

**Application Server Market Opportunities, Strategies, and
Forecasts, 2004 to 2009**

Application Server



Picture by Susie Eustis

MOUNTAINS OF OPPORTUNITY

**WinterGreen Research, Inc.
Lexington, Massachusetts**

www.wintergreenresearch.com

CHECK OUT THESE KEY TOPICS

APPLICATION SERVER MARKET SHARES
APPLICATION SERVER MARKET FORECASTS
Application Server Provides Competitive Advantage

Disconnected Silos Of Applicaitons

Application Servers Manage Distributed Transactions
E-Business Platforms

APPLICATION SERVER SOLUTIONS

KNOWLEDGEABLE WORKERS USE APPLICATION SERVERS

APPLICATION SERVER TECHNOLOGY

TRANSACTION AUTOMATION

APPLICATION SERVER INDUSTRY SPECIFIC APPLICATIONS

OPEN SOURCE APPLICATION SERVERS

APPLICATION SERVER DEVELOPMENT TOOLS

PROFESSIONAL SERVICE CAPABILITIES

GO TO MARKET STRATEGIES

APPLICATION SERVER PLATFORM PRIORITIES

OPPORTUNITY ABOUNDS

WinterGreen Research, Inc.

Lexington, Massachusetts

www.wintergreenresearch.com

Application Server Market Opportunities, Strategies, and Forecasts, 2004 to 2009

Application servers represent a way to implement high availability systems. High-availability software markets bring stringent requirements for maintaining the support and confidence of the overall technical computing market.

Application servers offer seamless private and public business process management. They allow companies to maximize e-business opportunities by leveraging existing resources to improve speed-to-market and anticipate IT changes as their business changes.

IBM and BEA dominate application server markets. BEA had been the market share leader by a wide margin but as J2EE architecture has been adopted, IBM achieved a commanding market leadership position as both companies provide significant advantage to users.

IBM market leadership position is secure, based on leveraging existing customer bases, providing robust functionality, and training the sales forces, these are the dominant forces in the segment. BEA has significant market advantage in its benchmarking.

Application server markets at \$1.5 billion in 2003 are expected to reach \$5.2 billion by 2009. Market growth will parallel increased use of the Internet to achieve operating efficiency. Industry consolidation also drives market growth as systems are used to link applications from various divisions.

With 400 million web sites already in existence and growing, the need for application servers is growing. For companies that have created successful sites, the traffic is expected to continue to grow creating demand for application servers.

Enterprise JavaBeans (EJBs) provide the primary server-side enterprise Java component architecture. They enable developers to design and develop customizable, reusable business logic. EJBs provide scalable, portable, server-side components for interacting with any kind of client.

Companies Profiled

Market Leaders

IBM Corporation
BEA

Market Participants

BMC Software
Macromedia
Novell
Red Hat

BroadSoft
Microsoft
Oracle Corporation
SeeBeyond Technology

Application Server Services Strategies and Forecasts, 2004-2009

REPORT METHODOLOGY

THIS IS THE *TWO-HUNDRED AND TWENTY-THIRD* REPORT IN A SERIES OF MARKET RESEARCH REPORTS THAT PROVIDE FORECASTS IN COMMUNICATIONS, TELECOMMUNICATIONS, THE INTERNET, COMPUTER, SOFTWARE, TELEPHONE EQUIPMENT, AND ENERGY. THE PROJECT LEADERS TAKE DIRECT RESPONSIBILITY FOR WRITING AND PREPARING EACH REPORT. THEY HAVE SIGNIFICANT EXPERIENCE PREPARING INDUSTRY STUDIES. FORECASTS ARE BASED ON PRIMARY RESEARCH AND PROPRIETARY DATA BASES. FORECASTS REFLECT ANALYSIS OF THE MARKET TRENDS IN THE SEGMENT AND RELATED SEGMENTS. UNIT AND DOLLAR SHIPMENTS ARE ANALYZED THROUGH CONSIDERATION OF DOLLAR VOLUME OF EACH MARKET PARTICIPATION IN THE SEGMENT. INSTALLED BASE ANALYSIS AND UNIT ANALYSIS IS BASED ON INTERVIEWS AND AN INFORMATION SEARCH. MARKET SHARE ANALYSIS INCLUDES CONVERSATIONS WITH KEY CUSTOMERS OF PRODUCTS, INDUSTRY SEGMENT LEADERS, MARKETING DIRECTORS, DISTRIBUTORS, LEADING MARKET PARTICIPANTS, OPINION LEADERS, AND COMPANIES SEEKING TO DEVELOP MEASURABLE MARKET SHARE. OVER 200 IN DEPTH INTERVIEWS ARE CONDUCTED FOR EACH REPORT WITH A BROAD RANGE OF KEY PARTICIPANTS AND INDUSTRY LEADERS IN THE MARKET SEGMENT.

