

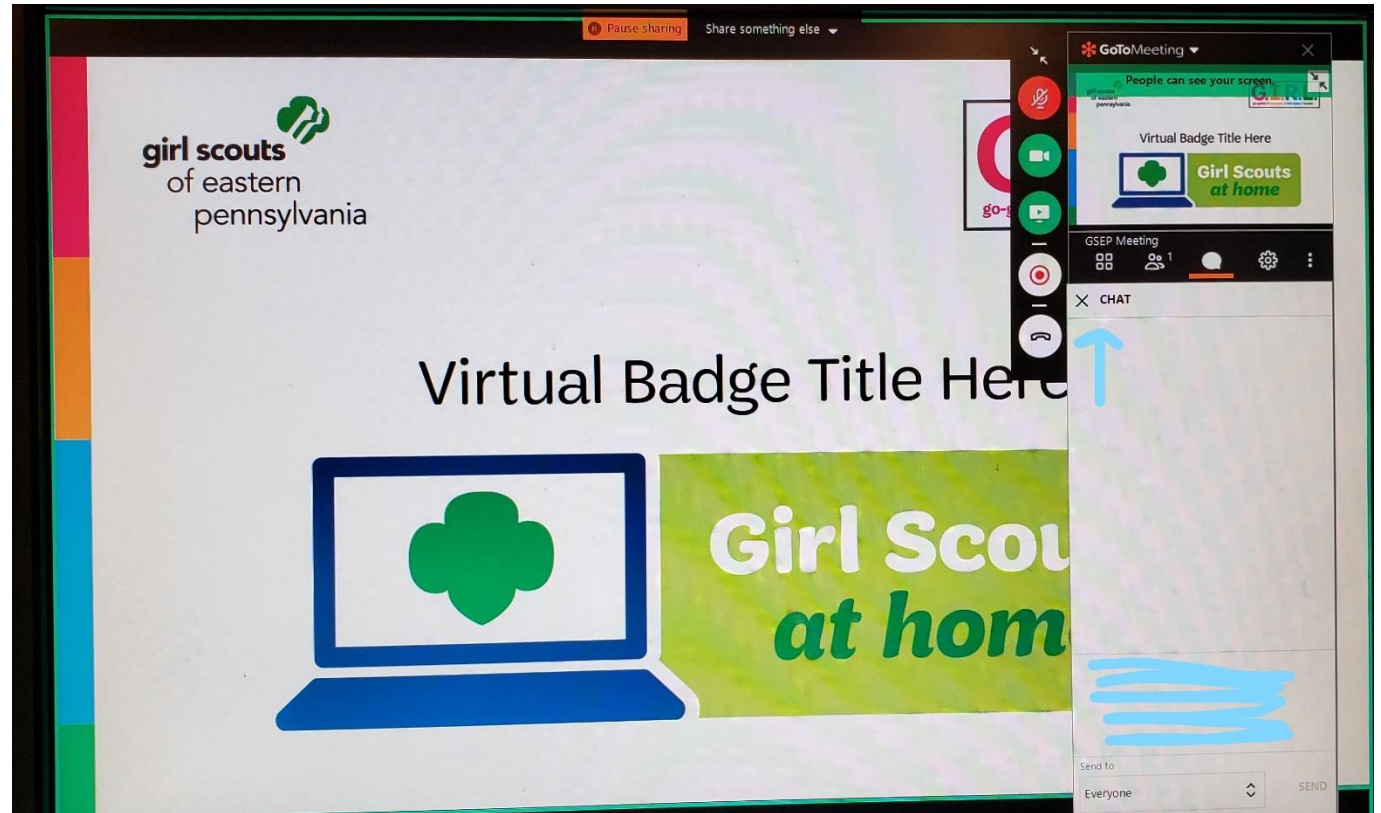
# Cybersecurity Investigator



**Girl Scouts**  
*at home*

# How will this Virtual Troop Meeting Work?

- On the right side of your screen, there is a control panel. You should see a microphone, a video camera and a chat bubble.
- When we sing together, you will want to click on your microphone so it is green. Then everyone will be able to hear you.
- If you have a webcam, clicking on it will let everyone else in the meeting see you too.
- The Chat Log looks like a cartoon thought bubble...see it underlined in red? You can type questions or comments into the chat log and everyone will be able to see what you write!



Let's start by saying our  
Girl Scout promise.

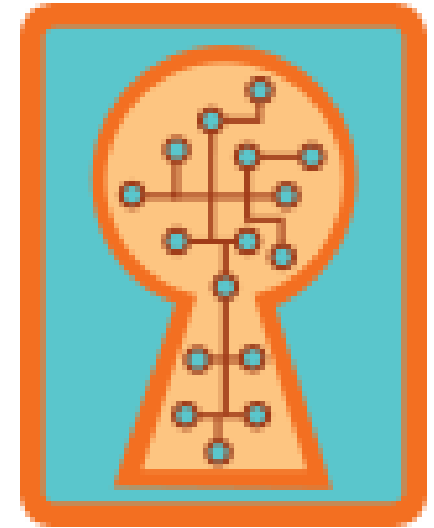


**On my honor**, I will try:  
To serve God and my country,  
To help people at all times,  
And to live by the **Girl Scout Law**.

