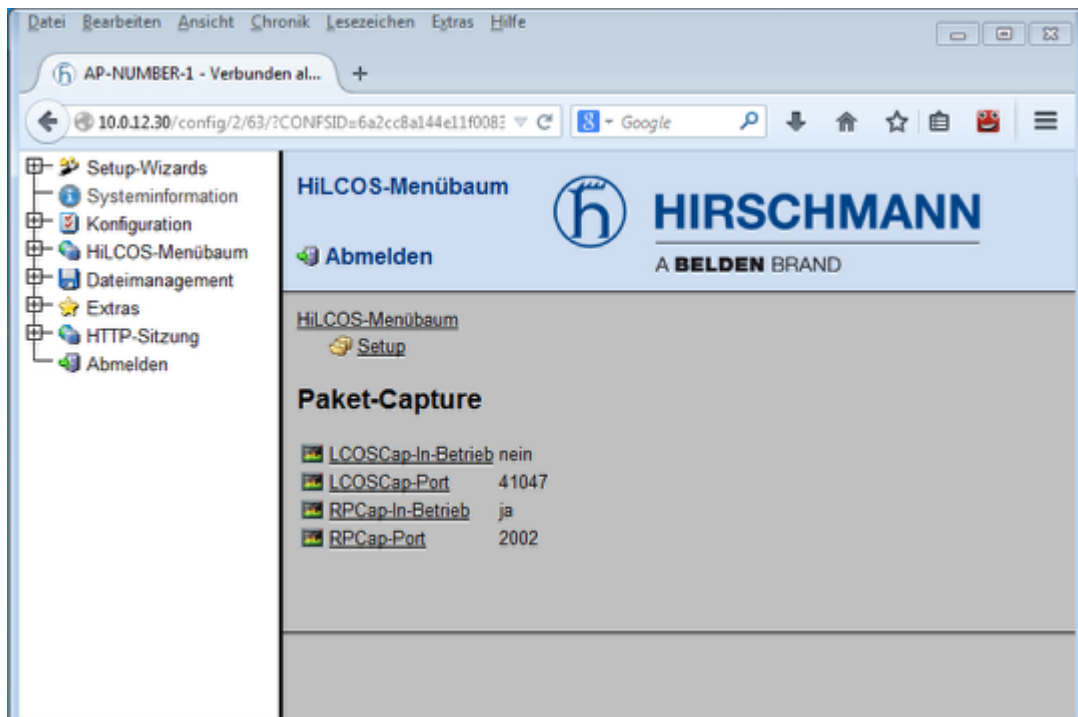


How to remotely capture the traffic of an Open BAT interface with RPCap function and Wireshark

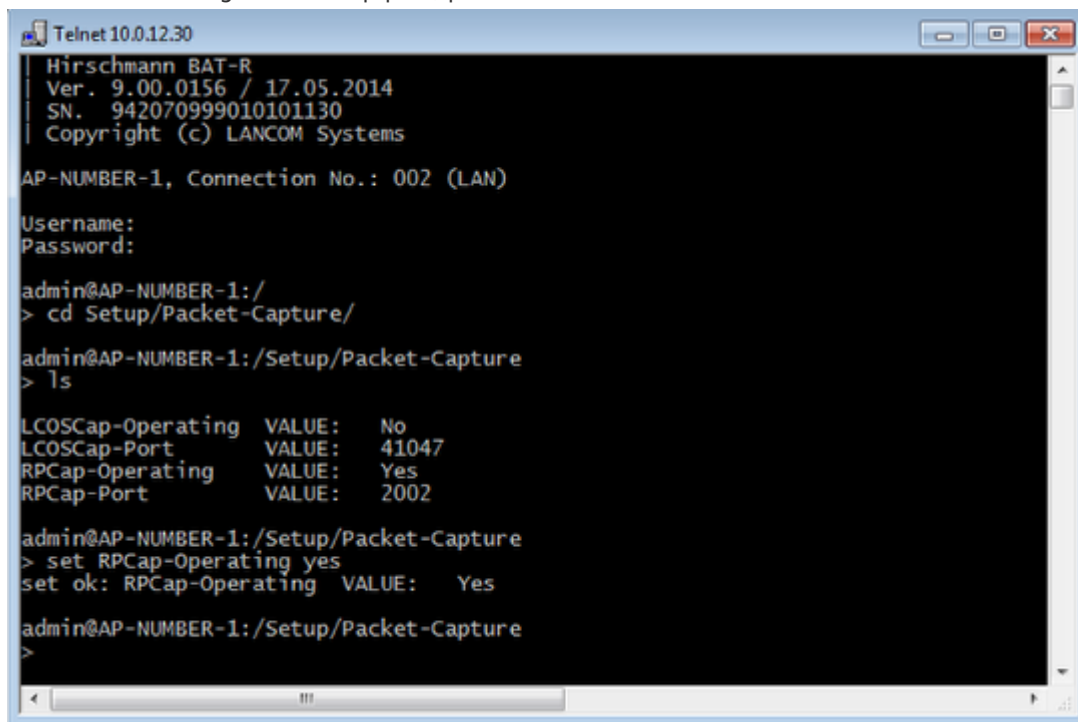
- 2018-02-21 - BAT, WLC (HiLCOS)

