

The background is a solid blue color with a complex, abstract pattern of white and light blue lines and circles. The lines form a network-like structure, with some circles acting as nodes or hubs. The overall effect is a sense of connectivity and digital technology.

Dynamic Web Content Generation

Malintha Adikari

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Static Vs. Dynamic Content

Static Content

← → ↻

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Dynamic Content

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Malintha Adikari

What is your question?

Chanaka Fernando answered this

In microservices architecture, how do services communicate with each other? Which protocols are used and when?

Chanaka Fernando, knows Sinhala
Answered Sat

Microservices communication has been a big discussion point during the 2017 and it was converged around the concept of a service mesh. The service mesh architecture allows microservices to communic... (more)

Questions for You

Question added - Jobs and Careers - Topic you might like

What is the abbreviation for administrative assistant?

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Static Content

- Static content is published to regular files on your server and handled using the simplest methods available to the web server.
- When a Web page is requested, the server where the page is stored returns the HTML document to the user's computer and the browser displays it.
- The user may interact with the document through clicking available links, or a small program (an applet) may be activated, but the document has no capacity to return information that is not pre-formatted.

Static Content

Advantages of static content:

- Fastest and most efficient way to deliver content
- Does not require any code to execute or any databases to be accessed
- Uses simple, clean URLs to address the content
- Takes best advantage of web caching systems, which further boosts performance
- Compatible with every type of webserver technology

Static Content

Disadvantages of static content:

- Must be republished when it changes, or your viewers will not see the updates
- Cannot display differently to different viewers, depending on their login status or other factors (Personalization???)

Dynamic Content

- Dynamic content is generated for you at the time you request the page.
- The document you view exists only for you at that moment; if viewed by someone else at the same time, or by you at a slightly different time, you could get something different.

Dynamic Content

Dynamic content is good for:

- Pages whose content changes too quickly to easily re-publish it
- Pages that display viewer-specific content (eg. user profiles) - Personalization
- Pages that display content conditionally (ie. member-only pages)

Dynamic Content

Disadvantages of dynamic content:

- **Resource-intensive** compared to static pages. The number of dynamic pages your server can display per second will generally be much less than the number of static pages.
- **Executes code on server**, and can read from and write to your database.
- In many typical default webserving configurations, the index page of a website is presumed to be a static page. That means there are some places where it is impractical or more difficult to use dynamic pages than others.

From Static to Dynamic

The static URL to a page will be something like:

<http://foobar.com/somepage.html>

whereas the dynamic URL will be something like:

<http://foobar.com/cgi/page.cgi?id=123>

or

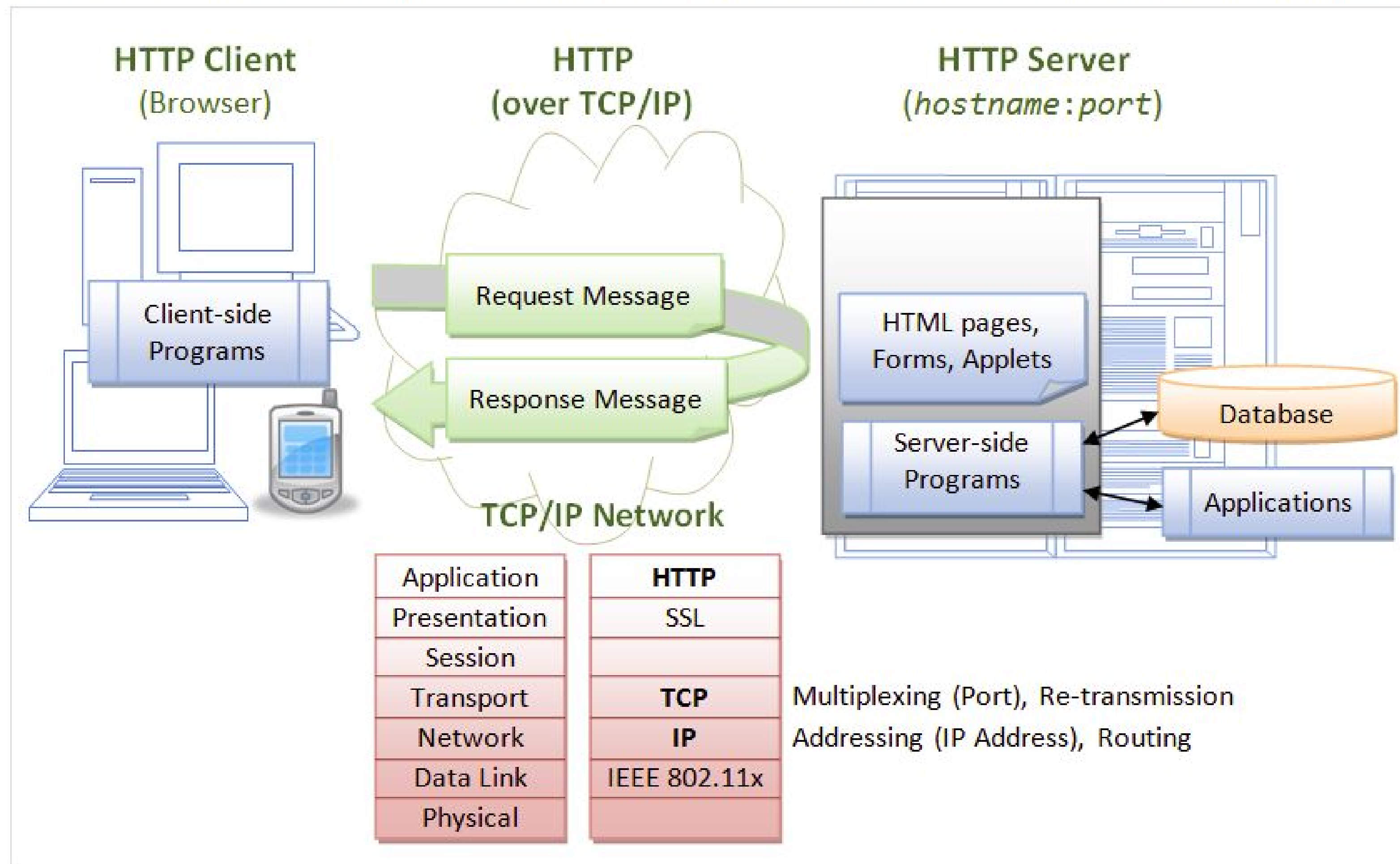
<http://foobar.com/cgi/page.cgi/somepage.html>

Server Side Programming

Servlets

- Servlets are *server-side programs* (running inside a web server) that handle clients' requests and return a *customized* or *dynamic response* for each request.
- The dynamic response could be based on user's input (e.g., search, online shopping, online transaction) with data retrieved from databases or other applications, or time-sensitive data (such as news and stock prices).
- Typically run on the HTTP protocol.

Server Side Programming



Server Side Programming

Server-Side Technologies

- Many server-side technologies available: Java-based (servlet, JSP, JSF, Struts, Spring, Hibernate), ASP, PHP, CGI Script, and many others.
- Java servlet is the *foundation* of the Java server-side technology, JSP (JavaServer Pages), JSF (JavaServer Faces), Struts, Spring, Hibernate, and others, are extensions of the servlet technology.

Server Side Programming

Apache Tomcat Server

- Servlets are server-side programs run inside a *Java-capable* HTTP server.
- Apache Tomcat Server is the official Reference Implementation for Java servlet and JSP, provided free by open-source foundation Apache.

Server Side Programming

HTTP Protocol

- A HTTP Servlet runs under the HTTP protocol.
 - In brief, HTTP is a request-response protocol.
 - The client sends a request message to the server.
 - The server, in turn, returns a response message.
 - The messages consists of two parts: header (information about the message) and body (contents). Header provides information about the messages.
 - The data in header is organized in name-value pairs.



Thanks!

Any questions?