

NETWORK

NEXT GENERATION CONNECTIVITY FOR TODAY'S BUSINESSES

 *domicilium*



A MESSAGE FROM OUR FOUNDER

Dear Customer

Domicilium is your one-stop-shop for all your connectivity solutions. From leased line data services, telephone connectivity and internet bandwidth to mpls point-to-point and point-to-multipoint vpns, our next generation network can carry all your voice and data traffic seamlessly, safely and reliably.

Innovation and customer service are at the heart of everything we do, and in this brochure you can learn about the leading-edge technologies we've harnessed to make your life simpler. We'll also make clear our commitment to giving customers 24/7 technical support on demand so that the impact of any disruption is immediately mitigated.

Today's e-business demands total global connectivity without compromise. Talk to us at Domicilium and you'll discover that that's exactly what we deliver.

Phil Adcock
Chief Technical Officer

A WORLD LEADING NETWORK IN A FAST-MOVING WORLD

Domicilium's next generation MPLS network infrastructure interconnects the Isle of Man to major Internet eXchange Points (IXPS) in the United Kingdom in the most diverse and resilient way. Designed from the ground up, this network fully meets the needs of risk-averse organisations requiring stringent service level guarantees.

In overview, our network solutions break down into three key areas:

- Transit bandwidth (IP-based connectivity) purchased by hosting customers in our datacentre or by Isle of Man-based businesses requiring leased lines.
- Point-to-point connectivity between sites, which could involve linking an Isle of Man office to another site in London or Jersey or Hong Kong. Delivery options include Layer 2 (switched Ethernet) services, iPLC and SDH.
- MPLS-based services, which can be point-to-point or multipoint. This allows us to connect multiple international and local sites into a network "cloud" enabling voice and data communication via a private and secure shared network.

Of course, we are happy to provide a mix of the above services where one for all solutions, we offer multiple levels of resilience ranging from cost-effective point-to-point up to multiple redundant paths where failure is never an option.

PUT THE DOMICILIUM CORE NETWORK AT THE CENTRE OF YOUR COMMUNICATIONS

Our resilient, low latency, switched MPLS core network is at the heart of all our communication solutions. As the diagram demonstrates, this network delivers services around the Isle of Man and into the UK.

On-island, our network consists of physically diverse fibre providing a ring between each location, with high capacity licensed point-to-point microwave systems installed in each of the island's POPs to deliver a third egress and ingress option. Our distribution network connects to the core and stretches the delivery of services throughout the island via a combination of wired and wireless technologies.

At the same time, we operate POPs in London Telehouse and Manchester Telecity, which form part of our core network. These locations have been strategically chosen to connect the Domicilium Network directly into the heart of the European communications infrastructure while maintaining physical diversity between cities to counter the possibility of terrorist threats.

Our UK POPs are fed diversely by high capacity submarine fibres supplied by multiple vendors, including 1+1 protected fibres and a Dense Wave Division Multiplexed (DWDM) SDH ring linking the UK and Ireland. For customers requiring the highest levels of resilience, we can deliver two paths across the fibre network, creating three physically diverse paths off the Isle of Man spread across two logical provider networks. Finally, a further independent fibre connects our UK POPs together, so that traffic can still be carried to and from the island during a total outage of a fibre provider's network.

MULTI-PROTOCOL LABEL SWITCHING THE TWENTY-FIRST CENTURY CONVERGED NETWORKING SOLUTION

We offer a variety of “next generation” network services over our physical infrastructure based on MPLS, a packet switched networking technology similar to ATM and FRAME RELAY. This means that unlike traditional leased lines there is no fixed path across the network and during fault conditions the network can adapt and re-route around the problem, as shown below.

MPLS is often referred to as the twenty-first century converged networking solution. This is because it can be deployed across many different types of physical networks, including DSL, leased lines, Ethernet, wireless, ATM and SDH.

As a result, organisations are no longer restricted to fixed bandwidth capacity, for example as a multiple of 2Mbps. In fact, we can provide flexible bandwidth at any level from 64k to over 2000Mbps, including a burst facility for delivering additional capacity at high utilisation periods. Backup connections can also be provided from any location into the MPLS network using similar or different access technologies; for instance, a 100Mbps Ethernet tail for a primary route with a 10Mbps backup leased line.

In summary, unlike traditional legacy communication solutions, our MPLS network delivers ultimate levels of resilience, latency guarantees and full support for quality of service to ensure that we can meet the network performance requirements of any major e-business application.

MESHED NETWORK TOPOLOGY THROUGH DOMICILIUM MPLS

MPLS services can also provide a private point-to-multipoint network topology, as shown above. This allows organisations operating from different locations to maintain a meshed network topology without the high cost of installing direct links between sites. There are a number of benefits to a meshed network topology across an MPLS network, including greater resilience, reduced cost and more efficient use of network bandwidth as traffic travels directly to the destination location.

SETTING THE STANDARD IN SERVICE, SUPPORT & MONITORING

Our low-latency, jitter-stable services are designed to carry time-sensitive traffic including voice and peer-to-peer — and backed by a comprehensive service level agreement. We regard ongoing support, maintenance and monitoring as a critical part of any communications deployment, and our connectivity solutions are implemented by experienced IP engineering teams who will go the extra mile to ensure smooth service provision.