This lesson explains via a few steps how to use the RPCap function to capture traffic remotely on specific interface(s) of the BAT devices (rel 8.90)

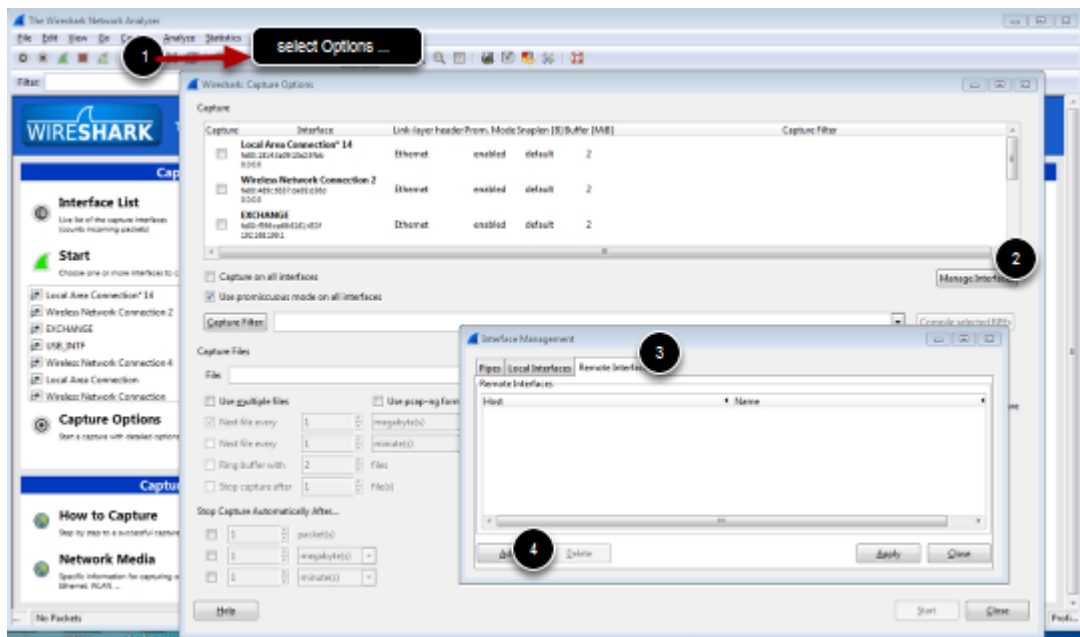
Enable RPCap on the BAT using the web interface or per CLI



