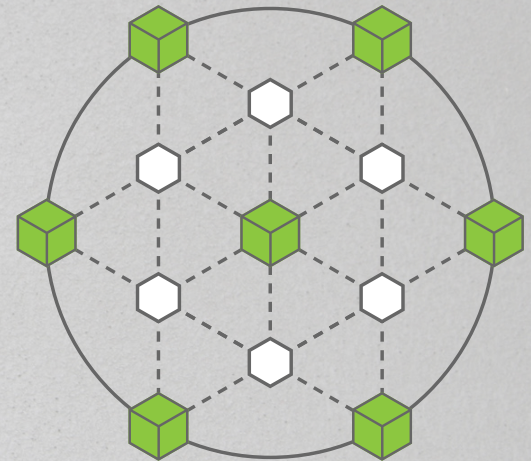


# SD-WAN for Service Providers



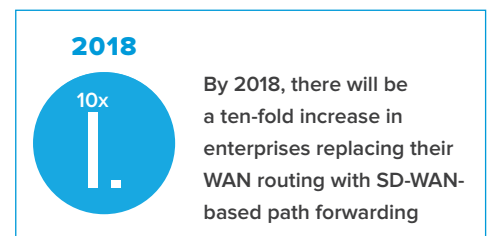
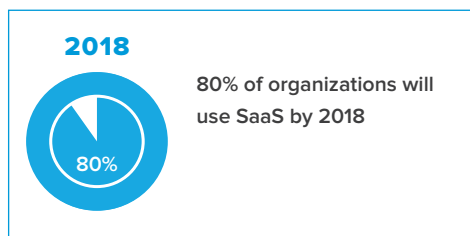
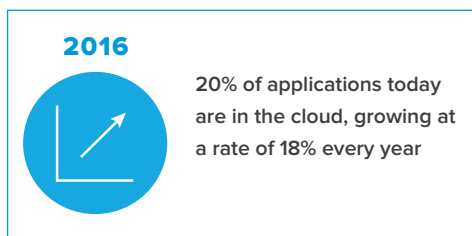
## WAN Market Ripe for the Picking with Meraki SD-WAN

Enterprise WAN connectivity is rapidly undergoing a market-disrupting transformation that represents fresh opportunities for service providers. Cisco Meraki can enable SPs to quickly realize this opportunity:

- Capture market share by launching services ahead of the competition to be established as the 'go-to' service provider for next-gen WAN connectivity
- Minimize churn rates by offering existing WAN customers an increasingly relevant and valuable Meraki-powered SD-WAN service in response to demands for more affordable offerings
- Upsell bandwidth more easily by using the Meraki dashboard to demonstrate that existing bandwidth is fully utilized
- Reduce operating costs and time with the industry's best-in-class cloud management platform -- Meraki

## WAN Market Trends

WAN is crucial to today's increasingly cloud-driven enterprises. The migration to cloud-based applications has meant an increased demand on bandwidth that traditional enterprise WAN solutions, such as MPLS, are struggling to satisfy at an acceptable cost.



### MYTH

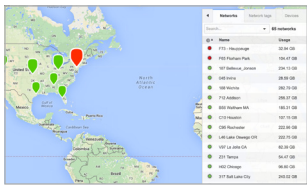
*"Meraki SD-WAN is trying to replace MPLS revenue from service providers..."*

### FACT

As Enterprises increase their use of public cloud services and SaaS applications, they are looking to meet growing WAN traffic volumes with existing WAN budgets while also investing in failover, load balancing, and orchestration technologies. A Hybrid WAN service based on Meraki's SD-WAN technology lets SPs deliver more customer value and address Enterprise pain points while retaining WAN revenue. In fact, offering Hybrid WAN as part of a Meraki "Full Stack" offering allows service providers to deliver more customer value than ever while dramatically increasing Enterprise customer wallet share.

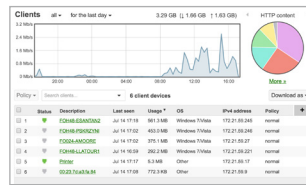
## Cisco Meraki SD-WAN

Software-defined WAN is a new approach to network connectivity that lowers operational costs and improves resource usage for multi-site deployments to use bandwidth more efficiently. This allows service providers to offer their customers the highest possible level of performance for critical applications without sacrificing security or data privacy.



