data protection

that delivers

hp OpenView storage data protector: shifting the focus to recovery

hp world #347

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agenda

challenges of business continuity

introducing ... data protector

proven functionality

for more information

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trends

- continued focus on cost-effectiveness (shrinking budgets)
- consolidation of I.T. functions driving central I.T. to act as a service provider to their business units
- since September 11, business continuity has taken center of attention
- storage capacity keeps growing
- more applications becoming 24x365 mission-critical.
- downtime increasingly unacceptable

challenges

focus on recovery

- "my environment is always-on"

- "I'm worried about recovery times"

- "storage keeps growing, but my recovery speeds haven't improved. How do I protect the business from a lengthy outage?"

- "I need a recent image to recover to – I can't afford lengthy recovery from logs"

hp OpenView storage
data protector

Data Protector

hp storage software
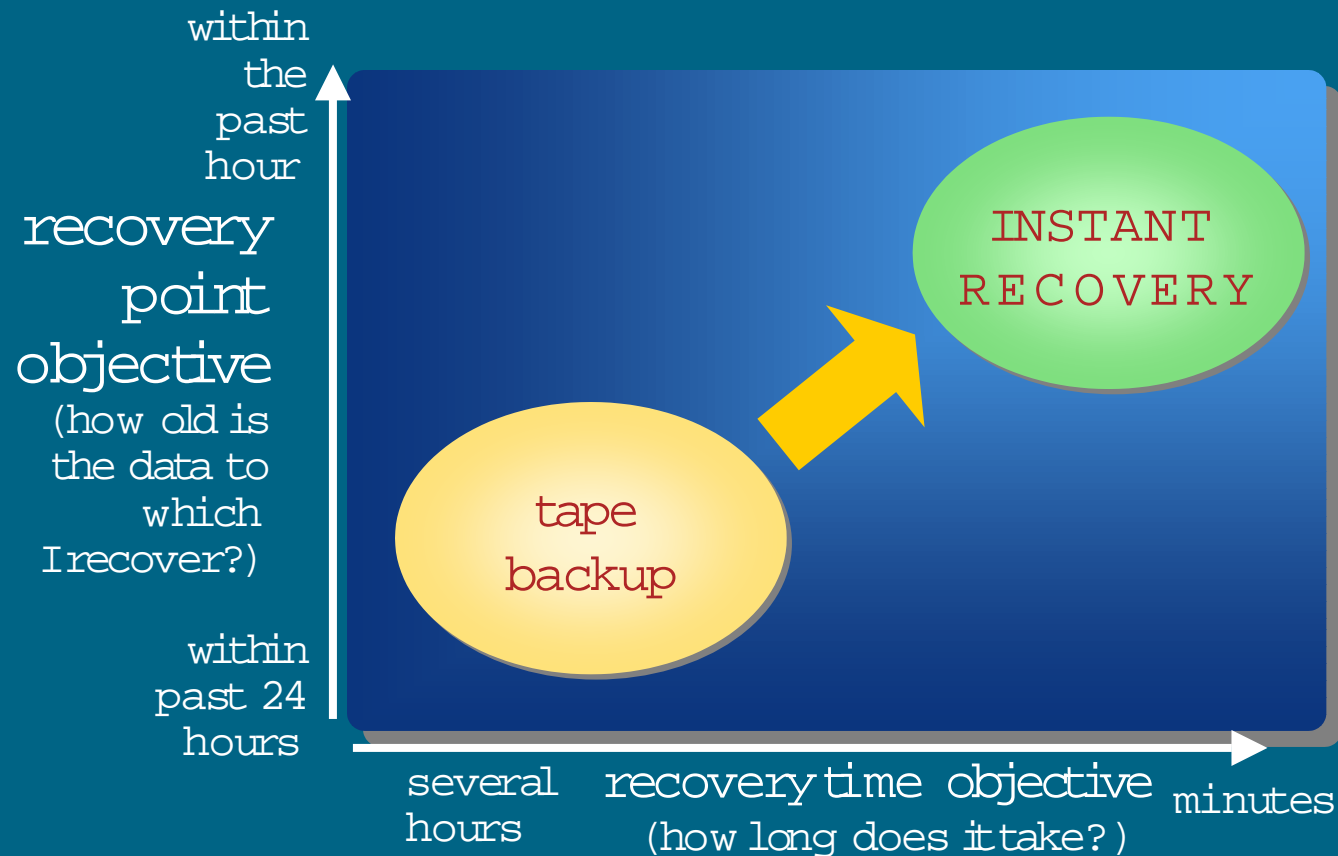
delivering
new levels of recovery

