

Architecture des Systèmes d'Information

WEB Server Architecture

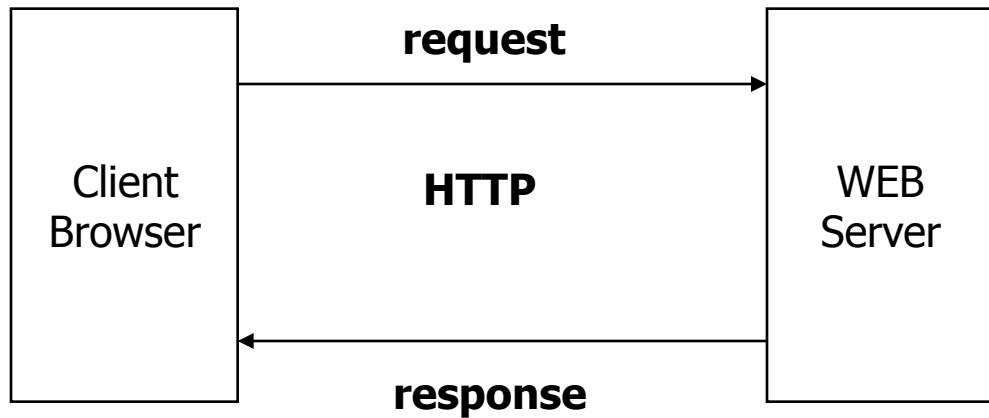
WEB Frameworks



Traduction en cours

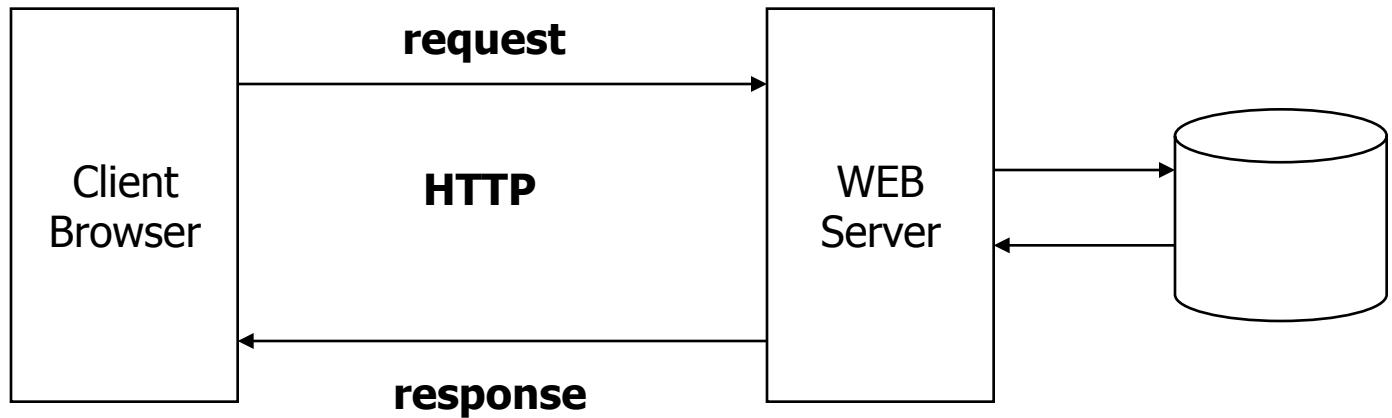


HTTP request and response



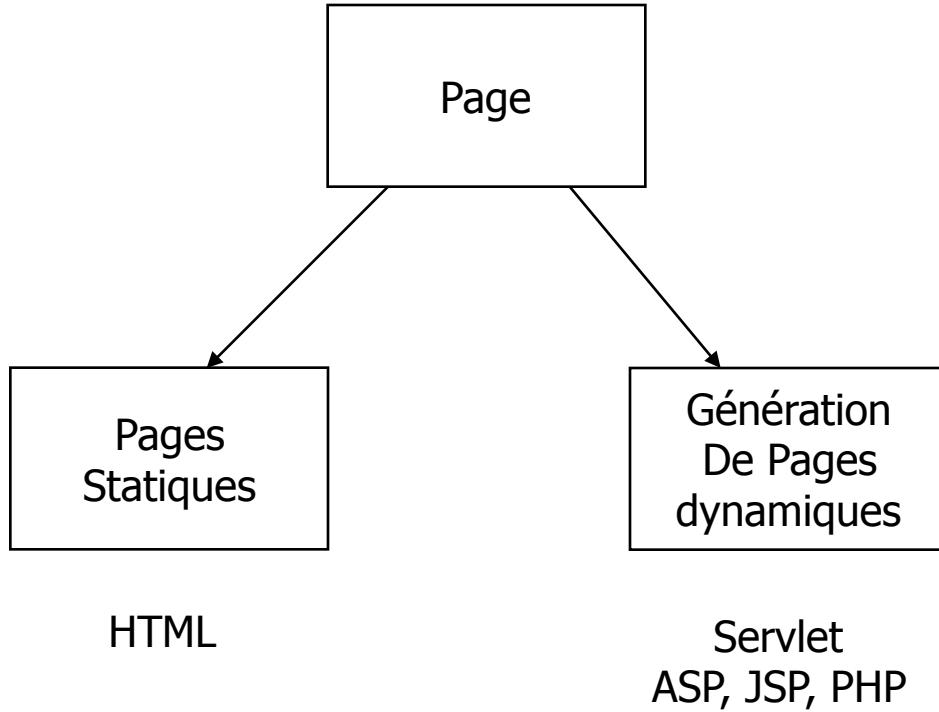


HTTP request and response





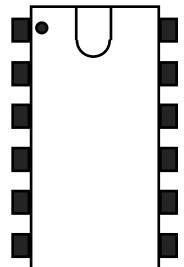
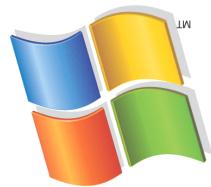
Gestion des pages HTML





Technologies (Frameworks)

- CGI : Common Gateway Interface
- Java EE : Java Enterprise Edition
- .NET





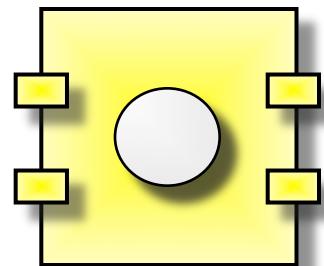
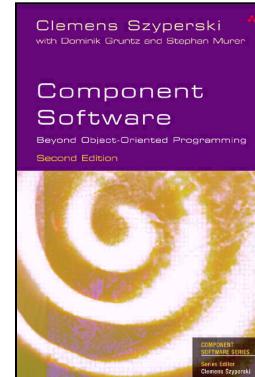
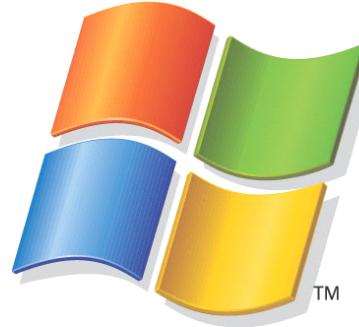
CGI vs Web Components

- Common Gateway Interface
 - Indépendant des langages de programmation.
 - Perl, Python, Java, PHP, ...
 - Le serveur lance (fork) un “process” externe à chaque requête.
 - Architecture ad hoc.



