practical .NET

Todd Rooke
Director of .NET Technologies
Technology Leadership Group
HP Consulting & Integration

October 7, 2002

agenda

hp customer .NET solutions

hp's internal .NET adoption

key takeaways

hp customer .NET solutions

General Mills

Wiltshire Constabulary

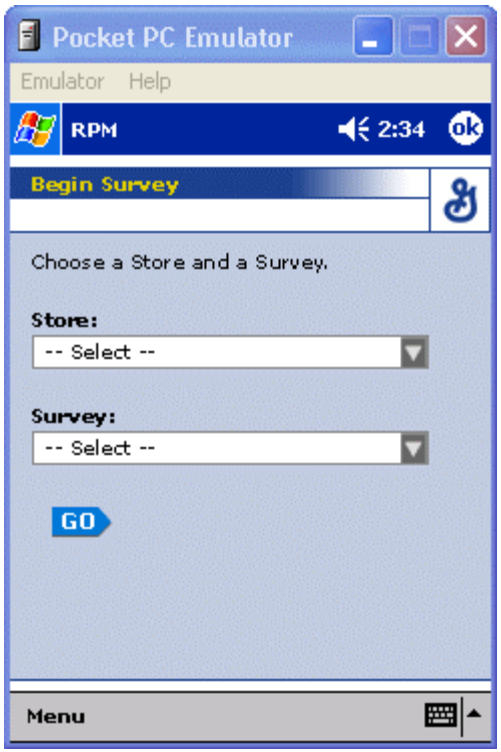
New Zealand Dairy

New York State OMH

Midwest Wireless

Intravex

Fair Isaac



General Mills was seeking to automate a retail planning process from a paper-based process to communicate information in real-time

Hp and Microsoft utilized the HP iPAQ with the .NET Compact Framework to create an application to monitor product placements in retail locations

Client Benefits: General Mills now has real-time access to data that directly affects their revenue

- Wiltshire Constabulary, one of 43 police forces in England and Wales, wanted to reduce the amount of time officers spent at their desks filling out paperwork
- HP and Microsoft utilized .NET to create an application environment that automated numerous manual processes
- *Client Benefits:* Wiltshire Constabulary's paperwork burden was minimized, and each 1% reduction in paperwork requirements frees up 16,000 police hours

New Zealand Dairy
GROUP OF COMPANIES

New Zealand Dairy wanted to monitor location and quality of dairy products through all stages of production for $2b exporter

Real-time information for barcode tracking, wireless LAN architecture, design and implementation in 17 buildings

Client Benefits: Less spoilage, flow efficiencies, efficiency gains more than paid for the solution and wireless conversion of other processes

New York State

Office of Mental Health

A system of mental health care for New Yorkers

James L. Stone, MSW, CSW
Commissioner

- New York State Office of Mental Health wanted to provide current clinical information for mental health field workers
- Equip field clinicians with *iPAQ* Pocket PCs accessing mental health records, medical reference data, mapping directions and office applications, including voice recording
- *Client benefits:* Better medical decisions with private confidential access to patient histories and reference data, and the first production-ready example of wireless technology for behavioral mental health

Midwest Wireless, a regional wireless service provider, wanted to automate a manual phone activation process that led to low levels of customer satisfaction and lost revenue

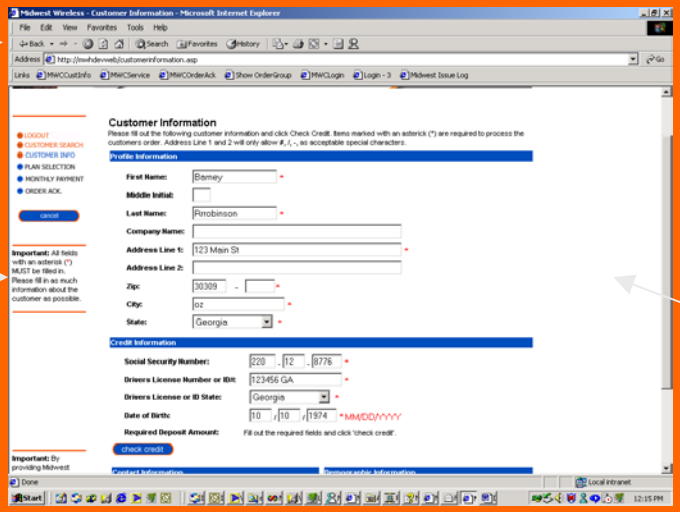
Using the .NET Framework, HP developed a Web-bases solution was developed to automate the numerous manual processes