You can also change the RPCap port, per default it's 2002

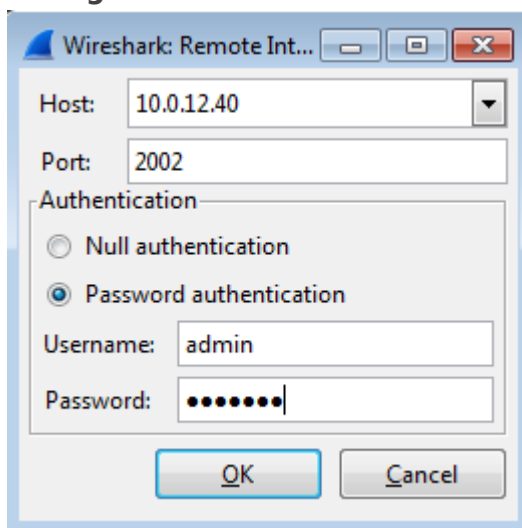


Add remote interfaces in wireshark options



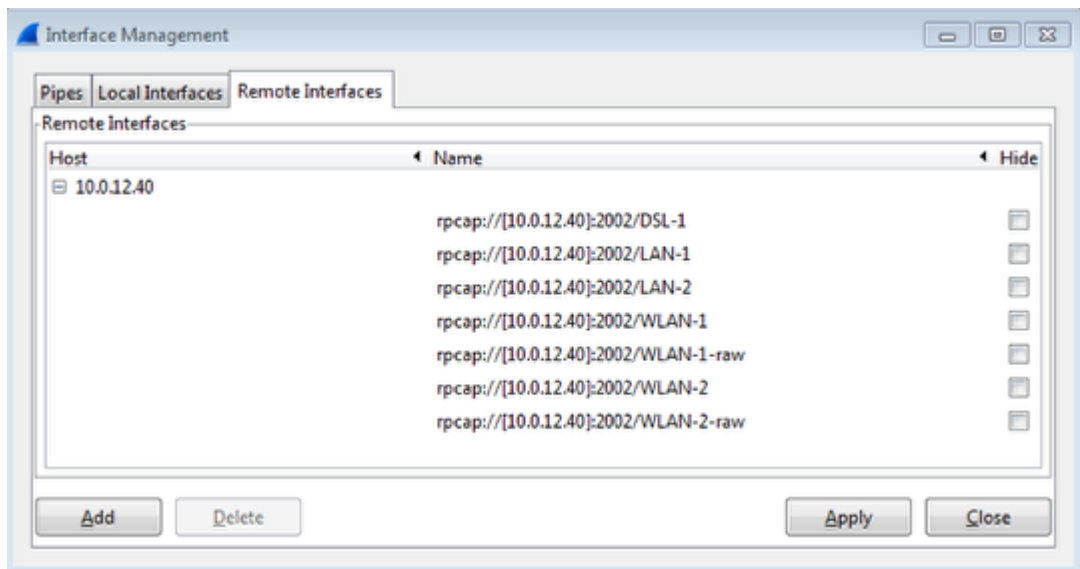
From Wireshark main Windows, open the Capture Options window (Capture/Options...). Click on manage Interface and select the tab Remote Interfaces and click on Add