with a service-driven
management approach

HP WORLD 2002
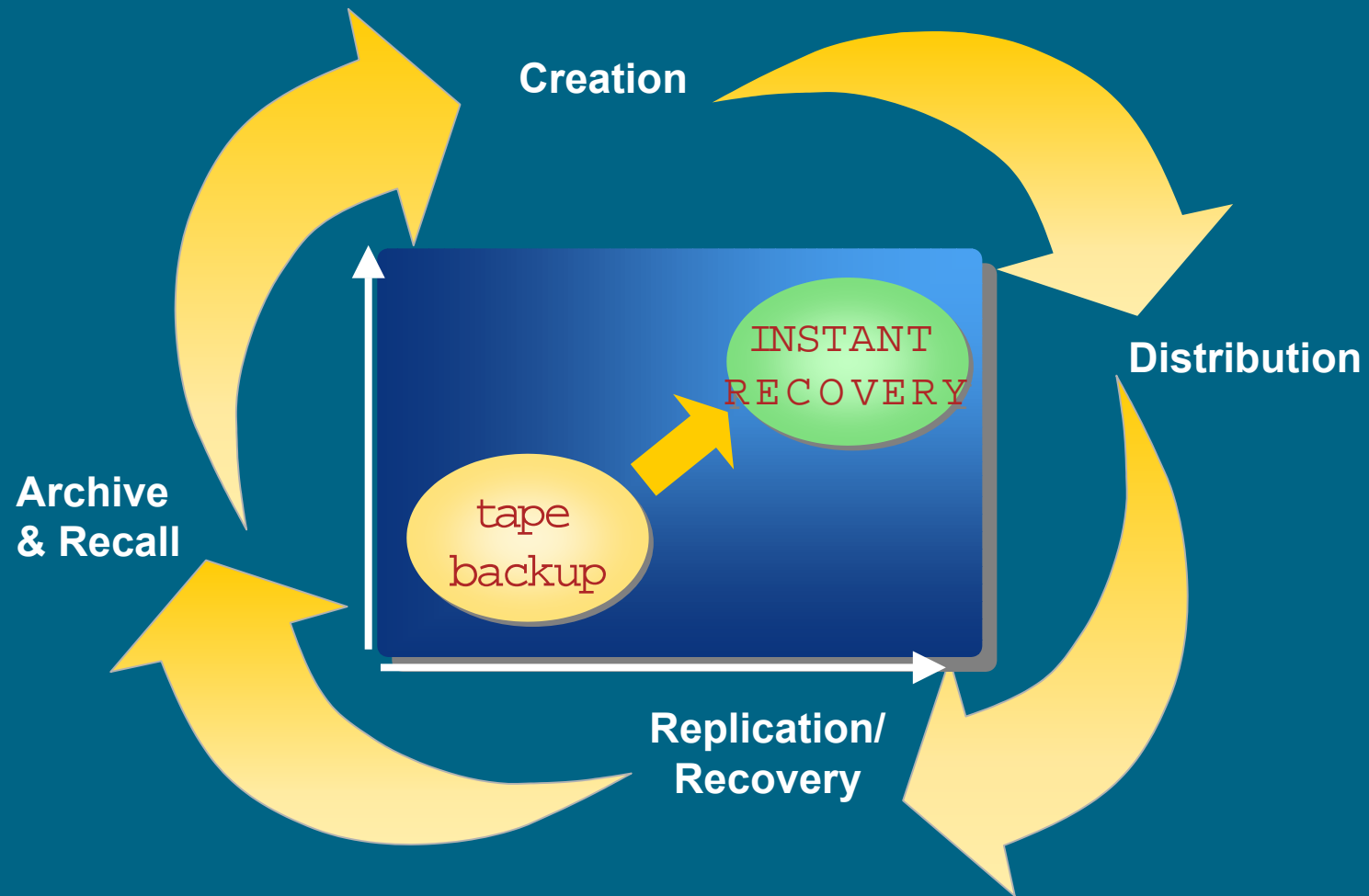Conference & Expo

measuring recovery performance:

❖ **Recovery Time**
(how long does recovery take?)

❖ **Recovery Point**
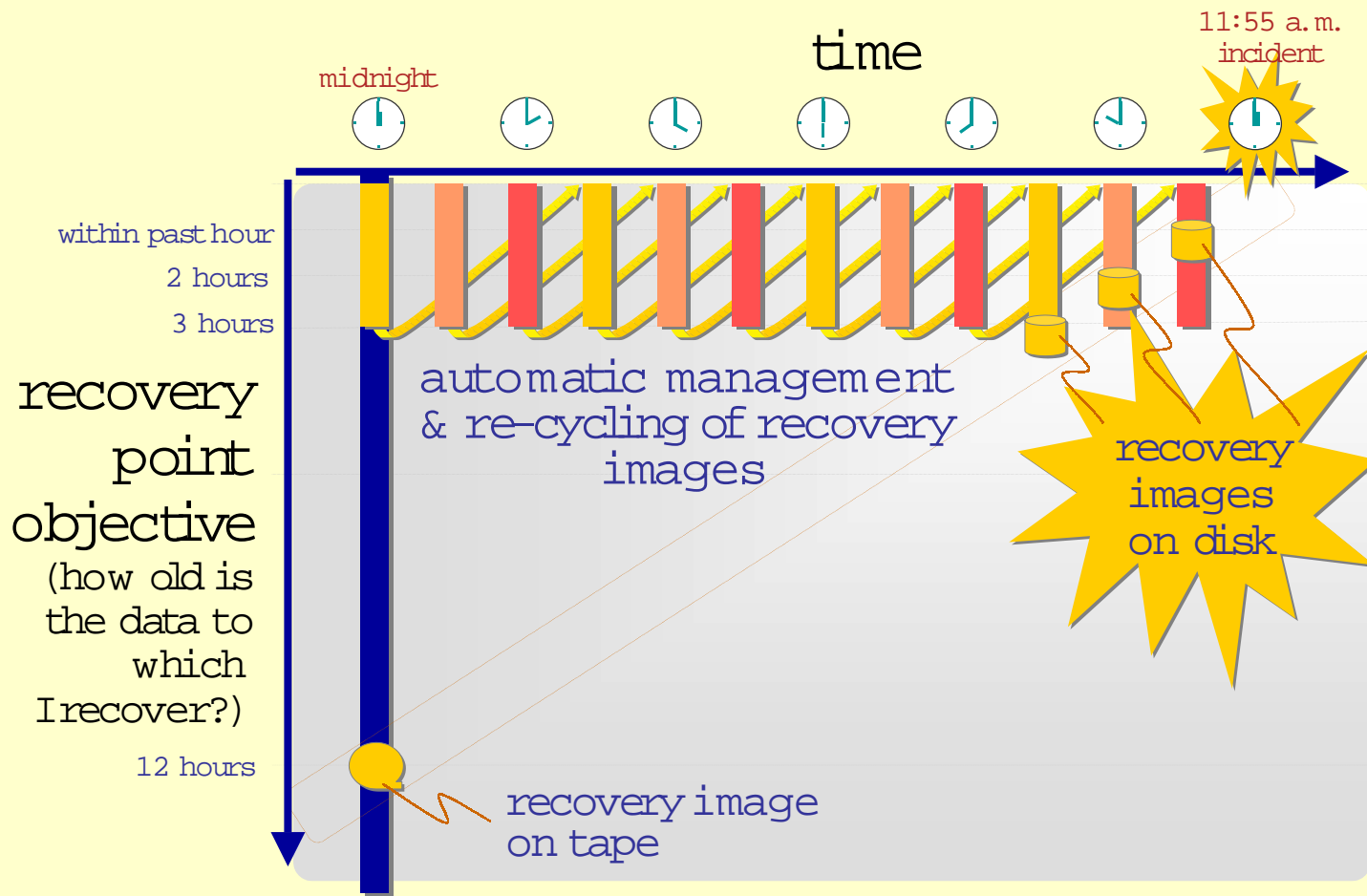(how old is the data to which I recover?)
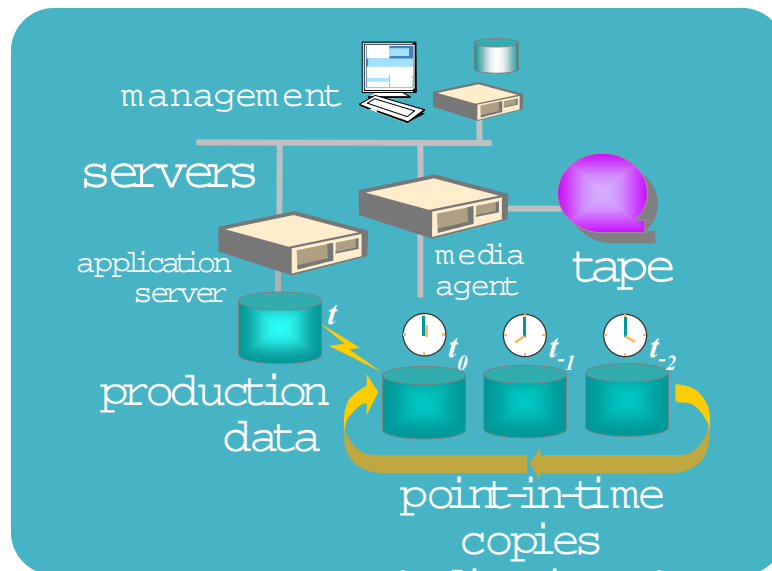
hp is shifting the focus from backup to recovery

