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Transforming the Information Infrastructure: Build, Manage, Optimize.

FALL 2011

SUNGARD AVAILABILITY SERVICES

Anatomy of Cloud-Based Recovery, A Detailed Walk-Through

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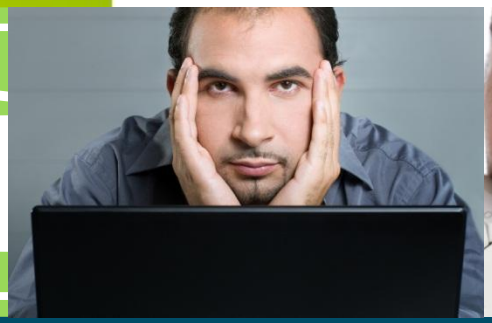
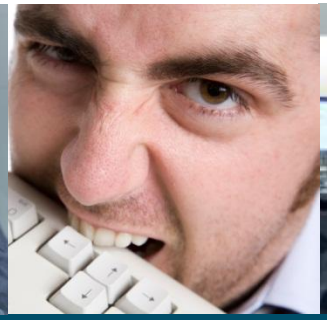
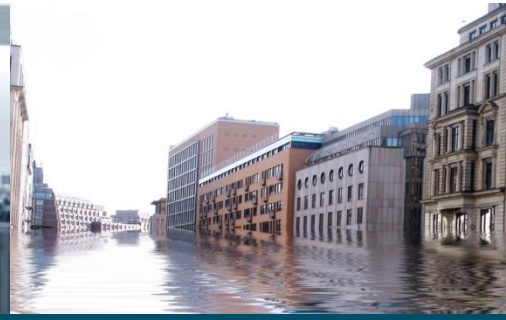
www.sungardas.com

Topics

- Challenges with Recovery
- Changing Recovery: The Opportunity with Cloud
- Anatomy of Cloud Recovery
- Adoption of Cloud-Based Recovery

Holistic Recovery Planning Demands Consideration of a Full Range of Failure Incidents



