

# 利用Wireshark进行抓包

## 1.实验所需软件

Wireshark

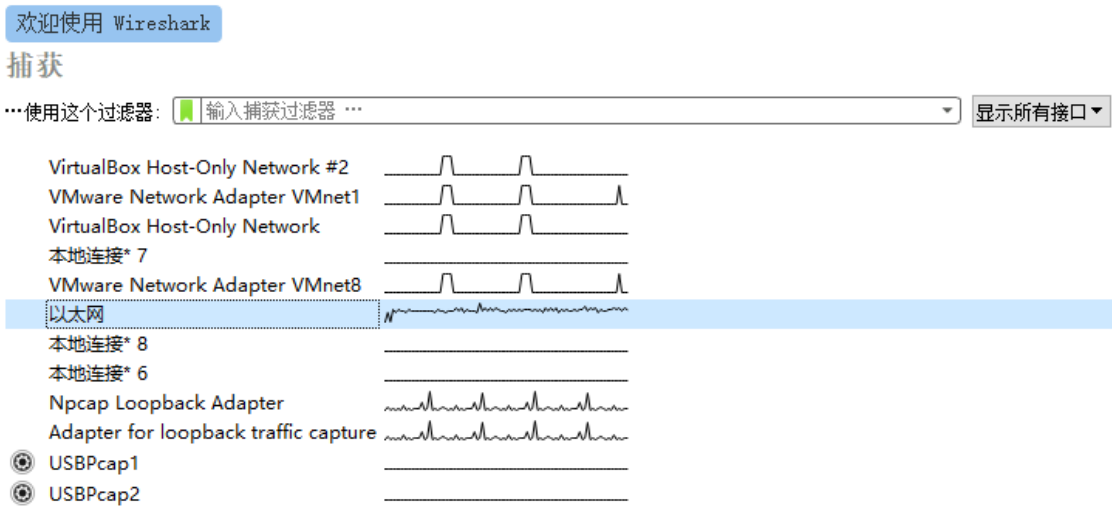
## 2.实验目的

使用工具Wireshark进行抓包

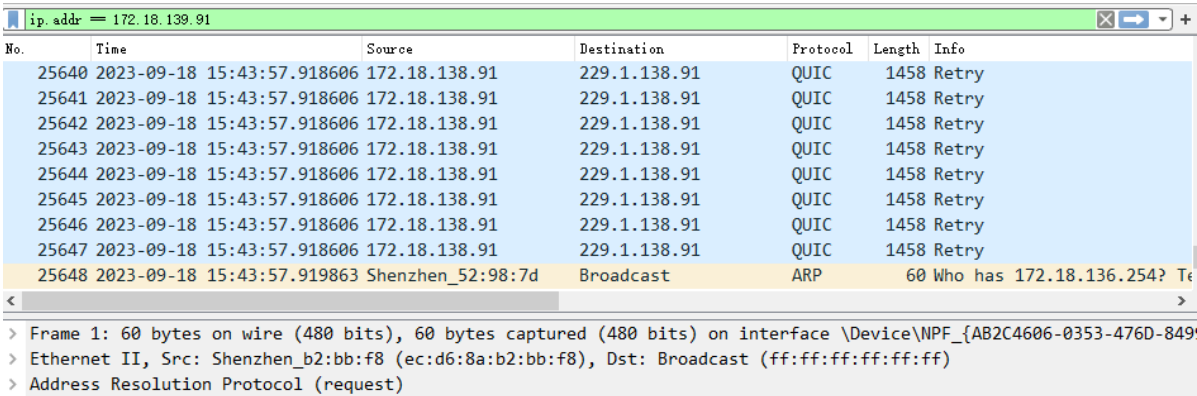
## 3.实验步骤

### 1.筛选出ip地址为172.18.139.91的数据包

(1)打开Wireshark选择以太网



(2)搜索栏输入ip.addr == 172.18.139.91(背景为淡绿色是语法正确 否则就是语法有问题)



(3)输入完毕后回车查看 此时可以看见ip地址都是172.18.139.91

No.	Time	Source	Destination	Protocol	Length	Info
2348...	2023-09-18 15:47:54.157259	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
2348...	2023-09-18 15:47:54.158343	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
2348...	2023-09-18 15:47:54.158343	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
2348...	2023-09-18 15:47:54.158343	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
2348...	2023-09-18 15:47:54.159336	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
2348...	2023-09-18 15:47:54.159336	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
2348...	2023-09-18 15:47:54.159336	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
2348...	2023-09-18 15:47:54.160417	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
2348...	2023-09-18 15:47:54.160417	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
2348...	2023-09-18 15:47:54.160417	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
2348...	2023-09-18 15:47:54.161504	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr

## 2.筛选出源ip地址为172.18.139.91 的数据包

(1)搜索栏输入ip.src == 172.18.139.91 (背景为淡绿色是语法正确 否则就是语法有问题)

ip.src == 172.18.139.91						
No.	Time	Source	Destination	Protocol	Length	Info
22	2023-09-18 15:43:33.162012	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
23	2023-09-18 15:43:33.162012	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
24	2023-09-18 15:43:33.162012	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
25	2023-09-18 15:43:33.163089	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
26	2023-09-18 15:43:33.163089	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
27	2023-09-18 15:43:33.163089	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
28	2023-09-18 15:43:33.164168	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
29	2023-09-18 15:43:33.164168	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
30	2023-09-18 15:43:33.164168	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
32	2023-09-18 15:43:33.165236	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
33	2023-09-18 15:43:33.165236	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
34	2023-09-18 15:43:33.165236	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
35	2023-09-18 15:43:33.166255	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr

(2)输入完毕后回车查看 此时可以看见源ip地址为172.18.139.91

ip.src == 172.18.139.91						
No.	Time	Source	Destination	Protocol	Length	Info
22	2023-09-18 15:43:33.162012	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
23	2023-09-18 15:43:33.162012	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
24	2023-09-18 15:43:33.162012	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
25	2023-09-18 15:43:33.163089	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
26	2023-09-18 15:43:33.163089	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
27	2023-09-18 15:43:33.163089	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
28	2023-09-18 15:43:33.164168	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
29	2023-09-18 15:43:33.164168	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
30	2023-09-18 15:43:33.164168	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
32	2023-09-18 15:43:33.165236	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
33	2023-09-18 15:43:33.165236	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr
34	2023-09-18 15:43:33.165236	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
35	2023-09-18 15:43:33.166255	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (pr

## 3.筛选出目标ip地址为255.255.255.255的数据包

(1)搜索栏输入ip.dst == 255.255.255.255 (背景为淡绿色是语法正确 否则就是语法有问题)

ip.dst == 255.255.255.255						
No.	Time	Source	Destination	Protocol	Length	Info
1870...	2023-09-18 16:22:15.878700	172.18.140.91	255.255.255.255	UDP	135	49617 → 7777 Len=93
1870...	2023-09-18 16:22:16.119668	172.18.139.91	255.255.255.255	ADwin ...	134	
1870...	2023-09-18 16:22:16.904749	172.18.138.91	255.255.255.255	UDP	148	7777 → 7777 Len=106
1870...	2023-09-18 16:22:16.947172	172.18.137.91	255.255.255.255	UDP	149	7777 → 7777 Len=107
1871...	2023-09-18 16:22:17.343784	0.0.0.0	255.255.255.255	DHCP	309	DHCP Discover - Transactio
1871...	2023-09-18 16:22:17.627980	172.18.141.50	255.255.255.255	UDP	150	7777 → 7777 Len=108
1871...	2023-09-18 16:22:17.754354	0.0.0.0	255.255.255.255	DHCP	313	DHCP Discover - Transactio
1872...	2023-09-18 16:22:18.876323	0.0.0.0	255.255.255.255	DHCP	309	DHCP Discover - Transactio
1872...	2023-09-18 16:22:18.878717	172.18.140.91	255.255.255.255	UDP	135	49617 → 7777 Len=93
1872...	2023-09-18 16:22:19.123195	172.18.139.91	255.255.255.255	ADwin ...	134	
1873...	2023-09-18 16:22:19.904995	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777 Len=107
1873...	2023-09-18 16:22:19.946869	172.18.137.91	255.255.255.255	UDP	149	7777 → 7777 Len=107
1873...	2023-09-18 16:22:19.962613	0.0.0.0	255.255.255.255	DHCP	375	DHCP Discover - Transactio

