



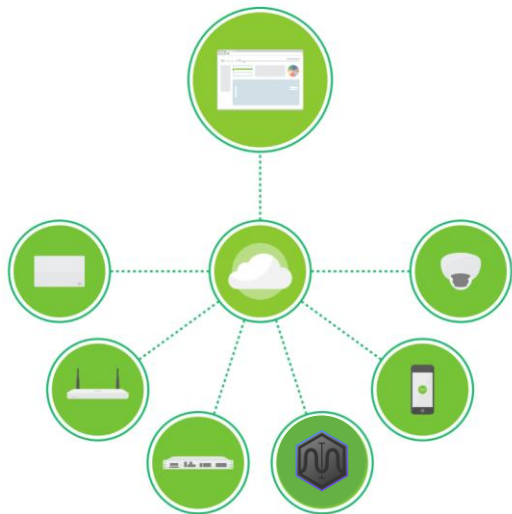
Intent-Based Networking and Network Intelligence





Meraki Overview

Who We Are and What We Do



NETWORKING IS COMPLICATED.
WE'RE MAKING IT EASIER, FASTER, AND SMARTER.

Our products are used in over **1.6M**
networks worldwide; you'll find them in classrooms, coffee shops,
hospitals, and hotel rooms. Better networking means that businesses
run more smoothly, and more people have reliable access to the
information they need.

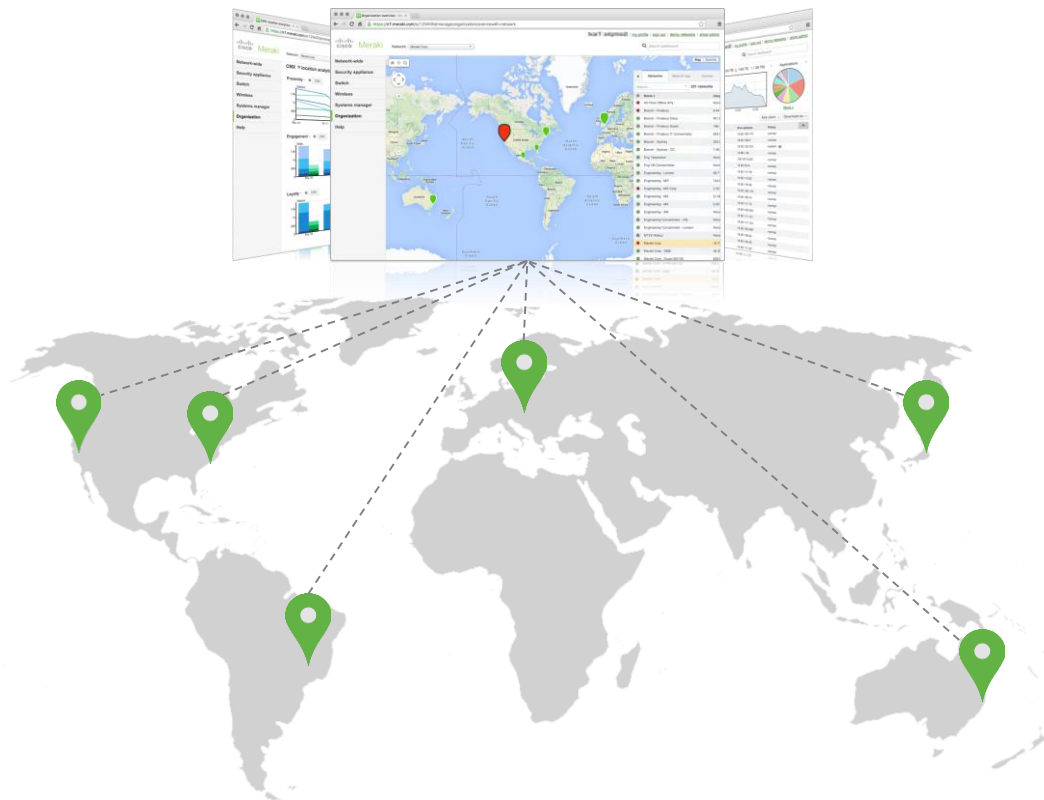
A complete, powerful, and intuitive cloud-managed IT solution.

With the Meraki full stack you can...

Deploy and grow networks at branch locations or large campuses **easily and rapidly**

Manage and monitor those networks with robust analytics from a **single pane of glass**

Reduce administrative overhead with **simple all-inclusive licensing** models and tools



Vision today: Cloud-managed IT



CASE STUDY: The Field Museum

Security & SD-WAN Landscape

Cloud-managed Applications on the Rise



AVG. NUMBER OF SaaS APPS PER ORGANIZATION



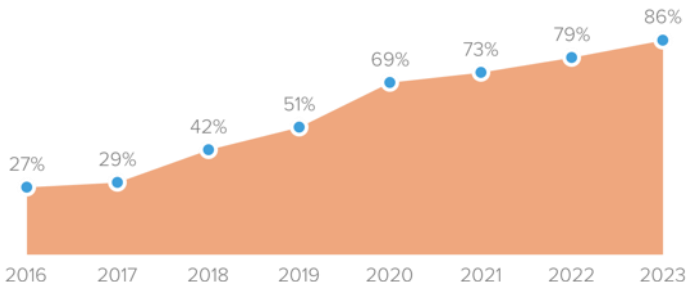
[Source: BetterCloud 2017 State of the SaaS-Powered Workplace]

SaaS SPENDING FORECAST, 2016 – 2020

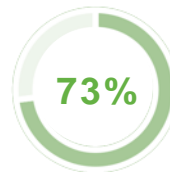
95% INCREASE Global SaaS spending is forecast to increase by over 95% to **\$75.7B**

[Source: Gartner, 2017]

