Free Airport Wireless

Introduction

The Airport has decided to provide passengers with free wireless internet connection next year. This document describes the actions planed on the network infrastructure to handle the expected load on the wireless network.

The network is a multiservice wireless network used by Barcode Scanners, Real Time Location of Tags and Client, Airport employees with laptops. Passengers are expected to you both laptops and Smartphones.

Questions

Is there something we need to do other than describe below?

Anyone have experience with similar cases?

Will we need to disable 2.4GHz on some AP?

Any comments what so ever ?

System Components

Controller   Cisco WiSM modules version 7.0.98.0
Access Points Cisco 3502E and I
MSE   3550

AP layout

AP are mounted with an average of 25 meter between each other. The placement is denser around the areas where we know is most crowded. That is the public seating area and popular restaurants. This is a screendump from one terminal. The blue dots are planed Access Points.
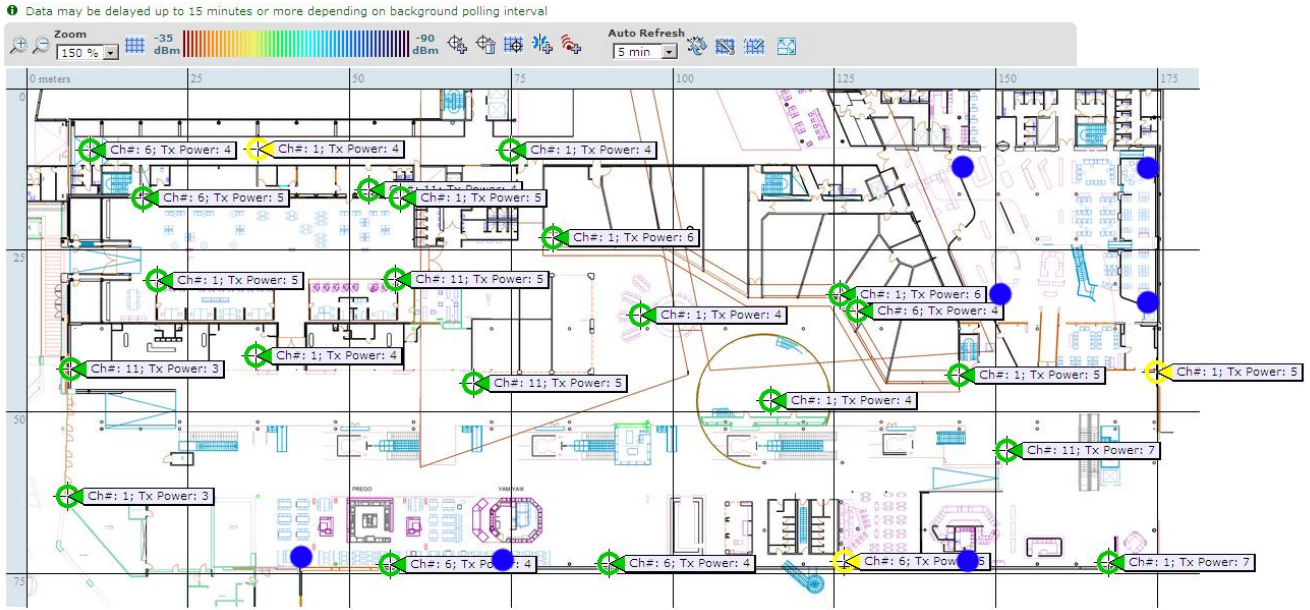
The AP is a mix of Cisco 3502E and I. When it is possible to mount the AP on the sealing we have used the 3502i with internal antenna. On walls we are using 3502e with the illustrated antenna setup

Some AP is mounted on top of low sealing shops this way

User validation

The hotspot users will be validated on an external captive portal system. The web-auth on the WiSM is not used.

Controller settings

With the high desity deployment we have a high focus on keeping high data rates and getting clients to select proper AP and Radio. The following setting is or will be implemented.

SSID's and broadcast

There will be 5 SSID's on the AP's and only the Hotspot will be broadcasted

Minimum Data Rate

24Mbps for both radios.

TX Power level threshold for RRM

2.4 GHz   -76dBm
5 GHz   -73dBm

Band Select and Load Balancing

Enabled

CleanAir Eventdriven RRM

Enabled

Max Client Count Treshhold for alarms

40 clients per radio. Both 2.4- and 5GHz

Interferense alarm Treshold

2.4GHz   15%
5GHz   10%