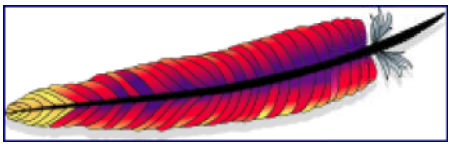
Apache Web Server



Original author(s)	Robert McCool
Developer(s)	Apache Software Foundation
Initial release	1995[1]
Stable release	2.4.9 (March 17, 2014) [±]
Development status	Active
Written in	C, Forth, XML[2]
Type	Web server
License	Apache License 2.0
Website	httpd.apache.org

The **Apache HTTP Server**, commonly referred to as **Apache**, is a web server application notable for playing a key role in the initial growth of the World Wide Web.[3] Originally based on the NCSA HTTPd server, development of Apache began in early 1995 after work on the NCSA code stalled. Apache quickly overtook NCSA HTTPd as the dominant HTTP server, and has remained the most popular HTTP server in use since April 1996. In 2009, it became the first web server software to serve more than 100 million websites.[4]

Apache is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation. Most commonly used on a Unix-like system,[5] the software is available for a wide variety of operating systems, including Unix, FreeBSD, Linux, Solaris, Novell NetWare, OS X, Microsoft Windows, OS/2, TPF, OpenVMS and eComStation. Released under the Apache License, Apache is open-source software.

As of June 2013, Apache was estimated to serve 54.2% of all active websites and 53.3% of the top servers across all domains.[6][7][8][9][10]

Name

According to the FAQ in the Apache project website, the name Apache was chosen out of respect to the Native American tribe Apache and its superior skills in warfare and strategy. The name was widely believed to be a pun on A Patchy Server (since it was a set of software patches), but this is erroneous.[11] Official documentation used to give this very explanation of the name,[12] but in a 2000 interview, Brian Behlendorf, one of the creators of Apache, set the record straight:[13]

> The name literally came out of the blue. I wish I could say that it was something fantastic, but it was out of the blue. I put it on a page and then a few months later when this project started, I pointed people to this page and said: "Hey, what do you think of that idea?" ... Someone said they liked the name and that it was a really good pun. And I was like, "A pun? What do you mean?" He said, "Well, we're building a server out of a bunch of software patches, right? So it's a patchy Web server." I went, "Oh, all right." ... When I thought of the name, no. It just sort of connoted: "Take no prisoners. Be kind of aggressive and kick some ass."

Features

Apache supports a variety of features, many implemented as compiled modules which extend the core functionality. These can range from server-side programming language support to authentication schemes. Some common language interfaces support Perl, Python, Tcl, and PHP. Popular authentication modules include mod_access, mod_auth, mod_digest, and mod_auth_digest, the successor to mod_digest. A sample of other features include Secure Sockets Layer and Transport Layer Security support (mod_ssl), a proxy module (mod_proxy), a URL rewriter (mod_rewrite), custom log files (mod_log_config), and filtering support (mod_include and mod_ext_filter).

Popular compression methods on Apache include the external extension module, mod_gzip, implemented to help with reduction of the size (weight) of web pages served over HTTP. ModSecurity is an open source intrusion detection and prevention engine for web applications. Apache logs can be analyzed through a web browser using free scripts such as AWStats/W3Perl or Visitors.

Virtual hosting allows one Apache installation to serve many different websites. For example, one machine with one Apache installation could simultaneously serve www.example.com, www.example.org, test47.test-server.example.edu, etc.

Apache features configurable error messages, DBMS-based authentication databases, and content negotiation. It is also supported by several graphical user interfaces (GUIs).

It supports password authentication and digital certificate authentication. Because the source code is freely available, anyone can adapt the server for specific needs, and there is a large public library of Apache add-ons.[14]

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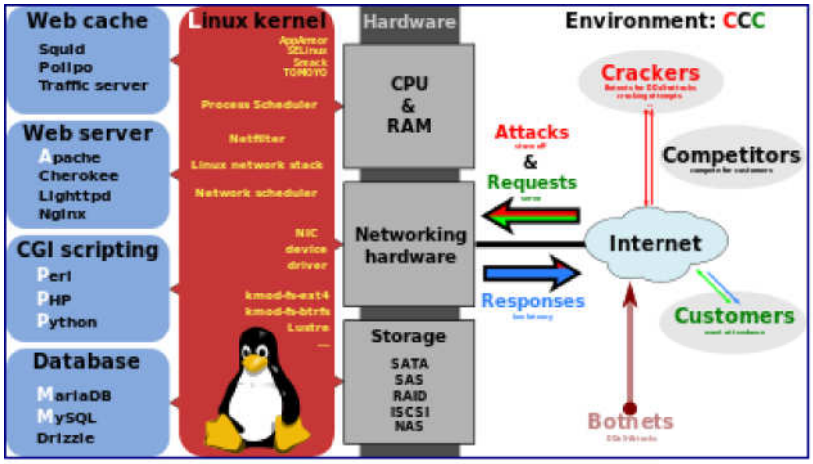
Performance



The LAMP software bundle (here additionally with Squid) is a commonly used stack for web applications

Although the main design goal of Apache is not to be the "fastest" web server, Apache does have performance similar to other "high-performance" web servers. Instead of implementing a single architecture, Apache provides a variety of MultiProcessing Modules (MPMs) which allow Apache to run in a process-based, hybrid (process and thread) or event-hybrid mode, to better match the demands of each particular infrastructure. This implies that the choice of correct MPM and the correct configuration is important. Where compromises in performance need to be made, the design of Apache is to reduce latency and increase throughput, relative to simply handling more requests, thus ensuring consistent and reliable processing of requests within reasonable time-frames.

The Apache 2.2 series was considered significantly slower than nginx for delivering static pages, although remaining significantly faster for dynamic pages. To address this issue, the Apache version considered by the Apache Foundation as providing high-performance is the multi-threaded version which mixes the use of several processes and several threads per process. [15] This architecture, and the way it was implemented in the Apache 2.4 series, provides for performance equivalent or slightly better than event-based webservers, as it claimed by President of the Apache Foundation, Jim Jagielski.[16] While some independent benchmarks show that it still twice slower than nginx.[17][18]

Licensing

The Apache HTTP Server codebase was relicensed to the Apache 2.0 License (from the previous 1.1 license) in January 2004,[19] and Apache HTTP Server 1.3.31 and 2.0.49 were the first releases using the new license.[20]

The OpenBSD project did not like the change and continued the use of pre-2.0 Apache versions, effectively forking Apache 1.3.x for its purposes.[21][22] Later it switched to nginx.[23] [24]

Development

The Apache HTTP Server Project is a collaborative software development effort aimed at creating a robust, commercial-grade, feature-rich and freely-available source code implementation of an HTTP (Web) server. The project is jointly managed by a group of volunteers located around the world, using the Internet and the Web to communicate, plan, and develop the server and its related documentation. This project is part of the Apache Software Foundation. In addition, hundreds of users have contributed ideas, code, and documentation to the project.[25][26][27]

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