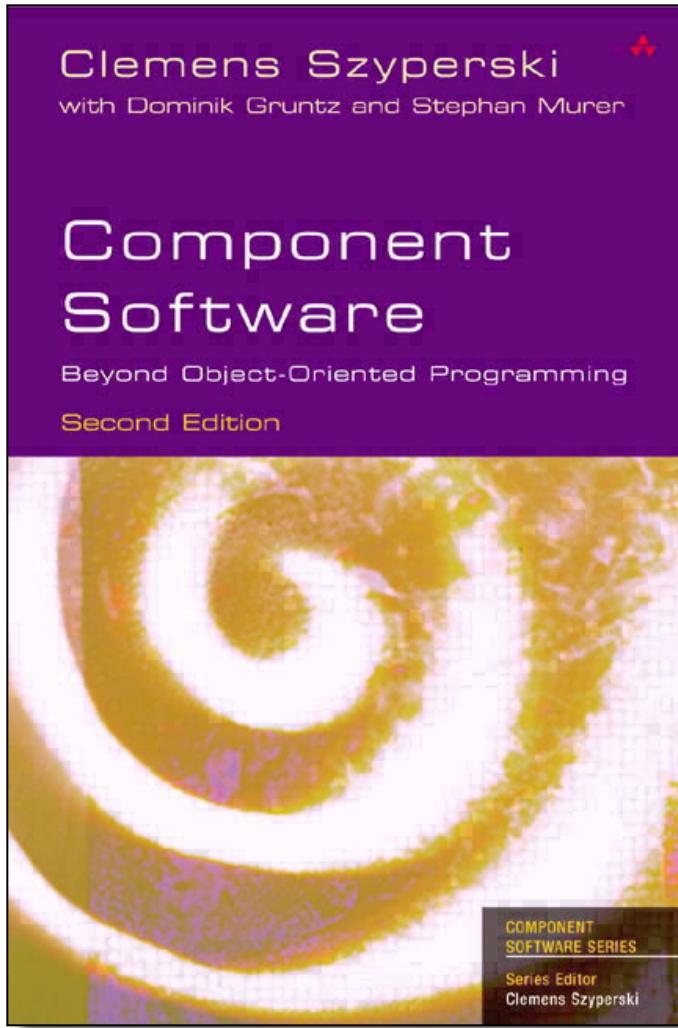
Approche Composants

- .NET (Microsoft)
 - Microsoft
 - Windows
 - ASP : Active Server Pages
 - Webforms
- Java EE : Java Enterprise Edition
 - Sun, Java
 - JSP : Java Server Page
 - JSF : Java Server Face
 - Open source





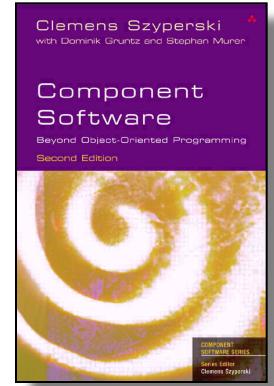
Clemens Szyperski



.NET



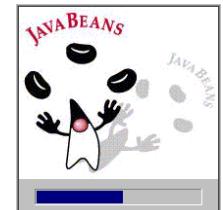
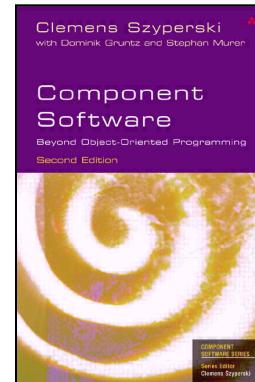
- Visual Studio
- Visual Basic
- C#
- COM/DCOM
 - Component Object Model/Distributed Component Object Model
- Assembly
- Windows Server
 - IIS
 - Internet Information Services
- Webforms



Java EE (specifications)



- Approche multi tier
- Composants (Components)
 - Applet
 - Servlet
 - Java Server Page (JSP)
 - JSF (Java Server Faces)
 - Java Beans
 - Enterprise Java Beans (EJB)
- Eclipse
- NetBeans