YOU MUST HAVE THIS STUDY

Application Server Market Opportunities, Strategies, and Forecasts, 2004 to 2009

Table of Contents

APPLICATION SERVER EXECUTIVE SUMMARY

APPLICATION SERVER EXECUTIVE SUMMARY	ES-1
Application Servers Support High Availability Systems	ES-1
Application Server Primary Functions	ES-1
Application Server Market Shares	ES-3
Application Server Market Forecasts	ES-6
Application Server Technology	ES-8

APPLICATION SERVER MARKET DESCRIPTION AND MARKET DYNAMICS

1. APPLICATION SERVER MARKET DESCRIPTION AND MARKET DYNAMICS	1-1
1.1.1 Java Based Application Server Virtual Hosting, Clustering, Fail-Over And Load Balancing	1-1
1.2 Application Server Provides Competitive Advantage	1-4
1.3 Marketplace For Reusable Software Components	1-5
1.3.1 Community-Based Marketplaces	1-5
1.3.2 Components Aimed At Developer Base	1-7
1.4 Infrastructure Switch	1-7
1.4.1 Market Change	1-8
1.5 Increasing Java Productivity	1-9
1.5.1 Increasing Developer Base	1-10
1.6 Application Server Platform Priorities	1-11
1.7 Consolidated Systems	1-11
1.8 Application Servers Manage Distributed Transactions	1-15
1.8.1 Application Server Transaction Management	1-15
1.8.2 Distributed Transactions	1-16
1.8.3 Distributed Processing Implemented As A Centralized System	1-17
1.8.4 Benchmarking Core Application Server Competitive Measure	1-18
1.8.5 Application Server Positioning	1-20
1.9 Disconnected Silos Of Applications	1-22
1.9.1 Mission Critical Functionality	1-23
1.9.2 Mainframe Environments	1-24
1.10 Distributed Computing	1-25
1.11 Web-Based Systems	1-28
1.12 E-Business Platforms	1-31
1.12.1 Business Process Management Platforms	1-32
1.12.2 Business Process Use Of Application Servers	1-34
1.12.3 Effective Control Of E-Commerce Systems	1-35
1.12.4 Web-Based E-Commerce Systems	1-37
1.12.5 Common Platform For Applications	1-38
1.12.6 Scalability, Performance, And Reliability	1-38
1.13 Integrated Functionality	1-39
1.14 Modular, Application Server-Based Architecture	1-40

1.15	Application Server Solutions	1-42
1.15.1	Internet Customer Relationship Management Solutions	1-43
1.16	Professional Service Capabilities	1-44
1.16.1	Systems Integrators And Web Developers	1-44
1.16.2	Expanding Market Presence	1-45
1.17	Go To Market Strategies	1-45
1.17.1	Go To Market Partnering	1-46
1.17.2	Business Imperatives	1-46
1.18	Need For Speed And Simplicity Of Underlying Business Processes	1-47
1.18.1	Complexity: The Challenge	1-49
1.18.2	Order-To-Delivery Cycle	1-50

APPLICATION SERVER MARKET SHARES AND MARKET FORECASTS

2. APPLICATION SERVER MARKET SHARES AND MARKET FORECASTS	2-1	
2.1	Knowledgeable Workers Use Application Servers	2-1
2.1.1	Application Server Market Driving Forces	2-4
2.1.2	Application Server Segments	2-6
2.2	Application Server Market Shares	2-8
2.2.1	Application Server Market Shares 2003	2-9
2.2.2	Application Server Market Shares First Half 2004	2-12
2.2.3	Application Server Pricing	2-15
2.2.4	Consistent Model For Enterprise Application	2-16
2.3	Application Server Market Forecasts	2-17
2.3.1	High End Application Server Market	2-19
2.3.2	Mid Range Application Server Market	2-22
2.3.3	Small and Medium Business Application Server Market	2-25
2.4	Application Server Development Tools	2-28
2.5	Open Source Application Servers	2-30
2.5.1	Application Server Installed Base and Unit Shipments	2-31
2.5.2	New and Replacement Application Servers	2-34
2.6	Application Server Regional Analysis	2-39
2.7	Internet Driving Forces	2-44
2.8	Application Server Positioning	2-48
2.8.1	Reliability	2-50
2.8.2	High Availability	2-51
2.8.3	Performance	2-52
2.8.4	Scalability	2-52
2.8.5	Flexibility	2-53
2.8.6	Productivity	2-53
2.8.7	Operability	2-53
2.8.8	Maintainability	2-54
2.8.9	Security	2-54
2.8.10	Complexity Of Integrating	2-55
2.9	Application Server Support High Availability Systems	2-56
2.9.1	Application Server Primary Functions	2-56