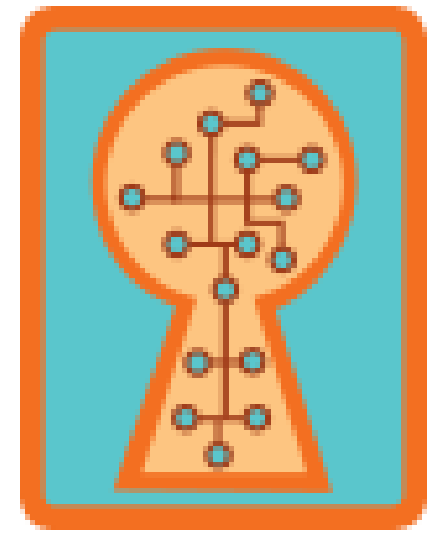
# Cybersecurity Investigator

Investigate and respond to a fictional cyber crime by:

- Looking for clues about a fictional hack
- Learn how traceroutes work
- Solve a cybercrime
- Role-play how to handle the crisis
- Play a game of Minesweeper



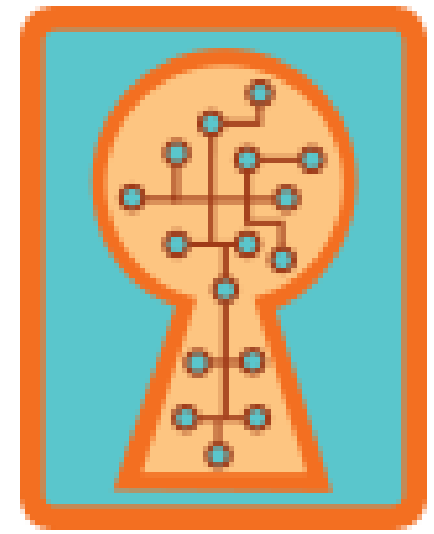
# Cybersecurity Investigator



Your first assignment:

- Build your own company; the name of the company will be **JGL Closet**.
- Next design a company logo
- Illustrate some of the products that your company sells
- Come up with a tagline for your business.

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Next Assignment: Look for Clues About a Fictional Hack

- Today, when you arrived at work, someone of your sales team tells you that they haven't received a single order in the past 24 hours, which is very unusual.
- Review the next scenarios to determine what may be the cause.

# Customer Feedback

Customer Name: Ariana

Message: I have been trying to shop on your website today. Every time I tried to type in the address to the store page, I received a 404 error message. Finally, I ran a Google search and was able to access the page just fine. Do you know why this is happening?

Customer Name: Ella

Message: I love your clothes and I have your store bookmarked in my browser. But today I could not get to the store page at all!

Customer Name: Jordyn

Message: I just received my package in the mail (Order #3817), and the colors of the clothing do not seem to match what is on the website. I'm very disappointed. I cannot wear them with the outfit that I had planned.

Customer Name: Sophia

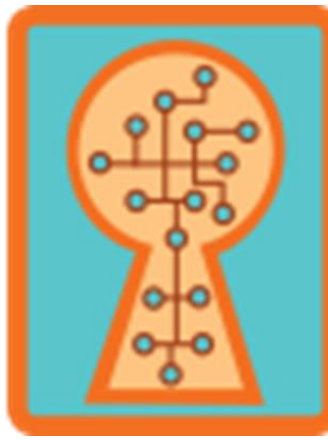
Message: Have you changed your website address?? I couldn't get to it from my bookmarks today!



Customer Name: Destiny

Message: Every time I click on the "Store" tab at the top of your webpage, my browser gives me an error message that says: "Do not proceed: this page is not secure."

# Traceroutes



A **traceroute** is a computer-generated list that shows the hops that the data makes on its path.

When you first glance at a **traceroute**, you see a lot of letters and numbers. They show all the details about where a data packet goes from the time you send it to the time it reaches its destination.