Java EE instances

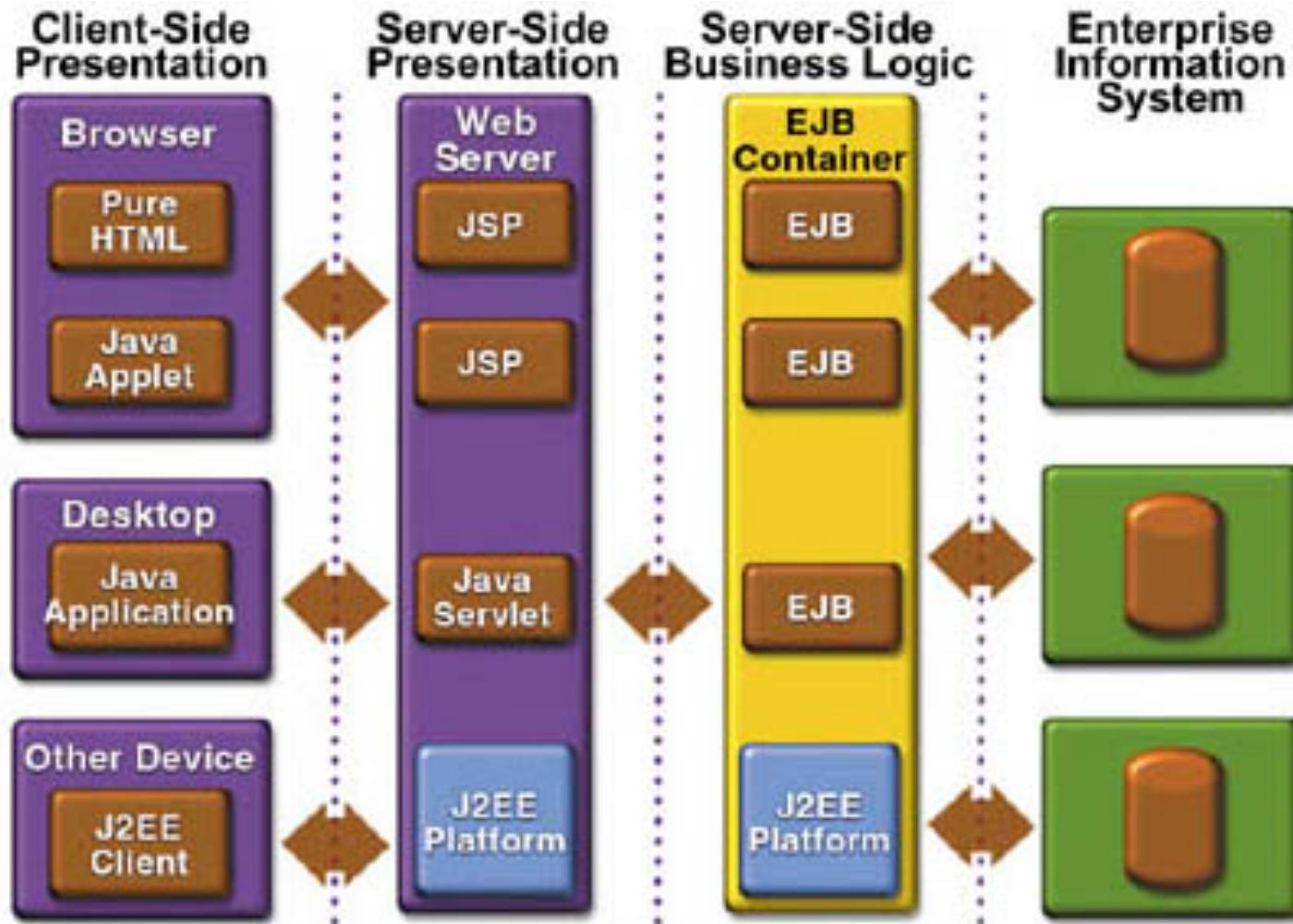
- JBoss
- WebLogic
- GlassFish

WebLogic



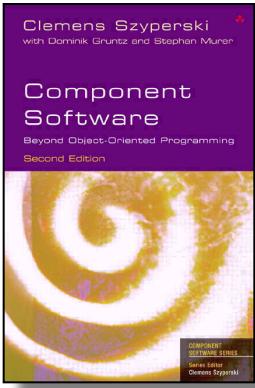
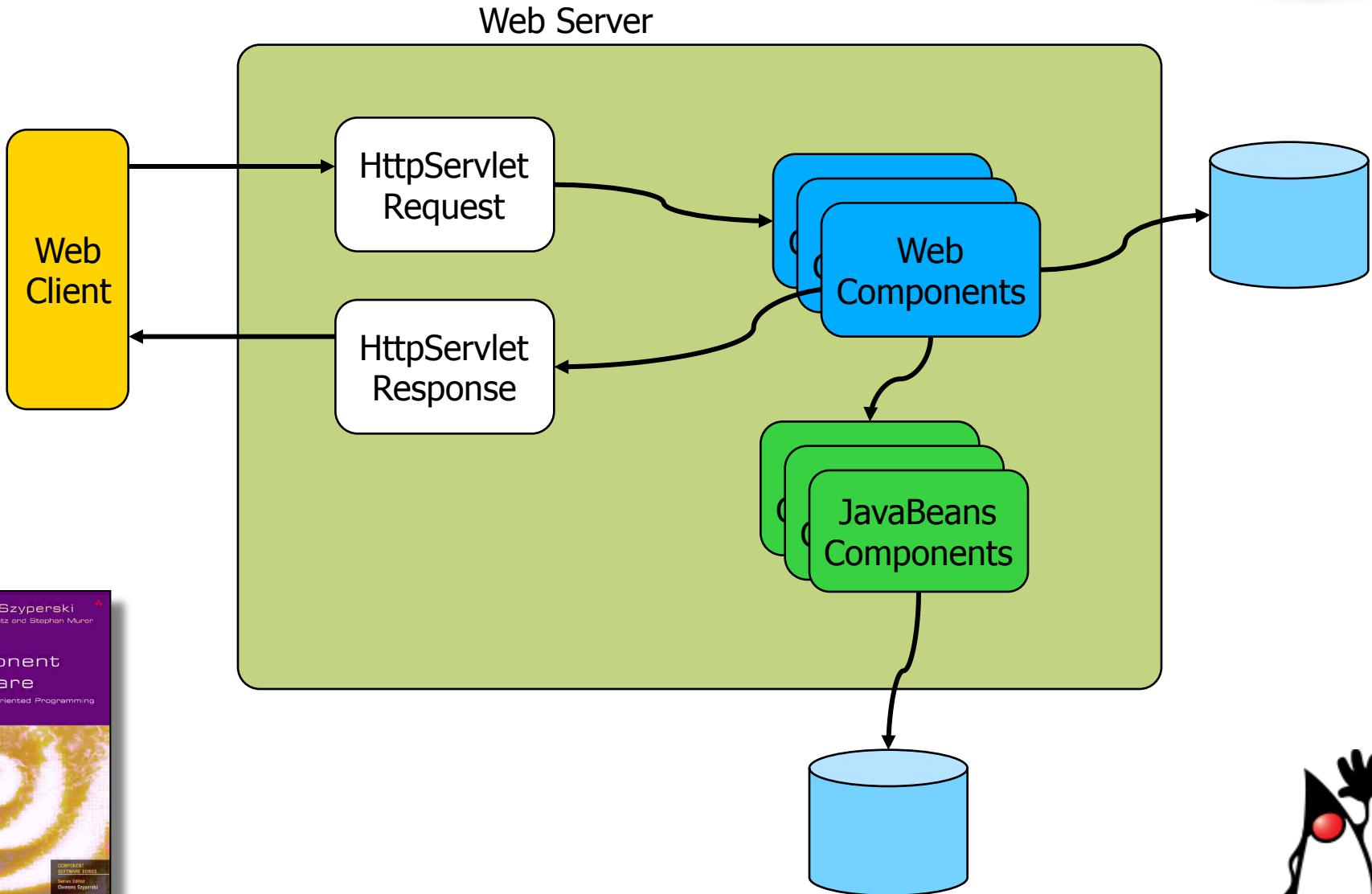