APPLICATION SERVER PRODUCT DESCRIPTION

3. APPLICATION SERVER PRODUCT DESCRIPTION	3-1	
3.1	Application Servers Address A2A, B2B, B2E, and B2C	3-1
3.2	Large-Scale Integrated Business Applications	3-3
3.3	IBM WebSphere® Application Server Positioning	3-7

3.3.1	IBM WebSphere Application Server	3-13
3.3.2	IBM WebSphere Application Server Network Deployment	3-20
3.3.3	IBM WebSphere Application Server Compliant To A Standard Defined By The Java Community Called J2EE	3-22
3.3.4	IBM WebSphere Application Server Enterprise	3-23
3.3.5	IBM WebSphere Application Server Tivoli Access Manager Securing Web Services	3-24
3.3.6	WebSphere Application Server J2EE Application Components	3-24
3.3.7	IBM WebSphere® Studio Used To Develop Portal Applications	3-25
3.3.8	IBM Rational ClearCase Team Development Application Server Tools	3-34
3.4	BEA WebLogic Platform	3-35
3.4.1	BEA WebLogic Server Process	3-38
3.4.2	BEA and HP High Performance, Cost Efficiency	3-38
3.4.3	BEA WebLogic Server Process Edition	3-39
3.4.4	BEA WebLogic Server 8.1 Functions	3-41
3.4.5	BEA WebLogic Portal	3-43
3.4.6	BEA WebLogic Workshop	3-44
3.4.7	BEA WebLogic Security Framework	3-46
3.4.8	BEA WebLogic Server 8.1 Messaging	3-47
3.4.9	BEA WebLogic® Server 8.1 Functions	3-48
3.4.10	BEA WebLogic Standards-Based Application Server	3-49
3.5	Macromedia	3-54
3.5.1	Macromedia Flex	3-54
3.5.2	Macromedia JRun	3-55
3.5.3	JRun Server Tags Technology	3-59
3.5.4	JRun Server Data Access Services	3-59
3.5.5	JRun Server Service Oriented Architecture	3-59
3.6	Oracle Application Server Leverages Database	3-61
3.6.1	Oracle Application Server Integrated Business Intelligence Software	3-61
3.6.2	Oracle 9iAS Application Server	3-62
3.6.3	Oracle Business Process Integration	3-64
3.7	Novell exteNd Application Server	3-70
3.8	Fujitsu Interstage Application Server	3-72
3.8.1	Fujitsu Interstage Key Benefits	3-75
3.8.2	Fujitsu Interstage Features	3-78
3.9	Red Hat Application Server	3-78
3.9.1	Red Hat Partner Technologies	3-79
3.9.2	Object Web	3-83
3.10	Mid Size Business Application Server Markets	3-83
3.10.1	IBM WebSphere® Application Server Express	3-84
3.10.2	WebSphere Application Server – Express Ease-Of-Use Features	3-89

APPLICATION SERVER STRATEGY, TECHNOLOGY, AND INDUSTRY SPECIFIC APPLICATIONS

4. APPLICATION SERVER STRATEGY, TECHNOLOGY, AND INDUSTRY SPECIFIC APPLICATIONS	4-1
4.1 Application Server Positioning	4-1
4.1.1 Integration Application Server	4-1
4.1.2 B2B Commerce Technology As A Working Reality	4-2
4.1.3 Application Server Strategy	4-3
4.1.4 Communities Of Partners	4-5
4.2 IBM Strategy	4-5
4.2.1 IBM WebSphere Application Development Targets Ordinary People	4-6
4.2.2 Common Development Environment Across Windows And Linux	4-7

