# Benefits of Managed Wifi

CalixCLOUD

# Definitions

- **Cloud** - term used to describe a global network of servers, each with a unique function. The cloud is not a physical entity, but instead is a vast network of remote servers around the globe which are hooked together and meant to operate as a single ecosystem.
- **Access Point** - a device, such as a wireless router, that allows wireless devices to connect to a network. Signal is measured in decibels (dB)

# Expert Installation

- Onsite installation (often included for free with new broadband/fiber customers)
- Techs will determine the best placement for the wireless router by assessing:


- Type of walls (see diagram)
- Window Placement
- Proximity to devices with overlapping frequencies
  - i.e. Microwaves or other access points

# Hassle Free Setup

- Multimedia techs will configure the wireless router settings while onsite during installation, including things like:
  - Wireless name (SSID)
  - Wireless password
  - Wireless frequency/channel
  - Security Settings

- Configuration stored in the cloud

# Warranty/Replacement

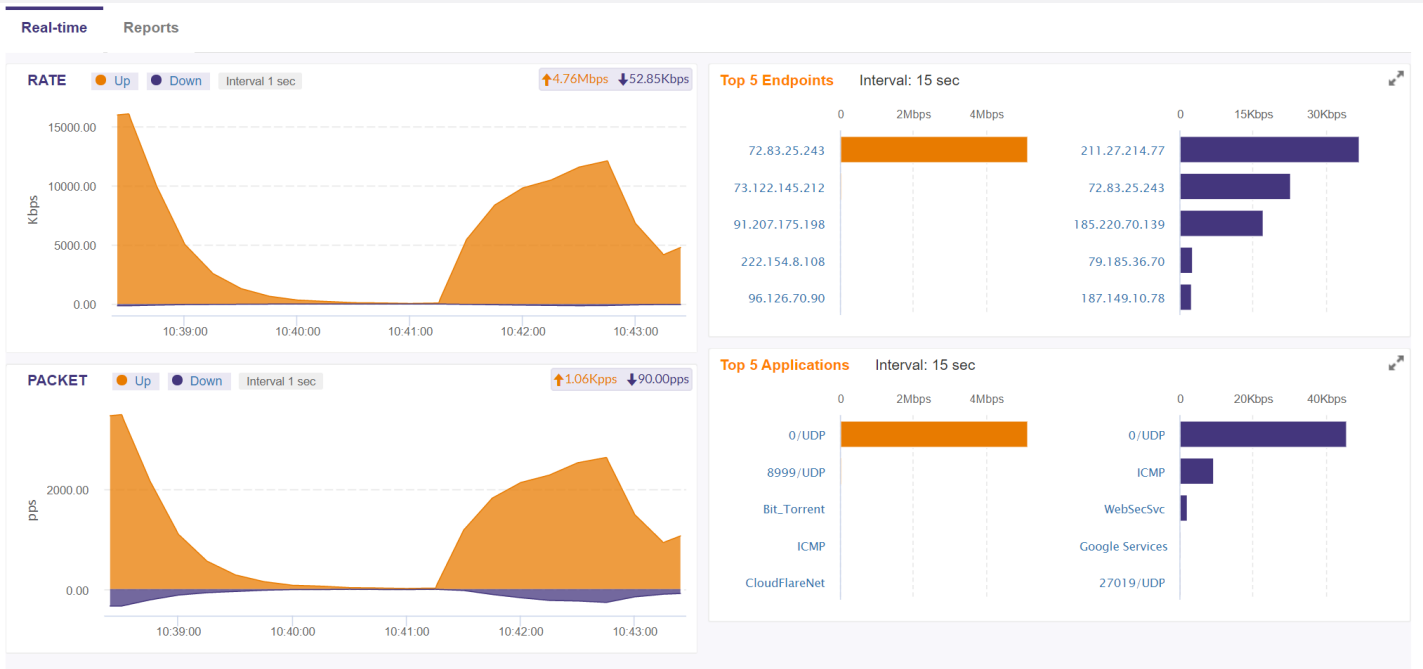
- If the managed router breaks for any reason, it will be replaced for free
- Routers can be swapped out immediately by stopping by our support center or by onsite visit from a Multimedia tech
- Replacements will come preconfigured with **YOUR** settings since the settings are backed up to the cloud

# 24/7 Support

- Local Support Center, not outsourced
- Open 365 days out of the year
- Trained professionals to help troubleshoot issues
  - Includes Tier 1 and Tier 2 support
    - Tier 1 – Reads from a question/response book
    - Tier 2 – Actively attempts to help troubleshoot multitude of situations
  - Many Support Techs hold multiple certifications