Client Benefits: The solution enables Midwest Wireless to establish new accounts and activate new phones at the point of sale. In addition, the new system and streamlines processes have resulted in an immediate savings of 20,000 hours of manual entry time in 2002

Retail POS and Consumer Web Services on .NET

Agents

Storefronts



- Sales
- Activation
- Notices
- Receipts

- Billing
- Tax
- Cellular infrastructure

HO Backend Systems

Voicemail Notifications

Intravex is a shipping expense management and aggregation service.

Logistics Web Services on .NET

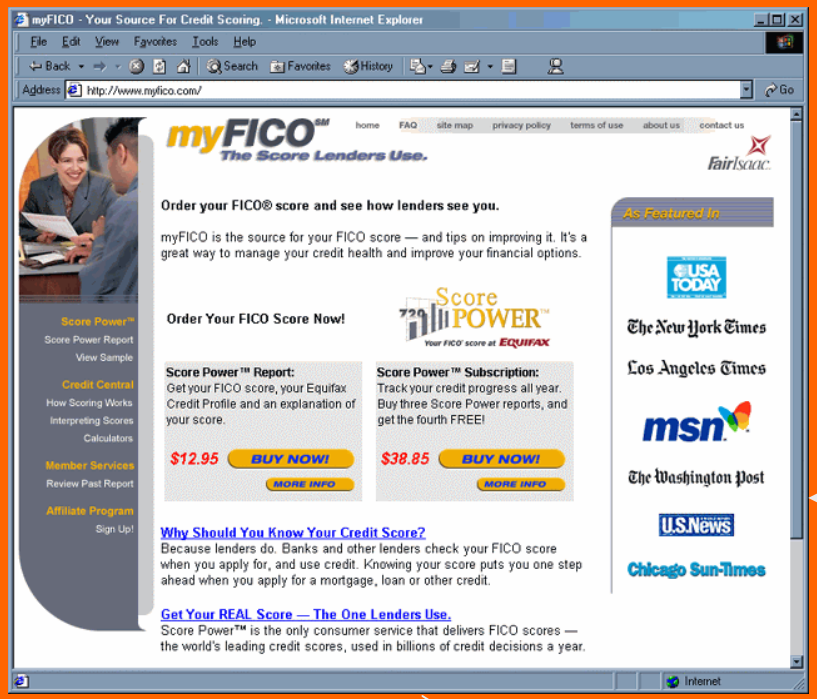
Fair Isaac delivers services like the FICO score to the financial services market

myfico.com Re-launch from Unix/Sun to Microsoft.NET/HP platform

Architecture for dynamic content management

New services capability (what-if, trends, other)