File Missing … Application Failure …
Datacenter Disruption … Facility Outage

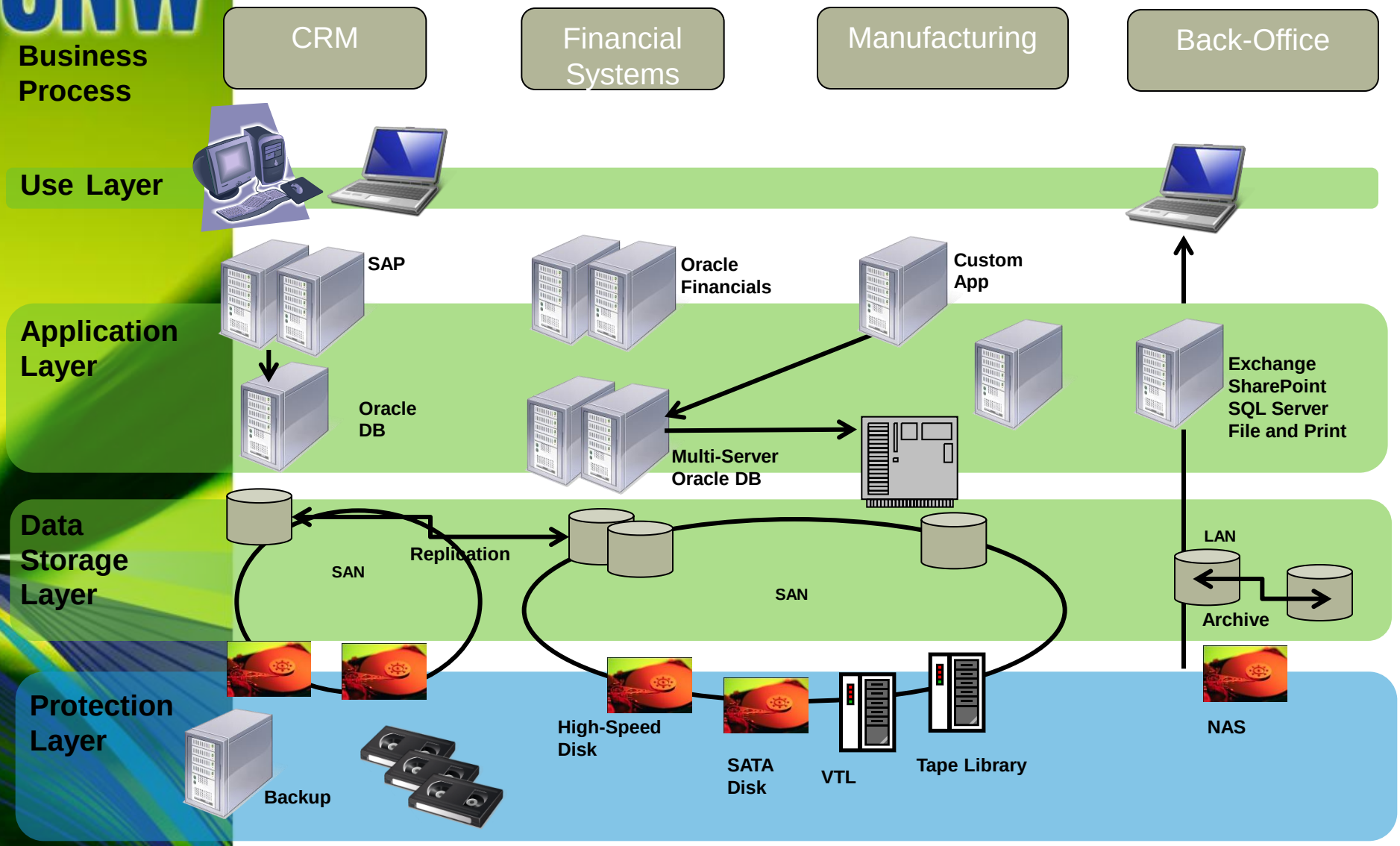
Protection Complexity is Increasing

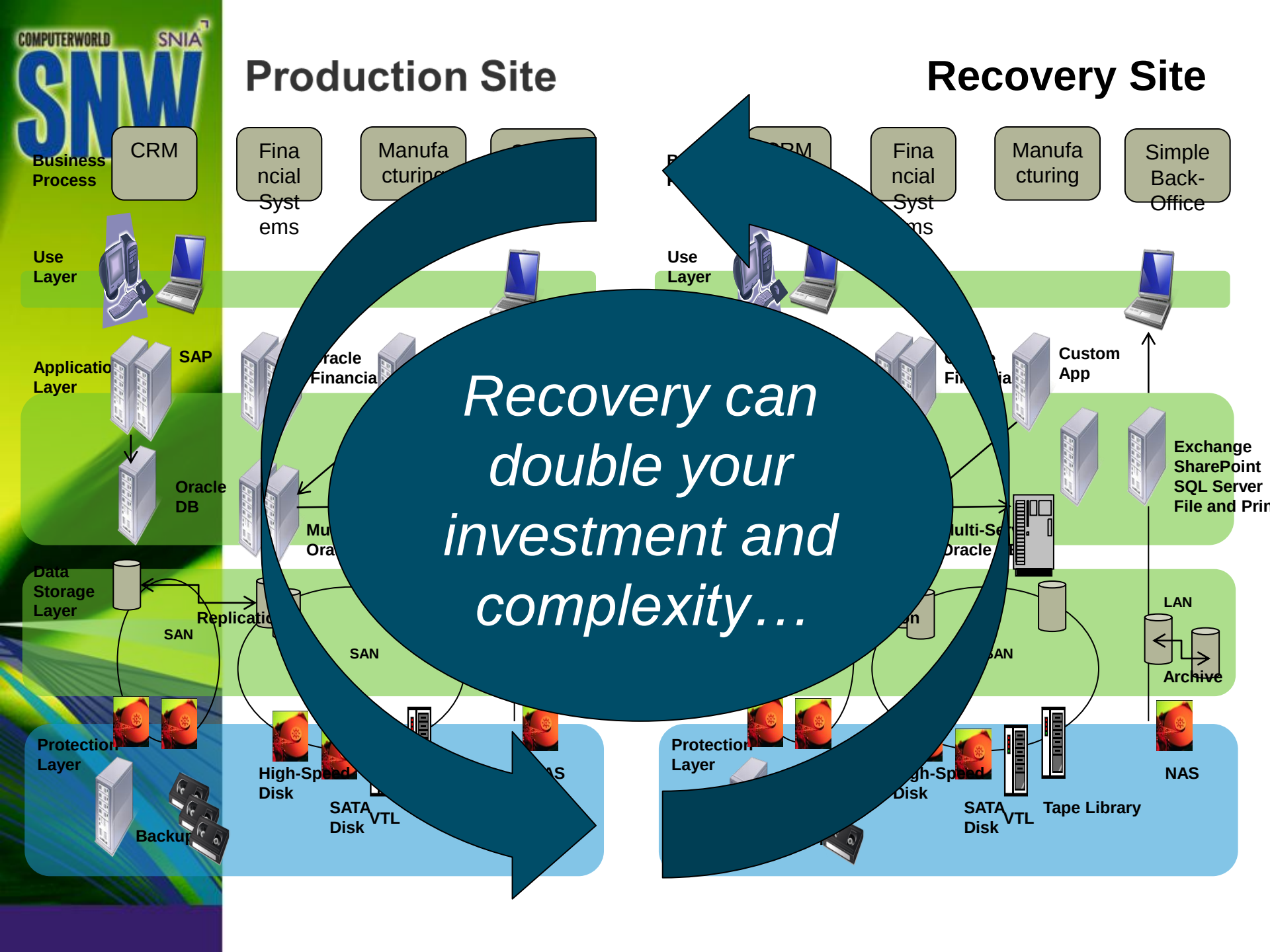
What methods do you use?