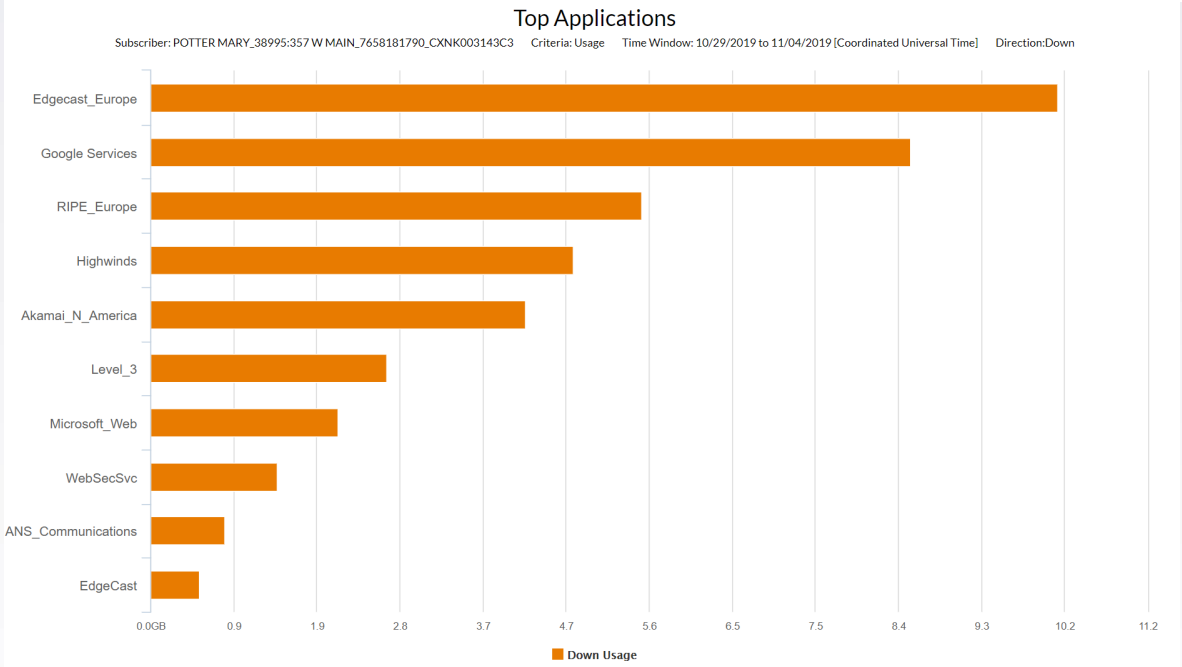
# Extended Troubleshooting Capabilities

- Calix Cloud allows Support to see things like:
  - Connection strength of devices
  - Interference from other wireless networks around you
  - Wireless mode used by devices
  - Total bandwidth with real time bandwidth reports:



# Extended Troubleshooting Pt. 2

| Wi-Fi Score | Device Type | Host Name | IP Address | MAC Address | Mode | Uptime | SSID | DS PHY Rate | US PHY Rate | Packets Dropped DS | SNR | Signal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | Computer (Microsof) | XBOXONE | 192.168.1.4 | c0:33:5e:a9:18:43 | 802.11n | 5m 46s | Potter 2.4g | 117Mbps | 117Mbps | 1 | 28dB | |

