

Computer Networking

Connecting computers together into networks can be incredibly useful, exemplified by the major impact of the global network-of-networks we know as the Internet. But how do computers communicate with each other in a network, and what hardware components are involved?



Client

Any computer that requests resources from a server (such as a home computer using a web browser to request a website from a web server)

URL

A Uniform Resource Locator identifies a single web page by:

- The request protocol (typically `https`)
- The domain name of the website
- The page's path within the website

Wi-Fi

A technology for connecting computers within a local network using radio waves.



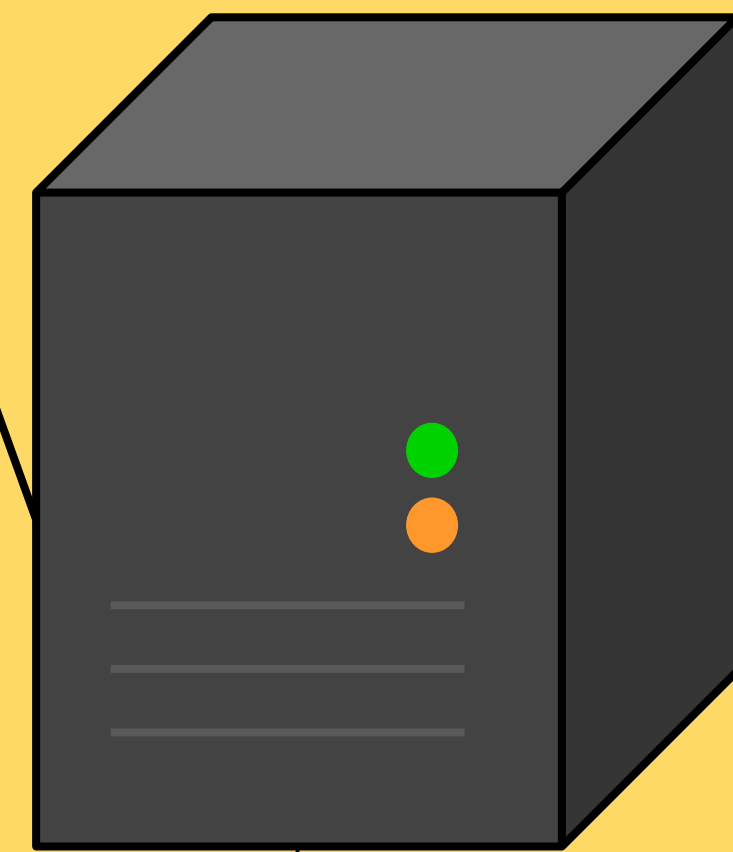
Home Router

Typically performs the role of multiple devices:

- **Switch:** It connects home computers into a local network.
- **Router:** It connects the local network to the Internet.
- **Modem:** For DSL, it converts analogue phone-line signals into digital data.

Application Server

A computer that provides a service to other computers over a network (such as a web server that serves a website).



IP Packet

A single Internet Protocol message sent across a network. All communication is broken down into packets.

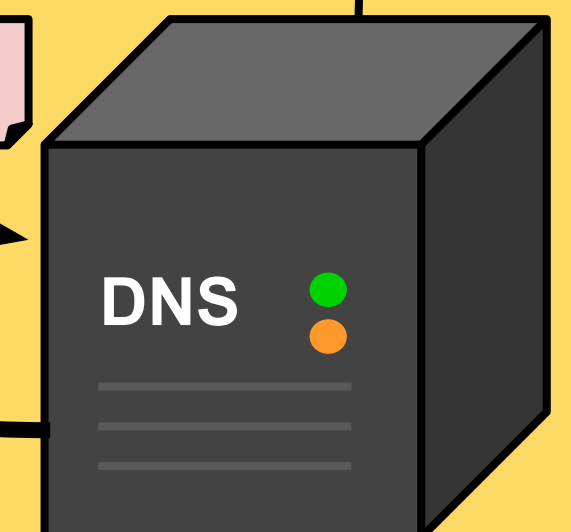
IP Address: 203.0.113.1
Data:
<html><head>
 <title>Kea</title>
</head>...

