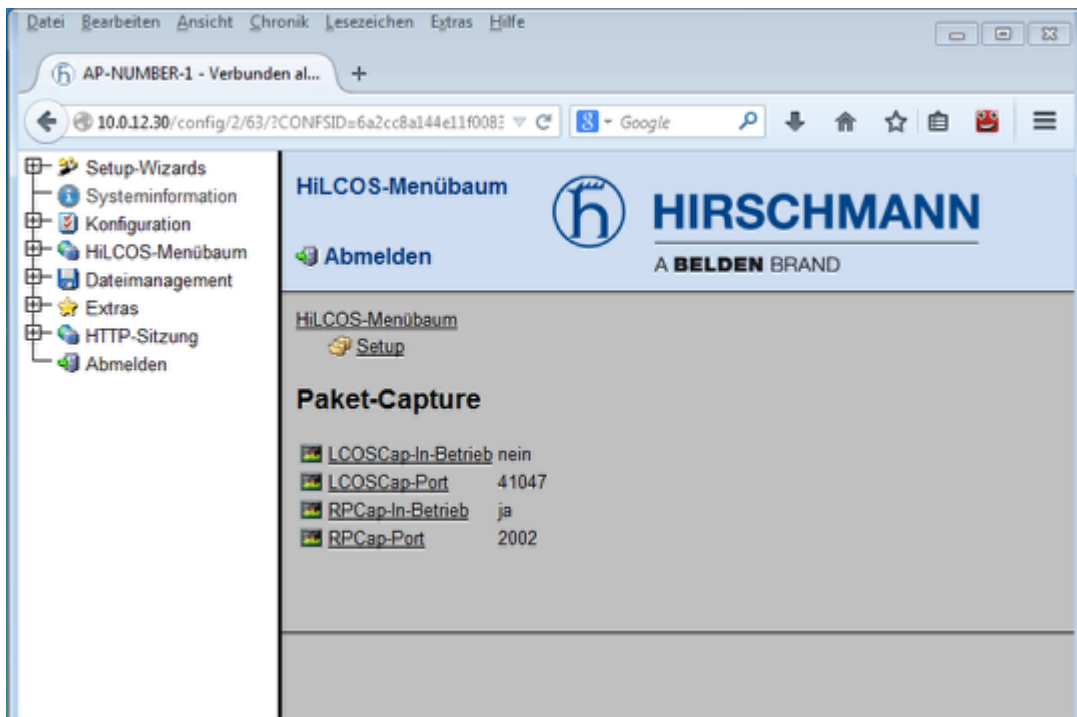


## How to remotely capture the traffic of an Open BAT interface with RPCap function and Wireshark

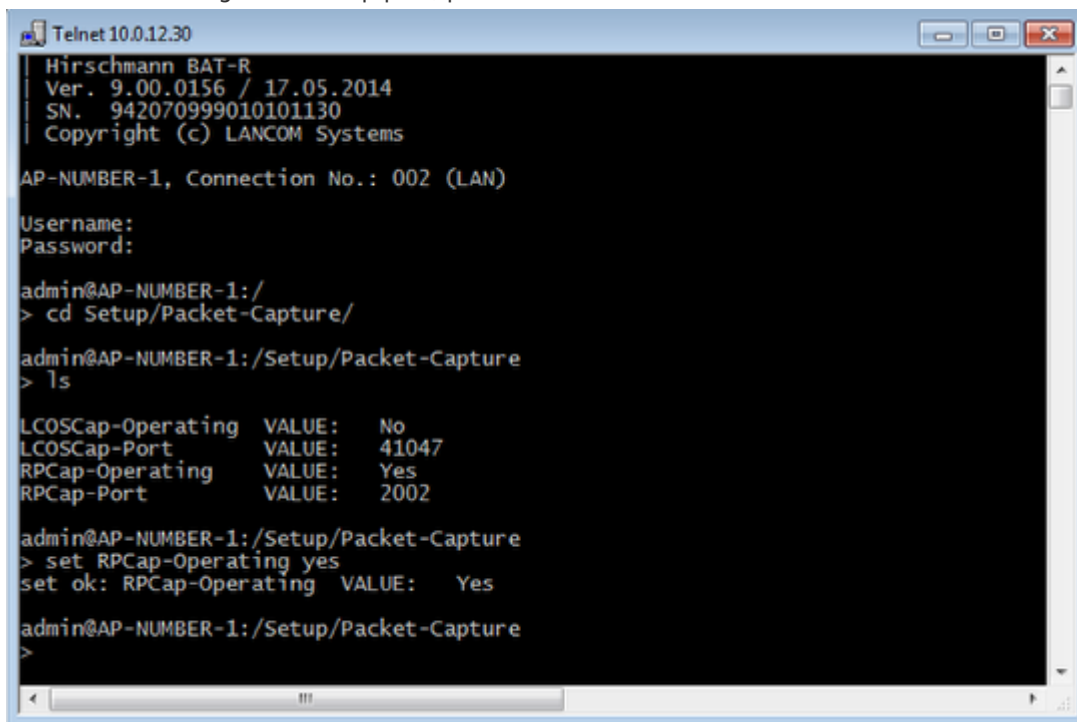