PERCENTAGE OF ENTERPRISES ESTIMATING WHEN 80% OF THEIR BUSINESS APPS WILL BE SaaS

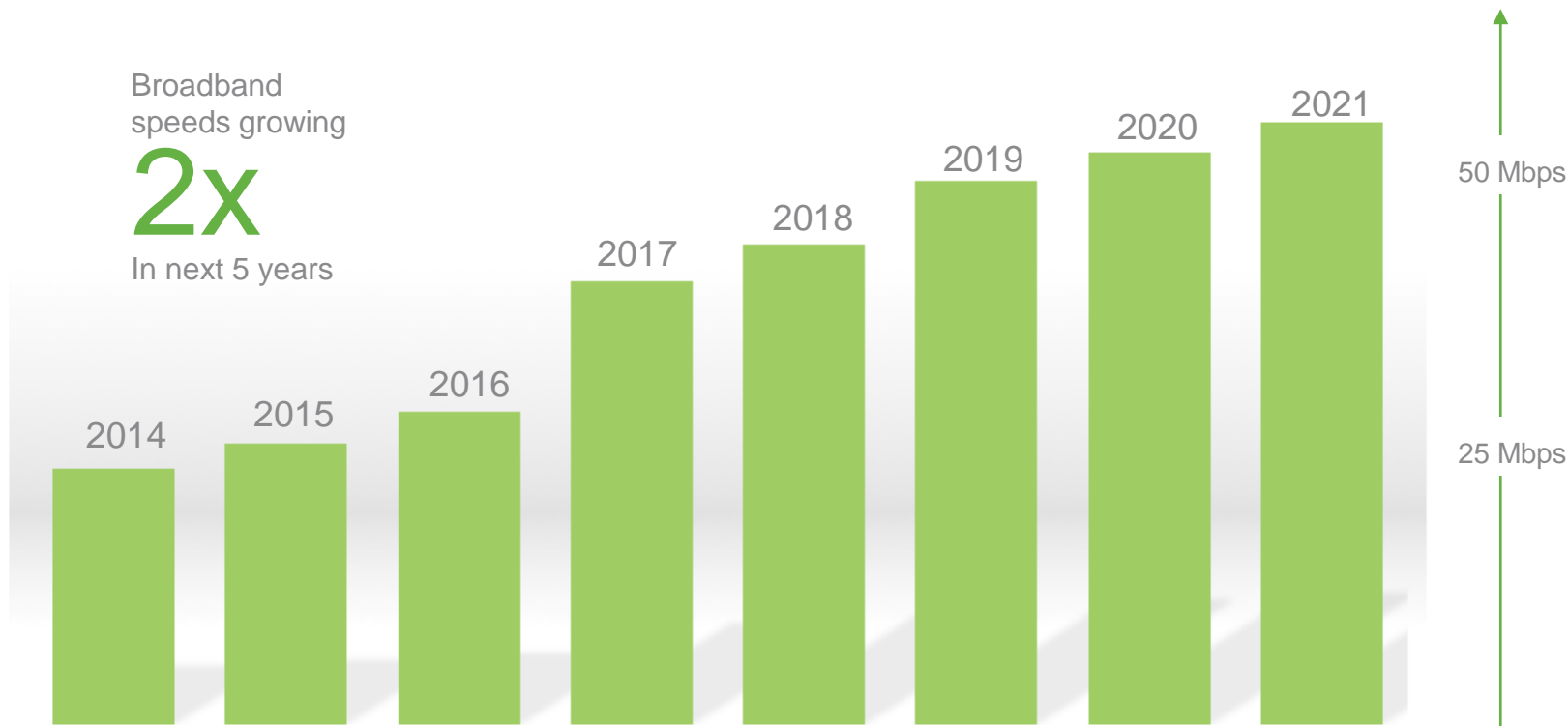


[Source: BetterCloud 2017 State of the SaaS-Powered Workplace]



Percentage of enterprises (1,000+ employees) estimating the majority of their apps will be SaaS by 2021

The Branch is Becoming Faster



[Source: Cisco. The Zettabyte Era: Trends and Analysis, July 2017]

LTE is Widespread and Reliable

57%

CAGR for
LTE through
2019

UP TO
20x

lower cost of LTE vs
MPLS, with comparable
reliability

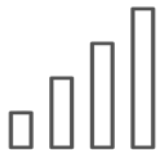
82%

of businesses with multiple
remote sites use LTE

\$300,000/hr

of downtime cost mitigated
with LTE as failover for
medium-sized businesses

Increased Branch WAN Uplink Options



LTE as the
single-uplink



Broadband + Broadband



MPLS

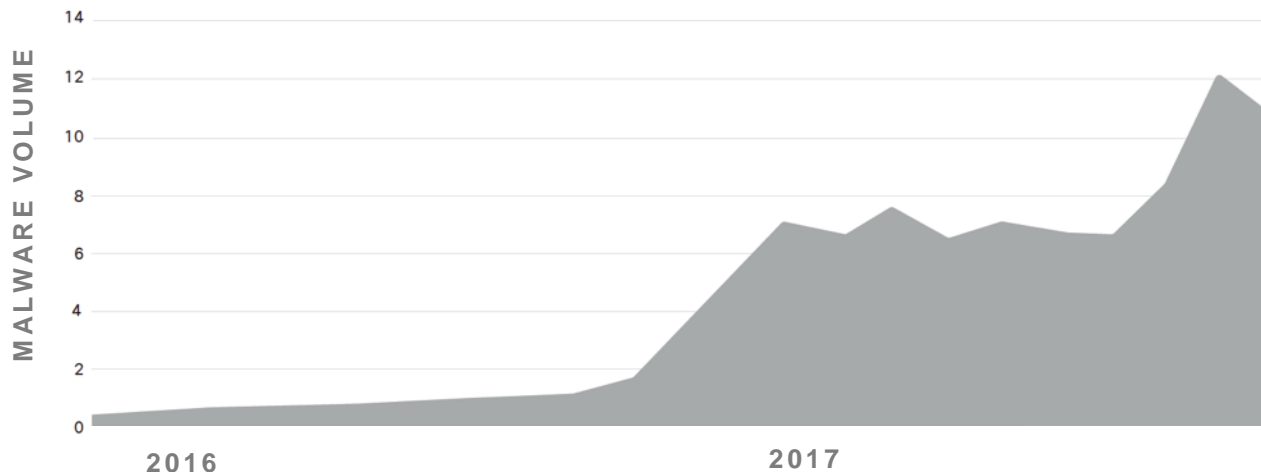
Broadband +
MPLS



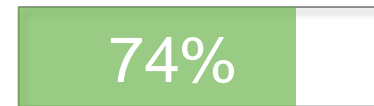
An increasing amount of bandwidth is becoming accessible
to all branch types through broadband and LTE

