



Integrating wired and wireless:

business-focused case study
of a major financial institution.

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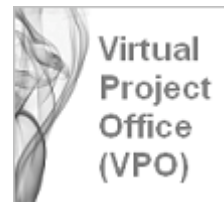
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Case Study overview

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About us

- Founded on key roles in major IP Communications projects cover 10,000+ ends and £30 million.
- We provide, support and implement project management capabilities.



- See more at our website <http://inrich.co.uk>.
- Contact Richard Tucker richard.tucker@inrich.co.uk or 07979 835 027.

Background - business drivers

Approach

- Enable more productive workers by enabling mobility within the office (building of 5,000!) and away from work (hotspots, home).

Options considered

- 3G mobile access.
- WiFi.

Background - business drivers

Challenges

- 500+ desktop applications, 20+ laptop types and unknown demand.

Considerations for your own projects

- Have a business case driven project, not a technology driven project.

Background - security

Approach

- Wireless an un-trusted environment.
- Ability to blacklist wireless networks.
- Prevent simultaneous wired and wireless connections.
- Authenticate the machine, authenticate the user.
- Balance security with business need.

Options considered

- Only allow connections to trusted access points.
- Multiple other security implementations.

Background - security

Challenges

- Achieving a static security policy.
- Leveraging existing assets for solutions (existing machine / user authentication, DHCP/ DNS, ...).

Considerations for your own projects

- Security policy will probably change once business interests are involved.
- Users want the service at home and at hotspots from day one.

Background - solution description

- Cisco WiFi infrastructure (802.11 a/b, g) with voice and data support.
- Any infrastructure at hotspots and home.
- Laptops with Cisco compliant client adaptors.
- Windows XP SP2.
- “Wireless security” software.
- 500+ desktop applications.
- 20+ laptop types up to 3 years old.
- Up to 1,500 users.
- Key site with 5,000 people.
- Hotspot and home WiFi access.
- Single help desk covering 2 outsourced providers.

Background - solution description

Challenges

- Security – balancing policy with user need.
- Hardware and Software integration – will all applications work? IP Telephony?
- End-users – will they use the service?
- Support – Desktop and Wireless supported by different outsource contracts.
- Rollout – Software AND hardware deployment.

Considerations for your own projects

- See next slides as the challenges above covered!

Integration - hardware and software

Approach

- Integrate with existing infrastructure; user and machine authentication solutions, DHCP/ DNS servers
- Use existing desktop firewall solution.
- Remotely deploy new wireless adaptor drivers, authentication software, security agents.
- Provide external WiFi adaptor as appropriate.
- Pilot groups and extensive testing.

Options considered

- Removal of legacy machines.
- Dedicating new infrastructure for authentication.

Integration - hardware and software Challenges

- WiFi coverage (including stairs, lifts).
- WiFi interference.
- Docking stations.
- Desktop firewall.
- Roaming and handoff.
- Applications that you don't know about, especially those with client initiated communications.
- Fault finding relatively complicated.

Integration - hardware and software

Considerations for your own projects

- Pilot groups by business areas and have users complete known sample of tests.
- If you don't have complete set of test hardware (laptops and docking stations) then include all types in pilot.
- You will find applications that you don't know about and this will require desktop firewall attention.
- Expect WiFi interference.
- More complicated solutions and more complicated to fault find and maintain (consider incremental deployment in production).

Integration - end user product

Approach

- Same wireless experience in the office as away from the office.
- Production of user guides.

Options considered

- Different wireless experience in the office as away from the office.

Integration - end user product

Challenges

- Integrating with existing product ranges (broadband remote access, 2G solutions).
- Home access was a key pilot request.

Considerations for your own projects

- Have a product based approach aligned with existing solutions.
- Pilot with **business users** will provide key information.

Integration - support environment

Approach

- Three technology providers! Desktop, Wireless, DHCP/ DNS.
- Requirement for single point of contact.
- Training and support guides.

Options considered

- None!

Integration - support environment

Challenges

- Getting two outsource partners with no direct relationship to pass faults between their service desks.
- Support documentation and training for help desk and L2 support staff.

Considerations for your own projects

- Complete business readiness testing.
- Consider cost of support in business plans.

Rollout

Approach

- Remote software deployment.
- Physical provision of wireless adaptor if applicable.
- Physical installation of access points including pre and post wireless surveys.

Options considered

- Witness all initial laptop deployments.

Rollout

Challenges

- Standard release management considerations.

Considerations for your own projects

- Involving support staff (including outsource provider) in rollout can be valuable.

The result

- Production wireless solution integrated with wired network and operational support environment.
- Solution worked at the office and at hotspots.
- IP Telephony (softphone) performed perfectly.
- Roaming between floors and access points good. No lift access however.
- Low initial take-up from new business users.
- High take-up from existing remote access business users.
- High take-up from IT users.



Further information

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Offer to IP07 delegates

- Free business focussed workshops on deploying Wireless or IP Telephony.
- Give your projects a flying start.