IBM

Networking Software Certification Roadmaps

Professional Certification Program from IBM

In today's ever-changing business environment, it's essential to keep pace with complex technologies and products. Most businesses are looking for complete solutions rather than tactical efforts. The Professional Certification Program from IBM offers a business solution for skilled technical professionals seeking to demonstrate their expertise to the world.

The program is designed to validate your skills and demonstrate your proficiency in the latest IBM technology and solutions. In addition, professional certification may help you excel at your job by giving you and your employer confidence that your skills have been tested. You may be able to deliver higher levels of service and technical expertise than noncertified employees and move on a faster career track. Professional certification puts your career in your control.

The Professional Certification Program from IBM has developed new certification role names and roadmaps to guide you in your professional development. These include IBM Certified Developer Associate (IBM CDA), IBM Certified Developer (IBM CD), IBM Certified Specialist (IBM CS), IBM Certified Systems Expert (IBM CSE), IBM Certified Solutions Expert (IBM CSE), IBM Certified Instructor (IBM CI), and IBM Certified Advanced Technical Expert (IBM CATE).

Whether you are a network administrator, systems integrator, network integrator, operator, solution architect, value-added reseller, technical coordinator, sales representative or an educational trainer, you can start charting your course through the Professional Certification Program today!

For more information, visit our web site—http://www.ibm.com/certify

IBM courses are recommended but not required in preparation for certification exams.

Every effort has been made to make the courses and publications as complete and as accurate as possible, but no warranty or fitness is implied. The course information and publications are provided on an "as is" basis. IBM shall have neither liability nor responsibility to any person or entity with respect to any loss or damage arising from course or publication content.

The information contained in this document was current at the time of printing. Current information is at http://www.ibm.com/certify

Table of Contents

IBM Networking Software Certification Roadmaps, Education and Publications

Communications Server Roadmaps:

IBM Certified Specialist - SecureWay Communications Server for AIX 1

IBM Certified Specialist - SecureWay Communications Server for OS/2 Warp 2

IBM Certified Specialist - SecureWay Communications Server for Windows NT 3

Firewall Roadmap:

IBM Certified Solutions Expert - SecureWay Firewall for AIX 4

IBM Certified Solutions Expert - SecureWay Firewall for Windows NT 5

OS/2 Warp Server Roadmaps:

IBM Certified Systems Expert - OS/2 Warp Server for e-business 6

IBM Certified Specialist - OS/2 Warp Server Administration 7

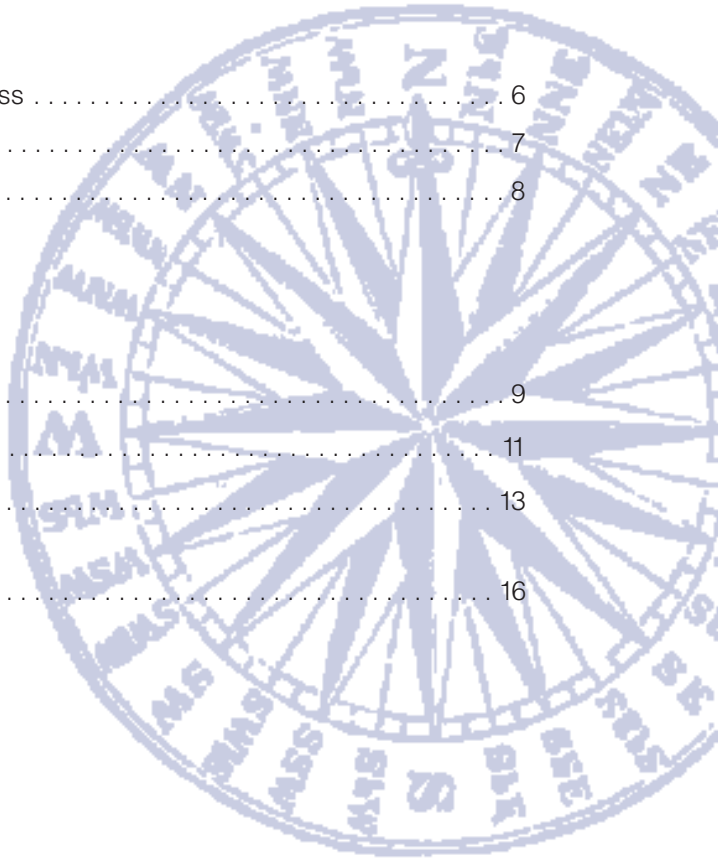
IBM Certified Systems Expert - OS/2 Warp Server 8

Test Preparation:

Courses and Publications

- Communications Server 9
- Firewall 11
- OS/2 Warp Server 13

General Program Information 16



IBM Certified Specialist SecureWay Communications Server for AIX

Specialist

Certification Requirement: 1 Test

Role Description:

IBM Certified Specialist - SecureWay Communications Server for AIX: This certification measures skills in planning, installing, configuring, using, and supporting the IBM SecureWay Communications Server. The IBM SecureWay Communications Server is a powerful, multi-function gateway for connecting diverse application and networking environments.

