

Erläuterungen V2

```
C:\>ipconfig
FastEthernet0 Connection: (default port)

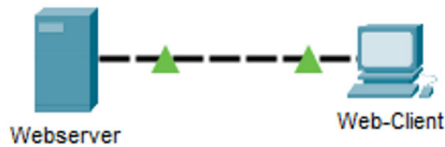
Connection-specific DNS Suffix...:
Link-local IPv6 Address . . . . .: FE80::201:96FF:FEA9:401D
IPv4 Address. . . . .: 192.168.1.254
Subnet Mask . . . . .: 255.255.255.0
Default Gateway . . . . .: 0.0.0.0
```

```
C:\>ipconfig
FastEthernet0 Connection: (default port)

Connection-specific DNS Suffix...:
Link-local IPv6 Address . . . . .: FE80::260:47FF:FECA:4DEE
IPv6 Address . . . . .:
IPv4 Address. . . . .: 192.168.1.1
Subnet Mask . . . . .: 255.255.255.0
Default Gateway . . . . .: 0.0.0.0
```

```
C:\>ipconfig /all
FastEthernet0 Connection: (default port)

Connection-specific DNS Suffix...: 0060.47CA.4DEE
Physical Address. . . . .: 0060.47CA.4DEE
Link-local IPv6 Address . . . . .: FE80::260:47FF:FECA:4DEE
IPv6 Address . . . . .:
IPv4 Address. . . . .: 192.168.1.1
Subnet Mask . . . . .: 255.255.255.0
Default Gateway . . . . .:
DHCP Servers . . . . .: 0.0.0.0
DHCPv6 IAID. . . . .: 0.0.0.0
DHCPv6 Client DUID. . . . .: 00-01-00-01-A7-1C-70-92-00-60-47-CA-4D-EE
DNS Servers . . . . .: 192.168.1.254
```



DNS

DNS Service ☒ On ☐ Off

Resource Records

Name Type

Address

Add Save Remove

No.	Name	Type	Detail
0	www.osi.local	A Record	192.168.1.254

HTTP

HTTP ☒ On ☐ Off HTTPS ☒ On ☐ Off

File Manager

File Name	Edit	Delete
1 copyrights.html	(edit)	(delete)
2 index.html	(edit)	(delete)

File Name:

```
<html>
<center><font size="2" color="blue">Web Server</font></center>
<hr>
<center>
<p>You have successfully accessed the home page for Web Server.</p>
</center>
</html>
```

Web Browser

URL Go Stop

Web Server

You have successfully accessed the home page for Web Server.

Config Desktop Programming Attributes

Web Browser

URL Go Stop

Web Server

You have successfully accessed the home page for Web Server.

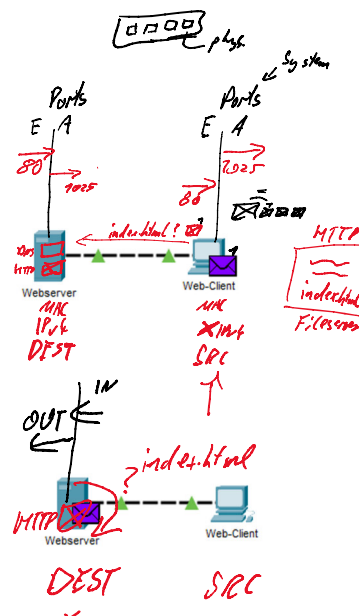
At Device: Web-Client
Source: Web-Client
Destination: HTTP CLIENT

In Layers	Out Layers
Layer 7:	Layer 7:
Layer 6:	Layer 6:
Layer 5:	Layer 5:
Layer 4:	Layer 4: TCP Src Port: 1025, Dst Port: 80
Layer 3:	Layer 3: IP Header Src. IP: 192.168.1.1, Dest. IP: 192.168.1.254
Layer 2:	Layer 2: Ethernet II Header 0060.47CA.4DEE >> 0001.96A9.401D
Layer 1:	Layer 1: Port(s):

1. The HTTP client sends a HTTP request to the server.

At Device: Webserver
Source: Web-Client
Destination: HTTP CLIENT

In Layers	Out Layers
Layer 7:	Layer 7:
Layer 6:	Layer 6:
Layer 5:	Layer 5:
Layer 4:	Layer 4: TCP Src Port: 1025, Dst Port: 80

