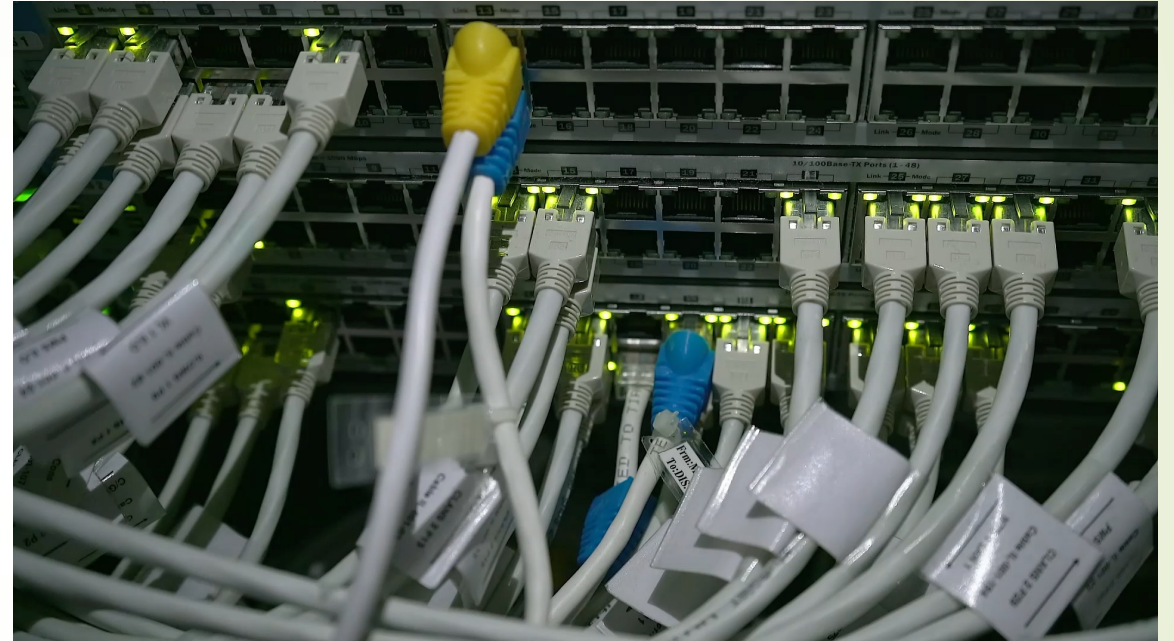


ICMP (RFC 792)

