



CPSC 100

Computational Thinking

Internet (Continued)

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Agenda

- How the internet works
- **Activity: Phishing**
- Debrief about how the internet collapsed today!



Learning Goals

After this week's lectures, you should be able to:

- Compare and contrast server and client.
- Explain how data is transferred from one location to another across networks, such as the Internet
- Define some of the design features of TCP/IP networks, such as packets, routing, and domain names.
- Explain the roles of Internet addresses, domain names, and DNS servers in networking
- Create the diagram for the hierarchical structure of a webpage or file
- Identify patterns in URLs

Course Admin



Course Admin

- Some groups were not able to coordinate about Milestone 1 before the due-date; note that those groups are **behind!**
 - I've extended PM1 until 6 PM Oct 21st (last chance!)
 - Everyone else is welcome to make edits and updates to what they submitted already **with no penalty**

How the Internet Works

These 4 videos are required watching for this course and is all examinable material !

How The Internet Works

Code.org - 1 / 8

↺ ↻

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What is the Internet?
Code.org
3:45
- 

The Internet: Wires, Cables & Wifi
Code.org
6:42
- 

The Internet: IP Addresses & DNS
Code.org
6:45
- 

The Internet: Packets, Routing & Reliability
Code.org
6:26

How the Internet Works



PAUL BARAN
COMPUTER NETWORK PIONEER

TYPES OF NETWORKS

CENTRALIZED



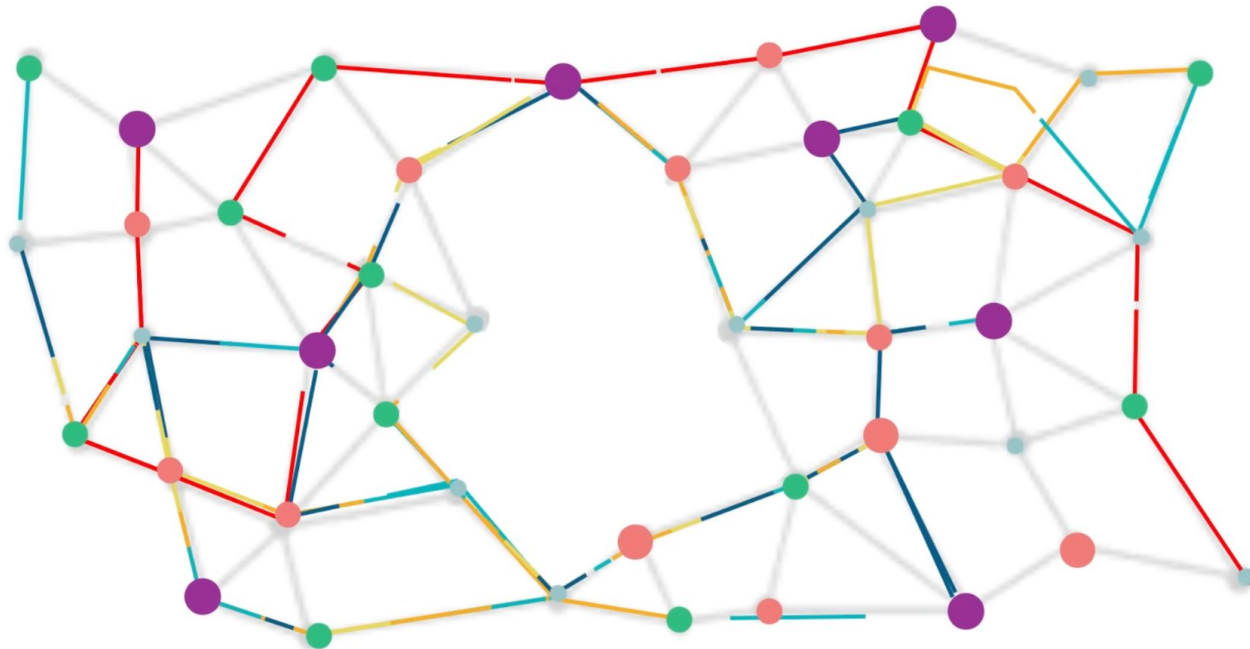
VS.