(2)输入完毕后回车查看 此时可以看见目标ip地址为255.255.255.255的数据包

ip.dst == 255.255.255.255							
No.	Time	Source	Destination	Protocol	Length	Info	
1870...	2023-09-18 16:22:15.878700	172.18.140.91	255.255.255.255	UDP	135	49617 → 7777	Len=93
1870...	2023-09-18 16:22:16.119668	172.18.139.91	255.255.255.255	ADwin ...	134		
1870...	2023-09-18 16:22:16.904749	172.18.138.91	255.255.255.255	UDP	148	7777 → 7777	Len=106
1870...	2023-09-18 16:22:16.947172	172.18.137.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
1871...	2023-09-18 16:22:17.343784	0.0.0.0	255.255.255.255	DHCP	309	DHCP Discover - Transacti	
1871...	2023-09-18 16:22:17.627980	172.18.141.50	255.255.255.255	UDP	150	7777 → 7777	Len=108
1871...	2023-09-18 16:22:17.754354	0.0.0.0	255.255.255.255	DHCP	313	DHCP Discover - Transacti	
1872...	2023-09-18 16:22:18.876323	0.0.0.0	255.255.255.255	DHCP	309	DHCP Discover - Transacti	
1872...	2023-09-18 16:22:18.878717	172.18.140.91	255.255.255.255	UDP	135	49617 → 7777	Len=93
1872...	2023-09-18 16:22:19.123195	172.18.139.91	255.255.255.255	ADwin ...	134		
1873...	2023-09-18 16:22:19.904995	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
1873...	2023-09-18 16:22:19.946869	172.18.137.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
1873...	2023-09-18 16:22:19.962613	0.0.0.0	255.255.255.255	DHCP	375	DHCP Discover - Transacti	

## 4.筛选出源ip地址为172.18.138.91 目标ip地址为255.255.255.255的数据包

(1)搜索栏输入ip.src == 172.18.138.91 && ip.dst == 255.255.255.255 (背景为淡绿色是语法正确 否则就是语法有问题)

ip.src == 172.18.138.91 && ip.dst == 255.255.255.255							
No.	Time	Source	Destination	Protocol	Length	Info	
2016...	2023-09-18 16:25:43.915211	172.18.138.91	255.255.255.255	UDP	148	7777 → 7777	Len=106
2018...	2023-09-18 16:25:46.915473	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2021...	2023-09-18 16:25:49.915016	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2023...	2023-09-18 16:25:52.915259	172.18.138.91	255.255.255.255	UDP	148	7777 → 7777	Len=106
2025...	2023-09-18 16:25:55.905185	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2027...	2023-09-18 16:25:58.905051	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2029...	2023-09-18 16:26:01.905017	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2031...	2023-09-18 16:26:04.905225	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2033...	2023-09-18 16:26:07.905043	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2035...	2023-09-18 16:26:10.905227	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2037...	2023-09-18 16:26:13.905187	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2038...	2023-09-18 16:26:16.905286	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2040...	2023-09-18 16:26:19.905216	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107

(2)输入完毕后回车查看 此时可以看见源ip地址为172.18.138.91 目标地址为255.255.255.255的数据包

ip.src == 172.18.138.91 && ip.dst == 255.255.255.255							
No.	Time	Source	Destination	Protocol	Length	Info	
2016...	2023-09-18 16:25:43.915211	172.18.138.91	255.255.255.255	UDP	148	7777 → 7777	Len=106
2018...	2023-09-18 16:25:46.915473	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2021...	2023-09-18 16:25:49.915016	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2023...	2023-09-18 16:25:52.915259	172.18.138.91	255.255.255.255	UDP	148	7777 → 7777	Len=106
2025...	2023-09-18 16:25:55.905185	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2027...	2023-09-18 16:25:58.905051	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2029...	2023-09-18 16:26:01.905017	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2031...	2023-09-18 16:26:04.905225	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2033...	2023-09-18 16:26:07.905043	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2035...	2023-09-18 16:26:10.905227	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2037...	2023-09-18 16:26:13.905187	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2038...	2023-09-18 16:26:16.905286	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107
2040...	2023-09-18 16:26:19.905216	172.18.138.91	255.255.255.255	UDP	149	7777 → 7777	Len=107