The Growing Importance of Security

MALWARE HAS RISEN BY MORE THAN 10X IN THE LAST YEAR



Percentage of organizations using more than 5 security vendors. Up from 55% in 2016



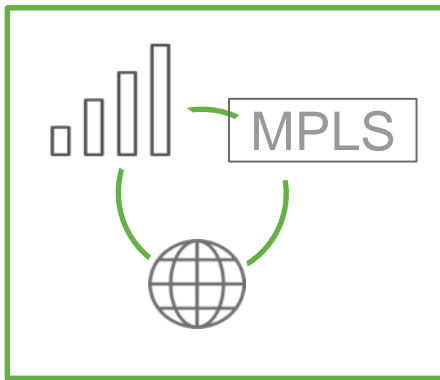
74% of security issues require people and/or policies to address, with only 26% being addressed by products

How Do You Prepare for the Future?



Cloud Applications

- Higher branch bandwidth requirements
- Challenge to monitor



Connectivity Options

- Diverse uplink availability
- Cost savings available
- Increase network uptime
- Bring new sites online



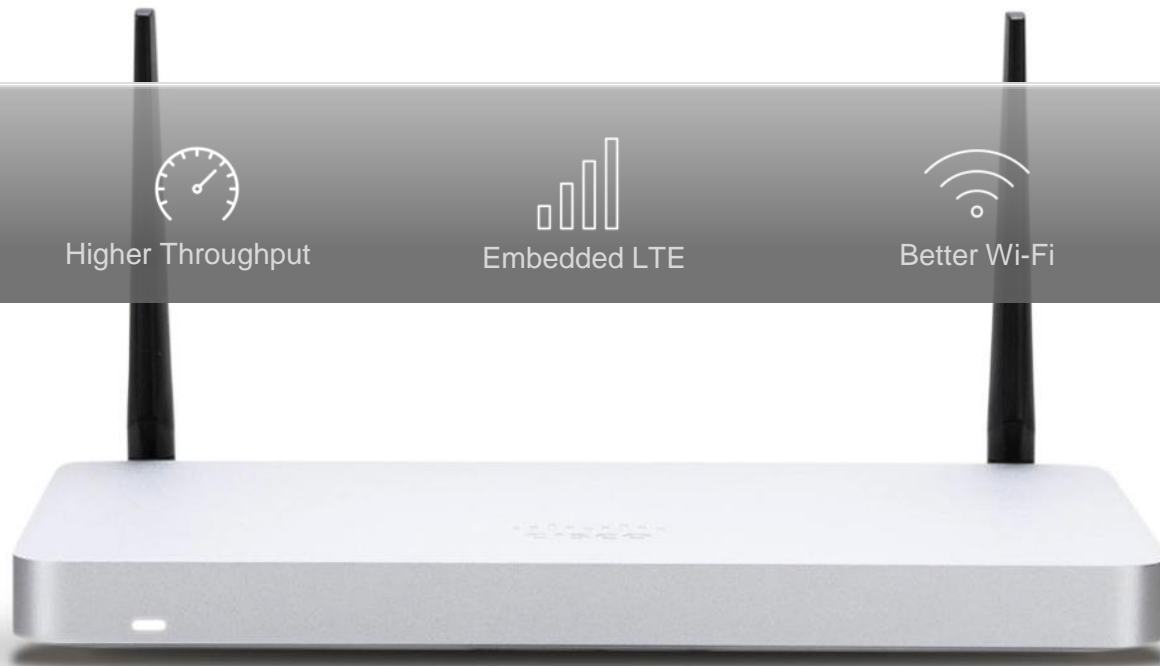
Security

- Increased threat volume
- Complex solution landscape

What's New?