recovery point objective
(how old is the data to which I recover?)

within the past hour

within past 24 hours

tape backup

INSTANT RECOVERY

several hours

recovery time objective
(how long does it take?)

minutes

focus on recovery – the first step in the evolution to life cycle data management

Creation

Distribution

INSTANT RECOVERY

tape backup

Archive & Recall

Replication/ Recovery

data protector manages the full life cycle for both disk and tape recovery images

time

11:55 a.m. incident

midnight

recovery point objective
(how old is the data to which I recover?)

within past hour
2 hours
3 hours

12 hours

automatic management & re-cycling of recovery images

recovery images on disk

recovery image on tape

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Instant Recovery

enables recovery of large data structures in minutes, not hours.

management

servers

application server

media agent

tape

t

t_0 t_{-1} t_{-2}

production data

point-in-time copies

In essence, Instant Recovery substitutes re-synchronization of disk copies for bulk data movements from tape

Justification:
- If data structures are large (e.g. tape recovery exceeds one hour), and
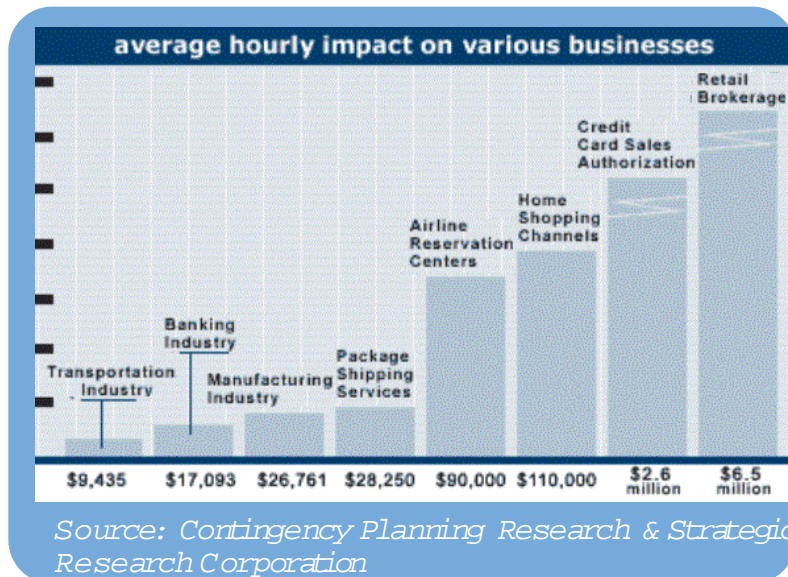- cost of downtime is high, then
- $\Rightarrow$ Instant Recovery and the necessary storage may be a well-justified investment.

Instant Recovery

key questions:

**What is the business cost per hour of downtime for this system/application?**

Examples shown at lower left

average hourly impact on various businesses

Transportation Industry	Banking Industry	Manufacturing Industry	Package Shipping Services	Airline Reservation Centers	Home Shopping Channels	Credit Card Sales Authorization	Retail Brokerage
$9,435	$17,093	$26,761	$28,250	$90,000	$110,000	$2.6 million	$6.5 million

Source: Contingency Planning Research & Strategic Research Corporation

In the event of a fault, how long would it take to recover this information from tape?