## 5.筛选出mac地址为eth.src == 00:07:3e:a7:27:0b的数据包

(1)搜索栏输入eth.src == 00:07:3e:a7:27:0b (背景为淡绿色是语法正确 否则就是语法有问题)

eth.src == 00:07:3e:a7:27:0b						
No.	Time	Source	Destination	Protocol	Length	Info
43	2023-09-18 15:43:33.168337	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol
44	2023-09-18 15:43:33.168337	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol
45	2023-09-18 15:43:33.168337	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
46	2023-09-18 15:43:33.169400	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol
47	2023-09-18 15:43:33.169400	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol
48	2023-09-18 15:43:33.169400	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
49	2023-09-18 15:43:33.170481	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol
50	2023-09-18 15:43:33.170481	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol
51	2023-09-18 15:43:33.170481	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
52	2023-09-18 15:43:33.171549	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol
53	2023-09-18 15:43:33.171549	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol
54	2023-09-18 15:43:33.171549	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
55	2023-09-18 15:43:33.172623	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol

(2)输入完毕后回车查看 此时可以看见MAC地址为 00:07:3e:a7:27:0b的数据包

eth.src == 00:07:3e:a7:27:0b						
No.	Time	Source	Destination	Protocol	Length	Info
22	2023-09-18 15:43:33.162012	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (
23	2023-09-18 15:43:33.162012	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (
24	2023-09-18 15:43:33.162012	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
25	2023-09-18 15:43:33.163089	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (
26	2023-09-18 15:43:33.163089	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (
27	2023-09-18 15:43:33.163089	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
28	2023-09-18 15:43:33.164168	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (
29	2023-09-18 15:43:33.164168	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (
30	2023-09-18 15:43:33.164168	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
32	2023-09-18 15:43:33.165236	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (
33	2023-09-18 15:43:33.165236	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (
34	2023-09-18 15:43:33.165236	172.18.139.91	229.0.139.91	UDP	1096	54678 → 7778 Len=4014
35	2023-09-18 15:43:33.166255	172.18.139.91	229.0.139.91	IPv4	1514	Fragmented IP protocol (

Address: IPv4mcast\_8b:5b (01:00:5e:00:8b:5b)

.... ..0. .... = LG bit: Globally unique address (factory default)

.... ..1. .... = IG bit: Group address (multicast/broadcast)

Source: ChinaGre\_a7:27:0b (00:07:3e:a7:27:0b)

Address: ChinaGre\_a7:27:0b (00:07:3e:a7:27:0b)

.... ..0. .... = LG bit: Globally unique address (factory default)

.... ..0. .... = IG bit: Individual address (unicast)

## 6.筛选出TCP的数据包

(1)搜索栏输入tcp (背景为淡绿色是语法正确 否则就是语法有问题)

tcp						
No.	Time	Source	Destination	Protocol	Length	Info
2331...	2023-09-18 16:34:18.819293	172.18.136.251	172.18.138.84	TCP	60	678 → 49706 [ACK] Seq=535:
2331...	2023-09-18 16:34:19.622144	172.18.138.84	52.165.165.26	TCP	265	[TCP Retransmission] 6050:
2332...	2023-09-18 16:34:19.796828	172.18.138.91	172.18.138.84	TCP	74	9003 → 62652 [PSH, ACK] Se
2332...	2023-09-18 16:34:19.836919	172.18.138.84	172.18.138.91	TCP	54	62652 → 9003 [ACK] Seq=876
2332...	2023-09-18 16:34:20.527030	172.18.138.84	172.18.138.91	TCP	1514	62652 → 9003 [ACK] Seq=876
2332...	2023-09-18 16:34:20.527030	172.18.138.84	172.18.138.91	TCP	121	62652 → 9003 [PSH, ACK] Se
2332...	2023-09-18 16:34:20.527441	172.18.138.91	172.18.138.84	TCP	60	9003 → 62652 [ACK] Seq=12:
2332...	2023-09-18 16:34:20.650841	172.18.138.84	172.18.136.251	TCP	114	49706 → 678 [PSH, ACK] Seq
2332...	2023-09-18 16:34:20.650942	172.18.136.251	172.18.138.84	TCP	60	678 → 49706 [ACK] Seq=535:
2332...	2023-09-18 16:34:21.489331	172.18.138.84	172.18.138.91	TCP	55	[TCP Keep-Alive] 62677 → :
2332...	2023-09-18 16:34:21.489667	172.18.138.91	172.18.138.84	TCP	66	[TCP Keep-Alive ACK] 9002
2333...	2023-09-18 16:34:22.015594	172.18.138.91	172.18.138.84	TCP	60	[TCP Keep-Alive] 9002 → 6:
2333...	2023-09-18 16:34:22.015648	172.18.138.84	172.18.138.91	TCP	66	[TCP Keep-Alive ACK] 6267:

(2)输入完毕后回车查看 此时可以看见所有协议为TCP的数据包



No.	Time	Source	Destination	Protocol	Length	Info
2331...	2023-09-18 16:34:18.819293	172.18.136.251	172.18.138.84	TCP	60	678 → 49706 [ACK] Seq=5353
2331...	2023-09-18 16:34:19.622144	172.18.138.84	52.165.165.26	TCP	265	[TCP Retransmission] 60503
2332...	2023-09-18 16:34:19.796828	172.18.138.91	172.18.138.84	TCP	74	9003 → 62652 [PSH, ACK] Seq=876
2332...	2023-09-18 16:34:19.836919	172.18.138.84	172.18.138.91	TCP	54	62652 → 9003 [ACK] Seq=876
2332...	2023-09-18 16:34:20.527030	172.18.138.84	172.18.138.91	TCP	1514	62652 → 9003 [ACK] Seq=876
2332...	2023-09-18 16:34:20.527030	172.18.138.84	172.18.138.91	TCP	121	62652 → 9003 [PSH, ACK] Seq=876
2332...	2023-09-18 16:34:20.527441	172.18.138.91	172.18.138.84	TCP	60	9003 → 62652 [ACK] Seq=121
2332...	2023-09-18 16:34:20.650841	172.18.138.84	172.18.136.251	TCP	114	49706 → 678 [PSH, ACK] Seq=5353
2332...	2023-09-18 16:34:20.650942	172.18.136.251	172.18.138.84	TCP	60	678 → 49706 [ACK] Seq=5353
2332...	2023-09-18 16:34:21.489331	172.18.138.84	172.18.138.91	TCP	55	[TCP Keep-Alive] 62677 → 9003
2332...	2023-09-18 16:34:21.489667	172.18.138.91	172.18.138.84	TCP	66	[TCP Keep-Alive ACK] 9002 → 62677
2333...	2023-09-18 16:34:22.015594	172.18.138.91	172.18.138.84	TCP	60	[TCP Keep-Alive] 9002 → 62677
2333...	2023-09-18 16:34:22.015648	172.18.138.84	172.18.138.91	TCP	66	[TCP Keep-Alive ACK] 62677 → 9002

## 7.筛选出不是TCP的数据包

(1)搜索栏输入!tcp (背景为淡绿色是语法正确 否则就是语法有问题)

No.	Time	Source	Destination	Protocol	Length	Info
2366...	2023-09-18 16:35:33.935252	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.935252	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.935828	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936249	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936249	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936249	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936249	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936832	172.18.141.50	229.1.141.50	QUIC	1458	Retry

(2)输入完毕后回车查看 此时可以看见所有协议不为TCP的数据包

No.	Time	Source	Destination	Protocol	Length	Info
2366...	2023-09-18 16:35:33.935252	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.935252	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.935828	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936043	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936249	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936249	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936249	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936249	172.18.141.50	229.1.141.50	QUIC	1458	Retry
2366...	2023-09-18 16:35:33.936832	172.18.141.50	229.1.141.50	QUIC	1458	Retry

## 8.筛选出端口是80的数据包

(1)搜索栏输入tcp.port == 80 (背景为淡绿色是语法正确 否则就是语法有问题)



