## **Contents**

Foreword	xvii
About the Authors .	xix
	xxi
ACKNOWIEUGINETICS	<i>xxt</i>
	rview of ATL Server tures and Services
Chapter 1 Inti	oduction to ATL Server3
What Is ATL Server	·3
	-or4
What About Web Serv	vices?4
How ATL Server Comp	pares with Traditional
	5
	6
	6
	6
	6
	7
	(58
	11
	12
	2
2	
	ications19
	19
	20
Chapter 2 SRF	<b>Files</b> 21
Flow Control	22
	23
While Statement	25
Nesting Statements	27

Using More Than One Handler	27
Include Statements	
Parameters	
Why No Variables?	
Advantages of ATL Server	
Comment Tags	
Conclusion	
Chapter 3 Request Handlers	33
Creating a Request Handler	33
Using Attributes	
Web Jukebox 1.0	
Getting Started	
Conclusion	
	10
Chapter 4 Introduction to	
ISAPI Services	45
15/11 2 50171005	10
What to Put in Your ISAPI DLL	45
Designing Your ISAPI Services	46
Creating an ISAPI Service	
Creating a Simple Counter	
Exposing the Counter As a Service (from the ISAPI DLL)	49
Using the ISAPI Service	51
Conclusion	53
Chapter 5 Inside the ATL	
Server Architecture	55
Key Components in ATL Server	
Processing an Incoming Request	
Key ATL Server Classes	
Key ISAPI Classes	
Key Request Handler (Application DLL) Classes	
Key Classes in Web Service Requests	
Key Web Service Client Classes	
Key Web Service Server Classes	63
Conclusion	64

Chapter 6	Getting User Input	65
The ValidateAr Validating Inp Exchanging Dat Using a Valida	and Form Variablesout	68 72 74 76
Chapter 7	Deploying an ATL Server Web Application	83
Virtual Direct Other Tabs Modifying Your Understanding Deployment	the Administration Tool tory Tab r ISAPI DLL the Visual Studio .NET Utility	84 85 87
Chapter 8	Cookies and Session State	93
Using Session Using Database	Service Statee-Backed Session State	96 99
Chapter 9		
	Perfmon	105
Using Perfmon Out-of-the-Box Understanding Creating a Pe Exposing a Pe	the Perfmon Systemerfmon Counter As an ISAPI Service	106 107 108 111
Using Perfmon Out-of-the-Box Understanding Creating a Pe Exposing a Pe Some Other T	x Counters the Perfmon Systemerfmon Countererfmon Counter System	106 107 108 111 116

Creating a W Creating a W Using ATL Ser ATL Server V SAX	b Service	124 124 128 129
Part Two	Advanced Concepts	
	and Techniques	159
Chapter 11	Using ATL Server Component Stand-Alone Applications	
Reusina the A	TL Server Thread Pool	161
	siderations	
	ver Thread Pool Class	
	hread Pool Class Sample	
	Conclusions	
	TL Server Stencil Processor	
	Server Stencil Processor Works	
	essor Sample	
Chapter 12	Caching	177
Types of Cach	es	177
	icheBase	
	iche	
	he	
	eCache	
	aching	
	port Example	
	nd Data Types	
	neters	
	tics	
Conclusion		196

Chapter 13 Application Tuning: Real	
World Tips and Tricks	197
COM	197
OLE Automation Types	
Marshaling	
Security and Process Model	
COM+	
Databases	200
Using the Right Tools	
Profiler	
Perfmon	203
Task Manager	203
Web Stress Tool	
Putting It All Together	204
Common Symptoms and the Problems That	
Cause Them	205
Low CPU, Low Requests per Second	
High CPU, Low Requests per Second	
Low Requests per Second, High Network Usage	
Low Requests per Second, High Database Usage	206
Low CPU, High Requests per Second	
Conclusion	
Chapter 14 ISAPI Extensions	
As Service Providers	209
A Simple ISAPI Service	209
Built-in Global ISAPI Services	213
Built-in per-Thread ISAPI Services	
Using per-Thread Services	
How to Implement the Actual Service	
How to Make a Service per-Thread	217
Optimization	
Per-Thread ISAPI Services Conclusion	219
Dynamically Adding Services to the ISAPI	
Application	219
Conclusion	