Utility-MacBook-Pro-2:~ utility.terminal\$ traceroute girlscouts.org

traceroute to girlscouts.org (209.66.73.87), 64 hops max, 52 byte packets

- 1 172.20.10.1 (172.20.10.1) 3.887 ms 3.807 ms 3.245 ms
- 2 145.sub-66-174-43.myvzw.com (66.174.43.145) 153.274 ms 49.206 ms 44.894 ms
- 3 \* \* \*
- 4 \* \* \*
- 5 66.sub-69-83-106.myvzw.com (69.83.106.66) 42.031 ms 45.271 ms 28.852 ms
- 6 2.sub-69-83-107.myvzw.com (69.83.107.2) 41.095 ms 38.262 ms 40.946 ms
- 7 112.sub-69-83-96.myvzw.com (69.83.96.112) 47.276 ms 38.921 ms 34.988 ms
- 8 112.sub-69-83-96.myvzw.com (69.83.96.112) 48.028 ms 35.339 ms 42.050 ms
- 9 69.sub-69-83-96.myvzw.com (69.83.96.69) 30.932 ms 40.307 ms 39.802 ms
- 10 et-1-1-2.gw18.dfw9.alter.net (157.130.131.9) 43.054 ms 28.253 ms 29.032 ms
- 11 0.ae1.br1.dfw13.alter.net (140.222.227.169) 42.743 ms 27.398 ms 28.958 ms
- 12 xe-5-0-1.er2.dfw2.us.zip.zayo.com (64.125.13.25) 40.943 ms 42.475 ms 44.620 ms
- 13 ae24.cs2.dfw2.us.zip.zayo.com (64.125.27.104) 93.879 ms 132.698 ms 113.548 ms
- 14 ae5.cs2.iah1.us.eth.zayo.com (64.125.28.102) 76.924 ms 86.856 ms 91.969 ms
- 15 ae3.cs2.dca2.us.eth.zayo.com (64.125.29.44) 94.885 ms 85.481 ms 100.032 ms
- 16 ae4.cs2.lga5.us.eth.zayo.com (64.125.29.30) 90.980 ms 107.770 ms 77.633 ms
- 17 ae12.er4.lga5.us.zip.zayo.com (64.125.27.197) 86.254 ms 89.839 ms 68.582 ms
- 18 209.66.94.14 (209.66.94.14) 80.432 ms 81.163 ms 79.936 ms

# Reading Traceroutes

Pull out your

- Traceroute Diagram,
- Sample Traceroute Number 2
- U.S. Map



# Reading Traceroutes



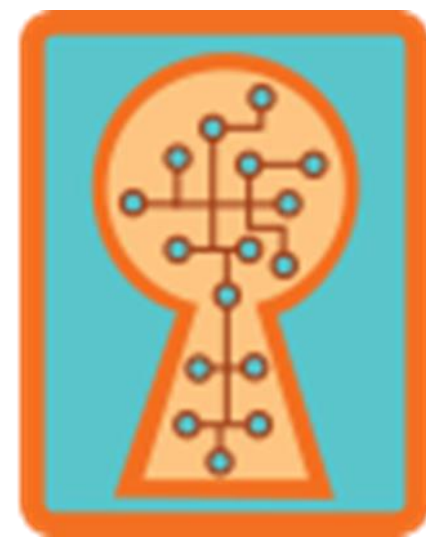
## Sample Traceroute Number 2

```
Utility-MacBook-Pro-2:~ utility.terminal$ traceroute pandora.com
traceroute: Warning: pandora.com has multiple addresses; using 208.85.40.50
traceroute to pandora.com (208.85.40.50), 64 hops max, 52 byte packets
 1  172.20.10.1 (172.20.10.1)  3.319 ms  4.560 ms  2.846 ms
 2  145.sub-66-174-43.myvzw.com (66.174.43.145)  35.159 ms  32.898 ms  80.405 ms
 3  * * *
 4  * * *
 5  66.sub-69-83-106.myvzw.com (69.83.106.66)  41.560 ms  41.179 ms  39.691 ms
 6  2.sub-69-83-107.myvzw.com (69.83.107.2)  39.707 ms  39.195 ms  40.208 ms
 7  112.sub-69-83-96.myvzw.com (69.83.96.112)  43.623 ms  40.046 ms  51.160 ms
 8  112.sub-69-83-96.myvzw.com (69.83.96.112)  46.978 ms  36.272 ms  39.971 ms
 9  69.sub-69-83-96.myvzw.com (69.83.96.69)  90.444 ms  31.140 ms  36.607 ms
10  et-1-1-2.gw18.dfw9.alter.net (157.130.131.9)  45.459 ms  36.339 ms  40.429 ms
11  0.et-11-1-0.gw7.dfw13.alter.net (140.222.234.227)  35.080 ms  43.918 ms  67.487 ms
12  be-203-pe01.1950stemmons.tx.ibone.comcast.net (66.208.229.169)  47.781 ms  49.374 ms  38.867 ms
13  be-12441-cr02.dallas.tx.ibone.comcast.net (68.86.89.205)  43.800 ms  39.285 ms  39.152 ms
14  be-12124-cr02.1601milehigh.co.ibone.comcast.net (68.86.84.229)  55.134 ms  60.736 ms  59.013 ms
15  be-12021-cr01.champa.co.ibone.comcast.net (68.86.84.225)  62.883 ms  67.879 ms  50.476 ms
16  be-11020-cr02.sunnyvale.ca.ibone.comcast.net (68.86.84.9)  82.197 ms  80.671 ms  118.241 ms
17  be-11083-pe02.529bryant.ca.ibone.comcast.net (68.86.84.14)  87.257 ms  75.289 ms  71.660 ms
18  as40428-1-c.529bryant.ca.ibone.comcast.net (75.149.229.170)  88.818 ms  77.446 ms  91.350 ms
19  www.pandora.com (208.85.40.50)  78.976 ms  89.662 ms  69.875 ms
```

# Cybersecurity Investigator

Next steps to complete the badge.

- Role-play how to handle the crisis
- Play a life-sized version of Minesweeper



# Cybersecurity Investigator

