

## COLLEGAMENTO TRA LAPTOP-PT0 A PC-PT-PC0

I screenshot dimostrano tutto ciò che avviene durante la comunicazione, cioè:

### 1. Generazione del Pacchetto:

Il PC-PT-PC0 genera un pacchetto dati destinato all'indirizzo IP del Laptop-PT.

### 2. Indirizzamento MAC:

Il sistema operativo del PC-PT-PC0 utilizza l'indirizzo IP del Laptop-PT per ottenere il corrispondente indirizzo MAC.

Il pacchetto dati viene incapsulato in un frame Ethernet, con l'indirizzo MAC del Laptop-PT come destinazione.

### 3. Switch:

Il frame Ethernet viene inviato allo switch a cui sono collegati sia il PC-PT-PC0 che il Laptop-PT.

Lo switch esamina la tabella di indirizzamento MAC e inoltra il frame alla porta collegata al Laptop-PT, poiché ha l'indirizzo MAC di destinazione.

### 4. Router:

Poiché PC-PT-PC0 e Laptop-PT sono sulla stessa rete locale, il frame non ha bisogno di passare attraverso il router. Quindi il frame viene inviato direttamente dallo switch al Laptop-PT.

### 5. Laptop-PT:

Il frame arriva al Laptop-PT, che estrae il pacchetto dati originale.

Il sistema operativo del Laptop-PT gestisce il pacchetto e lo passa al livello di applicazione, se necessario.

Generazione di Risposta:

Il Laptop-PT deve rispondere al PC-PT-PC0, il processo si ripete, con il pacchetto dati originato dal Laptop-PT.

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1011, y: 25

Time: 00:27:14.379 PLAY CONTROLS

Scenario 0

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

Successful Laptop0 PC0 ICMP 0.000 N 0 (edit) (delete)

10°C Nuvoloso 16:31 06/12/2023

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1088, y: 42

Time: 00:27:14.379 PLAY CONTROLS

Scenario 0

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

Successful Laptop0 PC0 ICMP 0.000 N 0 (edit) (delete)

10°C Nuvoloso 16:32 06/12/2023

PDU Information at Device: Laptop0

OSI Model Outbound PDU Details

PDU Formats

Ethernet II

PREAMBLE: 101010.10

SRC ADDR: 000A.F3BA.E688

TYPE: 0

DATA (VARIABLE LENGTH)

FCS: 0x00000000

IP

VER: 4

IHL: 5

DSCP: 0x00

TL: 28

ID: 0x001d

FLAGS: 0x0

FRAG OFFSET: 0x000

TTL: 255

PRO: 0x01

CHKSUM

SRC IP: 192.168.50.100

DST IP: 192.168.50.103

DATA (VARIABLE LENGTH)

ICMP

TYPE: 0x08

CODE: 0x00

CHECKSUM

ID: 0x001c

SEQ NUMBER: 27

Variable Size PDU

DATA (VARIABLE LENGTH)

PDU Information at Device: Switch0

OSI Model Inbound PDU Details Outbound PDU Details

At Device: Switch0

Source: Laptop0

Destination: PC0

In Layers

Layer 7

Layer 6

Layer 5

Layer 4

Layer 3

Layer 2: Ethernet II Header

000A.F3BA.E688 >> 000C.CF6C.97BE

Layer 1: Port FastEthernet0/3

Out Layers

Layer 7

Layer 6

Layer 5

Layer 4

Layer 3

Layer 2: Ethernet II Header

000A.F3BA.E688 >> 000C.CF6C.97BE

Layer 1: Port(s): FastEthernet0/1

1. FastEthernet0/3 receives the frame.

Challenge Me

<< Previous Layer Next Layer >>

Device At Device Type

p0 Laptop0 ICMP

h0 Switch0 ICMP

h0 PC0 ICMP

h0 Switch0 ICMP

h0 Laptop0 ICMP

h0 Switch0 STP

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1088, y: 42

Time: 00:27:14.379 PLAY CONTROLS

Scenario 0

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

Successful Laptop0 PC0 ICMP 0.000 N 0 (edit) (delete)

10°C Nuovolo 16:32 06/12/2023

PDU Information at Device: Switch0

OST Model Inbound PDU Details Outbound PDU Details

PDU Formats

Ethernet II

0 4 8 16 20 24 Bytes

PREAMBLE: 101010...10 SF D DEST ADDR: 000C.CF6C.97 BE

SRC ADDR: 000A.F3BA.E6B9 TYPE: 0 DATA (VARIABLE LENGTH) FCS: 0x00000000

IP

0 4 8 16 20 24 Bits

VER: 4 IHL: 5 DSCP: 0x00 TL: 28

ID: 0x001d FLAGS: 0x0 FRAG OFFSET: 0x000

TTL: 255 PRO: 0x01 CHKSUM

SRC IP: 192.168.50.100

DST IP: 192.168.50.103

DATA (VARIABLE LENGTH)

ICMP

0 8 16 Bits

TYPE: 0x08 CODE: 0x00 CHECKSUM

ID: 0x001c SEQ NUMBER: 27

Variable Size PDU

0 8 16 Bytes

DATA (VARIABLE LENGTH)

