

ITS SD WAN



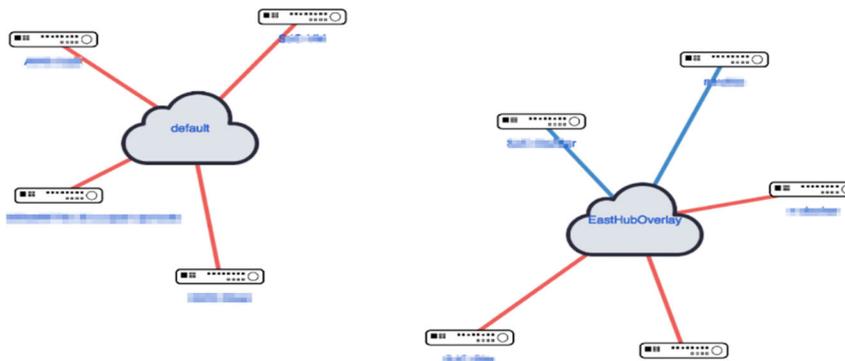
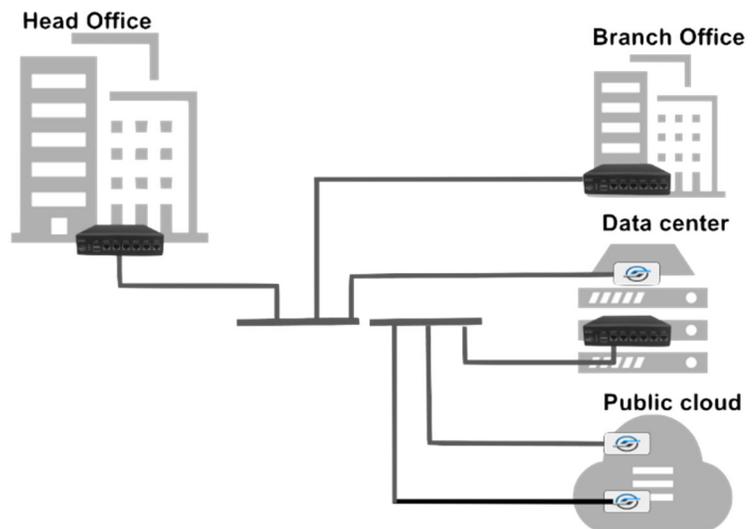
The ITS SD WAN offering powered by Sproute Networks allows you to build a better WAN.

When you want a secure network but have multiple locations with multiple connection types, SD WAN is the solution to your dilemma. By deploying ITS' SD WAN solution you can build a secure private network (VPN) that is carrier agnostic, allowing you to choose the best connection by site regardless of what type of service is installed elsewhere. The ITS SD WAN solution provides the capabilities of a complex mesh network while offering the ability to easily manage the network from one location.

Virtual Private Network

Automatically builds secure tunnels between your sites and cloud locations based on your declaration. Plus, you can choose from a flexible set of options for creating the overlay:

- Full mesh topology where all participating SD WAN routers on an overlay link establish secure tunnels with each other.
- Hub and spoke topology where you can select which SD WAN routers act as hubs. The spokes establish tunnels only with the hubs.
- Multiple overlay links to segment VPN among your sites.



Node Select

Mac: +

OtherOS: +

Edges

Hub

An edge between 2 nodes is created/removed by selecting the 2 nodes in succession

Edges may be created for hub-and-spoke or full-mesh connectivity.

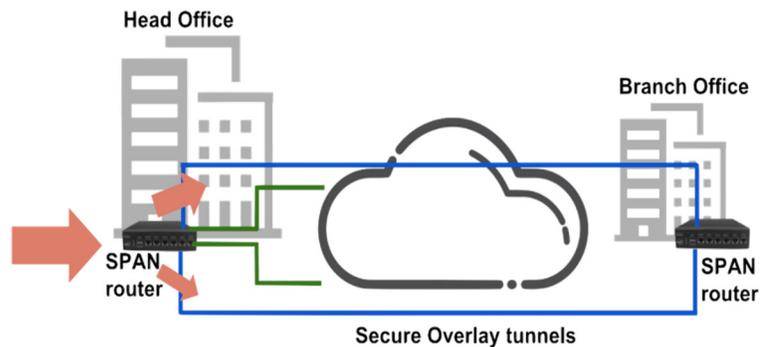
Full-Mesh

Select edge type to be 'non-hub' and create the edge between device and overlay link.

Hub-and-Spoke

Weighted load balancing and failover

The Sproute SPAN routers by default load balance traffic over all the WAN interfaces, thus optimally utilizing the uplink circuits. This mode of operation is called "active -- active". You can optionally configure "active -- backup" option through a policy to allow traffic to use one or more of the uplinks exclusively and keep the rest as backup.

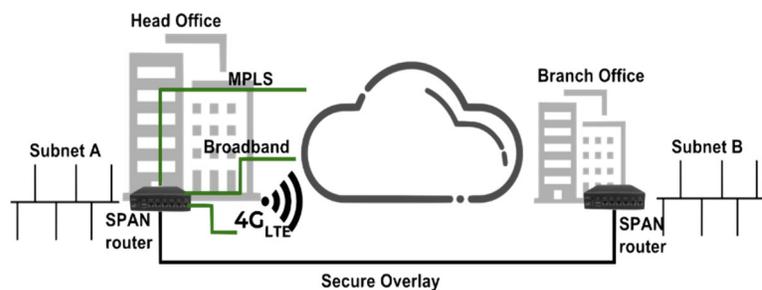


In the default "active -- active" mode, SPAN routers perform weighted load balancing that sprays application flows proportional to the outgoing bandwidth of each circuit.

In both "active -- active" and "active -- backup" modes, when a circuit fails, traffic is automatically switched over to rest of the available circuits.

