



Next Generation Cloud Managed Solutions, Simply Managed by Meraki

Ha An Nguyen

Distribution Partners Systems Engineer, Cisco Systems Vietnam

Jeffrey Chua

Consulting Systems Engineer, Cisco Meraki

A New Networking Architecture



Why a Cloud based solution?



Limited IT

Limited IT staff left to manage network

Rarely dedicated network engineers



Low TCO

No requirement for technical resources at branch

True Plug and Play



Distributed Locations

Offices/sites in high-density areas, or remote locations

Hard to get to sites to troubleshoot when there is a problem



Going Digital

API First -> Insights & Troubleshooting

Smart City initiatives on the horizon



One-time remote, web-based network configuration



No pre-staging
No onsite configuration



Unbox and plug in at city locations

Simplifying across IT with Cloud Management



A complete cloud managed IT solution

Wireless, switching, security, SD-WAN, intelligent network insights, endpoint management, and smart cameras

Integrated hardware, software, and cloud services

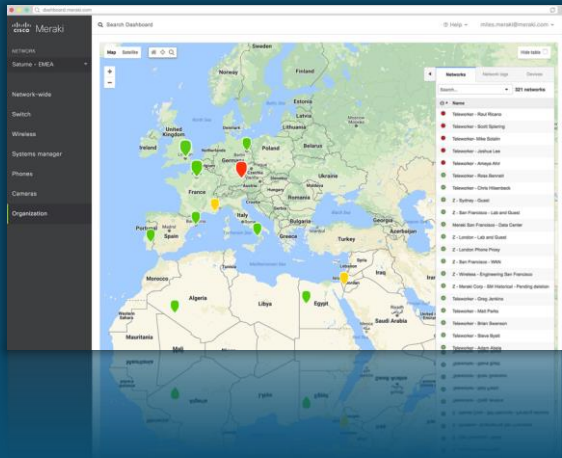
Leader in cloud-managed IT

350k+
Unique customers

5.5M+
Meraki devices
online

14k+
SD-WAN
Customers

The Meraki Full Stack



MR
Access Points



MX
SD-WAN & Security
Appliances



MI
Insight



MS
Ethernet Switches



**Systems
Manager**
Endpoint
Management



MV
Security Cameras

A COMPLETE CLOUD MANAGED IT PORTFOLIO
SINGLE PANE OF GLASS MANAGEMENT

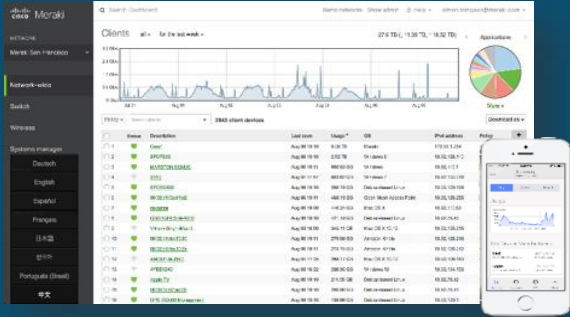
Meraki Guiding Principles

SIMPLICITY FIRST



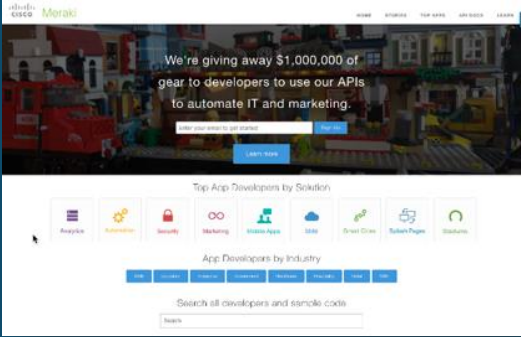
Simplifying powerful technology to free passionate people to focus on their mission

