

# CCDC Homework #3

## Resources

1. Link to TryHackMe rooms:
  - a. <https://tryhackme.com/room/introtonetworking>

## Questions

1. What's the difference between ping and traceroute?
2. Define IP address, subnet mask, default gateway.
3. What is the difference between a LAN or a WAN? Provide an example.
4. What is the OSI Model and TCP/IP protocol stack? What are the differences?
5. What is the difference between Layer 4 and Layer 5 of the OSI Model?
6. What is a Firewall? How does it benefit a network?
7. What is the difference between Outbound and Inbound filtering?
8. What is the difference between IPv4 and IPv6? What are the pros and cons of each? Why are we not using all IPv6 addresses? WHY ARE WE HERE JUST TO SUFFER????
9. What is a Default Gateway? Why is it important?
10. Look at this firewall rule:

Action	Protocol	Source IP	Source Port	Dest IP	Dest Port	Description
Block	TCP	LAN net	any	WAN net	80	Block revshells on TCP 80

What is it doing? What could break?

11. Make a topology based off of the firewall workshop. You can use any software you want, I recommend using draw.io (now called diagrams.net) to make it.
12. Also provide a screenshot of the inbound and outbound firewall rules that your team applied during the workshop and explain it rule by rule. Provide the pros and cons of having that rule.

## Deliverables

1. Submit a PDF with all of the following:
  - a. Screenshot of TryHackMe room completion

- b. Answers to all the questions**
  - c. Topology and explanation of that topology**
- 2. Make sure all sections and images are readable and labeled.**
- 3. Name the file with the following format: FirstLast\_CCDCHomework3.pdf**

If you are trying out for the team, make sure you submit your PDF in Canvas.

Otherwise, please use this form if you want to be graded:

<https://forms.gle/G41Rtk37EbRWMjWz8>.