DISTRIBUTED

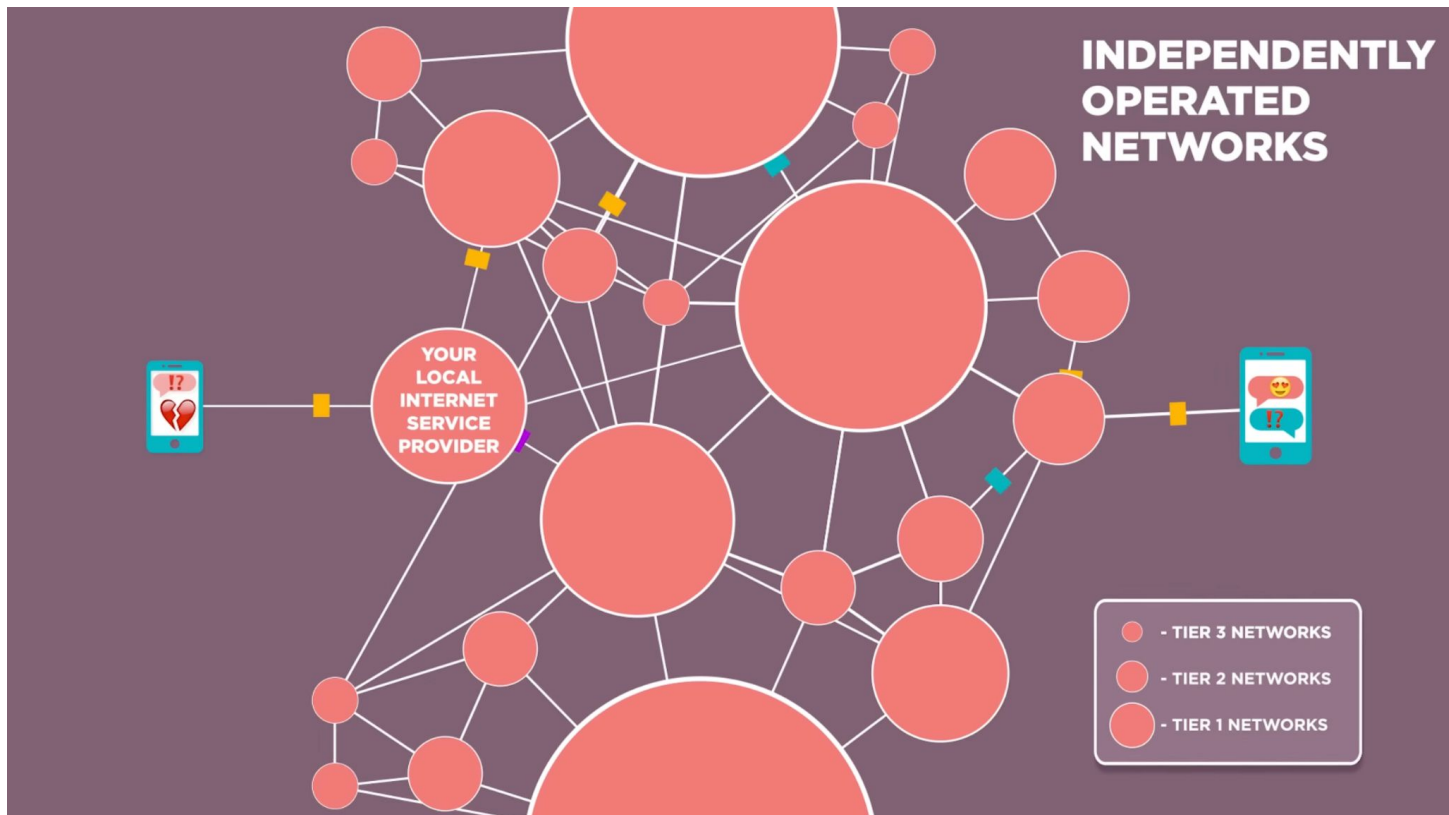


How the Internet Works

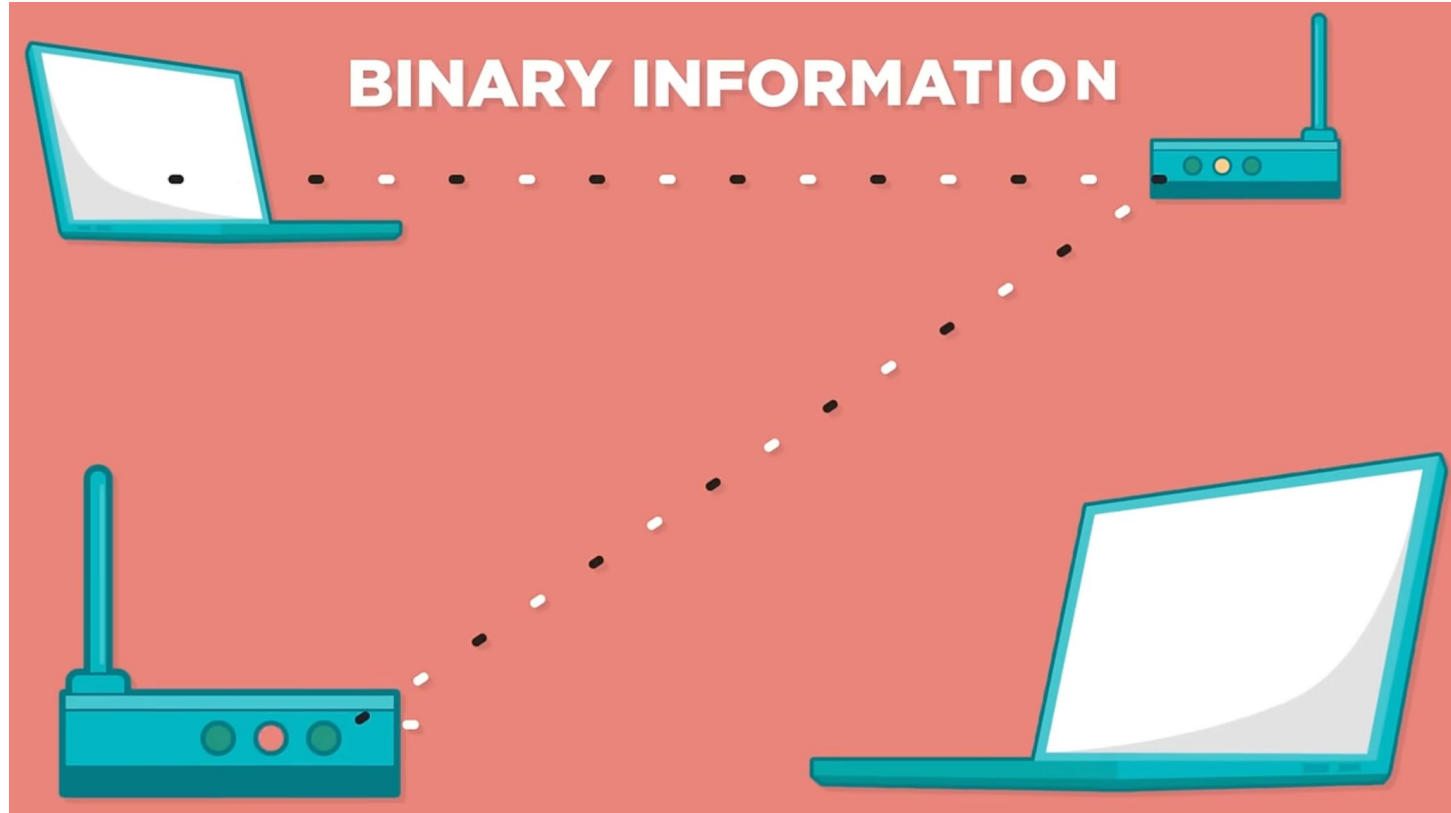
A DISTRIBUTED PACKET-SWITCHED NETWORK



How the Internet Works



How the Internet Works