tcp.port == 80 && ip.src == 172.18.138.84							
No.	Time	Source	Destination	Protocol	Length	Info	
1843...	2023-09-18 16:21:36.029526	172.18.138.84	58.254.137.162	TCP	66	54897 → 80 [SYN] Seq=0 Win	
1843...	2023-09-18 16:21:36.065034	172.18.138.84	58.254.137.162	TCP	54	54897 → 80 [ACK] Seq=1 Ack	
1843...	2023-09-18 16:21:36.065163	172.18.138.84	58.254.137.162	TCP	901	54897 → 80 [PSH, ACK] Seq=	
1843...	2023-09-18 16:21:36.065188	172.18.138.84	58.254.137.162	TCP	1510	54897 → 80 [ACK] Seq=848 /	
1843...	2023-09-18 16:21:36.065188	172.18.138.84	58.254.137.162	TCP	1510	54897 → 80 [ACK] Seq=2304	
1843...	2023-09-18 16:21:36.065188	172.18.138.84	58.254.137.162	TCP	1510	54897 → 80 [ACK] Seq=3760	
1843...	2023-09-18 16:21:36.065188	172.18.138.84	58.254.137.162	TCP	1510	54897 → 80 [ACK] Seq=5216	
1843...	2023-09-18 16:21:36.065188	172.18.138.84	58.254.137.162	TCP	1510	54897 → 80 [ACK] Seq=6672	
1843...	2023-09-18 16:21:36.065188	172.18.138.84	58.254.137.162	TCP	1510	54897 → 80 [ACK] Seq=8128	
1843...	2023-09-18 16:21:36.065188	172.18.138.84	58.254.137.162	TCP	1510	54897 → 80 [ACK] Seq=9584	
1843...	2023-09-18 16:21:36.065188	172.18.138.84	58.254.137.162	TCP	1510	54897 → 80 [ACK] Seq=11040	
1843...	2023-09-18 16:21:36.065188	172.18.138.84	58.254.137.162	TCP	1510	54897 → 80 [ACK] Seq=12496	
1843...	2023-09-18 16:21:36.100896	172.18.138.84	58.254.137.162	TCP	1510	54897 → 80 [ACK] Seq=13952	
1843...	2023-09-18 16:21:36.100896	172.18.138.84	58.254.137.162	TCP	1510	54897 → 80 [ACK] Seq=15408	
1843...	2023-09-18 16:21:36.100896	172.18.138.84	58.254.137.162	TCP	1510	54897 → 80 [PSH, ACK] Seq=	
1843...	2023-09-18 16:21:36.100896	172.18.138.84	58.254.137.162	HTTP	774	POST /uma/v2 HTTP/1.1 (a	
1844...	2023-09-18 16:21:36.231371	172.18.138.84	58.254.137.162	TCP	54	54897 → 80 [ACK] Seq=19040	
1873...	2023-09-18 16:22:21.197387	172.18.138.84	58.254.137.162	TCP	55	[TCP Keep-Alive] 54897 → 8	
1904...	2023-09-18 16:23:06.238023	172.18.138.84	58.254.137.162	TCP	55	[TCP Keep-Alive] 54897 → 8	

## 10.应用层过滤

(1)搜索栏输入http.request (背景为淡绿色是语法正确 否则就是语法有问题)

http.request							
No.	Time	Source	Destination	Protocol	Length	Info	
2488...	2023-09-18 16:42:31.362070	172.18.138.69	239.255.255.250	SSDP	215	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:31.453393	172.18.141.36	239.255.255.250	SSDP	217	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:31.493871	172.18.137.74	239.255.255.250	SSDP	179	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:31.501139	172.18.140.36	239.255.255.250	SSDP	208	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:31.608243	172.18.138.72	239.255.255.250	SSDP	215	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:31.644425	172.18.137.6	239.255.255.250	SSDP	217	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:31.719566	172.18.140.46	239.255.255.250	SSDP	208	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:32.058329	172.18.138.73	239.255.255.250	SSDP	215	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:32.062758	172.18.138.82	239.255.255.250	SSDP	215	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:32.209207	172.18.140.1	239.255.255.250	SSDP	208	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:32.377750	172.18.138.69	239.255.255.250	SSDP	215	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:32.461454	172.18.141.36	239.255.255.250	SSDP	217	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:32.501188	172.18.140.36	239.255.255.250	SSDP	208	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:32.612491	172.18.138.72	239.255.255.250	SSDP	215	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:32.656416	172.18.137.6	239.255.255.250	SSDP	217	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:32.720101	172.18.140.46	239.255.255.250	SSDP	208	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:32.861798	172.18.138.9	239.255.255.250	SSDP	215	M-SEARCH * HTTP/1.1	
2488...	2023-09-18 16:42:32.915290	172.18.137.77	239.255.255.250	SSDP	179	M-SEARCH * HTTP/1.1	

源IP地址在变化 目标ip地址都是239.255.255.250

(2)搜索栏输入http.response (背景为淡绿色是语法正确 否则就是语法有问题)

http.response							
No.	Time	Source	Destination	Protocol	Length	Info	
4287...	2023-09-18 15:53:11.073551	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
4799...	2023-09-18 15:54:41.059494	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
5312...	2023-09-18 15:56:11.069122	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
5976...	2023-09-18 15:57:41.073821	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
6639...	2023-09-18 15:59:11.090246	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
7257...	2023-09-18 16:00:41.070108	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
7763...	2023-09-18 16:02:11.078694	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
8353...	2023-09-18 16:03:41.073085	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
9055...	2023-09-18 16:05:11.073117	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
9652...	2023-09-18 16:06:41.062638	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
1053...	2023-09-18 16:08:11.072560	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
1183...	2023-09-18 16:09:41.074961	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
1303...	2023-09-18 16:11:11.084493	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
1405...	2023-09-18 16:12:44.492415	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
1483...	2023-09-18 16:14:11.058507	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
1559...	2023-09-18 16:15:41.080270	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
1637...	2023-09-18 16:17:11.084351	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
1714...	2023-09-18 16:18:41.065160	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	
1784...	2023-09-18 16:20:11.074740	172.18.136.251	172.18.138.84	HTTP/J...	60	HTTP/1.1 200 OK , Java	