4.2.3	IBM WebSphere Grid Supports	4-9
4.2.4	IBM Partner Strategy	4-9
4.2.5	IBM Application Server Bundling	4-10
4.3	BEA Strategy	4-10
4.3.1	BEA Positions To Preserve Existing Investment In IT Systems	4-12
4.3.2	BEA Application Infrastructure Positioning	4-13
4.3.3	BEA Sales Strategy	4-14
4.3.4	BEA Dev2dev	4-19
4.3.5	Dev2dev User Group Program	4-21
4.3.6	Dev2dev University Program	4-21
4.3.7	BEA dev2dev Membership Program	4-21
4.4	Microsoft Strategy	4-21
4.5	Oracle Strategy	4-22
4.6	Application Server Technology	4-22
4.6.1	Java Application Server	4-23
4.6.2	Java and J2EE	4-23
4.6.3	Major Types Of Enterprise Beans	4-24
4.6.4	EJB Clustering	4-26
4.6.5	EJB Caching	4-27
4.6.6	Back-End Layer	4-27
4.6.7	Relational Database Access	4-27
4.6.8	Web Services	4-29
4.6.9	Web Service Applications Composed Of Servlets And EJBs	4-29
4.6.10	WS-Security	4-30
4.6.11	Open Standards	4-30
4.6.12	Reliable Web Services Solutions	4-30
4.6.13	Enterprise JavaBeans (EJBs)	4-32
4.6.14	Autonomic Computing Technologies	4-35
4.6.15	Grid Protocol Topology	4-40
4.6.16	Open Grid Services Architecture (OGSA)	4-42
4.6.17	Eclipse Open-Source Tools Framework	4-43
4.7	Transaction Automation	4-44
4.7.1	Asynchronous Communications Dominate	4-44
4.8	Stateless Session Bean	4-46
4.9	Cluster	4-47
4.10	Location Transparency	4-48
4.11	Smart Proxy	4-49
4.12	Load Balancing	4-49
4.13	Process-Entity Design Pattern	4-50
4.14	Command Objects / Control Flow	4-50
4.15	Authorization Checks	4-51
4.16	Delegation	4-52
4.17	Collaborative Filtering	4-53
4.18	Site Analysis	4-53
4.19	Portals	4-54
4.20	Application Server Industry Specific Applications	4-56
4.20.1	Packaged Applications	4-56
4.20.2	Real-Time Processing	4-57

APPLICATION SERVER COMPANY DESCRIPTION

5. APPLICATION SERVER COMPANY PROFILES	5-1
5.1 BEA	5-1

5.1.1	BEA Systems WebLogic Enterprise Platform	5-2
5.1.2	BEA and HP Performance in Industry-Standard Benchmark	5-4
5.1.3	Industries Targeted By BEA	5-4
5.1.4	BEA Customers	5-10
5.1.5	BEA Financial Services and Insurance Customers	5-11
5.1.6	BEA Telecommunications Customers	5-12
5.1.7	BEA Services Customers	5-12
5.1.8	BEA Manufacturing Customers	5-13
5.1.9	BEA Retail/Wholesale Customers	5-13
5.1.10	BEA Government Customers	5-14
5.1.11	BEA Chemicals and Pharmaceuticals Customers	5-14
5.1.12	BEA Revenue	5-15
5.1.13	BEA Revenues by Geographic Region	5-19
5.1.14	BEA WebLogic Platform	5-21
5.1.15	BEA Revenue	5-24
5.1.16	BEA Systems Q1 2004 Revenue	5-25
5.2	BMC Software	5-26
5.2.1	BMC Software Positioning	5-26
5.3	BroadSoft	5-30
5.4	IBM Corporation	5-31
5.4.1	IBM / Candle	5-31
5.4.2	IBM Revenue	5-33
5.4.3	IBM Third-Quarter 2003 Revenues	5-38
5.4.4	IBM Third-Quarter 2003 Revenues Software	5-40
5.4.5	IBM 2004 First-Quarter Revenue	5-40
5.4.6	IBM® DB2® Content Manager	5-48
5.4.7	IBM Lotus Workplace Web Content Management	5-49
5.4.8	IBM On-Demand Supply Chain	5-50
5.4.9	IBM Acquires HoloSoft	5-50
5.4.10	IBM / PricewaterhouseCoopers Consulting	5-52
5.4.11	IBM Acquires Rational Software	5-52
5.5	Macromedia	5-55
5.5.1	Macromedia Fourth Quarter and Fiscal Year 2004 Revenue	5-55
5.5.2	Macromedia Revenue	5-57
5.5.3	Macromedia Designer/Developer Market	5-58
5.5.4	Macromedia Partners	5-58
5.6	Microsoft	5-59
5.6.1	Microsoft.Net	5-61
5.6.2	Microsoft BizTalk Server	5-62
5.7	Novell	5-63
5.7.1	Novell exteNd Application Server	5-63
5.7.2	Novell Revenue	5-65
5.7.3	Novell SUSE Linux AG	5-66
5.8	Oracle Corporation	5-66
5.9	Red Hat	5-69
5.9.1	Red Hat Enterprise Linux	5-71
5.9.2	Red Hat Revenue	5-71
5.10	SeeBeyond Technology	5-72
5.10.1	SeeBeyond (ICAN™) Suite	5-73
5.10.2	SeeBeyond Alliances	5-73
5.10.3	SeeBeyond Revenue	5-75
5.10.4	Operations by Reportable Segments and Geographic Area	5-77

