

# MPLS provides multi-site solution

## Executive Summary

MPLS (Multi Protocol Label Switching) meets the need for a cost-effective solution for voice and data connectivity across multiple sites. Spitfire's MPLS solution offers some significant advantages.

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## Introduction

Many customers want to link multiple sites into a voice and data network without the expense of dedicated leased lines or unreliability of IPsec VPNs. MPLS is a way of achieving multisite connectivity efficiently and with minimal cost. Spitfire MPLS solutions provide cost effective, secure connectivity for a business to connect multiple sites, remote workers and the internet for both voice and data by using MPLS enabled Ethernet or broadband circuits.

MPLS provides a secure low cost voice and data link between multiple sites, making it an ideal solution for multisite businesses, for example branch offices of the same company, where high volumes of data and guaranteed voice service provision are a necessary requirement.

*“Spitfire’s  
approach to  
MPLS is simple”*

Spitfire’s approach to MPLS is simple; our clients receive all of the technical and commercial benefits of the MPLS solution without the large implementation and management related costs. Spitfire MPLS is therefore ideal for any sized business which needs to share data and/or voice connectivity across multiple offices.



MPLS achieves this by adding an extra layer of label information to packets so that packets are recognised by network hardware.

## How it works

Spitfire MPLS allows customers to deploy a private managed network linking multiple sites directly into Spitfire's core network. Spitfire MPLS can be based on a wide range of connectivity circuits, including:

- Fibre Ethernet
- Copper Ethernet
- SDSL M
- VDSL (Fibre Broadband)
- ADSL2+ / ADSL Max

*"All sites are interconnected with no single point of failure ... allowing data to securely route between sites"*

As the circuits connect into Spitfire's central 'cloud', all sites are interconnected with no single point of failure. This makes an MPLS network more flexible and resilient than using the traditional approach of site to site leased lines or IPsec VPNs (Virtual Private Networks) both of which require expensive routers and complex configuration.

Because of the design of a Spitfire MPLS solution, adding a new site into an MPLS network is as simple as just ordering a single circuit at the new address. Spitfire will then connect this new site directly into the MPLS network, allowing data to securely route between all sites without the need to set up more VPNs and firewalls.

## Advantages of Spitfire MPLS

Spitfire MPLS networks offer high security while reducing overall cost of ownership. Standard circuit routers are used on each site, meaning expensive routers and firewalls are not needed, nor is any complicated on site customer configuration and management.

For external Internet connection, an optional hosted firewall service provides a centralised Internet connection, for all sites. The MPLS cloud allows all sites to link to each other in a full mesh, and when linked to the hosted firewall this provides secure external access to the Internet. With a single large gateway to the Internet through a centralised firewall, the cost of Internet bandwidth is reduced while at the same time improving reliability, speed and management control.

What makes  
Spitfire  
MPLS  
different?



Spitfire MPLS is ideal for voice solutions (VoIP) and SIP Trunks. By using voice dedicated circuits or converged voice and data circuits with Quality of Service (QoS) enabled, voice quality can be assured between all MPLS sites. A direct connection between our clients' MPLS networks and the Spitfire SIP trunks ensure end to end voice quality. Spitfire SIP trunks also provide lower cost external calls and free calls between sites, with service level agreements (SLAs) for assured performance levels. An MPLS is easily scalable, flexible providing a secure, resilient multi-site solution.

Spitfire utilises dedicated connections between the client's sites and Spitfire's MPLS core network – these do not touch the public Internet so are not subject to the same quality and security issues that an IPsec VPN solution would have to bear.

*"One-time costs  
are kept to a  
minimum"*

As all circuits terminate on the Spitfire MPLS core we do not incur large charges from other carriers or datacenters. Configuring the circuit as part of an MPLS is also a relatively simple exercise so only a small fee per circuit is charged. All onsite equipment is standard for the circuit type and we make the setup as simple and straightforward as possible so one-time costs are kept to a minimum.

## MPLS Benefits Summary

1. Converged voice and data. Spitfire MPLS networks support a converged voice and data network across multiple sites, improving site to site collaboration and productivity.
2. Cost saving. Compared to dedicated point to point circuits Spitfire's solution typically offers large savings, especially where sites are geographically distant or high bandwidth is required.
3. Flexibility. Unlike a standard IPsec based Virtual Private Network, additional sites can be added to the MPLS very simply by Spitfire. This saves time and cost because an engineer will not need to reconfigure every router to allow the new site to communicate with the existing sites.
4. Negates need for onsite internet access. MPLS provides site to site connectivity without having to access the public internet directly from each site, so improving security and compliance.
5. No expensive routers required. Spitfire managed WAN is set up on Spitfire's core network so simple routers can be used and no on-site VPN expertise is required.
6. Flexible access. Spitfire MPLS is compatible with a wide variety of circuits including Fibre, EFM and GEA Ethernet, SDSL M, Annex M, VDSL & ADSL2+. Each site can therefore use the circuit that suits their needs.
7. Improved business continuity. All sites connect to the MPLS and Internet independently, so none are reliant on the other unlike with traditional point to point circuits. In addition, each site can have multiple connections for resilience, e.g. Ethernet as the primary connection with a free Broadband back-up.
8. Remote VPN support. The solution supports remote access via IPSec VPN. This is useful both for home/remote workers and for allowing access from sites with non-Spitfire circuits e.g. overseas offices.

How do  
I find out  
more or  
receive  
a quote?

If you have any questions regarding this service, would like more information or would like a quotation please contact your IT Support Company or call the Spitfire team on 020 7501 3333. Alternatively, email us at [info@spitfire.co.uk](mailto:info@spitfire.co.uk).

## About the authors:



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He is responsible for the technical implementation and management of Spitfire's requirements as a leading UK ITSP. He is a member of the British Computer Society and the Institution of Engineering and Technology.



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