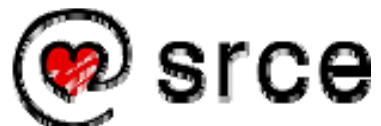


WLAN (eduroam) probe

Miroslav Milinović, Dubravko Penezić
*University Computing Centre,
University of Zagreb, Zagreb, Croatia*
<miro@srce.hr>

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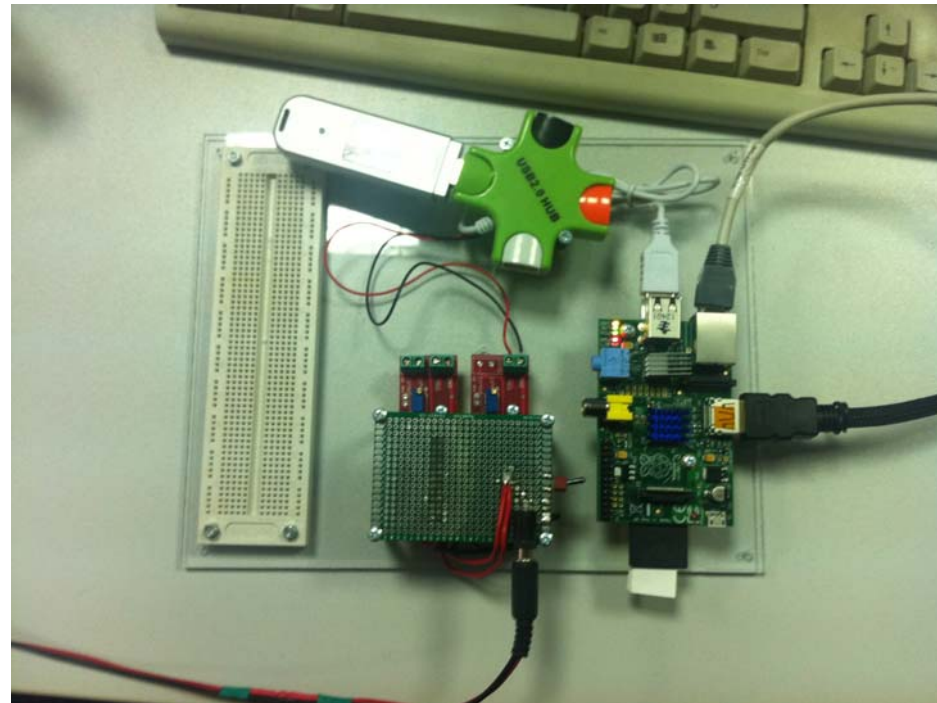


The task!

- ❖ build the client to monitor (probe) WLAN/eduroam service location(s):
 - ♦ available SSIDs
 - ♦ signal strength/quality
 - ♦ AuthN and crypto methods used
- ♦ functional eduroam test (authN + perform action)
- ♦ collect, store & analyze data from probe(s)
- ♦ results → OpenSource

The platform

- ❖ Raspberry Pi HW
- ❖ Raspbian Linux
- ❖ Python 2.7.



Current results

- ❖ scanning for signals / SSIDs
- ❖ results send (via syslog) and saved in the monitoring db
- ❖ some of the outputs:
 - ◆ <http://www.eduroam.hr/sensornet/index.php>
 - ◆ <http://www.eduroam.hr/sensornet/index1.php>
 - ◆ <http://www.eduroam.hr/sensornet/index2.php>

Current results

WiFiCurious

WiFi Scanning Results (2012-12-20 22:39:00)

Channel	Frequency	Mode	SSID	MAC	Signal	Power	Security
Channel 1	2412 MHz	b g n	eduroam	00:23:EB:39:38:80	85.71%	-64 dBm	WPA2/CCMP/TKIP
			UNIQ-GUEST	00:23:EB:39:38:81	82.89%	-69 dBm	WPA2/CCMP/TKIP
			camnet-urednic	00:0F:F7:EB:6D:90	80.00%	-82 dBm	WPA2/CCMP/TKIP
Channel 2	2417 MHz	b g n					
Channel 3	2422 MHz	b g n	camnet-urednic	00:0E:83:78:5A:D0	45.00%	-82 dBm	WPA2/CCMP/TKIP
			camnet-wsp	00:0E:83:78:5A:D3	42.88%	-85 dBm	WEP
Channel 4	2427 MHz	b g n					
Channel 5	2432 MHz	b g n					
Channel 6	2437 MHz	b g n	hidden	00:21:55:F4:44:22	82.89%	-52 dBm	WPA2/CCMP/PSK
			hidden	00:21:55:F4:44:23	82.88%	-52 dBm	WPA2/CCMP/PSK
			UNIQ-GUEST	00:21:55:F4:44:20	74.29%	-58 dBm	WPA2/CCMP/PSK
			eduroam	00:21:55:F4:44:21	82.88%	-52 dBm	WPA2/CCMP/TKIP
Channel 7	2442 MHz	b g n					
Channel 8	2447 MHz	b g n					
Channel 9	2452 MHz	b g n					
Channel 10	2457 MHz	b g n					
Channel 11	2462 MHz	b g n	hidden	00:23:EB:39:2D:72	37.14%	-84 dBm	WPA2/CCMP/PSK
			UNIQ-GUEST	00:23:EB:39:2D:71	37.14%	-84 dBm	WPA2/CCMP/PSK
Channel 12	2467 MHz	b g n					
Channel 13	2472 MHz	b g n					
Channel 14	2484 MHz	b g n					

Author: Dubravko Penadic, 2013