



Best Practices Checklist

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This chapter discusses the best practices check list while deploying a CMX solution.

1. Familiarize yourself with RF basics.
2. Familiarize yourself with 802.11 fundamentals and location fundamentals.
3. Check for regulatory domain restrictions in the area.
4. Conduct pre-site survey:
 - Assess building type and materials used
 - Anticipate difficult zones:
 - Areas where full coverage and full performance is needed.
 - Areas where location is important and needed.
 - Areas where RF free zones exist.
 - Business needs of the WLAN
 - How will the network look in two years.
 - Plan for future client explosion
 - Scale of the planning
 - Expected audience of the network
 - Constraints on deployment
 - DFS and radar avoidance requirement
 - Aesthetic design requirements
 - Predictive surveys for simple budgeting
 - Plan for cabling, power drops, and power requirements
 - Obtain location maps for RF surveys later
 - Thorough versus sample area survey
 - 802.11n/ac readiness and expectations
 - Outdoor readiness
 - Location where access points can be deployed
 - Capture existing 802.11

- Plan for persistent non-movable interferers
 - Antenna evaluation
 - High density consideration
5. Conduct predictive site survey.
- Use Prime Infrastructure RF Planner tool to design a RF plan
 - Use Ekahau Site Survey planner to design a RF plan in absence of Cisco Prime Infrastructure
 - Location tracking = AP per 2500 sqft
 - Enter signal strength to be -67 dBm
 - SNR should to be ≥ 20 dBm
 - Data rate to be 12 mbps
 - Ping round trip should be ≤ 500 ms
 - Packet loss should be $\leq 10\%$
 - Remember, minimum number of APs for location tracking is three.
6. AP placement guidelines
- APs should be < 70 feet apart.
 - Use directional antennas where necessary.
 - Plan for coverage with location calculation in mind.
 - Use staggered layout for placing APs, not a straight line.
 - Plan to avoid interferers and installation of APs over interfering sources.
 - Ensure perimeter coverage.
 - Use a single type of AP across the installation.
7. AP Capacity planning
- Plan with client density and client type in mind.
 - Plan for minimum application performance needed.
 - Plan for future growth of client types.
 - Consider high density design if a location demands it.
8. Antennas
- Select the ideal antenna for installation depending on building and aesthetic requirements
 - Be aware of power requirements with antennas.
9. Post-RF deployment
- Turn on RRM and let the network settle before go live.
 - Turn on Clean Air on capable access points.
 - Conduct post-site survey regularly to keep a watch on RF.