How the Internet Works



How the Internet Works



BANDWIDTH

MAXIMUM TRANSMISSION
CAPACITY OF A DEVICE

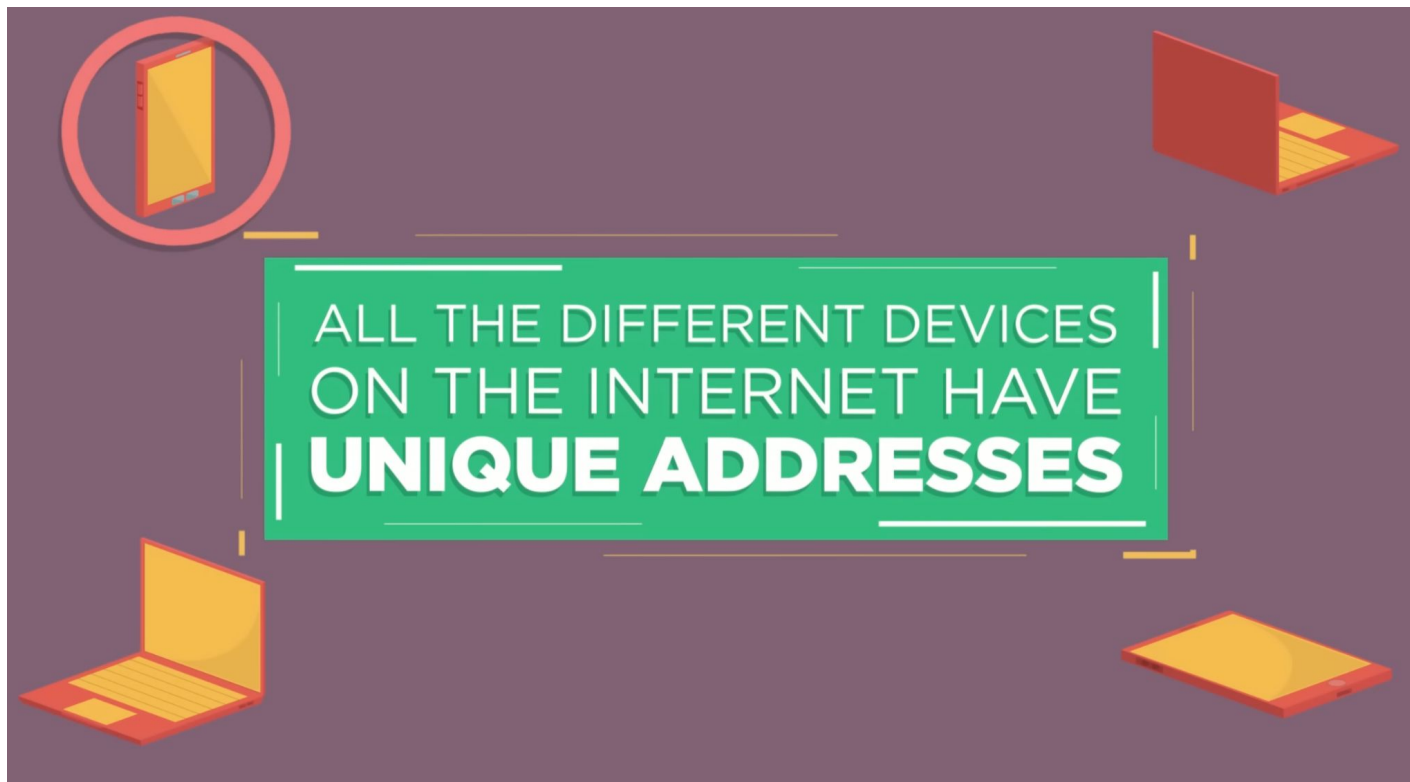
BIT RATE

NUMBER OF BITS THAT WE
CAN SEND OVER A GIVEN
PERIOD OF TIME

