

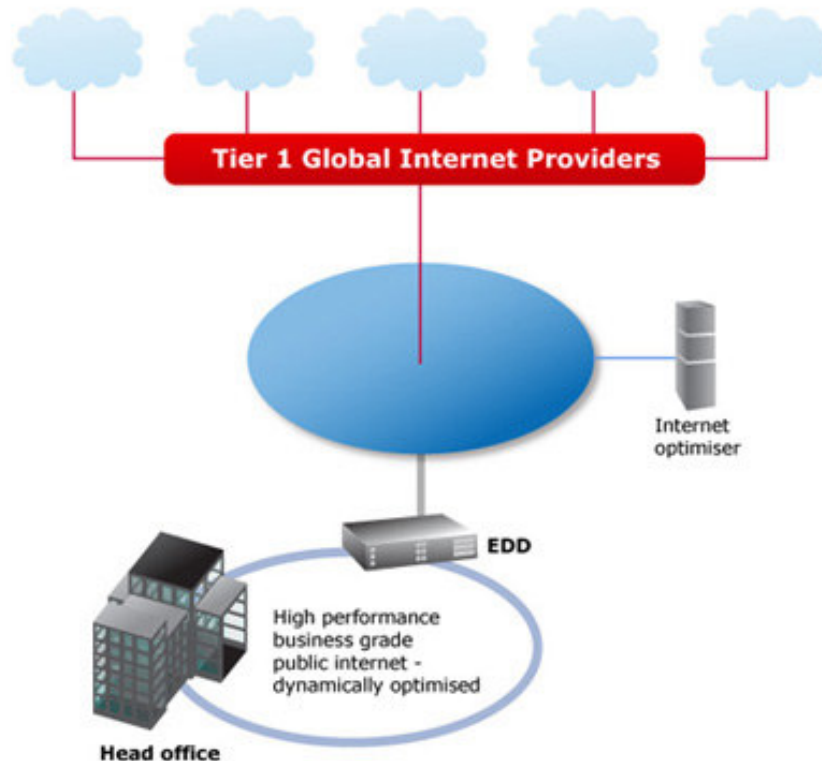


## Carrier-grade Internet service

Our Internet service is a high performance business grade Internet service designed to dynamically optimise your Internet experience every time you connect.

It delivers the high performance needed to support your mission critical business processes and applications, it will outperform a direct connection to a Tier 1 provider, typically reducing the latency by 20% to 50% and reducing packet loss to zero.

For resiliency, our Internet solution uses multiple Internet Tier 1 providers. A Tier 1 provider is a provider with its own global internet route that can provide you with a full internet routing table. Moreover, it has its own peering agreements in place so it can access all the routes available over the internet.



The two main advantages of using multiple Tier 1 providers are that firstly, it means we are not reliant on any single global network, so, in the highly unlikely event that one of our Tier 1 providers fails, we could still maintain an internet service to our customers; and secondly, it vastly increases the number of global routes available for our use – ensuring that we always have the best routes available. All of this means that our customers receive a multi-tiered, resilient and premium performance internet carrier class solution.

Our carrier-grade Internet service provides:-

- Dynamic best-route selection, which typically improves connection speeds by 20-50%
- Fully resilient service enabled by multiple global transit providers
- Low latency; intelligent QoS and SLAs for mission-critical applications
- Full DNS and IP registration and addressing
- Bandwidth on demand allowing you to allocate bandwidth as your needs change
- Resilient failover IP gateway giving 99.9% network uptime, with the option of back-up to offer 99.999%
- 24/7 monitoring and fault management

### **Route 1™ sampling algorithm**

Our Route1 sampling algorithm provides the fastest end-to-end Internet service available at any given time over a consortium of tier 1 Internet partners on a single contract.

Matched with our Route 1 feature, the use of multiple Tier 1 providers ensures the best possible route across the Internet at any second of the day. Our **Route 1™** intelligent IP management functionality monitors real time traffic delivered by our multiple Tier 1 global providers. When your users access the Internet they are automatically sent on the fastest route available, at that moment, for that destination, ensuring you benefit from the fastest connection speeds in the UK (our network boasts a New York to London return time of 67ms).