5.10.5	See Beyond Financing	5-78
5.10.6	See Beyond Four-Year Co-Marketing Agreement With General Motors Corporation (GMC)	5-79

List of Tables and Figures

APPLICATION SERVER EXECUTIVE SUMMARY

Table ES-1	ES-2
Market Driving Forces for Applications Servers	
Figure ES-2	ES-4
Worldwide Application Integration Broker Market Shares, First Half 2004	
Figure ES-3	ES-5
Worldwide Application Server Market Shares, 2003	
Figure ES-4	ES-7
Worldwide Application Server Market Forecast, Dollars, 2004-2009	
Table ES-5	ES-9
Application Server Underlying Infrastructure Services	

APPLICATION SERVER MARKET DESCRIPTION AND MARKET DYNAMICS

Table 1-1	1-2
Java Based Application Server Functions	
Table 1-2	1-6
Market-Ready Components Business	
Table 1-3	1-9
Application Server Product Functions	
Table 1-4	1-12
IT System Consolidation Aspects	
Table 1-5	1-19
Benefits Of Distributed Computing	
Table 1-6	1-20
Back End Functionality Support	
Table 1-7	1-21
Application Server Mobile Worker Functionality Support	
Table 1-8	1-23
Transaction Mission Critical System Requirements	
Table 1-9	1-24
Transaction System Aspects	
Table 1-10	1-25
Mainframe System Limitations	
Table 1-11	1-26
Application Server Positioning	
Table 1-12	1-27
Distributed Server Applications	
Table 1-13	1-28
Types Of E-Commerce Transaction Requests	
Table 1-14	1-29
Types Of Distributed Computer transactions	

Table 1-15	1-30
Reasons Web Sites Gather Information About Users	
Table 1-16	1-33
Benefits Of Business Process Management Products	
Table 1-17	1-36
Effective Control Of E-Commerce Systems	
Table 1-18	1-41
Modular, Application Server-Based Architecture Solutions	
Table 1-19	1-42
Application Server Solutions	
Table 1-20	1-48
Business Process Application Server Drivers	

APPLICATION SERVER MARKET SHARES AND MARKET FORECASTS

Table 2-1	2-1
Application Server Key Benefits	
Table 2-2	2-2
On Demand Business Benefits	
Table 2-3	2-5
Application Server Market Positioning	
Table 2-4	2-6
Market Driving Forces for Applications Servers	
Table 2-5	2-7
E-Commerce Target Markets	
Figure 2-6	2-10
Worldwide Application Server Market Shares, 2003	
Table 2-7	2-11
Worldwide Application Server Market Shares, 2003	
Figure 2-8	2-13
Worldwide Application Integration Broker Server Market Shares, First Half 2004	
Table 2-9	2-14
Worldwide Application Integration Broker Server Market Shares, First Half 2004	
Figure 2-10	2-18
Worldwide Application Server Market Forecast, Dollars, 2004-2009	
Table 2-11	2-19
Worldwide Application Server Market Forecast, 2004-2009	
Figure 2-12	2-21
Worldwide High End Application Server Market Forecasts, Dollars, 2004-2009	
Figure 2-13	2-22
Worldwide High End Application Server Market Forecasts, Units, 2004-2009	
Figure 2-14	2-23
Worldwide Mid Market Application Server Market Forecasts, Dollars, 2003-2008	
Figure 2-15	2-24
Worldwide Mid Range Application Server Market Forecasts, Units, 2004-2009	
Figure 2-16	2-29
Worldwide Application Server Tool Market Forecasts, 2003-2008	
Figure 2-17	2-30
Worldwide Open Source Application Server, Market Forecast, Units, 2004-2009	
Figure 2-18	2-31
Worldwide High End Application Server Installed Based Analysis Market Forecasts, 2004-2009	