von Tayfun Gerland und Murat Can Baylan

Gliederung

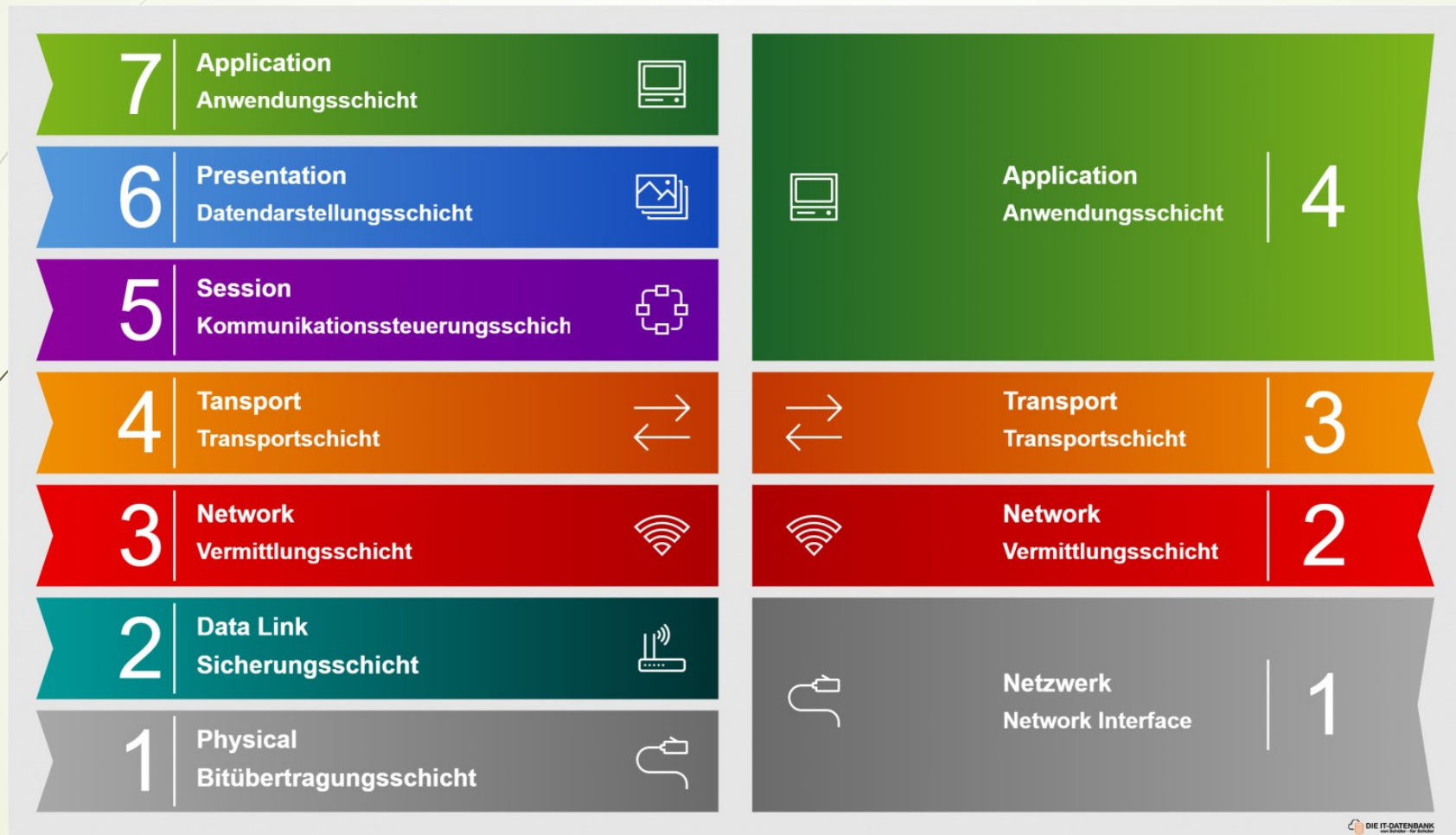
1. RFC 792
2. GB_ICMPLIB
3. DEMO 1
4. DEMO 2
5. Tools
 1. Traceroute
 2. Nmap
 3. PING/MultiPING
6. Anekdoten und Fallstricke



1. RFC 792

The slide features a light green background with a dark green vertical bar on the left. On the right side, there are several thin, curved green lines that sweep across the space, adding a modern, abstract design element.

