

13 ICMP

13.1 ICMP Messages

- ping: Echo Request / Echo Reply
- Destination unreachable ICMPv4
 - 0 - Net unreachable
 - 1 - Host unreachable
 - 2 - Protocol unreachable
 - 3 - Port unreachable
- Destination unreachable ICMPv4
 - 0 - No route to destination
 - 1 - Communication with the destination is administratively prohibited (e.g., firewall)
 - 2 - Beyond scope of the source address
 - 3 - Address unreachable
 - 4 - Port unreachable
- Time exceeded
 - IPv4: Time to Live (TTL) = 0
 - IPv6: Hop Limit = 0
 - verwendet von traceroute
- ICMPv6 Messages
 - Router solicitation (RS)
 - Router Advertisement (RA)
 - Neighbor Solicitation (NS)
 - Neighbor Advertisement (NA)
 - Redirect

13.2 Ping and Traceroute Testing

- Ping - Test Connectivity
 - Pinging the local loopback (127.0.0.1, ::1)
 - Pinging the default gateway
 - Pinging the remote host
- Traceroute - Test the Path
 - Round Trip Time (RTT)
 - IPv4 TTL and IPv6 Hop Limit