Documentation SUN



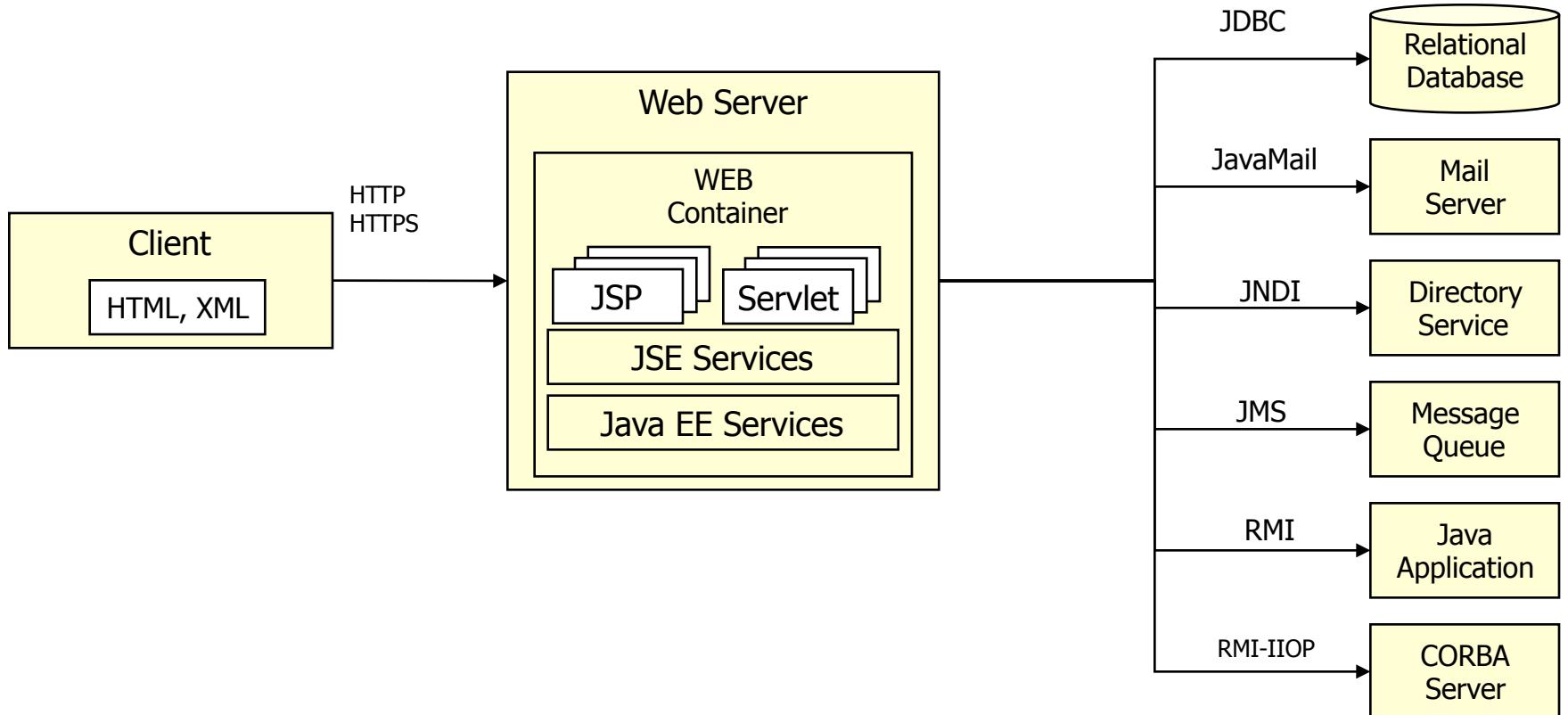


Web Server Component (SUN)



