AGENDA

- Introduction
- Where to get Apache
- Versions
- Licensing
- Use
- Features
- Server & Supporting programs
- Competitors
- Market structure
- Pros & Cons
- Apache Vs Other servers

Presentation by: Lilian Thairu
Apache Web Server

Introduction

- Often referred to as simply Apache is a public-domain open source Web server developed by a group of programmers of about 20 volunteers called the Apache Software Group.

- Apache was born in early 1995, as free Web server software based around NCSA httpd 1.3, which was the most popular Web server at that time, and with a bunch of software patches. From that it earned its name, which stands for "A PAtCHY server." Since then, it has been completely re-written, and has become the most popular WWW server on the Internet.
Introduction

- Apache lends itself particularly well to projects that are heavily Java based. It offers superior handling of the Java Database Connectivity (JDBC) application program interface.

- The original version was written for UNIX, but there are now versions run under other platforms.

- Majority of all web servers using Apache are Linux web servers.
Introduction

The Apache web server is a program that parses types of hypertext markup language (HTML) and sends it back to you as a human readable web page.

It was the first alternative to the Netscape Communications Corporations web server and it has since evolved to rival other Unix Based web servers in terms of functioning and performance.

It has played a key role in the initial growth of the WWW and has been the most popular HTTP server on the WWW. As of Dec 2008 Apache served 51% of all websites.

It is also available for a wide range of Operating Systems including:
- Unix
- Linux
- Mac OS
- MS Windows
- Novell NetWare
- Solaris
- OS/2

Presentation by: Lilian Thairu
Where do I get Apache?

- You can download the web server from the website of the AFS [http://www.apache.org](http://www.apache.org)

- It's advisable to use your favourite distribution's package which will not just install Apache but many add-on modules needed to run Perl, Python and/or PHP scripts and to interact with databases like MySQL and PostgreSQL.
Versions

- The **Apache License 1.0** was the original Apache License which applies only to older versions of Apache packages.

- The **Apache License 1.1** was approved by the ASF in 2000.

- 1.3 series - Apache 1.3.41 is the current stable version

- 2.0 series - Apache 2.0.63 is the current stable version

- 2.2 series-2.2.11
  - Apache HTTP Server 2.2.11 is the best available version
Licencing

- The name Apache is a registered trademark and may only be used with the trademark holder’s express permission.

- The software licence under which software from the Apache Foundation is distributed is a distinctive part of the Apache HTTP Server's history and presence in the open source software community. The Apache License allows for the distribution of both open and closed source derivations of the source code.
Use

- Apache is primarily used to serve both static content and dynamic web pages on the World Wide Web.

- Apache is the web server component of the popular LAMP web server application stack, alongside MySQL, and the PHP/Perl/Python (and now also Ruby) programming languages.

- Apache is redistributed as part of various proprietary software packages including the Oracle Database or the IBM WebSphere application server. Mac OS X integrates Apache as its built-in web server and as support for its WebObjects application server. It is also supported in some way by Borland in the Kylix and Delphi development tools. Apache is included with Novell NetWare 6.5, where it is the default web server. Apache is also included with many Linux distributions.
More uses

- Apache is used for many other tasks where content needs to be made available in a secure and reliable way. One example is sharing files from a personal computer over the Internet. A user who has Apache installed on their desktop can put arbitrary files in the Apache's document root which can then be shared.

- Programmers developing web applications often use a locally installed version of Apache in order to preview and test code as it is being developed.

- Some of the biggest web sites in the world are run using Apache. Google’s search engine front end is based on a modified version of Apache, named Google Web Server (GWS). Several Wikimedia projects also run on Apache servers.
Features

- **Some common language interfaces** support mod perl, mod 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 SSL and TLS support (mod_ssl), a **proxy** module, a URL rewriter (also known as a rewrite engine, implemented under 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. 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 actual websites. For example, one machine, with one Apache installation could simultaneously serve www.example.com, www.test.com, test47.test-server.test.com, etc.

Apache features configurable error messages, DBMS-based authentication databases, and content negotiation. It is also supported by several graphical user interfaces (GUIs).
Server and Supporting Programs
---some of the executable programs included with the Apache HTTP Server.

- **httpd** - Apache HyperText Transfer Protocol (HTTP) server program
- **apachectl** - front end to the Apache HyperText Transfer Protocol (HTTP) server.
- **ab** - a tool for benchmarking your Apache Hypertext Transfer Protocol (HTTP) server.
- **apxs** - a tool for building and installing extension modules for the Apache HyperText Transfer Protocol (HTTP) server.
- **configure script** - configures the source tree for compiling and installing the Apache HTTP Server on your particular platform.

Presentation by: Lilian Thairu
Server and Supporting Programs

- **htdigest** - used to create and update the flat-files used to store usernames, realm and password for digest authentication of HTTP users.

