An Aggressive Approach on P2V to Address BCP & DR with the Benefit of Server Consolidation

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The Portman Building Society

- **The Portman Group consists of:**

  - **Portman Building Society** is the third largest UK building society and 13th largest UK mortgage lender

  - In the six years since 2000, Portman has more than doubled in size. During this period Portman was the fastest growing top ten building society in terms of total assets

  - The Group has total assets of £18.7 ($32) billion and employs over 2,700 staff, serving 1.7 million members

  - The Society has a network of 144 branches. Our Head Office is in Bournemouth, Dorset and it has an administration centre based in the West Midlands

AWARDS 2006
M
Moneyfacts

Best Discounted Rate
Mortgage Provider

WINNER
Portman Building Society

AWARDS 2006
M
Moneyfacts

Best Fixed Rate
Mortgage Provider
(without redemption tie-in)
WINNER
Portman Building Society

Moneywise
MORTGAGE
AWARDS
2006
WINNER
BEST LENDER FOR
FIXED RATE MORTGAGES
PORTMAN BUILDING
SOCIETY

Agenda

- Where were we?

- Why did we need to move?

- Where did we want to be?

- How did we get there?

- We got there…

- …but what would we do next time?

Where Were We?

- Mixture of environments
  - Own Windows NT 4.0 domains & Windows 2003 Active Directory, through acquisitions additional Windows NT 4.0 domains & two Windows 2000 Active Directories.

- Hardware
  - Compaq Proliant, HP Netserver, Dell and Compaq PCs

- Existing Virtual Machines
  - Adopted VMware GSX servers
  - Microsoft Virtual PCs
  - POC VMware ESX servers

Why Did We Need to Move?

- Existing environment looked a little like this!
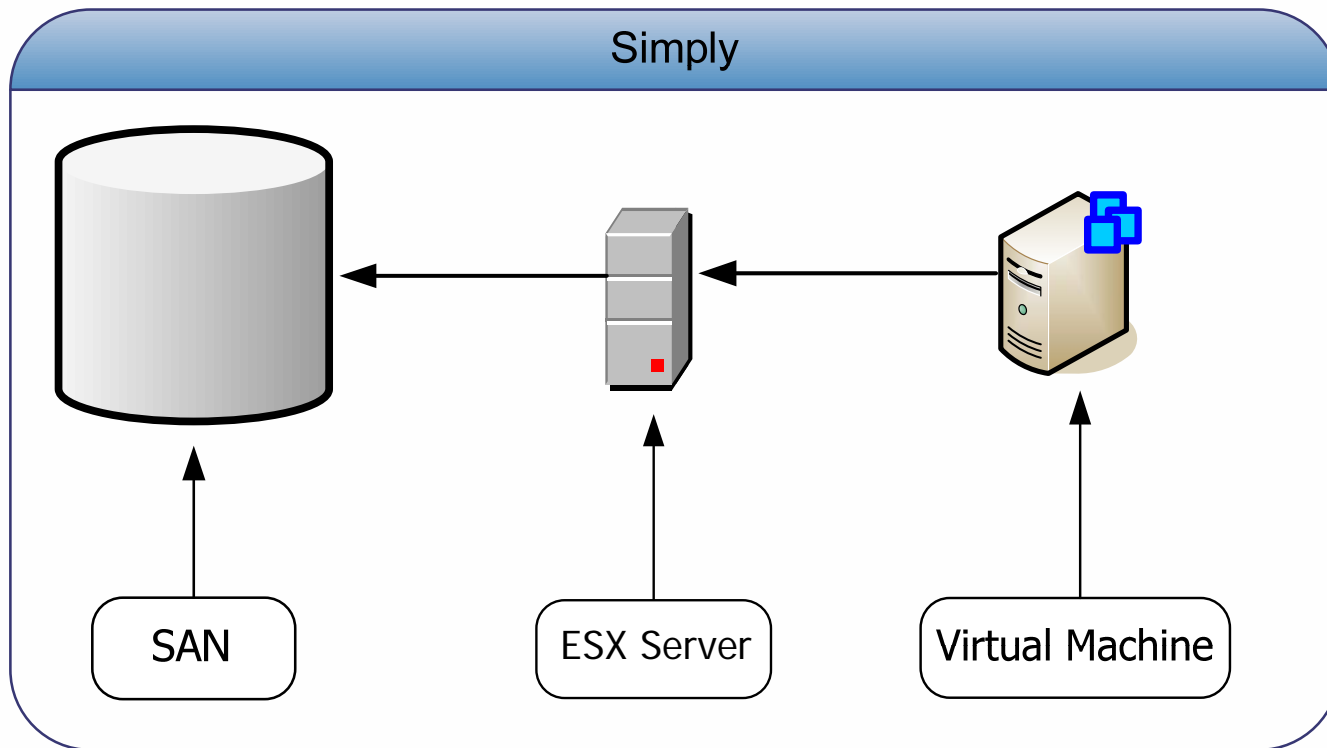
Where Did We Want to Be?