FULL STACK MANAGEMENT



Localization opens new market opportunities

API FIRST



- 2,000 registered developers
- 13M+ API calls/day

Intuitive Cloud Dashboard

Single pane of glass management

Client fingerprints

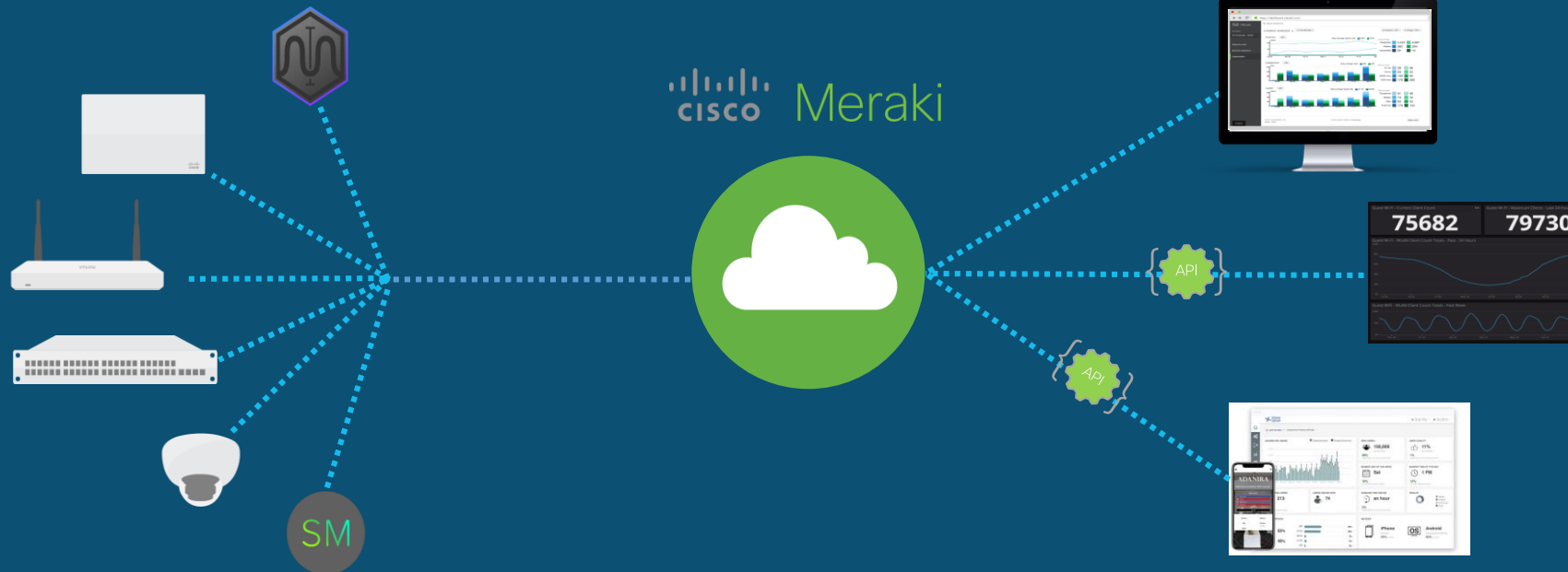
Real-time analytics

The screenshot displays the Cisco Meraki Cloud Dashboard interface. On the left is a navigation sidebar with categories: ORGANIZATION (Cisco Meraki), NETWORK (Meraki Sydney), Network-wide, Security & SD-WAN, Switch, Wireless, Systems Manager, Insight, and Organization. The main content area shows details for a client named 'Pratiks-MacBook-Pro'. The client status is 'associated since Jan 28 11:37'. Other details include SSID (Meraki-Corp), Access point (AP 10), Splash (Systems Manager Sentry splash), Signal (51dB), User (pratik.vyas), Device type (Apple Mac OS X), and Capabilities (802.11ac - 2.4 and 5 GHz). A map shows the client's location near Meraki Sydney. Below the map is a usage graph for the last day, showing a peak of 4.96 GB. A pie chart shows application usage. At the bottom, there are sections for Web App Health (listing Meraki HTTPS, salesforce.com, and Google Drive), Policy (Device policy: normal, Bandwidth: unlimited, etc.), Network (IPV4 address: 10.239.144.215, etc.), and Ping (80 ms).