Table 2-19	2-32
Worldwide High End Application Server Installed Based Analysis, 2004-2009	
Figure 2-20	2-33
Commercial Web Site Forecasts, 2004-2009	
Table 2-21	2-34
Commercial Web Site Forecasts, 2004-2009	
Figure 2-22	2-35
Worldwide High End Application Server Market Segments, New and Replacement, 2003	
Table 2-23	2-36
Worldwide High End Application Server Installed Base Analysis, 2002-2009	
Figure 2-24	2-37
Worldwide High End Application Server Market Segments, New and Replacement, 2009	
Figure 2-25	2-38
B to C E Commerce Market Forecasts, 2004-2009	
Figure 2-26	2-40
EAI Regional Market Shares, 2003	
Table 2-27	2-41
Application Server Regional Market Shares, 2003	
Figure 2-28	2-42
EAI Regional Market Shares, 2009	
Table 2-29	2-43
Application Server Regional Market Shares, 2009	
Table 2-30	2-45
Enterprise Messaging Integration Functions	
Table 2-31	2-49
Application Server Core Technologies	
Table 2-32	2-57
Application Server Primary Functions	

APPLICATION SERVER PRODUCT DESCRIPTION

Table 3-1	3-2
Application Server Real-Time Business Customized Architecture Issues	
Table 3-2	3-4
Large-Scale Integrated Business Applications Needs	
Table 3-3	3-5
Core Application Server Functions	
Table 3-4	3-8
IBM WebSphere® Application Server Key Benefits	
Table 3-5	3-10
WebSphere Application Server Configurations	
Table 3-6	3-15
IBM WebSphere® Application Server Functions	
Table 3-7	3-17
IBM WebSphere® Application Server Benefits	
Table 3-8	3-19
IBM WebSphere® Application Server Aspects	
Table 3-9	3-21
IBM WebSphere Application Server Network Deployment Features	
Table 3-10	3-22
IBM WebSphere Application Server Edge Server Component Deployment Features	

Table 3-11	3-26
IBM WebSphere® Studio Functions To Rapidly Develop Portal Applications	
Table 3-12	3-28
IBM WebSphere® Studio Features To Develop Portal Applications	
Table 3-13	3-29
IBM WebSphere® Studio J2EE Development Environment Features	
Table 3-14	3-30
IBM WebSphere® Studio J2EE Development Environment Functions	
Table 3-15	3-32
IBM WebSphere® Studio J2EE Development Environment Tools	
Table 3-16	3-33
IBM WebSphere® Studio J2EE Development Environment Mapping	
Table 3-17	3-36
BEA WebLogic Enterprise Platform Modules	
Table 3-18	3-40
BEA WebLogic Server Features	
Table 3-19	3-44
BEA WebLogic Workshop Features:	
Table 3-20	3-47
BEA WebLogic Application Server Framework	
Table 3-21	3-50
BEA WebLogic Server Core Application Server Functions And Services	
Table 3-22	3-55
Macromedia JRun Features	
Table 3-23	3-65
Oracle Application Server Modules	
Table 3-24	3-73
Fujitsu Interstage Application Server Functions	
Table 3-25	3-74
Fujitsu Interstage Application Server International Standards	
Table 3-26	3-76
Fujitsu Interstage Application Server Key Benefits	
Table 3-27	3-77
Fujitsu Interstage Application Server Functions	
Table 3-28	3-80
Red Hat Application Server Functions	
Table 3-29	3-81
Red Hat Application Server Features	
Table 3-30	3-82
Red Hat Application Server Architecture	
Table 3-31	3-85
IBM WebSphere Studio Client Functions	
Table 3-32	3-87
WebSphere Studio Major Development Tool Capabilities	
Table 3-33	3-89
WebSphere Application Server – Express End To End Features	
Table 3-34	3-92
WebSphere Application Server Express End To End Simplified Administration	

