

Cisco IOS and CLI configuration basics

Download the Cisco AP1310 User's Guide and configuration instructions (in PDF format) from the website at: http://radiokomunikacja.edu.pl/u/rkotrys/wlan_lab___7_semester

1. Cisco IOS Software Configuration: <http://radiokomunikacja.edu.pl/f/87>

Basic operations

Connect in to the Cisco AP1310 device serial administration console (look at chapter 3 of [1])

Connect a serial (RS232) cable between the PC serial connector (9 pins) and the Cisco AP1310 Console socket. Launches the "puty.exe" serial console application, set the RS232 serial connection parameters to:

9600 bps, 8 data, 0 parity, 1 stop, no flow control.

Configuration modes via the command lines in the console.

Mode	Access Method	Prompt	Exit Method	About This Mode
User EXEC	Begin a session with the wireless device.	ap>	Enter logout or quit .	Use this mode to: <ul style="list-style-type: none">• Change terminal settings• Perform basic tests• Display system information
Privileged EXEC	While in user EXEC mode, enter the enable command.	ap#	Enter disable to exit.	Use this mode to verify commands. Use a password to protect access to this mode.
Global configuration	While in privileged EXEC mode, enter the configure command.	ap(config)#	To exit to privileged EXEC mode, enter exit or end , or press Ctrl-Z .	Use this mode to configure parameters that apply to the entire wireless device.
Interface configuration	While in global configuration mode, enter the interface command (with a specific interface).	ap(config-if)#	To exit to global configuration mode, enter exit . To return to privileged EXEC mode, press Ctrl-Z or enter end .	Use this mode to configure parameters for the Ethernet and radio interfaces. The 2.4-GHz radio and the 802.11n 2.4-GHz radio is radio 0, The 5-GHz radio and the 802.11n 5-GHz radio is radio 1.

The Cisco IOS user interface is divided into many different modes. The commands available to you depend on which mode you are currently in. Enter a question mark (?) at the system prompt to obtain a

list of commands available for each command mode. When you start a session on the wireless device, you begin in user mode, often called user EXEC mode. A subset of the Cisco IOS commands are available in user EXEC mode. For example, most of the user EXEC commands are one-time commands, such as show commands, which show the current configuration status, and clear commands, which clear counters or interfaces.

The user EXEC commands are not saved when the wireless device reboots. To have access to all commands, you must enter privileged EXEC mode. Normally, you must enter a password to enter privileged EXEC mode. From this mode, you must enter privileged EXEC mode before you can enter the global configuration mode.

Device static IP and mask settings

After establishing a serial connection to Cisco AP1310 enable "Privileged EXEC" mode:

```
ap> enable
Password: Cisco
ap#
```

enable "Global configuration" mode:

```
ap# configure terminal
```

enable "Interface configuration" mode for BVI 1 (Bridge Virtual Interface 1):

```
ap(config)# interface BVI1
ap(config-if)# ip address 192.168.N.250 255.255.255.0
```

exit to "Global configuration" mode:

```
ap(config-if)# exit
ap(config)#
```

Configuring the SSID (name of the WLAN eg. 'wlan_name')

```
ap(config)# dot11 ssid wlan_name
```

we create SSID name nad enable ssid configuration context (look at the prompt "config-ssid")

```
ap(config-ssid)# guest-mode           // makes wlan visible
ap(config-ssid)# authentication open  // set no authentication
```

exit to "Global configuration" mode:

```
ap(config-ssid)# exit
ap(config)#
```

Configuring the radio interface

enable "Interface configuration" mode for dot11Radio 0:

```
ap(config)# interface dot11Radio 0
ap(config-if)# station-role root      // set role to AccessPoint
ap(config-if)# ssid wlan_name        // assign wlan name
ap(config-if)# no shutdown           // switch-on the interface
```

exit to "Global configuration" mode:

```
ap(config-if)# exit
ap(config)#
```

Basic AP configuration is done, the wlan network 'wlan_ssid' should be visible to wlan clients (windows, smartphones)

Save the configuration:

```
ap# copy running-config startup-config
```