



2º Trabalho Laboratorial

Redes de Computadores

Equipa T02G2:

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Sumário

O seguinte relatório foi efetuado no âmbito da unidade curricular de Redes de Computadores (RCOM). O segundo trabalho laboratorial tem como objetivo o desenvolvimento de uma aplicação de download (1^a parte) e configuração e análise de uma rede, através da realização de várias experiências sequenciais (2^a parte).

Podemos dizer que concluímos este trabalho com sucesso, cumprindo todos os objetivos estabelecidos.

Introdução

O segundo trabalho laboratorial pode ser dividido em 2 partes:

- Desenvolvimento de uma **aplicação de download** de ficheiros por FTP, capaz de transferir um ficheiro presente num qualquer servidor FTP;
- **Configuração e estudo de uma rede**: experiências sequenciais e progressivas, de modo a compreender todos os passos efetuados para a sua implementação.

Aplicação de download

A primeira parte do trabalho laboratorial consistiu em desenvolver uma aplicação de download de ficheiros por FTP (File Transfer Protocol), que aceita um link como argumento no seguinte formato: **ftp://[<user>:<password>@]<host>/<url-path>**.

Para esta implementação, estudamos o RFC959 sobre FTP e o RFC1738, sobre o tratamento da informação do URL recebido.

Arquitetura

A nossa aplicação de download começa com um processamento (parsing) do URL nos argumentos que o compõem através da chamada à função **parseArgs**, que completa a struct criada para o efeito (struct args, que contém variáveis para guardar valores de user, password, host, path, filename e IP. O filename é obtido a partir do path processado na função **parseFilename** e para completar a struct é chamada a função **getIPAddress**, cujo código principal já nos tinha sido fornecido.

De seguida, o IP obtido é usado para estabelecer ligação com o socket através da porta 21 (porta do servidor de FTP), através da chamada à função **openConnectSocketServer**.

Estabelecida a ligação com o socket, estamos prontos para “trocar” mensagens. Neste processo, usamos essencialmente 2 funções:

- **receiving**: função que lê o buffer do socket e devolve ao terminal essa informação;
- **sending**: função que envia ao socket um comando passado como argumento.

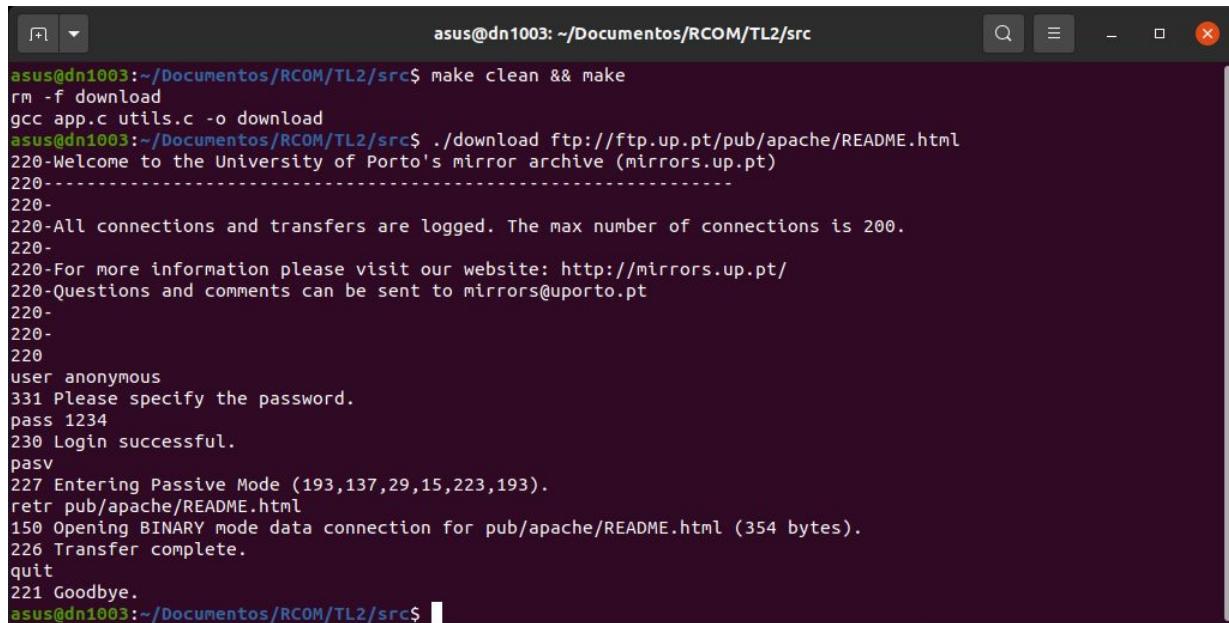
Com essas 2 funções, conseguimos fazer “login”, enviando os comandos **user** e **pass**, e entrar em modo passivo pelo envio do comando **pasv**.

Neste último envio, temos uma função extra, **receivingPasvCommand**, que atualiza o valor de 2 novas variáveis ip (para confirmar que coincide com o IP inicialmente recebido) e port (porta onde se vai abrir o socket para o efetivo download do ficheiro).

Concluído todo este processo e estabelecendo ligação com o novo socket, só é necessário enviar o comando **retr path/to/file.txt**, receber a resposta e começar a transferência do ficheiro através da função **downloadFile**: é enviado o file descriptor do novo socket e o nome do ficheiro a ser transferido e enquanto vamos lendo, vamos escrevendo no novo ficheiro.

Para terminar, enviamos o comando **quit** para terminar a ligação com o servidor.

Resultados



```
asus@dn1003:~/Documentos/RCON/TL2/src$ make clean && make
rm -f download
gcc app.c utils.c -o download
asus@dn1003:~/Documentos/RCON/TL2/src$ ./download ftp://ftp.up.pt/pub/apache/README.html
220-Welcome to the University of Porto's mirror archive (mirrors.up.pt)
220-
220-
220-All connections and transfers are logged. The max number of connections is 200.
220-
220-For more information please visit our website: http://mirrors.up.pt/
220-Questions and comments can be sent to mirrors@upporto.pt
220-
220-
220
user anonymous
331 Please specify the password.
pass 1234
230 Login successful.
pasv
227 Entering Passive Mode (193,137,29,15,223,193).
retr pub/apache/README.html
150 Opening BINARY mode data connection for pub/apache/README.html (354 bytes).
226 Transfer complete.
quit
221 Goodbye.
asus@dn1003:~/Documentos/RCON/TL2/src$
```

Configuração e análise de rede

Experiência 1: Configurar uma rede IP

O objetivo desta experiência é configurar uma rede IP, de modo a haver comunicação entre 2 computadores (neste caso, entre tuxy3 e tuxy4).

Para configurar cada tux, invocamos os seguintes comandos:

- no tuxy3: **ifconfig eth0 172.16.40.1/24**
- no tuxy4: **ifconfig eth0 172.16.40.254/24**

Desta forma, e ao apagar as entradas da tabela ARP referentes aos tux's que queremos que comuniquem, ao fazer ping no tuxy3 para o tuxy4 (ping 172.16.40.254), é possível verificar a ligação entre os 2 computadores.

Inicialmente, o tuxy3 envia um pacote ARP (em broadcast: para toda a rede local) com os endereços IP e MAC do “emissor” e o endereço IP do “recetor”, e com o endereço MAC do “recetor” com o valor de 00:00:00:00:00:00, uma vez que este não é reconhecido ainda pelo tuxy3. O intuito dos pacotes ARP é precisamente associar endereços IP a endereços físicos MAC.

O tuxy4, ao reconhecer que o IP de destino do pacote ARP é ele próprio, completa o campo do seu endereço MAC e envia um pacote ARP em resposta ao tuxy3 com essa informação.

A partir deste reconhecimento entre computadores, estes trocam pacotes ICMP entre si, o tuxy3 (emissor) envia pacotes *request* e o tuxy4 (recetor) envia pacotes *reply*.

Pacotes <i>request</i>	Origem	Destinatário
Endereço IP	172.16.40.1	172.16.40.254
Endereço MAC	00:21:5a:61:2d:df	00:21:5a:5a:79:97

Pacotes <i>reply</i>	Origem	Destinatário
Endereço IP	172.16.40.254	172.16.40.1
Endereço MAC	00:21:5a:5a:79:97	00:21:5a:61:2d:df

Experiência 2: Implementar 2 LAN's virtuais num switch

O objetivo desta experiência é criar 2 LAN's virtuais:

- vlan y0, à qual foram associados o tuxy3 e tuxy4;
- vlan y1, à qual foi associado o tuxy2.

Com esta implementação, o tuxy2 deixa de ter acesso ao tuxy3 e tuxy4, uma vez que estão em subredes diferentes.

Para configurar as VLAN, através do terminal GTKTerm, invocamos os seguintes comandos:

- para criar as VLAN:
 - **configure terminal**
 - **vlan yn** (y = nº da bancada: 4 no nosso caso; n = número da VLAN: 0 ou 1)
 - **end**
- para adicionar as portas dos tuxy's a cada VLAN:
 - **configure terminal**
 - **interface fastethernet 0/[porta onde está ligado o tuxy respetivo]**
 - **switchport mode access**
 - **switchport access vlan yn**
 - **end**

Desta forma, ao fazer ping em cada um dos tuxy's, confirmamos que existem agora 2 domínios de transmissão, 1 para cada VLAN: ao fazer ping a partir do tuxy3, este recebe resposta do tuxy4, mas não do tuxy2; e ao fazer ping a partir do tuxy2, não recebe nenhuma resposta.

Assim, confirma-se que tuxy3 e tuxy4 comunicam entre si e tuxy2 não comunica com nenhum deles (por enquanto).

Experiência 3: Configuração de um router em Linux

Nesta experiência, o tuxy4 foi configurado como um router, de forma a permitir a comunicação entre as 2 VLAN's criadas na experiência anterior.

Para isso, configuramos a interface eth1 no tuxy4:

- **ifconfig eth1 up**
- **ifconfig eth1 172.16.41.253/24**

A partir deste momento, as interfaces eth0 e eth1 no tuyx4 têm o mesmo endereço MAC, mas diferentes endereços IP.

De seguida, adicionamos rotas para o router a partir dos restantes tux's:

- no tuyx3: `route add -net 172.16.41.0/24 gw 172.16.40.254`
- no tuyx2: `route add -net 172.16.40.0/24 gw 172.16.41.253`

De forma a permitir reencaminhar pacotes entre redes diferentes, através do router, foi necessário invocar os seguintes comandos no tuyx4:

- ativar o IP forwarding:
 - `echo 1 > /proc/sys/net/ipv4/ip_forward`
- desativar ICMP echo-ignore-broadcasts:
 - `echo 0 > /proc/sys/net/ipv4/icmp_echo_ignore_broadcasts`

Neste momento, é possível comunicar com todas as interfaces de rede configuradas, ou seja, obtemos resposta ao fazer:

- ping 172.16.40.254 (eth0 do tuyx4).
- ping 172.16.41.253 (eth1 do tuyx4).
- ping 172.16.41.1 (eth0 do tuyx2).

Experiência 4: Configurar um router comercial e implementar NAT

O objetivo desta experiência foi configurar um router comercial, seguido da implementação do NAT no router.

Começamos por configurar o router comercial sem o NAT.

Para isso, começamos por adicionar rotas *default* para o router:

- no tuyx3: `route add default gw 172.16.40.254`
- no tuyx4: `route add default gw 172.16.41.254`
- no tuyx2: `route add default gw 172.16.41.254`

Adicionamos uma rota do router para a vlan y0:

- `ip route 172.16.40.0 255.255.255.0 172.16.41.253`

E invocamos os comandos:

- `echo 0 > /proc/sys/net/ipv4/conf/eth0/accept_redirects`
- `echo 0 > /proc/sys/net/ipv4/conf/all/accept_redirects`

Assim sendo, há rotas criadas anteriormente que deixam de ser necessárias, como a rota para do tuyx2 para 172.16.40.0/24 (eth0 de tuyx4), logo pode ser removida.

Feito isso, configuramos o router comercial.

Para implementar o NAT, utilizamos os comandos presentes no slide 46 do guião deste trabalho laboratorial. **Sem o NAT, o tuxy3 não conseguia aceder ao router, uma vez que não pertencem à mesma rede.** O protocolo NAT (Network Address Translation) gera um IP global a partir do IP de rede interna, para que uma máquina externa saiba para onde responder a mensagens. Este IP é gerado utilizando uma tabela hash, e quando o router recebe a resposta, faz o processo inverso.

Experiência 5: DNS

Nesta experiência configuramos um servidor DNS no laboratório (netlab.fe.up.pt), que faz a **tradução de um hostname para um endereço IP.**

Para configurar o DNS (Domain Main System), é necessário alterar o ficheiro **resolv.conf** no diretório **/etc/**. Este ficheiro tem de conter a seguinte informação:

- **search netlab.fe.up.pt** (nome do servidor DNS)
- **nameserver 172.16.2.1** (endereço IP)

Assim, é possível fazer **ping ftp.up.pt** e verificar troca de mensagens, concluindo assim que **existe uma ligação entre redes diferentes.**

Experiência 6: Conexões TCP

Esta experiência, tendo todas as experiências anteriores completas, consiste em **compilar e correr a nossa aplicação de download (parte 1) através da rede que configuramos nas experiências anteriores.**

Com isto, foi possível verificar que a aplicação FTP abre **2 conexões TCP**:

- uma para mandar os comandos FTP ao servidor e receber as respectivas respostas.
- outra para fazer a transferência do ficheiro pretendido.

Cada conexão TCP (Transmission Control Protocol) divide-se em **3 fases**:

- estabelecimento de ligação.
- troca de mensagens e de informação.
- fim de ligação.

O **TCP utiliza o mecanismo ARQ** (Automatic Repeat Request) com o **método da janela deslizante**, que consiste no controlo de erros na transmissão de dados. Para isso, utiliza:

- **acknowledgments**: mensagens enviadas pelo receptor que indicam se a trama foi recebida corretamente.
- **timeouts** para que, tal como fizemos no primeiro trabalho laboratorial, seja verificada a necessidade de reenviar tramas, caso um ACK não seja recebido antes do timeout.

Com o aparecimento de uma segunda conexão TCP, o fluxo de conexões de dados TCP é afetado, uma vez que a **taxa de transferência é distribuída de igual forma para cada ligação**. Assim, a existência de uma transferência de dados pode sofrer uma queda na taxa de transmissão, uma vez que esta vai ser equilibrada com a nova conexão que acabou de se estabelecer.