- 2018-02-21 - BAT, WLC (HiLCOS)

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)

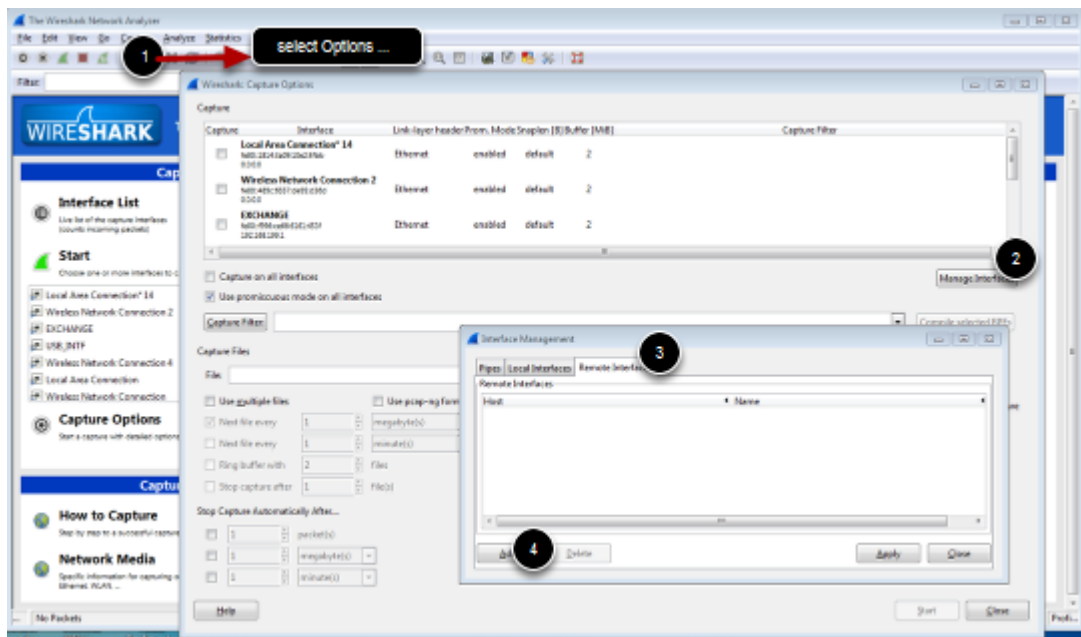
### **Enable RPCap on the BAT using the web interface or per CLI**