部分的源IP和目标IP相同

(2)搜索栏输入http.request.method == "GET" (背景为淡绿色是语法正确 否则就是语法有问题)



http.request.method == "GET"							
No.	Time	Source	Destination	Protocol	Length	Info	
4285...	2023-09-18 15:53:10.793674	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
4797...	2023-09-18 15:54:40.786188	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
5310...	2023-09-18 15:56:10.792909	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
5974...	2023-09-18 15:57:40.790052	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
6637...	2023-09-18 15:59:10.793308	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
7256...	2023-09-18 16:00:40.792183	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
7761...	2023-09-18 16:02:10.790975	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
8350...	2023-09-18 16:03:40.790560	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
9053...	2023-09-18 16:05:10.786766	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
9650...	2023-09-18 16:06:40.785830	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
1053...	2023-09-18 16:08:10.796932	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
1183...	2023-09-18 16:09:40.782866	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
1303...	2023-09-18 16:11:10.788278	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
1401...	2023-09-18 16:12:40.790433	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
1483...	2023-09-18 16:14:10.775528	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
1558...	2023-09-18 16:15:40.797385	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
1637...	2023-09-18 16:17:10.793153	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
1714...	2023-09-18 16:18:40.788075	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil
1784...	2023-09-18 16:20:10.797333	172.18.138.84	172.18.136.251	HTTP	283	GET	/thor/instance/fil

页面信息都显示HTTP GET方法的请求

(3)搜索栏输入http.request.uri contains ".php"(背景为淡绿色是语法正确 否则就是语法有问题)

http.request.uri contains ".php"							
No.	Time	Source	Destination	Protocol	Length	Info	
6	0.040110	192.168.3.10	123.6.47.171	HTTP	1032	POST	/cloudquery.php HTTP/1.1
1766	24.321825	192.168.3.10	123.6.47.171	HTTP	896	POST	/cloudquery.php HTTP/1.1
3788	79.034306	192.168.3.10	123.6.47.171	HTTP	824	POST	/cloudquery.php HTTP/1.1
4335	225.607090	192.168.3.10	123.6.47.171	HTTP	832	POST	/cloudquery.php HTTP/1.1
4356	225.738149	192.168.3.10	123.6.47.171	HTTP	816	POST	/cloudquery.php HTTP/1.1
4444	225.902908	192.168.3.10	123.6.47.171	HTTP	832	POST	/cloudquery.php HTTP/1.1
4533	226.026166	192.168.3.10	123.6.47.171	HTTP	840	POST	/cloudquery.php HTTP/1.1
7257	349.944131	192.168.3.10	210.52.217.139	HTTP	640	POST	/cloudquery.php HTTP/1.1
8420	477.127702	192.168.3.10	123.6.47.171	HTTP	776	POST	/cloudquery.php HTTP/1.1
8603	478.856798	192.168.3.10	123.6.47.171	HTTP	768	POST	/cloudquery.php HTTP/1.1

## 11.使用ICMP协议抓取百度的数据包

(1)在cmd下执行ping [www.baidu.com](http://www.baidu.com) -t 命令 显示百度的IP地址为153.3.238.102

```
C:\Users\tjw26>ping www.baidu.com -t

正在 Ping www.a.shifen.com [153.3.238.102] 具有 32 字节的数据:
来自 153.3.238.102 的回复: 字节=32 时间=20ms TTL=53
来自 153.3.238.102 的回复: 字节=32 时间=20ms TTL=53
来自 153.3.238.102 的回复: 字节=32 时间=20ms TTL=53
来自 153.3.238.102 的回复: 字节=32 时间=20ms TTL=53
来自 153.3.238.102 的回复: 字节=32 时间=19ms TTL=53
来自 153.3.238.102 的回复: 字节=32 时间=20ms TTL=53

153.3.238.102 的 Ping 统计信息:
    数据包: 已发送 = 6, 已接收 = 6, 丢失 = 0 (0% 丢失),
往返行程的估计时间(以毫秒为单位):
    最短 = 19ms, 最长 = 20ms, 平均 = 19ms
```