Conclusão

Este segundo trabalho laboratorial, como já foi dito, teve como objetivo desenvolver uma aplicação de download de ficheiros por FTP, e configurar e analisar uma rede.

Apesar de todos os contratemplos, desde feriados coincidentes com as aulas práticas, do momento pandémico por que todos passamos e das restrições computacionais que este trabalho implica, penso que conseguimos atingir todos os objetivos do trabalho a que nos propusemos.

Referências

Para a realização deste trabalho laboratorial baseamo-nos nos slides teóricos da unidade curricular de RCOM e ao guião deste trabalho laboratorial.

Anexos

Aplicação

Código do ficheiro app.c, que contém a função main.

```
c app.c  x
TL2 > src > C app.c > ⊕ main(int,char *[])
1   #include "utils.h"
2
3   int main(int argc, char *argv[]) {
4       // printf("RCOM TL2\n");
5
6       if (argc != 2) {
7           printf("Usage: download ftp://[<user>:<password>@]<host>/<url-path>\n");
8           exit(1);
9       }
10
11       struct args URL;
12       if (parseArgs(&URL, argv[1]) != 0) { printf("Error parsing arguments.\n"); return 1; }
13       /*printf("User: %s\n", URL.user);
14       printf("Password: %s\n", URL.password);
15       printf("Host: %s\n", URL.host);
16       printf("Path: %s\n", URL.path);
17       printf("Filename: %s\n", URL.filename);*/
18
19       if (getIPAddress(URL.IP, URL.host) != 0) { printf("Error getting IP address.\n"); return 2; }
20       /*printf("IP Address : %s\n", URL.IP);*/
21
22       struct ftp ftp;
23       ftp.fd = openConnectSocketServer(URL.IP, FTP_PORT);
24       if (ftp.fd == -1) { printf("Error opening TCP socket.\n"); return 3; }
25       if (ftp.fd == -2) { printf("Error connecting to the server.\n"); return 4; }
26       //else printf("Connection established in port %d.\n", port);
27
28       ftp.file = fdopen(ftp.fd, "r");
29       receiving(ftp.file);
30
31       // username
32       char userCommand[256];
33       sprintf(userCommand, "user %s\r\n", URL.user);
34       sending(ftp.fd, userCommand);
35       if (receiving(ftp.file) != 0) return 5; // 331 Please specify the password.
36
37       // password
38       char passwordCommand[256];
39       sprintf(passwordCommand, "pass %s\r\n", URL.password);
40       sending(ftp.fd, passwordCommand);
41       if (receiving(ftp.file) != 0) return 6; // 230 Login successful.
42
43       // pasv
44       char pasvCommand[256], ip[16]; int port;
45       sprintf(pasvCommand, "pasv\r\n");
46       sending(ftp.fd, pasvCommand);
47       receivingPasvCommand(ftp.file, ip, &port); // 227 Entering Passive Mode (193,137,29,15,port1,port2). -> port = port1 * 256 + port2
48       if (strcmp(ip, URL.IP) != 0) { printf("Error parsing pasv.\n"); return 7; }
49
50       // Connecting to port server, waiting for connection
51       ftp.data_fd = openConnectSocketServer(URL.IP, port);
52       if (ftp.data_fd == -1) { printf("Error opening TCP socket.\n"); return 8; }
53       if (ftp.data_fd == -2) { printf("Error connecting to the server.\n"); return 9; }
54       //else printf("Connection established in port %d.\n", port);
55
56       // retr
57       char retrCommand[256];
58       sprintf(retrCommand, "retr %s\r\n", URL.path);
59       sending(ftp.fd, retrCommand);
60       if (receiving(ftp.file) != 0) return 10; // 150 Opening BINARY mode data connection for pub/apache/HEADER.html (770 bytes).
61
62       // Download file
63       if (downloadFile(ftp.data_fd, URL.filename) != 0) { printf("Error transferring file.\n"); return 5; }
64       if (receiving(ftp.file) != 0) return 11; // 226 Transfer complete.
65
66       char quitCommand[256];
67       sprintf(quitCommand, "quit\r\n");
68       sending(ftp.fd, quitCommand);
69       if (receiving(ftp.file) != 0) return 12;
70
71       return 0;
72 }
```

Código do ficheiro utils.h, onde estão situadas a declaração das estruturas usadas e das funções utilizadas.

```
C utils.h  x  
TL2 > src > C utils.h > ...  
1 #ifndef UTILS_H  
2 #define UTILS_H  
3  
4 #include <stdio.h>  
5 #include <string.h>  
6 #include <stdlib.h>  
7 #include <unistd.h>  
8 #include <fcntl.h>  
9 #include <errno.h>  
10 #include <netdb.h>  
11 #include <sys/types.h>  
12 #include <netinet/in.h>  
13 #include <arpa/inet.h>  
14  
15 #define MAX 100  
16 #define FTP_PORT 21  
17  
18 struct args {  
19     char user[MAX];  
20     char password[MAX];  
21     char host[MAX];  
22     char path[MAX];  
23     char filename[MAX];  
24     char IP[MAX];  
25 };  
26  
27 struct ftp {  
28     FILE *file;  
29     int fd;  
30     int data_fd;  
31 };  
32  
33 int parseArgs(struct args *URL, char *command);  
34 int parseFilename(struct args *URL);  
35 int getIPAddress(char *ip, char *host);  
36 int openConnectSocketServer(char *IP, int port);  
37 int sending(int sockfd, char *command);  
38 int receiving(FILE * sockfile);  
39 int receivingPasvCommand(FILE* sockfile, char* serverIP, int *serverPort);  
40 int downloadFile(int sockfd, char *filename);  
41  
42 #endif // UTILS_H
```

Código do ficheiro utils.c, onde se definem as funções declaradas em utils.h.

```
C utils.c  X
TL2 > src > C utils.c > ⌂ openConnectSocketServer(char *,int)
1  #include "utils.h"
2
3  int parseArgs(struct args *URL, char *command) {
4
5      char* ftp = strtok(command, "/"); // ftp:
6      char* remaining = strtok(NULL, "/"); // diogo:feup@ftp.up.pt
7      char* path = strtok(NULL, ""); // path/to/destination/file.txt
8
9      if (strcmp(ftp, "ftp:") != 0) { printf("Error parsing protocol: Expected ftp.\n"); return 1; }
10     ftp[strlen(ftp) - 1] = '\0';
11
12     char *user = strtok(remaining, ":");
13     char *password = strtok(NULL, "@");
14
15     if (password == NULL)
16     {
17         user = "anonymous";
18         password = "1234";
19         strcpy(URL->host, remaining);
20     }
21     else strcpy(URL->host, strtok(NULL, ""));
22
23     strcpy(URL->user, user);
24     strcpy(URL->password, password);
25     strcpy(URL->path, path);
26
27     parseFilename(URL);
28
29     return 0;
30 }
31
32 int parseFilename(struct args *URL) {
33     char fullpath[256];
34     strcpy(fullpath, URL->path);
35     char* token = strtok(fullpath, "/");
36     while( token != NULL ) {
37         strcpy(URL->filename, token);
38         token = strtok(NULL, "/");
39     }
40     return 0;
41 }
```

```

42
43 int getIPAddress(char *ip, char *host) {
44     struct hostent *h;
45     if ((h = gethostbyname(host)) == NULL) {
46         perror("gethostbyname");
47         return 1;
48     }
49     strcpy(ip, inet_ntoa(*((struct in_addr *)h->h_addr)));
50     return 0;
51 }
52
53 int openConnectSocketServer(char *IP, int port) {
54     int sockfd;
55     struct sockaddr_in server_addr;
56
57     // Server Address Handling
58     bzero((char*)&server_addr, sizeof(server_addr));
59     server_addr.sin_family = AF_INET;
60     server_addr.sin_addr.s_addr = inet_addr(IP);    // 32 bit Internet address network byte ordered*/
61     server_addr.sin_port = htons(port);           // server TCP port must be network byte ordered */
62
63     // Open an TCP socket
64     if ((sockfd = socket(AF_INET, SOCK_STREAM, 0)) < 0) {
65         perror("socket()");
66         return -1;
67     }
68
69     // Connect to the server
70     if (connect(sockfd, (struct sockaddr *)&server_addr, sizeof(server_addr)) < 0) {
71         perror("connect()");
72         return -2;
73     }
74
75     return sockfd;
76 }
77
78 int sending(int sockfd, char *command) {
79     printf("%s", command);
80     int sent = write(sockfd, command, strlen(command));
81
82     if (sent == 0) { printf("Connection closed.\n"); return 1; }
83     else if (sent == -1) { printf("Error sending command.\n"); return 2; }
84
85     return 0;
86 }

```

```

87
88 int receiving(FILE * sockfile) {
89     char *buf;
90     size_t bytes = 0;
91
92     while (1) {
93         getline(&buf, &bytes, sockfile);
94         printf("%s", buf);
95         if (buf[3] == ' ') {
96             long code = strtol(buf, &buf, 10);
97             if (code == 530 || code == 550) {
98                 printf("Error receiving command.\n");
99                 return 1;
100            }
101            break;
102        }
103    }
104
105    return 0;
106 }

```

```
107 int receivingPasvCommand(FILE* sockfile, char* serverIP, int *serverPort) {
108     char *buf;
109     size_t bytes = 0;
110
111     while (1) {
112         getline(&buf, &bytes, sockfile);
113         printf("%s", buf);
114         if (buf[3] == ' ') {
115             long code = strtol(buf, &buf, 10);
116             if (code == 530 || code == 550) {
117                 printf("Error receiving command.\n");
118                 return 1;
119             }
120             break;
121         }
122     }
123
124     strtok(buf, "(");
125
126     char* IP[4];
127     for (int i = 0; i < 4; i++) {
128         IP[i] = strtok(NULL, ",");
129     }
130
131     sprintf(serverIP, "%s.%s.%s.%s", IP[0], IP[1], IP[2], IP[3]);
132
133     char *port1 = strtok(NULL, ",");
134     char *port2 = strtok(NULL, ")");
135     *serverPort = atoi(port1)*256 + atoi(port2);
136
137
138     return 0;
139 }
```

```
140 int downloadFile(int sockfd, char *filename) {
141
142     int file_fd = open(filename, O_WRONLY | O_CREAT, 0777);
143     if (file_fd < 0) { printf("Error creating file.\n"); return 1; }
144
145     int bytes; char buf[1];
146     do {
147         bytes = read(sockfd, buf, 1);
148         //printf("%s", buf);
149         write(file_fd, buf, bytes);
150     } while (bytes != 0);
151
152     close(file_fd);
153
154     return 0;
155 }
156 }
```

Comandos de configuração

tux 43

```
ifconfig eth0 up
ifconfig eth0 172.16.40.1/24
route add -net 172.16.41.0/24 gw 172.16.40.254
route add default gw 172.16.40.254
```

tux 44

```
ifconfig eth0 up
ifconfig eth0 172.16.40.254/24
ifconfig eth1 up
ifconfig eth1 172.16.41.253/24
echo 1 > /proc/sys/net/ipv4/ip_forward
echo 0 > /proc/sys/net/ipv4/icmp_echo_ignore_broadcasts
route add -net 172.16.1.0/24 gw 172.16.41.254
route add default gw 172.16.41.254
```

tux 42

```
ifconfig eth0 up
ifconfig eth0 172.16.41.1/24
route add -net 172.16.40.0/24 gw 172.16.41.253
route add -net 172.16.1.0/24 gw 172.16.41.254
route add default gw 172.16.41.254
echo 1 > /proc/sys/net/ipv4/conf/eth0/accept_redirects
echo 1 > /proc/sys/net/ipv4/conf/all/accept_redirects
```

Switch

```
configure terminal
vlan 40
interface fastethernet 0/1
switchport mode access
switchport access vlan 40
exit

interface fastethernet 0/2
switchport mode access
switchport access vlan 40
exit

vlan 41
interface fastethernet 0/3
switchport mode access
```

```
switchport access vlan 41
exit

interface fastethernet 0/4
switchport mode access
switchport access vlan 41
exit

interface fastethernet 0/5
switchport mode access
switchport access vlan 41
end
```

Router

```
conf t
interface fastethernet 0/0
ipaddress 172.16.41.254 255.255.255.0
no shutdown
exit

interface fastethernet 0/1
ipaddress 172.16.2.49 255.255.255.0
no shutdown
exit

interface fastethernet 0/0
ip address 172.16.41.254 255.255.255.0
no shutdown
ip nat inside
exit

interface fastethernet 0/1
ip address 172.16.2.49 255.255.255.0
no shutdown
ip nat outside
exit

ip nat pool ovrlid 172.16.2.49 172.16.2.49 prefix 24
ip nat inside source list 1 pool ovrlid overload

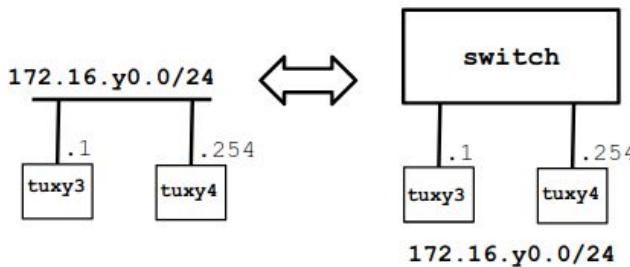
access-list 1 permit 172.16.40.0 0.0.0.7
access-list 1 permit 172.16.41.0 0.0.0.7

ip route 0.0.0.0 0.0.0.0 172.16.2.254
ip route 172.16.40.0 255.255.255.0 172.16.41.253
end
```

Experiências

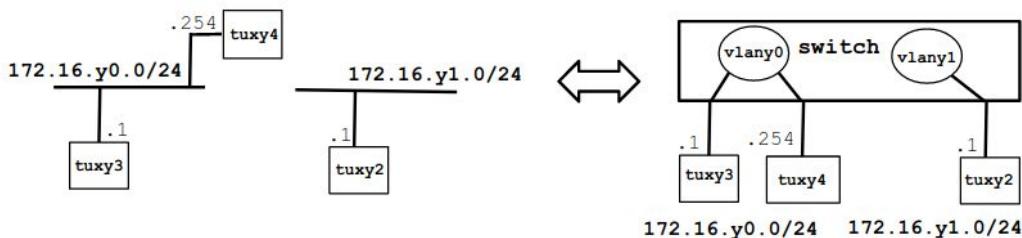
Devido a alguns problemas com os logs do grupo, foram utilizadas imagens de logs de outros grupos (como sugerido pelo docente Filipe Teixeira).