Financial Services .Net Web Service application



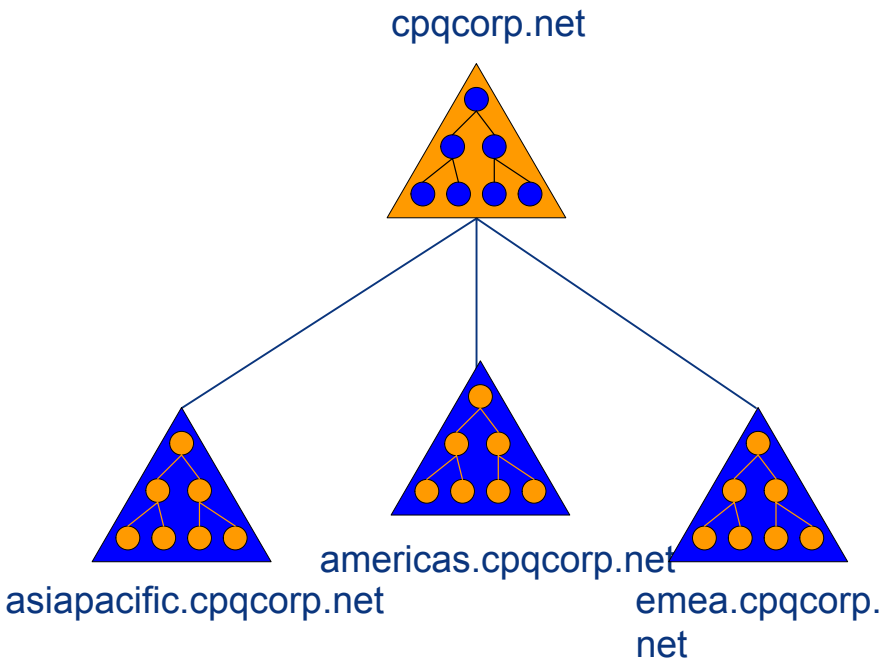
Integration with data provider

EQUIFAX

- 25,000 → 40,000 hits/day
- 3,000 → 7,000 transactions/day

internal .NET adoption

- hp's Windows infrastructure integration and move on to Windows.NET Server
- hp's internet application platform move on to Windows.NET Web Server
- pervasive implementations of both.NET and J2EE web services
- hp's spare parts automated replacement solution



pre-merger domains

Pre-merger HP

- 9 Windows NT4 domains, cross trusted plus 380 resource domains
- geography or site focused

- Pre-merger CPQ
  - Single Windows 2000 Forest
  - One root domain plus 3 geography based domains
  - 142 NT4 resource domains
  - Migration Status
    - User account migration from 13 NT4 domains complete
    - 7 of 13 MUDs retired, 3 planned for 10/30/02
    - 1,558 Resource domains retired, 142 left

directories

- 2 X.500 compliant directories
- Enterprise Directory (ED)
  - IPlanet – (Feeds from HR systems)
- Microsoft Active Directory
  - Core directory for Windows authentication and Exchange 2000
  - DDNS for Windows
- Synchronization jobs keep data up to date on both directories
  - LDSU
    - HP Internal tool to synchronize LDAP accessible directories

active directory

- single forest, 4 domains (root & 3 geography domains)
- 153 global catalog/domain controllers
  - (34 AP, 53 AM, 58 EU, 8 RT)
- 2 Million+ objects
- 93 Replication Sites
- 110+ AD Site Links
- 2000+ subnets
- replication design
- hub and spoke architecture
- 7 core sites (3 US, 2 AP, 2 EU) going to 10 (4 US, 3 AP, 3 EU)

active directory

- Root DCs located at core sites only
- Geography DCs at core sites, serve as primary DNS servers
- GCs located at spoke sites (where single domain controllers are installed) and at major sites based on population requirements
  - GCs are local DNS for spoke sites
- Network bandwidth
  - Core links are 10-40 Mb ATM
  - Links to spokes as low as 256kb satellite