APPLICATION SERVER STRATEGY, TECHNOLOGY, AND INDUSTRY SPECIFIC APPLICATIONS

Table 4-1	4-2
Aspects Of Application Server Technology	
Table 4-2	4-4
Mainstream Application Servers Strategic Positioning	
Table 4-3	4-7
People Needing Tools To Implement Web Systems	
Table 4-4	4-15
Types Of BEA Strategic Alliances	
Table 4-5	4-17
BEA ISV Solution Providers	
Table 4-6	4-20
BEA dev2dev Offerings	
Table 4-7	4-24
Major Types Of Enterprise Beans Defined In EJB	
Table 4-8	4-33
Application Server Underlying Infrastructure Services	
Table 4-9	4-34
Major Types Of Enterprise Beans	
Table 4-10	4-36
Autonomic Features	
Table 4-11	4-38
Autonomic Functions	
Table 4-12	4-45
Distributed Transaction Functions	
Table 4-13	4-54
Portal Functions	
Table 4-14	4-56
Buy Or Build Decision	
Table 4-15	4-58
B2B Application Server Quantifiable Business Benefit	
Table 4-16	4-59
Trading Exchange Positioning	
Table 4-17	4-60
Integrated e-Market Benefits	

APPLICATION SERVER COMPANY DESCRIPTION

Table 5-1	5-2
BEA Systems WebLogic Enterprise Platform Positioning	
Table 5-2	5-6
Industries Targeted By BEA	
Table 5-3	5-7
BEA WebLogic Application Infrastructure Functions	
Table 5-4	5-8
BEA WebLogic Network Infrastructure Functions	
Table 5-5	5-9
Application Server Applications Targeted By BEA	
Table 5-6	5-21
BEA Integrated Software Core Platform	

Table 5-7	5-22
BEA Integrated Software BEA WebLogic functions	
Table 5-8	5-28
BMC Functions To Prevent Recurrence Of IT Problems	
Table 5-9	5-32
IBM Strengths and Challenges	

ABOUT THE COMPANY

WINTERGREEN RESEARCH, HAS A UNIQUE RESEARCH STRATEGY THAT RELATES TO IDENTIFYING MARKET TRENDS THROUGH READING AND INTERVIEWING OPINION LEADERS. BY READING THE ELECTRONIC EQUIVALENT OF 40 FEET OF PAPER, WINTERGREEN RESEARCH SENIOR ANALYSTS CAN LEARN A LOT MORE ABOUT MARKETS, A LOT FASTER THAN CAN BE LEARNED THROUGH EXPENSIVE SURVEYS AND FOCUS GROUPS. THINKING ABOUT MARKET TRENDS IS A HIGH PRIORITY AT WINTERGREEN RESEARCH. AS WITH ALL RESEARCH, THE VALUE PROPOSITION FOR COMPETITIVE ANALYSIS COMES FROM INTELLECTUAL INPUT.

IT IS A LUXURY REALLY, AVAILABLE TO ONLY A VERY FEW PEOPLE, TO BE ABLE TO GATHER INFORMATION, LOTS OF INFORMATION FROM READING MASSIVE AMOUNTS OF CONTENT, AND THEN TRYING TO MAKE SENSE OF THAT CONTENT. THE ABILITY TO THINK ABOUT MARKET TRENDS IS ENHANCED BY DOING IT OVER AND OVER FOR MANY DIFFERENT MARKETS. THAT IS WHAT WINTERGREEN RESEARCH IS ALL ABOUT: READING AND THINKING IS AN ESSENTIAL ASPECT OF COMPETITIVE ANALYSIS. TALKING TO OPINION LEADERS IS THE THIRD ESSENTIAL ASPECT OF PRODUCING GOOD, RELIABLE DATA.

WINTERGREEN RESEARCH, FOUNDED IN 1985, PROVIDES STRATEGIC MARKET ASSESSMENTS IN TELECOMMUNICATIONS, COMMUNICATIONS EQUIPMENT, HEALTH CARE, INTERNET AND ADVANCED COMPUTER TECHNOLOGY. INDUSTRY REPORTS FOCUS ON OPPORTUNITIES THAT EXPAND EXISTING MARKETS OR DEVELOP MAJOR NEW MARKETS. THE REPORTS ASSESS NEW PRODUCT AND SERVICE POSITIONING STRATEGIES, NEW AND EVOLVING TECHNOLOGIES, AND TECHNOLOGICAL IMPACT ON PRODUCTS, SERVICES, AND MARKETS. MARKET SHARES ARE PROVIDED. LEADING MARKET PARTICIPANTS ARE PROFILED, AND THEIR MARKETING STRATEGIES, ACQUISITIONS, AND STRATEGIC ALLIANCES ARE DISCUSSED. THE PRINCIPALS OF WINTERGREEN RESEARCH HAVE BEEN INVOLVED IN ANALYSIS AND FORECASTING OF INTERNATIONAL BUSINESS OPPORTUNITIES IN TELECOMMUNICATIONS AND ADVANCED COMPUTER TECHNOLOGY MARKETS FOR OVER 30 YEARS.