Device At Device Type

Laptop0 Laptop0 ICMP

Switch0 Switch0 ICMP

PC0 PC0 ICMP

Switch0 Switch0 ICMP

Laptop0 Laptop0 ICMP

Switch0 Switch0 STP

Start Delay Captured to: 1.995 s

Time: 00:27:14.379 PLAY CONTROLS

Scenario 0

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

Successful Laptop0 PC0 ICMP 0.000 N 0 (edit) (delete)

10°C Nuovolo 16:32 06/12/2023

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1052, y: 25

Router0  
Laptop-PT Laptop0  
Switch0  
Laptop-PT Laptop1  
PC-PT PC0

PDU Information at Device: PC0

OSI Model Inbound PDU Details Outbound PDU Details

At Device: PC0  
Source: Laptop0  
Destination: PC0

In Layers  
Layer7  
Layer6  
Layer5  
Layer4  
Layer3: IP Header Src. IP: 192.168.50.100, Dest. IP: 192.168.50.103  
ICMP Message Type: 8  
Layer2: Ethernet II Header  
000A.F3BA.E688 >> 000C.CF6C.97BE  
Layer1: Port FastEthernet0

Out Layers  
Layer7  
Layer6  
Layer5  
Layer4  
Layer3: IP Header Src. IP: 192.168.50.103, Dest. IP: 192.168.50.100  
ICMP Message Type: 0  
Layer2: Ethernet II Header 000C.CF6C.97BE >> 000A.F3BA.E688  
Layer1: Port(s): FastEthernet0

1. FastEthernet0 receives the frame.

Challenge Me << Previous Layer Next Layer >>

Time: 00:27:14.379 PLAY CONTROLS

Scenario 0  
New Delete  
Toggle PDU List Window

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete  
Successful Laptop0 PC0 ICMP 0.000 N 0 (edit) (delete)

10°C Nuvoloso Cerca 16:32 06/12/2023

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1052, y: 25

Router0  
Laptop-PT Laptop0  
Switch0  
Laptop-PT Laptop1  
PC-PT PC0

PDU Information at Device: PC0

OSI Model Inbound PDU Details Outbound PDU Details

PDU Formats

Ethernet II  
0 4 8 16 20 24 Bytes  
PREAMBLE: 101010.10 SF D DEST ADDR 000C.CF6C.97BE  
SRC ADDR 000A.F3BA.E688 TYPE 0 DATA (VARIABLE LENGTH) FCS 0x00000000

IP  
0 4 8 16 20 24 Bits  
VER: 4 IHL: 5 DSCP: 0x00 TL: 28  
ID: 0x001d FLAGS: 0x0 FRAG OFFSET: 0x000  
TTL: 255 PRO: 0x01 CHKSUM  
SRC IP: 192.168.50.100  
DST IP: 192.168.50.103  
DATA (VARIABLE LENGTH)

ICMP  
0 8 16 24 Bits  
TYPE: 0x08 CODE: 0x00 CHECKSUM  
ID: 0x001c SEQ NUMBER: 27

Variable Size PDU  
0 8 16 24 Bytes  
DATA (VARIABLE LENGTH)

Time: 00:27:14.379 PLAY CONTROLS

Scenario 0  
New Delete  
Toggle PDU List Window

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete  
Successful Laptop0 PC0 ICMP 0.000 N 0 (edit) (delete)

10°C Nuvoloso Cerca 16:33 06/12/2023

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1052, y: 25

Router0  
Switch0  
Laptop-PT Laptop0  
Laptop-PT Laptop1  
PC-PT PC0

PDU Information at Device: PC0

OSI Model Inbound PDU Details Outbound PDU Details

PDU Formats

Ethernet II

PREAMBLE: 101010...10 SF 0 DEST ADDR 000A.F3BA.E6 SRC ADDR 000C.F6C.97BE TYPE 0 DATA (VARIABLE LENGTH) FCS 0x00000000

VER 4 IHL 5 DSCP 0x00 ID 0x0013 FLAGS 0x0 FRAG OFFSET 0x0000 TTL 128 PRO 0x01 CHKSUM SRC IP: 192.168.50.103 DST IP: 192.168.50.100 DATA (VARIABLE LENGTH)

ICMP

TYPE 0x00 CODE 0x00 CHECKSUM ID 0x001c SEQ NUMBER 27

Variable Size PDU

DATA (VARIABLE LENGTH)

Device At Device Type

p0 Laptop0 ICMP

h0 Switch0 ICMP

h0 PC0 ICMP

h0 Switch0 ICMP

h0 Laptop0 ICMP

h0 Switch0 STP

Time: 00:27:14.379 PLAY CONTROLS

Scenario 0

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

Successful Laptop0 PC0 ICMP 0.000 N 0 (edit) (delete)