- Identical ESX hardware
  - Live and Disaster Recovery site
  - HP Proliant DL580G2 fully loaded
  - Booting from SAN
  - Standby server '+1'

- SAN
  - Network Appliance FAS 920 Cluster for Live site
  - Network Appliance FAS 940 Single for DR site for Test & Development
  - Replicated snapshots at intervals defined by the business
    - …and there was 12tb replicated (initially!)
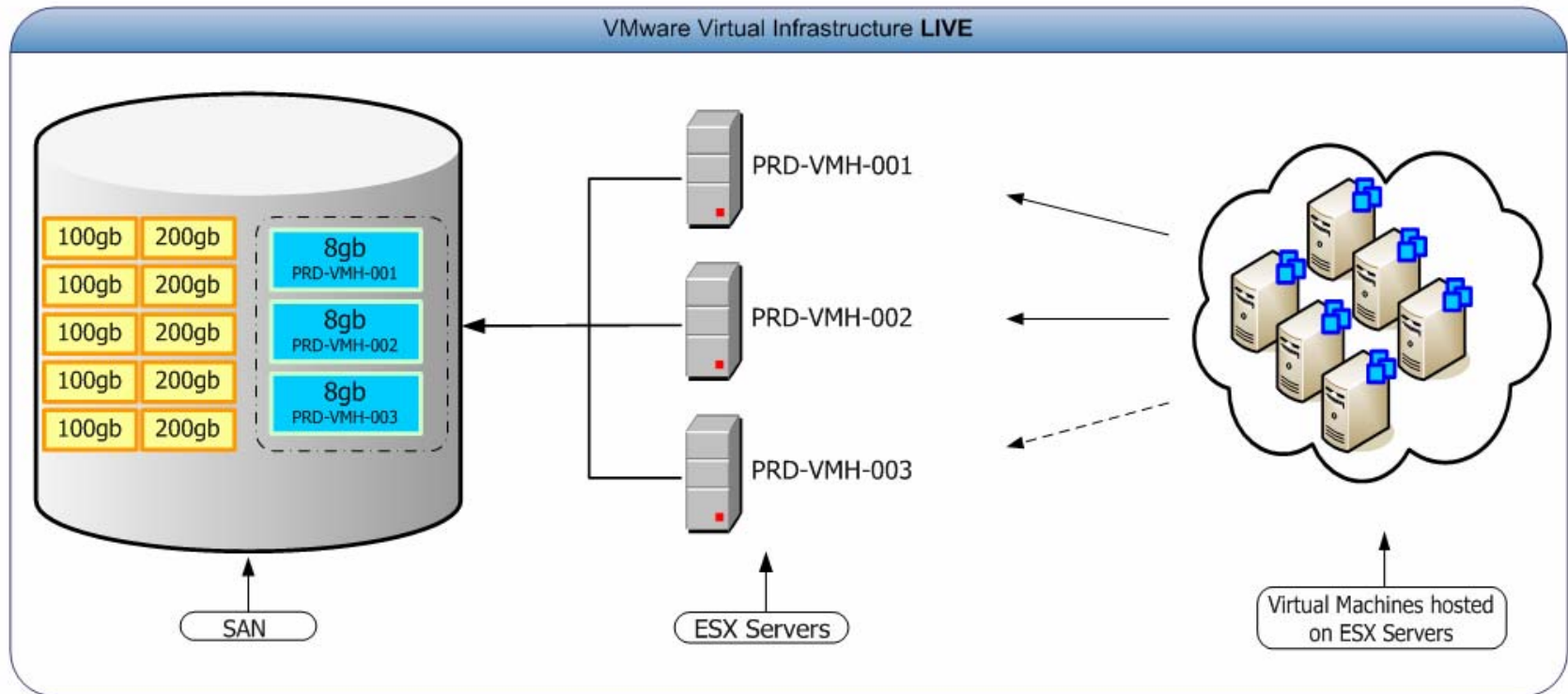
Where Did We Want to Be?
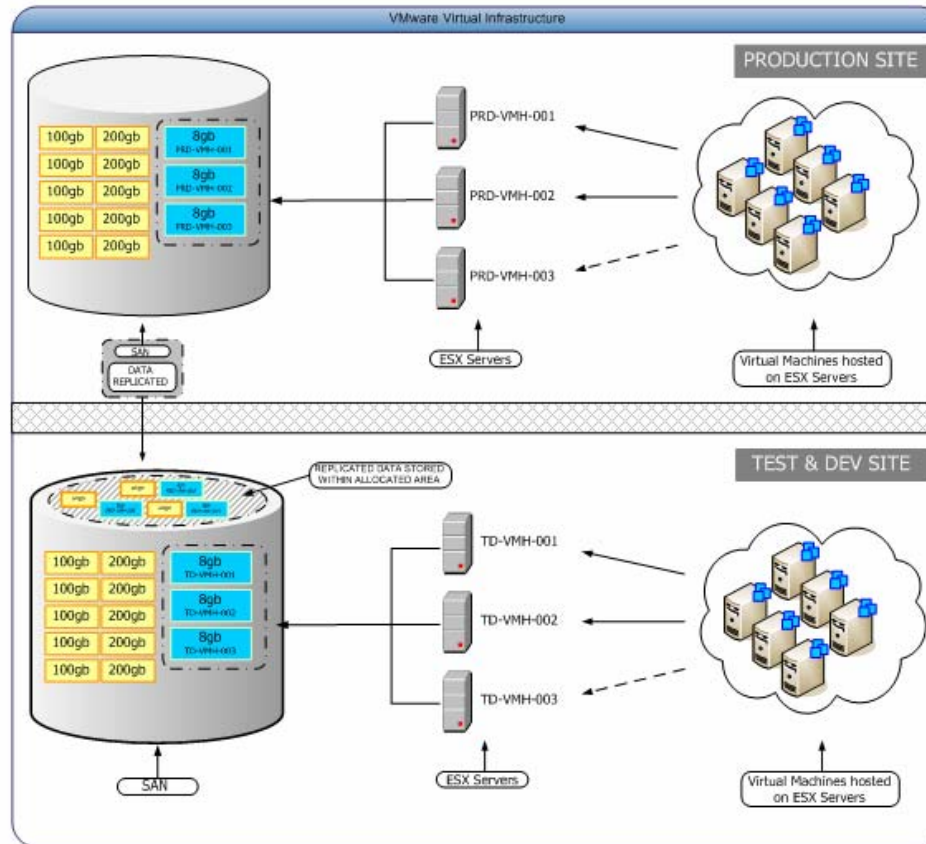
- A simple view of our implementation

