



WIRELESS LAN ASSOCIATION

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## Wireless LAN Design Framework: Diagnose

### *Assessing networks and their design*

*Note: The purpose of this book is to characterize the network and identify its potential issues. Corrective action will not be explored.*

#### **1. Identify the Purpose of the Assessment**

- 1.1. Change in Wireless LAN requirements
- 1.2. Scheduled WLAN health check
- 1.3. Reported WLAN performance or connectivity problems
- 1.4. WLAN refreshment

#### **2. Review Existing Requirements and Design Documentation (if Available)**

Which may include any results / files / output from initial delivery such as:

- 2.1. Requirement engineering
- 2.2. Coverage
- 2.3. Interference
- 2.4. Configuration
- 2.5. Features
- 2.6. Security

#### **3. Conduct WLAN Assessment**

Which may include any combination of the following, per type:

- 3.1. RF Assessment
  - 3.1.1. Coverage (RSSI)
  - 3.1.2. SNR
  - 3.1.3. Overlap and CCI
  - 3.1.4. Roaming
  - 3.1.5. Spectrum
  - 3.1.6. Channel plans
  - 3.1.7. Performance metrics (throughput, latency, jitter)
- 3.2. Network Assessment
  - 3.2.1. Network infrastructure
  - 3.2.2. PoE
  - 3.2.3. VLANs
  - 3.2.4. Addressing

- 3.3. Application and Services Assessment
  - 3.3.1. DNS
  - 3.3.2. DHCP
  - 3.3.3. WNMS
  - 3.3.4. Location services / RTLS
  - 3.3.5. Captive portals
  - 3.3.6. RADIUS server
  - 3.3.7. Authentication
- 3.4. Physical Assessment
  - 3.4.1. Cabling
  - 3.4.2. Validating antenna orientations
  - 3.4.3. Validating effective mounting

#### **4. Complete Assessment Report**

This may include any, or all, of the following:

- 4.1. Test plans
- 4.2. Test results
- 4.3. Recommendations