- Traditional backup
- Tape rotation
- Tiered disk-to-disk
- Replication
- Snapshot
- Archive
- Online services
- Separate BC/DR

The result in most environments:
high **complexity**, **cost**, and administrative **burden**
– without a consistent recovery result

Problem Scope: Typical Complex Environment

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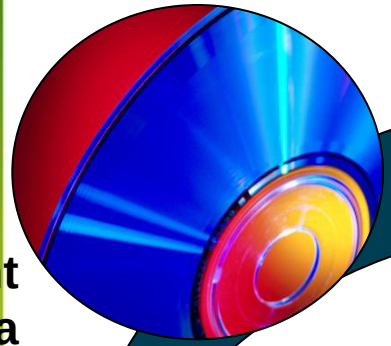
SNIA
SNW
Production Site
Recovery Site
Business Process
CRM
Financial Systems
Manufacturing
Simple Back-Office
Use Layer
Application Layer
SAP
Oracle Financial
Custom App
Oracle DB
Exchange
SharePoint
SQL Server
File and Print
Data Storage Layer
SAN
Replication
LAN
Archive
Protection Layer
High-Speed Disk
SATA Disk
VTL
Tape Library
NAS
Backup
Recovery can double your investment and complexity…

Recovery Requirements

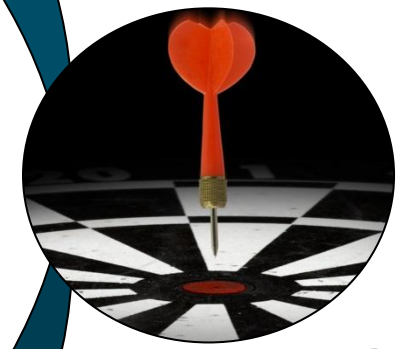


Coherent Data

Procedures

Capacity

… and demands resources which may be unavailable or too costly.



Expertise

People

Time

Backup Remains “Broken”…

Labor Intensive - Set up, on going management and problem resolution when the jobs fail

Costly - Purchases include Hardware, Software, Maintenance, Support, Training, Power, Space, Cooling costs

Off-Site Transit – Risk of loss for tapes transported off-site for recovery

The Never Ending Backup - More data is being backed up as growth rates continue to climb for all companies

….And Recovery Is Even More Challenging

Recovery is expensive, requiring dedicated staff + resources

Recovery is risky technically and operationally, tapes fail

Recovery is a thankless task – no upside, lots of downside

Devoting resources to recovery has opportunity cost

Data Points: The 2011 Digital Universe Study[1]

[1] IDC 2011 Digital Universe Study, sponsored by EMC and published June 2011

- In 2010: Crossed the zettabyte barrier
- In 2011: Growth will surpass 1.8 ZBs (1.8 trillion GBs)
- 500 quadrillion “files” or containers
- Commercial organizations responsible for 80% of information
- Growth of data is more than doubling every two years
- Outpaces the growth of storage
- Growth of files is faster than growth of data – by a factor of 8 over the next five years
- IT staff resources will grow by <1.5

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How SunGard Views Cloud: An Evolutionary Step