Configure the BAT as remote device



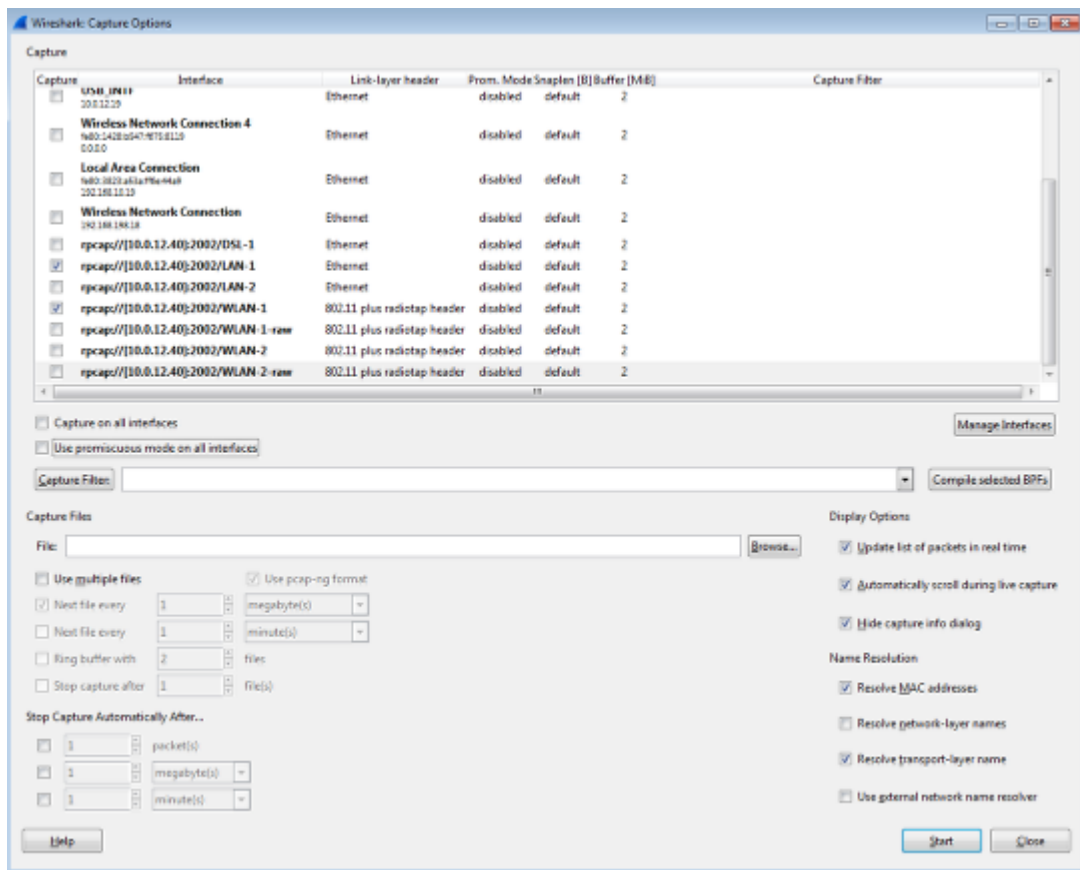
Give the IP address of the BAT, the RCap port relevant username and password to access the device then click ok

RCap gives all the available interfaces on the remote device



click on Apply and Close

From the Capture option Window, the remote interfaces are now available, select the one(s) you want to capture the traffic on.



In this example traffic going through LAN-1 and WLAN-1 will be captured. Then just clic on start

Result view

The screenshot shows the Wireshark interface with a packet capture on interface 1. The packet list displays various traffic, including TCP connections and RPL (Radio Link Protocol) packets. The packet details pane for the selected packet (No. 1) shows the IEEE 802.11 header and the RPL packet structure. The packet bytes pane shows the raw data in hexadecimal and ASCII.