(2)在Wireshark中输入 ip.addr == 153.3.238.102 and icmp



ip.addr == 153.3.238.102 and icmp						
No.	Time	Source	Destination	Protocol	Length	Info
10442	625.583181	192.168.3.10	153.3.238.102	ICMP	74	Echo (ping) request id=0x0001, seq=1/256, ttl=64 (rep
10443	625.603465	153.3.238.102	192.168.3.10	ICMP	74	Echo (ping) reply id=0x0001, seq=1/256, ttl=53 (req
10450	626.586455	192.168.3.10	153.3.238.102	ICMP	74	Echo (ping) request id=0x0001, seq=2/512, ttl=64 (rep
10451	626.607265	153.3.238.102	192.168.3.10	ICMP	74	Echo (ping) reply id=0x0001, seq=2/512, ttl=53 (req
10460	627.591429	192.168.3.10	153.3.238.102	ICMP	74	Echo (ping) request id=0x0001, seq=3/768, ttl=64 (rep
10461	627.611418	153.3.238.102	192.168.3.10	ICMP	74	Echo (ping) reply id=0x0001, seq=3/768, ttl=53 (req
10470	628.595165	192.168.3.10	153.3.238.102	ICMP	74	Echo (ping) request id=0x0001, seq=4/1024, ttl=64 (rep
10471	628.615290	153.3.238.102	192.168.3.10	ICMP	74	Echo (ping) reply id=0x0001, seq=4/1024, ttl=53 (req
10486	629.598588	192.168.3.10	153.3.238.102	ICMP	74	Echo (ping) request id=0x0001, seq=5/1280, ttl=64 (rep
10487	629.618141	153.3.238.102	192.168.3.10	ICMP	74	Echo (ping) reply id=0x0001, seq=5/1280, ttl=53 (req
10522	630.601709	192.168.3.10	153.3.238.102	ICMP	74	Echo (ping) request id=0x0001, seq=6/1536, ttl=64 (rep
10523	630.621517	153.3.238.102	192.168.3.10	ICMP	74	Echo (ping) reply id=0x0001, seq=6/1536, ttl=53 (req

> Frame 10442: 74 bytes	0000	a4 c7 4b 5e ca c8 ce d3 96 50 5e 0b 08 00 45 00	..K^....P^...E..
> Ethernet II, Src: ce:d3:96:50:5e:0b (ce:d3:96:50:5e:0b), Dst: HuaweiDe_5e:ca:c8 (a4:c7:4b:5e:ca:c8)	0010	00 3c 80 ed 00 00 40 01 00 00 c0 a8 03 0a 99 03	<....@.....
> Internet Protocol Version 4, Src: 192.168.3.10, Dst: 153.3.238.102	0020	ee 66 08 00 4d 5a 00 01 00 01 61 62 63 64 65 66	.f..MZ...abcdef
> Internet Control Message Protocol, Src: 192.168.3.10, Dst: 153.3.238.102	0030	67 68 69 6a 6b 6c 6d 6e 6f 70 71 72 73 74 75 76	ghijklmnopqrstuv
	0040	77 61 62 63 64 65 66 67 68 69	wabcdefg hi

(3)单击串口左侧三角，可显示抓到的数据包详细信息

> Frame 10442: 74 bytes on wire (592 bits), 74 bytes captured (592 bits) on interface \Device\NPF{...}	
> Ethernet II, Src: ce:d3:96:50:5e:0b (ce:d3:96:50:5e:0b), Dst: HuaweiDe_5e:ca:c8 (a4:c7:4b:5e:ca:c8)	
> Destination: HuaweiDe_5e:ca:c8 (a4:c7:4b:5e:ca:c8)	
> Source: ce:d3:96:50:5e:0b (ce:d3:96:50:5e:0b)	
Type: IPv4 (0x0800)	
> Internet Protocol Version 4, Src: 192.168.3.10, Dst: 153.3.238.102	
0100 .... = Version: 4	
.... 0101 = Header Length: 20 bytes (5)	
> Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)	
Total Length: 60	
Identification: 0x80ed (33005)	
> 000. .... = Flags: 0x0	
...0 0000 0000 0000 = Fragment Offset: 0	
Time to Live: 64	