RaaS *before* the cloud

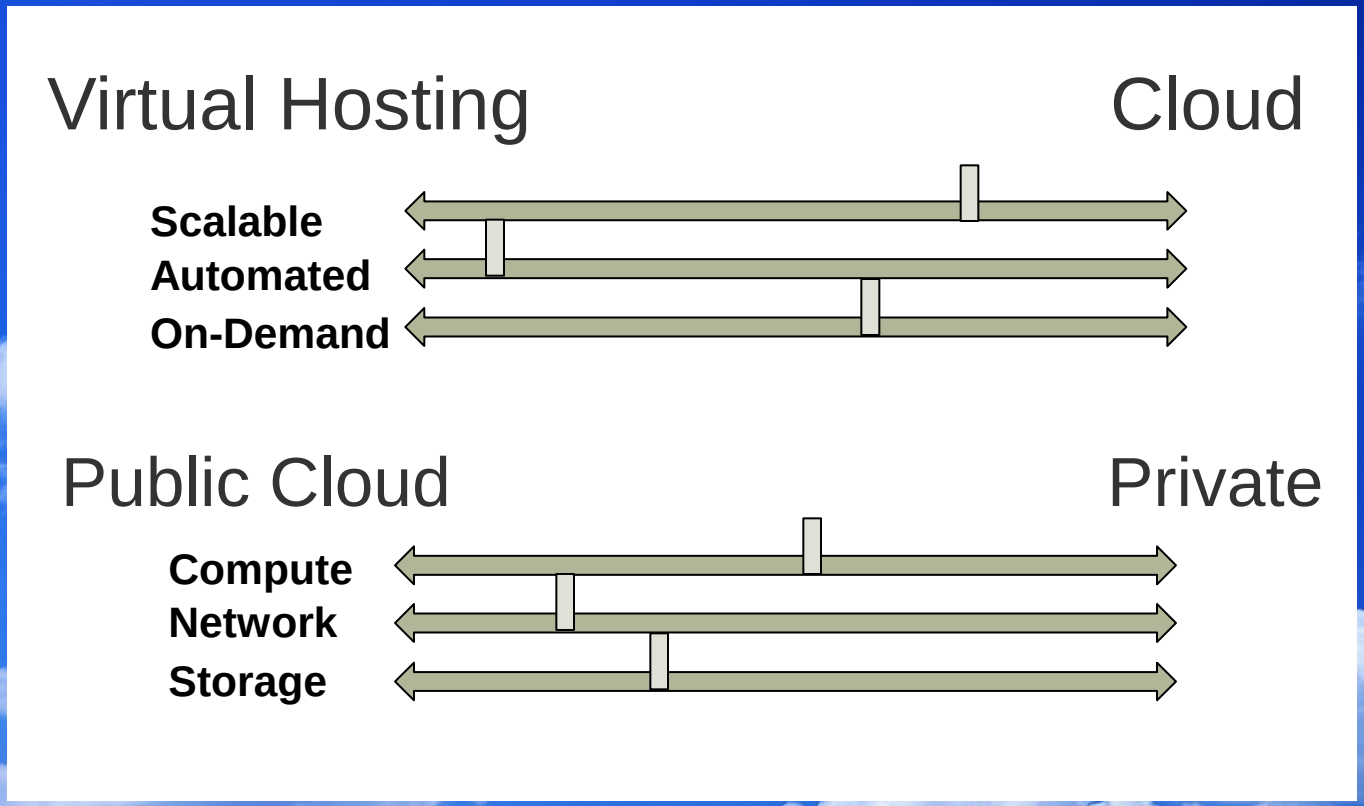
- Pay as a service
- Private
- Flexible
- Scalable
- Heterogeneous
- Vendor agnostic
- Online
- Application recovery

Cloud is a new platform that enables more cost-effective application recovery

Cloud Defined: What is Sufficient Cloud Capability?

- Virtual infrastructure enables cloud
  - Automated provisioning
  - Compute, network and storage
- Enables a more affordable business model
  - Scale on-demand
  - Scale within reasonable timeframes – at least within same-day
  - Scale down as well as up
  - Pay only for what you use

Cloud Defined: Continuum of Capability



Resulting Cloud Models

- Public
  - Completely shared infrastructure
  - Compute, storage, networks
- Private
  - Completely private infrastructure – even at the ESX Server level
  - **Community cloud** option
- Virtual Private Cloud (VPC)
  - Service provider hosts private cloud infrastructure for its clients

Key Drivers of Choices in the Cloud

Service providers are responding to these questions – rather than the strict cloud definition

Two Key Concerns:

What is the cost?
Is it secure?

