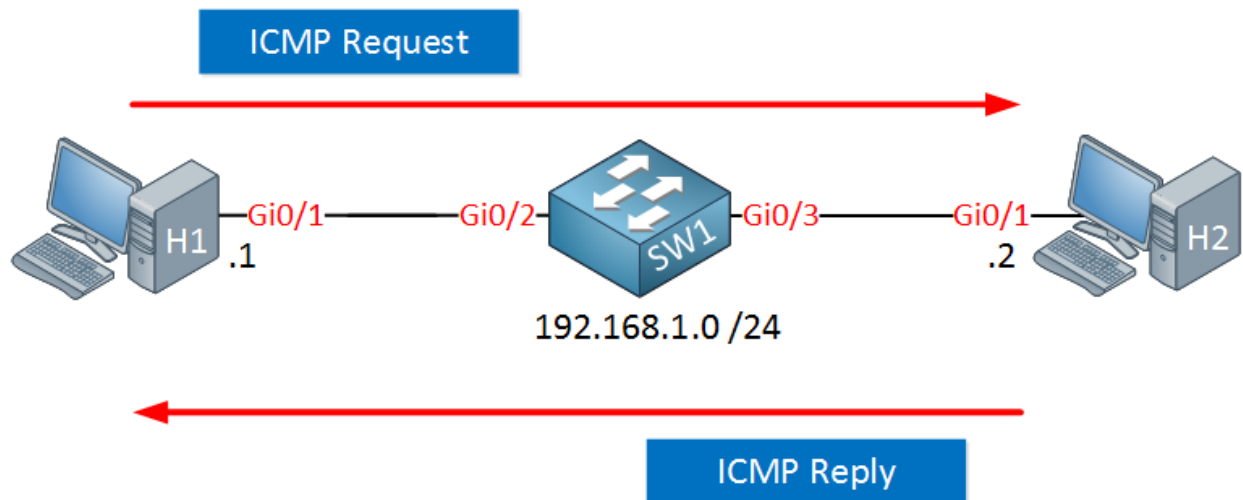


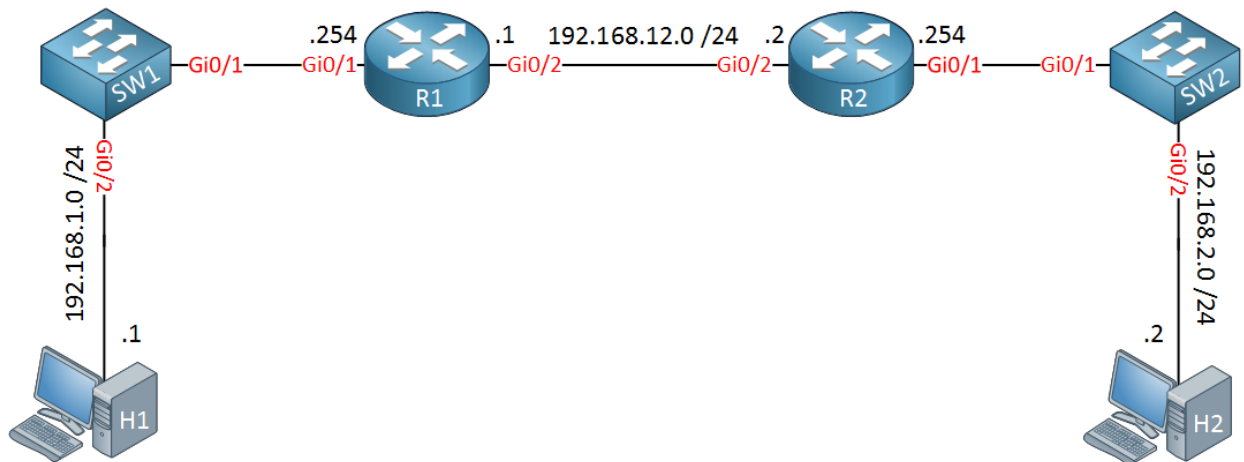
Ping Troubleshooting on Cisco IOS

The ping command can be used to quickly check if a remote device is reachable or not. In this lesson, I'll show you how you can use it to troubleshoot issues in your network. Take a look at the following picture:



OSI Model	
Application	?
Presentation	?
Session	?
Transport	?
Network	✓
Data Link	✓
Physical	✓

Since this ping is working, it tells me that everything on the physical layer, data link layer, and network layer in between H1 and H2 are functional. We don't have to worry about things like cabling, connectors, interfaces, VLANs, MAC addresses, ARP, IP addresses and subnet masks. If any of these were configured incorrectly, the upper layers wouldn't work.



Look at the picture above for a moment, think of some of the routing related things we need in this network to make it work so that H1 can reach H2:

- Behind R2 is the 192.168.2.0/24 network. R1 has to know how to reach this network.
- Behind R1 is the 192.168.1.0/24 network. R2 has to know how to get there.
- H1 should use R1 as its default gateway so that it can get out of its own subnet.
- H2 should use R2 as the default gateway.