"Terabyte per hour" tape recovery is industry benchmark. Roll-forward from logs takes more time.
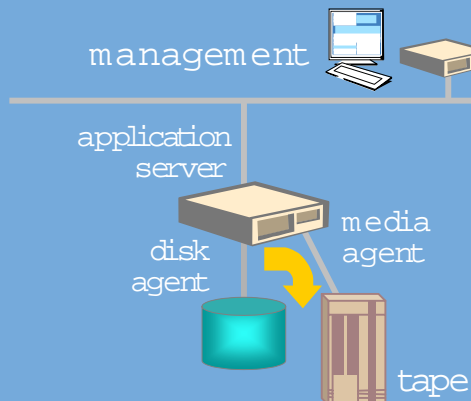
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business value of instant recovery
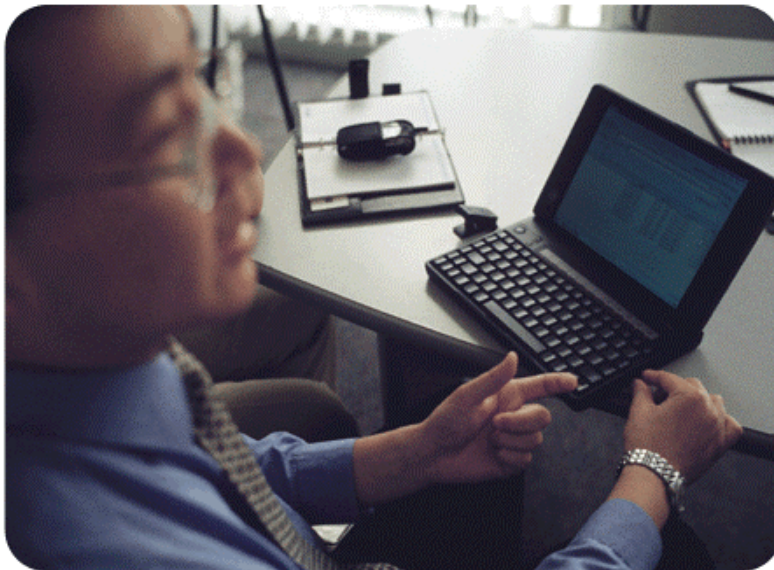
- reduced direct cost of downtime

- increased service levels – achieved by eliminating risk of lengthy downtime

- operational efficiencies – cost savings achieved by consolidating previously-separate servers, applications – enabled by eliminating the need to plan for lengthy downtime example: Exchange server consolidation
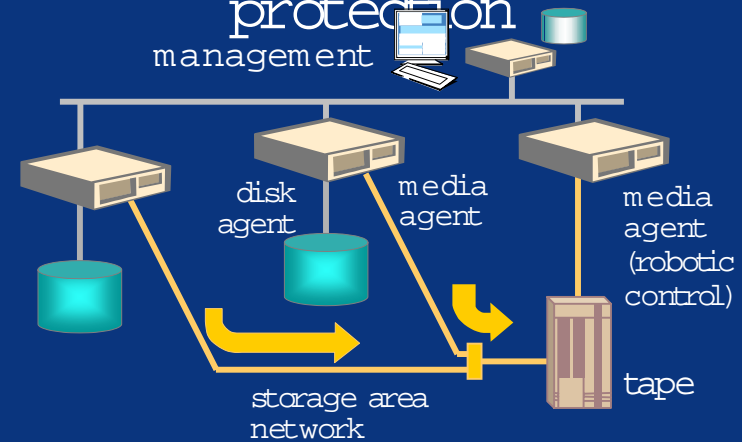
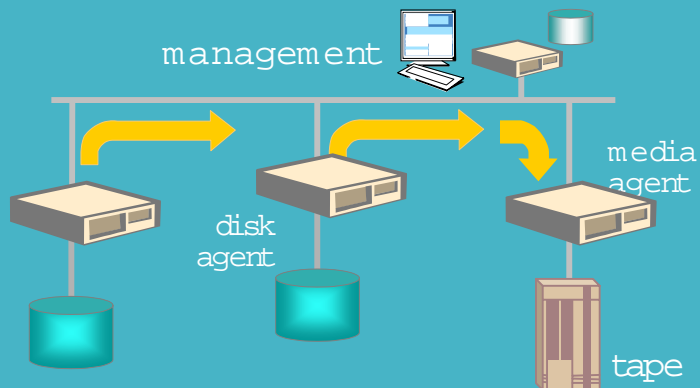# data protector – a range of protection alternatives
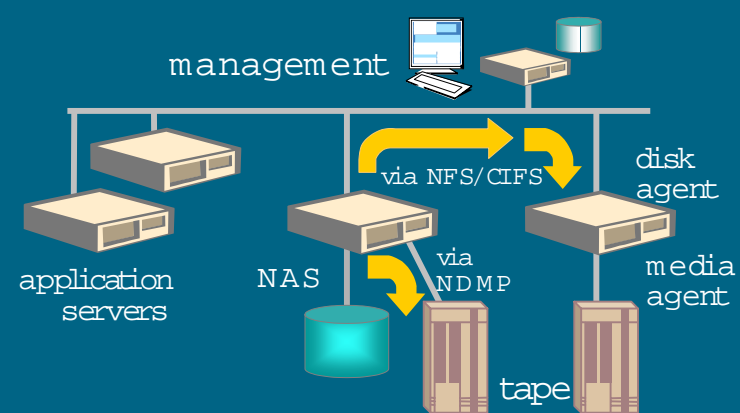

direct-attached protection

management

application server

disk agent

media agent

tape

SAN (LAN-free) protection

management

disk agent

media agent

media agent (robotic control)