No.	Time	Date	Source	Destination	Protocol	Info
1	0.000000000	2016-02-07 07:34:42.124451000	10.0.12.40	10.0.12.19	TCP	mailbox > tdsos190 [ACK] Seq=1 Ack=1
2	0.000477000	2016-02-07 07:34:42.125130000	10.0.12.19	10.0.12.40	TCP	mosaicssysv1 > globe [ACK] Seq=1 Ack=1
3	0.001054000	2016-02-07 07:34:42.125707000	10.0.12.40	10.0.12.19	TCP	globe > mosaicssysv1 [ACK] Seq=1 Ack=1
4	0.002523000	2016-02-07 07:34:42.127174000	10.0.12.19	10.0.12.40	TCP	[TCP Previous segment not captured]
5	0.037883000	2016-02-07 07:34:42.162536000	JuniperN_72:9b:00	Broadcast	802.11	Beacon frame, Ss=618, Fn=0, Flags=...
6	0.040730000	2016-02-07 07:34:42.165383000	JuniperN_72:9b:04	Broadcast	802.11	Beacon frame, Ss=620, Fn=0, Flags=...
7	0.047596000	2016-02-07 07:34:42.172410000	Sensoint_87:26:ba	Broadcast	802.11	Beacon frame, Ss=1027, Fn=0, Flags=...
8	0.052454000	2016-02-07 07:34:42.177107000	JuniperN_72:9b:00	Broadcast	802.11	Beacon frame, Ss=1067, Fn=0, Flags=...
9	0.053866000	2016-02-07 07:34:42.178529000	JuniperN_72:9b:02	Broadcast	802.11	Beacon frame, Ss=1068, Fn=0, Flags=...
10	0.063072000	2016-02-07 07:34:42.177725000	10.0.12.40	10.0.12.19	TCP	[TCP Acksed unseen segment] globe > m...
11	0.003442000	2016-02-07 07:34:42.128095000	10.0.12.40	10.0.12.19	RPL	update filter reply
12	0.003595000	2016-02-07 07:34:42.128248000	10.0.12.40	10.0.12.19	TCP	[TCP window update] globe > mosaicssy...
13	0.038126000	2016-02-07 07:34:42.162779000	10.0.12.40	10.0.12.19	RPL	Packet
14	0.055322000	2016-02-07 07:34:42.179975000	JuniperN_72:9b:04	Broadcast	802.11	Beacon frame, Ss=2069, Fn=0, Flags=...
15	0.055614000	2016-02-07 07:34:42.180267000	10.0.12.40	10.0.12.19	RPL	Packet
16	0.057542000	2016-02-07 07:34:42.182195000	10.0.12.19	10.0.12.40	TCP	brcontrol > brutus [ACK] Seq=1 Ack=1
17	0.057810000	2016-02-07 07:34:42.182463000	10.0.12.40	10.0.12.19	RPL	Packet
18	0.059263000	2016-02-07 07:34:42.183916000	Hirschma_ff:d2:f3	Broadcast	802.11	Beacon frame, Ss=1092, Fn=0, Flags=...
19	0.089998000	2016-02-07 07:34:42.214651000	Hirschma_ff:d2:f3	Broadcast	802.11	Beacon frame, Ss=1404, Fn=0, Flags=...
20	0.112718000	2016-02-07 07:34:42.237371000	Hirschma_ff:d3:64	Broadcast	802.11	Beacon frame, Ss=2869, Fn=0, Flags=...
21	0.141242000	2016-02-07 07:34:42.265795000	JuniperN_72:9b:00	Broadcast	802.11	Beacon frame, Ss=824, Fn=0, Flags=...

Frame 6: 338 bytes on wire (2704 bits), 338 bytes captured (2704 bits) on interface 1
 RadioTap Header v0, Length 36
 Header revision: 0
 Header pad: 0
 Header length: 36
 Present flags
 MAC timestamp: 383751312
 Flags: 0x00
 Data rate: 2.0 Mb/s
 Channel frequency: 2462 [86.11]
 Channel type: 802.11g (pure-g) (0x00c0)
 SSI signal: -57 dbm
 SSI noise: -87 dbm
 Antenna: 0
 Channel number: 11
 Channel frequency: 2462
 Channel type: unknown (0x00400c0)
 IEEE 802.11 Beacon frame, #Tags:
 IEEE 802.11 Wireless LAN management frame

0000 30 20 24 50 8f 58 04 00 30 7a d8 18 05 50 00 04 ...
 0010 04 04 9e 09 c0 00 c7 a9 00 00 00 00 c0 00 04 00 ...
 0020 0e 09 0b 00 80 00 00 00 ff ff ff ff ff ff 3c 94 ...
 0030 10 12 0b 04 31 84 d5 72 9b 04 c0 26 f9 50 77 6f ...
 0040 0e 00 05 50 84 50 31 84 00 0a 42 47 57 2d 4e 8f ...
 0050 0e 50 6c 75 01 0a 87 70 00 0a 42 47 57 2d 4e 8f ...

Packets: 1229 - Displayed: 1229 (100.0%) - Dropped: 5 (0.4%)

RPL tunnels the traffic between the BAT and the capturing station. Packets from WLAN-1 with radio header and packets from LAN-1 are in the same capture but can be read separately filtering the interface id.