Experiência 1: Configurar uma rede IP



No.	Time	Source	Destination	Protocol	Length	Info
73	101.917700795	HewlettP_61:2d:df	Broadcast	ARP	42	Who has 172.16.40.254? Tell 172.16.40.1
74	101.917841036	HewlettP_5a:79:97	HewlettP_61:2d:df	ARP	60	172.16.40.254 is at 00:21:5a:5a:79:97
75	101.917848928	172.16.40.1	172.16.40.254	ICMP	98	Echo (ping) request id=0x0a23, seq=1/256, ttl=64 (reply in 7...)
76	101.918005932	172.16.40.254	172.16.40.1	ICMP	98	Echo (ping) reply id=0x0a23, seq=1/256, ttl=64 (request in...)
77	102.636316296	Cisco_7b:ce:85	Spanning-tree-(for-bridge)	STP	60	Conf. Root = 32768/1/00:1e:14:7b:ce:80 Cost = 0 Port = 0x80...
78	102.945116200	172.16.40.1	172.16.40.254	ICMP	98	Echo (ping) request id=0x0a23, seq=2/512, ttl=64 (reply in 7...)
79	102.945289197	172.16.40.254	172.16.40.1	ICMP	98	Echo (ping) reply id=0x0a23, seq=2/512, ttl=64 (request in...)
80	103.969120345	172.16.40.1	172.16.40.254	ICMP	98	Echo (ping) request id=0x0a23, seq=3/768, ttl=64 (reply in 8...)
81	103.969289361	172.16.40.254	172.16.40.1	ICMP	98	Echo (ping) reply id=0x0a23, seq=3/768, ttl=64 (request in...)
82	104.645207299	Cisco_7b:ce:85	Spanning-tree-(for-bridge)	STP	60	Conf. Root = 32768/1/00:1e:14:7b:ce:80 Cost = 0 Port = 0x80...
83	104.993117366	172.16.40.1	172.16.40.254	ICMP	98	Echo (ping) request id=0x0a23, seq=4/1024, ttl=64 (reply in ...)
84	104.993293925	172.16.40.254	172.16.40.1	ICMP	98	Echo (ping) reply id=0x0a23, seq=4/1024, ttl=64 (request in...)
85	106.017117390	172.16.40.1	172.16.40.254	ICMP	98	Echo (ping) request id=0x0a23, seq=5/1280, ttl=64 (reply in ...)
86	106.017293949	172.16.40.254	172.16.40.1	ICMP	98	Echo (ping) reply id=0x0a23, seq=5/1280, ttl=64 (request in...)
87	106.646102720	Cisco_7b:ce:85	Spanning-tree-(for-bridge)	STP	60	Conf. Root = 32768/1/00:1e:14:7b:ce:80 Cost = 0 Port = 0x80...
88	107.041114411	172.16.40.1	172.16.40.254	ICMP	98	Echo (ping) request id=0x0a23, seq=6/1536, ttl=64 (reply in ...)
89	107.041292227	172.16.40.254	172.16.40.1	ICMP	98	Echo (ping) reply id=0x0a23, seq=6/1536, ttl=64 (request in...)

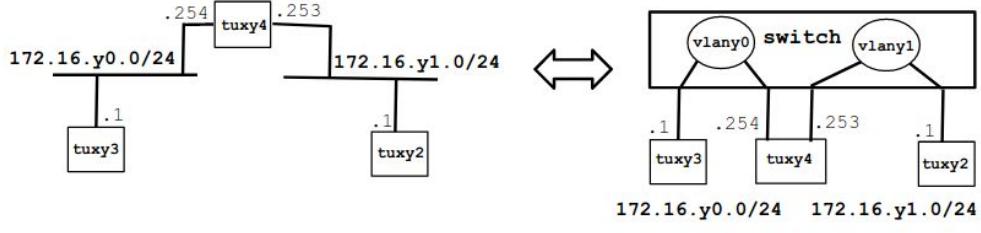
Experiência 2: Implementar 2 LAN's virtuais num switch



9	13.904858468	Cisco_7b:ce:85	CDP/VTP/DTP/PAgP/UDLD	CDP	60	Device ID: gnu-sw6 Port ID: FastEthernet0/5
10	13.929983222	Cisco_7b:ce:85	Cisco_7b:ce:85	LOOP	60	Reply
11	14.038447295	Cisco_7b:ce:85	Spanning-tree-(for-bridge)	STP	60	Conf. Root = 32768/60/00:1e:14:7b:ce:80 Cost = 0 Port = 0x8005
12	15.751699162	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=1/256, ttl=64 (no response found!)
13	16.751699162	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=2/512, ttl=64 (no response found!)
14	16.768421199	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=3/768, ttl=64 (no response found!)
15	17.792406138	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=4/1024, ttl=64 (no response found!)
16	18.040245865	Cisco_7b:ce:85	Spanning-tree-(for-bridge)	STP	60	Conf. Root = 32768/60/00:1e:14:7b:ce:80 Cost = 0 Port = 0x8005
17	18.816417826	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=5/1280, ttl=64 (no response found!)
18	19.844042694	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=6/1536, ttl=64 (no response found!)
19	20.844042694	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=7/1792, ttl=64 (no response found!)
20	20.864402369	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=8/1536, ttl=64 (no response found!)
21	20.992363846	HewlettP_5a:79:97	HewlettP_61:2d:df	ARP	42	Who has 172.16.60.254? Tell 172.16.60.1
22	20.992363846	HewlettP_5a:79:97	HewlettP_61:2d:df	ARP	60	172.16.60.254 is at 00:21:5a:5a:79:97
23	21.888483162	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=1/256, ttl=64 (no response found!)
24	22.888483162	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=2/512, ttl=64 (no response found!)
25	22.912402138	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=3/768, ttl=64 (no response found!)
26	23.936399159	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=4/1024, ttl=64 (no response found!)
27	23.937668595	Cisco_7b:ce:85	Cisco_7b:ce:85	LOOP	60	Reply
28	24.054903421	Cisco_7b:ce:85	Spanning-tree-(for-bridge)	STP	60	Conf. Root = 32768/60/00:1e:14:7b:ce:80 Cost = 0 Port = 0x8005
29	24.679435318	f800:2215:0aff:fe5a:79ff	ff00:1:fb	MONS	188	Standard query 0x0000 PTR _ftp._tcp.local, "QM" question PTR _afpovertcp._tcp.local, "QM" que...
30	24.679435378	172.16.60.254	224.0.0.251	MONS	188	Standard query 0x0000 PTR _ftp._tcp.local, "QM" question PTR _nfs._tcp.local, "QM" que...
31	24.968416295	172.16.60.254	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=10/256, ttl=64 (no response found!)
32	25.984402690	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=11/288, ttl=64 (no response found!)
33	25.984402690	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=12/320, ttl=64 (no response found!)
34	27.008397416	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=13/352, ttl=64 (no response found!)
35	28.032400443	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=14/384, ttl=64 (no response found!)
36	28.064755900	Cisco_7b:ce:85	Spanning-tree-(for-bridge)	STP	60	Conf. Root = 32768/60/00:1e:14:7b:ce:80 Cost = 0 Port = 0x8005
37	29.056396207	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=15/416, ttl=64 (no response found!)
38	29.056396207	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=16/448, ttl=64 (no response found!)
39	30.088397698	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=17/480, ttl=64 (no response found!)
40	31.194399608	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=18/496, ttl=64 (no response found!)
41	32.074699024	Cisco_7b:ce:85	Spanning-tree-(for-bridge)	STP	60	Conf. Root = 32768/60/00:1e:14:7b:ce:80 Cost = 0 Port = 0x8005
42	32.128494870	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=19/486, ttl=64 (no response found!)
43	33.152397911	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=20/496, ttl=64 (no response found!)
44	33.945348763	Cisco_7b:ce:85	Cisco_7b:ce:85	LOOP	60	Reply
45	34.176403313	172.16.60.1	172.16.60.254	ICMP	98	Standard query 0x0000 PTR _nfs._tcp.local, "QM" question PTR _afpovertcp._tcp.local, "QM" que...
46	34.176403313	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=19/486, ttl=64 (no response found!)
47	35.208403197	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=20/512, ttl=64 (no response found!)

39	38.088397698	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=15/3840, ttl=64 (no response found!)
40	31.184399608	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=16/4896, ttl=64 (no response found!)
41	32.128404870	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=17/4352, ttl=64 (no response found!)
42	33.152397911	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=18/4608, ttl=64 (no response found!)
43	34.945348763	Cisco_7bce:85	Cisco_7bce:85	LOOP	60	Reply
45	34.079445182	Cisco_7bce:85	Spanning-tree-(for-bridges)-STP	STP	60	Conf. Root = 32768/60/081:le14:t7:ce1e80 Cost = 0 Port = 0xb005
46	34.176493313	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=19/4864, ttl=64 (no response found!)
47	35.268483197	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=20/5120, ttl=64 (no response found!)
48	36.224400148	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=21/5376, ttl=64 (no response found!)
50	37.248401849	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=22/5632, ttl=64 (no response found!)
51	38.099363799	Cisco_7bce:85	Spanning-tree-(for-bridges)-STP	STP	60	Conf. Root = 32768/60/081:le14:t7:ce1e80 Cost = 0 Port = 0xb005
52	38.272420152	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=23/5884, ttl=64 (no response found!)
53	39.296399383	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=24/6144, ttl=64 (no response found!)
54	40.328907591	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=25/6400, ttl=64 (no response found!)
56	41.344401666	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=26/6656, ttl=64 (no response found!)
57	42.099098083	Cisco_7bce:85	Spanning-tree-(for-bridges)-STP	STP	60	Conf. Root = 32768/60/081:le14:t7:ce1e80 Cost = 0 Port = 0xb005
58	42.368401132	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=27/6912, ttl=64 (no response found!)
59	43.392481715	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=28/7168, ttl=64 (no response found!)
60	45.344941994	Cisco_7bce:85	LOOP	60	Conf. Root = 32768/60/081:le14:t7:ce1e80 Cost = 0 Port = 0xb005	
62	44.416307688	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=29/7424, ttl=64 (no response found!)
63	45.440408596	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=30/7680, ttl=64 (no response found!)
64	46.189824132	Cisco_7bce:85	Spanning-tree-(for-bridges)-STP	STP	60	Conf. Root = 32768/60/081:le14:t7:ce1e80 Cost = 0 Port = 0xb005
65	46.464398854	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=31/7936, ttl=64 (no response found!)
66	47.484841742	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=32/8192, ttl=64 (no response found!)
67	48.512399182	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=33/8448, ttl=64 (no response found!)
68	49.640388424	Hewlett_P_5a:79:97	Hewlett_P_5a:79:97	ARP	42	Who has 172.16.60.254 Tell 172.16..6.1
69	49.640518500	Hewlett_P_5a:79:97	Hewlett_P_5a:79:97	ARP	60	172.16.60.254 is at 00:21:5a:5a:79:97
71	49.536398228	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=34/8784, ttl=64 (no response found!)
72	50.512280517	Cisco_7bce:85	Spanning-tree-(for-bridges)-STP	STP	60	Conf. Root = 32768/60/081:le14:t7:ce1e80 Cost = 0 Port = 0xb005
73	50.568397965	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=35/8960, ttl=64 (no response found!)
74	51.589397211	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=36/9216, ttl=64 (no response found!)
75	52.123776196	Cisco_7bce:85	Spanning-tree-(for-bridges)-STP	STP	60	Conf. Root = 32768/60/081:le14:t7:ce1e80 Cost = 0 Port = 0xb005
76	52.608398859	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=37/9472, ttl=64 (no response found!)
77	53.632401747	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=38/9728, ttl=64 (no response found!)
78	53.95213496	Cisco_7bce:85	LOOP	60	Reply	
79	54.088397698	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=39/10080, ttl=64 (no response found!)
80	54.456400584	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=39/9984, ttl=64 (no response found!)
81	55.68840459	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=40/10240, ttl=64 (no response found!)
82	56.113401528	Cisco_7bce:85	Spanning-tree-(for-bridges)-STP	STP	60	Conf. Root = 32768/60/081:le14:t7:ce1e80 Cost = 0 Port = 0xb005
83	56.794400804	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=41/10496, ttl=64 (no response found!)
84	57.728400877	172.16.60.1	172.16.60.254	ICMP	98	Echo (ping) request id=0x158f, seq=42/10752, ttl=64 (no response found!)