For Recovery, Cloud Platforms Lower Cost and Improve Scalability

What Cloud Changes

- Lower cost platform
- Faster response to real-time fluctuations on-demand
- Compute, network, storage
- OPEX rather than CAPEX investment
- Need to manage service providers – and define who has responsibility
- Need to balance secure (private) vs lowered cost (shared)

What Cloud Does Not Change

- Need to modernize data movement
- Need to analyze applications value and downtime business impact
- Need to tier applications and prioritize recovery investment
- Need for applications expertise to plan and implement successful recovery
- Need to maintain and test recovery procedures

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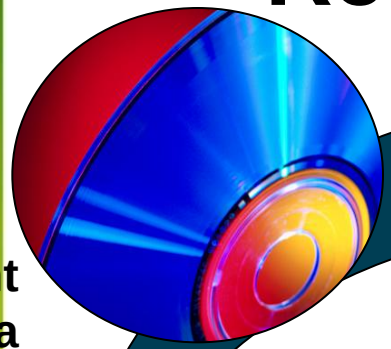
Recovery Requirements

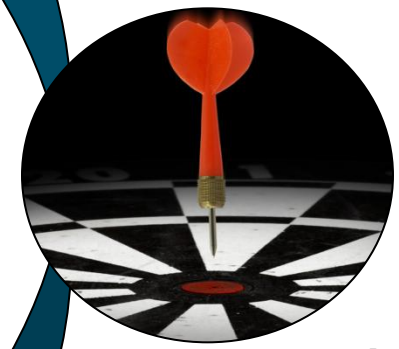


Coherent Data

Procedures

Prioritize investment by business value to control costs

Capacity