tape

storage area network

network-based protection

management

disk agent

media agent

tape

NAS (NDMP) protection

management

application servers

NAS

via NFS/CIFS

via NDMP

disk agent

media agent

tape

data protector supports a range of configurations

clustered environments

management
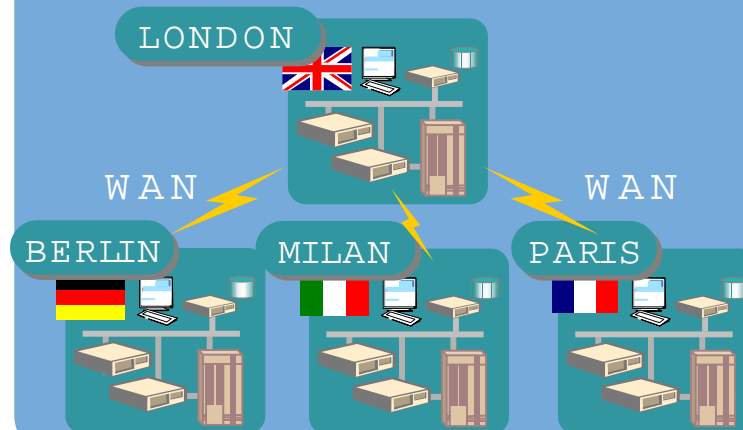
Fail-Over

primary server

secondary server

tape

NDMP environments

management

Net App
EMC Celerra

backup server

SCSI or FC

tape

library sharing

central site

remote office

tape

manager-of-managers

LONDON

WAN

WAN

BERLIN

MILAN
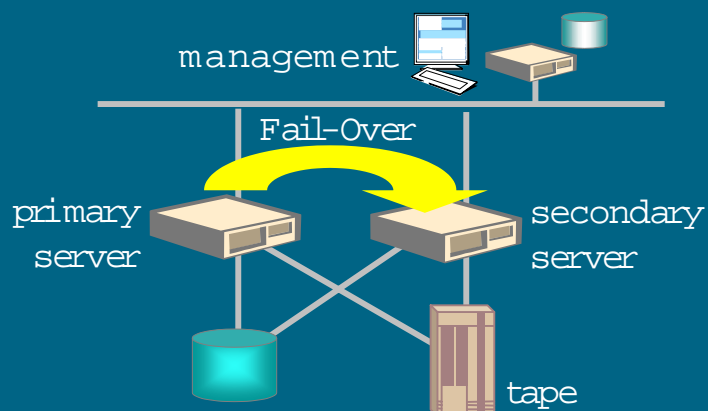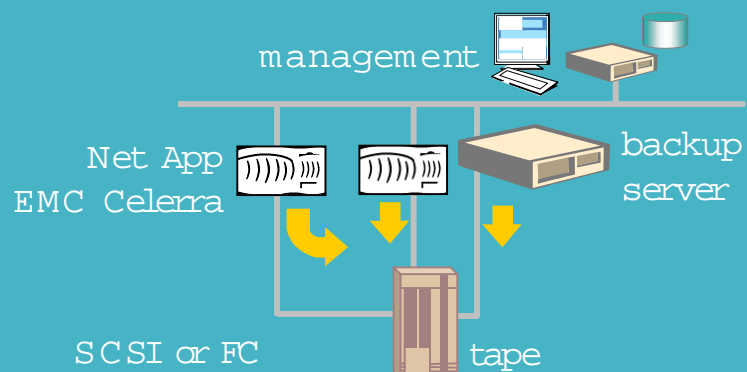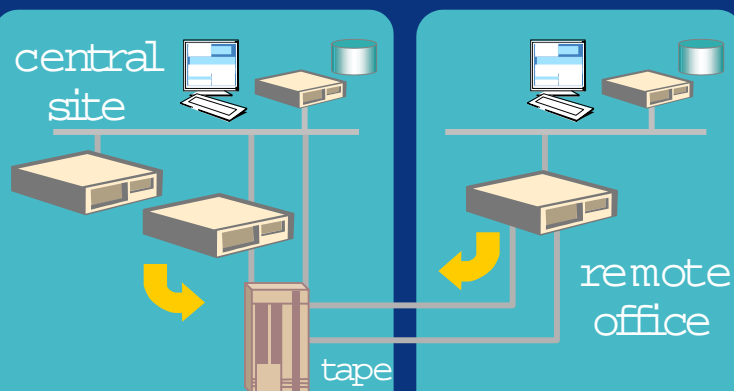
PARIS

data protector offers high-availability protection

zero-downtime backup

management

application server

backup server

production data

copy

tape
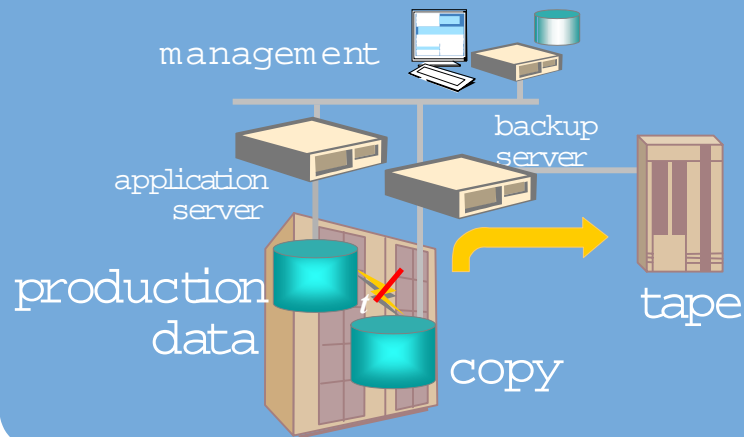
direct (server-less) backup

management

bridge

application server

production data

copy

tape

⬛ = xCopy data mover
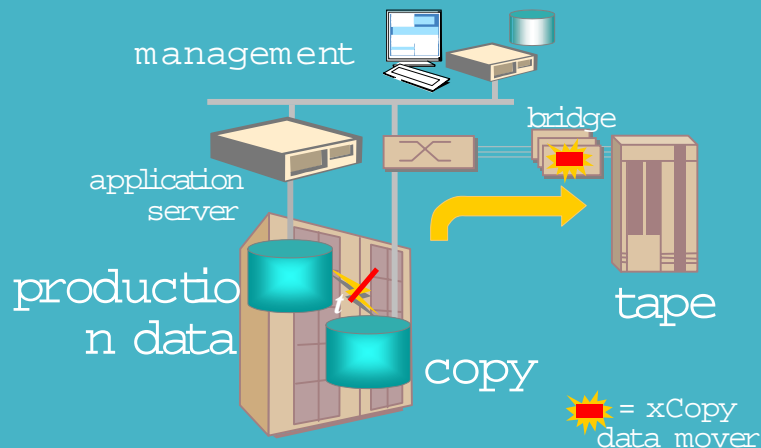
disaster-tolerant configurations

