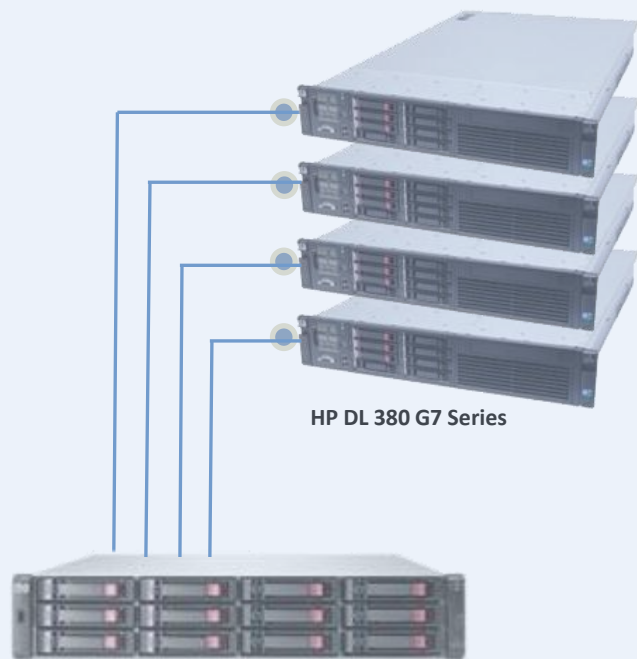
- Need to educate internal IT personnel
- Expensive Replication Software
- Main site is still running with obsolete hardware



Disaster Recovery Solution – option 3

Virtualization (HQ and DR-site)

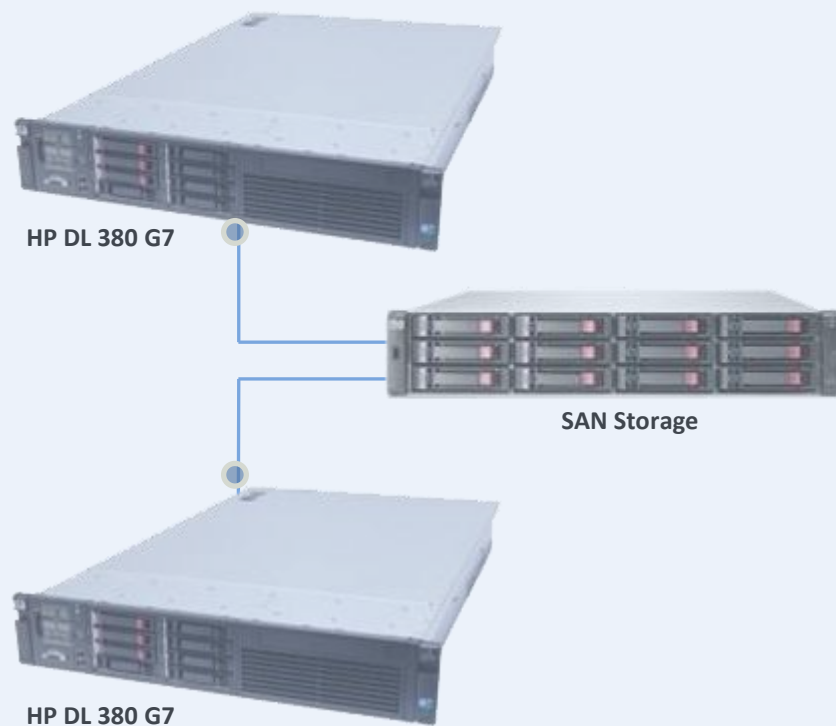
Customer (Virtualized Server Farm)



Hourly replication



Disaster Recovery Site



Disaster Recovery Solution – option 3

Virtualization + upgrade

Advantages

- Less power and cooling
- High hardware utilization
- Less hardware
- Rapid Deployments
- Hardware independent
- OS independent
- Simplify maintenance
- No use of expensive Replication Software
- Both sites running on newest technology and up to date hardware