Client location

Usage Monitoring

Meraki Platform: Dashboard & API Working Together



Automate repetitive tasks

“1 click vs 1328 clicks”

Tailored solutions

“Seamless device onboarding”

Meraki API Services

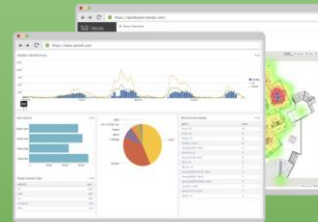
Meraki Platform APIs

Dashboard



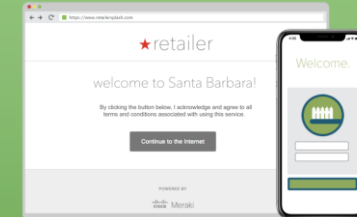
230+ REST endpoints
75,000 active developers

Scanning & Webhook



250M BLE beacons
spotted globally

Captive Portal (EXCAP)



500K+ custom splash
solutions deployed

Dashboard API Use Cases

Dashboard API

Provisioning



Setup 10K networks
across 5 time zones

Configuration Management



Make a configuration
change to 1,100 ports

Monitoring



Connection status of all
2,200 Meraki devices in
Organization

Automation



Apply a group policy
if a device matches
certain criteria

Reporting



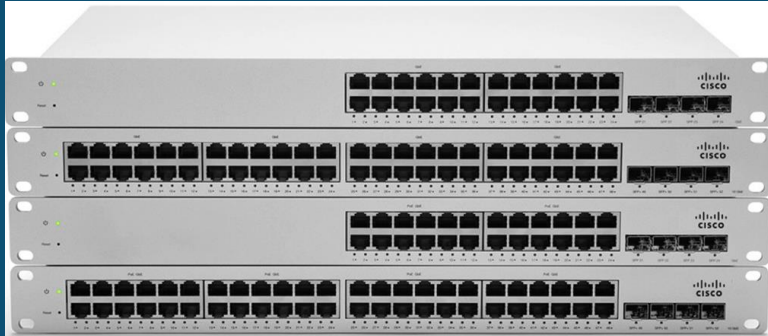
Visualize what % of
clients are on WiFi
vs Wired

Intelligence (IQ)



Processed data
insights that deliver
key new business
insights

Meraki MS - Switches



Feature highlights

Voice and video QoS

Layer 7 app visibility

Virtual and physical stacking

Dynamic routing

Enterprise security

Remote packet capture, cable testing

Topology view

37 models ranging from compact and closet access switches to campus fiber aggregation switches

Introducing cloud managed physical stacking, multigigabit performance, UPoE to the campus network

Network Topology: Live end-to-end network visibility

Dynamic discovery

CDP/LLDP provides end to end discovery including placement of non-Meraki devices.

Intelligent updates

Hands free, live view of current network topology with instant view of online, offline, alerting devices.

Seamless network navigation

See statistics and connectivity information with clickable live links into devices/ports.

