

## Broadband - a business necessity

Broadband has now become the norm. In November 2006, Forfas released its annual broadband benchmarking update, which concluded the following increases in broadband takeup:

### BROADBAND TAKE UP

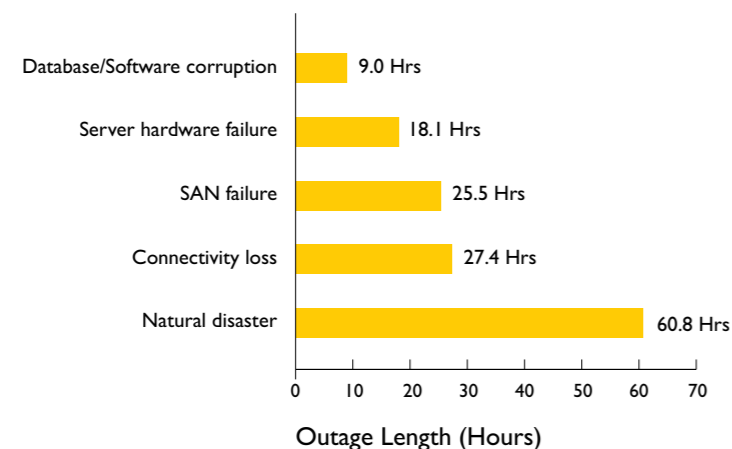
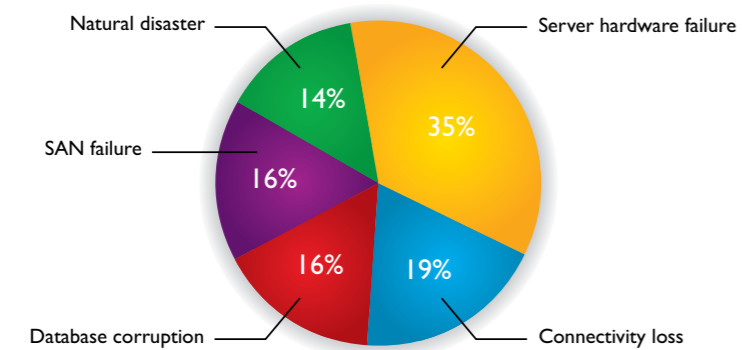
Large corporates	86%
Medium sized businesses	71%
Small sized businesses	57%

## With Broadband come new challenges

As Businesses increasingly operate on a single broadband connection to function in the most efficient and productive manner, the importance of ensuring your Internet Connection is always available has become as important as maintaining your cash flow.

A recent survey\* by IBM in May 2006, revealed that in any given 12-month time period, there is a 75% likelihood of an unplanned e-mail outage for any given company. Of the failures, 19% were due to connectivity losses, each outage averaging 27.4 hours, second only to a Natural Disaster

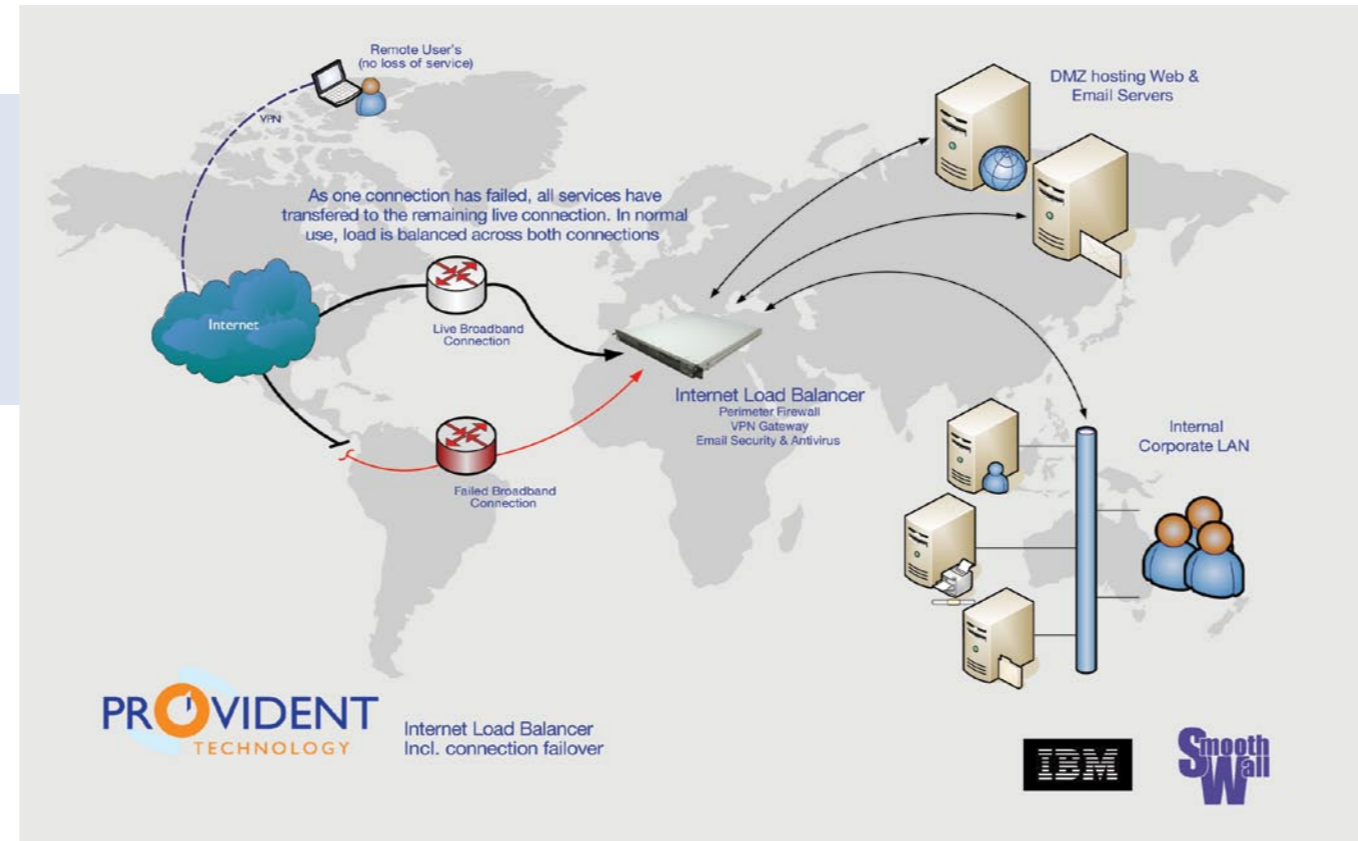
\* IBM Global Technology Services – Why Email Fails: A Survey of Email Outages