10°C Nuovolo

Cerca

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1071, y: 42

Router0  
Switch0  
Laptop-PT Laptop0  
Laptop-PT Laptop1  
PC-PT PC0

PDU Information at Device: Switch0

OSI Model Inbound PDU Details Outbound PDU Details

At Device: Switch0  
Source: Laptop0  
Destination: PC0

In Layers

Layer 7  
Layer 6  
Layer 5  
Layer 4  
Layer 3  
Layer 2: Ethernet II Header 000C.F6C.97BE >> 000A.F3BA.E688  
Layer 1: Port FastEthernet0/1

Out Layers

Layer 7  
Layer 6  
Layer 5  
Layer 4  
Layer 3  
Layer 2: Ethernet II Header 000C.F6C.97BE >> 000A.F3BA.E688  
Layer 1: Port(s): FastEthernet0/3

1. FastEthernet0/1 receives the frame.

Challenge Me << Previous Layer Next Layer >>

Device At Device Type

p0 Laptop0 ICMP

h0 Switch0 ICMP

h0 PC0 ICMP

h0 Switch0 ICMP

h0 Laptop0 ICMP

h0 Switch0 STP

Time: 00:27:14.379 PLAY CONTROLS

Scenario 0

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

Successful Laptop0 PC0 ICMP 0.000 N 0 (edit) (delete)

10°C Nuovolo

Cerca

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1071, y: 42

Time: 00:27:14.379 PLAY CONTROLS

Scenario 0

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

Successful Laptop0 PC0 ICMP 0.000 N 0 (edit) (delete)

Toggle PDU List Window

Automatically Choose Connection Type

10°C Nuvoloso 16:33 06/12/2023

PDU Information at Device: Switch0

OSI Model Inbound PDU Details Outbound PDU Details

PDU Formats

EthernetII

PREAMBLE: 101010.10 SF D DEST ADDR 000A.F3BA.E5 B8

SRC ADDR 000C CFEC.97BE TYPE 0 x0800 DATA (VARIABLE LENGTH) FCS 0x00000000

IP

VER 4 IHL 5 DSCP 0x00 TL 28

ID 0x0013 FLAGS 0x0 FRAG OFFSET 0x000

TTL 128 PRO 0x01 CHKSUM

SRC IP 192.168.50.103

DST IP 192.168.50.100

DATA (VARIABLE LENGTH)

ICMP

TYPE 0x00 CODE 0x00 CHECKSUM

ID 0x001c SEQ NUMBER 27

Variable Size PDU

DATA (VARIABLE LENGTH)

Device At Device Type

p0 Laptop0 ICMP

h0 Switch0 ICMP

h0 PC0 ICMP

h0 Switch0 ICMP

h0 Laptop0 ICMP

Switch0 STP

Start Delay Captured to: 1.995 s

10°C Nuvoloso 16:33 06/12/2023

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x 818, y 670

Router0  
Laptop-PT Laptop0  
Switch0  
Laptop-PT Laptop1  
PC-PT PC0

PDU Information at Device: Laptop0

OSI Model Inbound PDU Details

At Device: Laptop0  
Source: Laptop0  
Destination: PC0

In Layers  
Layer7  
Layer6  
Layer5  
Layer4  
Layer3  
Layer2  
Layer1

Out Layers  
Layer7  
Layer6  
Layer5  
Layer4  
Layer3  
Layer2  
Layer1

Layer 3: IP Header Src. IP: 192.168.50.103, Dest. IP: 192.168.50.100  
ICMP Message Type: 0

Layer 2: Ethernet II Header 000C:CF5C:97BE >> 000A:F3BA:E688

Layer 1: Port FastEthernet0

1. FastEthernet0 receives the frame.

Challenge Me

<< Previous Layer Next Layer >>

Time: 00:27:14.379 PLAY CONTROLS

Scenario 0

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

Successful Laptop0 PC0 ICMP 0.000 N 0 (edit)

Automatically Choose Connection Type

Toggle PDU List Window

10°C Nuvoloso

Cerca

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x 818, y 670

Router0  
Laptop-PT Laptop0  
Switch0  
Laptop-PT Laptop1  
PC-PT PC0

PDU Information at Device: Laptop0

OSI Model Inbound PDU Details

PDU Formats

Ethernet II

PREAMBLE: 101010 10 SF D DEST ADDR 000A:F3BA:E688

SRC ADDR 000C:CF5C:97BE TYPE 0 DATA (VARIABLE LENGTH) FCS 0x00000000

IP

VER 4 IHL 5 DSCP 0x00 TL 28

ID 0x0013 FLAGS 0x00 FRAG OFFSET 0x000

TTL 128 PRO 0x01 C-H-SUM

SRC IP: 192.168.50.103

DST IP: 192.168.50.100

DATA (VARIABLE LENGTH)

ICMP

TYPE 0x00 CODE 0x00 CHECKSUM

ID 0x001c SEQ NUMBER 27

Variable Size PDU

DATA (VARIABLE LENGTH)

Time: 00:27:14.379 PLAY CONTROLS

Scenario 0

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

Successful Laptop0 PC0 ICMP 0.000 N 0 (edit)

Automatically Choose Connection Type

Toggle PDU List Window

10°C Nuvoloso

Cerca

Strumento di cattura

Screenshot copiato negli Appunti e salvato  
Seleziona qui per contrassegnare e condividere l'immagine