Customizable

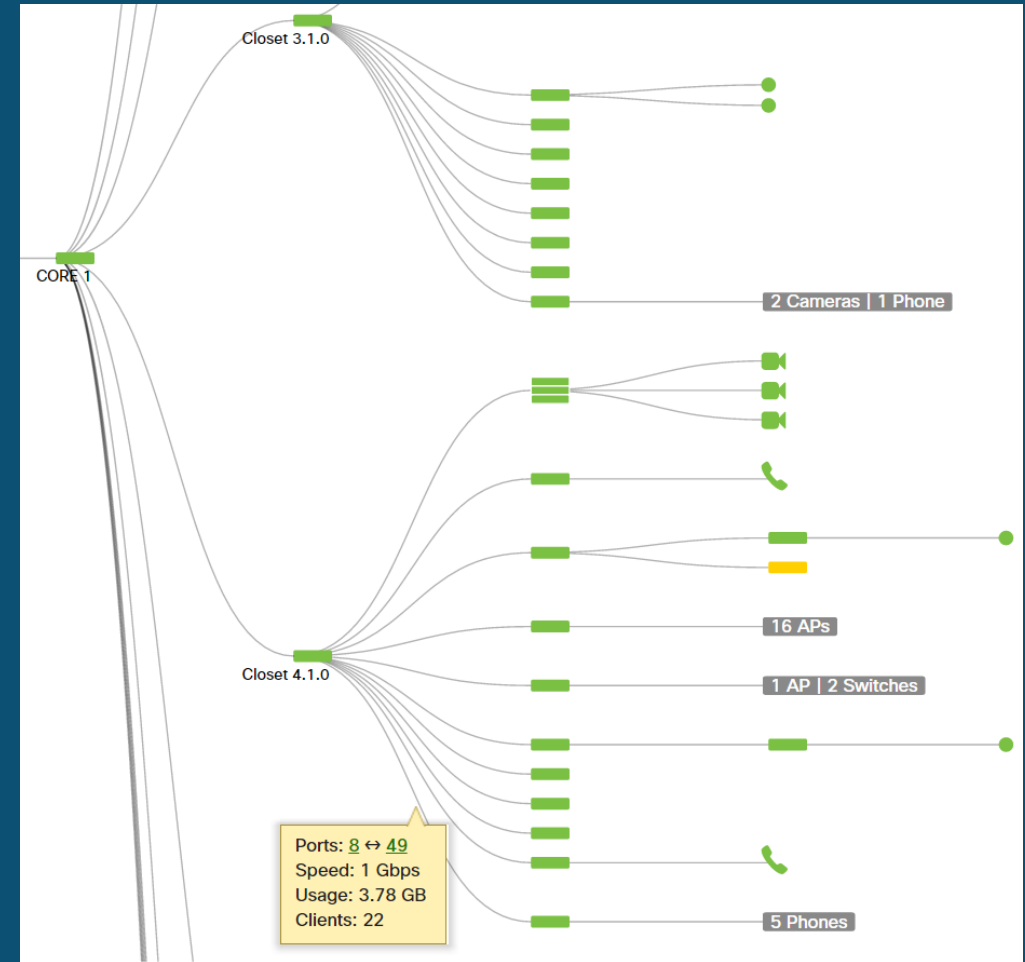
Collapse or expand to any number of levels or specific sections of the graph as needed.

Searchable

Search by name, tag, device type, MAC address.

Exportable

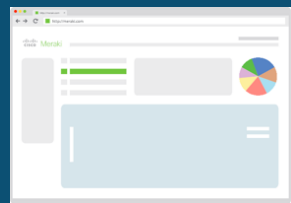
Downloadable as an SVG.



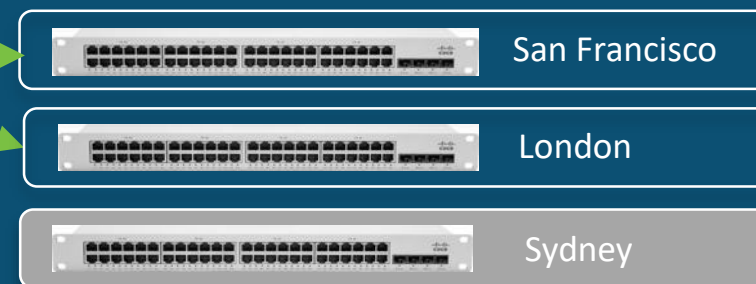
Meraki Stacking: Virtual and Physical

What is Virtual Stacking?

