

Puzzle Name: Networking Bug  
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The user is given a lot of information to parse through.  
Much of the flavor text gives small hints that all point in the same direction.  
The more concrete data they are given is the network signal and the shipping records.

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Solving procedure:

First, the solver should get their bearings on the information being presented. It is recommended that the players read over everything first, but it is not strictly necessary. The pinned email gives some simple exposition, letting the player know that they are working for a shady corporation currently running surveillance on the Port of Los Angeles, and gives them some information about how their network works.

The main focus should be the most recent email, marked URGENT, asking you to fix the network. This contains information about the Arweave beetle (be careful to avoid the Arweave-shaped rabbit hole, the actual Arweave blockchain isn't important), most importantly, their id sequences and excitement response. This is followed by a network signal representing the id sequence of this specific beetle: -\_\_\_\_\_-|\_\_\_\_-\_-\_|\_-\_\_\_\_-|-\_-\_-\_-\_, mentioning that it's a "bit" hard to read, and should be converted to a "basic digital" format, hinting at the conversion from binary to base 10. The vertical bar characters simply act as delimiters between 4 numbers.

```
-_____-|____-_-_|_-____-|-_-_-_-  
10000001 00010101 01011101 10110101  
      129      21      93      181
```

Just to the right of this message, there is a sticky note asking for the id sequence with the exact right spacing to fit this answer. Giving you 129.21.93.181, which should act as a confirmation and should look familiar, as it is the format of an IP address (the main way that computers identify who they are sending messages to on the internet). Below it there is another sticky note, with a colon and 4 open spaces; again, this is a common format that should hint at a port number. If you continue reading the email, it states that "tuning our frequency requires going to the port", this (along with other scattered hints) is meant to represent the idea that the frequency is the in-universe analog for the real-world port number that you are looking for. The company which you work for is very blatantly hinted at being the authoritarian government from the book 1984 by George Orwell, commonly known as Big Brother. Looking up the port number of Big Brother and/or Arweave will give you your answer: 1984. This represents the fact that the Arweave beetle in-universe uses the same frequency as your corporation, in the same way that Arweave protocol uses the same port number as the Big Brother protocol. Again, this can be 'written in' to the sticky note, giving you 129.21.93.181:1984.

With this, you can do as the email suggested and “try connecting with the bug and listen to how it responds”. It mentions doing it “locally” and following “protocol”. This (again, along with many scattered hints), are meant to suggest the use of a local TCP connection.

This can be done in 5 lines in python (which you can even ask AI to write):

```
import socket
conn = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
conn.connect(("129.21.93.181", 1984))
print(conn.recv(2048).decode())
conn.close()
```

This will give you the resulting data: -- \_\_\_\_ --- \_\_\_\_ - - - - - \_\_\_\_ - - \_\_\_\_ - - - - - \_\_\_\_ - - \_\_\_\_ - -.

This is meant to be converted again to binary: 11000111000111110001100111100001100011.

This does not convert to anything meaningful in base 10, and cannot be broken up into bytes (as it is not a multiple of 8).

As the email suggests, your new goal is to “filter out the signal and figure out [the] trigger word”.

Moving onto the next email, containing the shipment logs, clicking on the link will automatically download the file as a .bin (hinting at the fact that you will be playing with the data on the bit level). You can open the file in a basic text editor and see the corrupted text. This email states that “they seem to be inserting extra bits of data in the middle of the messages”. After completing the previous step, you know exactly what bit string you are looking for. Removing it requires reading the file in as binary, finding the interference string, and removing it. The location of the error is different on each line (appearing earlier and earlier, as the beetles get better and better at identifying that the signal means food).

This puzzle can be solved in a more brute force manner, without ever connecting to the network or learning the bit-string. Instead, simply by shifting bits until the text re-aligns (although you will always be missing one character, as the interruption never appears on a byte-boundary). This is a valid solution to the problem, as you have successfully completed the task of determining the trigger word.

Filtering out the error should leave you with the trigger word Avocado, which again, fits nicely into the sticky note on the computer monitor. This is placed at the bottom of the screen to indicate that it is the final answer.

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I was going to list out every hint and easter egg, but there are far too many and it is already late.

The name is a pun. There is an issue (commonly referred to as a bug) with the networking systems, hence a networking bug. There is also a bug at the center of the issue which has the ability to create local channels of communication, hence a networking bug.

They are presented with a computer monitor displaying “Inner Party Controlled Transmissions”. The Inner Party is the name of high ranking members of the authoritarian government in George Orwell’s 1984

Throughout this puzzle, the IP connection is used somewhat metaphorically/abstractly to represent transmitting on a radio network. The IP address is a representation of the bug’s unique identifier and the port number is used as an analogy for the frequency.