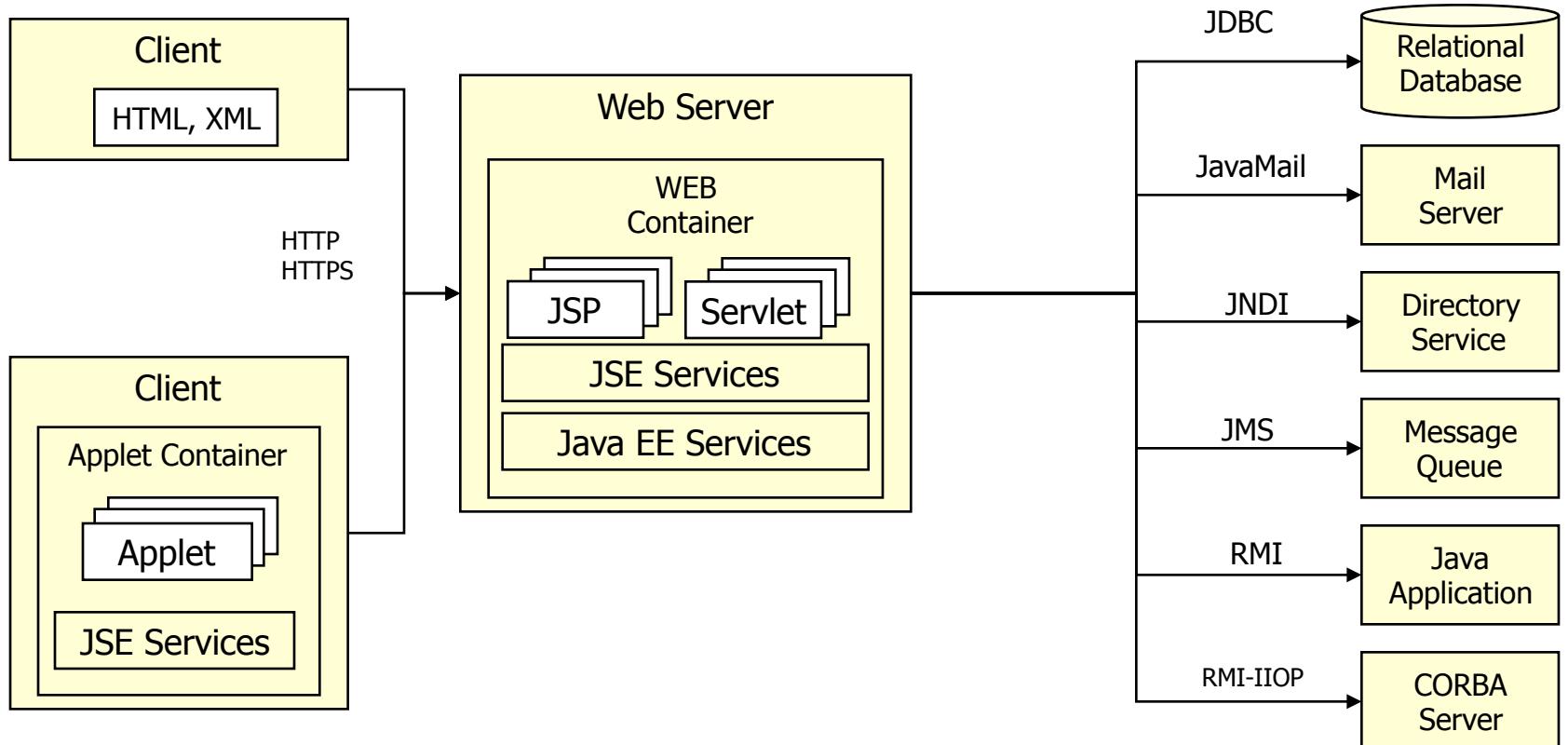


Web Server, Client Browser



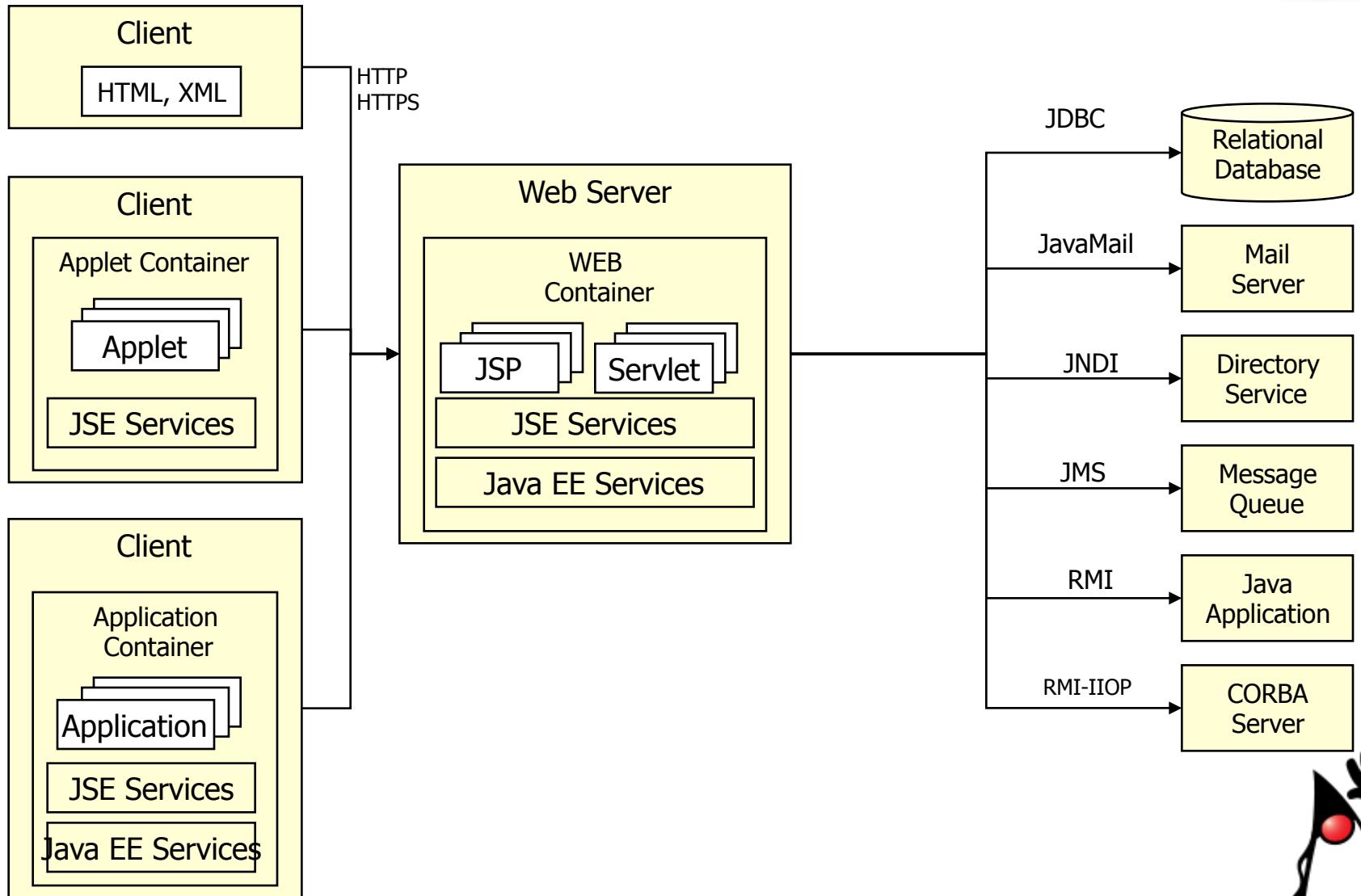


Web Server, Client Browser Applet



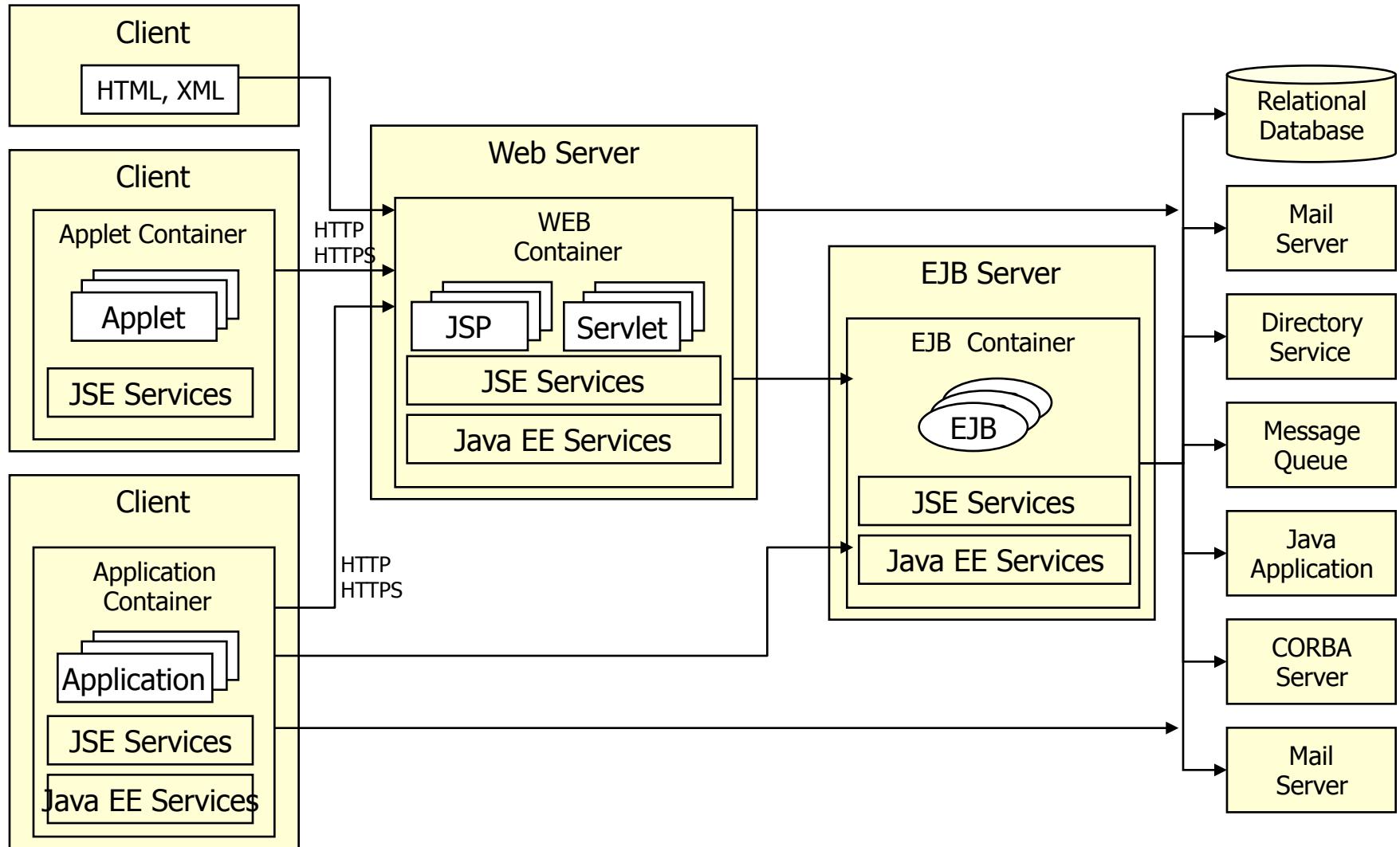


Web Server, Client Web Server



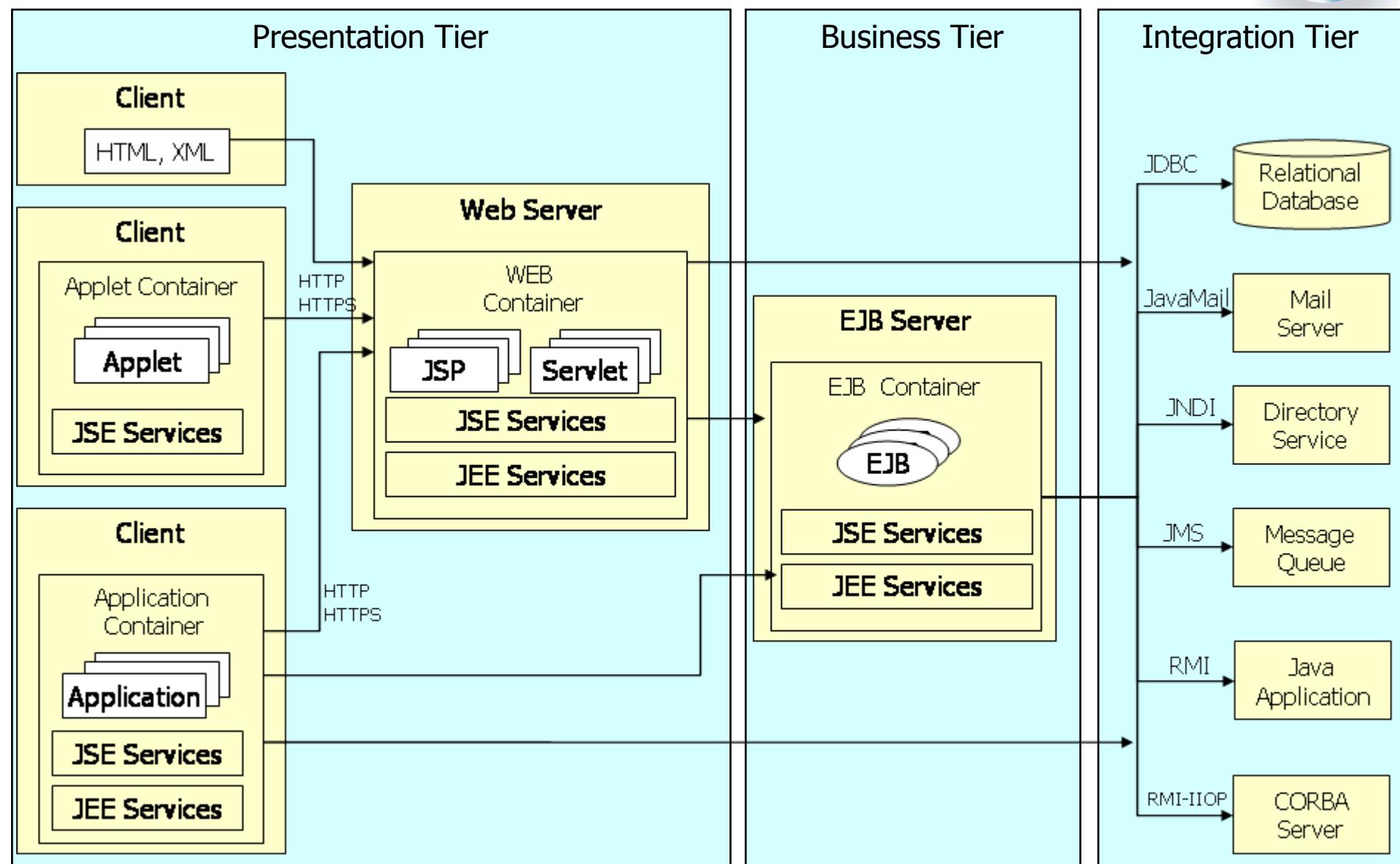


Web Server Enterprise Components





Tiers

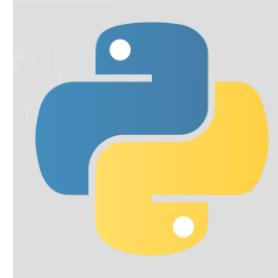




Others

- ZOPE
 - Python
 - Transactional object database which can store not only content and custom data, but also dynamic HTML templates, scripts, a search engine, and relational database (RDBMS) connections and code.

- ZEND
 - PHP 5.3+.





Symfony Components

- Symfony Components are a set of decoupled and reusable PHP libraries.
- They are the standard foundation on which PHP applications are built on.





JavaScript Frameworks

- jQuery

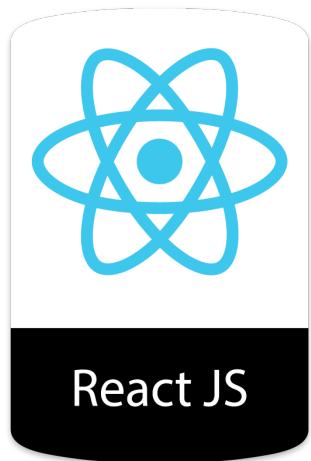


- Prototype





JavaScript Frameworks Web 2.0



Node.js (2009)

