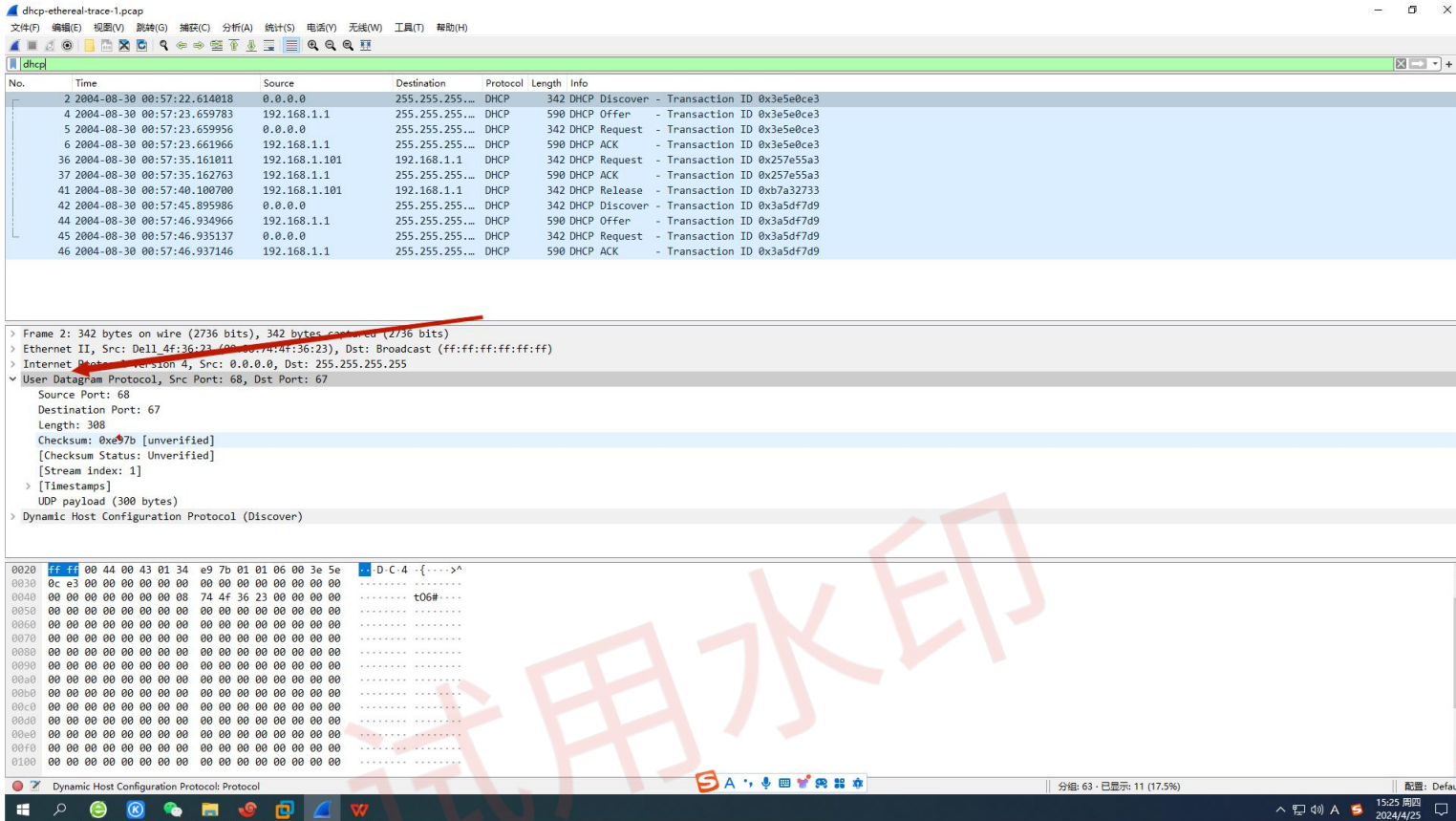


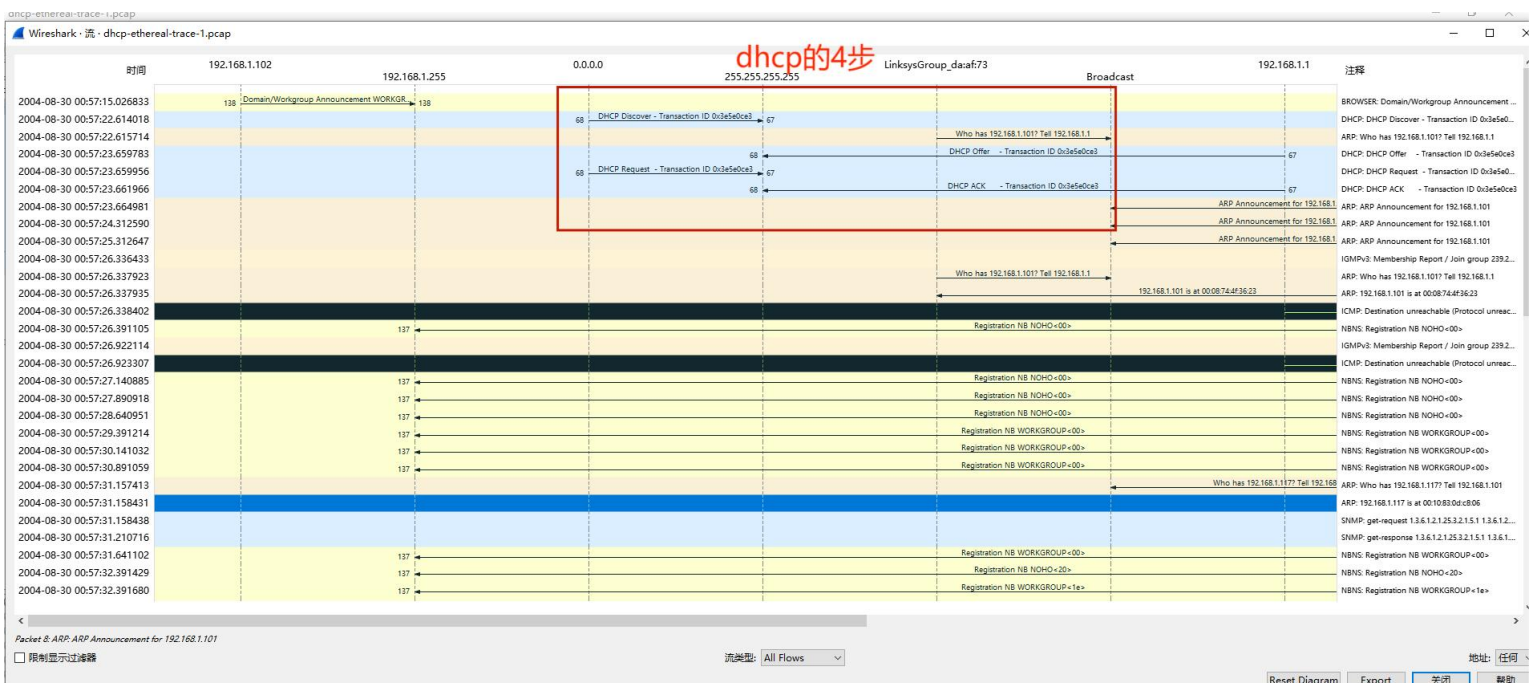
# DHCP\_LAB

## 1. DHCP 消息是通过 UDP 还是 TCP 发送的？

udp



2. 绘制时间流图形。说明客户端和服务端之间第一次四个 DHCP 发现，DHCP 提供，DHCP 请求以及 DHCP 响应的顺序，说明您的结果中对于每个数据包，指示源和目标端口号是否与本实验分配中给出的示例相同？