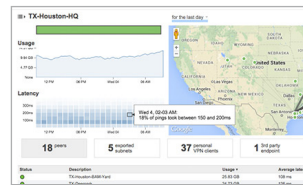
### TRANSPORT INDEPENDENCE

- Apply bandwidth, routing, and security policies across a variety of mediums (MPLS, Internet, or 3G/4G LTE) with a single consistent, intuitive workflow



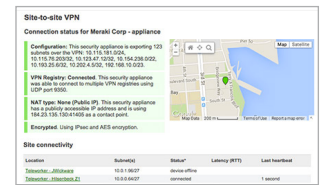
### APPLICATION CONTROL

- Centralized network visibility and control
- QoS and bandwidth management with Meraki traffic shaping



### INTELLIGENT PATH CONTROL

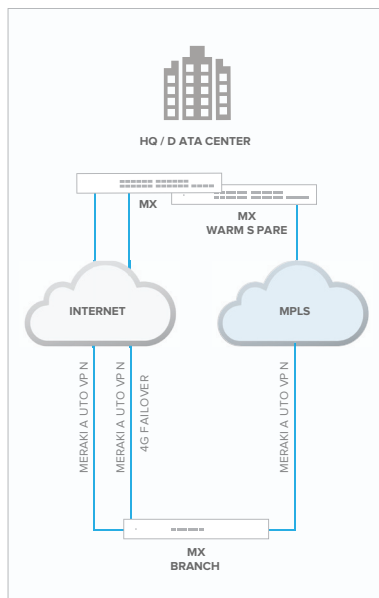
- Dynamic policy and performance based path selection with automatic load balancing for maximum network reliability and performance



### SECURE CONNECTIVITY

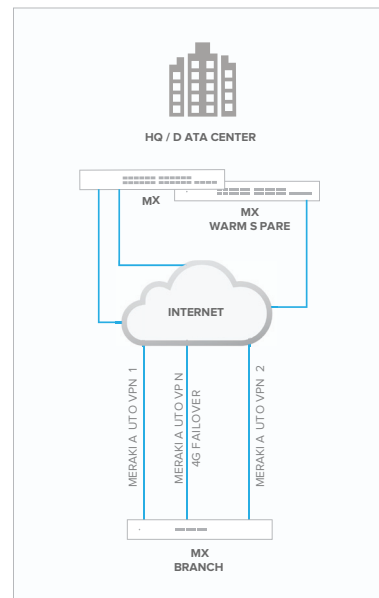
- Integrated Cisco Security threat defense technologies for direct Internet access (DIA) combined with IPsec VPN to ensure secure communication with cloud applications, remote offices, or datacenters

## Flexible Deployment Options



### AUGMENT MPLS



- Supplement an existing MPLS network with broadband for increased bandwidth
- Offload critical traffic from MPLS to broadband with policy based routing dynamic path selection
- Automatic 3G/4G failover offers an extra layer of redundancy



