

WiFi Best Practices - 10 items to do for best performance

1. 2.4GHz must be set to 20MHz RF channel bandwidth to avoid co-channel interference.
2. 2.4GHz must be set to use channels 1,6, and 11 only to ensure no co-channel interference.
3. In multi-AP deployments, maximum RF output power should not exceed 17dBm.
4. RF output power should be around 6-8dBm less on 2.4GHz vs. 5GHz (example 2.4GHz = 10dBm, 5GHz = 17dBm) (this to ensure similar sized coverage cells).
5. Ideal is to create separate SSID's for 2.4GHz and 5GHz (example "Guest 2.4GHz" and "Guest 5GHz"). Suggest all to connect to 5GHz whenever possible.
6. In reference to #5, do not use the same SSID for both 2.4GHz and 5GHz and do not use "bandsteering".
7. Do not use "route to internet" in a multi-AP BSS environment because route means layer 3 IP address assignments are limited to that individual AP, thus no seamless roaming can occur. Instead use "bridge to internet" and have a router or captive portal device instead.
8. In some multi-AP environments, you may need to actually disable some AP's 2.4GHz radios to reduce co-channel interference on 2.4GHz.
9. In general 40MHz is best for 5GHz. 80MHz may provide more impressive speed testing and peak throughput but a 20MHz or 40MHz design will yield a more reliable stable network with less interference.
10. In some cases where there are neighboring interference, manually setting channels may be required and / or turning off 2.4GHz if interference cannot be avoided (so 5GHz can be the only choice in that high 2.4GHz interference location).