Introducing the MX67/68 Security & SD-WAN Appliances

Designed to re-architect the branch with performance and simplicity



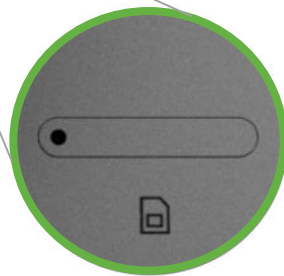
Benefits of Cellular, Now Integrated



Connect Remote
Sites

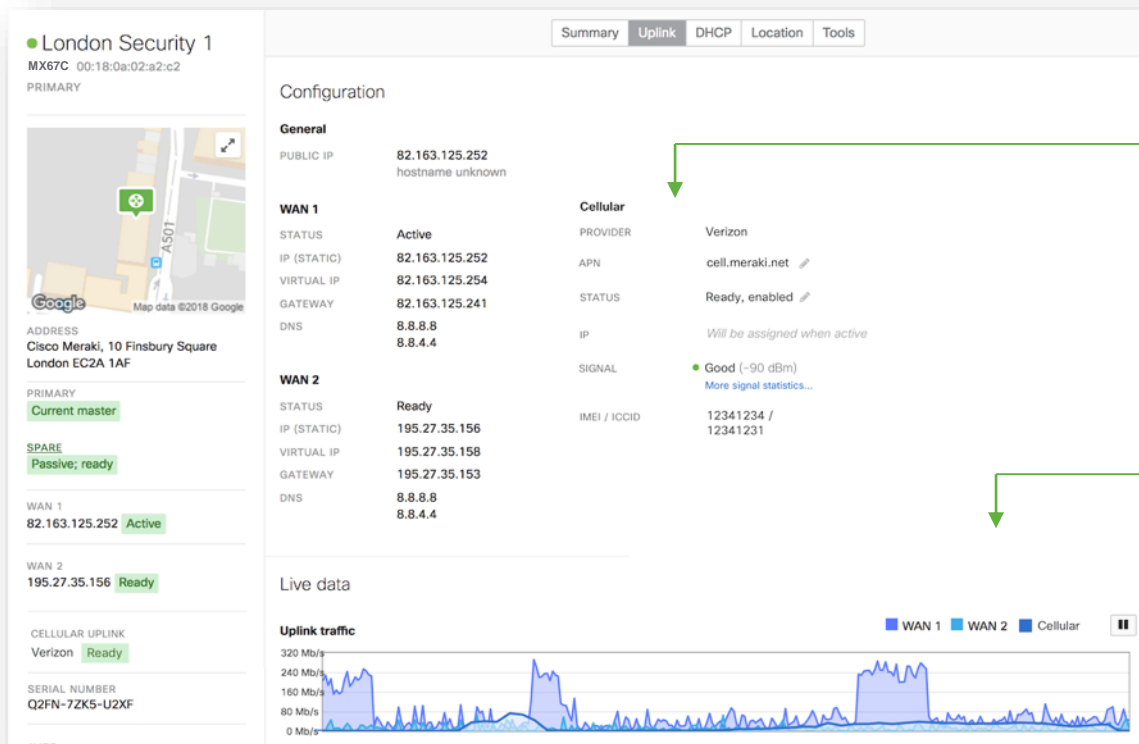


Limit downtime



SIM & LTE MODEM
INTEGRATED

LTE Visibility with Dashboard



LTE Configuration
Information

Historical LTE
Traffic

LTE Performance

MX Security & SD-WAN Small Branch Portfolio

Future-proof with improved performance and embedded LTE



MX64(W)



MX65(W)



MX67(W)



MX68(W)



MX67C



MX68CW

Firewall Throughput	250 Mbps	250 Mbps	450 Mbps	450 Mbps	450 Mbps	450 Mbps
VPN Throughput	100 Mbps	100 Mbps	200 Mbps	200 Mbps	200 Mbps	200 Mbps
Wi-Fi	(802.11ac)	(802.11ac)	(802.11ac Wave 2)	(802.11ac Wave 2)	-	802.11ac Wave 2
Ports	5	12 (2 PoE+)	5	12 (2 PoE+)	5	12 (2 PoE+)
Embedded Cellular	-	-	-	-	CAT 6 LTE	CAT 6 LTE
Price	\$595/\$945	\$945/\$1,245	\$695/\$995	\$995/\$1,295	\$1,295	\$1,795

North America variant:

Bands 2, 4, 5, 12, 13, 17, and 29

Worldwide variant:

Bands 1, 3, 5, 7, 8, 20, 26, 28A, 28B, 34, 38, 39, 40, 41

Simple, All-Inclusive Licensing



License



Hardware

1:1 ratio of licensing and hardware

1, 3, 5, 7, and 10 year durations available

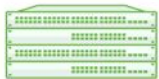
Centralized management with network-wide visibility and remote troubleshooting tools

Over-the-web firmware and security updates

24/7 enterprise support and warranty

All features included as standard, no per-feature licensing

Next Steps – Cisco Meraki Free Trial



Request Trial Gear

Try any Cisco Meraki product on your network.
We'll ship you gear and provide technical support to
get you set up. There's zero risk — if Meraki isn't right
for you, simply send the gear back.

REQUEST TRIAL



meraki.cisco.com/eval

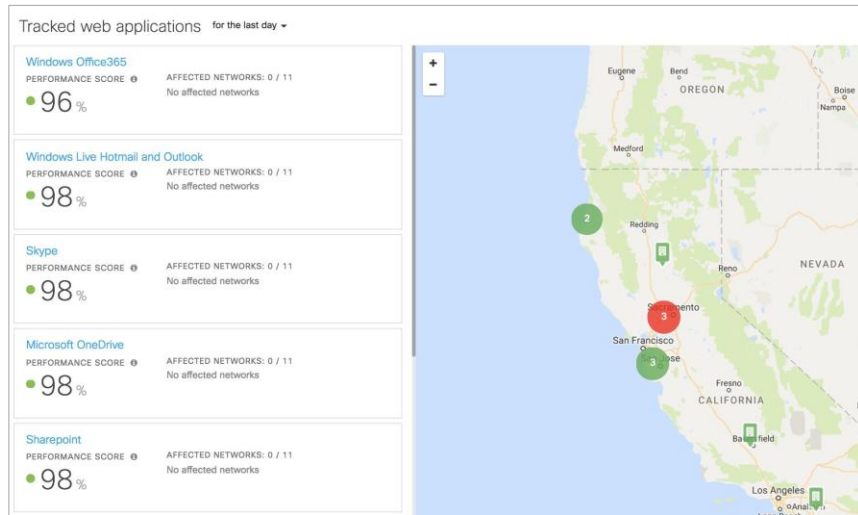
Meraki Insight



Meraki Insight

Network and SAAS Performance Management

- End-to-end visibility for SaaS application experience
- Network performance management and troubleshooting, including the LAN / WAN / ISPs
- Nothing to install or deploy



