

# ICA0002: IT Infrastructure Services

## Web Servers

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# Basic terms

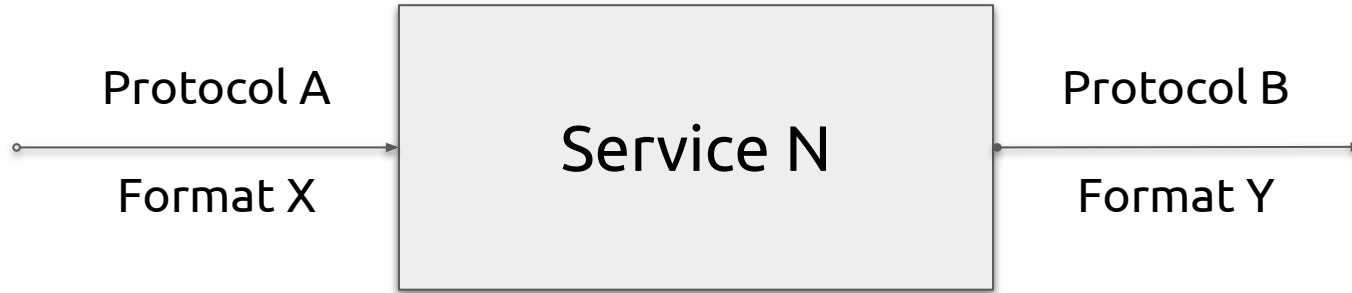
WWW: World Wide Web, the Web

URL: Uniform Resource Locator

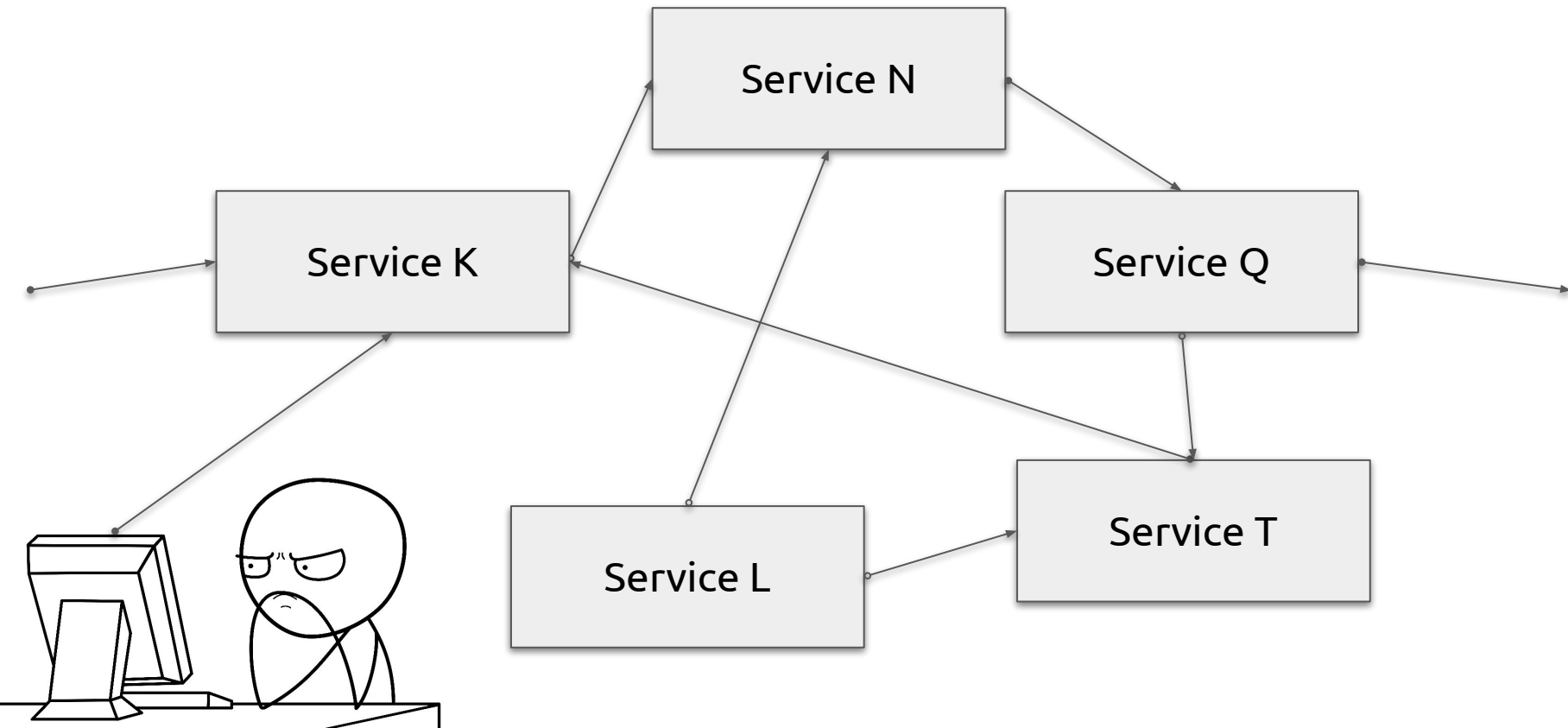
Web server

Web client (web browser, user agent)

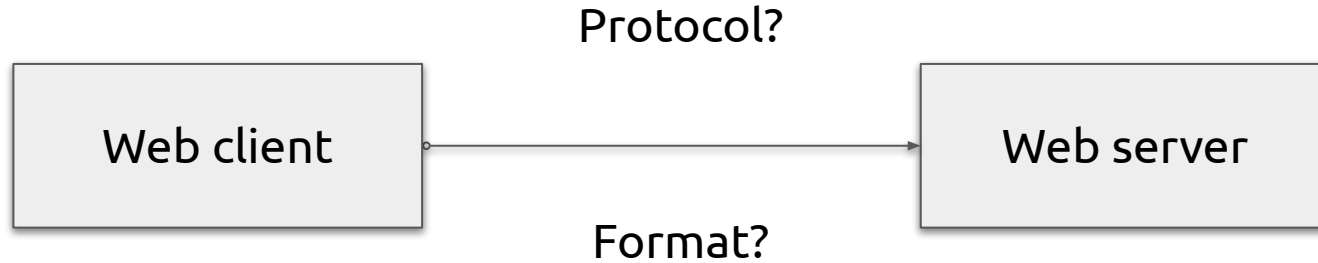
# (very) Generic IT service



# Service communication



# Web client and Web server



# Web client and Web server



# Web client and Web server

FTP, Gopher, HTTP/0.9, HTTP/1.0, HTTP/1.1,  
HTTP/2, HTTP/3, HTTPS, SPDY,



Demo time!



# Behind the Web server



# Behind the Web server

Static documents:

- web server sends files from local filesystem as is

Dynamic documents:

- web server calls scripts to generate the resource on the fly (dynamically) and sends that generated resource to the client

Proxy mode:

- web server forwards request to other services

# Other topics

Not discussed in detail in this course -- but some are covered in labs as needed:

- HTTPS, SSL/TLS
- WebSockets, HTTP/2, HTTP/3
- CGI, WSGI
- Caching
- Proxying
- High availability

# Web server market share



# Apache HTTPd

The oldest of the existing mainstream web servers, and still widely used

Free and open-source, maintained by Apache Software Foundation

First release in 1995, current version: 2.4

Modules for TLS, server-side scripts, authentication, proxying, etc.

- List of modules: [https://en.wikipedia.org/wiki/List\\_of\\_Apache\\_modules](https://en.wikipedia.org/wiki/List_of_Apache_modules)

Web site: <https://httpd.apache.org>

# Nginx

Rather 'new' web server: first public release in 2004, current version: 1.18

- Nginx: free and open-source (BSD license)
- Nginx Plus: proprietary

One of the most widely used -- second after Apache HTTPd (released in 1995)

Web server, HTTP proxy, load balancer

- List of modules: <https://www.nginx.com/nginx-wiki/build/dirhtml/modules>

Web site: <https://nginx.org>

Questions?