3. 主机的链路层（例如以太网）地址是什么？

Ethernet II, Src: Dell\_4f:36:23 (00:08:74:4f:36:23), Dst: Broadcast (ff:ff:ff:ff:ff:ff)

4. DHCP 发现消息中的哪些值与 DHCP 请求消息区不同？

dhcpc-ethereal-trace-1.pcap

文件(F) 编辑(E) 视图(V) 跟踪(G) 捕获(C) 分析(A) 统计(S) 电话(V) 无线(W) 工具(T) 帮助(H)

Current filter: dhcp

No.	Time	Source	Destination	Protocol	Length	Info
2	2004-08-30 00:57:22.614018	0.0.0.0	255.255.255...	DHCP	342	DHCP Discover - Transaction ID 0x3e5e0ce3
4	2004-08-30 00:57:23.659783	192.168.1.1	255.255.255...	DHCP	590	DHCP Offer - Transaction ID 0x3e5e0ce3
5	2004-08-30 00:57:23.659956	0.0.0.0	255.255.255...	DHCP	342	DHCP Request - Transaction ID 0x3e5e0ce3
6	2004-08-30 00:57:23.661966	192.168.1.1	255.255.255...	DHCP	590	DHCP ACK - Transaction ID 0x3e5e0ce3
36	2004-08-30 00:57:35.161011	192.168.1.101	192.168.1.1	DHCP	342	DHCP Request - Transaction ID 0x257e55a3
37	2004-08-30 00:57:35.162763	192.168.1.1	255.255.255...	DHCP	590	DHCP ACK - Transaction ID 0x257e55a3
41	2004-08-30 00:57:40.100700	192.168.1.101	192.168.1.1	DHCP	342	DHCP Release - Transaction ID 0xb7a32733
42	2004-08-30 00:57:45.895986	0.0.0.0	255.255.255...	DHCP	342	DHCP Discover - Transaction ID 0x3a5df7d9
44	2004-08-30 00:57:46.934966	192.168.1.1	255.255.255...	DHCP	590	DHCP Offer - Transaction ID 0x3a5df7d9
45	2004-08-30 00:57:46.935137	0.0.0.0	255.255.255...	DHCP	342	DHCP Request - Transaction ID 0x3a5df7d9
46	2004-08-30 00:57:46.937146	192.168.1.1	255.255.255...	DHCP	590	DHCP ACK - Transaction ID 0x3a5df7d9

Message type: Boot Request (1)

Hardware type: Ethernet (0x01)

Hardware address length: 6

Hops: 0

Transaction ID: 0x3e5e0ce3

Seconds elapsed: 0

Bootp flags: 0x0000 (Unicast)

Client IP address: 0.0.0.0

Your (client) IP address: 0.0.0.0

Next server IP address: 0.0.0.0

Relay agent IP address: 0.0.0.0

Client MAC address: Dell\_4f:36:23 (00:08:74:4f:36:23)

Client hardware address padding: 00000000000000000000

Server host name not given

Boot file name not given

Magic cookie: DHCP

Option: (53) DHCP Message Type (Request)

Option: (61) Client identifier

Option: (50) Requested IP Address (192.168.1.101)

Option: (54) DHCP Server Identifier (192.168.1.1)

Option: (12) Host Name

Option: (60) Vendor class identifier

Option: (55) Parameter Request List

Option: (255) End

Padding: 000000000000

0040 00 00 00 00 00 00 00 74 4f 36 23 00 00 00 00

0050 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

0060 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

0070 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Client hardware address padding (dhcp.hwaddr\_padding), 10 byte(s)

360日历为您播报 杭州 阴 23°C

16:01:23

热点持续放送 戳我快速了解>

分钟: 63 · 已显示: 11 (17.5%)

16:01 周四 2024/4/25

5. 第一次四个 DHCP 发现，DHCP 提供，DHCP 请求以及 DHCP 响应的 Transaction-ID 值是多少？Transaction-ID 字段目的是什么。