ABOUT THE PRINCIPAL AUTHORS

ELLEN T. CURTISS, TECHNICAL DIRECTOR, CO-FOUNDER OF WINTERGREEN RESEARCH, CONDUCTS STRATEGIC AND MARKET ASSESSMENTS IN TECHNOLOGY-BASED INDUSTRIES. PREVIOUSLY SHE WAS A MEMBER OF THE STAFF OF ARTHUR D. LITTLE, INC., FOR 23 YEARS, MOST RECENTLY AS VICE PRESIDENT OF ARTHUR D. LITTLE DECISION RESOURCES, SPECIALIZING IN STRATEGIC PLANNING AND MARKET DEVELOPMENT SERVICES. SHE IS A GRADUATE OF BOSTON UNIVERSITY AND THE PROGRAM FOR MANAGEMENT DEVELOPMENT AT HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION. SHE IS THE AUTHOR OF RECENT STUDIES ON WORLDWIDE TELECOMMUNICATIONS MARKETS, THE TOP TEN INTERNET EQUIPMENT COMPANIES, THE TOP TEN CONTRACT MANUFACTURING COMPANIES, AND THE TOP TEN TELECOMMUNICATIONS MARKET ANALYSIS AND FORECASTS.

SUSAN EUSTIS, PRESIDENT, CO-FOUNDER OF WINTERGREEN RESEARCH, HAS DONE RESEARCH IN COMMUNICATIONS AND COMPUTER MARKETS AND APPLICATIONS. SHE HOLDS SEVERAL PATENTS IN MICROCOMPUTING AND PARALLEL PROCESSING. SHE HAS THE ORIGINAL PATENTS IN ELECTRONIC VOTING MACHINES. SHE HAS NEW PATENT APPLICATIONS IN FORMAT VARYING, MULTIPROCESSING, AND ELECTRONIC VOTING. SHE IS THE AUTHOR OF RECENT STUDIES OF THE REGIONAL BELL OPERATING COMPANIES' MARKETING STRATEGIES, INTERNET EQUIPMENT, BIOMETRICS, A STUDY OF INTERNET EQUIPMENT, WORLDWIDE TELECOMMUNICATIONS EQUIPMENT, TOP TEN TELECOMMUNICATIONS, DIGITAL LOOP CARRIER, WEB HOSTING, WEB SERVICES, AND APPLICATION INTEGRATION MARKETS. MS. EUSTIS IS A GRADUATE OF BARNARD COLLEGE.

WINTERGREEN RESEARCH, INC.

ORDER FORM

Return To: WinterGreen Research, Inc.
6 Raymond Street
Lexington, MA 02421 USA
Phone: (781) 863-5078 --- Fax: (781) 863-1235 or (781) 860-0897

PLEASE ENTER MY ORDER FOR:

Application Server Market Opportunities,
Strategies, and Forecasts 2004-2009

-ALL REPORTS ARE AVAILABLE IN EITHER PRINT OR PDF-

_____ **PDF** _____ **PRINT**

_____ ENCLOSED IS MY CHECK FOR \$2,800 FOR SINGLE COPY, \$3,800 FOR WEB SITE POSTING

_____ PLEASE BILL MY COMPANY USING P.O. NUMBER _____

_____ PLEASE CHARGE MY MASTERCARD/VISA/AMERICAN EXPRESS _____

CARD NUMBER _____ EXP. DATE _____

If charging to a Credit card you may e-mail the order form, but not the card information

Fax or Call with credit card information - Do not send card number as e-mail - You may send the order as e-mail

_____ ADDITIONAL COPIES, @ \$375 (EXTRA COPY PRICE IN EFFECT ONLY WITH INITIAL ORDER)

NAME _____ TITLE _____

SIGNATURE _____

COMPANY _____ DIVISION _____

-

ADDRESS _____

CITY _____ STATE /

ZIP _____

TELEPHONE _____

FAX _____

EMAIL _____

PLEASE NOTE: RESIDENTS OF MASSACHUSETTS AND CONNECTICUT MUST INCLUDE APPROPRIATE SALES TAX

SUBSCRIBERS OUTSIDE THE UNITED STATES MUST PROVIDE PREPAYMENT IN U.S. FUNDS

REPORT # SH29821354

353 PAGES

117 TABLES AND FIGURES

2004

\$2,800