Where Did We Want to Be?
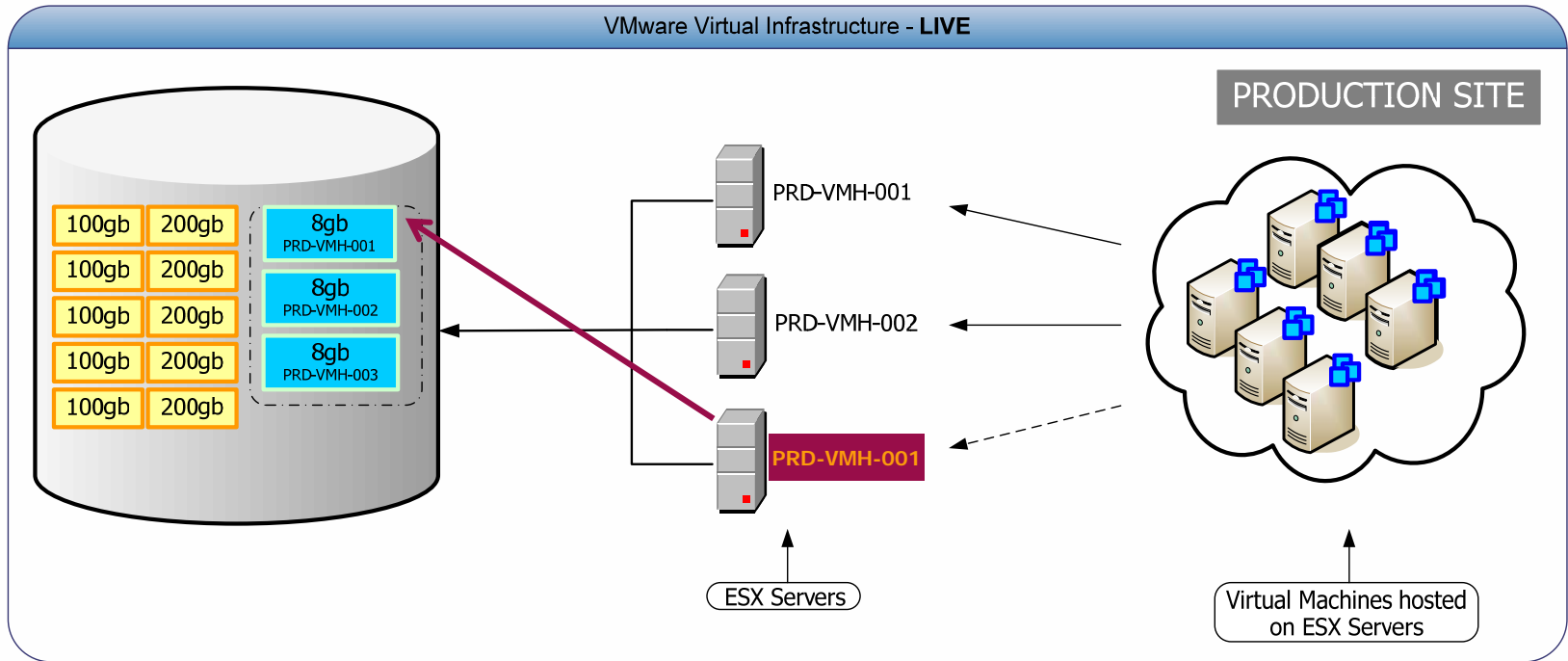
- The bigger picture of our implementation

