

ICA0002: IT Infrastructure Services

Web Servers

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Basic terms

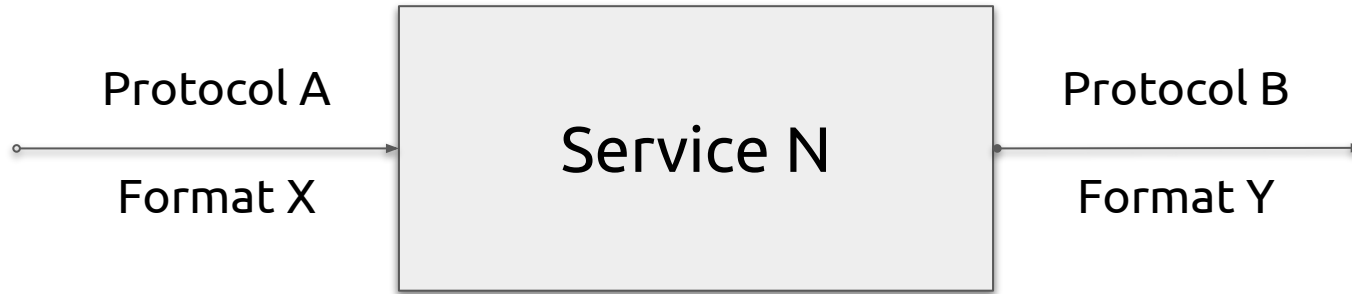
WWW: World Wide Web, the Web

URL: Uniform Resource Locator

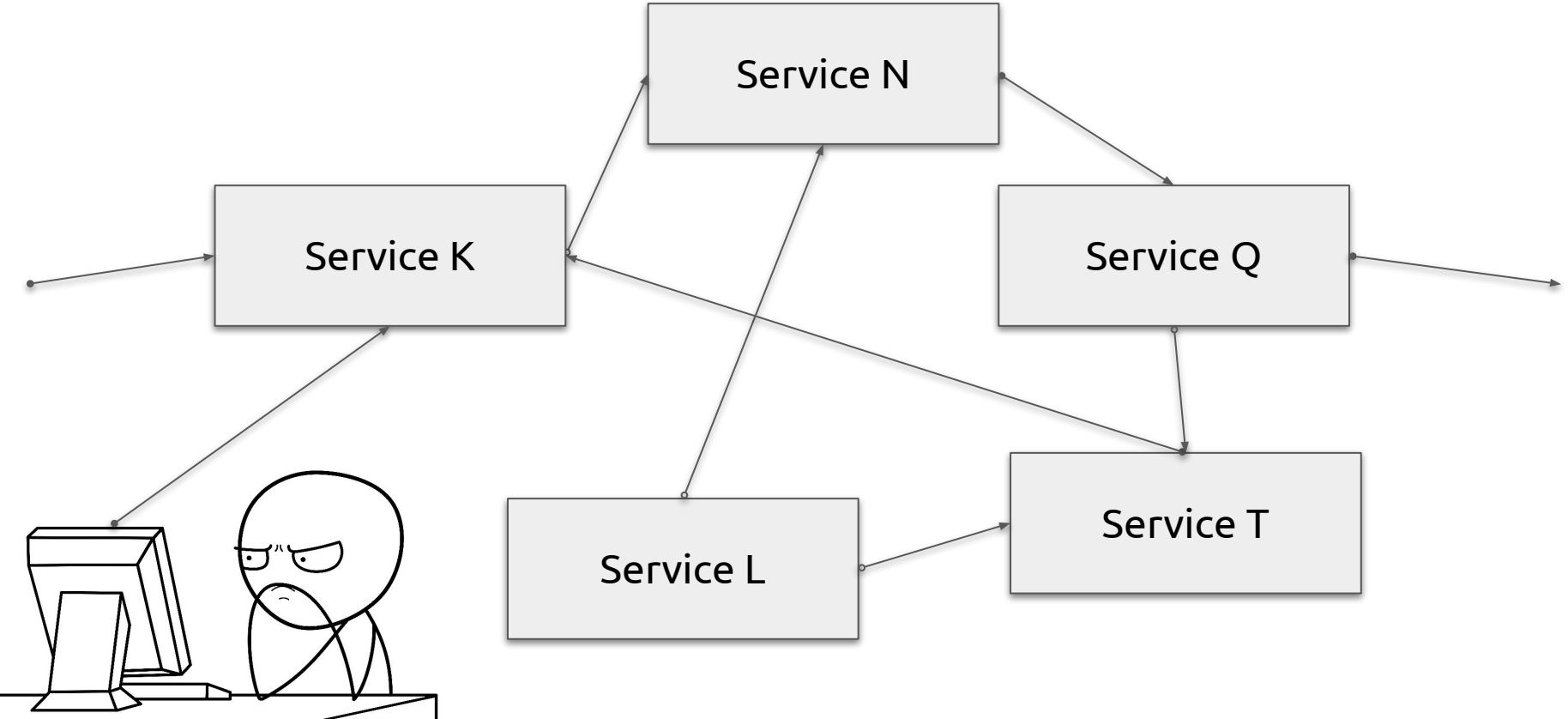
Web server

Web client (web browser, user agent)