Site A

production servers

Site B

fail-over servers

management

LAN

backup server
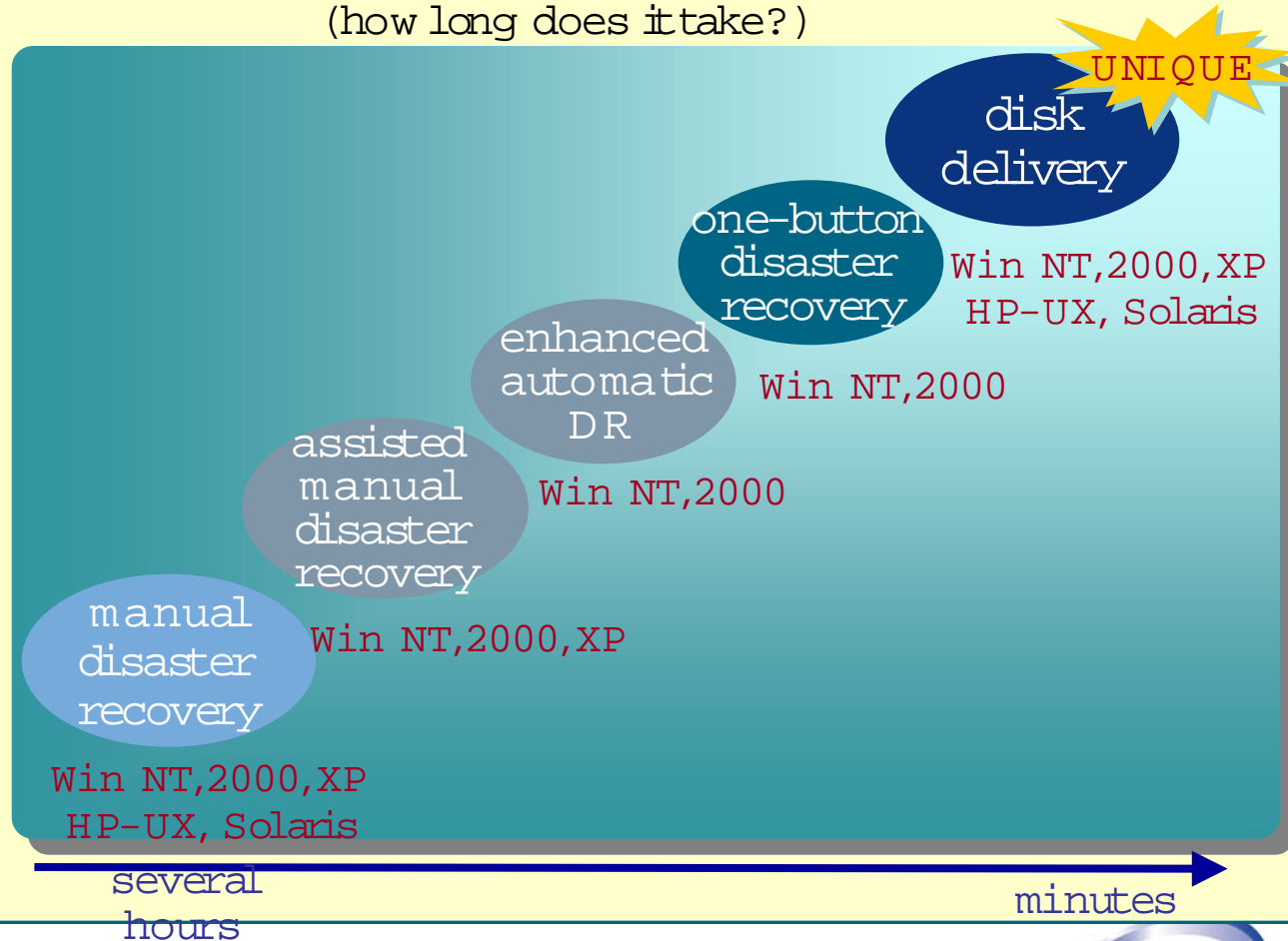
Continuous Access XP

M

S

T

XP array

XP array

tape
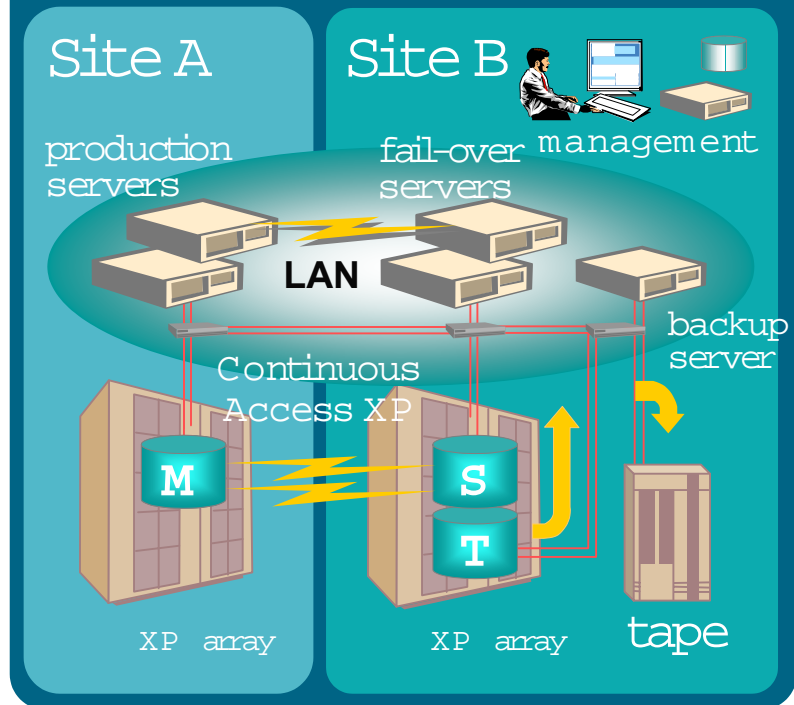
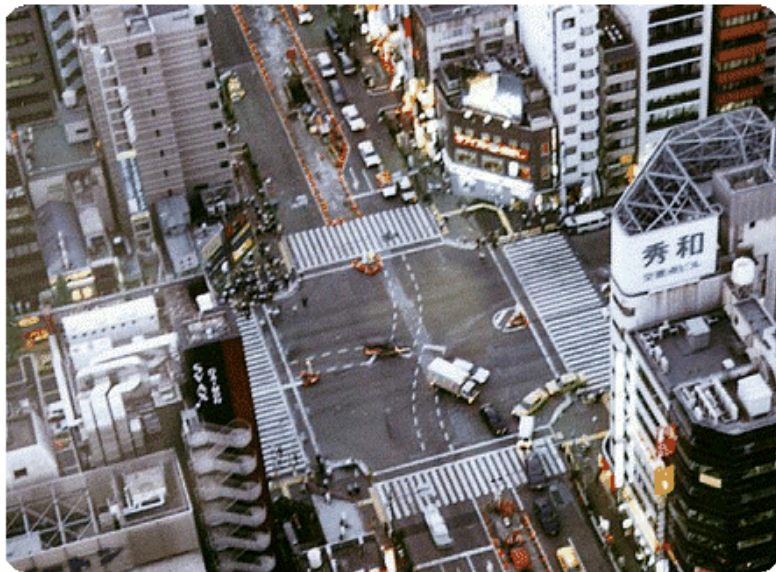selected data protector high availability features are available for:
HP XP arrays, HP VA arrays,
EMC Symmetrix, HDS Lightning

data protector provides a full range of system disaster recovery options

recovery time objective

(how long does it take?)

UNIQUE

disk delivery

Win NT,2000,XP
HP-UX, Solaris

one-button disaster recovery

Win NT,2000

enhanced automatic DR

Win NT,2000

assisted manual disaster recovery

Win NT,2000,XP

manual disaster recovery

Win NT,2000,XP
HP-UX, Solaris

several hours

minutes

Instant Recovery changes the way you think about data protection

multiple levels of protection enable tailoring service levels to business needs.

UNIQUE

the only enterprise data protection software today to seamlessly integrate tape as well as disk-based recovery in a single tool, a single interface