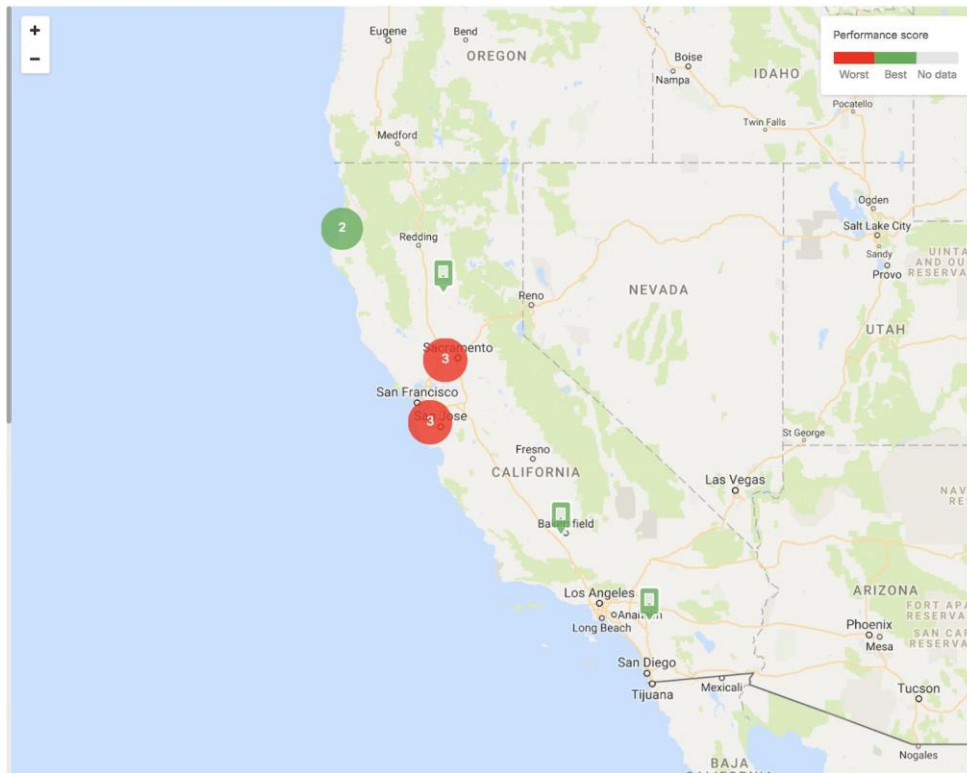
Simplify network troubleshooting
Ease migration to SaaS & SD-WAN

Focus on Mission Critical Apps

Tracked web applications for the last week ▾

BETA

Windows Live Hotmail and Outlook	PERFORMANCE SCORE ⓘ	AFFECTED NETWORKS: 1 / 11 HWAN - R7 Santa Barbara
96%		
Windows Office365	PERFORMANCE SCORE ⓘ	AFFECTED NETWORKS: 0 / 11 No affected networks
96%		
CNN	PERFORMANCE SCORE ⓘ	AFFECTED NETWORKS: 1 / 11 R2 - Forensics Lab - 1415 N. Market St - appliance
97%		EDIT
Skype	PERFORMANCE SCORE ⓘ	AFFECTED NETWORKS: 0 / 11 No affected networks
97%		
Microsoft OneDrive	PERFORMANCE SCORE ⓘ	AFFECTED NETWORKS: 0 / 11 No affected networks
97%		
Sharepoint	PERFORMANCE SCORE ⓘ	AFFECTED NETWORKS: 0 / 11 No affected networks
99%		