Experiência 3: Configuração de um router em Linux

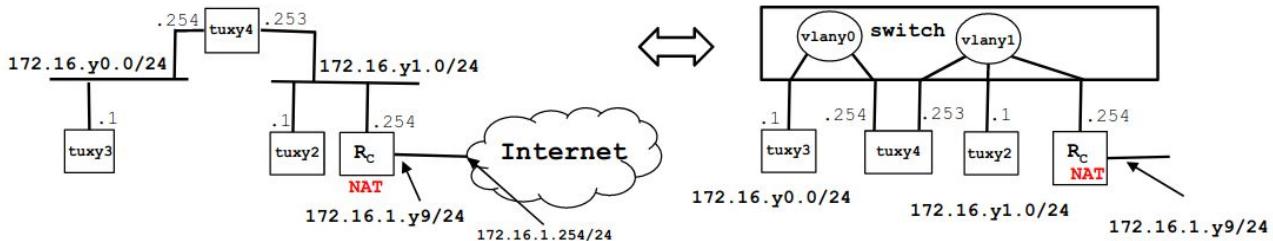


26	34.285214821	Cisco_b6:8c:13	CDP/VTY/OTP/PoP/UDL	CDP	602	Device ID: gnu-w2 Port ID: FastEthernet0/19
27	35.050869464	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=3/768, ttl=64 (reply in 28)
28	35.050824446	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) request id=0x9564, seq=3/768, ttl=64 (request in 27)
29	36.074064916	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=4/1024, ttl=64 (reply in 29)
30	36.074108732	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=4/1024, ttl=64 (request in 29)
31	37.098052713	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=5/1280, ttl=64 (reply in 31)
32	37.098065279	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=5/1280, ttl=64 (request in 31)
33	37.098139724	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) request id=0x9564, seq=6/1920, ttl=64 (reply in 33)
34	37.97148860	Cisco_b6:8c:13	LOOP	60	Conf. Root = 32768/38/081:le14:b6:8c:00 Cost = 0 Port = 0xb013	
35	38.122208435	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=6/1920, ttl=64 (reply in 37)
36	38.122217198	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) request id=0x9564, seq=7/2560, ttl=64 (reply in 36)
37	38.14351633	Hewlett_P_5a:7d:b7	Hewlett_P_5a:7d:b7	ARP	42	Who has 172.16.30.254 Tell 172.16..30.1
38	38.14351633	Hewlett_P_5a:7d:b7	Hewlett_P_5a:7d:b7	ARP	60	172.16.30.254 is at 00:21:5a:5b:7d:b7
39	38.146202396	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=7/2560, ttl=64 (reply in 43)
40	40.14606335	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=8/3840, ttl=64 (reply in 40)
41	40.258154011	Hewlett_P_5a:7d:b7	Hewlett_P_5a:7d:b7	ARP	60	172.16.30.254 is at 00:21:5a:5b:7d:b7
42	40.258154011	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=9/5120, ttl=64 (reply in 48)
43	40.316262396	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=9/5120, ttl=64 (request in 47)
44	40.316268788	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=10/560, ttl=64 (reply in 51)
45	40.178068788	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=10/560, ttl=64 (request in 50)
46	40.17813899	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=11/896, ttl=64 (reply in 53)
47	40.194059537	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=12/1280, ttl=64 (reply in 58)
48	40.194193804	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=13/1920, ttl=64 (reply in 47)
49	40.218068448	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=14/2560, ttl=64 (reply in 51)
50	41.422196589	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) request id=0x9564, seq=14/2560, ttl=64 (request in 50)
51	42.426602852	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=15/3840, ttl=64 (reply in 55)
53	43.242227953	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=16/5120, ttl=64 (request in 52)
54	44.266866747	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=17/6400, ttl=64 (reply in 56)
55	44.266194792	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) request id=0x9564, seq=17/6400, ttl=64 (request in 55)
56	45.298064411	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=18/7680, ttl=64 (reply in 58)
58	45.290139826	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=19/8960, ttl=64 (request in 57)
60	46.314067179	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=20/10240, ttl=64 (reply in 61)
61	46.31419699	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) request id=0x9564, seq=20/10240, ttl=64 (request in 60)
62	47.314066674	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=21/1280, ttl=64 (reply in 63)
63	47.314066674	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) request id=0x9564, seq=21/1280, ttl=64 (request in 62)
64	47.966843696	Cisco_b6:8c:13	LOOP	60	Conf. Root = 32768/38/081:le14:b6:8c:00 Cost = 0 Port = 0xb013	
65	48.121936711	Cisco_b6:8c:13	Spanning-tree-(for-bridges)-STP	STP	60	Conf. Root = 32768/38/081:le14:b6:8c:00 Cost = 0 Port = 0xb013
66	48.314067179	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=1/3840, ttl=64 (reply in 67)
67	48.314067179	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) request id=0x9564, seq=1/3840, ttl=64 (request in 71)
68	49.336866597	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=2/4096, ttl=64 (reply in 69)
69	49.336284559	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) request id=0x9564, seq=2/4096, ttl=64 (request in 73)
70	50.12683698	Cisco_b6:8c:13	Spanning-tree-(for-bridges)-STP	STP	60	Conf. Root = 32768/38/081:le14:b6:8c:00 Cost = 0 Port = 0xb013
71	51.401800018	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=3/4096, ttl=64 (reply in 72)
72	51.401800018	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) request id=0x9564, seq=3/4096, ttl=64 (request in 73)
73	51.454058931	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=4/4096, ttl=64 (reply in 74)
74	51.454200812	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) request id=0x9564, seq=4/4096, ttl=64 (request in 73)
75	51.454200812	Cisco_b6:8c:13	Spanning-tree-(for-bridges)-STP	STP	60	Conf. Root = 32768/38/081:le14:b6:8c:00 Cost = 0 Port = 0xb013
76	52.458062901	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request id=0x9564, seq=5/4384, ttl=64 (reply in 77)
77	52.458237551	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) request id=0x9564, seq=5/4384, ttl=64 (request in 76)

83	53.998172618	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=2/512, ttl=64 (request in 82)
84	54.132692430	Cisco_b6:8c:13	Spanning-tree-(for-bridges)-	STP	68	Conf. Root = 32768/30/00:le:14:b6:8c:00	Cost = 0 Port = 0x8013
85	54.132692431	172.16.30.1	172.16.30.1	ICMP	98	Echo (ping) request	id=0x996a, seq=2/512, ttl=64 (request in 85)
86	54.132692432	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=22/5932, ttl=64 (request in 85)
87	55.18187565	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=3/768, ttl=64 (reply in 88)
88	55.18253464	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=3/768, ttl=64 (request in 87)
89	55.18987062	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x996a, seq=3/768, ttl=64 (reply in 89)
90	56.13806729	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=23/5880, ttl=64 (request in 89)
91	56.18264835	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=4/1024, ttl=64 (reply in 92)
92	56.64219971	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=4/1024, ttl=64 (request in 91)
93	57.79817469	Cisco_b6:8c:13	Spanning-tree-(for-bridges)-	STP	68	Conf. Root = 32768/30/00:le:14:b6:8c:00	Cost = 0 Port = 0x8013
94	56.52271053	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x9954, seq=24/6144, ttl=64 (reply in 95)
95	56.52271054	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=24/6144, ttl=64 (request in 94)
96	57.6656831313	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=5/1280, ttl=64 (reply in 97)
97	57.666195872	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=5/1280, ttl=64 (request in 96)
98	57.540863873	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x9954, seq=25/6400, ttl=64 (reply in 99)
99	57.79817469	Cisco_b6:8c:13	Spanning-tree-(for-bridges)-	STP	68	Conf. Root = 32768/30/00:le:14:b6:8c:00	Cost = 0 Port = 0x8013
100	58.090861659	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=6/1536, ttl=64 (reply in 102)
102	58.090193232	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=6/1536, ttl=64 (request in 101)
103	58.146769766	Cisco_b6:8c:13	Spanning-tree-(for-bridges)-	STP	68	Conf. Root = 32768/30/00:le:14:b6:8c:00	Cost = 0 Port = 0x8013
104	58.146769767	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x9954, seq=26/6552, ttl=64 (reply in 103)
105	58.570209951	172.16.30.1	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=26/6552, ttl=64 (request in 104)
106	59.114063131	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=7/1792, ttl=64 (reply in 107)
107	59.114149293	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=7/1792, ttl=64 (request in 106)
108	59.94945893	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x9954, seq=27/6552, ttl=64 (reply in 109)
109	59.94945894	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=27/6552, ttl=64 (request in 108)
110	60.138862795	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=8/2848, ttl=64 (reply in 111)
111	60.138195215	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=8/2848, ttl=64 (request in 110)
112	60.14720632	Cisco_b6:8c:13	Spanning-tree-(for-bridges)-	STP	68	Conf. Root = 32768/30/00:le:14:b6:8c:00	Cost = 0 Port = 0x8013
113	60.147206320	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x9954, seq=9/1792, ttl=64 (reply in 114)
114	60.147206321	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=9/1792, ttl=64 (request in 113)
115	61.162681272	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=9/2384, ttl=64 (reply in 116)
116	61.162191457	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=9/2384, ttl=64 (request in 115)
117	61.164208541	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x9954, seq=10/2816, ttl=64 (reply in 118)
118	61.164208542	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=10/2816, ttl=64 (request in 117)
119	62.152219434	Cisco_b6:8c:13	Spanning-tree-(for-bridges)-	STP	68	Conf. Root = 32768/30/00:le:14:b6:8c:00	Cost = 0 Port = 0x8013
120	62.152219435	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=10/2560, ttl=64 (reply in 121)
121	62.186186439	172.16.30.1	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=10/2560, ttl=64 (request in 120)
122	62.166608646	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x9954, seq=11/2816, ttl=64 (reply in 123)
123	62.166608647	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=11/2816, ttl=64 (request in 122)
124	63.120866431	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=12/2816, ttl=64 (reply in 125)
125	63.120866432	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=12/2816, ttl=64 (request in 124)
126	63.169086729	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x9954, seq=13/2848, ttl=64 (reply in 127)
127	63.169100557	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=13/2848, ttl=64 (request in 126)
128	64.134183029	Cisco_b6:8c:13	Spanning-tree-(for-bridges)-	STP	68	Conf. Root = 32768/30/00:le:14:b6:8c:00	Cost = 0 Port = 0x8013
129	64.234085028	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=14/2816, ttl=64 (reply in 130)
130	64.234184794	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=14/2816, ttl=64 (request in 129)
131	64.714067612	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x9954, seq=15/2816, ttl=64 (reply in 132)
132	64.714067613	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=15/2816, ttl=64 (request in 131)
133	65.155048889	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=16/3232, ttl=64 (reply in 134)
134	65.158196471	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=16/3232, ttl=64 (request in 133)
135	65.173806569	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x9954, seq=17/3248, ttl=64 (reply in 136)
136	65.738194671	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=17/3248, ttl=64 (request in 135)
137	66.1626819248	Cisco_b6:8c:13	Spanning-tree-(for-bridges)-	STP	68	Conf. Root = 32768/30/00:le:14:b6:8c:00	Cost = 0 Port = 0x8013
138	66.1626826568	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=18/3584, ttl=64 (reply in 139)
140	66.466606688	Hex-11:P_Sat74:3e	Hex-11:P_Sat74:3e	ARP	42	Mac has 192.16.30.254 at 00:21:5b:5a:7d:29	
141	66.660136819	Hex-11:P_Sat74:3e	Hex-11:P_Sat74:3e	ARP	60	172.16.30.254 is at 00:21:5b:5a:7d:29	
142	66.762649851	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x9954, seq=14/8704, ttl=64 (reply in 143)
143	66.762171274	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=14/8704, ttl=64 (request in 142)
144	67.308657515	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=15/3840, ttl=64 (reply in 145)
145	67.308657516	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=15/3840, ttl=64 (request in 144)
146	67.308657517	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x9954, seq=15/9864, ttl=64 (reply in 147)
147	67.786327668	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=15/9864, ttl=64 (request in 146)
148	68.025119095	Cisco_b6:8c:13	Loop	68	Echo (ping) reply	id=0x9954, seq=16/3486, ttl=64 (request in 146)	
149	68.17939044	Cisco_b6:8c:13	Spanning-tree-(for-bridges)-	STP	68	Conf. Root = 32768/30/00:le:14:b6:8c:00	Cost = 0 Port = 0x8013
150	68.130063674	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x9954, seq=16/3486, ttl=64 (reply in 151)
151	68.130063675	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=16/3486, ttl=64 (request in 150)
152	68.130063676	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x9954, seq=16/6216, ttl=64 (reply in 153)
153	68.619305215	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) reply	id=0x9954, seq=16/6216, ttl=64 (request in 152)
154	69.354962438	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=17/3452, ttl=64 (reply in 155)
155	69.354194222	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=17/3452, ttl=64 (request in 154)
156	69.354194237	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x9954, seq=17/9472, ttl=64 (reply in 157)
157	69.354194238	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=17/9472, ttl=64 (request in 156)
158	70.171135646	Cisco_b6:8c:13	Spanning-tree-(for-bridges)-	STP	68	Conf. Root = 32768/30/00:le:14:b6:8c:00	Cost = 0 Port = 0x8013
159	70.378064262	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=18/4068, ttl=64 (reply in 160)
160	70.378193337	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=18/4068, ttl=64 (request in 159)
161	70.378193338	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x9954, seq=18/6216, ttl=64 (reply in 161)
162	70.378193339	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954, seq=18/6216, ttl=64 (request in 160)
163	71.162193908	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=19/4864, ttl=64 (reply in 163)
165	71.162013912	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) reply	id=0x996a, seq=19/4864, ttl=64 (request in 164)
166	71.162013913	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) request	id=0x9954, seq=19/256, ttl=64 (reply in 165)
167	71.162013914	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) reply	id=0x9954, seq=19/256, ttl=64 (request in 166)
168	71.162013915	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) request	id=0x9954, seq=19/512, ttl=64 (reply in 167)
169	72.698464722	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) reply	id=0x9954, seq=19/512, ttl=64 (request in 168)
170	72.700238824	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) request	id=0x9954, seq=20/4024, ttl=64 (reply in 175)
171	72.700238825	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) reply	id=0x9954, seq=20/4024, ttl=64 (request in 174)
172	73.160953237	172.16.30.1	172.16.31.253	ICMP	98	Echo (ping) request	id=0x996a, seq=21/3452, ttl=64 (reply in 177)
173	73.160953238	172.16.31.253	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x996a, seq=21/3452, ttl=64 (request in 176)
174	73.160953239	172.16.30.1	172.16.30.254	ICMP	98	Echo (ping) request	id=0x9954, seq=21/6384, ttl=64 (reply in 178)
175	73.160953240	172.16.30.254	172.16.30.1	ICMP	98	Echo (ping) reply	id=0x9954,