IP Address

A unique identifier of a computer within a network (such as the Internet). Used to identify the recipient of an IP packet.

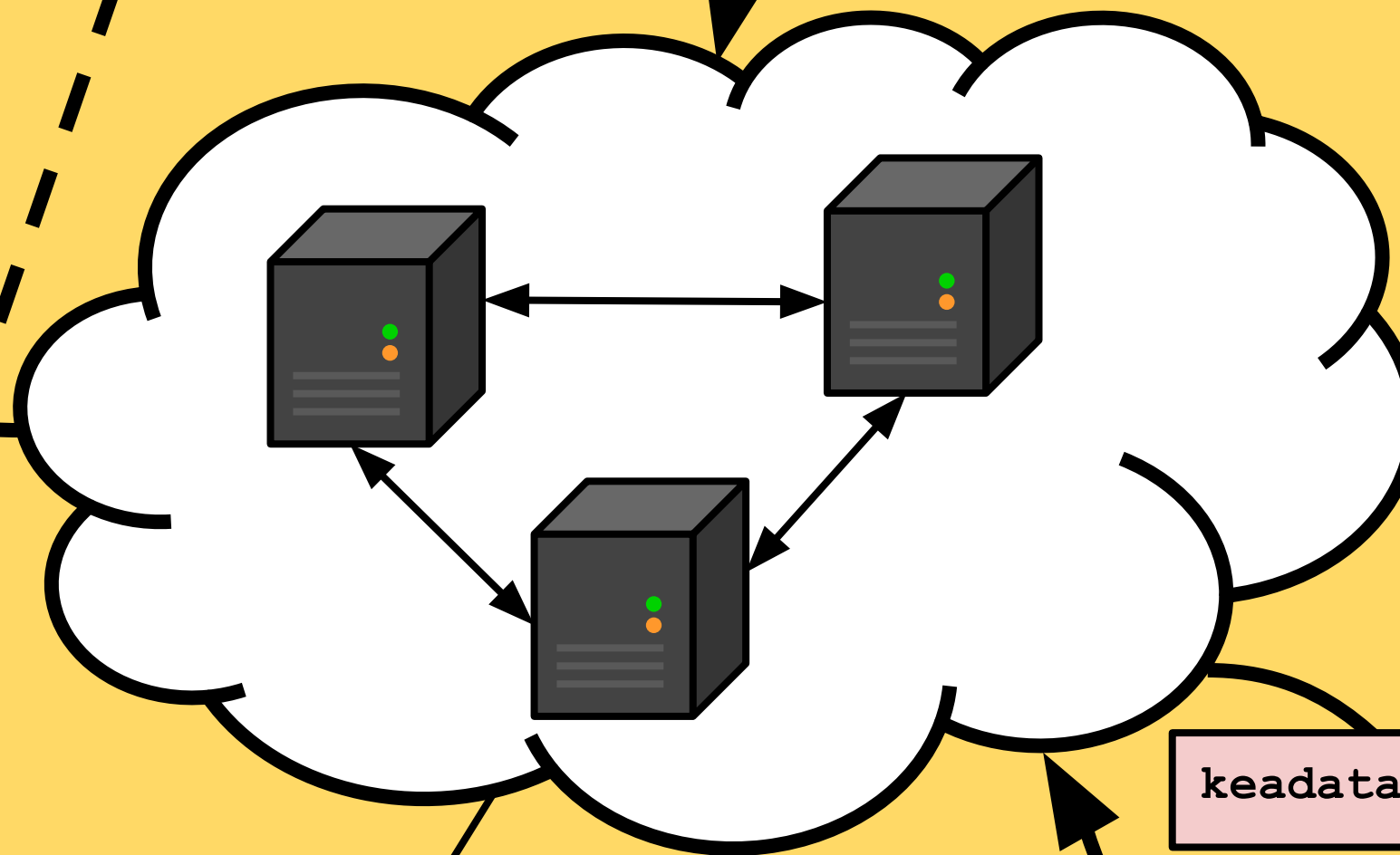
DNS Server

A Domain Name System server provides the IP address for the domain name in the URL.



The Internet

A global network of computer networks that supports services like websites (the World Wide Web), email, and voice calling.



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