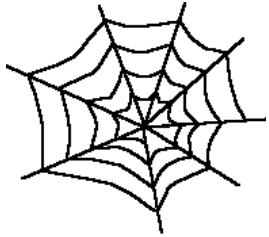


# Introduction to Apache

Ken Coar

*coar@Apache.Org,  
The Apache Group*

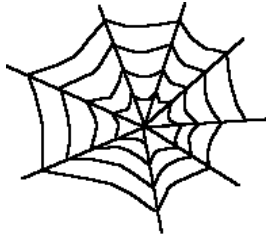




# Disclaimers

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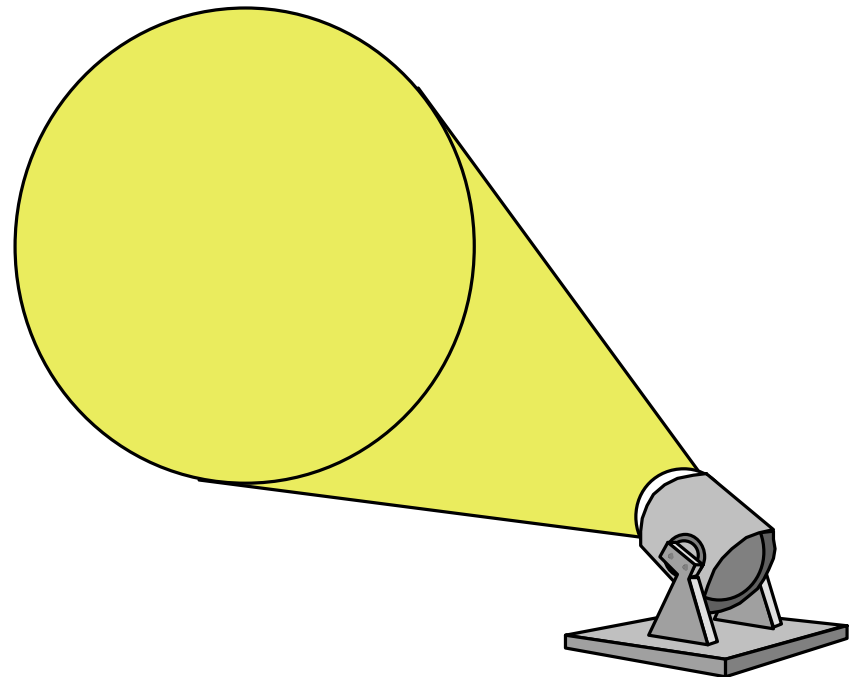
- UNIX is a registered trademark of X/Open Company Ltd
- OpenVMS is a registered trademark of Compaq Corporation
- PostScript is a registered trademark of Adobe Systems, Inc
- All other trademarks are the property of their respective owners, and no misuse is intended

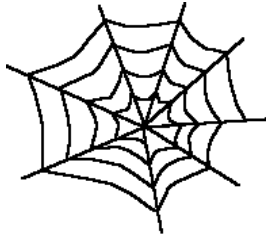


# Acknowledgements

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- I would like to gratefully acknowledge the contributions of the following:
  - Neil Gregory, Paul Scherrer Institut

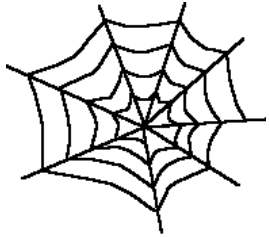




# Copies of This Presentation

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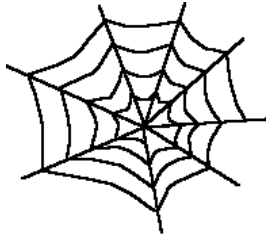
- *WILL BE* available online at  
<http://Web.GoLux.Com/coar/>



# Contents

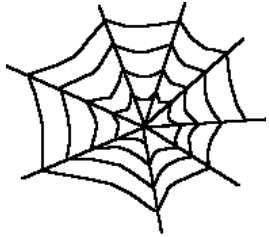
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- What *IS* Apache, Anyway?
- What's "Open-Source"?
- Getting Apache
- Installing the server
- Configuring Apache
- Logfiles
- Troubleshooting



## What *IS* Apache, Anyway?

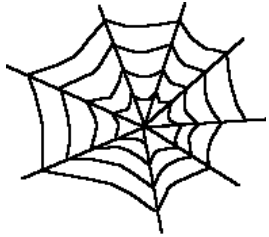
- Open-Source Web server originally based on NCSA server
- Available on over 160 varieties of Unix -- and Windows NT
- Over 56% of Internet Web servers run Apache or an Apache derivative



## What's "Open-Source"?

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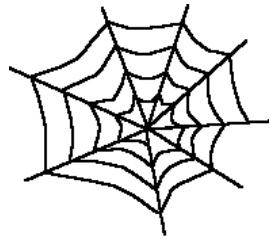
- Open-Source refers to software that is not only free, but includes the source as well
- Users are free to make whatever modifications they like to make the software work better for them
- Users are generally encouraged to submit improvements for inclusion in the master distribution