107	76.522074548	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) request id=0x506a, seq=24/0344, ttl=64 (reply in 190)
108	76.778064531	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) reply id=0x506a, seq=24/0344, ttl=64 (request in 197)
109	77.002056434	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) request id=0x5054, seq=44/11264, ttl=64 (reply in 201)
201	77.002056206	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) reply id=0x5054, seq=44/11264, ttl=64 (request in 208)
202	77.002056202	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) request id=0x506a, seq=25/0340, ttl=64 (reply in 201)
203	77.002056207	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) reply id=0x506a, seq=25/0340, ttl=64 (request in 202)
204	77.002056281	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) request id=0x507e, seq=7/792, ttl=64 (reply in 205)
205	77.002056289	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) reply id=0x507e, seq=7/792, ttl=64 (request in 204)
206	77.099011699	Cisco_b6:8c:13	Cisco_b6:8c:13	LOOP	68 Reply
207	78.030011611	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) request id=0x5054, seq=45/11259, ttl=64 (reply in 208)
208	78.030011677	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) reply id=0x5054, seq=45/11259, ttl=64 (request in 207)
209	78.195528284	Cisco_b6:8c:13	Spanning-tree-(for-bridges)..	STP	68 Cost_ Root = 32768/30/00:le:14:b6:8c:00 Cost = 0 Port = 0x8013
210	78.370069648	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) request id=0x506a, seq=26/0655, ttl=64 (reply in 211)
211	78.570072766	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) reply id=0x506a, seq=26/0655, ttl=64 (request in 210)
212	78.620651488	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) request id=0x507e, seq=27/248, ttl=64 (reply in 212)
213	78.620651474	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) reply id=0x507e, seq=27/248, ttl=64 (request in 213)
214	78.593065568	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) request id=0x5054, seq=46/11776, ttl=64 (reply in 215)
215	79.059194907	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) reply id=0x5054, seq=46/11776, ttl=64 (request in 214)
216	79.594908518	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) request id=0x506a, seq=27/692, ttl=64 (reply in 217)
217	79.594917337	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) reply id=0x506a, seq=27/692, ttl=64 (request in 216)
218	79.594917339	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) request id=0x506a, seq=28/240, ttl=63 (request in 218)
219	79.594917379	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) reply id=0x506a, seq=28/240, ttl=63 (request in 219)
220	80.074197365	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) request id=0x5054, seq=47/12032, ttl=64 (reply in 221)
221	80.074197365	Cisco_b6:8c:13	Spanning-tree-(for-bridges)..	STP	98 Echo (ping) reply id=0x5054, seq=47/12032, ttl=64 (request in 220)
222	80.196263919	Cisco_b6:8c:13	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/30/00:le:14:b6:8c:00 Cost = 0 Port = 0x8013
223	80.200010809	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) request id=0x506a, seq=28/6655, ttl=64 (reply in 224)
224	80.510208538	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) reply id=0x506a, seq=28/7568, ttl=64 (request in 223)
225	80.574052362	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) request id=0x507e, seq=10/2568, ttl=64 (reply in 226)
226	80.674281923	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) reply id=0x507e, seq=10/2568, ttl=63 (request in 225)
227	81.098071524	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) request id=0x5054, seq=48/12288, ttl=64 (reply in 228)
228	81.098071525	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) reply id=0x5054, seq=48/12288, ttl=64 (request in 227)
229	81.542963234	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) request id=0x506a, seq=29/1254, ttl=64 (reply in 229)
230	81.642019749	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) reply id=0x506a, seq=29/1254, ttl=64 (request in 229)
231	81.642019749	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) request id=0x5054, seq=49/12032, ttl=64 (reply in 221)
232	82.122066928	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) reply id=0x5054, seq=49/12032, ttl=64 (request in 231)
233	82.122066928	Cisco_b6:8c:13	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/30/00:le:14:b6:8c:00 Cost = 0 Port = 0x8013
234	82.666071479	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) request id=0x506a, seq=30/7650, ttl=64 (reply in 235)
235	82.666071479	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) reply id=0x506a, seq=30/7650, ttl=64 (request in 234)
236	83.490092598	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) request id=0x506a, seq=31/7930, ttl=64 (reply in 237)
237	83.490092598	172.16.30.1	172.16.31.253	IOMP	98 Echo (ping) reply id=0x506a, seq=31/7930, ttl=64 (request in 236)
238	84.247919719	Cisco_b6:8c:13	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/30/00:le:14:b6:8c:00 Cost = 0 Port = 0x8013
239	84.247919719	Cisco_b6:8c:13	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/30/00:le:14:b6:8c:00 Cost = 0 Port = 0x8013
240	84.247919719	Cisco_b6:8c:13	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/30/00:le:14:b6:8c:00 Cost = 0 Port = 0x8013
241	84.247919719	Cisco_b6:8c:13	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/30/00:le:14:b6:8c:00 Cost = 0 Port = 0x8013
242	84.247919719	Hewlett_P_Sat7:43:e3	Hewlett_P_Sat7:43:e3	ARP	68 Who has 172.16.30.17 Tell 172.16.30.254
243	84.832046767	Hewlett_P_Sat7:43:e3	Hewlett_P_Sat7:43:e3	ARP	42 172.16.30.1 is at 00:21:5a:5a:7d:57
244	84.832046767	Cisco_b6:8c:13	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/30/00:le:14:b6:8c:00 Cost = 0 Port = 0x8013
50	87.958342405	172.16.31.1	172.16.2.1	DNS	86 Standard query 0xd3d4 PTR 253.31.16.172.in-addr.arpa
51	87.958342821	Encore6_b4:1b:94	Broadcast	ARP	42 Who has 172.16.31.17 Tell 172.16.31.253
52	87.958478846	Encore6_b4:1b:94	Encore6_b4:1b:94	ARP	68 172.16.31.17 is at 00:21:5a:5a:7d:48
53	87.958484053	172.16.31.1	172.16.31.253	IOMP	114 Destination unreachable (Network unreachable)
54	87.958484053	172.16.31.1	172.16.31.253	IOMP	68 Echo (ping) request id=0x506a, seq=30/1254, ttl=64 (reply in 55)
55	89.219938987	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
56	89.219938987	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
57	89.219938987	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
58	92.055666664	172.16.31.1	172.16.31.253	IOMP	114 Destination unreachable (Network unreachable)
59	93.1229177493	Hewlett_P_61:24:01	Hewlett_P_61:24:01	ARP	68 Who has 172.16.31.253 Tell 172.16.31.31
60	93.1229177493	Encore6_b4:1b:94	Hewlett_P_61:24:01	ARP	42 172.16.31.253 is at 00:21:5d:7d:48:94
61	94.229701936	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
62	96.701002286	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Reply
63	96.701002286	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
64	97.660872653	172.16.31.1	172.16.31.253	IOMP	68 Echo (ping) request id=0x506a, seq=31/1659, ttl=64 (reply in 65)
65	97.966105828	172.16.31.1	172.16.31.253	IOMP	114 Destination unreachable (Network unreachable)
66	98.039514194	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
67	98.100.244302203	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
68	98.100.244302203	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
69	102.965112976	172.16.31.1	193.136.28.1	IOMP	68 Standard query 0xd3d4 PTR 253.31.16.172.in-addr.arpa
70	102.965146246	172.16.31.1	172.16.31.253	IOMP	114 Destination unreachable (Network unreachable)
71	104.254147198	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
72	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Echo (ping) request id=0x506a, seq=32/1254, ttl=64 (reply in 73)
73	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
74	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Echo (ping) reply id=0x506a, seq=32/1254, ttl=64 (request in 75)
75	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
76	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Echo (ping) request id=0x506a, seq=33/1254, ttl=64 (reply in 77)
77	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
78	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Echo (ping) reply id=0x506a, seq=33/1254, ttl=64 (request in 79)
79	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
80	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Echo (ping) request id=0x506a, seq=34/1254, ttl=64 (reply in 81)
81	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
82	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Echo (ping) reply id=0x506a, seq=34/1254, ttl=64 (request in 83)
83	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
84	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Echo (ping) request id=0x506a, seq=35/1254, ttl=64 (reply in 85)
85	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
86	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Echo (ping) reply id=0x506a, seq=35/1254, ttl=64 (request in 87)
87	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
88	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Echo (ping) request id=0x506a, seq=36/1254, ttl=64 (reply in 89)
89	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
90	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Echo (ping) reply id=0x506a, seq=36/1254, ttl=64 (request in 91)
91	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
92	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Echo (ping) request id=0x506a, seq=37/1254, ttl=64 (reply in 93)
93	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Conf_ Root = 32768/31/00:le:14:b6:8c:00 Cost = 0 Port = 0x8015
94	106.208035737	Cisco_b6:8c:15	Spanning-tree-(for-bridges)..	STP	68 Echo (ping) reply id=0x506a, seq=37/1254, ttl=64 (request in 95)
95	141.101364555	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) request id=0x5054, seq=25/256, ttl=63 (reply in 96)
96	141.101364555	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) reply id=0x5054, seq=25/256, ttl=64 (request in 95)
97	141.101364555	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) request id=0x5054, seq=26/256, ttl=63 (reply in 98)
98	141.101364555	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) reply id=0x5054, seq=26/256, seq=3/792, ttl=64 (request in 97)
99	141.101364555	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) request id=0x5054, seq=27/256, seq=3/792, ttl=64 (reply in 100)
100	141.101364555	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) reply id=0x5054, seq=27/256, seq=3/792, ttl=64 (request in 101)
101	143.1508219734	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) request id=0x5054, seq=28/256, ttl=64 (reply in 102)
102	144.174216703	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) reply id=0x5054, seq=28/256, ttl=64 (request in 103)
103	144.174216703	172.16.30.1	172.16.30.254	IOMP	98 Echo (ping) request id=0x5054, seq

Experiência 4: Configurar um router comercial e implementar NAT



41	18.249017567	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=14/3844, ttl=63 (request in 39)
42	18.367752577	Cisco_Sc:4d:86	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=15/4896, ttl=64 (reply in 45)
43	11.264385438	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
44	11.264546574	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=15/3844, ttl=63 (request in 43)
45	11.264546574	Cisco_Sc:4d:86	172.16.21.1	ICMP	60 Reply
47	12.267987558	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=16/4896, ttl=64 (reply in 49)
48	17.288324724	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
49	11.265048033	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=16/3844, ttl=63 (request in 47)
50	11.367752577	Cisco_Sc:4d:86	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=17/4896, ttl=64 (reply in 53)
51	13.312011419	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=17/352, ttl=63 (request in 51)
52	13.312351928	172.16.21.254	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=18/4896, ttl=64 (reply in 56)
53	14.367752577	172.16.28.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
54	14.367888038	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=19/4896, ttl=64 (reply in 58)
55	14.366379497	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
56	14.336563814	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=19/4896, ttl=63 (request in 54)
57	14.367967873	Hewlett_Packard:61:2b:72	172.16.21.1	ARP	42 Who has 172.16.21.254 Tel:172.16.21.1
58	14.368278804	Cisco_Sc:d7:78	172.16.21.1	ARP	68 172.16.21.254 is at 08:ef:bd:e1:d7:78
59	14.368278804	172.16.21.254	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=19/4896, Cost = 0 Port = 0x8000
60	15.369012371	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=19/4896, ttl=64 (reply in 62)
61	15.368938184	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
62	15.368959187	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=19/4896, ttl=63 (request in 68)
63	16.367752577	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=20/4896, ttl=64 (reply in 65)
64	16.367888038	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
65	16.364584872	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=20/352, ttl=63 (request in 63)
66	16.677905127	Cisco_Sc:4d:86	172.16.21.1	ICMP	68 Conf. Root = 3278/21/fccfb:fb:5c:d4:88 Cost = 0 Port = 0x8000
67	17.408011384	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=21/3576, ttl=64 (reply in 69)
68	17.408011384	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
69	17.408011384	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=21/3576, ttl=63 (request in 67)
70	18.43202395	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=22/2532, ttl=64 (reply in 72)
71	18.432328483	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
72	18.432587888	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=22/5632, ttl=63 (request in 78)
73	18.677252981	Cisco_Sc:4d:86	172.16.21.1	ICMP	68 Conf. Root = 3278/21/fccfb:fb:5c:d4:88 Cost = 0 Port = 0x8000

73	18.677252981	Cisco_Sc:4d:86	Spanning-tree-(for-bridges)..	STP	68 Conf. Root = 3278/21/fccfb:fb:5c:d4:88 Cost = 0 Port = 0x8000
74	19.456089479	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) request id=0x21bb, seq=23/5888, ttl=64 (reply in 76)
75	19.456354598	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
76	19.456354598	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=23/3888, ttl=63 (request in 74)
77	20.178128909	Cisco_Sc:4d:86	172.16.21.1	CDP	435 Device ID: tux-sx Port ID: FastEthernet0/4
78	20.408011461	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=24/1144, ttl=64 (reply in 88)
79	20.408011461	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
80	20.488538952	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=24/3544, ttl=63 (request in 78)
81	20.681792522	Cisco_Sc:4d:86	Spanning-tree-(for-bridges)..	STP	68 Conf. Root = 3278/21/fccfb:fb:5c:d4:88 Cost = 0 Port = 0x8000
82	21.408011461	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) request id=0x21bb, seq=25/4480, ttl=64 (reply in 84)
83	21.564357976	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
84	22.132299449	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=25/352, ttl=63 (request in 82)
85	22.132299449	Cisco_Sc:4d:86	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=26/6566, ttl=64 (reply in 88)
86	22.528086789	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) request id=0x21bb, seq=26/6566, ttl=64 (reply in 88)
87	22.528336928	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
88	22.528336928	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=26/6566, ttl=63 (request in 86)
89	23.552053333	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) request id=0x21bb, seq=27/5912, ttl=64 (reply in 92)
90	23.552349747	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
91	23.552349747	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=27/5912, ttl=63 (request in 98)
92	23.552349747	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) request id=0x21bb, seq=28/1168, ttl=64 (reply in 95)
93	24.576086552	172.16.21.1	172.16.20.1	ICMP	78 Redirect (Redirect for host)
94	24.576353272	172.16.21.254	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=29/352, ttl=63 (request in 93)
95	24.576353272	172.16.28.1	172.16.20.1	ICMP	98 Echo (ping) request id=0x21bb, seq=29/4560, ttl=64 (reply in 99)
96	24.601477113	Cisco_Sc:4d:86	Spanning-tree-(for-bridges)..	STP	68 Conf. Root = 3278/21/fccfb:fb:5c:d4:88 Cost = 0 Port = 0x8000
97	25.599976205	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) request id=0x21bb, seq=29/2472, ttl=64 (reply in 99)
98	25.648833499	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
99	26.624084538	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=30/2472, ttl=63 (request in 97)
100	26.624084538	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=30/5600, ttl=64 (reply in 102)
101	26.624349723	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
102	26.624588056	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=30/5600, ttl=63 (request in 108)
103	27.648537272	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) request id=0x21bb, seq=31/352, ttl=64 (reply in 106)
104	27.648537272	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
105	27.648537272	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=31/352, ttl=63 (request in 105)
106	30.719907787	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) request id=0x21bb, seq=34/7874, ttl=64 (reply in 117)
107	30.778053878	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=34/7874, ttl=63 (request in 115)
108	31.744084111	172.16.21.254	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=35/9560, ttl=64 (reply in 120)
109	31.744084111	172.16.28.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
110	31.744575425	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=35/9560, ttl=63 (request in 118)
111	31.744575425	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
112	31.744575425	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=35/9560, ttl=64 (reply in 125)
113	31.744575425	Cisco_Sc:4d:86	Spanning-tree-(for-bridges)..	STP	68 Conf. Root = 3278/21/fccfb:fb:5c:d4:88 Cost = 0 Port = 0x8000
114	31.744575425	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=35/9560, ttl=63 (request in 111)
115	31.744575425	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
116	31.770334141	172.16.21.254	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=35/9560, ttl=63 (request in 115)
117	31.770334141	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=36/9560, ttl=64 (reply in 128)
118	31.770334141	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=36/9560, ttl=63 (request in 118)
119	31.770334141	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
120	32.711083368	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=36/9560, ttl=63 (request in 128)
121	32.148897532	Cisco_Sc:4d:86	Spanning-tree-(for-bridges)..	STP	68 Conf. Root = 3278/21/fccfb:fb:5c:d4:88 Cost = 0 Port = 0x8000
122	32.148897532	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) request id=0x21bb, seq=36/9560, ttl=64 (reply in 125)
123	32.148897532	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
124	32.768517931	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=36/9560, ttl=63 (request in 323)
125	32.768517931	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) request id=0x21bb, seq=37/9472, ttl=64 (reply in 128)
126	33.791986344	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=37/9472, ttl=63 (request in 128)
127	33.7919235924	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
128	33.7919235924	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=37/9472, ttl=63 (request in 128)

