Autonomous AP Configuration

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Introduction

This task set should introduce the student for manual configuration of Cisco Aironet access points. As help/guidance, the configuration manual for the Aironet 1700 accesspoints are available online [1]. This is also true for the datasheet [2].

Required infrastructure for all the labs are:

- A router (ex. Cisco 2901)
- A switch (ex. Cisco Catalyst 2960)
- An access point (ex. Cisco Aironet 1702i)

Passwords

Use only username/password cisco/cisco on all equipment, and remember to clear the configuration when done!

The default credentials on the AP is Cisco/Cisco.

1 Preliminary tasks

See LAB 1 for the configuration og the wired base network.

2 Introduction tasks - AP web-interface

1. Connect the AP to an access port in the "Staff" VLAN.
2. Investigate the DHCP log to identify the AP's IP address.
3. Log in to the AP's web-page, and give it basic configuration trough the express set-up page. Assign one SSID for 2.4 GHz, and one for 5GHz. Go to the summary-page, click on each of the radios, navigate to its settings and enable it.
4. Verify that the configuration works by connecting to the SSID's using your laptop.
5. Erase the AP's startup-config and reboot it.

3 Simple CLI configuration

To better understand the specifics of the AP configuration, the CLI should be used. Connect to the console-port of the AP, clear the current startup-configuration (erase startup-config), and reload the AP.

1. Connect the AP to a trunk-port of the switch, which have the native-VLAN in the management network. The Staff VLAN and the Guest VLAN should also be present on the trunk (fa0/7 or fa0/8 in LAB 1. But remember to configure the native-vlan, as this is not a part of LAB 1).
2. Configure an SSID for the employee network, and assign it to the correct VLAN. Make sure to specify open authentication. Configure mbssid guest-mode. Guest-mode means that the SSID is broadcasted.
3. Configure a subinterface for the emplyee VLAN on both radios, and on the Gigabit ethernet interface. Configure the dot1q encapsulation on all these subinterfaces to match the VLAN id. Bridge these subinterfaces together by assigning all of them to bridge-group 2.
4. Make sure "mbssid" is enabled on the radios.
5. Assign the ssid to the radio interfaces (not sub-interfaces) and enable the radios (no shutdown)
6. Verify that the ssid is visible, and that it is possible to connect to it.

4 Advanced CLI Configuration

1. Modify the configuration from the last task so that there are two SSID's available for the employee VLAN; one for each radio. Verify that a client can connect to both the SSID's.
2. Disable the DSSS speeds on the 2.4GHz radio. Why is this common to do?
3. Create SSID's for the Guest network. One for each radio. Verify that clients connecting to these SSID's appear in the correct VLAN.

5 Wireless captures

Perform a capture of wireless using wireshark (having a wireless nic set in monitor mode), or download the example dump from blackboard.

1. Identify a client connecting
2. Identify an active probe from the client to find a wireless network, and the network's response

References

[1] Cisco. *Cisco IOS Configuration Guide for Autonomous Cisco Aironet Access Points - Cisco IOS Release 15.3(3)JAB*. `https://www.cisco.com/c/en/us/td/docs/wireless/access_point/15-3-3/configuration/guide/cg15-3-3.html`. [Online; accessed 29-August-2018]. 2014.

[2] Cisco. *Data sheet - Cisco Aironet 1700 Series Access Point*. `http://www.cisco.com/c/en/us/products/collateral/wireless/aironet-1700-series/datasheet-c78-732347.pdf`. [Online; accessed 27-October-2015]. 2015.