Where Did We Want to Be?

- The bigger picture of our implementation
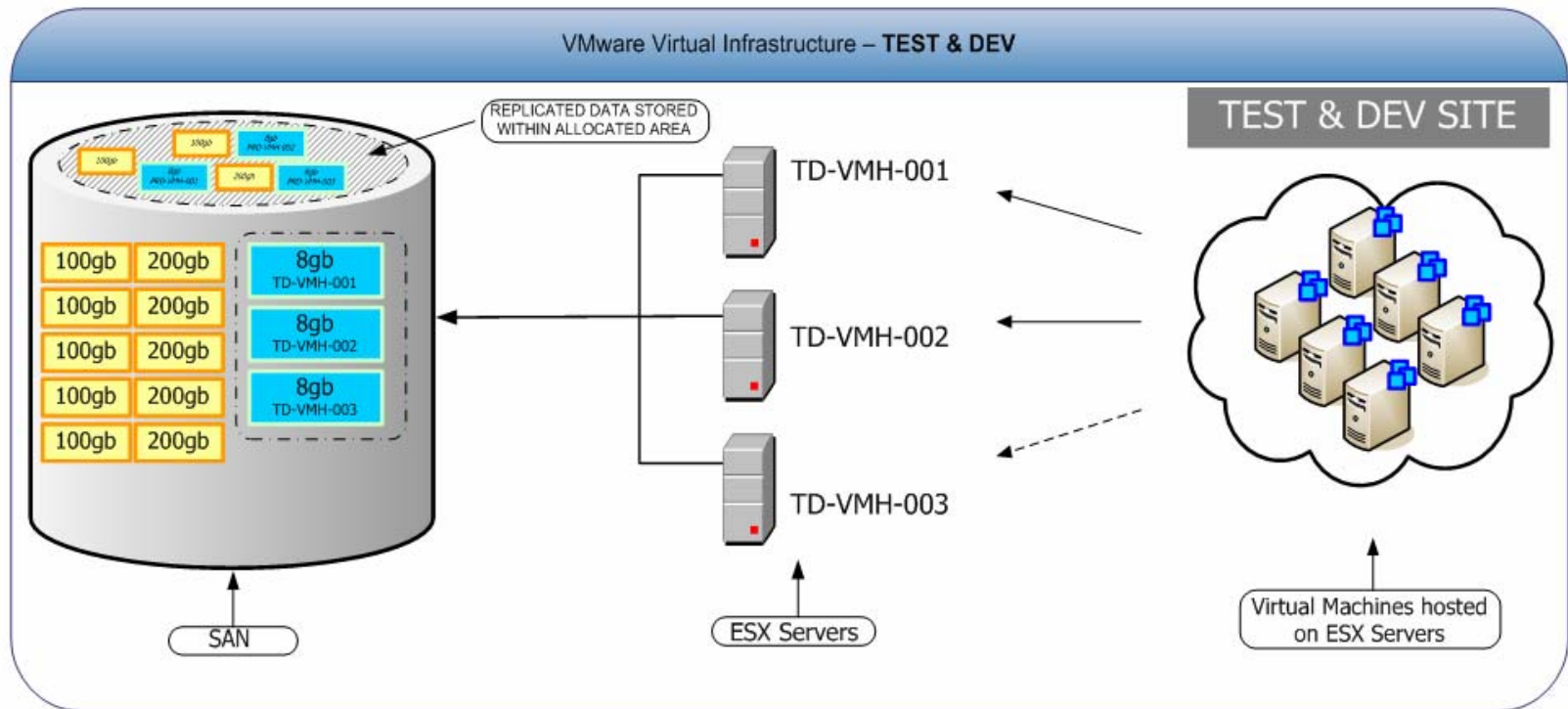
Where Did We Want to Be?