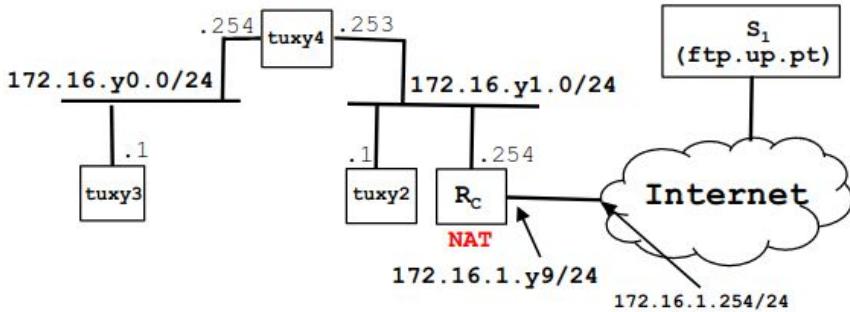
21	5.12057249817	172.16.21.254	172.16.21.21	IOMP	79	Redirect	[Redirect for host]
22	6.1340900888	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x2384, ttl=63 (request in 28)
23	6.1344545233	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x2560, ttl=64 (reply in 25)
24	6.1344545233	172.16.21.254	172.16.21.21	IOMP	79	Redirect	[Redirect for host]
25	6.1345448639	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x2560, ttl=63 (request in 23)
26	6.1345448639	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x2560, ttl=64 (reply in 26)
27	7.1688128929	172.16.21.21	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f7816, ttl=64 (reply in 29)
28	7.1688128929	172.16.21.254	172.16.21.21	IOMP	79	Redirect	[Redirect for host]
29	7.1685569529	172.16.20.21	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x1f816, ttl=63 (request in 27)
30	8.1926979798	172.16.21.21	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f8072, ttl=64 (reply in 32)
31	8.192339709	172.16.21.254	172.16.21.21	IOMP	79	Redirect	[Redirect for host]
32	8.192339709	172.16.20.21	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x1f8072, ttl=63 (request in 38)
33	8.192339709	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f816, ttl=64 (reply in 39)
34	9.2761081514	172.16.21.21	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f8328, ttl=64 (reply in 36)
35	9.2162548885	172.16.21.254	172.16.21.21	IOMP	79	Redirect	[Redirect for host]
36	9.2165832812	172.16.20.21	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x1f8328, ttl=63 (request in 34)
37	9.2165832812	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f816, ttl=64 (17.21.21.253)
38	9.221517125	Hewlett_Packard_f1	172.16.21.21	ARP	60	Who has	17.21.21.253? TTL=17
39	10.240000665	172.16.21.21	172.16.21.21	IOMP	42	17.21.21.21 is at	00:21:ba:1e:12:02
40	10.240000665	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f84584, ttl=64 (reply in 41)
41	10.240000665	172.16.21.254	172.16.21.21	IOMP	79	Redirect	[Redirect for host]
42	10.240000665	172.16.20.21	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x1f84584, ttl=63 (request in 39)
43	10.240000665	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f816, Port = 0x8000
44	11.264035539	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f84584, ttl=64 (reply in 45)
45	11.264035539	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x1f84584, ttl=63 (request in 43)
46	12.1388451524	Cisco_Sc4d:86	172.16.21.21	LOOP	60	Reply	
47	12.1388451524	Cisco_Sc4d:86	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f84606, ttl=64 (reply in 49)
48	12.288324247	172.16.21.254	172.16.21.21	IOMP	79	Redirect	[Redirect for host]
49	12.288324247	172.16.20.21	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x1f84606, ttl=63 (request in 47)
50	12.288324247	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f816, Port = 0x8000
51	13.312011419	172.16.21.21	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f7352, ttl=64 (reply in 53)
52	13.312011419	172.16.21.254	172.16.21.21	IOMP	79	Redirect	[Redirect for host]
53	13.312562280	172.16.20.21	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x1f7352, ttl=63 (request in 51)
54	13.340868885	172.16.21.21	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f84606, ttl=64 (reply in 56)
55	13.340868885	172.16.21.254	172.16.21.21	IOMP	79	Redirect	[Redirect for host]
56	13.3506568104	172.16.20.21	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x1f84608, ttl=63 (request in 54)
57	13.3506568104	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f816, Port = 0x8000
58	14.3682788680	Cisco_Sc4d:778	172.16.21.21	ARP	42	Who has	17.21.21.254? TTL=7
59	14.3682788680	Cisco_Sc4d:778	172.16.21.21	IOMP	60	17.21.21.21 is at	00:21:ba:1e:12:02
60	14.3682788680	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f84608, ttl=64 (reply in 57)
61	15.368301181	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f84604, ttl=64 (reply in 62)
62	15.368301181	172.16.20.21	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x1f84604, ttl=63 (request in 68)
63	16.383995355	172.16.21.21	172.16.20.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x205120, ttl=64 (reply in 65)
64	16.3839432824	172.16.21.254	172.16.21.21	IOMP	79	Redirect	[Redirect for host]
65	16.384568474	172.16.20.21	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x205120, ttl=63 (request in 63)
66	16.384568474	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x205120, Port = 0x8000
67	17.4009813306	172.16.21.21	172.16.20.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x1f73576, ttl=64 (reply in 69)
68	17.4009813306	172.16.21.254	172.16.21.21	IOMP	79	Redirect	[Redirect for host]
69	17.4009552273	172.16.20.21	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x1f73576, ttl=63 (request in 67)
70	18.4320082395	172.16.21.21	172.16.20.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x225832, ttl=64 (reply in 72)
71	18.4323226483	172.16.21.254	172.16.21.21	IOMP	79	Redirect	[Redirect for host]
72	18.4323226483	172.16.20.21	172.16.21.21	IOMP	98	Echo (ping) reply	id=0x21bb, seq=0x225832, ttl=63 (request in 78)
73	18.4323226483	172.16.21.254	172.16.21.21	IOMP	98	Echo (ping) request	id=0x21bb, seq=0x225832, Port = 0x8000

F3	18.0.7725.0001	Cisco_Sc4d:80	Spanning-tree-(for-bridges)_	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:80 Cost = 0 Port = 0x8000
71	18.456884879	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=23/8888, ttl=64 (reply in 76)
76	19.456534598	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=23/8888, ttl=63 (request in 74)
77	20.1701208801	Cisco_Sc4d:80	CDP/TP/DP/PAgP/UDLD	CDP	435 Device ID: tuc-sw-1 Port ID: Fastethernet0/4
78	20.400014611	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=24/1144, ttl=64 (reply in 88)
79	20.408934916	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
80	20.409536952	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=24/1144, ttl=63 (request in 78)
81	21.564031503	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=25/6400, ttl=64 (reply in 84)
83	21.564357876	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
84	21.564358079	172.16.21.254	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=25/6400, ttl=63 (request in 82)
85	21.564360449	Cisco_Sc4d:80	Spanning-tree-(for-bridges)_	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:80 Cost = 0 Port = 0x8000
86	22.528086789	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=26/656, ttl=64 (reply in 88)
87	22.528336928	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
88	22.528536460	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=26/656, ttl=63 (request in 86)
89	23.552095353	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=27/9512, ttl=64 (reply in 92)
91	23.552349747	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
92	23.552544883	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=27/9512, ttl=63 (request in 98)
93	24.560806652	172.16.21.254	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=28/7168, ttl=64 (reply in 95)
94	24.576325971	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
95	24.576325971	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=28/7168, ttl=63 (request in 93)
96	24.576325971	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=28/7168, ttl=64 (request in 96)
97	25.509997620	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=29/7424, ttl=64 (reply in 99)
98	25.600033499	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
99	25.600033499	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=29/7424, ttl=63 (request in 97)
100	26.624006068	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=29/7424, ttl=64 (reply in 102)
101	26.674348723	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
102	26.674568896	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=30/8880, ttl=63 (request in 100)
103	26.698449935	Cisco_Sc4d:80	Spanning-tree-(for-bridges)_	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:80 Cost = 0 Port = 0x8000
104	27.640446452	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=31/7668, ttl=64 (reply in 106)
105	27.640446452	172.16.21.1	172.16.21.254	ICMP	78 Redirect (Redirect for host)
106	27.640543727	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=31/7636, ttl=63 (request in 104)
107	28.672080652	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=32/8192, ttl=64 (reply in 109)
108	28.672339362	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
109	28.672349711	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=32/8192, ttl=63 (request in 107)
110	28.672349711	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=33/7668, ttl=64 (reply in 111)
111	29.695985804	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=33/7448, ttl=64 (reply in 113)
112	29.696328068	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
113	29.696553038	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=33/7448, ttl=63 (request in 111)
114	29.769212205	Cisco_Sc4d:80	Spanning-tree-(for-bridges)_	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:80 Cost = 0 Port = 0x8000
115	29.769212205	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=34/7084, ttl=64 (reply in 117)
116	30.778231421	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
117	30.778238878	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=34/7874, ttl=63 (request in 115)
118	31.744041215	172.16.21.254	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=35/9560, ttl=64 (reply in 120)
119	31.744351626	172.16.28.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
120	31.744351626	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=35/9560, ttl=63 (request in 118)
121	32.148957752	Cisco_Sc4d:80	Spanning-tree-(for-bridges)_	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:80 Cost = 0 Port = 0x8000
122	32.715183380	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=36/216, ttl=64 (reply in 125)
123	32.767997775	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
124	32.768316299	172.16.21.254	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=37/9472, ttl=64 (request in 126)
125	32.768316299	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=37/9472, ttl=63 (request in 123)
126	33.791963444	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=37/9472, ttl=64 (reply in 128)
127	33.792325924	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
128	33.792523887	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=37/9472, ttl=63 (request in 126)
129	34.721135745	Cisco_Sc4d:80	Spanning-tree-(for-bridges)_	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:80 Cost = 0 Port = 0x8000
130	34.815997729	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=38/9726, ttl=64 (reply in 132)
131	34.815997729	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
132	34.835488405	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=39/720, ttl=63 (request in 130)
133	35.839977799	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=39/9984, ttl=64 (reply in 135)
134	35.84037229	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
135	35.840525625	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=39/9984, ttl=63 (request in 133)
136	36.863988988	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
137	36.863988988	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=40/18240, ttl=64 (reply in 139)
138	36.864376728	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
139	36.864464821	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=40/18240, ttl=63 (request in 137)
140	37.867979472	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=41/9496, ttl=64 (reply in 142)
141	37.868323030	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
142	37.868323030	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=42/17946, ttl=64 (request in 140)
143	38.863975397	Cisco_Sc4d:80	Spanning-tree-(for-bridges)_	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:80 Cost = 0 Port = 0x8000
144	38.911975050	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=43/10752, ttl=64 (reply in 146)
145	38.912141625	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
146	38.912141625	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=43/10752, ttl=63 (request in 144)
147	39.912141625	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=44/18968, ttl=64 (reply in 149)
148	39.916316636	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
149	39.936562502	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=45/1088, ttl=63 (request in 147)
150	40.7153864377	Cisco_Sc4d:80	Spanning-tree-(for-bridges)_	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:80 Cost = 0 Port = 0x8000
151	40.7153864377	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=46/11764, ttl=64 (reply in 153)
152	40.866327768	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
153	40.968516546	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=47/1264, ttl=63 (request in 151)
154	41.983994943	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=48/1520, ttl=64 (reply in 156)
155	41.984354445	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
156	41.984578405	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=49/1520, ttl=63 (request in 154)
157	42.154454878	Cisco_Sc4d:80	Spanning-tree-(for-bridges)_	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:80 Cost = 0 Port = 0x8000
158	42.154454878	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=50/1824, ttl=64 (reply in 156)
159	43.807958538	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
160	43.80831537	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=51/1776, ttl=63 (request in 159)
161	43.808669994	172.16.21.254	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=52/2352, ttl=64 (reply in 164)
162	43.808669994	172.16.21.1	172.16.28.1	ICMP	78 Redirect (Redirect for host)
163	44.802347407	172.16.21.254	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=53/2823, ttl=63 (request in 162)
164	44.825237347	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=54/2823, ttl=63 (request in 162)
165	45.743838016	Cisco_Sc4d:80	Spanning-tree-(for-bridges)_	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:80 Cost = 0 Port = 0x8000
166	45.875059595	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=55/3056, ttl=64 (reply in 168)
167	46.875215453	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
168	46.875343724	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=56/2288, ttl=63 (request in 166)
169	46.87994435	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=57/2544, ttl=64 (reply in 171)
170	46.898459507	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
171	46.89886699	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=58/2544, ttl=63 (request in 169)
172	47.160401018	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=59/2800, ttl=64 (reply in 175)
174	47.16433725	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
175	47.164564139	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=60/2800, ttl=63 (request in 173)
176	48.128061926	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=61/3056, ttl=64 (reply in 178)
177	48.406125454	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
178	48.413633724	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=62/3056, ttl=63 (request in 176)
179	48.754801277	Cisco_Sc4d:80	Spanning-tree-(for-bridges)_	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:80 Cost = 0 Port = 0x8000
180	49.15199796	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=63/3312, ttl=64 (reply in 182)
181	49.152333129	172.16.21.254	172.16.21.1	ICMP	78 Redirect (Redirect for host)
182	49.152333129	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=64/3312, ttl=63 (request in 180)
183	58.175971738	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=65/3368, ttl=64 (reply in 185)