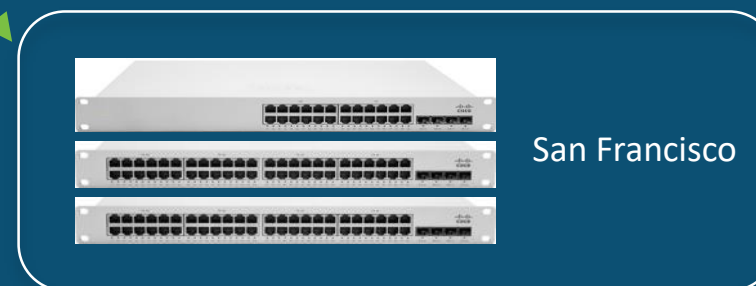
- Make every port on every switch in an entire network part of a single virtual chassis.
- Perform powerful searching, sorting, and bulk changes regardless of switch/location.
- Benefits of virtual stacking apply equally to standalone or physically stacked switches.



Apply an access policy, port schedule and native VLAN on ports 1-10 on 5 out of these 6 switches...



Standalone switches



Physically stacked switches

Step 1: Select ports to edit

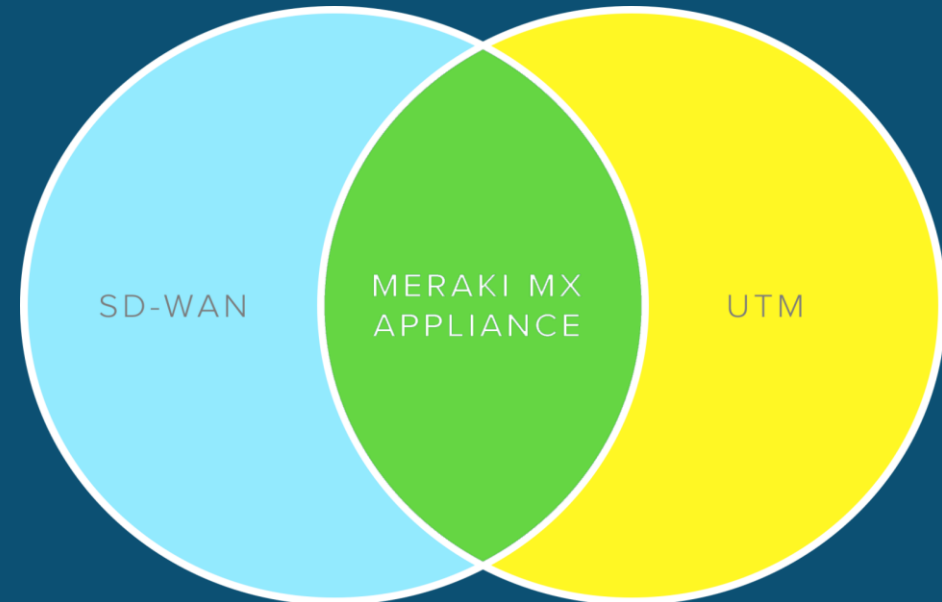
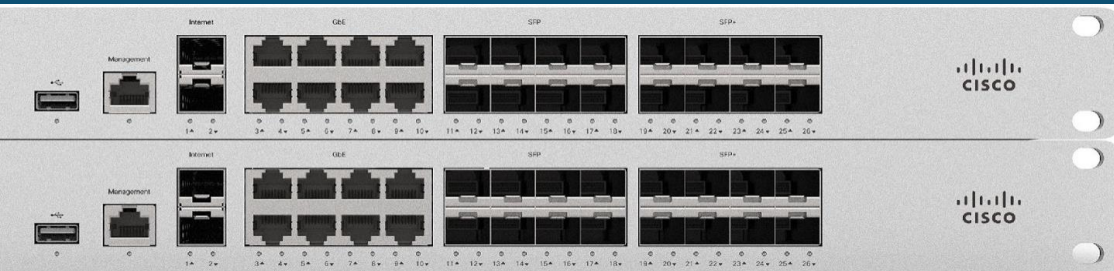
Step 2: Configure multiple ports as desired

Step 3: Save, you're done!