Hybrid WAN

Hybrid WAN enables per-application traffic steering over two or more uplink connection types. The connection types broadly fall under three categories: (1) MPLS, (2) Broadband, (3) LTE. Each has unique path characteristics. For example, MPLS offers guaranteed SLA, but has high cost and (usually) low bandwidth. Broadband has low cost and high bandwidth, but does not offer any SLA guarantees. An LTE/4G connection is one notch lower in terms of reliability, but is much more flexible, portable, readily available, and works best as a backup circuit.



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To mitigate for no SLA guarantees, SPAN router measures various SLA metrics (e.g. latency, loss, and jitter) in real time over each tunnel. SPAN offers a flexible policy framework to let you select the best end-to-end path for an application.

Networks / Network: default / Template: default

Add Path Selector

Name: Selector Name

Rules

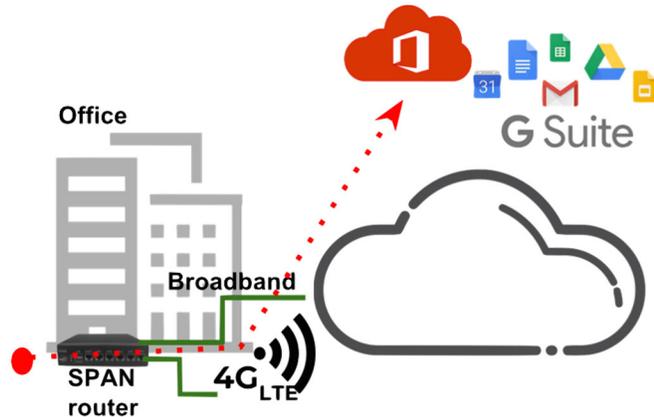
Priority	Interface Type	Remote Interface Type	Max Paths	Delete
1.	1. Latency	2. Loss	3. Jitter	Delete
	0.40 ms	0.01 %	0.10 ms	
2.	1. Latency	2. Loss	3. Jitter	Delete
	0.50 ms	0.10 %	0.10 ms	

Submit

Local Internet breakout

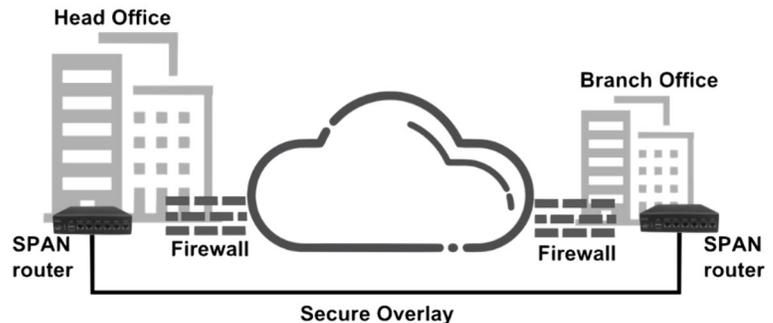
With the increase in traffic patterns to cloud and SaaS applications on Internet, the traditional hub and spoke topologies do not scale. The SPAN router breaks out such traffic locally to the Internet providing maximum flexibility. Some of the salient points are:

- Traffic is load balanced across all connected uplinks, proportional to the available bandwidth.
- You can configure hybrid WAN policies to select one or more WAN interfaces to send traffic on per application.
- By default, SPAN routers perform NAT on all Internet-bound traffic, creating a natural state for firewall to protect the site from Internet.



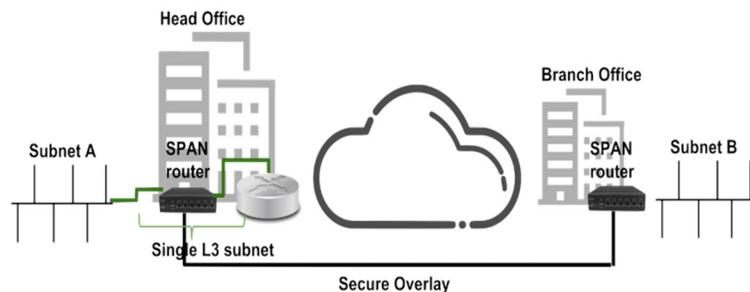
Automatic NAT Traversal

Automatic NAT traversal is the default mechanism that Sproute SPAN routers across sites use to establish secure tunnels with each other. The SPAN router backend running in the cloud acts as a rendezvous for these connections. Using this method, the SPAN routers, sitting behind different private networks that are protected by multiple levels of Firewalls and NAT devices, can punch holes, advertise it to the cloud, and learn other sites' NAT endpoints from the cloud to build secure tunnels to.



Transparent overlay

The transparent overlay functionality allows SPAN routers to be inserted transparently into existing brownfield networks. No configuration change is necessary to provide secure VPN connectivity to other branch sites.



This, for example, allows hosts with static addresses to continue to work as no new subnets are created. The existing edge device continues to provide Internet access, till such point, when it can safely be removed from the network to put SPAN router at the edge.

Routing

You may have multiple subnets at your site. Sproute SPAN automatically distributes the routes to all the devices connected on the network once you configure those on your dashboard.



Features & Benefits

- Content Filtering
- Near real-time traffic analysis
- Automated software updates
- Automatic NAT traversal

The need for remote private connectivity, aka VPN in enterprises and the solutions are as old as the advent of networking, allowing greater flexibility, better economics, and adaptability to the changing workflows. Now because the technology has evolved by leaps and bounds, even small medium businesses can recognize and afford the benefits of a private VPN,

ITS' SD WAN solution powered by Sproute Networks is a new breed of business VPN service built at the cusp of networking fundamentals with modern web technologies.

ITS is an authorized partner of Sproute Networks.



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