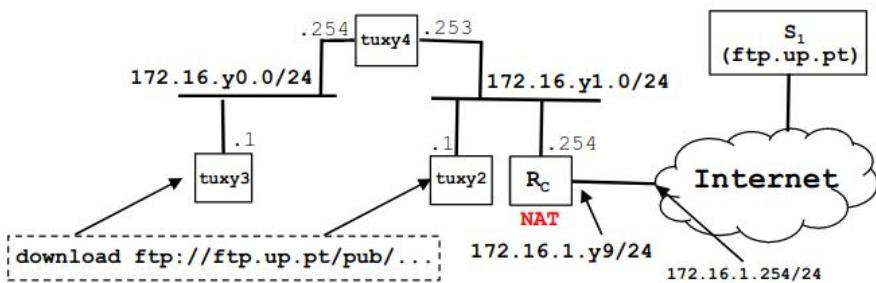
168	40-115997962	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=5/13312, ttl=64 (reply in 182)
169	40-115997963	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=5/13312, ttl=63 (request in 180)
183	50-175997138	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=5/13568, ttl=64 (reply in 185)
184	50_176342782	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
185	50-17650617	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=5/13568, ttl=63 (request in 183)
186	50_18695268	Heueltt_6120:72	Heueltt_a61ad:1	ARP	68 Who has 172.16.21.1 Tel=172.16.21.253
187	50_18979510	Cisco_Sc-4d186	Spanning-tree-(for-bridges)-	STP	42 Conf_Root = 32768/21/172.16.21.1 Cost = 0 Port = 0x0000
189	51_199983257	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=5/13824, ttl=64 (reply in 191)
190	51_209315631	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
193	52_15637981	Cisco_Sc-4d186	Spanning-tree-(for-bridges)-	STP	98 Echo (ping) reply id=0x21bb, seq=5/13824, ttl=63 (request in 189)
193	52_15637981	Cisco_Sc-4d186	Spanning-tree-(for-bridges)-	STP	98 Echo (ping) request id=0x21bb, seq=5/14080, ttl=64 (reply in 195)
194	52_224327731	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
195	52_22455763	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=5/14080, ttl=63 (request in 193)
197	53_240985155	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=5/14326, ttl=64 (reply in 199)
198	53_248520767	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
199	53_248515764	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=5/14326, ttl=63 (request in 197)
208	54_272091762	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=5/14592, ttl=64 (reply in 282)
281	54_272323443	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
283	54_764085931	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=5/14592, ttl=63 (request in 200)
284	54_764085937	Cisco_Sc-4d186	Spanning-tree-(for-bridges)-	STP	68 Conf_Root = 32768/21/172.16.21.1 Cost = 0 Port = 0x0000
204	55_29599996	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=5/14840, ttl=64 (reply in 206)
205	55_296334013	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
206	56_31998346	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=5/14840, ttl=63 (request in 204)
206	56_319983487	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=5/15154, ttl=64 (reply in 209)
208	56_328228008	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
209	56_328524285	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=5/15154, ttl=63 (request in 207)
210	56_763995118	Cisco_Sc-4d186	Spanning-tree-(for-bridges)-	STP	68 Conf_Root = 32768/21/172.16.21.1 Cost = 0 Port = 0x0000
210	56_763995118	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=5/15154, ttl=64 (reply in 213)
211	56_244735655	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
213	57_344544497	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=5/15368, ttl=63 (request in 211)
214	58_367997373	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=6/15616, ttl=64 (reply in 216)
215	58_368464288	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
216	58_368666677	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=6/15616, ttl=63 (request in 214)
216	58_368666677	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=6/15616, ttl=64 (reply in 215)
218	59_392901122	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=6/215872, ttl=64 (reply in 220)
219	59_39235517	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
220	59_392359813	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=6/215872, ttl=63 (request in 218)
221	59_42395297	Heueltt_6120:72	Cisco_Sc-4d186	ARP	42 Who has 172.16.21.1 Tel=172.16.21.1
221	59_42395297	Cisco_Sc-4d186	Heueltt_a61ad:1	ARP	42 Who has 172.16.21.1 Tel=172.16.21.1
223	60_416082132	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=6/316128, ttl=64 (reply in 225)
224	60_416351338	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
225	60_416553598	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=6/316128, ttl=63 (request in 223)
226	60_416553598	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=6/316128, ttl=64 (reply in 229)
227	61_440086838	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=6/416384, ttl=64 (reply in 229)
228	61_440824232	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
229	61_440855924	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=6/416384, ttl=63 (request in 227)
230	62_1555799532	Cisco_Sc-4d186	Spanning-tree-(for-bridges)-	STP	68 Conf_Root = 32768/21/172.16.21.1 Cost = 0 Port = 0x0000
231	62_464082005	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=6/215648, ttl=64 (reply in 233)
232	62_464082005	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
233	62_464529813	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=6/51664, ttl=63 (request in 231)
234	62_784483752	Cisco_Sc-4d186	Spanning-tree-(for-bridges)-	STP	68 Conf_Root = 32768/21/172.16.21.1 Cost = 0 Port = 0x0000
235	63_468084404	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=6/615896, ttl=64 (reply in 237)
236	63_468338213	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
284	76_818734397	Cisco_Sc-4d186	Spanning-tree-(for-bridges)-	STP	68 Conf_Root = 32768/21/172.16.21.1 Cost = 0 Port = 0x0000
285	77_823998198	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=8/214880, ttl=64 (reply in 287)
286	77_824319948	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
287	77_824517593	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=8/214880, ttl=63 (request in 285)
288	78_847997993	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=8/27756, ttl=64 (reply in 291)
289	78_847997998	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
290	79_848521223	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=8/12736, ttl=63 (request in 289)
292	79_871997967	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=8/21992, ttl=64 (reply in 294)
293	79_873373735	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
294	80_871993141	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=8/21992, ttl=63 (request in 292)
295	80_174180292	Cisco_Sc-4d186	CDP/TP/DP/Pag/UDL	COP	43 Device ID: tuc-w2 Port ID: FastEthernet0/4
296	80_872846653	Cisco_Sc-4d186	Spanning-tree-(for-bridges)-	STP	68 Conf_Root = 32768/21/172.16.21.1 Cost = 0 Port = 0x0000
297	80_873998808	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=8/31246, ttl=64 (reply in 299)
298	80_886931237	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
299	80_8931231	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=8/31246, ttl=63 (request in 297)
300	80_8931231	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=8/41594, ttl=64 (reply in 302)
301	81_929313182	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
302	81_929555033	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=8/41594, ttl=63 (request in 308)
303	82_162435980	Cisco_Sc-4d186	Spanning-tree-(for-bridges)-	STP	68 Conf_Root = 32768/21/172.16.21.1 Cost = 0 Port = 0x0000
305	82_943997192	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=8/51768, ttl=64 (reply in 307)
306	82_944367786	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
307	82_944593337	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=8/51768, ttl=63 (request in 305)
308	83_967996224	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=8/62108, ttl=64 (reply in 318)
309	83_968313814	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
310	83_968313814	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=8/62108, ttl=63 (request in 308)
311	84_839582218	Cisco_Sc-4d186	Spanning-tree-(for-bridges)-	STP	68 Conf_Root = 32768/21/172.16.21.1 Cost = 0 Port = 0x0000
312	84_991997613	172.16.21.1	172.16.20.1	ICMP	98 Echo (ping) request id=0x21bb, seq=8/22227, ttl=64 (reply in 314)
313	84_992316989	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
314	84_992316989	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=8/22227, ttl=63 (request in 312)
315	86_815995925	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=8/22528, ttl=64 (reply in 317)
316	86_816273986	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
317	86_816538646	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=8/22528, ttl=63 (request in 315)
318	86_843951922	Cisco_Sc-4d186	Spanning-tree-(for-bridges)-	STP	68 Conf_Root = 32768/21/172.16.21.1 Cost = 0 Port = 0x0000
319	86_843951922	172.16.21.1	172.16.21.1	ICMP	98 Echo (ping) request id=0x21bb, seq=8/22764, ttl=64 (reply in 321)
320	87_848316506	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
321	87_848537609	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=8/22764, ttl=63 (request in 319)
322	88_863997422	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=8/23849, ttl=64 (reply in 324)
323	88_864316599	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
324	88_864546394	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=8/23849, ttl=63 (request in 322)
326	89_887998409	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=8/32906, ttl=64 (reply in 328)
327	89_888323388	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)
328	89_888520366	172.16.28.1	172.16.21.1	ICMP	98 Echo (ping) reply id=0x21bb, seq=8/32906, ttl=63 (request in 326)
329	89_888520366	172.16.21.1	172.16.28.1	ICMP	98 Echo (ping) request id=0x21bb, seq=8/32555, ttl=64 (reply in 331)
330	90_881337720	172.16.21.1	172.16.21.1	ICMP	78 Redirect (Redirect for host)

