



Informatik AG - Kooperation

Immanuel-Kant-Gymnasium
&
Hochschule der Medien

Themenblock 2: Rechnernetze und IT-Security

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+
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Termine

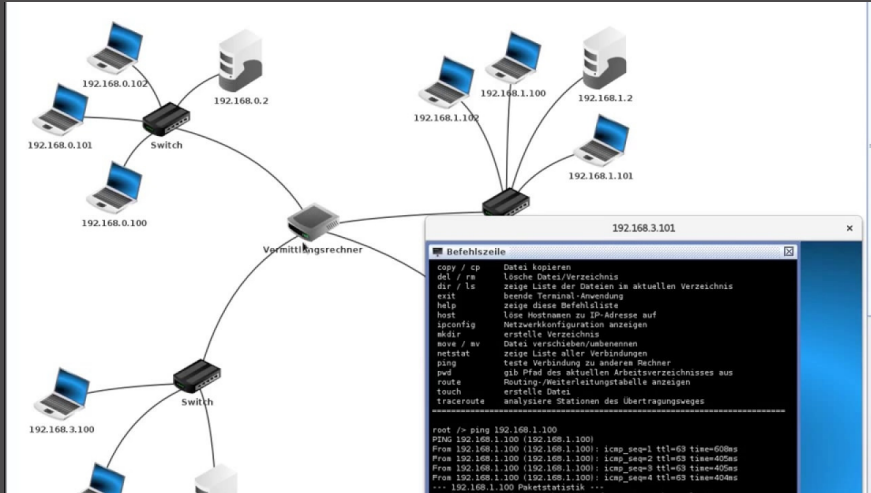
1. Termin 1 – KW 3: Grundlagen der Netzwerktechnik
2. Termin 2 – KW 4: Adressierung
3. Termin 3 – KW 5: Adressierung/Routing

4. Termin 4 – KW 6: Adressierung/Routing
5. Termin 5 – KW 7: IT-Security



Tools

- Netzsimulation Filius



- Wireshark

The screenshot shows Wireshark 1.8.5 capturing traffic from three interfaces. The main pane displays a list of captured packets. The following table represents the data shown in the main pane:

No.	Time	Source	Destination	Protocol	Length	Info
15	13.8582070	192.168.179.1	192.168.179.255	NBNS	92	Name query NB WPAD<00s
16	13.8588720	192.168.38.1	192.168.38.255	NBNS	92	Name query NB WPAD<00s
17	13.8580060	10.1.1.1	10.255.255.255	NBNS	92	Name query NB WPAD<00s
18	14.6078270	192.168.179.1	192.168.179.255	NBNS	92	Name query NB WPAD<00s
19	14.6085600	192.168.38.1	192.168.38.255	NBNS	92	Name query NB WPAD<00s
20	14.6079120	10.1.1.1	10.255.255.255	NBNS	92	Name query NB WPAD<00s
21	15.3592260	192.168.38.1	192.168.38.255	NBNS	92	Name query NB WPAD<00s
22	15.3590780	10.1.1.1	10.255.255.255	NBNS	92	Name query NB WPAD<00s
23	15.3590000	192.168.179.1	192.168.179.255	NBNS	92	Name query NB WPAD<00s
24	16.2389030	192.168.11.4	8.8.8.8	DNS	80	Standard query 0xb95b
25	16.2526230	8.8.8.8	192.168.11.4	DNS	414	Standard query response
26	20.6201800	192.168.11.4	74.125.224.137	TCP	55	[TCP segment of a reas
27	20.6203850	74.125.224.137	192.168.11.4	TCP	60	http > 49484 [ACK] seq
28	20.8001570	vmware_5b:a2:58	vmware_ec:7c:70	ARP	42	who has 192.168.11.2?
29	20.8003380	vmware_ec:7c:70	vmware_5b:a2:58	ARP	60	192.168.11.2 is at 00:

The details pane shows the following information for the selected packet (No. 24):

- Frame 1: 156 bytes on wire (1248 bits), 156 bytes captured (1248 bits) on interface 2
- Ethernet II, Src: VMware_ec:7c:70 (00:50:56:ec:7c:70), Dst: vmware_5b:a2:58 (00:0c:29:5b:)
- Internet Protocol Version 4, Src: 74.125.224.134 (74.125.224.134), Dst: 192.168.11.4 (192.)
- Transmission Control Protocol, Src Port: https (443), Dst Port: 49448 (49448), Seq: 1, Ac
- Secure Sockets Layer