1. RFC 792



<https://it-datenbank.com/wp-content/uploads/2020/08/tcp-model-1536x875.png>

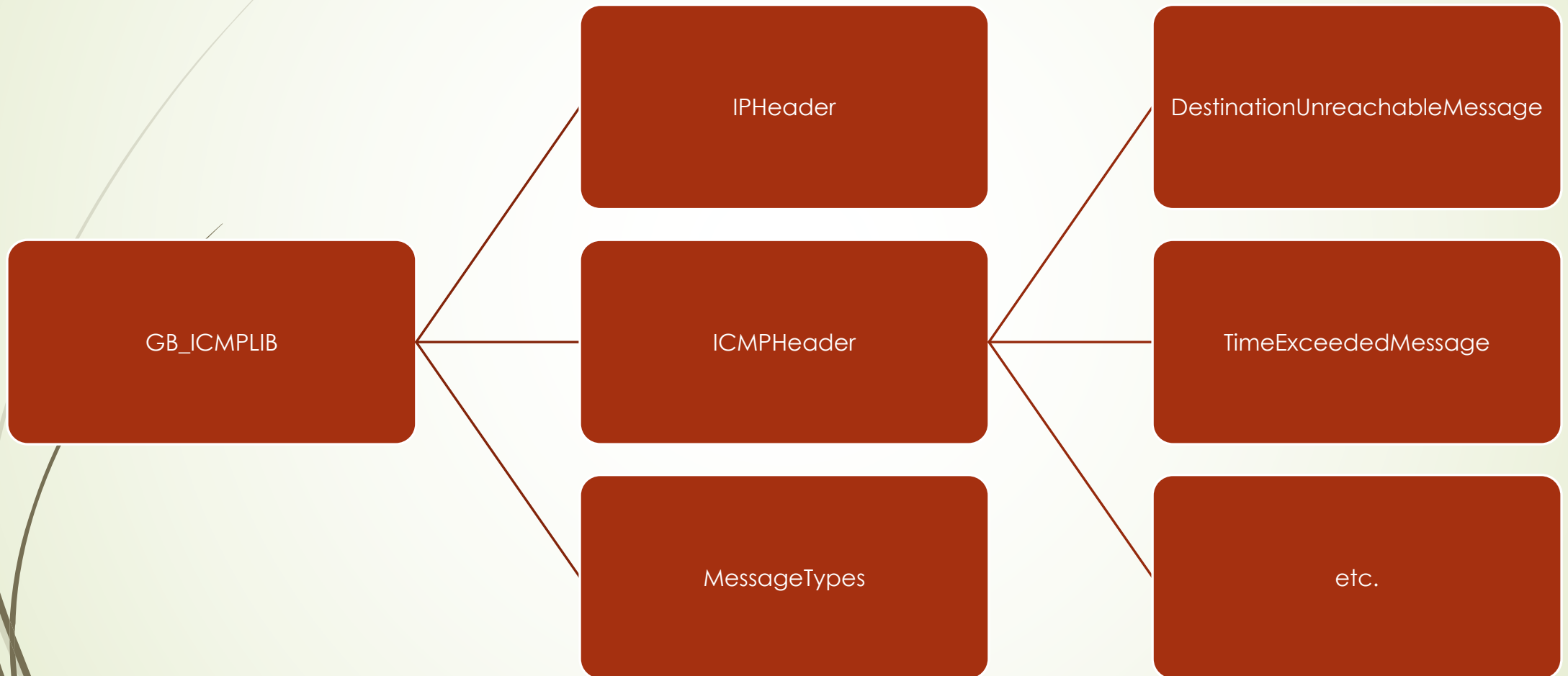
1. RFC 792

0	• Echo Reply Message
3	• Destination Unreachable Message
4	• Source Quench Message
5	• Redirect Message
8	• Echo Message
11	• Time Exceeded Message
12	• Parameter Problem Message
13	• Timestamp Message
14	• Timestamp Reply Message
15	• Information Request Message
16	• Information Reply Message