332	98.053207229	Cisco_5c:4d:88	Spanning-tree-(for-bridges)...	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:88 Cost = 0 Port = 0x8000
333	91.115905188	172.16.21.1	IOMP	68 Echo (ping) request id=0x21bb, seq=0/3/23808, ttl=64 (no response found!)	
334	91.115905188	172.16.21.1	IOMP	68 Who has 172.16.21.1? Tell 172.16.21.253	
335	91.142363892	Howlett_61:2b:72	ARP	42 172.16.21.1 is at 00:21:5a:61:2b:72	
336	91.142371784	Howlett_61:2b:72	ARP	42 172.16.21.1 is at 00:21:5a:61:2b:72	
337	92.159997887	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=94/24064, ttl=64 (reply in 339)	
338	93.1843683728	172.16.21.254	IOMP	78 Redirect (Redirect for host)	
339	93.1843683728	172.16.21.1	IOMP	98 Echo (ping) reply id=0x21bb, seq=94/24064, ttl=63 (request in 337)	
340	94.297973761	172.16.21.1	IOMP	68 Echo (ping) reply id=0x21bb, seq=94/24064, ttl=64 (reply in 344)	
341	94.297973761	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=95/24320, ttl=64 (request in 344)	
342	94.297973761	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=95/24320, ttl=64 (request in 344)	
343	93.184368610	172.16.21.254	IOMP	78 Redirect (Redirect for host)	
344	93.184368610	172.16.21.1	IOMP	98 Echo (ping) reply id=0x21bb, seq=95/24320, ttl=63 (request in 342)	
345	94.297973761	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=95/24576, ttl=64 (reply in 347)	
346	94.298312973	172.16.21.254	IOMP	78 Redirect (Redirect for host)	
347	94.298544217	172.16.21.1	IOMP	98 Echo (ping) reply id=0x21bb, seq=99/24576, ttl=63 (request in 345)	
348	94.298544217	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=99/24832, ttl=64 (reply in 351)	
349	95.232081881	172.16.21.1	IOMP	78 Redirect (Redirect for host)	
350	95.232540845	172.16.21.1	IOMP	98 Echo (ping) reply id=0x21bb, seq=99/24832, ttl=63 (request in 349)	
352	96.256086667	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=98/25088, ttl=64 (reply in 354)	
353	96.256347117	172.16.21.254	IOMP	78 Redirect (Redirect for host)	
354	96.256347117	172.16.21.1	IOMP	98 Echo (ping) reply id=0x21bb, seq=98/25088, ttl=63 (request in 352)	
355	96.256347117	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=98/25088, ttl=64 (request in 352)	
356	97.279994279	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=99/25344, ttl=64 (reply in 358)	
357	97.280315758	172.16.21.1	IOMP	78 Redirect (Redirect for host)	
358	97.280538606	172.16.21.1	IOMP	98 Echo (ping) reply id=0x21bb, seq=99/25344, ttl=63 (request in 356)	
359	97.280538606	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=99/25608, ttl=64 (reply in 361)	
360	98.364471838	172.16.21.254	IOMP	78 Redirect (Redirect for host)	
361	98.364471838	172.16.21.1	IOMP	98 Echo (ping) reply id=0x21bb, seq=99/25608, ttl=63 (request in 359)	
362	98.872390329	Cisco_5c:4d:88	Spanning-tree-(for-bridges)...	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:88 Cost = 0 Port = 0x8000
363	99.328063563	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=181/25866, ttl=64 (reply in 365)	
364	99.328063563	172.16.21.1	IOMP	98 Echo (ping) reply id=0x21bb, seq=181/25866, ttl=63 (request in 364)	
365	99.328063563	172.16.21.1	IOMP	98 Echo (ping) reply id=0x21bb, seq=181/25866, ttl=63 (request in 363)	
366	100.352093085	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=182/26112, ttl=64 (reply in 368)	
367	100.352093085	172.16.21.254	IOMP	78 Redirect (Redirect for host)	
368	100.3520934633	172.16.21.1	IOMP	98 Echo (ping) reply id=0x21bb, seq=182/26112, ttl=63 (request in 366)	
369	100.3520934633	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=183/26368, ttl=64 (reply in 372)	
370	101.176340795	172.16.21.254	IOMP	78 Redirect (Redirect for host)	
372	101.176340795	172.16.21.1	IOMP	98 Echo (ping) reply id=0x21bb, seq=183/26368, ttl=63 (request in 370)	
373	102.177720282	Cisco_5c:4d:88	Cisco_5c:4d:88	LODP	68 Reply
374	102.177720282	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=184/26264, ttl=64 (reply in 376)	
375	102.177720282	172.16.21.254	IOMP	78 Redirect (Redirect for host)	
376	102.189027448	172.16.28.3	IOMP	98 Echo (ping) reply id=0x21bb, seq=184/26264, ttl=63 (request in 374)	
377	102.189027448	Cisco_5c:4d:88	Spanning-tree-(for-bridges)...	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:88 Cost = 0 Port = 0x8000
378	103.142999913	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=185/26888, ttl=64 (reply in 380)	
379	103.142999913	172.16.21.254	IOMP	78 Redirect (Redirect for host)	
380	103.142999913	172.16.21.1	IOMP	98 Echo (ping) reply id=0x21bb, seq=185/26888, ttl=63 (request in 378)	
381	104.448906081	172.16.21.1	IOMP	98 Echo (ping) request id=0x21bb, seq=186/27136, ttl=64 (reply in 383)	
382	104.448906249	172.16.21.254	IOMP	78 Redirect (Redirect for host)	
383	104.448906249	172.16.21.1	IOMP	98 Echo (ping) reply id=0x21bb, seq=186/27136, ttl=63 (request in 381)	
384	104.479966559	Howlett_61:2b:72	Cisco_e3:d7:78	ARP	42 Who has 172.16.21.254? Tell 172.16.21.1
385	104.480866892	Howlett_61:2b:72	ARP	68 172.16.21.254 is at 68:ef:bd:e3:d7:78	
386	104.480866892	Cisco_5c:4d:88	Spanning-tree-(for-bridges)...	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:88 Cost = 0 Port = 0x8000
7	8.596423807	172.16.28.1	172.16.1.254	IOMP	98 Echo (ping) request id=0x2a0c, seq=1/256, ttl=64 (reply in 8)
8	8.597122692	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=1/256, ttl=62 (request in 7)	
9	8.603517477	172.16.28.1	IOMP	98 Echo (ping) request id=0x2a0c, seq=2/252, ttl=64 (reply in 10)	
10	8.603517477	172.16.28.1	IOMP	98 Echo (ping) reply id=0x2a0c, seq=2/252, ttl=62 (request in 9)	
11	10.807437454	Cisco_5c:4d:88	Cisco_5c:4d:88	LODP	68 Echo (ping) request id=0x2a0c, seq=3/256, ttl=64 (request in 11)
12	10.765359636	Cisco_5c:4d:88	Spanning-tree-(for-bridges)...	STP	68 Conf. Root = 32768/21/fc:fb:fb:5c:4d:88 Cost = 0 Port = 0x8000
13	10.627513486	172.16.28.1	172.16.1.254	IOMP	98 Echo (ping) request id=0x2a0c, seq=4/256, ttl=64 (reply in 14)
14	10.628098030	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=4/256, ttl=62 (request in 13)	
15	10.628098030	172.16.28.1	IOMP	98 Echo (ping) request id=0x2a0c, seq=5/256, ttl=64 (reply in 15)	
16	10.652107763	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=4/2824, ttl=62 (request in 15)	
17	10.652107763	Cisco_5c:4d:88	Spanning-tree-(for-bridges)...	STP	68 Conf. Root = 32768/20/fc:fb:fb:5c:4d:88 Cost = 0 Port = 0x8000
18	10.675518312	172.16.28.1	172.16.1.254	IOMP	98 Echo (ping) request id=0x2a0c, seq=5/256, ttl=64 (reply in 19)
19	10.675518312	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=5/256, ttl=62 (request in 18)	
20	10.699508987	172.16.28.1	IOMP	98 Echo (ping) request id=0x2a0c, seq=6/256, ttl=64 (reply in 21)	
21	11.768995520	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=6/256, ttl=62 (request in 20)	
22	14.188274213	Cisco_5c:4d:88	Spanning-tree-(for-bridges)...	STP	68 Conf. Root = 32768/20/fc:fb:fb:5c:4d:88 Cost = 0 Port = 0x8000
23	14.722500041	172.16.28.1	172.16.1.254	IOMP	98 Echo (ping) request id=0x2a0c, seq=7/256, ttl=64 (reply in 23)
24	14.840996088	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=7/256, ttl=62 (request in 23)	
25	15.747531387	172.16.28.1	IOMP	98 Echo (ping) request id=0x2a0c, seq=8/2848, ttl=64 (reply in 28)	
26	15.749886666	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=8/2848, ttl=62 (request in 25)	
27	16.191642939	Cisco_5c:4d:88	Spanning-tree-(for-bridges)...	STP	68 Conf. Root = 32768/20/fc:fb:fb:5c:4d:88 Cost = 0 Port = 0x8000
28	16.191642939	172.16.28.1	172.16.1.254	IOMP	98 Echo (ping) request id=0x2a0c, seq=9/2384, ttl=64 (reply in 29)
29	16.191642939	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=9/2384, ttl=62 (request in 28)	
30	16.772124539	172.16.28.1	IOMP	98 Echo (ping) request id=0x2a0c, seq=10/2560, ttl=64 (reply in 31)	
31	17.795509856	172.16.28.1	IOMP	98 Echo (ping) reply id=0x2a0c, seq=10/2560, ttl=62 (request in 30)	
32	18.819524406	172.16.28.1	IOMP	98 Echo (ping) request id=0x2a0c, seq=11/2616, ttl=64 (reply in 41)	
34	18.820212583	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=11/2616, ttl=62 (request in 33)	
35	19.843526353	172.16.28.1	IOMP	98 Echo (ping) request id=0x2a0c, seq=12/3072, ttl=64 (reply in 36)	
36	19.844111985	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=12/3072, ttl=62 (request in 35)	
37	20.815121534	Cisco_5c:4d:88	LODP	68 Conf. Root = 32768/20/fc:fb:fb:5c:4d:88 Cost = 0 Port = 0x8000	
38	20.867513472	172.16.28.1	172.16.1.254	IOMP	98 Echo (ping) request id=0x2a0c, seq=13/3228, ttl=64 (reply in 48)
40	20.868897427	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=13/3228, ttl=62 (request in 39)	
41	21.891513996	172.16.28.1	172.16.1.254	IOMP	98 Echo (ping) request id=0x2a0c, seq=14/3384, ttl=64 (reply in 42)
42	21.892116383	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=14/3384, ttl=62 (request in 41)	
43	22.915515618	172.16.28.1	172.16.1.254	IOMP	98 Echo (ping) request id=0x2a0c, seq=15/3480, ttl=64 (reply in 45)
45	22.916114477	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=15/3480, ttl=62 (request in 44)	
46	23.939517989	172.16.28.1	IOMP	98 Echo (ping) request id=0x2a0c, seq=16/4096, ttl=64 (reply in 47)	
47	23.939517989	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=16/4096, ttl=62 (request in 46)	
48	24.850636348	Netronix_50:3f:12	Howlett_61:7d:12	ARP	68 Who has 172.16.26.17? Tell 172.16.26.25:25:24
49	24.850636348	Howlett_61:7d:12	Netronix_50:3f:12	ARP	68 Who has 172.16.26.17? Tell 172.16.26.25:25:24
50	24.211779540	Cisco_5c:4d:88	Spanning-tree-(for-bridges)...	STP	68 Conf. Root = 32768/20/fc:fb:fb:5c:4d:88 Cost = 0 Port = 0x8000
51	24.211779540	172.16.28.1	172.16.1.254	IOMP	98 Echo (ping) request id=0x2a0c, seq=17/4544, ttl=64 (reply in 51)
52	24.211779540	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=17/4544, ttl=62 (request in 51)	
53	25.987512183	172.16.28.1	IOMP	98 Echo (ping) request id=0x2a0c, seq=18/4908, ttl=64 (reply in 54)	
54	25.988114498	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=18/4908, ttl=62 (request in 53)	
55	26.057640359	172.16.28.1	172.16.1.254	IOMP	98 Echo (ping) request id=0x2a0c, seq=19/4964, ttl=64 (reply in 57)
56	26.057640359	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=19/4964, ttl=62 (request in 56)	
57	27.812123849	172.16.28.1	IOMP	98 Echo (ping) request id=0x2a0c, seq=20/5120, ttl=64 (reply in 59)	
58	28.035512587	172.16.28.1	IOMP	98 Echo (ping) reply id=0x2a0c, seq=20/5120, ttl=62 (request in 58)	
59	28.036186815	172.16.1.254	IOMP	98 Echo (ping) reply id=0x2a0c, seq=20/5120, ttl=62 (request in 58)	

Experiência 5: DNS



Experiência 6: Conexões TCP



24	38.89789806	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	Conf. Root = 32768/28/[ccfbfb3c]4d1bb Cost = 0 Port = 0x803
25	40.50751305	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	Conf. Root = 32768/28/[ccfbfb3c]4d1bb Cost = 0 Port = 0x803
26	42.182637162	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	Conf. Root = 32768/28/[ccfbfb3c]4d1bb Cost = 0 Port = 0x803
27	42.175156764	Cisco_Sc4d:83	CDP/P.TP/DTP/PoGP/UDLD	CDP	435	Device ID: 172.16.1.2 Port: FastEthernet0/1
28	43.308927608	Cisco_Sc4d:83	172.16.1.1	DNS	76	Standard query response 0x842 A name=ftp.up.pt 172.16.1.254.1 TSecr=3405882731 TSecv=4219395467 TSecr=3405882731 TSecv=4219395467
29	43.30893347	Cisco_Sc4d:83	172.16.1.1	DNS	34	Standard query response 0x842 A name=ftp.up.pt 172.16.1.254.1 TSecr=3405882731 TSecv=4219395467 TSecr=3405882731 TSecv=4219395467
30	43.308933478	Cisco_Sc4d:83	192.168.109.136	TCP	74	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 MSS=1468 SACK_PERM=1 TSecr=3405882731 TSecv=4219395467 TSecr=3405882731 TSecv=4219395467
31	43.30713330	Cisco_Sc4d:83	192.168.109.136	TCP	74	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 MSS=1468 SACK_PERM=1 TSecr=3405882731 TSecv=4219395467 TSecr=3405882731 TSecv=4219395467
32	43.3071454516	Cisco_Sc4d:83	192.16.20.1	TCP	68	60482 - 21 [ACK] Seq=21 Win=29312 Len=0 TSecr=3405882732 TSecv=4219395467
33	43.308985151	Cisco_Sc4d:83	192.16.20.1	FTP	108	Request: 21 [PASV] Seq=1 Win=65280 Len=0 TSecr=3405882732 TSecv=4219395467
34	43.308985155	Cisco_Sc4d:83	192.16.20.1	FTP	68	60482 - 21 [ACK] Seq=1 Win=29312 Len=0 TSecr=3405882732 TSecv=4219395467
35	43.36419678	Cisco_Sc4d:83	192.16.20.1	FTP	82	Request: USER anonymous
36	43.3089145450	Cisco_Sc4d:83	192.168.109.136	TCP	66	21 - 60482 [ACK] Seq=35 Ack=35 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
37	43.30891454509	Cisco_Sc4d:83	192.168.109.136	TCP	74	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 MSS=1468 SACK_PERM=1 TSecr=3405882734 TSecv=4219395467
38	43.30891454509	Cisco_Sc4d:83	192.168.109.136	TCP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 MSS=1468 SACK_PERM=1 TSecr=3405882734 TSecv=4219395467
39	43.3089148237	Cisco_Sc4d:83	192.168.109.136	TCP	74	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 MSS=1468 SACK_PERM=1 TSecr=3405882734 TSecv=4219395467
40	43.3089148237	Cisco_Sc4d:83	192.168.109.136	TCP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 MSS=1468 SACK_PERM=1 TSecr=3405882734 TSecv=4219395467
41	43.307899515	Cisco_Sc4d:83	192.16.20.1	FTP	97	Response: 220 Switching to Binary mode.
42	43.307899515	Cisco_Sc4d:83	192.16.20.1	FTP	73	Request: PASV
43	43.309178507	Cisco_Sc4d:83	192.16.20.1	FTP	68	21 - 60482 [ACK] Seq=32 Win=652280 Len=0 TSecr=4219395467 TSecv=3405882734
44	43.309178507	Cisco_Sc4d:83	192.16.20.1	FTP	128	Response: 221 Entering Passive Mode (192.168.109.136,172,117).
45	43.309178507	Cisco_Sc4d:83	192.16.20.1	FTP	82	Request: RETR ./pub/
46	43.309228375	Cisco_Sc4d:83	192.16.20.1	TCP	74	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
47	43.310293328	Cisco_Sc4d:83	192.168.109.136	TCP	74	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
48	43.310293328	Cisco_Sc4d:83	192.168.109.136	TCP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
49	43.311452956	Cisco_Sc4d:83	192.168.109.136	TCP	74	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
50	43.311452956	Cisco_Sc4d:83	192.168.109.136	TCP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
51	43.31582224	Cisco_Sc4d:83	192.168.109.136	TCP	74	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
52	43.31582224	Cisco_Sc4d:83	192.168.109.136	TCP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
53	43.352174745	Cisco_Sc4d:83	192.16.20.1	FTP	132	Response: 158 Opening ETIMEDOUT data connection for pub/
54	43.352174745	Cisco_Sc4d:83	192.16.20.1	FTP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=4219395467 TSecv=3405882734
55	43.352174752	Cisco_Sc4d:83	192.168.109.136	TCP	74	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
56	43.352174752	Cisco_Sc4d:83	192.168.109.136	TCP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
57	43.352174751	Cisco_Sc4d:83	192.16.20.1	FTP	74	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
58	43.352174751	Cisco_Sc4d:83	192.16.20.1	FTP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
59	43.352174751	Cisco_Sc4d:83	192.16.20.1	FTP	74	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
60	43.352174751	Cisco_Sc4d:83	192.16.20.1	FTP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
61	43.354197678	Cisco_Sc4d:83	192.16.20.1	FTP	74	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
62	44.112618804	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
63	45.50851287	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
64	45.50851287	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
65	46.112738738	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
66	46.508016866	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
67	46.5080264702	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
68	46.534119593	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
69	46.534119593	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
70	46.534119593	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
71	52.1277119155	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
72	54.131972782	Cisco_Sc4d:83	Spanning-tree-(for-bridges)..	STP	68	60482 - 21 [SYN] Seq=1 Win=65280 Len=0 TSecr=3405882734 TSecv=4219395467
14632	47.671220958	Cisco_Sc4d:83	192.16.20.199..190	TCP	142	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.199]
14633	47.670251662	Cisco_Sc4d:83	192.16.20.1	TCP	66	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497
14634	47.670251662	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14635	47.670909228	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Previous segment not captured FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14636	47.670909228	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14637	47.670909228	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14638	47.671119474	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14639	47.67123595	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14640	47.671240378	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14641	47.671480262	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14642	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14643	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14644	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14645	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14646	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14647	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14648	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14649	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14650	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14651	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14652	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14653	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14654	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14655	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14656	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14657	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14658	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14659	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14660	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14661	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14662	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	78	42634 - 46078 [ACK] Seq=1 Win=65280 Len=0 TSecr=177750195 TSecv=3644298497 SLE=14034017
14663	47.671682987	Cisco_Sc4d:83	192.16.20.1	TCP	1514	FTP Data: 1448 bytes (PASV) [/etc/ftp/pub/192.16.20.1]
14664						