Chapter 15 Debugging ATL
Server Applications223
Server-Side Debugging223
ISAPI Initialization223
Request Loading and Processing227
Finding Errors in SRF Files230
Identifying a Failing Replacement Method232
Client-Side SOAP Debugging234
Debugging Helper: The ISAPI WebDbg Tool236
Conclusion236
Chapter 16 Database Access
with ATL Server239
Using OLE DB Consumer Templates239
Using the ATL Server Data Source Cache247
Using the Data Source Cache Service251
Putting It All Together251
Conclusion259
<u> </u>
Chapter 17 Advanced SRF261
Extending Stancil Suntay
Extending Stencil Syntax
Overriding File Extensions272 Conclusion272
CONCIUSION272
Chapter 18 Advanced Request Handlers 273
·
Creating a Thread Pool273
Runtime ATL Server Information275
Dynamically Sizing a Thread Pool277
Conclusion
Chapter 19 Advanced Web Services287
ATL Server and COM287
COM Attributes
User-Defined Types293
IDispatch Types297
Allocation

Determining Whether an Object Is Invoked As COM	
or As SOAP	305
SOAP Faults and IErrorInfo	309
ATL Server Web Service Internals	312
How an ATL Server Web Service Works	313
ATL Server Implementation	314
Error Checking	336
Structs and Enums	337
Arrays	344
WSDL Generation	345
Conclusion	345
Chapter 20 Performance Tuning ATL Server Web Applications	347
What Performance Is	347
A Typical Web Request from a Performance	0.40
PerspectiveATL Server Facilities	348
Pitfalls and Programming Idioms to Avoid Excessive Memory Allocation	350 351
Locks	
I/O	
Measuring Performance	
Conclusion	
CONCIUSION	333
Chapter 21 ATL Server and	
Passport .NET	357
Using Passport	357
Initializing Passport Manager	
Using Passport to Authenticate	
IsAuthenticated	368
Displaying User-Specific Content	
Putting It All Together	
Using CPassportHandlerT	376
Conclusion	

Chapter 22 Interoperability with	
ATL Server Web Services	381
What Interoperability Is When and Why You Should Care About	
Interoperability	383
ATL Server Interoperability Limitations	383
Standard Basic Data Types Not Supported by ATL Server	
WSDL Problems	386
A Specific Interoperability Problem	389
Conclusion	391
Chapter 23 Extensibility of ATL	
Server Web Services	202
Server web Services	393
ATL Server SOAP Request Processing Model	393
(Non-HTTP)	395
Overriding the HTTP Transport	396
ReadClient/WriteClient	
GetServerVariable	
Mapping an HTTP Request Object to a Physical Object	398
Custom Parsing on the Server Side	
Custom Data Types Marshaling	
Conclusion	
Chapter 24 SMTP and MIME Support in	
ATL Server	421
Connecting to an SMTP Server	421
Managing Connections with CSMTPConnection	422
Sending MIME Messages	423
CMimeMessage	
Sending Text	
Adding Attachments	
Extending ATL Server's SMTP Support:	
Sending HTML Messages	430
Tips for Improving Performance	
Creating a Delivery Queue	
Processing the Delivery Queue	
Conclusion	

Chapter 25 Developing HTTP Client
Applications in ATL Server44
Classes for Developing HTTP Clients442
A Simple HTTP Client442
Transmitting and Receiving Data44
Handling Query and Form Parameters44
Sending and Receiving Large Payloads45
Securing the HTTP Communication453
Authentication453
Secure Communication (HTTPS)454
Conclusion455
Chapter 26 Securing Your Web
Application457
Application45
Security Best Practices45
Authentication459
NTLM Authentication460
Basic Authentication46
Encryption464
Conclusion460
Chapter 27 ATL Server FAQ467
Generic ATL Server Application FAQ46
What Does "Assertion in Atlisapi.h, Line 663" Mean?46"
How Can I Access the Physical Directory of an
ATL Server Application?468
How Can I Access the Client's SSL Certificate in a
Secure Web Application?468
Mail Support FAQ469
How Do I Send HTML Mail Messages with ATL Server?470
SOAP FAQ470
How Do I Make a SOAP Client Point to a Different URL?470
How Do I Use an HTTP Proxy in a SOAP Client?47
How Do I Use SOAP over a Custom Transport Protocol?47
How Do I Use WinINet, ServerXMLHTTP, or a
Custom HTTP Stack in a SOAP Client?47
How Do I Use HTTPS/SSL in a SOAP Client?472
How Do I Select a Specific Certificate for an SSL
Connection?
How Do I Access the Client's Certificate in a
SOAP Server?474

How Do I Use Custom Encryption/Compression	
with SOAP?	474
How Do I Develop an Asynchronous SOAP Client?	475
How Do I Send XML Fragments/Unescaped Strings	
As Part of a SOAP Message?	476
How Do I Perform Custom Server-Side Parsing?	477
Conclusion	477
Index	479