A solution with a proven track record ▲

## Provident's high availability internet solution

Provident Technology, a leader in telecoms & ICT solutions, in association with IBM Ireland & SmoothWall Ltd have developed a market leading High Availability Broadband Solution for all sizes of business. Essentially this new product is an Internet load balancing and connection failover solution, and operates as illustrated in the schematic below:



### The benefits to your business

#### Eliminate connectivity losses due to unforeseen failure of service.

With the proliferation of inexpensive Internet provision, most business services have evolved to include some aspect of online services. "Always on" services have encouraged most business's to move their email and extranet onto their own servers taking advantage of collaboration tools previously only available to larger Multinationals and Financial Institutions.

By adding a second alternative broadband connection (ADSL, ADSL2+, SDSL or Wireless) and introducing Provident's new high availability solution, critical services can be maintained even during periods of connectivity losses. This ensures business continuity for,

- Email
- Voice over Internet Protocol (VoIP)
- VPN's
- Internet Access
- Extranets

The solution not only allows for two or more (up to twenty) autonomous internet connections, it also provides Load Balancing and Quality of Service (QoS).

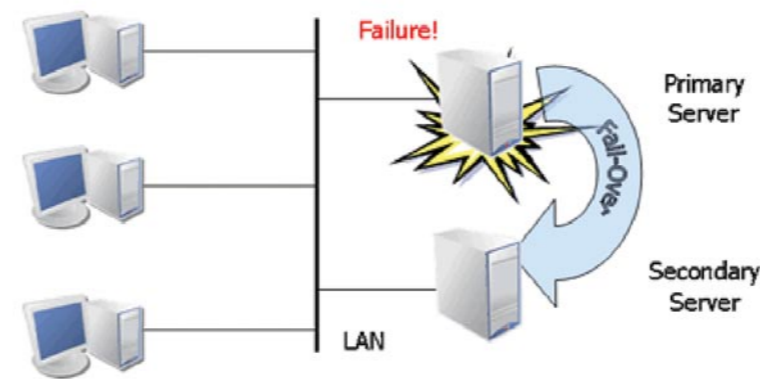
QoS provides the ability to successfully implement a VoIP System as either Managed or Hosted guaranteeing a minimum of bandwidth available for voice at all times. Fallback to POTS Dial-up and ISDN is also supported (to retain ADSL PPPoE IP address for email MX records).

### Get the best value from your internet connections

The solution can enable your organisation to get the best value from your internet connections, ensuring that mission critical and interactive services run smoothly and quickly, yet avoiding the need for wasteful spare capacity that is seldom needed.

### Protect your business against hardware failure

With hardware failure being the clear reason for email outages at 35%, the Internet Load Balancer includes support for hardware failure. Along with failover for the broadband connections, the solution includes Raid 1 (including redundancy in booting), and the ability for a second server to run in parallel, in hot-standby mode.