BIND owns the corporate root

BIND used for static namespaces

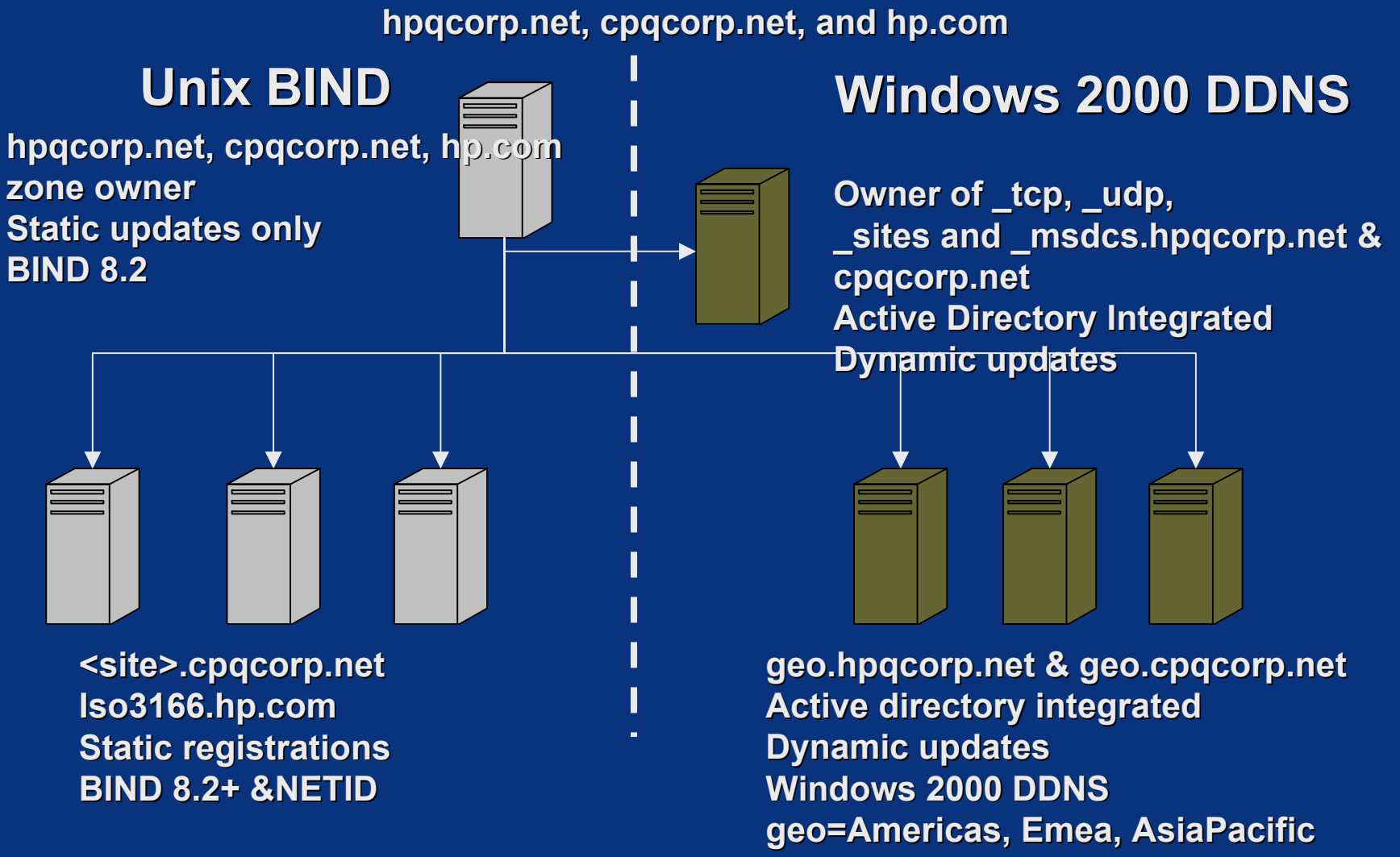
Dynamic zones delegated to AD DDNS for dynamic zones

AD integrated DDNS used for Windows based infrastructure (servers and desktops)