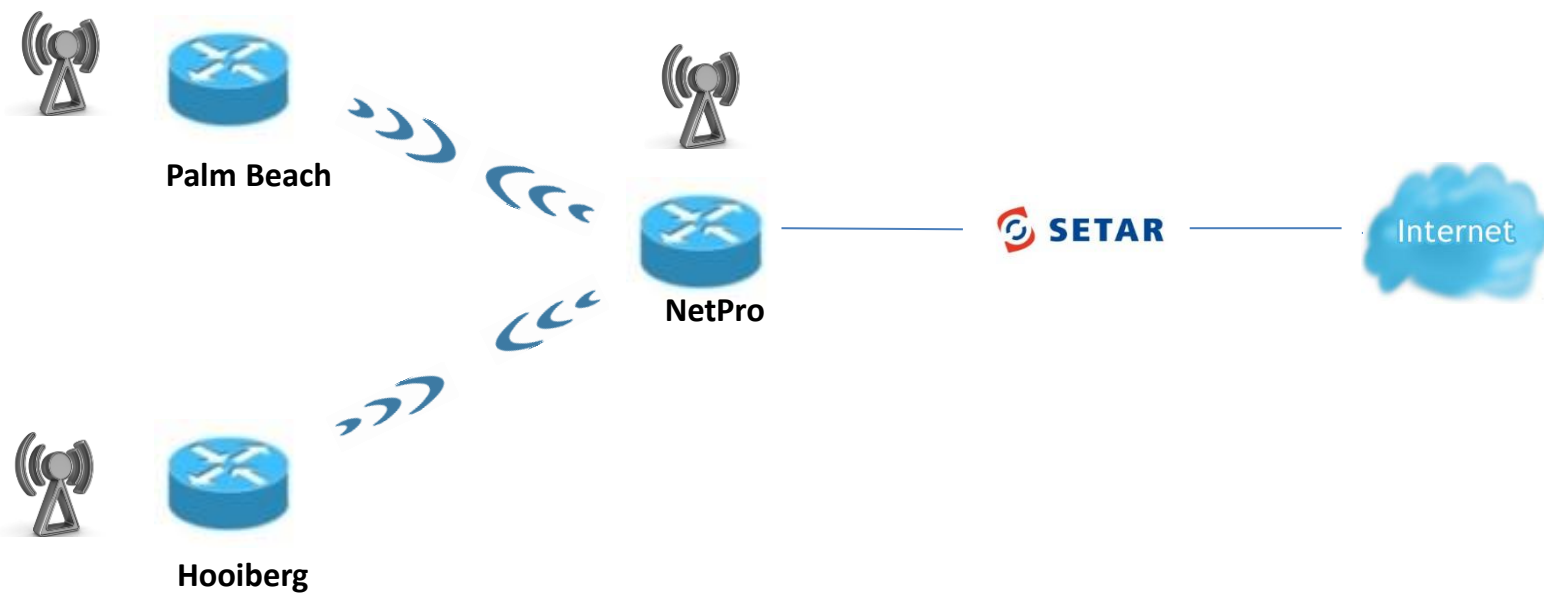
Disadvantages

- Need to educate internal IT personnel



Wireless Internet Connection Redundant Solution

NetPro Internet



Wireless Internet Connection

Service availability

The service that we provide is redundant and fully operational and has backup facilities at each of the connecting sites. Other services are listed below:

- 24 X 7 Monitoring (Qos) using the latest version of Solar Winds
- Fixed Bandwidth (Qos dedicated bandwidth, low latency)
- Yearly maintenance
- Timely upgrading of the equipment
- Intended is an internet connection that would be up and running at least 99% of the time during any 12-month period.



Conclusion

Today's businesses are more dependent on information technology than ever before, making business continuity and disaster recovery a core concern. Disruptions to IT infrastructure and unpredictable events can have catastrophic consequences that threaten the bottom line.

We have insurance for everything from houses to pets, so why shouldn't businesses invest in a plan that protects data so crucial to the survival of the business? A successful business continuity and disaster-recovery plan that incorporates mission-critical business requirements and is continually tested and updated can mean the difference between life and death for an organization. Now isn't that an insurance policy worth having?



Questions?

Thanks for your attention.

NetPro Group

Roger Glenn van Santen

TD-Manager

Phone: + (599 9) 736 6955 Ext 101

Cell nr.: + (599 9) 512 2607

E-mail: roger@netprogroup.com