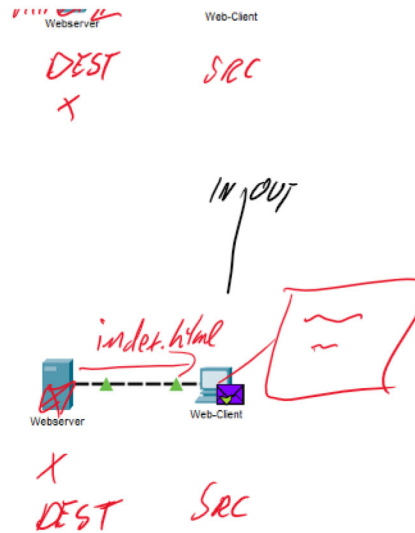


In Layers	Out Layers
Layer 7:	Layer 7:
Layer 6:	Layer 6:
Layer 5:	Layer 5:
Layer 4: TCP Src Port: 1025, Dst Port: 80	Layer 4: TCP Src Port: 80, Dst Port: 1025
Layer 3: IP Header Src. IP: 192.168.1.1, Dest. IP: 192.168.1.254	Layer 3: IP Header Src. IP: 192.168.1.254, Dest. IP: 192.168.1.1
Layer 2: Ethernet II Header 0060.47CA.4DEE >> 0001.96A9.401D	Layer 2: Ethernet II Header 0001.96A9.401D >> 0060.47CA.4DEE
Layer 1: Port FastEthernet0	Layer 1: Port(s): FastEthernet0

1. FastEthernet0 receives the frame.

At Device: Webserver Source: Web-Client Destination: HTTP CLIENT	
In Layers	Out Layers
Layer 7:	Layer 7:
Layer 6:	Layer 6:
Layer 5:	Layer 5:
Layer 4: TCP Src Port: 1025, Dst Port: 80	Layer 4: TCP Src Port: 80, Dst Port: 1025
Layer 3: IP Header Src. IP: 192.168.1.1, Dest. IP: 192.168.1.254	Layer 3: IP Header Src. IP: 192.168.1.254, Dest. IP: 192.168.1.1
Layer 2: Ethernet II Header 0060.47CA.4DEE >> 0001.96A9.401D	Layer 2: Ethernet II Header 0001.96A9.401D >> 0060.47CA.4DEE
Layer 1: Port FastEthernet0	Layer 1: Port(s): FastEthernet0

1. FastEthernet0 receives the frame.



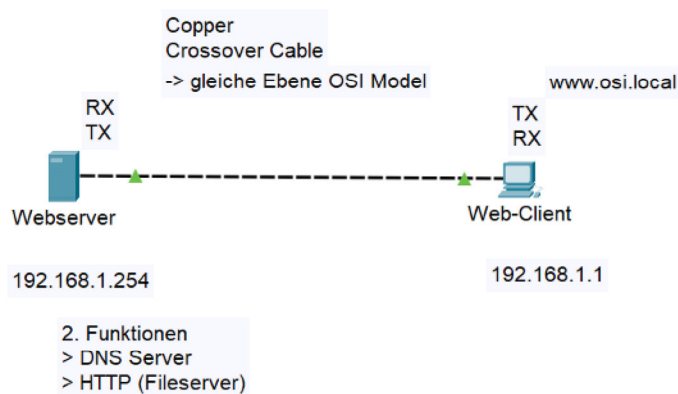
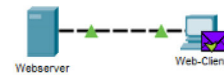
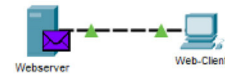
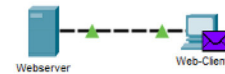
PDU - Protocol Data Unit
Datagram

PDU Formats

Ethernet II	
0	Bytes
PREAMBLE: 101010...10	SFD
SRC ADDR: 0060.47CA.4DEE	TYPE: 0x0800
DATA (VARIABLE LENGTH)	FCS: 0x00000000
IP	
0	Bits
VER: 4	IHL: 5
DSCP: 0x00	TL: 122
ID: 0x0004	FLAGS: 0x2
TTL: 128	PRO: 0x06
SRC IP: 192.168.1.1	CHKSUM
DST IP: 192.168.1.254	DATA (VARIABLE LENGTH)
TCP	
0	Bits
SOURCE PORT: 1025	DESTINATION PORT: 80
SEQUENCE NUMBER: 1	ACKNOWLEDGEMENT NUMBER: 1
OFFSET: 0x0	RESER: 0
FLAGS: 0b00011000	WINDOW: 65535
CHECKSUM: 0x0000	URGENT POINTER: 0x0000
OPTION	DATA (VARIABLE LENGTH)
PADDING: 0	
HTTP REQUEST	
0	Bytes
HTTP Data: Accept-Language: en-us	
Accept: */*	

Gesamt

Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
Visible	0.000	--	Web-Client	DNS
Visible	0.000	--	Web-Client	ARP
	0.001	Web-Client	Webserver	ARP
	0.002	Webserver	Web-Client	ARP
	0.002	--	Web-Client	DNS
	0.003	Web-Client	Webserver	DNS
	0.004	Webserver	Web-Client	DNS
	0.004	--	Web-Client	TCP
	0.005	Web-Client	Webserver	TCP
	0.006	Webserver	Web-Client	TCP
	0.006	--	Web-Client	HTTP
	0.007	Web-Client	Webserver	TCP
	0.007	--	Web-Client	HTTP
	0.008	Web-Client	Webserver	HTTP
	0.009	Webserver	Web-Client	HTTP
	0.009	--	Web-Client	TCP
	0.010	Web-Client	Webserver	TCP
	0.011	Webserver	Web-Client	TCP
	0.012	Web-Client	Webserver	TCP



Warum mehrere IPv4 Adressen?
öffentlich vs. local