Meraki SD-WAN and Security Appliance

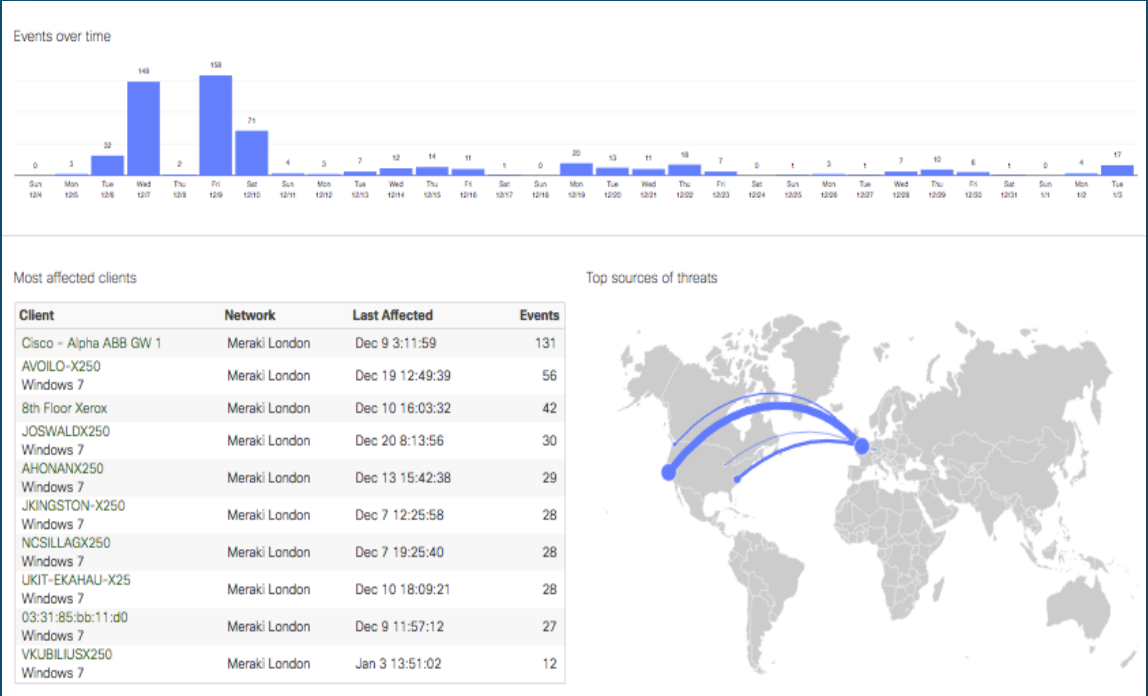
One unified platform

Industry Leading SD-WAN
Meets Industry Leading Security



Built-in Ironclad Security

Next Generation Firewall	Application aware firewalling
Intrusion Prevention (IPS)	Based on Cisco Snort
URL Content Filtering	With over 80 categories and 4 billion categorized URLs
Geo Based Security	Allow or block traffic by country
Malware Protection	Cisco AMP and Threat Grid
Automatic Updates	Software and security updates delivered from the cloud
PCI Compliance	PCI 3.2 certified cloud management backend



SD-WAN enabling the future

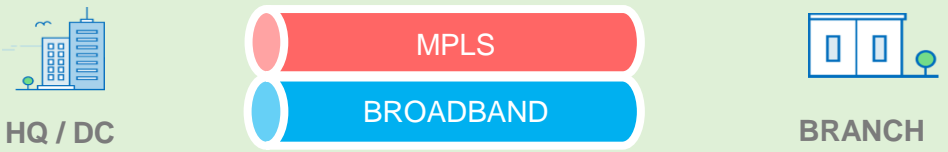
MPLS ONLY

1



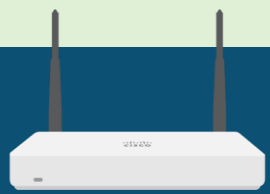
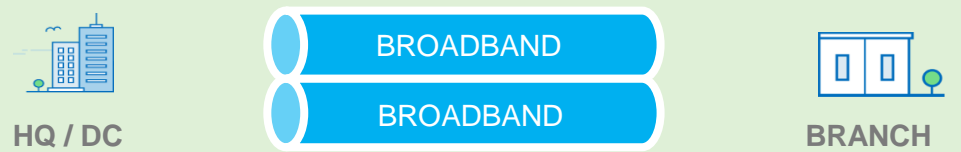
2