# Getting Apache

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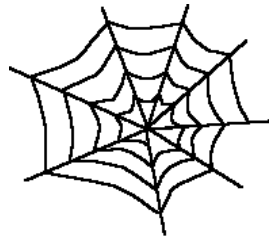
- You can pull the distribution down from the Apache Web site  
`<http://www.apache.org/dist/>`
- Some added-value vendors (e.g., RedHat) provide pre-built packaged versions
- Some companies offer support (for a price, of course!)
- The Apache site is mirrored all over the world, so there's probably a site nearer to you



# Installing the Server on Windows NT

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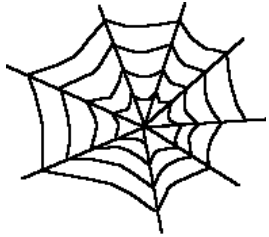
- Just run the installer
- If upgrading, be sure to save your content and *un*install the current version before installing the new



# Installing the Server on Unix

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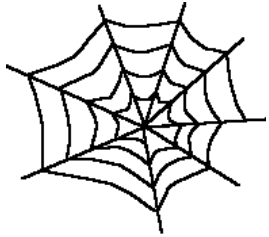
- If you have a pre-built package
  - Install it
- Otherwise,
  - Unpack the tarball
  - Choose your modules
  - Compile the server
  - Modify configuration files to reflect your environment



# Configuring Apache

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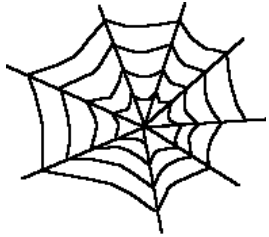
- Choosing functionality
  - Apache functionality is available through modules which are either built into or loaded into the server
- Server instructions
  - Apache reads its run-time configuration instructions from text files
  - No GUI available
  - 182 configuration directives in base package



## Pre-Forked or Multi-Threaded

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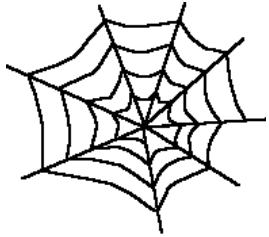
- On Unix, Apache uses a pre-forking model, which means that several processes are created to implement the server and handle requests
  - Control *via* the parent process; don't touch the children!
- On Windows NT, there are only two processes to handle multiple request threads



## Virtual Hosts

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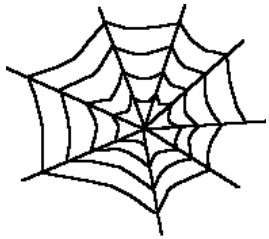
- A single Apache server installation can actually support hundreds of different Web sites
- NSPs and ISPs do this a lot
- Allows additional Web presence without accompanying hardware or software investment required



# Content Negotiation

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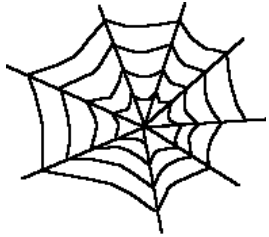
- If you have multiple language-specific versions of documents, Apache can automatically choose the correct one according to the client's language preferences
- Server can choose among different graphics formats; if it has both GIF and JPEG versions, it can send the one for which the client has expressed a preference



# Scripts, Server-Side Includes, Servlets, and SSL

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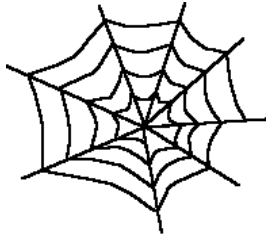
- Apache can handle run-time execution of external applications (scripts)
- Server-side includes allow the server to modify pages at run-time before sending them
- Java servlet modules are available, but not yet part of the base package (still under development)
- SSL-enabled versions of Apache are available, both from commercial vendors and under open-source licence



# Logfiles

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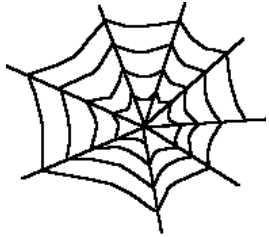
- Two basic logfiles
  - Access log -- who's been visiting your server and what they wanted
  - Error log -- problems the server has encountered and things it has noticed
- Can be configured for each virtual host, or for entire server
- Access log format can be customised



# Troubleshooting

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- First and foremost, *check the error log!*
- Check the Apache FAQ  
<<http://www.apache.org/docs/misc/FAQ.html>>
- Check the Apache bug database to see if it's been reported yet  
<<http://bugs.apache.org/>>
- Check & ask on USENET  
comp.infosystems.www.servers.unix
- If **all else fails**, submit a bug report  
<[http://www.apache.org/bug\\_report.html](http://www.apache.org/bug_report.html)>



## Going Further

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- The main Apache site  
<http://www.apache.org/>
- HTML Syntax Validator  
<http://validator.w3.org/>
- CGI Specification:  
<http://www.w3.org/pub/WWW/CGI/>
- CGI RFC project:  
<http://Web.Golux.Com/coar/cgi/>
- USENET News:  
[comp.infosystems.www.servers.unix](http://comp.infosystems.www.servers.unix)

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