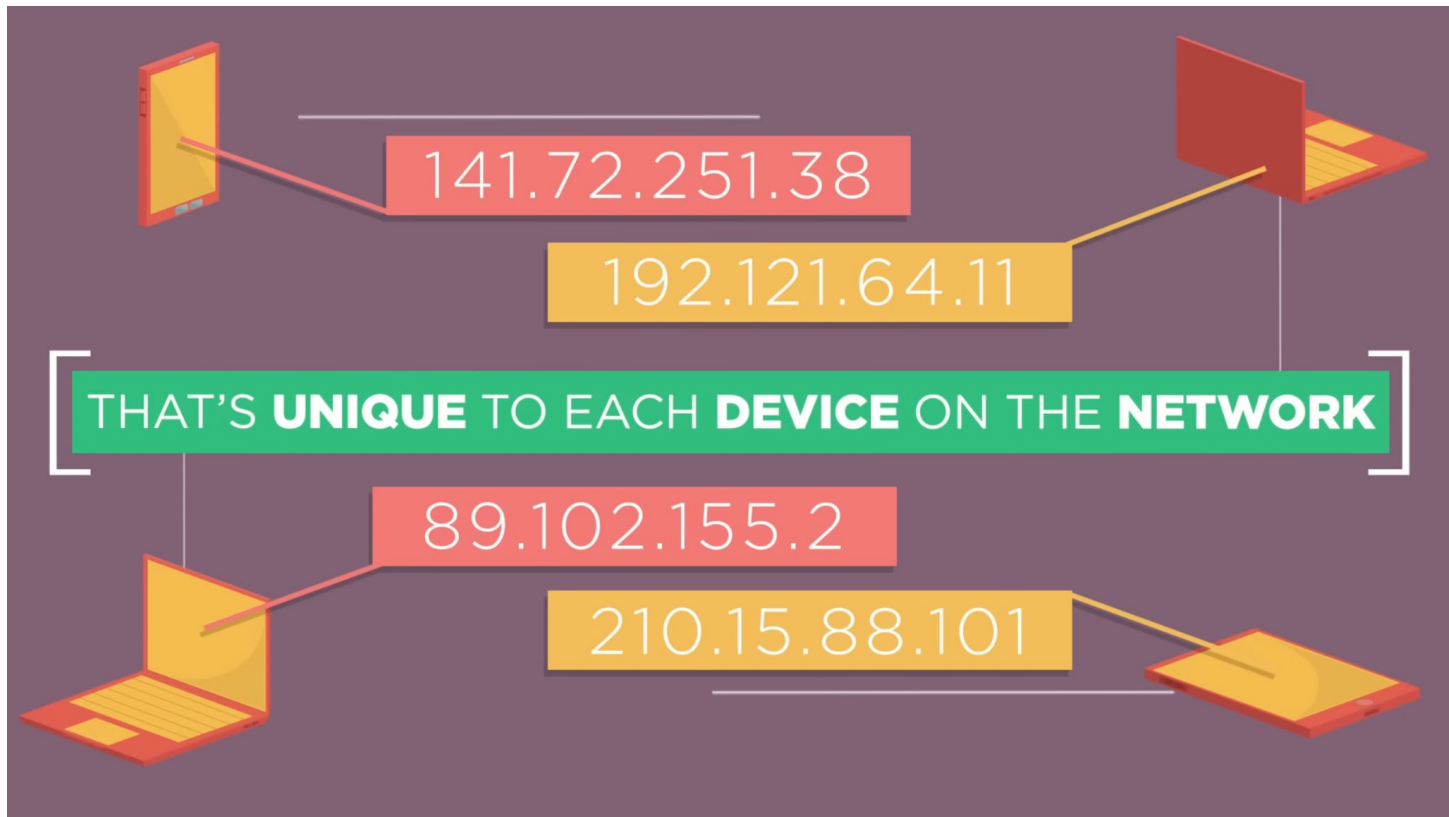
How the Internet Works

METHOD	PRO	CON
 ELECTRICITY	CHEAP	SIGNAL LOSS
 LIGHT	REALLY FAST NO SIGNAL LOSS	EXPENSIVE HARD TO WORK WITH
 RADIO	TOTALLY MOBILE	SHORT RANGE