AUGMENTED MPLS



3

BROADBAND-BROADBAND



MERAKI SD-WAN

REDUCING COST

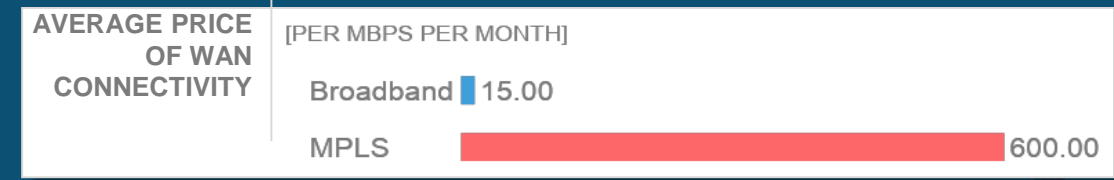
Problem: High cost to expand capacity of existing MPLS network to keep up with bandwidth requirements

Supplement an existing MPLS network with broadband for increased bandwidth

Offload critical traffic from MPLS to broadband with policy based routing, dynamic path selection

Dual high speed broadband connections

Load balance business critical traffic based on policy or link performance



Automated Site-to-Site VPN (Auto VPN)



Simple

The ability to configure site-to-site, Layer 3 IPsec VPN tunnels in just two clicks in the Cisco Meraki dashboard over any WAN link

Automatic

VPN configuration generated and deployed automatically from the cloud – create a mesh or hub-and-spoke topology with only a few clicks

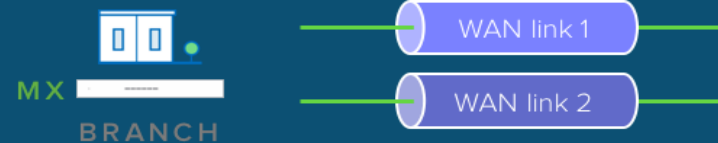
Resilient

Automatically adjusts to changes in order to maintain secure connectivity during an ISP or datacenter outage, hardware failure, or IP address update

Intelligent path control to suit your needs

Dual active VPN

Load balance your VPN traffic over two WAN links



Policy-based Routing (PbR)

Select the preferred path for traffic based on protocol, port, source and destination IP, or even application



Dynamic path selection

Select the best VPN tunnel for traffic automatically based on performance



Auto VPN tunnels

Cisco Umbrella Integration with Meraki MR



Secure WiFi

Define Umbrella policies to protect corporate users, guest wifi and BYOD



Dashboard Linkage

Link Meraki Dashboard directly to the Umbrella account via API



Policy Flexibility

Assign Umbrella policies to Meraki wireless networks, per-SSID or Meraki Group Policy

MR + Umbrella Benefits:

- Per-client filtering using group policies, with reporting.
- No need for an appliance on site.
- Flexibility of filtering users no matter where the AP is deployed.
- All in one cloud experience providing CIPA level filtering / protection

90% of malware leverages DNS as some point in the attack process.

Meraki and Umbrella dashboards can be linked via API keys.

This allows MR wireless clients to have DNS traffic filtered through Umbrella's DNS service.

Umbrella DNS filtering can apply on a per-SSID basis or to wireless clients assigned to network wide group policies.

Simply assign a filtering policy to an SSID or GP, and all DNS requests are redirected to Umbrella and checked against the network device policy in the Umbrella dashboard.



Simplifying powerful technology to free passionate people to focus on their mission.

Work Simple

A network diagram is visible in the top right and bottom left corners of the slide. It consists of several nodes (represented by colored circles) connected by thin white lines. The nodes are arranged in a way that suggests a complex network structure. The colors of the nodes include orange, green, and grey.

Dashboard Demo



Say hello
to the future.

Cisco Connect 2019

Hanoi, Vietnam 4 April 2019

#CiscoConnectHN