Transaction-ID : 0x3e5e0ce3，为了区分不同的客户端请求

6. 主机使用 DHCP 获取 IP 地址。主机在 DHCP 的 4 次问询和回答之后获取了地址。请问如果在这 4 次 DHCP 问询和回答中，如果主机没有 IP 地址，那么 IP 数据报的值是什么？请分别指出这 4 个 DHCP 的消息 IP 数据报源地址和目标 IP。

由于没有IP，2次DHCP中主机的源IP和目的IP分别都是0.0.0.0 255.255.255.255  
DHCP服务器响应的DHCP包源IP：192.168.1.1，目标IP：255.255.255.255

7. 您的 DHCP 服务器的 IP 地址是多少？

192.168.1.1

8. 发送 DHCP Offer 消息的 DHCP 服务器 IP 是什么，指示哪条 DHCP 消息包含提供的 DHCP 地址。

192.168.1.1





11. 解释 DHCP offer 消息中路由器和子网掩码字段的用途。

路由器字段表明提供的默认网关，子网掩码字段表明提供的IP属于的子网

12. 作者提供的抓包结果中，DHCP 服务器会向作者提供特定的 IP 地址（请见上面问题 8）。请问客户端是否对第一个提供 DHCP offer 消息的 DHCP 地址接受使用？客户端的响应（DHCP 请求中）哪里是它所要求的地址

会接受提供的IP地址

dhcp-ethereal-trace-1.pcap

文件(F) 编辑(E) 视图(V) 捕获(C) 分析(A) 统计(S) 电话(V) 无线(W) 工具(T) 帮助(H)

Current filter: dhcp

No.	Time	Source	Destination	Protocol	Length	Info
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46	2004-08-30 00:57:46.937146	192.168.1.1	255.255.255...	DHCP	590	DHCP ACK - Transaction ID 0x3a5d7d9

Hardware address length: 6  
Hops: 0  
Transaction ID: 0x3e5e0ce3  
Seconds elapsed: 0  
Bootp flags: 0x0000 (Unicast)  
0... = Broadcast flag: Unicast  
000000000000 = Reserved flags: 0x0000  
Client IP address: 0.0.0.0  
Your (client) IP address: 0.0.0.0  
Next server IP address: 0.0.0.0  
Relay agent IP address: 0.0.0.0  
Client MAC address: Dell\_4f:36:23 (00:08:74:4f:36:23)  
Client hardware address padding: 00000000000000000000  
Server host name not given  
Boot file name not given  
Magic cookie: DHCP  
> Option: (53) DHCP Message Type (Request)  
> Option: (61) Client identifier  
> Option: (50) Requested IP Address (192.168.1.101)  
> Option: (54) DHCP Server Identifier (192.168.1.1)  
> Option: (12) Host Name  
> Option: (60) Vendor class identifier  
> Option: (55) Parameter Request List  
> Option: (255) End  
Padding: 000000000000

0000 ff ff ff ff ff ff 00 08 74 4f 36 23 00 00 45 00 ..... tO6#.. E  
0010 01 48 b3 11 00 00 80 11 86 94 00 00 00 ff ff ..H.....  
0020 ff ff 00 44 00 43 01 34 ae 85 01 01 06 00 3e 5e ...D.C:4.....^  
0030 0c e3 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....  
dhcp-ethereal-trace-1.pcap

分组: 63 · 已显示: 11 (17.5%)

配置: Default

请求的IP地址

13. 解释租约时间的目的。 您的实验中的租约时间有多长？

是为IP能被重复使用，不会造成IP地址池的耗尽。1day

14. DHCP 释放消息的目的是什么？DHCP 服务器是否发出收到客户端 DHCP 释放请求的确认。如果客户端的 DHCP 释放消息丢了会发生什么。

释放租期中IP，dhcp服务器不会发送确认，由于服务器没有收到释放分组，则在租期内不会把此IP租给其他用户

试用水印