
Table of Contents

<i>Preface</i>	<i>ix</i>
1. <i>Getting Started</i>	1
How Does Apache Work?	3
What to Know About TCP/IP	5
How Does Apache Use TCP/IP?	7
What the Client Does	9
What Happens at the Server End?	11
Which Unix?	12
Which Apache?	13
Making Apache Under Unix	13
Apache Under Windows	23
Apache Under BS2000/OSD and AS/400	25
2. <i>Our First Web Site</i>	26
What Is a Web Site?	26
Apache's Flags	27
site.toddle	28
Setting Up a Unix Server	29
Setting Up a Win32 Server	39
3. <i>Toward a Real Web Site</i>	43
More and Better Web Sites: site.simple	43
Butterthlies, Inc., Gets Going	46
Block Directives	49
Other Directives	52

Two Sites and Apache	58
Controlling Virtual Hosts on Unix	58
Controlling Virtual Hosts on Win32	60
Virtual Hosts	61
Two Copies of Apache	65
HTTP Response Headers	68
Options	68
Restarts	71
.htaccess	72
CERN Metafiles	72
Expirations	73
 4. Common Gateway Interface (CGI)	75
Turning the Brochure into a Form	75
Writing and Executing Scripts	79
Script Directives	83
Useful Scripts	85
Debugging Scripts	89
Setting Environment Variables	90
suEXEC on Unix	93
Handlers	100
Actions	101
 5. Authentication	104
Authentication Protocol	104
Authentication Directives	106
Passwords Under Unix	108
Passwords Under Win32	110
New Order Form	110
Order, Allow, and Deny	114
Digest Authentication	118
Anonymous Access	120
Experiments	123
Automatic User Information	124
Using .htaccess Files	126
Overrides	129
 6. MIME, Content and Language Negotiation	132
MIME Types	132
Content Negotiation	134
Language Negotiation	135

Type Maps	137
Browsers and HTTP/1.1	140
7. Indexing	141
Making Better Indexes in Apache	141
Making Our Own Indexes	149
Imagemaps	152
8. Redirection	158
Rewrite	162
Speling	169
9. Proxy Server	170
Proxy Directives	170
Caching	173
Setup	175
10. Server-Side Includes	179
File Size	182
File Modification Time	183
Includes	183
Execute CGI	183
Echo	185
XBitHack	185
XSSI	185
11. What's Going On?	186
Status	186
Server Status	187
Server Info	188
Logging the Action	188
12. Extra Modules	196
Authentication	201
Blocking Access	202
Counters	202
Faster CGI Programs	202
FrontPage from Microsoft	202
Languages and Internationalization	203
Server-Side Scripting	203
Throttling Connections	203

URL Rewriting	203
Miscellaneous	203
MIME Magic	204
DSO	204
13. Security	205
Internal and External Users	206
Apache's Security Precautions	208
Binary Signatures, Virtual Cash	209
Firewalls	214
Legal Issues	217
Secure Sockets Layer: How to Do It	222
Apache-SSL's Directives	233
Cipher Suites	236
SSL and CGI	238
14. The Apache API	240
Pools	240
Per-Server Configuration	241
Per-Directory Configuration	242
Per-Request Information	243
Access to Configuration and Request Information	245
Functions	246
15. Writing Apache Modules	290
Overview	290
Status Codes	292
The Module Structure	293
A Complete Example	316
General Hints	329
A. Support Organizations	331
B. The echo Program	333
C. NCSA and Apache Compatibility	337
D. SSL Protocol	339
E. Sample Apache Log	345
Index	355