In fact, our Network Operations Team continually monitors all aspects of the network on a 24/7 basis, utilising a private MPLS management network. Every network device is configured to report back to our central authentication and syslog servers, which keep track of all events on the managed equipment, including errors, faults and configuration changes. These events are tracked in real time, and where appropriate engineers' details are logged.

In the event of a fault, customers can contact our engineers 24/7 via our dedicated helpdesk or through an out-of-hours contact procedure — ensuring immediate access to qualified engineers rather than wasted time discussing complex issues with a general call centre. At the same time, we provide an online service portal to enable customers to raise service requests, receive updates and monitor all aspects of the service.

INTERNET SERVICES FOR DEMANDING E-BUSINESS INTERNET SERVICES FOR DEMANDING E-BUSINESS


We deliver internet services across our network via a mixture of public and private peering agreements. These arrangements were established in line with our global peering strategy, which aims to improve the quality of internet communications and IP transit. Direct peering relationships pass traffic directly to the destination provider's network without having to transit through multiple third party networks, thus providing improved latency and stability.

Our private peering relationships deliver direct fibre connections between the Domicilium Network and selected third party networks in our UK POPs, as shown above. Meanwhile, our public peering relationships connect our network to an Internet eXchange Point (IXP). An IXP is a collection of service providers from a particular geographic area that connect to a shared infrastructure and configure peering sessions with each other for the exchange of traffic.

The largest ixp in the world is the London Internet eXchange (LINX), with hundreds of gigabits of data transferred between service providers at peak times of day. Domicilium uses LINX to peer directly with 200 IP service providers and telcos from Europe, Asia and the US, including:

Claranet	Akama Technologies
Energis (Cable & Wireless)	Cache Networks
Hurricane Electric	Interconnect Exchange EU
Microsoft Fujitsu Services	Limelight Networks
Globix Corp	Packet Clearing House
PCCW	Shaw
RIPE NCC Telecity Group	WV Fiber LLC
Telenor Business Solutions	NTL
Telstra Europe	Yahoo!

At present, we are finalising membership of the UK's second major ixp in Manchester (MANAP).



For public IP destinations that are not available through direct peering, IP transit is provided through three tier-1 backbone providers (currently Telia, Above net and MCI WorldCom/Verizon). Each tier-1 provider operates its own international IP network in more than 80 countries and peers directly with all the other tier-1 providers. We connect to each tier-1 provider from Manchester and London, delivering physical diversity and ensuring that during fault conditions our routes to the rest of the internet remain stable.

We have an aggressive global peering strategy aimed at minimising latency and jitter and eliminating packet loss to our customers' key internet target networks. Direct peering is provisioned across 100Mbps Fast Ethernet and 100Mbps Gigabit Ethernet. Due to the growth of some of the larger public internet exchanges, we are planning to upgrade to 10 Gigabit Ethernet.

TOTAL PROTECTION FOR MISSION-CRITICAL DATA

The core of our DDoS protection service is our resilient cleansing network, which provides key analysing and filtering mechanisms. This high capacity sink network is co-located in our UK POPs and is based around Cisco Guard and detection devices (formally Riverhead) that can automatically identify and filter an attack.

Our heavy investment in infrastructure means that we operate as a European tier-1 service provider, peering directly with other tier-1 ISPs for traffic exchange, and enjoying unparalleled access to the capacity levels required to provide the highest level of DDoS protection. The DDoS cleansing network supports up to 4Gbps of tier-1 transit connectivity and is able to defend DDoS attacks of 2Gbps. We interconnect with this network in London and then carry the filtered traffic back to the Isle of Man.

The cleansing network is directly attached to our upstream bandwidth providers, allowing DDoS attack traffic to be taken “off-net” and cleaned. This approach enables us to offer higher levels of DDoS protection on dedicated infrastructure whilst isolating attack traffic from our regular upstream connections — ensuring that a DDoS attack does not impact service for any other customers. Moreover, our DDoS protection service automatically detects a DDoS attack against your site and redirects your traffic through our high capacity cleansing network, discarding the bulk of the malicious traffic and passing the filtered traffic to your website.

JOIN THE NETWORK OF THE FUTURE TODAY

The Domicilium Network will transform the way you do e-business. To learn more about how we can give your organisation the connectivity solutions it needs to stay ahead, please call us today. We're ready to tailor the solution that will give you the edge.

ABOUT US

Domicilium was established in 1991 as one of the first Internet Service Providers in Europe.

Our customers benefit from some of the most skilled and experienced experts available, backed by the highest levels of care and enterprise-class service level agreements.

Our network core extends diversely from our co-location facilities in the Isle of Man into Manchester and the heart of the European communications hub in London Telehouse. As members of the London Internet Exchange (LINX) and Edge-IX in Manchester we deliver optimal performance to you and your customers by peering with all major Tier-1 providers.

If you require a fully managed service or simply wish to leverage the investment in a state of the art infrastructure, Domicilium will prove a valuable partner.

We provide highly resilient and stable services, utilising our wholly owned world class datacentre facilities and network infrastructure.

Our clients benefit from peace of mind but most importantly we are passionate about customer service.

Our track record, product range, technical skills and commitment to service are the reason that our e-business clients choose to transact several billion US Dollars every month from the Domicilium infrastructure.

If uptime and service are a priority to your business then contact Domicilium today.

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