How the Internet Works



How the Internet Works

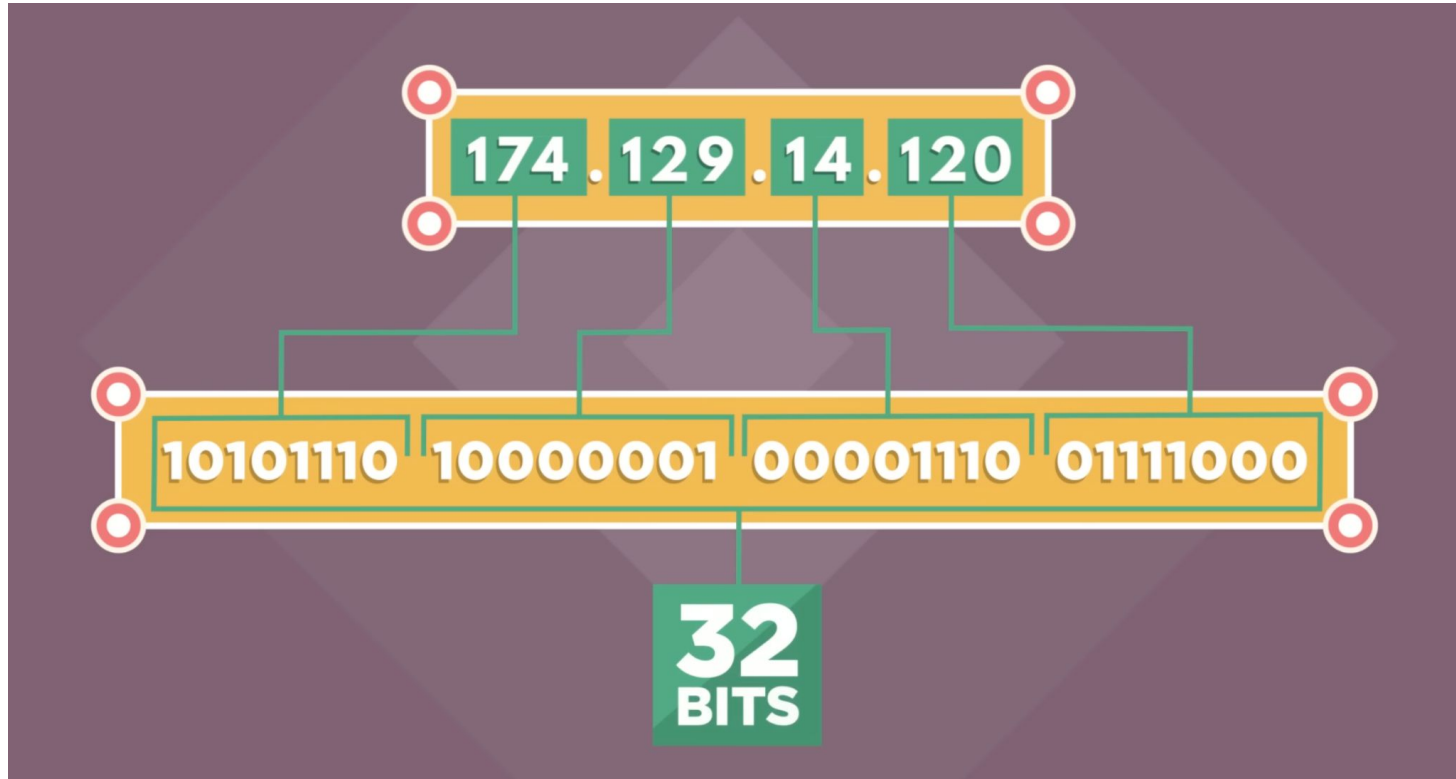


How the Internet Works





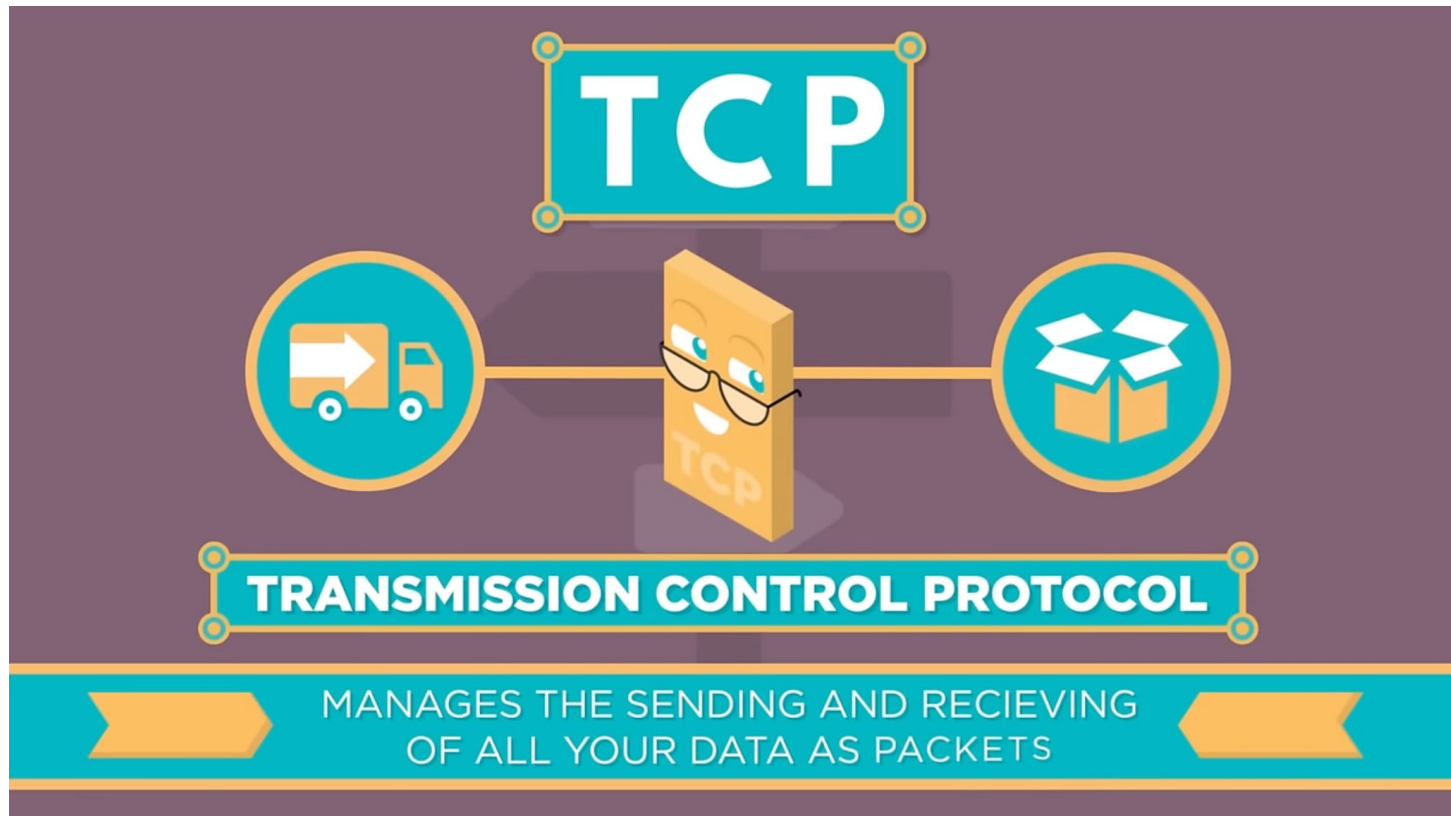
How the Internet Works



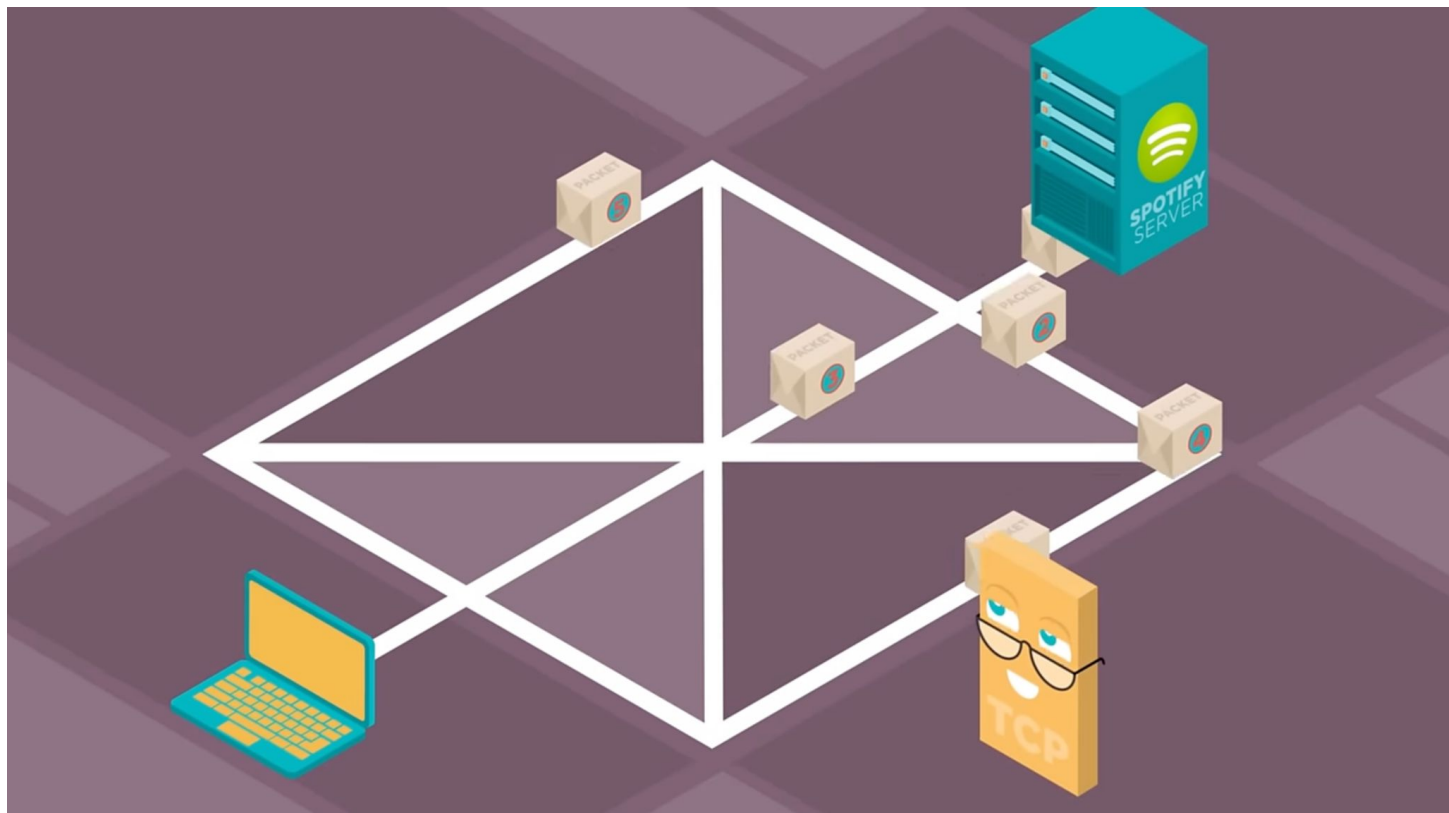
How the Internet Works



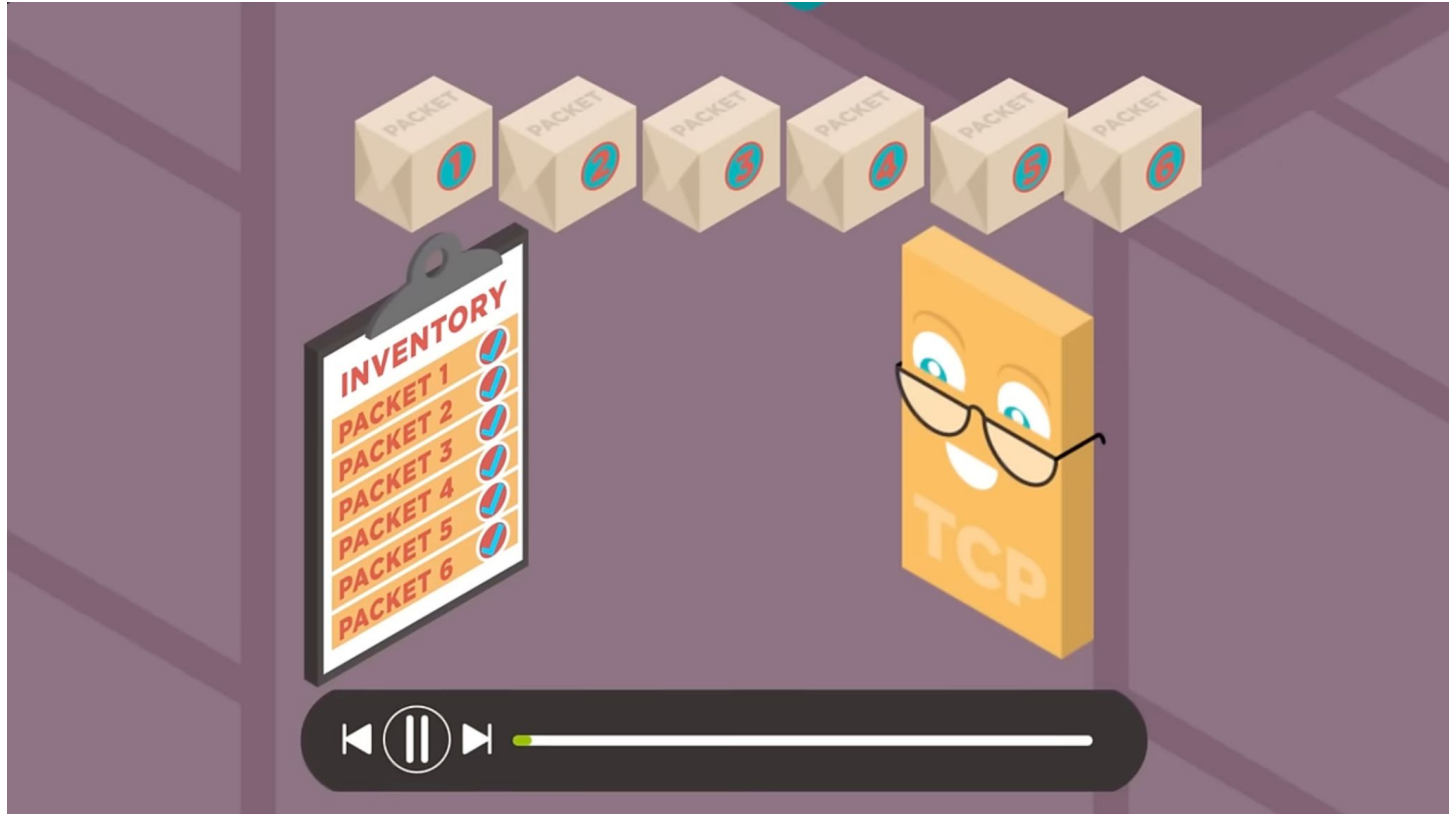
How the Internet Works



How the Internet Works



How the Internet Works



How the Internet Works



How the Internet Works



Activity



Activity: Phishing Quiz

Google Phishing Quiz

Developed by JIGSAW

Make up a name and email.

phishingquiz.withgoogle.com

Create a name and email — neither need to be real — to make this quiz seem more realistic. Don't worry, this information won't leave your device. *More*

Name*

Email*

Get started

Internet Collapse today....

Business live
Business

Amazon says Web Services are recovering after outage hits millions of users - as it happened

Updated 2h ago

This live blog is now closed. You can read the full report here:

- [Full story: Amazon Web Services outage hits dozens of websites and apps](#)

- **14h ago**
Thousand Eyes shows scale of internet outages
- **14h ago**
Ring doorbells brought down by internet outage
- **14h ago**
AWS: engineers are actively working to fix the problem
- **14h ago**
Problems at Lloyds, Halifax and Bank of Scotland
- **14h ago**
Fortnite investigating login problems
- **14h ago**
Users report major internet outage after AWS suffers 'operational issue'
- **15h ago**
Oil hit by



Wrap up