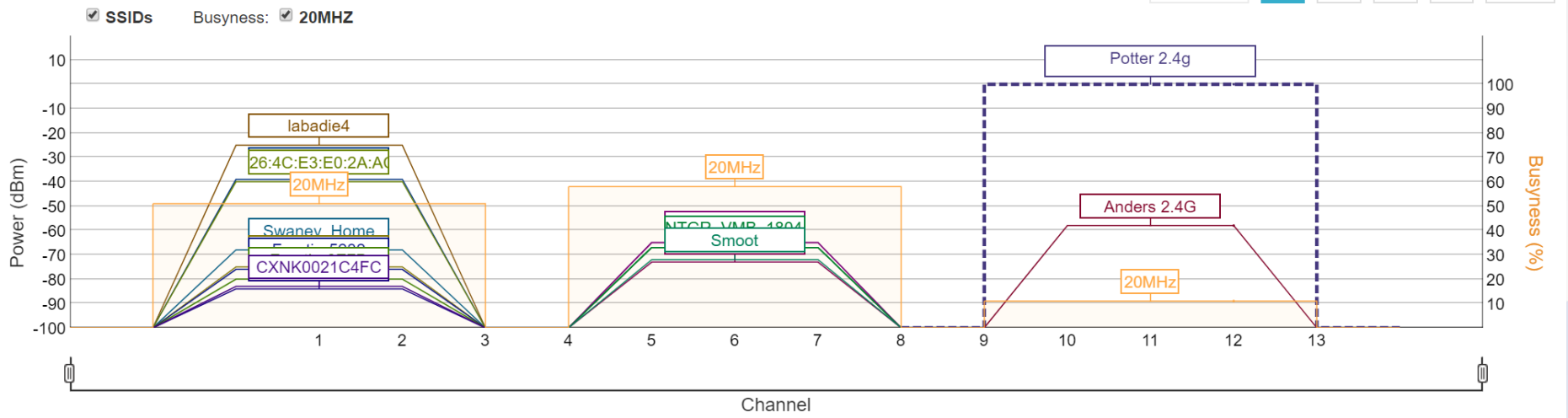


# Troubleshooting: Site Survey

| SSID | Channel | RSSI | Security | Channel Bandwidth | BSSID |
|---|---|---|---|---|---|
| Swaney_Home | 1 | -68dBm | WPA2 | 20MHz | 70:F1:96:30:7D:D5 |
| labadie4 | 1 | -25dBm | WPA-WPA2 | 20MHz | 44:65:7F:E3:4B:E3 |
| Palmer | 1 | -39dBm | WPA-WPA2 | 20MHz | CC:BE:59:92:69:B1 |
| Hidden | 1 | -75dBm | WPA2 | 20MHz | D0:4D:2C:F2:6B:B1 |
| Frontier5232 | 1 | -76dBm | WPA2 | 20MHz | 2C:58:4F:71:D8:70 |

*Showing 1 to 5 of 17 entries*

Previous 1 2 3 4 Next



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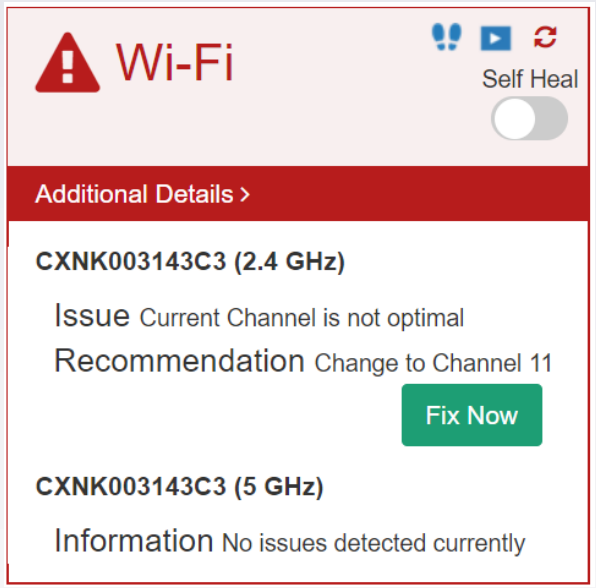


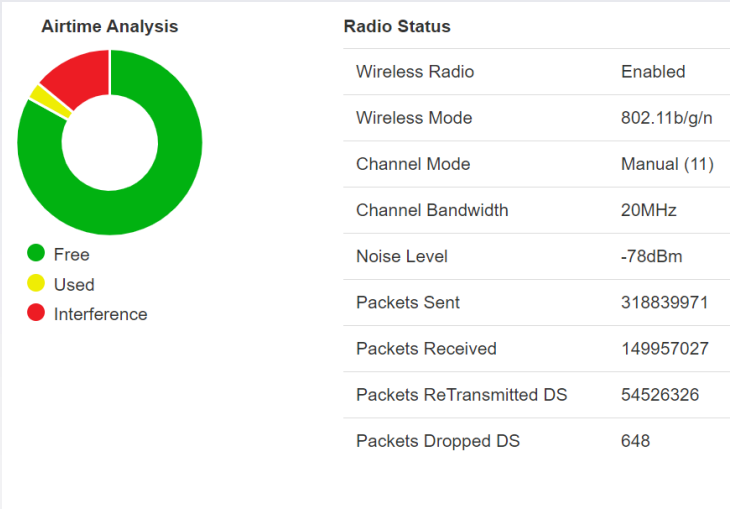

# Security Upgrades

- Any time there is a major security breach, it is patched automatically
- Enterprise level security means all of the latest security features and patches for attacks such as:
  - **War Driving** - the act of locating and possibly exploiting connections to wireless local area networks while **driving** around a city or elsewhere.
  - **Cracking Attacks –** using different methods to guess your password
  - **Denial of Service** - cyber-attack in which the perpetrator seeks to make a machine or network resource unavailable to its intended users by temporarily or indefinitely disrupting services of a host
  - **Karma Attacks** - exploits a behaviour of some Wi-Fi devices, combined with the lack of access point authentication in numerous WiFi protocols
    - **Evil Twin Attacks –** similar to Karma Attacks, where a fraudulent Wi-Fi access point that appears to be legitimate but is set up to eavesdrop on wireless communications. Exploits the unencrypted broadcast of known, preferred, wireless networks by devices

# Questions?