when a crisis happens, no one wants to deal with multiple tools

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How do we manage multiple levels of protection?

In a future storage utility, data protection is assumed – quality of recovery becomes the issue.

utility-oriented management will be required to manage multiple levels of service without increasing complexity. Focus on:

•The service we're delivering
•The metrics we achieve

Fortunately, OpenView has built a strong foundation …

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managing
data protection
# as part of a
storage utility service
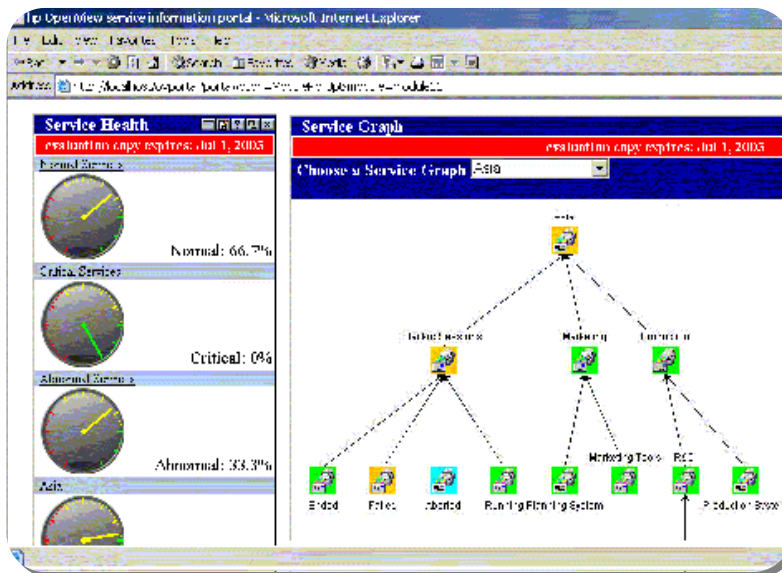
hp's vision:

storage is a utility service

breakthroughs in productivity occur when administrators focus on managing the business service, not individual tasks or technologies

- business-oriented service views
- data protection service integrated into the application service (Oracle SAP Exchange)
- integrated helpdesk