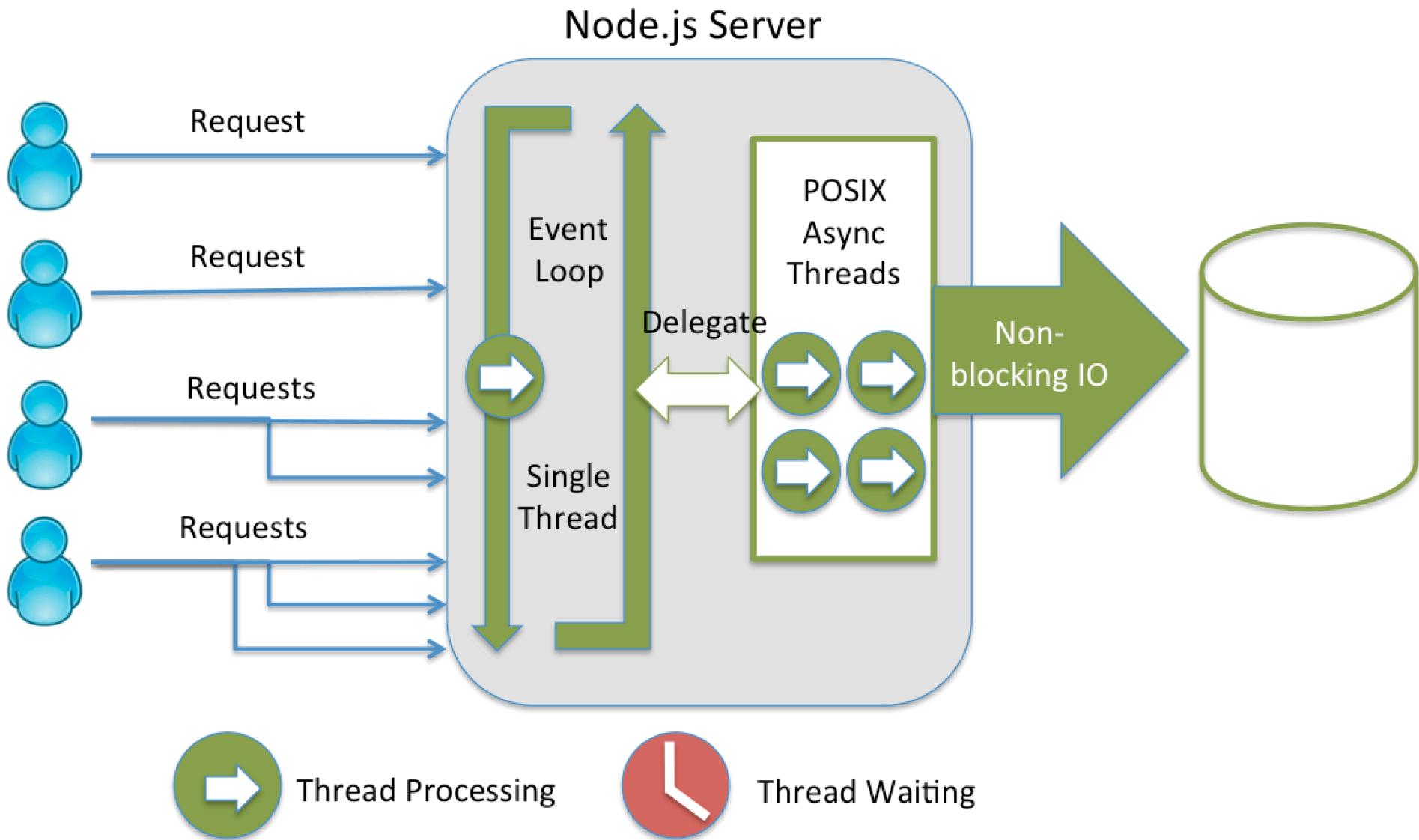
Ryan Dahl



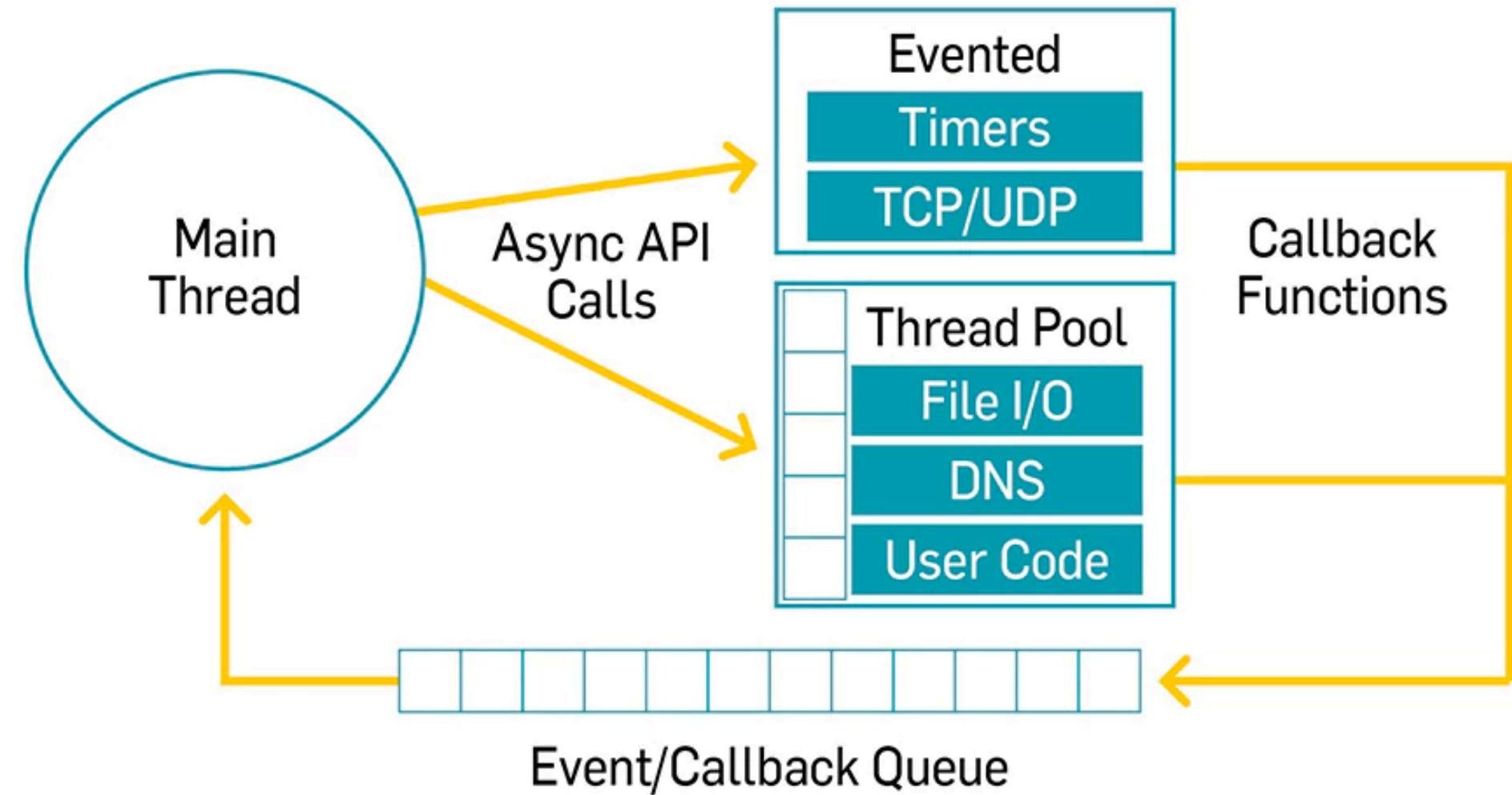
- Node.js :
 - single-threaded,
 - single-process
 - shared-nothing
 - OS process boundaries.
- Applications are event-based and run asynchronously.
- Node.JS is a set of C++ bindings for network I/O and socket I/O.