2. GB_ICMPLIB

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2. GB_ICMPLIB



2. GB_ICMPLIB



generate
raw_data



load
raw_data



calc
checksum



verify
checksum

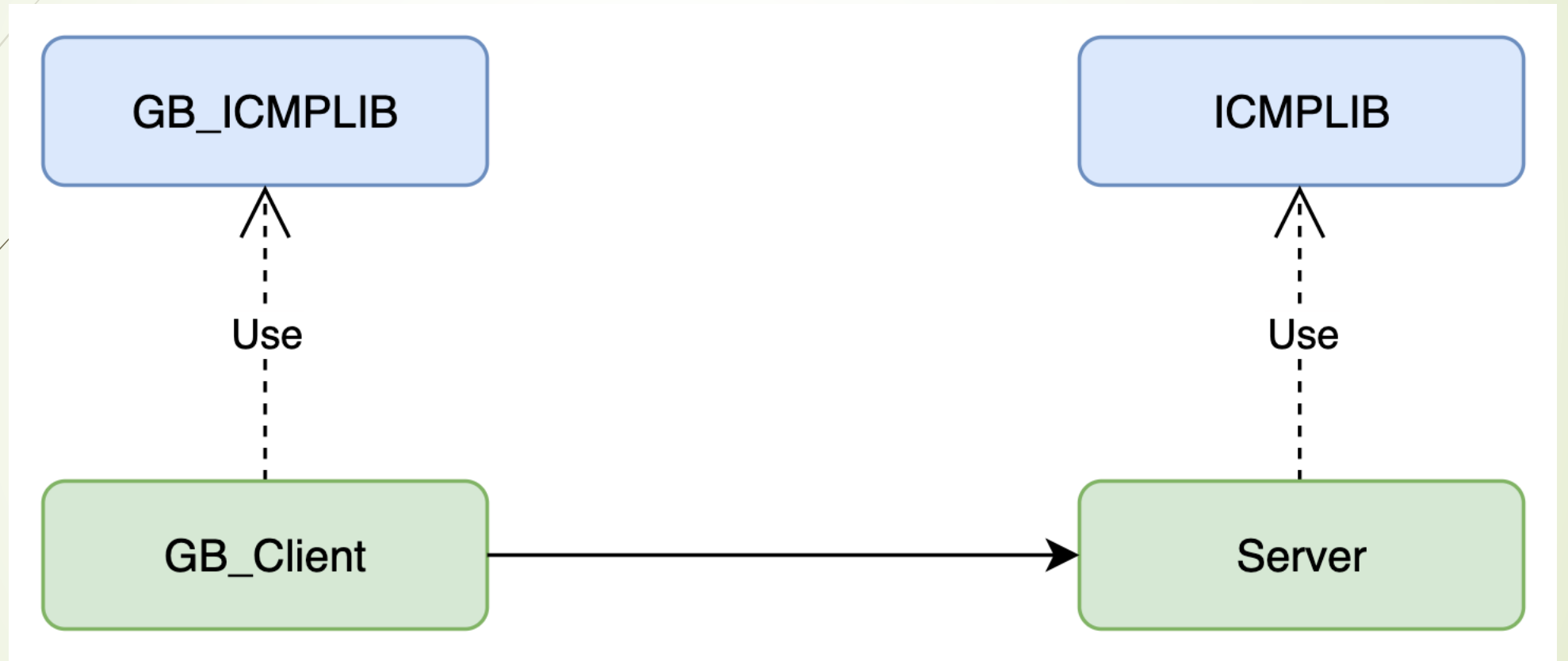


print
header

3. Demo 1

The slide features a light green background with a dark green vertical bar on the left. On the right side, there are several thin, curved green lines that sweep across the space, adding a modern, abstract design element.

