



**Cost effective resilient networking  
for retail and office applications**

**IP Access**

WLAN

ITC

**VoIP / VoVPN**

IT Security

## The new acronym: Resilient Networking

Any industry that makes widespread use of technology is well known for generating its fair share of “in” words and acronyms. The coming together of the telecomms and datacomms industries – a development better known these days as convergence – has given us yet another term to get to grips with: Resilient Networking.

## Unified Communications

It is taking far longer for users to move towards convergence or unified communications than equipment suppliers initially anticipated. Reasons put forward vary, but most seem to involve a belief that, since it seems impossible for ISPs to guarantee delivery of service, any move towards convergence increases the “inconvenience” caused when the system fails. Losing voice and data communications at the same time can have serious consequences for any business but, for the rapidly growing number of small to medium enterprises (SME’s) who rely on remote locations, tele-workers etc, it can be a real business “stopper”.

Resilient networks are a must for any business with more than one location that relies on high volume voice traffic

and/or large-scale data transfer. Typical organisations can include retail stores with many sites and companies with a headquarters and remote national and international locations.

A resilient virtual private network (VPN) can provide such organisations with a totally reliable converged communications capability along with the significant added benefit of a huge cost saving.

So what is a resilient network? As its name suggests, a resilient network is a guarantee to users that, once installed, their network can operate reliably under any circumstances.

According to Paul Moss, a director with tailored network specialists Activator UK, a resilient network is designed and configured to make sure that no matter what happens connections between locations are not broken. It should be capable of instantly switching from a failed link to a back up without the user knowing, so VoIP calls and data transfer can continue without interruption.

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*bintec R230a: ADSL router with SIP proxy and IPSec*

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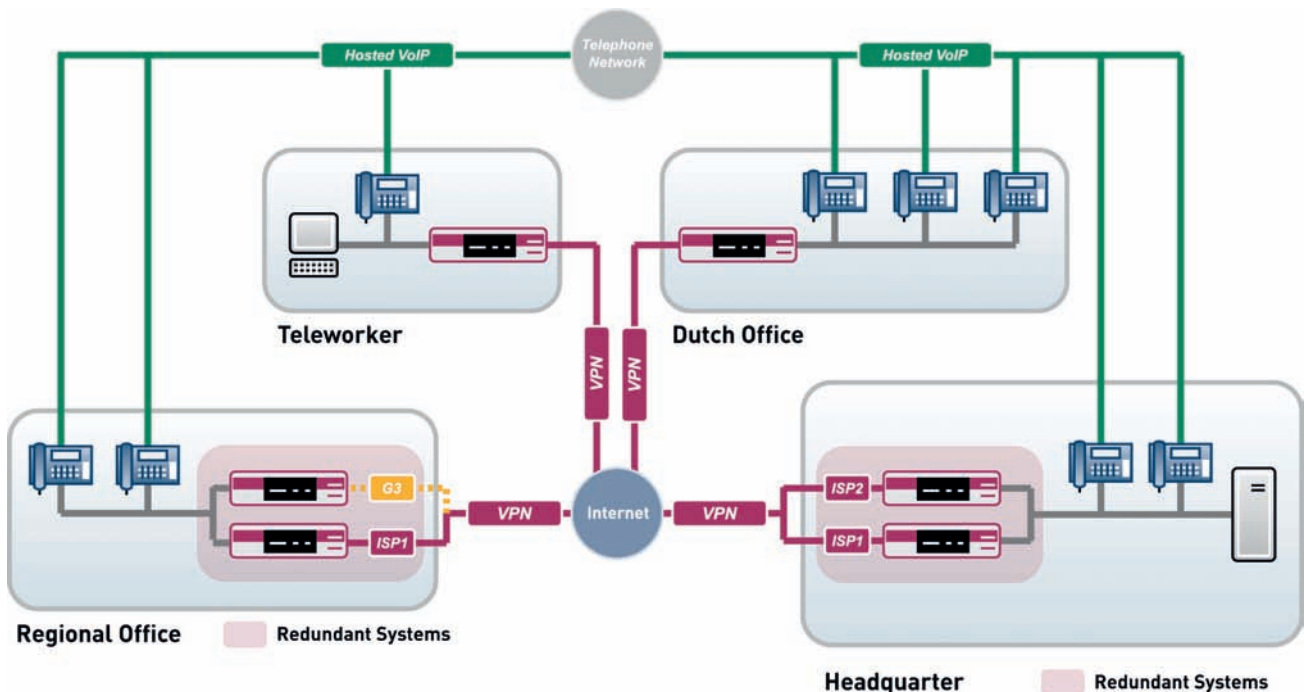
### The own network as an example

Perhaps the best way to illustrate how a resilient network can be configured is to use Activator's own network as an example. Activator has a policy of evaluating new equipment in a real business environment and the way that the company is organised makes it an ideal testing ground for new products.

The illustration describes Activator's network. With its head office in Basingstoke, Activator also has an office in the Netherlands, a regional office in Manchester and several remote locations

from where key staff operate.

The head office has four telephones connected through two Funkwerk R3000 ADSL routers – one on a BT line and the other on a local loop unbundled circuit. This provides Activator with an automatic resilient VPN connection to its remote sites as well as a resilient connection to its hosted VoIP service. The company has no PBX, just IP telephones. Each site connects via the VPN to the head office server. The Manchester office has a resilient connection using ADSL and 3G and also uses VoIP, while the Dutch office uses a Funkwerk R230a to connect for VoIP and data. The remote teleworker offices also use VoIP and connect to Activator's main server via the virtual private network.



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## Cost savings from day one

According to Activator's Paul Moss, there are several key benefits to this type of network in addition to resilience. The Funkwerk routers manage the IP quality of service and allow the company to run voice and data traffic simultaneously. All telephone calls between extensions on all Activator's sites are cost free including those between Holland and the UK. For companies like Activator, this type of network is a very credible and more flexible replacement for very expensive leased lines and will demonstrate significant operational cost savings from day one.

But the key to this network is the paired Funkwerk R3000 routers which completely mask any ADSL failures. Active voice calls are unaffected when the network switches from one service to another and network managers and managed service providers are saved a lot of work when the VPN is automatically switched from one ISP to another.

The R3000 router used by activator is a recent addition to Funkwerk Enterprise Communication's product line up. It is a multi protocol router equipped with an integrated ADSL(2+) modem and supports redundant router protocol which means a pair of units can automatically handle circuit or hardware/power failure. Funkwerk designed the R3000 to accommodate the level of high speed internet access and remote access for use in small to medium sized enterprises or remote offices.

Activator UK specialises in IP connectivity and uses the latest equipment and methodology to provide its growing customer base with a networking solution that matches their precise needs.

Activator can deliver a range of managed services designed to support a customer's VoIP and data connectivity. From simply supplying product to taking total responsibility for the design, implementation and management of a network, Activator UK is recognised as a leader in converged data and voice communications.

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*bintec R3000: Highend ADSL router with IPSec and BRI*

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