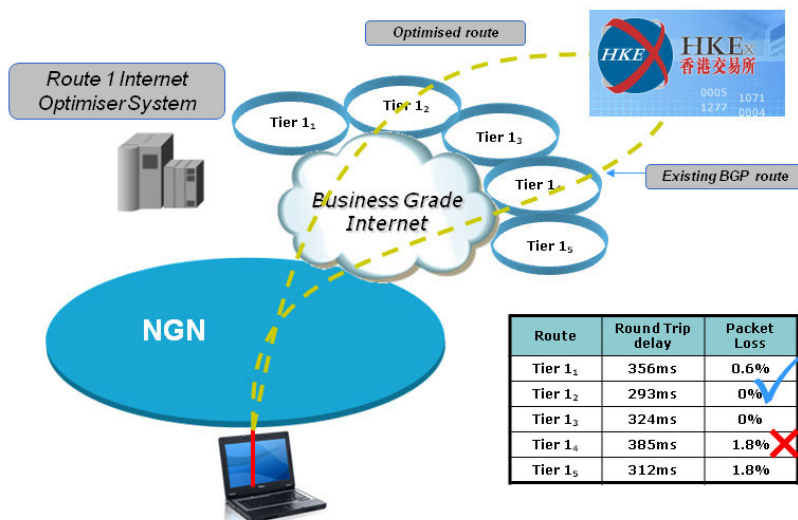
Route 1 operates on top of standard BGP routing and analyses all the packets that flow through the IP gateways, and knows the destinations on the internet that our customers are trying to reach. It performs these tests in real time of the various routes a particular packet could take to get to its destination. These tests are based on response time, hop count and packet loss. Most providers use standard BGP routing alone, which only considers the number of network hops when making routing decisions.

Route 1™ is unique to us.

### **Key benefits**

1. Our Internet service is not reliant on any one provider
2. Guarantees a higher level of Internet performance
3. Reduces connection times by 20-50%
4. Route 1 is a complimentary addition to all of our Internet services

In essence, our Route 1 functionality allows us to be more intelligent in route selection. It enables detection of upstream congestion in a network so that packet loss levels can be brought back to zero. With standard BGP routing alone, this detection is not possible and, therefore, those providers who only use BGP cannot guarantee the same level of Internet performance that we can using Route 1.



When the Route 1 optimiser real-time checks the available routes through each of the multiple Tier 1 providers and analyses the results, the comparison table clearly shows that the performance of the second tier 1 provider is vastly better than that selected by BGP. This is because of the additional criteria (i.e. jitter, packet loss and latency) that Route 1 uses when selecting routes.

In essence, our Route 1 functionality allows us to be more intelligent in route selection as it enables detection of upstream congestion in a network so that packet loss levels can be brought back to zero. With BGP routing alone (which is the standard inter-autonomous routing system) - this detection is not possible and therefore those providers who only use BGP cannot guarantee the same level of internet performance that we can using our Route 1 system.

Needless to say we still use BGP as it is the essential function needed to peer on the internet but we also carry out our own intelligence tests using Route 1 to automatically inject new routes into the IP gateways based on the performance tests it undertakes. In other words, the Route 1 system acts as a peer itself and will advertise the chosen routes to the IP gateways based on its performance tests.

The features and key benefits of our Internet service include:

Features	Benefits
Dynamic best route selection	Reduce latency by 20% to 50%
Multiple Tier 1 Internet providers	Improved Internet performance and reliability
Fixed and on-demand bandwidth	Flex bandwidth as your needs change
Full DNS & IP registration and addressing service	Complete service
Resilient failover IP Gateways	99.999% reliability guarantee
24x7 monitoring & fault management	Fast, effective professional support
Industry leading SLA	Quality and performance guaranteed

The bandwidth can be provided in any quantity to the limit of your chosen connection. It is available as a fixed amount with the option of flexible pay-as-you-go bandwidth on demand to handle your high usage periods.

### **About LinchPin Networks**

LinchPin Networks specialise in the supply of wide area network technology, either complete re-deployment of national or local WAN's, or implementing technology to enhance an existing provision.

Technologies employed include:

- National Ethernet
- MPLS
- SIP Trunking and IP Telephony
- Dark Fibre – local and national
- Licensed Microwave
- Application Acceleration
- Internet Provision

### **LinchPin Networks Ltd**

**[www.linchpinnetworks.co.uk](http://www.linchpinnetworks.co.uk)**

Tel: 01284 830 841

General enquiries: **[info@linchpinnetworks.co.uk](mailto:info@linchpinnetworks.co.uk)**