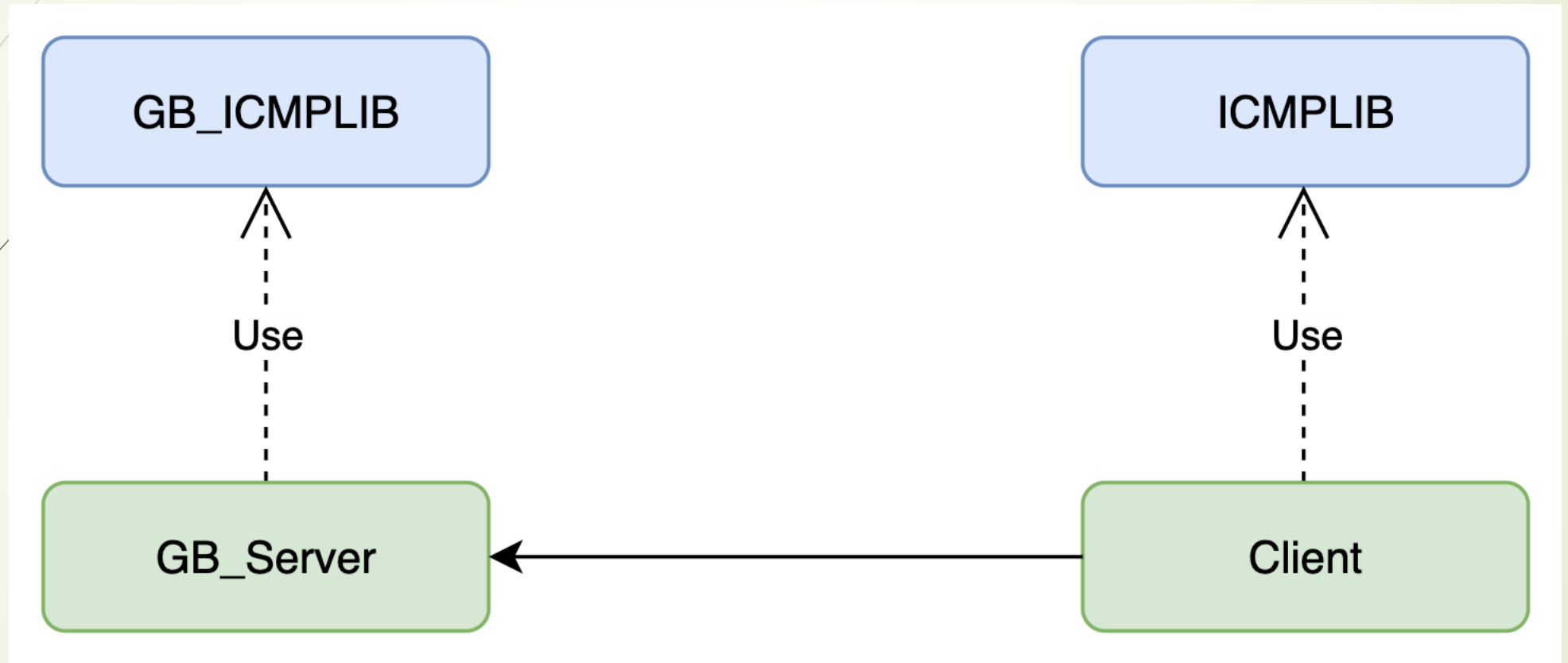
3. Demo 1



4. Demo 2

The slide features a light green background with a dark green vertical bar on the left. On the right side, there are several thin, curved green lines that sweep across the space, adding a modern, abstract design element.

4. Demo 2



5. Tools

The slide features a light green background with a dark green vertical bar on the left. On the right side, there are several thin, curved green lines that sweep across the space, adding a modern, abstract design element.



5. Tools

1. Traceroute

- Verfolgung eines Datenpakets in einem IP-Netzwerk
- variabler TTL-Wert (time to live)
- Empfang eines „TimeExceeded“ ICMP-Packets
- `gb_traceroute.py`



5. Tools

2. Nmap

- Tool zum Scannen eines Netzwerks
- Portzustände
- Empfang eines „DestinationUnreachable“ ICMP-Packets
- `gb_nmap.py`



5. Tools

3. PING/MultiPING

- Überprüfung der Erreichbarkeit bestimmter Hosts in einem IP-Netzwerk
- Einsatz von „Echo Request“ und „Echo Reply“ ICMP-Packeten
- gb_ping.py
- Gb_multiping.py

6. Anekdoten & Fallstricke

The slide features a light green background with a dark green vertical bar on the left. On the right side, there are several thin, curved green lines that sweep upwards and outwards, creating a modern, abstract design.



6. Anekdoten & Fallstricke

- Checksum
- Nmap UDP-Scan mit eduroam
- Echo-Reply vom Betriebssystem
- Raw-Socket

- ICMP Angriffe (Bsp. Smurf-Attack)

Vielen Dank für Ihre
Aufmerksamkeit!

The background features several thin, light green lines. One line is a long, straight diagonal stroke starting from the top center and extending towards the bottom right. Another line is a curved stroke that starts near the top right and curves downwards and to the left. A third line is a curved stroke that starts near the bottom right and curves upwards and to the left, intersecting the other curved line.