and utility

data protection related to business services

Service trees automatically generated "out-of-the-box"
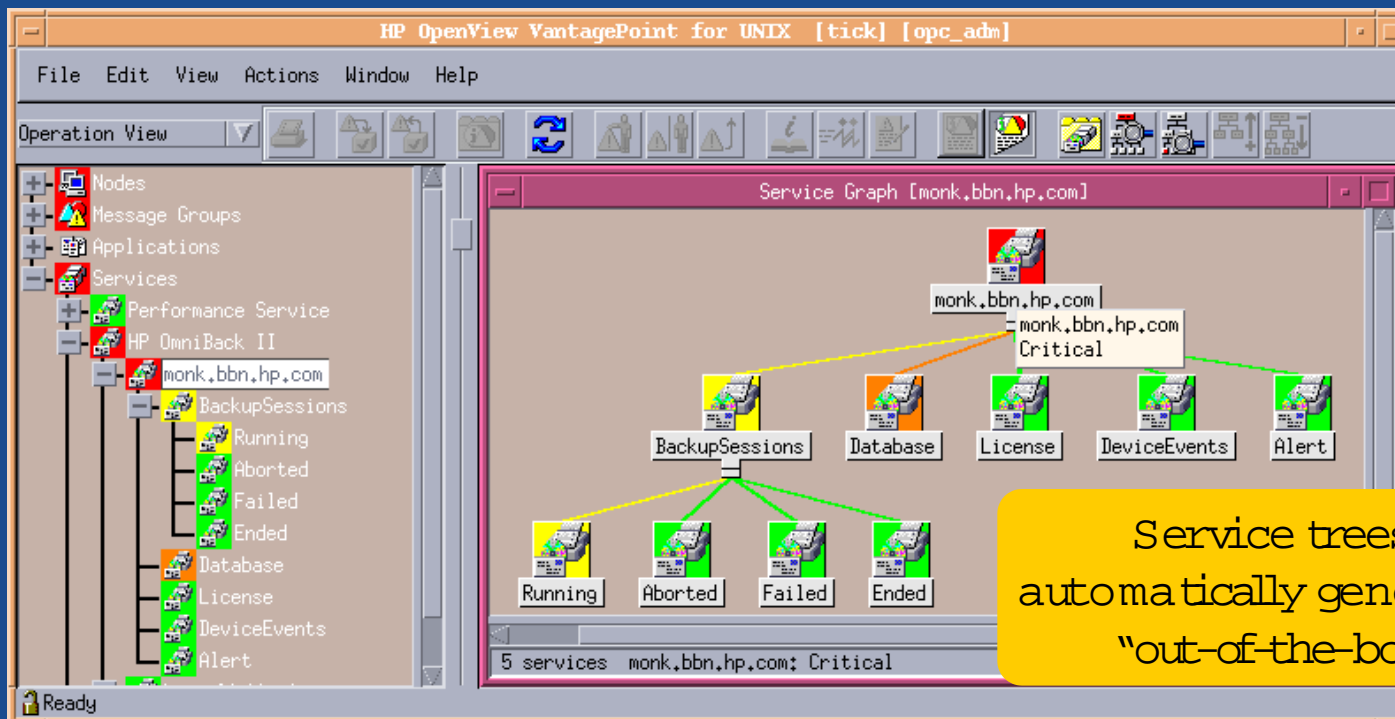
- data protection service is modeled "out of the box"
- customization permits modeling service for individual clients
- Impact can be assessed; incidents prioritized & diagnosed quickly
- tracking and monitoring are automatic

users monitor storage utility via storage portal
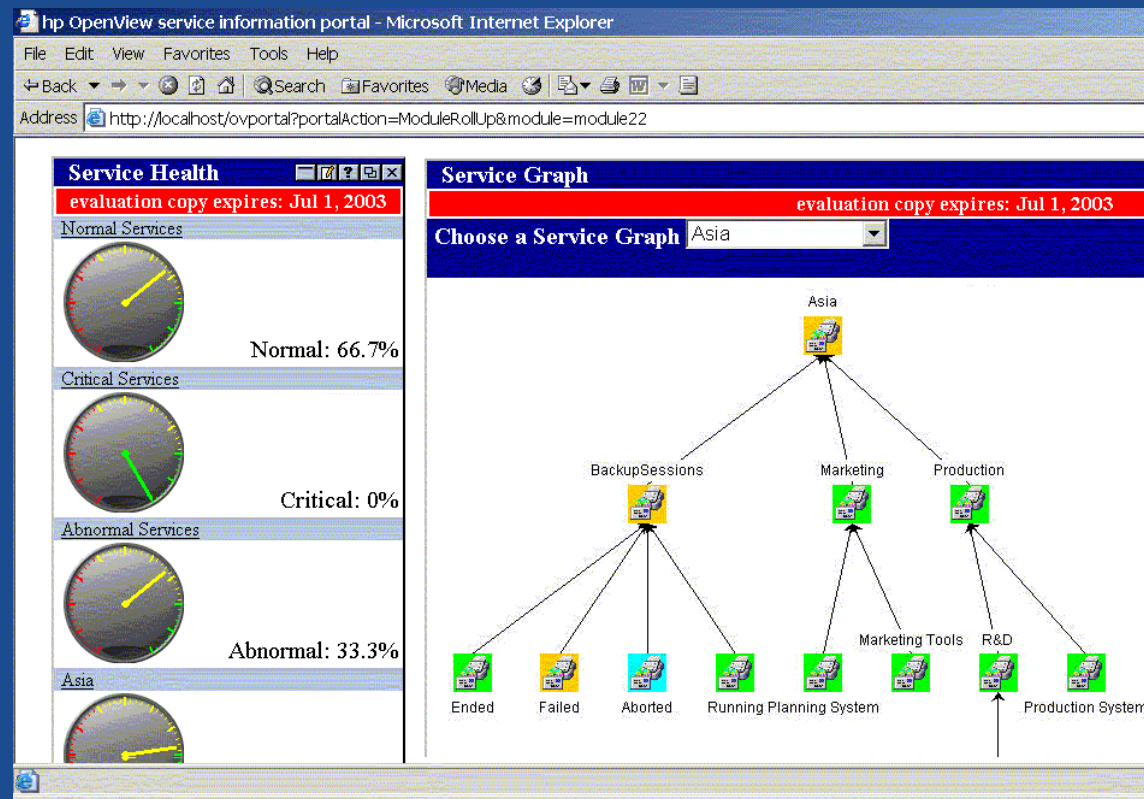
- Freely-customizable portal permits monitoring storage utility; data protection parameters, statistics; enables drill-down.
- User-specific views enable clients to monitor their own

hp OpenView storage data protector

Data Protector

hp storage software

delivering
new levels of recovery

with a service-driven
management approach

data protector

is the successor to

omniback II

data protection
that delivers

Data Protector builds upon the capabilities of HP OpenView Omniback II, for tape management, backup, and disaster recovery, and is fully compatible with existing Omniback tapes, scripts, procedures

existing Omniback II customers with support contracts can upgrade to the new product at no charge.

for more information

Data Protector

hp storage software

http://www.openview.hp.com

or contact:
your OpenView or storage software specialist

questions – hp world

Please Visit:
hp OpenView storage data protector Booth

- Demonstrations of the product
- Discuss your specific data protection needs

Please attend:
other data protector presentations
here at the conference