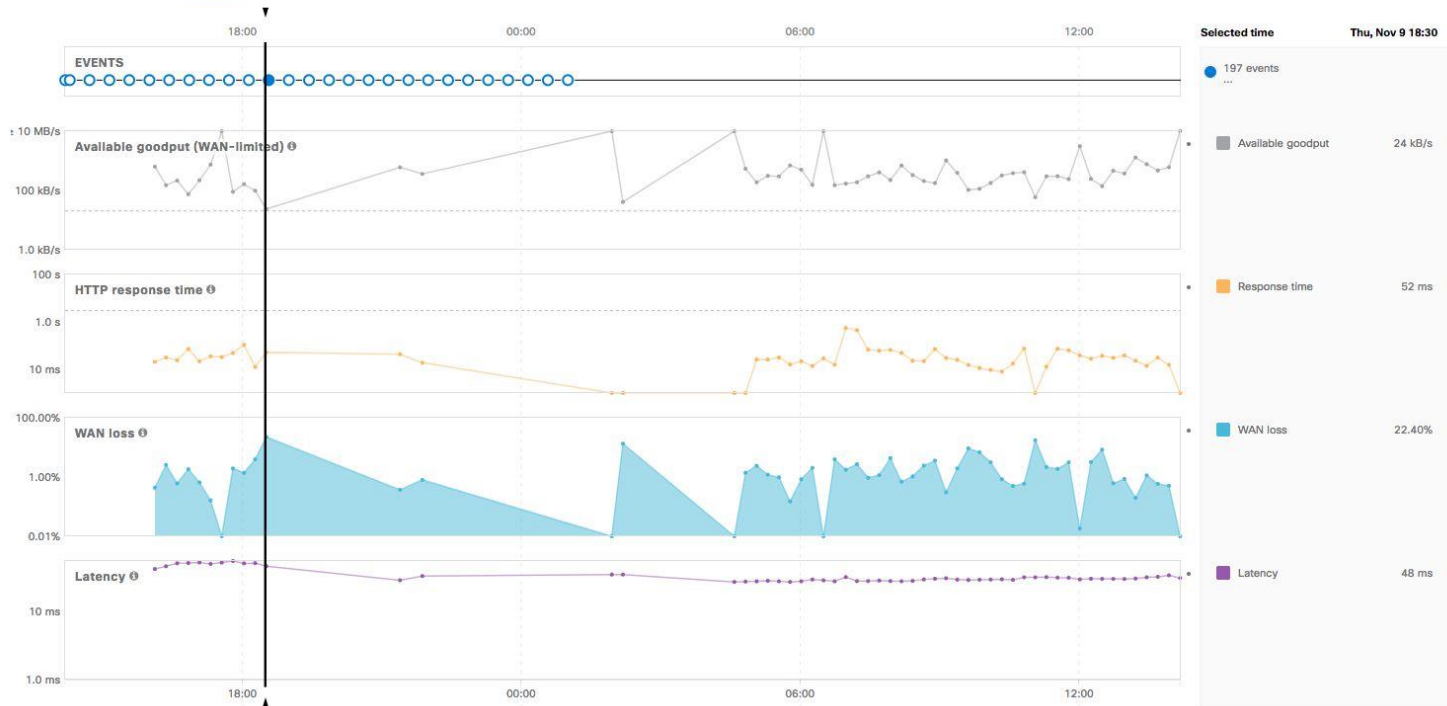
Faster time to resolution

TRACKED WEB APPLICATIONS > HQ-GREENVILLE - APPLIANCE

BETA

Vision for the last day ▾

Network Application **WAN** LAN Clients Servers Domains

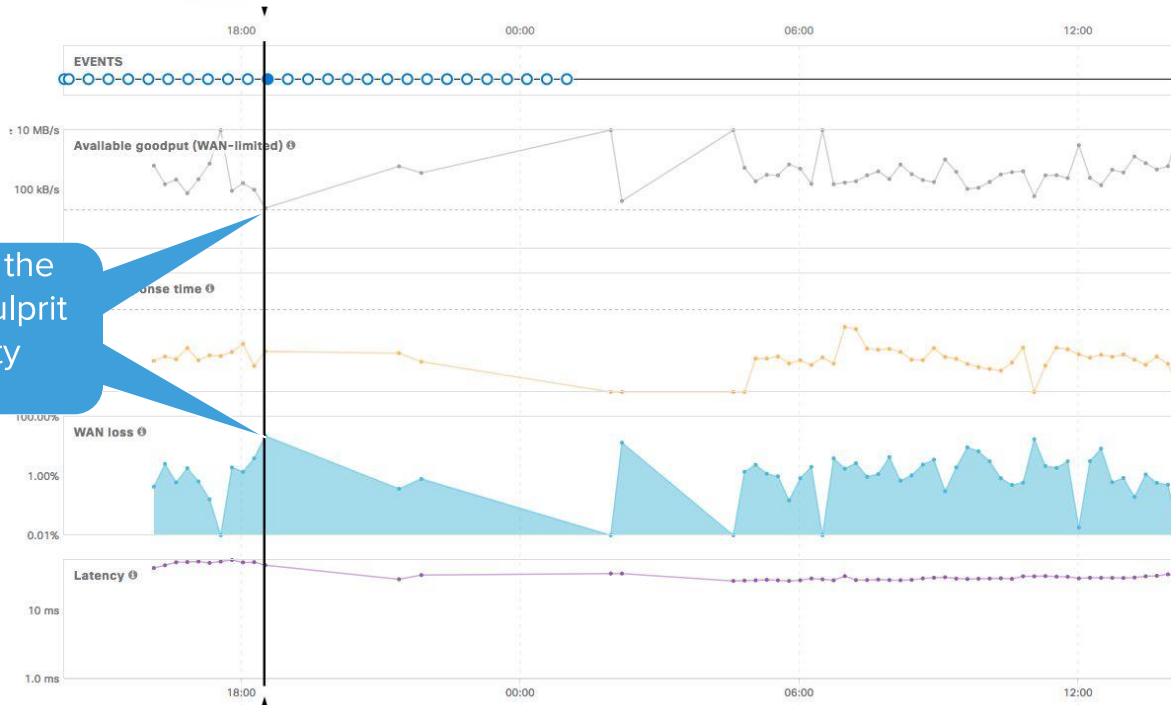


Faster time to resolution

TRACKED WEB APPLICATIONS > HQ-GREENVILLE - APPLIANCE

Vision for the last day ▾

Network Application **WAN** LAN Clients Servers Domains



Selected time Thu, Nov 9 18:30

197 events	
Available goodput	24 kB/s
Response time	52 ms
WAN loss	22.40%
Latency	48 ms

DEMO: Insight

Intelligent Wireless

Wireless Intelligence

RF Analytics



Location Analytics



Anomaly Detection

Summary Report from the last week

NETWORK(S)	DEVICE TAG	SSID
Meraki San Francisco - wireless	All devices	All SSIDs

Anomalies

- 12/17: Above average usage for a Sunday
Bandwidth usage was 256% higher than the last 10 Sundays recorded [View details](#)
- [View 2 more](#)

Clients with high usage

- 4 clients used more than 100.00 GB
'X1V2', 'MYU-X260' and 2 other clients

RF Profiles

Customize RF characteristics by deployment

Radio settings **BETA**

Overview **Rf profiles**

Create profile...

Grapefruitvity

Applied to 5 radios. Overrides applied to 3/5 of those radios.

2.4 GHZ	5 GHZ
Channel assignment	Channel assignment
Auto	Auto
AutoPower max	AutoPower max
27	Auto
AutoPower min	AutoPower min
6	Auto
Min. bitrate	Min. bitrate
36	Auto
	Channel width
	80

DELETE

SEE OVERRIDES

COPY

EDIT

Unicorn

Applied to 5 radios. Overrides applied to 3/5 of those radios.

2.4 GHZ	5 GHZ
Channel assignment	Channel assignment
Auto	Auto
AutoPower max	AutoPower max
Auto	Auto
AutoPower min	AutoPower min
Auto	Auto
Min. bitrate	Min. bitrate
Auto	Auto
	Channel width
	Auto

DELETE

SEE OVERRIDES

COPY

EDIT

Fairy

Applied to 5 radios. Overrides applied to 3/5 of those radios.

Lemon

Applied to 5 radios. Overrides applied to 3/5 of those radios.

[View old version](#)