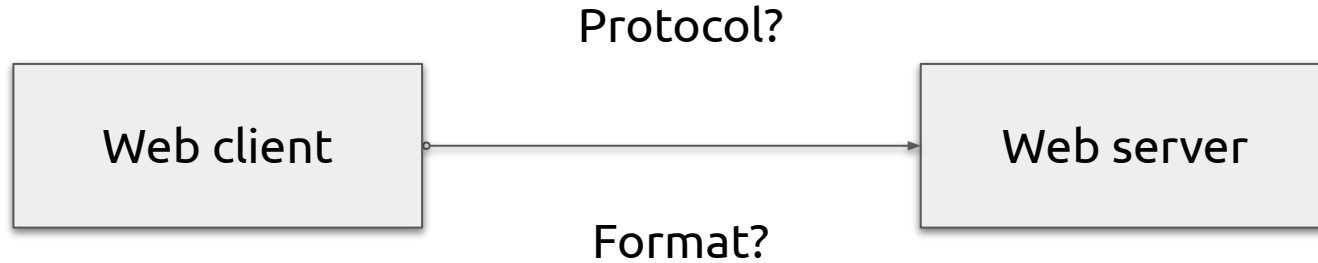
(very) Generic IT service



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:

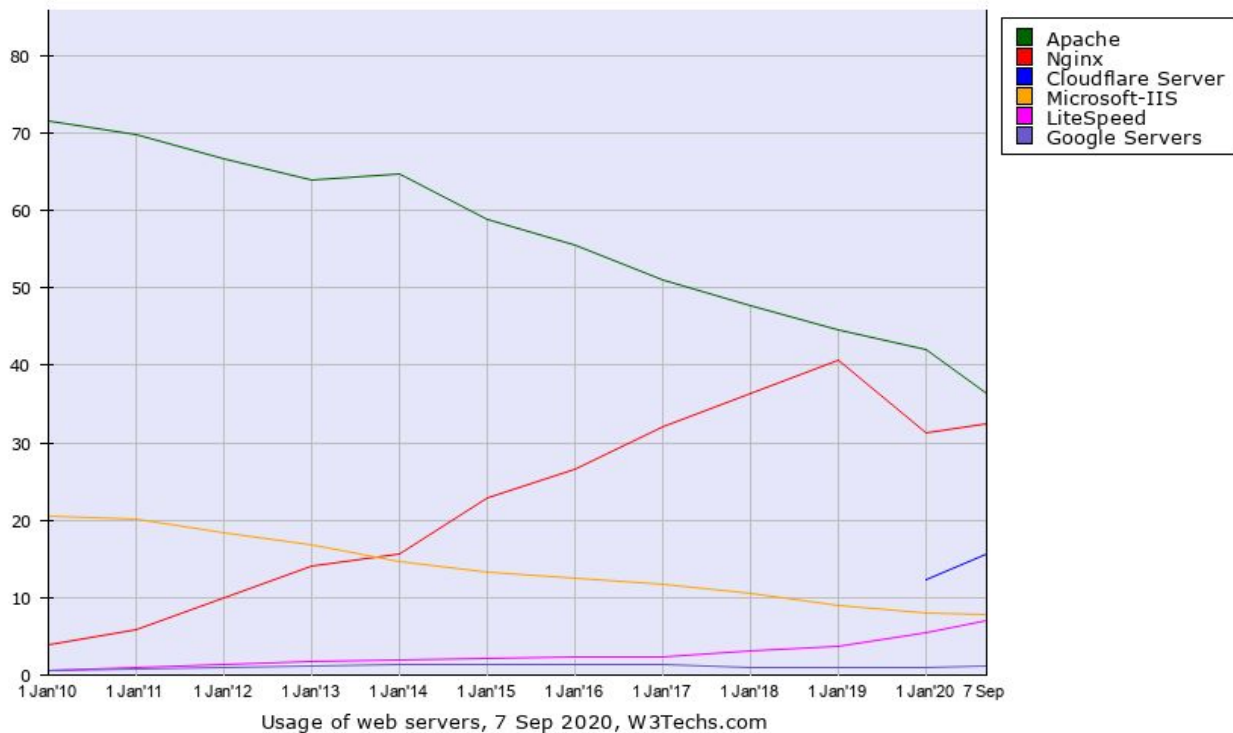
- web server forwards request to other services

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 most 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

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/resources/wiki/modules>

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

Questions?