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## Specifications

- Up to 20 network interfaces for External, Internal, DMZ, VLAN or Wireless
- Load Balancing of External connections with automatic failover
- Perimeter Firewall – high performance firewall and unified threat management solution for enterprise networks
- Internal Firewall – segregation of networks into physically separated zones with user-level access control
- VPN gateway – secure remote access for mobile users, site to site and wireless connections
- Microsoft Active Directory®, LDAP or Novell eDirectory™ user authentication
- Deep packet inspection technology to detect and block P2P network traffic
- Ethernet, DSL (PPPoA, PPPoE and PPTP), ISDN and Modem support
- Routing protocol support (RIP) and VLAN Trunking (802.1Q)
- Support for hardware failover. That is, you can utilise two servers in parallel with one of them acting as a hot-standby.
- Software RAID 1 mirroring, including redundancy in booting.
- Fallback to POTS Dial-up and ISDN Supported (to retain ADSL PPPoE IP address)
- VPNs can be configured on secondary interfaces
- Hosting on secondary connections, including multiple forwards from different interfaces for use in load balancing setups
- Real-time log viewing via Ajax
- Bandwidth Management (QoS) – maximise Internet connection and VoIP performance\*
- Email Protection – anti-virus and anti-spam filtering of inbound and outbound email\*
- Web Proxy Server with add-on Web Content Filter\*
- Email Archiving – Inbound & Outbound email can be recorded so that an archive of all email is kept\*

\* optional extras

### Hardware



eServer x3250, Intel Pentium Dual Core, Minimum of 512Mb, Gbit LAN, 2x Hot Swapable S-ATA, Raid 1, Rack Mountable 1U or Tower

### Software



SmoothWall Advanced Firewall 2 Advanced Firewall is a software appliance firewall and VPN system, complete with integrated security hardened operating system.





Simply Mortgages is a nationally branded mortgage, life & general brokering distribution business. Headquartered in Dublin, they currently have eleven branches around the country and have plans to open more soon.

## BALANCER

### Their set-up

- CRM System hosted in Dublin Office and served to Branches over a Corporate VPN
- Website & Email hosted on Servers in Dublin Head Office
- New Hosted VoIP system implemented in Dublin Office.

### The Problem

- Nationwide availability of Website, Email & CRM system reliant on a single Wireless Broadband connection in the Dublin Office, which was subject to frequent interruption of service.
- VoIP service suffering from Broadband reliability issues resulting in loss of Voice on a weekly basis.

### Our solution

- Provident Internet Load Balancer Installed with two Internet Interfaces. A new SDSL line was commissioned. All Internet, Email and VPN traffic access was balanced across both Internet connections.
- QoS was added, and configured to prioritise Voice traffic above all other traffic to ensure VoIP service be guaranteed.



### Profile: Provident Technology

Provident Technology was established in 2000 as a software consultancy company for telecoms infrastructure system design (V90 56k). Being experts in telecoms design, infrastructure & IP based networking, in late 2001, Provident moved into the IT sector in response to the planned launch of Eircom's i-Stream DSL Broadband product. Being one of a handful of Experts in this technology, Provident quickly adapted to include a range of networking services to meet the need for business in Ireland to adopt this technology.

Since 2001, Provident has built a team of technical experts providing a range of both Telecom's and IT services including Support, Monitoring, Installations and Systems Design. We have also been busy building partnerships with industry leading software and hardware manufacturers so as to provide best of breed solutions to our customers.

We have a large and diverse customer base including both SME's and Corporates. From our base in Dublin, (50 Clontarf Road, Dublin 3) we provide an International service to all of our Customers ensuring their ability to communicate with both voice and data, using technology solutions that are closely aligned to their business requirements.

Our team of technical and business professionals are committed to providing your business with all the options and resources available to empower you to make the best IT decisions for your business model.

### Contact details

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## LOAD

Bank of Scotland (Ireland) is the first completely new high street bank in Ireland for some 150 years. Headquartered in Dublin, they have five regional business banking offices around the country and a growing number of retail branches.

### Their set-up

- Internet Access & Email for 2500 users provided by 2Mb leased line.
- Site to Site VPNs provided by Wireless 4Mb connection.
- One ADSL line lying disconnected as potential backup (reconfiguration of Cisco equipment required to be used.)

### The Problem

- Site to Site VPN's were vulnerable to the loss of service if the Wireless Internet connection was disabled for any reason, thus preventing normal interactions between the Head Office and remote sites.
- Internet Access and Email for all Staff members was reliant on the 2Mb Leased line availability, and was restricted to a Bandwidth of 2Mb.
- ADSL line bandwidth unutilised, and required considerable reconfiguration of existing equipment to enable.

### Our solution

- Provident Internet Load Balancer Installed with three Internet interfaces, allowing all three Internet connections to be connected at all times.
- Internet usage for 2500 users balanced across all three internet connections, utilising all available bandwidth.
- VPN's configured to use more than one interface, thus allowing for redundancy.
- Failover configured to ensure services will work on all three Internet connections to ensure minimal interruption of service in the event of one of the connections failing.