- Local resilience
  - What if an ESX host becomes defunct?
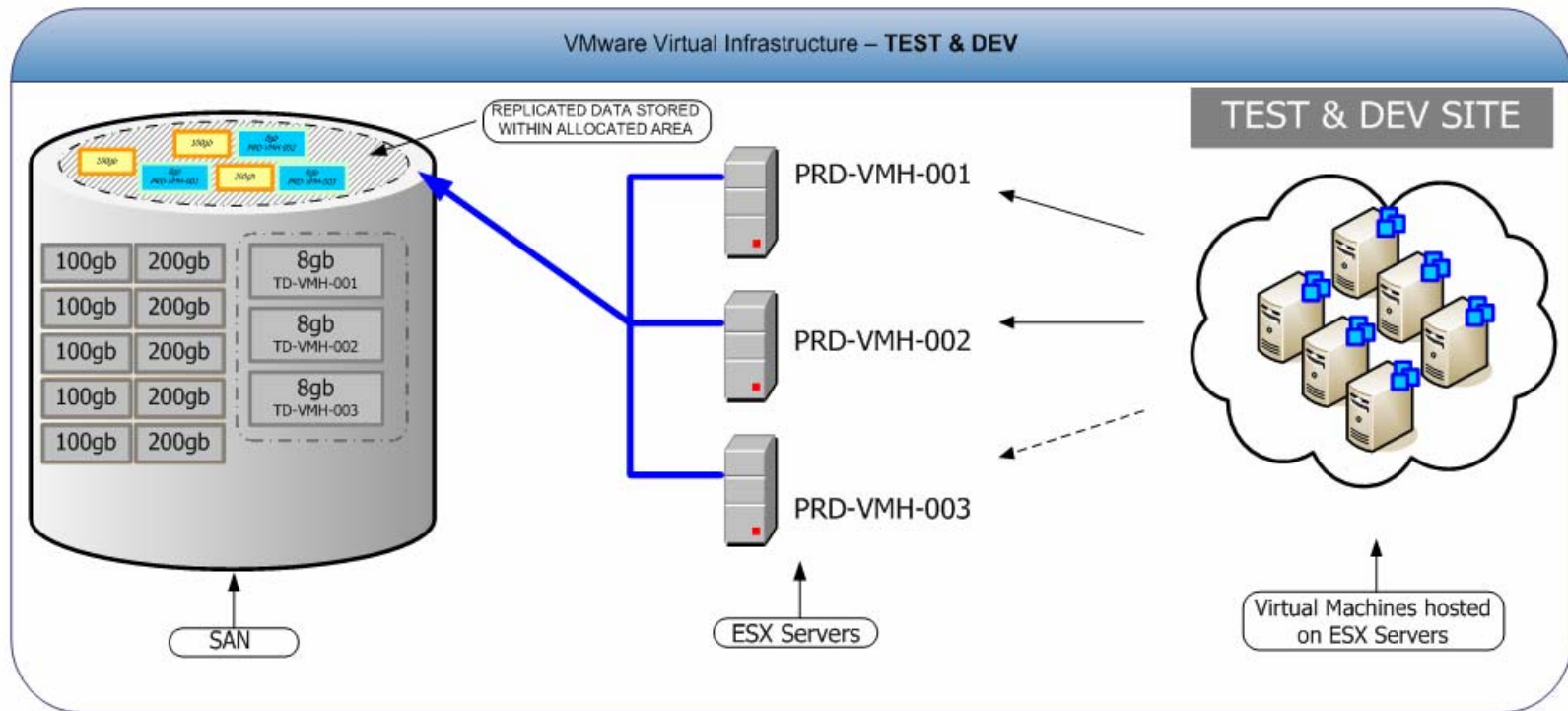
Where Did We Want to Be?