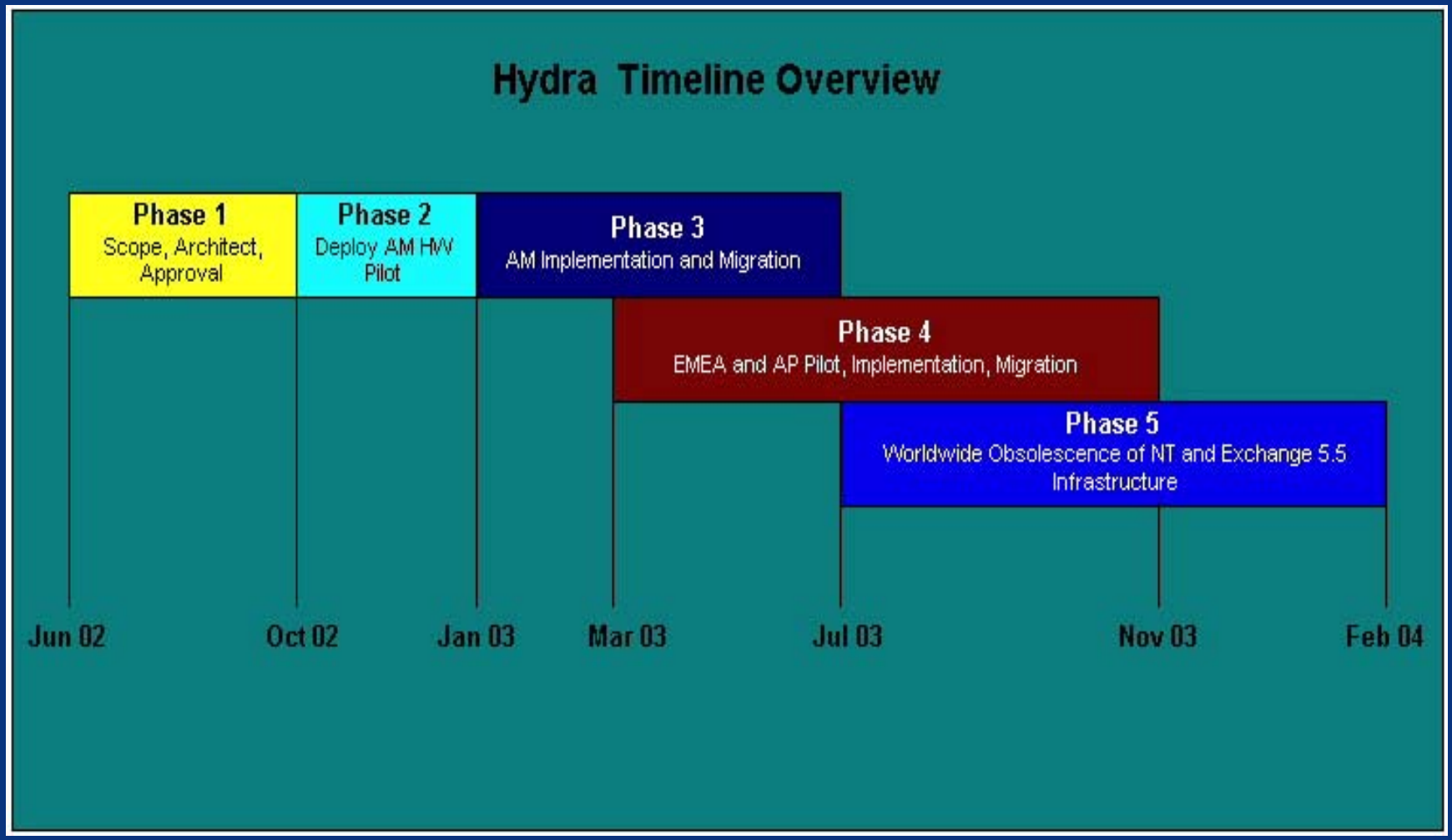
dns

Split DNS between BIND and AD integrated secure DDNS

new hp DNS architecture



Windows.NET Server Rollout Timeline



HP Titanium Plan is to continue to test beta 1 & beta 2 in our simulated production labs.

Starting with RC1, at least two servers will roll into production
and by release timeframe at least 10 will be in production.

The goal is to build as many pmHP migration servers to Titanium as possible to avoid E2K upgrades

Exchange "Titanium" plans

HP internet applications

migration to Windows.NET Web Server (IIS 6.0)

- overview of web environment
- Window.NET Web Server implementation plan
- Windows.NET Server adoption summary

~ 5000 IIS web servers in production

~ 3000 web applications in production

Cisco based load balancing

- local directors
- distributed director (global lb based on DNS)
- content smart switch (layer 7 switch – that manage session/stickiness)

overview of hp's internet application environment

Windows.NET Web Server implementation plan

Today: many servers in the lab

First Production Application: Compaq Services Network
(fulfillment of warranty and parts)

- Initially (1) Windows.NET Web Server will be added to a 14 server Windows 2000 web farm.
- Timeframe is November likely on RC2 if it is ready

Long Term Objective:

consolidation -- move away from dedicated farms per app

spread greater number of applications out across larger farms

- Speed to change
- Performance improvements
  - no global catalog logon
  - create replica from media
  - IIS 6.0 by means of re-architecture
- Manageability
- 64-bit support
- Role based security
- The web server edition is built for security & performance