- **htdbm** - used to manipulate the DBM format files used to store usernames and password for basic authentication of HTTP users via `mod_auth_dbm`.

- **htpasswd** - used to create and update the flat-files used to store usernames and password for basic authentication of HTTP users.

- **htcacheclean** - is used to keep the size of `mod_disk_cache`'s storage within a certain limit.
Who are the main competitors?

- Microsoft Internet Information Services (IIS) is the main competitor to Apache, trailed by Sun Microsystems’ Sun Java System Web Server.

- A host of other applications such as Zeus Web Server, Microsoft Internet Information Services (IIS).
# Market structure

.... a list of top Web server software vendors

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Product</th>
<th>Web Sites Hosted</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apache</td>
<td>Apache</td>
<td>96,531,033</td>
<td>52.05%</td>
</tr>
<tr>
<td>Microsoft</td>
<td>IIS</td>
<td>61,023,474</td>
<td>32.90%</td>
</tr>
<tr>
<td>Google</td>
<td>GWS</td>
<td>9,864,303</td>
<td>5.32%</td>
</tr>
<tr>
<td>nginx</td>
<td>nginx</td>
<td>3,462,551</td>
<td>1.87%</td>
</tr>
<tr>
<td>lighttpd</td>
<td>lighttpd</td>
<td>2,989,416</td>
<td>1.61%</td>
</tr>
</tbody>
</table>
Apache pros:

- **Open source updates.** It's constantly being updated and you can add functionality as it becomes available.
- **Free.** The software is free. It's hard to beat that price!
- **Multi-platform support.** Apache can be used on systems that have 80x86-series (i.e. Intel) processors running either Linux or NT as an OS, or on other computers running a Unix-type OS on a different processor.
- **Popular.** Apache is the most-used Web server software package in the world. As such, it's unlikely that further development of the software will ever cease.
Apache cons:

- **No Support.** Apache's developers do not provide any type of support for their product. There are third-party companies that provide Apache support, but you have to pay for it.

- **Runs best on Linux.** Given two machines with the same hardware and different operating systems (Linux and NT),

**Apache runs faster on the Linux machine.** This means that if you decide to go with Apache, you should also use Linux to get maximum performance. If you've decided to use NT, it makes more sense to use the Web server Microsoft includes with that OS.
## Apache Vs Other servers

### Overview

<table>
<thead>
<tr>
<th>Server</th>
<th>Developed by</th>
<th>Cost(USD)</th>
<th>Open source</th>
<th>Software license</th>
<th>Last stable version</th>
<th>Release date</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOL server</td>
<td>Navisoft</td>
<td>Free</td>
<td>Yes</td>
<td>AOL server Public License</td>
<td>4.5.1</td>
<td>2009-02-02</td>
</tr>
<tr>
<td>IBM HTTP Server</td>
<td>IBM</td>
<td>Free</td>
<td>No</td>
<td>Proprietary</td>
<td>6.1</td>
<td>2006-07-21</td>
</tr>
<tr>
<td>Apache HTTP Server</td>
<td>Apache Software Foundation</td>
<td>Free</td>
<td>Yes</td>
<td>Apache License</td>
<td>2.2.11</td>
<td>2008-12-14</td>
</tr>
<tr>
<td>Apache Tomcat</td>
<td>Apache Software Foundation</td>
<td>Free</td>
<td>Yes</td>
<td>Apache License</td>
<td>6.0.18</td>
<td>2008-07-30</td>
</tr>
</tbody>
</table>
# Apache Vs Other servers

<table>
<thead>
<tr>
<th>Server</th>
<th>Windows</th>
<th>Mac OS X</th>
<th>Linux</th>
<th>Solaris</th>
<th>OpenV MS</th>
<th>AIX</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOL server</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>?</td>
</tr>
<tr>
<td>IBM HTTP Server</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Apache HTTP Server</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Apache Tomcat</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
## Apache Vs Other servers

<table>
<thead>
<tr>
<th>Server</th>
<th>Basic access authentication</th>
<th>Digest access authentication</th>
<th>HTTPs</th>
<th>ASP.NET</th>
<th>Administration console</th>
<th>Runs in user space or kernel space</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOL server</td>
<td>Yest</td>
<td>Free</td>
<td>No</td>
<td>?</td>
<td>?</td>
<td>User</td>
</tr>
<tr>
<td>Oracle HTTP Server</td>
<td>Yes</td>
<td>?</td>
<td>Yes</td>
<td>No</td>
<td>?</td>
<td>User</td>
</tr>
<tr>
<td>Apache HTTP Server</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Apache Tomcat</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>?</td>
</tr>
</tbody>
</table>

*Presentation by: Lilian Thairu*
References

- http://httpd.apache.org
THANK YOU!

Presentation by: Lilian Thairu