- **Site resilience**
  - > What is the Live site becomes unusable?

Where Did We Want to Be?

- Site resilience
  - > What is the Live site becomes unusable?

VMware Virtual Infrastructure – **TEST & DEV**

REPLICATED DATA STORED WITHIN ALLOCATED AREA

TEST & DEV SITE

100gb	200gb
100gb	200gb
100gb	200gb
100gb	200gb
100gb	200gb

8gb TD-VMH-001
8gb TD-VMH-002
8gb TD-VMH-003

PRD-VMH-001

PRD-VMH-002

PRD-VMH-003

SAN

ESX Servers

Virtual Machines hosted on ESX Servers

How Do We Get There?

- Migrations required
  - 86 for Live, Test & Development environments
    - Physical and Virtual Machines

- Engage with a VAC
  - Resource and experience

- Boundaries
  - Migration quantity and window
  - Testing
  - Communication

How Do We Get There?

- Tools
  - Installed Gigabit network cards
  - Symantec Ghost V8 on a bootable Windows PE CD
  - Microsoft Windows Backup

- Timings
  - Power down , transfer speeds , power up

- Real life examples
  - 1 CPU, Proliant DL360G3 2gb RAM, 29gb data. Total time 3 ¼ hrs
  - 1 CPU, Proliant 1850R, 640mb RAM, 76gb data. Total time 5 ½ hrs
  - 4 CPU, Proliant 6500R, 2gb RAM, 319gb data. Total time 21 ½ hrs

We Got There…

- …and ahead of schedule
  - First migration 6th September and last 12th October
    - …that's 18 nights & 4 Sundays
  - 8 servers had to be moved out of scope
    - Modems or IP address

- **We still migrated 78 servers – that's 3.5 per window!**
  - **…and to 6 ESX hosts!**

- Budget
  - 30% below

- New process
  - Virtual Machine templates
  - Master inventory

…But What Would We Do Next Time?

- Environment review
  - Server role
  - P2V and native

- Migration issues
  - Super fast network cards no good
  - More 'Helper' servers
  - Licensing

- 3rd Party tools

What Do We Have Today?

- How quick can we recover the Virtual Infrastructure?
  - Same site in minutes
  - Across site in minutes

- Licensing wins
  - Websphere
    - 20 Websphere Application Server on one ESX server = 1 License

- How many ESX hosts?
  - 14 x HP DL580G2 ESX 2.5.3 hosts running 211 Virtual Machines

- How much NetApp storage?
  - 1 x FAS 920 & 2 x FAS 3050 clusters for Live
    - Started with 12tb & now have 45tb
  - 1 x FAS 3050 cluster for DR
    - Started with 16tb & now have 34tb

Questions?

- If you'd like to discuss anything further…

  > ✋ come and find me during VMworld

  or

  > ✉ darren.woollard@portman.co.uk

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