Windows.NET Server adoption summary

critical success factors for deploying a .NET solution

Think big picture – solutions can be wrapped around the users environment, whether they are mobile or stationary in an office

Legacy apps don't need to be re-written and, unlike previously, leveraging investments can be planned for in a solution

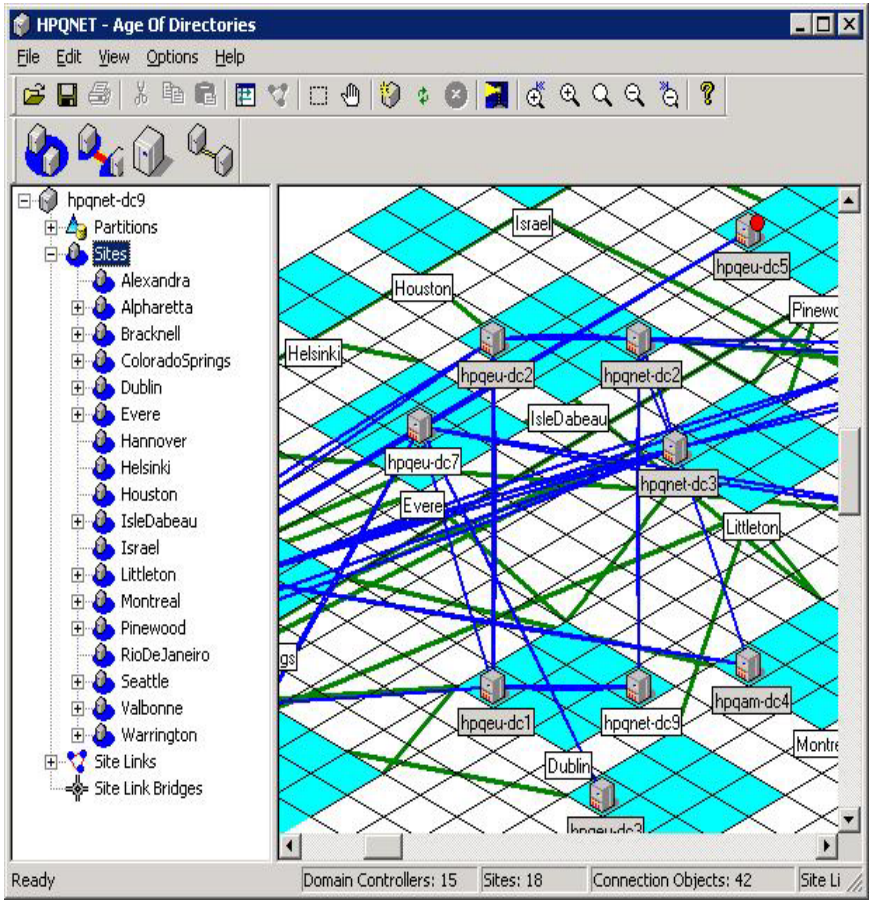
You can't put solutions on foundations that aren't sound, you need to build on stable and scalable infrastructure designed to accommodate more complex solutions

When you do need cross-platform integration, build the foundation on Web services

key takeaways

- .NET is real. Enterprises are using it today to create innovative Web services solutions that deliver tangible and immediate benefits to customers.
- HP and Microsoft are working together to ensure that the .NET rubber meets the road
- Leverage, not re-write your legacy systems


hp
invent



HPQNET

hp age of directories internal apps shown on the left

Overview HPQNET

- Aim of HPQNET is to build world-wide enterprise scale experience and provide a test bed for HP Services consultants on Windows .NET Server
- HPQNET is a brand new fully native Windows .NET environment
- Test new features in Windows .NET 2003 full functionality mode such as domain rename, linked value replication, DCPROMO from media
- Test Exchange Titanium, 64bit Windows. NET server on Itanium, MOM, IIS, and Windows .NET web services.
- Available for use by customers
- Currently 20+ DC's deployed in pm HP/CPQ networks, 100+ target prior to Windows.NET Server launch
- RC1 is what is currently deployed