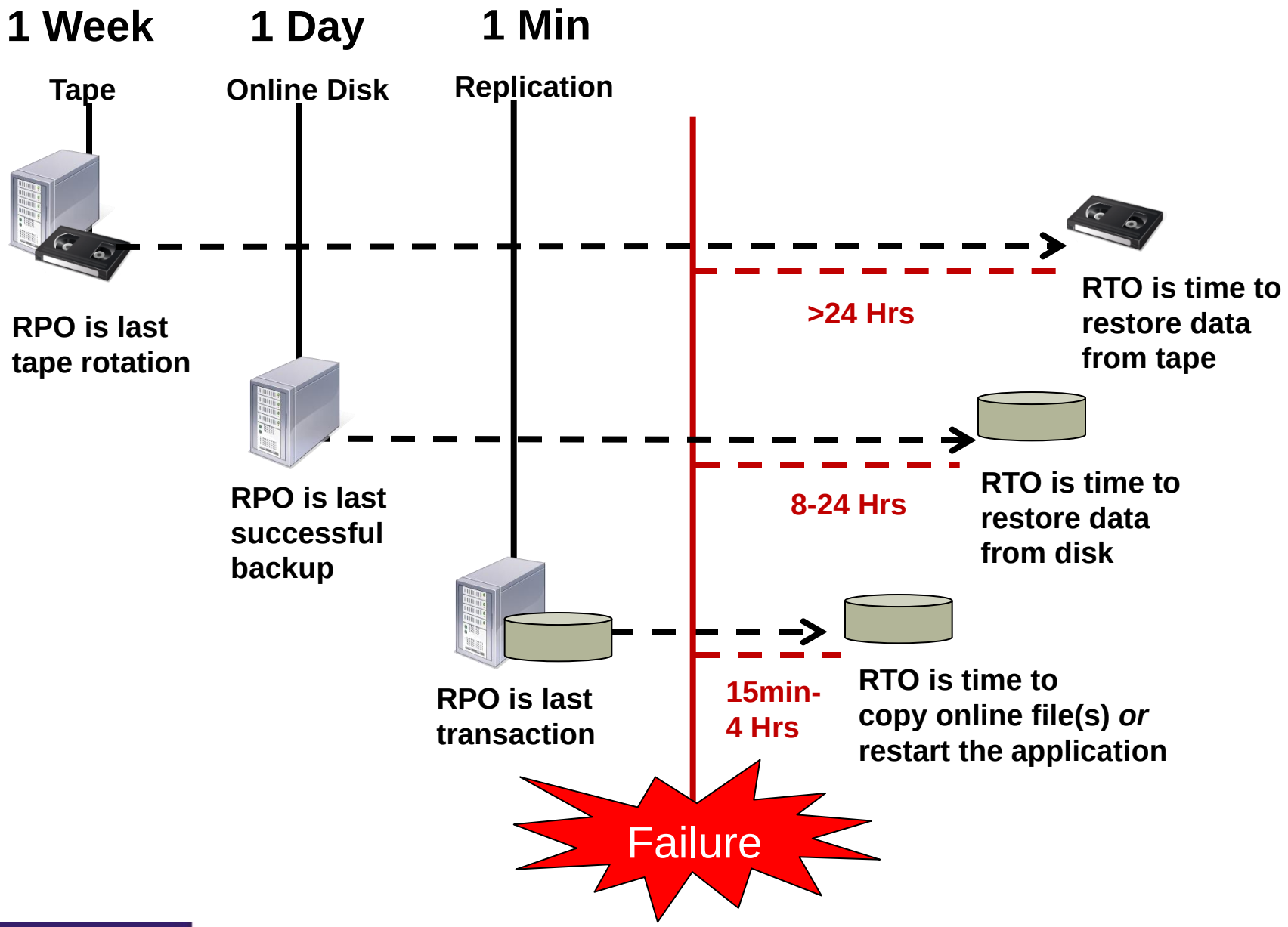


Expertise

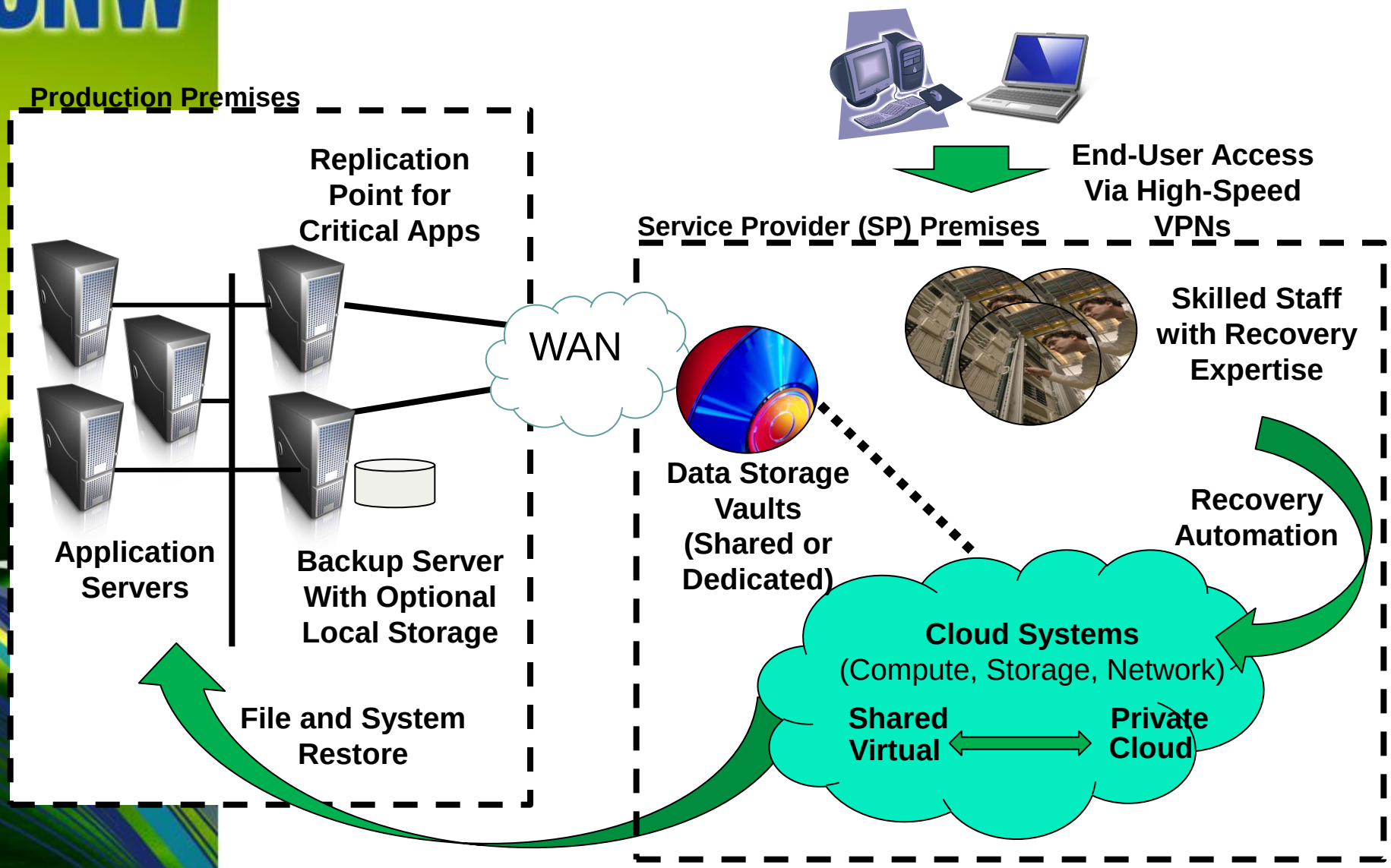
People

Time

Data Movement Predicts RPO/RTO



Anatomy of a Cloud Recovery



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Cloud: Who Owns the Compute Assets? Who Owns the Responsibility for Recovery?

- Differs by service provider
- Differs by client
- Sometimes, clients want to contract for the resources – but manage everything on their own
- Other times, clients want the service provider to handle everything for them

Advice for Controlling Cloud Recovery Costs

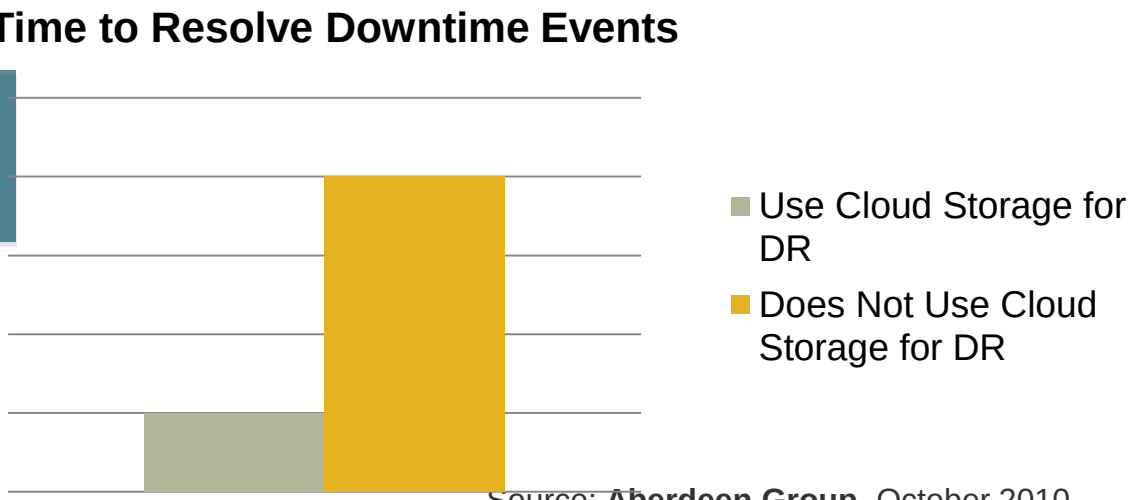
- Invest at the level of responsibility that you want
- Invest with the RPO/RTO service levels that you need
- Invest according to the business value of each application
- Add to your own recovery expertise and procedures
- Or, completely replace your need to operate recovery

Stepping Into Cloud

1. Evaluate business impact of applications – and tier
2. Establish RPO/RTO targets for each tier
3. Select data movement technologies which match RPO/RTO targets
4. Consider the cost-savings and expertise of service providers
   - Is the cloud flexible including virtual, cloud, hybrid infrastructure?
   - Is the responsibility level clear?
   - SLAs in writing?
   - How many actual disaster declarations have they managed?

Adopters of Cloud Disaster Recovery…

Enjoy Faster Recovery Times



Source: **Aberdeen Group**, October 2010

See Real Cost Savings

"Duplicating and maintaining [DR] infrastructure would have cost about $190,000 over three years."

- **Actual Customer**

Are Ahead of the Game

"At least 40% of the midsize businesses that have developed an internal disaster recovery site during the past two years will migrate to a cloud-based site by 2012."

- **Gartner Group**, October 2010

Q&A

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