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



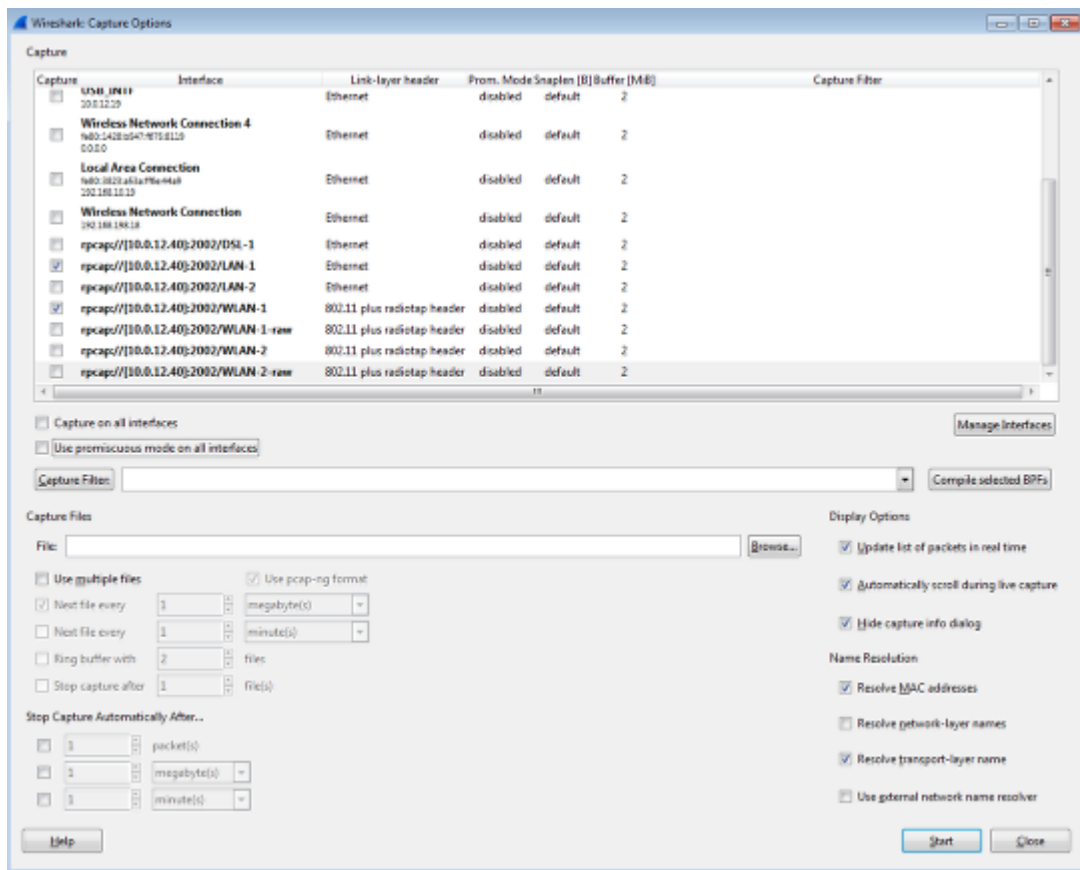
Give the IP address of the BAT, the RCap port relevant username and password to access the device then click ok

### 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 displays the Wireshark network protocol analyzer interface. The main window is titled "2 Interfaces" and shows a list of captured packets. The packet list pane contains the following data:

No.	Time	Date	Source	Destination	Protocol	Info
1	0.000000000	2016-02-07 07:34:42.124453000	10.0.12.40	10.0.12.19	TCP	mailbox > tados190 [ACK] Seq=1 Ack=1
2	0.000477000	2016-02-07 07:34:42.125120000	10.0.12.19	10.0.12.40	TCP	mosaicysysvcl > 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 > mosaicysysvcl [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	Juniper_N_72:9b:00	Broadcast	802.11	Beacon frame, S=618, F=0, Flags=..
6	0.040730000	2016-02-07 07:34:42.165383000	Juniper_N_72:9b:00	Broadcast	802.11	Beacon frame, S=620, F=0, Flags=..
7	0.047590000	2016-02-07 07:34:42.172243000	Senpoint_87:26:8a	Broadcast	802.11	Beacon frame, S=1027, F=0, Flags=..
8	0.052454000	2016-02-07 07:34:42.177107000	Juniper_N_72:9b:00	Broadcast	802.11	Beacon frame, S=1067, F=0, Flags=..
9	0.053866000	2016-02-07 07:34:42.178529000	Juniper_N_72:9b:00	Broadcast	802.11	Beacon frame, S=1068, F=0, Flags=..
10	0.063072000	2016-02-07 07:34:42.177221000	10.0.12.40	10.0.12.19	TCP	[TCP ACKed unseen segment] globe > m
11	0.003442000	2016-02-07 07:34:42.128095000	10.0.12.40	10.0.12.19	RRCAP	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 > mosaicys
13	0.038126000	2016-02-07 07:34:42.162779000	10.0.12.40	10.0.12.19	RRCAP	Packet
14	0.055322000	2016-02-07 07:34:42.179975000	Juniper_N_72:9b:00	Broadcast	802.11	Beacon frame, S=2069, F=0, Flags=..
15	0.055614000	2016-02-07 07:34:42.180267000	10.0.12.40	10.0.12.19	RRCAP	Packet
16	0.057542000	2016-02-07 07:34:42.182193000	10.0.12.19	10.0.12.40	TCP	brcontrol > brutus [ACK] Seq=1 Ack=1
17	0.057810000	2016-02-07 07:34:42.183463000	10.0.12.40	10.0.12.19	RRCAP	Packet
18	0.059263000	2016-02-07 07:34:42.183916000	Hirschma_ff:d2:f3	Broadcast	802.11	Beacon frame, S=1092, F=0, Flags=..
19	0.089998000	2016-02-07 07:34:42.214451000	Hirschma_ff:d2:f3	Broadcast	802.11	Beacon frame, S=1404, F=0, Flags=..
20	0.112718000	2016-02-07 07:34:42.237371000	Hirschma_ff:d5:64	Broadcast	802.11	Beacon frame, S=2869, F=0, Flags=..
21	0.141242000	2016-02-07 07:34:42.265795000	Juniper_N_72:9b:00	Broadcast	802.11	Beacon frame, S=824, F=0, Flags=..
22	0.141524000	2016-02-07 07:34:42.267117000	Broadcast	Broadcast	802.11	Beacon frame, S=824, F=0, Flags=..

The details pane for the selected packet (No. 6) shows the following structure:

- Frame 6: 338 bytes on wire (2704 bits), 338 bytes captured (2704 bits) on interface 1
- IEEE 802.11 Wireless LAN management frame
- IEEE 802.11 Beacon frame, Flags: .....
- Channel type: unknown (0x000400c0)
- Channel frequency: 2462
- Channel number: 11
- Antenna: 0
- SSI noise: -87 dbm
- SSI signal: -57 dbm
- Channel type: 802.11g (pure-g) (0x000c00)
- Present flags
- MAC timestamp: 383351312
- Header length: 36
- Header pad: 0
- Header revision: 0
- RadioTap Header v0, Length 36
- Data rate: 2.0 Mb/s
- Flags: 0x00

The packet bytes pane shows the raw data in hexadecimal and ASCII format:

```

0000  00 20 33 50 8f 58 04 00 3f 7a d8 18 05 00 00 04
0010  04 94 9e 09 c0 00 c7 a9 00 00 00 00 c0 00 04 90
0020  9e 59 0b 00 80 00 00 00 ff ff ff ff ff 3c 94
0030  10 72 9b 04 31 84 d5 72 9b 04 c0 26 f0 00 77 6f
0040  0e 00 05 00 84 00 31 84 00 0a 42 47 57 2d 4e 8f
0050  0e 50 6c 7f 06 08 83 76 0c 00 03 0e 18 01 03 8f
  
```

RPCap 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.