General 2.4 GHz 5 GHz

General

Profile name Grapefruitvity

Band selection

Per AP

Per SSID

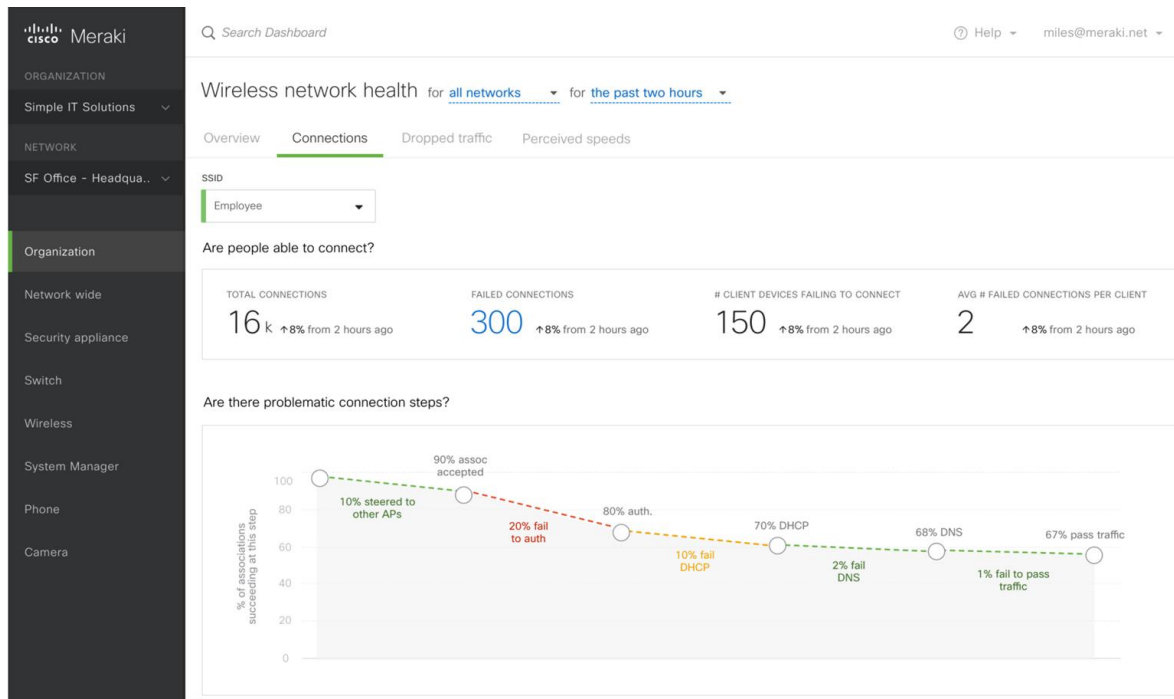
- ☒ Dual band operation (2.4 & 5 GHz enabled)
Supports both modern and legacy devices well.
- ☒ Enable band steering
- ☐ 5 GHz band only
5 GHz has more capacity and less interference than 2.4 GHz, but legacy clients are not capable of using it.
- ☐ 2.4 GHz band only
This is not recommended but can be used to support legacy clients.

Minimum bitrate configuration

- ☒ Per band
Set the minimum bitrates for the 2.4 & 5 GHz radios separately below.
- ☐ Per SSID
The radios in this profile will follow the minimum bitrate set on the [Access Control page](#).

Available for Meraki MR access points as a **free** feature update

One step further: Wireless Health



Metrics and anomaly detection for:

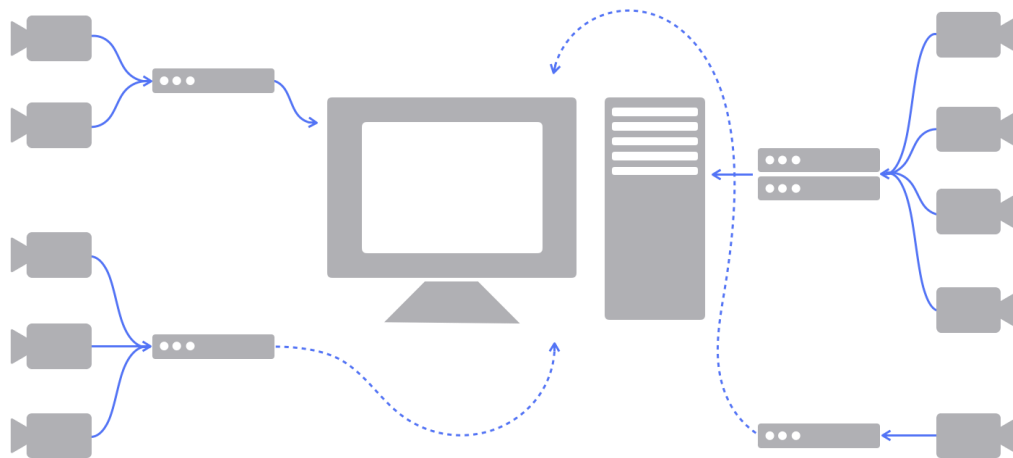
- client network associations
- wireless connection quality (latency)
- capacity (data rate)

Available for Meraki MR access points as a **free** feature update

DEMO: Wireless Health

MV Security Cameras

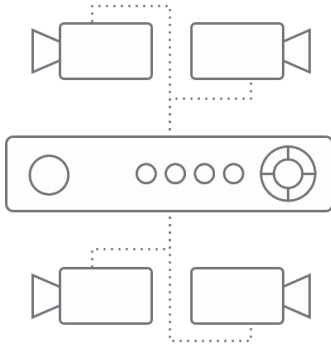
A Traditional Security Camera Deployment



Network video recorders (NVRs), servers, on-premises hardware
Multiple software packages, manual configuration, and **complexity**
Huge network vulnerability

Current Video Surveillance Solutions

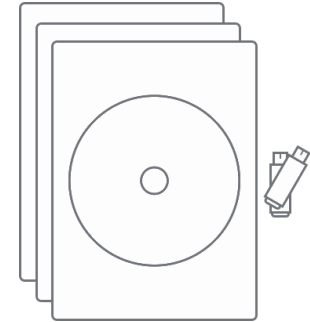
WITH MV, SAY GOODBYE TO



Additional on-premise hardware
Ex. Network Video Recorder (NVR)



Standalone software packages,
drivers, plug-ins, and IP
configuration



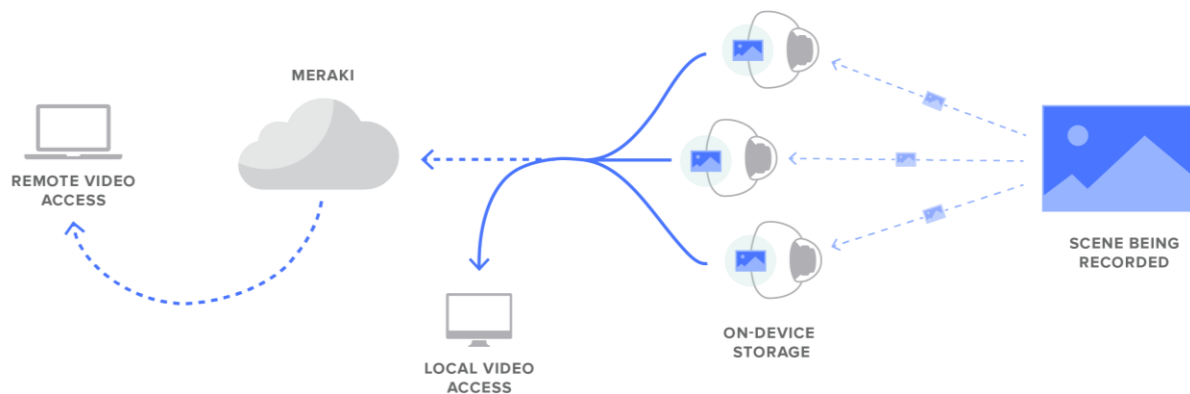
DVDs, thumb drives, VHS, and
other outdated sharing options

