

Document name: Packet switching simulation

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OpenLearn course: Internet of everything

OpenLearn url: <http://www.open.edu/openlearn/science-maths-technology/internet-everything/content-section-overview>



Packet Tracer - Packet Switching Simulation

Scenario

Packet Tracer is a fun, take-home, flexible software program that allows you to experiment with network behavior, build network models, and ask “what if” questions. In this activity, you will explore an example of how Packet Tracer can serve as a modeling tool for representing an Internet connection to Facebook.

Note: This document is a supplement, but not a replacement, for the video demonstration. The video demonstration is the primary source for how to navigate this activity.

Steps

- Open the **Packet Tracer – Packet Switching Simulation A.pkz** file.
- Click **SmartPhone > Desktop tab > Web Browser**.
- Enter **www.facebook.com** and click **Go**. The web page should appear. If not, click **Fast Forward Time** several times to force the network to quickly converge. Then try accessing **www.facebook.com** again.
- Click each of the cloud icons to view the more complex networking paths inside:
 - Click **Internet Exchange** to view the paths, and click **Back**.
 - Click **Internet Core** to view the paths, and click **Back**.
 - Click **Facebook Data Center** to view the paths, and click **Back**.
- Close the **Packet Tracer – Packet Switching Simulation A.pkz** file, open the **Packet Tracer – Packet Switching Simulation B.pkz** file, and configure the following setting:
 - Click **Fast Forward Time** until you see the **Time** increment to at least five minutes.
 - Maximize your window. If necessary, use the horizontal and vertical scroll bars to view all of the devices in the network.
- Click **Simulation** and change the following **Simulation Panel** settings:
 - Click **Edit Filters > Show All** to turn off all protocols. Select **ICMP** and **HTTP**.
 - Adjust the speed of the **Play Controls**.
 - Close the **Simulation Panel** but remain in **Simulation** mode.
- Send a ping to **www.facebook.com**, and configure the following settings:
 - Click **SmartPhone > Desktop tab > Command prompt**.
 - Enter the **ping www.facebook.com** command.
 - Minimize the **SmartPhone** window.
 - Click **Auto Capture/Play** to watch the ping packets travel from the **SmartPhone** to the Facebook servers. When the ping “echo reply” packets return from the Facebook servers, notice how the packets take different paths.
- Investigate the **Packet Switching Simulation B.pkz** file on your own.