Node.js



Node.js



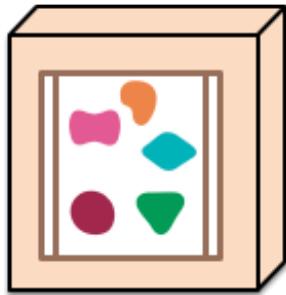
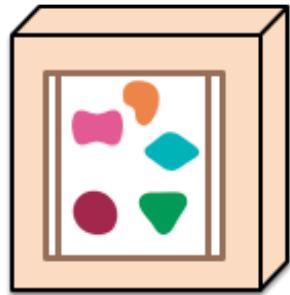
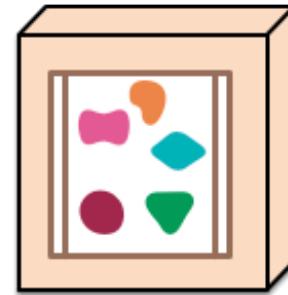
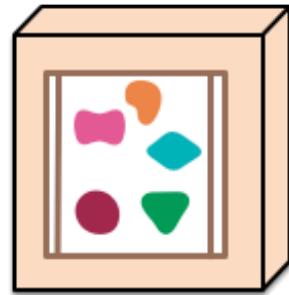
Micro-Service



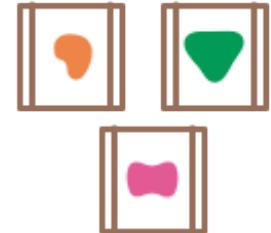
A monolithic application puts all its functionality into a single process...



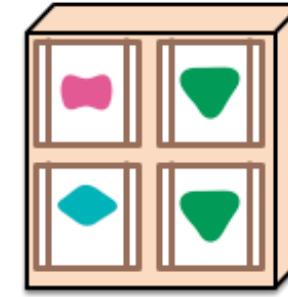
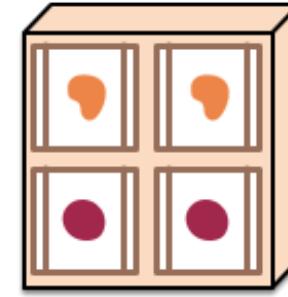
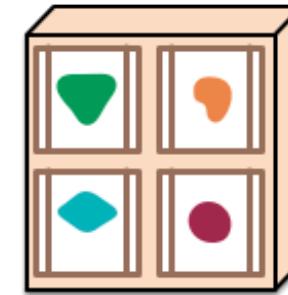
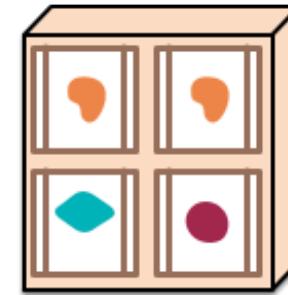
... and scales by replicating the monolith on multiple servers



A microservices architecture puts each element of functionality into a separate service...



... and scales by distributing these services across servers, replicating as needed.





REST : Representational state transfer

Roy Fielding

{ REST }

Architectural Styles and
the Design of Network-based
Software Architectures
(2000)

Microservices







Law of the Instrument

- Law of the Instrument
- A natural cognitive bias that leads to over-reliance on a familiar tool.
- Abraham Maslow (the psychologist who invented the law) said:
 - "I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail"





Abraham Maslow



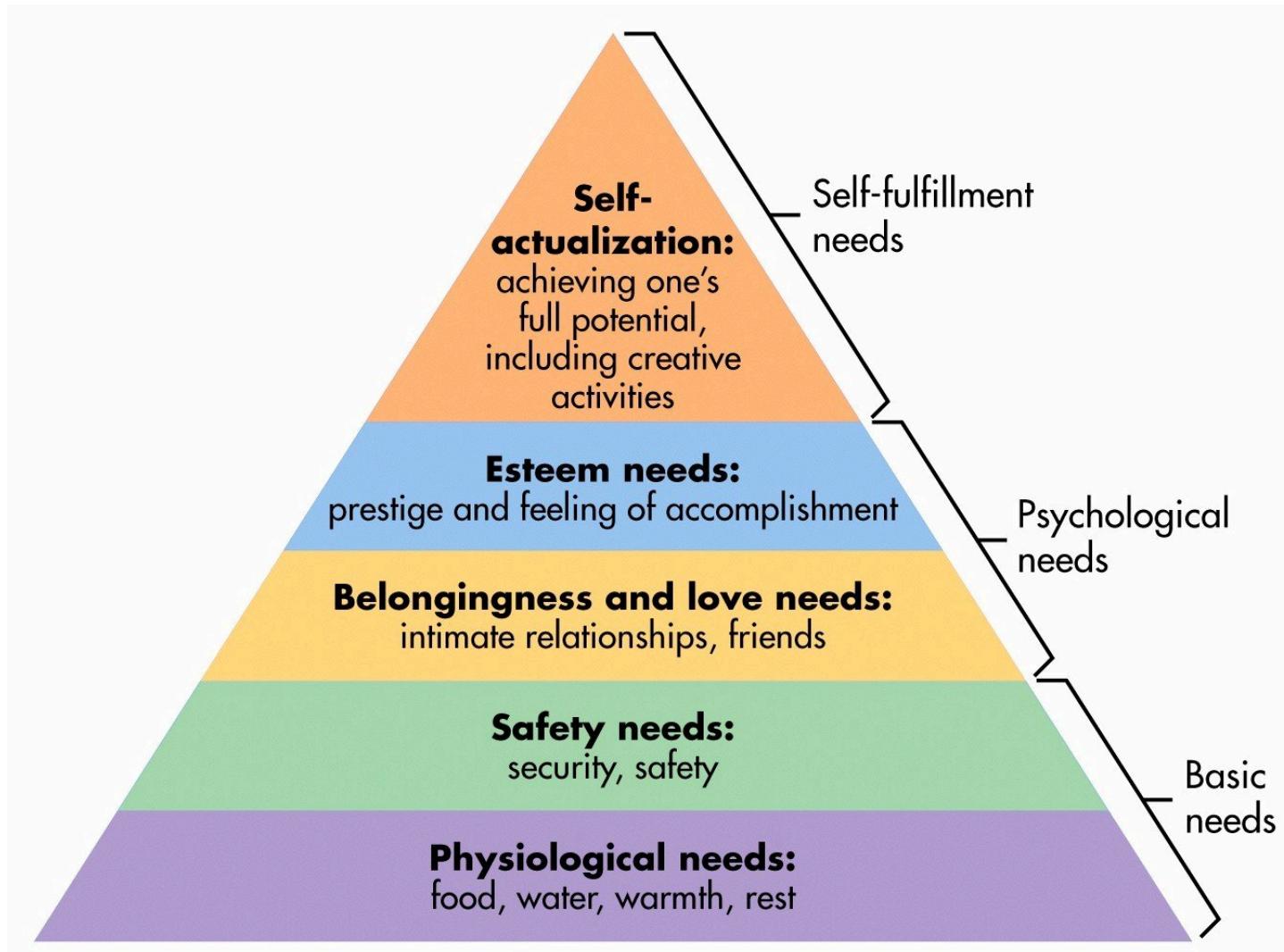
A Theory of Human Motivation



A. H. Maslow



Humann Motivation





“

**IF THE ONLY TOOL YOU HAVE
IS A HAMMER, YOU TEND
TO SEE EVERY PROBLEM
AS A NAIL.**

– ABRAHAM HAROLD MASLOW



SUPERBcommunication.com