Cutting Edge Architecture

Less than 50kbps upstream bandwidth per camera

Configuration, thumbnails, and metadata stored in the cloud

Hybrid video processing: video is analysed on camera, motion indexed in the cloud



Introducing MV12



3 SKUs – up to 256GB integrated storage

High definition – 1080p

Microphone

Wireless capable

Compact form factor

Qualcomm Snapdragon processor

Advanced on-board analytics and machine learning

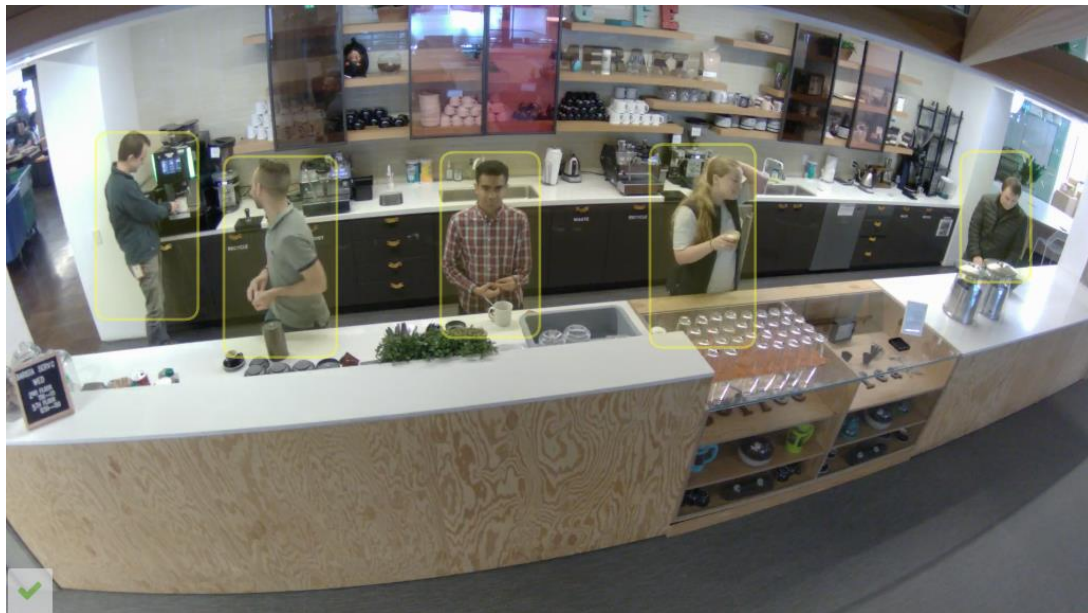
*A family of indoor
mini dome
cameras designed
with more than
just security in*

What is machine learning?



Cameras get smarter over time

Object Detection



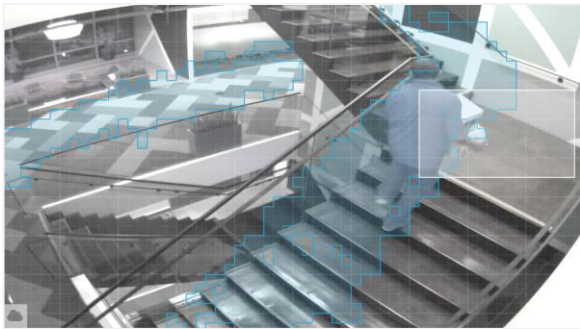
FUNCTIONALITY:

Anonymized person detection
for business intelligence

EXAMPLE USE CASE:

People counting to better
understand in-store customer
behavior patterns

Physical Security Meets Business Intelligence

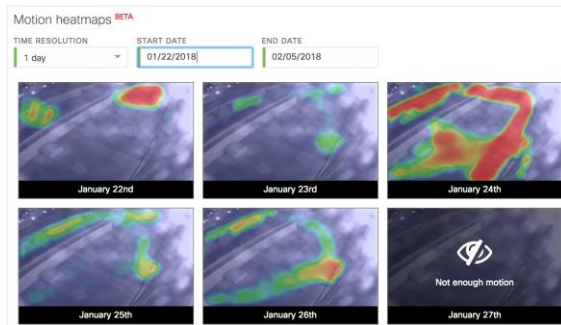


MOTION SEARCH

Automatically isolate key motion events and find out who stole that laptop

Easily export important video segments

Available on all MV models



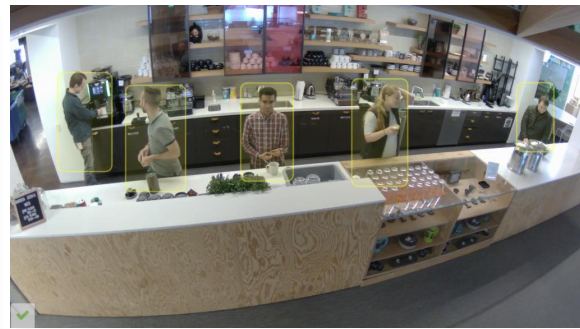
MOTION HEAT MAPS

See relative motion in an area over time

Choose hour-by-hour or day-by-day view

Generated entirely from metadata

Available on all MV models



PERSON DETECTION

Identify what is a person, and what is not

Additional functionality coming soon!

Available on MV12 models

DEMO: MV Cameras

Thank You!

Russ Davis
russda@cisco.com