

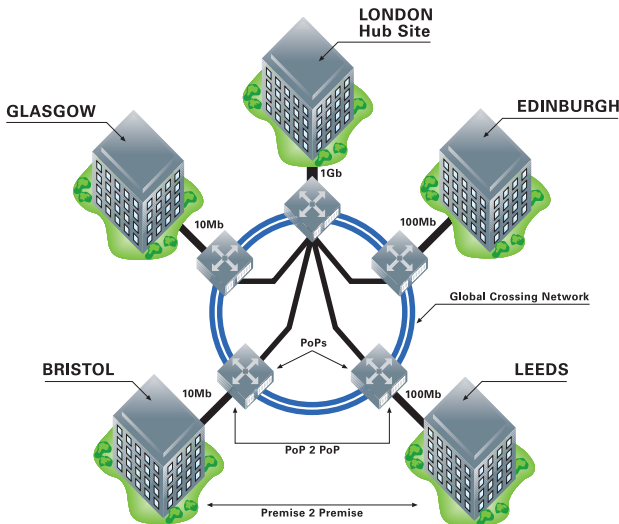
## Global Crossing Ethernet

Ethersphere  
Etherline  
Ethernet/bespoke

# Global Crossing Ethersphere

## What is Global Crossing Ethersphere?

**Global Crossing Ethersphere is a flexible, resilient, cost effective Layer 2 managed Ethernet service providing connectivity between two or more locations from 1Mb to 1 Gigabit. Ethersphere uses Resilient Packet Ring (RPR) technology to deliver Ethernet over MPLS.**



Global Crossing has extensive National and Metropolitan coverage throughout the UK via over 100 Points of Presence (PoPs). You choose 10Mb, 100Mb or Gigabit Ethernet connection from which Global Crossing creates secure Virtual Connections (VC's) to all of your locations. Global Crossing then allocate a Committed Data Rate (CDR) to each VC to meet your specific requirements.

Global Crossing offers competitive Service Level Agreements due to the highly resilient build of our Ethersphere network infrastructure. Should a failure occur RPR offers significant protection through Ring Wrap. Ring Wrap is used in the event of a fibre break or hardware fault - Ethersphere switches automatically wrap the dual counter rotating rings to ensure connectivity is restored (in less than 50ms). In addition to the resilient nature of RPR, low latency is ensured through Spatial Reuse Protocol - the core switches are aware of the destination for all traffic and will always take the most efficient route.

## Service Options

### ↘ Point to Point

A transparent Ethernet connection between any two locations allowing extension of the LAN between sites. This service supports both untagged and tagged VLAN traffic as described in IEEE802.1Q.

### ↘ Point to Multipoint

By nominating a hub site all remote sites connect back using VC's. Global Crossing allocate unique VLAN ID's to each location, which are attached to Ethernet

frames on ingress to the network, these are then stripped on egress ensuring your traffic (and any local VLAN information) is delivered securely across our network.

### ↘ Multipoint

Also known as Virtual Private LAN Service (VPLS), Global Crossing can provide the path to the future of Ethernet connectivity by offering a virtual cloud that contains all of your nominated locations with secure, seamless connectivity. Any to any connectivity is particularly relevant to organisations with multiple data centres serving many geographically distributed sites.

## Security

All customer ports are physically separate. By utilising MPLS in our core network we create Label Switched Paths between our backbone switches. We allocate unique Virtual LAN (VLAN) Identifiers to each location and create unique VC's between each port ensuring data is secure at all times. Ethersphere is a layer 2 service and is incapable of being compromised by potentially insecure layer 3 (Internet) traffic.

## Features

Ethersphere offers significant improvements over legacy WAN solutions.

### ↘ Connectivity

10Mbps, 100Mbps, 1000Mbps interfaces. CDR in highly granular increments.

### ↘ Secure

Ethernet over MPLS with unique VLAN ID verification.

### ↘ Performance Reports

Available online daily, weekly or monthly.

### ↘ Resilient

RPR uses Ring Wrap and steering functionality to offer sub 50ms restoration.

### ↘ Low Latency

RPR uses Spatial Reuse Protocol to route traffic across the shortest path to ensure data is delivered in the shortest timeframe possible.

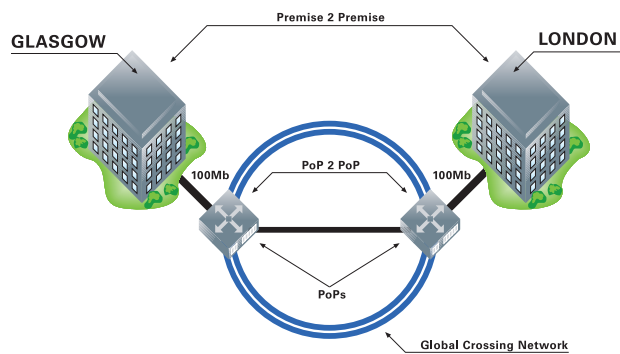
### ↘ Scalable

Bandwidth upgrades in hours rather than days or weeks.

# Global Crossing Etherline

## What is Global Crossing Etherline?

**Global Crossing Etherline is a resilient, cost effective managed service providing flexible connectivity between any two locations using virtually concatenated SDH backbone network capacity (from 4Mbps to 1Gbps) to achieve the desired throughput.**



Global Crossing has extensive National and Metropolitan coverage throughout the UK with over 100 Points of Presence (PoPs). Global Crossing will allocate a Committed Data Rate (CDR) to meet your specific requirements.

Global Crossing offers competitive Service Level Agreements due to the highly resilient build of our SDH network infrastructure. Should a failure occur SDH offers protection options to ensure your traffic will re-route in less than 50ms.

