13th Assignment: Network Protocols and Architectures, WS 13/14

Question 1: (20 + 20 + 20 + 20 = 80 points) Recap: Network topology

The trace found in \(^1\) was captured on the monitoring port (all incoming packets are mirrored and sent to the monitoring port as well) of the central switch S1 in a LAN segment. The graphic below shows you a rough schematic how the network where the trace has been captured is structured.

Hint: All hosts have just rebooted - all caches are empty.

Derive the full network topology from the captured network traffic. Present your findings with a map of the topology annotated with the following information:

(a) Hostnames of all the hosts found in the trace
(b) For each host: IP and MAC address
(c) IP networks the hosts are located in (with network prefix and broadcast address)
(d) Which hosts provide which services

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\(^1\)http://www.net.t-labs.tu-berlin.de/~florian/u13-trace-npa.pcap
Question 2: (20 points) Recap: Routing

Give the full routing table of the host named "Garfield" as you can deduct from the trace. The host has only one interface, named eth0.

Due Date: Wednesday, February, 05th 2014 only until 09:55 h s.t.

• As PDF files (no MS Office or OpenOffice files): Uploaded via ISIS (https://www.isis.tu-berlin.de/2.0/course/view.php?id=349)
• Put your name, StudentID number (Matrikelnummer) and the name of your tutor on your solution.