

Meraki Auto RF

Cloud-Based Spectrum Analysis and RF Optimization

As wireless networks assume a more critical role in the networking infrastructure, ensuring predictable performance becomes ever more important. However, the shared spectrum on which WiFi networks rely has become increasingly congested, both from other wireless networks and from non-WiFi sources like Bluetooth devices, cordless phones, and microwave ovens. Network administrators are often forced to choose between complex, costly RF management systems and suffering from unreliable wireless network performance. Meraki Auto RF provides a better alternative.

Meraki Auto RF is a powerful, yet completely automated RF optimization system that delivers hassle-free, high-performance WiFi, even under challenging interference conditions. With Auto RF, every access point on the network continuously and automatically monitors its surroundings for any source of interference that could affect WiFi performance. Interference metrics, including data from a powerful spectrum analyzer built into each Meraki AP, are uploaded to the Cloud Controller. Armed with real-time and historical data, the Cloud Controller continually assesses the health of the entire network, dynamically tuning wireless channel selection, transmit power, and client connection settings to automatically adapt to changing interference conditions.

Features

Spectrum Analyzer Detects Non-WiFi Interference

- Fine-grained data from dedicated spectrum analysis hardware on AP
- Quantifies interference from Bluetooth devices, microwave ovens, etc.
- Real-time spectrum visualization over the web
- Available on all Meraki 802.11n APs

802.11 Radios Monitor WiFi Environment

- 2.4 and 5 GHz 802.11 channel utilization
- Interference from neighboring APs
- Client device capabilities

Cloud-Based Algorithms Determine Optimal Configuration

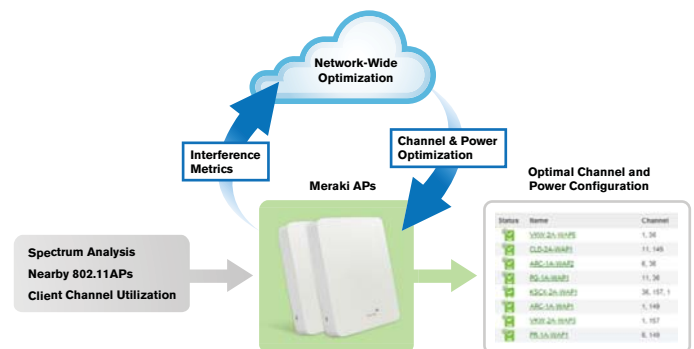
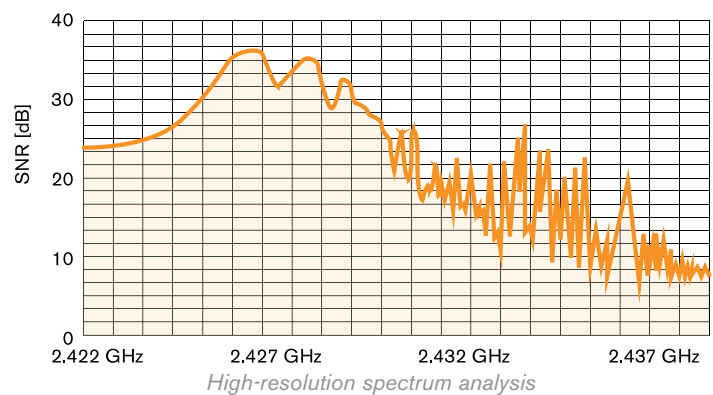
- Utilizes real-time and historical data uploaded from APs
- Algorithms tuned with inputs from 15,000+ networks
- Administrators can choose how often scans and replanning takes place

Performance Settings Tune Automatically

- Channel assignment
- Per radio transmit power
- Band steering – move capable devices to 5 GHz

Benefits

- Increased reliability under challenging RF conditions
- Better coverage with fewer APs
- Higher client throughput
- Requires no additional hardware, licenses, cost, or complexity



Cloud-based network optimization