## Service Options

### Point-Point

This is a transparent Ethernet connection between any two locations allowing extension of the LAN between sites. The service supports both untagged and tagged VLAN traffic as described in IEEE802.1Q.

## Security

All customer ports are physically separate. SDH uses separate transmission paths for each individual connection meaning your traffic is kept secure at all times. Etherline is a layer 2 service and is incapable of being compromised by potentially insecure layer 3 (Internet) traffic.

## Features

Etherline offers many benefits and significant improvements over legacy WAN solutions.

### Connectivity

10, 100, 1000Mbps interfaces.

### Secure

Ethernet over SDH with separate transmission paths.

### Resilient

SDH uses protected paths to offer sub 50ms restoration.

### Scalable

Select the Committed Data Rate to meet your requirements 4Mbps - 1Gbps.

# Bespoke Ethernet

## What is Bespoke Ethernet?

**Global Crossing offers completely bespoke solutions tailored to individual customer requirements.**

From a completely discrete private Ethernet WAN using combinations of Ethersphere & Etherline through to Gigabit Ethernet over private fibre and up to entire managed wavelengths across the UK.

Our previous experience has led to award winning network builds for extremely large commercial and service provider organisations. Whether you are looking for a private WAN solution to enable data, voice and video convergence or Storage Area Networking connectivity, Global Crossing has a proven track record in delivering extremely complex bespoke solutions to enable you to concentrate on your core business.

## Service Options

Forget all the rules, Global Crossing can offer you the right solution to meet exact requirements.

Different combinations of Etherline and Ethersphere, Ethernet Bespoke and last mile service delivery options allow even the most exacting of customer requirements to be met. Ask your Global Crossing representative for copies of our Ethernet/bespoke case studies for examples of what can be achieved.

## Features

Bespoke Ethernet offers significant benefits over legacy WAN solutions and predefined product offerings.

### ➤ **Connectivity**

10Mbps - 10 Gbps.

### ➤ **Secure**

Ethernet over SDH, Ethernet over RPR, Ethernet over Optical Wavelengths, Ethernet over Fibre - All are dedicated, discreet networks for only your use.

### ➤ **Flexible**

Global Crossing will work with you to determine your specific requirements.

### ➤ **Resilient**

As a bespoke solution, Global Crossing can build in as much resilience as you require - be it dual building entries, fully diverse PoP's or back-up connectivity for every location.

### ➤ **Scalable**

Global Crossing can ensure that any bespoke solution will meet your needs, both now and in the future.

# At a glance

Feature	Ethersphere Options	Etherline Options
Connectivity Options	10Mbps, 100Mbps, Gigabit	10Mbps, 100Mbps, Gigabit
Committed Data Rates (per Virtual Connection)	10Mbps: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10Mbps 100Mbps: 10, 15, 20, 25, 30, 35, 40, 50, 75, 100Mbps Gigabit: 100 - Gigabit in linear steps	4, 6, 8, 10, 15, 20, 25, 50, 100, 155, 310, 465, 620, 775, 930Mbps, Gigabit
Tail Circuits	10Mbps, 100Mbps, Gigabit	10Mbps, 100Mbps, Gigabit
Interfaces	10/100 - RJ45, Gigabit - Optical (GBIC)	10/100 - RJ45, Gigabit - Optical (GBIC)
Backbone Technology	Layer 2 MPLS over RPR	Layer 2 Ethernet over SDH
Service Availability Target	99.999% PoP-to-PoP 99.95% Premise-to-Premise	99.85% PoP-to-PoP 99.6% Premise-to-Premise
Fault Response Target	4 hours	4 hours
Fault Restoration Target	8 hours	8 hours
Delivery Targets	10 working days PoP-to-PoP 65 working days Premise-to-Premise	10 working days PoP-to-PoP 65 working days Premise-to-Premise
Coverage	National UK including Metro London	National UK including Metro London
Contract Period	1-5 years	1-5 years
Customer Service	Central support and proactive management available 24 x 7 x 365	Central support and proactive management available 24 x 7 x 365

## Benefits of Implementing Ethernet Services

**Flexibility** - Pay for what you need now rather than what you may need in the future, by selecting the CDR that best fits your specific requirements. Upgrade this in hours and then pay for the additional bandwidth as your business needs grow.

**Reduced Downtime** - The beauty of Ethernet is realised when you want to change the CDR between any of your locations - no truck roll is required, no physical changes are needed and therefore downtime during upgrades is practically eliminated.

**Cost Savings** - Ethernet services are more cost effective than legacy WAN services and Ethernet interfaces are extremely low cost (most Routers include them in base configurations now). The ease of managing a transparent Ethernet LAN/WAN improves cost savings through the use of existing LAN management tools and skilled resource.

**Revenue Generation** - With the bottlenecks removed in the WAN, businesses can use the increase in capacity to deliver new or enhanced services that will generate previously unavailable revenues.

**Consolidation** - Servers have traditionally been dispersed throughout the network, due to bottlenecks in the WAN, to provide end users with better response times. To assist with management and maintenance, network managers have had to employ third party providers with costly maintenance and support agreements. By removing the bottleneck, Ethernet changes the rules, allowing consolidation of server resources into centralised locations..

**Business Continuity** - Ethersphere has extremely flexible service delivery options to ensure your locations are always connected - be it dual tail circuits or even using VPLS to add your DR site into the same VLAN as the hub site.

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## Global Crossing Ethernet

Service availability may vary by location. Errors and Omissions excepted. Contents correct at time of press.

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