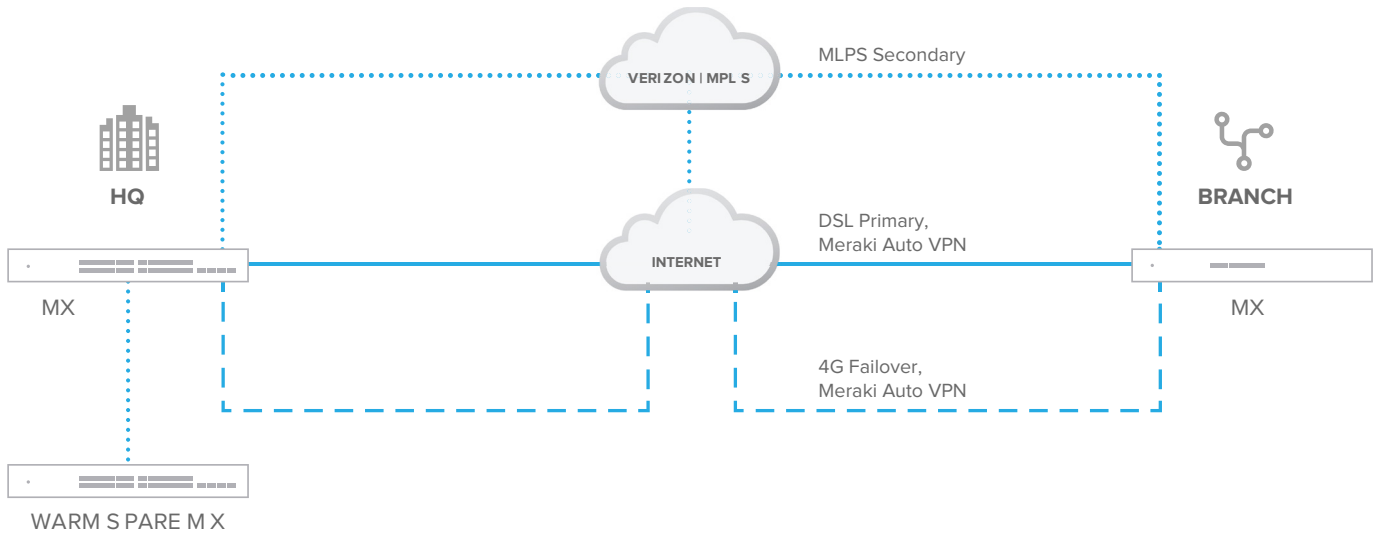
### INTERNET + INTERNET

- Load balance critical traffic based on policy or link performance
- Reduce costs by offering dual high speed broadband connections
- Rapidly detect and mitigate link degradation

## Case Study

 <p><b>SERVICE PROVIDER</b></p> <p>Verizon</p>	 <p><b>END CUSTOMER PROFILE</b></p> <p>Industry - Healthcare</p> <p>Locations -1,100 Branches</p>
<p><b>CHALLENGES</b></p>	
<p>Configuration of complex monitoring tools to determine where to route VPN traffic</p>	<ul style="list-style-type: none"> <li>• Limited visibility into branches</li> <li>• Flapping or deteriorated uplink issues</li> <li>• Poor operational efficiency</li> <li>• High cost of existing solution</li> </ul>
<p><b>RESULTS</b></p>	
<ul style="list-style-type: none"> <li>• On track to deliver deployment of Meraki MX security appliances across all 1,100 branches on schedule</li> <li>• Extended the life of MPLS by augmenting with broadband for primary WAN links at branches</li> </ul>	<ul style="list-style-type: none"> <li>• Intuitive web-based dashboard to increase application and bandwidth visibility at branches</li> <li>• Triple redundancy with SD-WAN flow preferences mitigated issues such as flapping and deteriorated uplinks that plagued previous deployments</li> </ul>
<p><b>WHY CISCO MERAKI</b></p>	
<ul style="list-style-type: none"> <li>• Meraki zero-touch provisioning with Auto VPN allows Verizon to meet the customer's aggressive deployment schedule of months as opposed to years for full roll out across 1,100 locations</li> <li>• Meraki SD-WAN allows Verizon to simply configure dual VPN paths across the customer's 1,100 branches based on traffic protocol, source, destination, or application in the matter of a few mouse clicks</li> <li>• SNMP integration into Verizon's backend systems for monitoring</li> <li>• Pre-built dashboard to provide the customer full branch visibility</li> <li>• Increased visibility via the Meraki dashboard will allow Verizon to quantifiably demonstrate bottlenecks to upsell bandwidth</li> </ul>	<ul style="list-style-type: none"> <li>• Meraki dashboard provides intuitive browser-based visibility into layer 7 application and client usage as well as VPN status at branches</li> <li>• Meraki security appliances provide a robust and reliable unified threat management solution for branches</li> <li>• Meraki provides a cost effective managed enterprise WAN solution with sufficient bandwidth and redundancy to support the increasing usage of cloud apps</li> </ul>

## THE DEPLOYMENT



- MPLS augmentation with broadband and 4G
- 1,100 branches with a primary WAN link via DSL internet connection, secondary MPLS connection, and a cellular failover connection. Terminating the tunnels at headquarters are two Meraki MX600s in warm spare configuration preventing a single point of failure.
- Cloud provisioned Meraki MX security appliances eliminate the need for pre-staging and increased operational efficiency