Recommended Prerequisite:

- Knowledge of general networking concepts (SNA, TCP/IP, LAN and the protocols supported by the SecureWay Communications Server)
- Experience using AIX

Core Requirement (1 Test):

Test 552

AIX Communications Server

Benefits:

- *Certificate*
- *Lapel pin*
- *Certification logo*
- *Wallet-size certificate*

The information contained in this roadmap (as well as test objectives and sample tests) is available from our website – http://www.ibm.com/certify

IBM Certified Specialist SecureWay Communications Server for OS/2 Warp

Specialist

Certification Requirement: 1 Test

Role Description:

IBM Certified Specialist - SecureWay Communications Server for OS/2 Warp: This certification measures skills in planning, installing, configuring, using, and supporting the IBM SecureWay Communications Server and IBM SecureWay Personal Communications clients. The IBM SecureWay Communications Server is a powerful, multi-function gateway for connecting diverse application and networking environments. Complementary to the IBM SecureWay Communications Server, SecureWay Personal Communications clients provide users with a common look and feel to applications and data --- regardless of the networking operating system or platform.

Recommended Prerequisite:

- Knowledge of general networking concepts (SNA, TCP/IP, LAN and the protocols supported by the SecureWay Communications Server family products)
- Experience using OS/2 Warp

Core Requirement (1 Test):

Test 551

OS/2 Communications Server

Benefits:

- *Certificate*
- *Lapel pin*
- *Certification logo*
- *Wallet-size certificate*

The information contained in this roadmap (as well as test objectives and sample tests) is available from our website – http://www.ibm.com/certify

IBM Certified Specialist SecureWay Communications Server for Windows NT

Specialist

Certification Requirement: 1 Test

Role Description:

IBM Certified Specialist - SecureWay Communications Server for Windows NT: This certification measures skills in planning, installing, configuring, using, and supporting the IBM SecureWay Communications Server and IBM SecureWay Personal Communications clients. The IBM SecureWay Communications Server is a powerful, multi-function gateway for connecting diverse application and networking environments. Complementary to the IBM SecureWay Communications Server, SecureWay Personal Communications clients provide users with a common look and feel to applications and data --- regardless of the networking operating system or platform.

Recommended Prerequisite:

- Knowledge of general networking concepts (SNA, TCP/IP, LAN and the protocols supported by the SecureWay Communications Server family products)
- Experience using Windows NT

Core Requirement (1 Test):

Test 556

Windows NT Communications Server

Benefits:

- *Certificate*
- *Lapel pin*
- *Certification logo*
- *Wallet-size certificate*

The information contained in this roadmap (as well as test objectives and sample tests) is available from our website – http://www.ibm.com/certify

IBM Certified Solutions Expert SecureWay Firewall for AIX

IBM Certified ™
Solutions Expert

Certification Requirement: 1 Test

Role Description:

IBM Certified Solutions Expert - SecureWay Firewall for AIX: If you are responsible for assessing the network security requirements as they relate to a firewall, designing a firewall solution, and installing, customizing, and supporting that installation, this certification may help validate your skills and abilities.

Recommended Prerequisites:

- Knowledge of TCP/IP
  Note: If you have limited knowledge of TCP/IP, it is recommended that you complete the TCP/IP Architecture course prior to testing.
- General skills in AIX Firewall

Core Requirement (1 Test):

Test 558

Planning, Implementing and Supporting the IBM Firewall for AIX

Benefits:

- *Certificate*
- *Wallet-size certificate*
- *Lapel pin*
- *Certification logo*

The information contained in this roadmap (as well as test objectives and sample tests) is available from our website – http://www.ibm.com/certify

IBM Certified Solutions Expert SecureWay Firewall for Windows NT

Solutions Expert

Certification Requirement: 1 Test

Role Description:

IBM Certified Solutions Expert - SecureWay Firewall for Windows NT: If you are responsible for assessing the network security requirements as they relate to a firewall, designing a firewall solution, and installing, customizing, and supporting that installation, this certification may help validate your skills and abilities.

Recommended Prerequisites:

- Knowledge of TCP/IP
  Note: If you have limited knowledge of TCP/IP, it is recommended that you complete the TCP/IP Architecture course prior to testing.
- General skills in Firewall for Windows NT

Core Requirement (1 Test):

Test 250

Firewall for Windows NT

Benefits:

- *Certificate*
- *Wallet-size certificate*
- *Lapel pin*
- *Certification logo*

The information contained in this roadmap (as well as test objectives and sample tests) is available from our website – http://www.ibm.com/certify

IBM Certified Systems Expert OS/2 Warp Server for e-business

IBM Certified ™
Systems Expert

Certification Requirement: 2 Tests

Role Description:

IBM Certified Solutions Expert - OS/2 Warp Server for e-business: This certification measures skills in planning, installing, configuring, using and supporting the OS/2 Warp Server environment. Candidates should possess the skills required to manage OS/2 Warp Server users, groups and shared resources and to apply the features of OS/2 Warp Server (file and print operations, adapter, protocol and TCP/IP services, advanced print services, and problem determination) in a customer environment. It is expected that the IBM Certified Systems Expert will be able to perform these tasks with limited assistance from peers, product documentation and vendor support services.

Recommended Prerequisite:

- OS/2 Warp 4 system management skills
- Basic Networking Fundamentals including LANS, LAN Adapters, Bridges, Routers
- Network Protocols including: NetBIOS, TCP/IP, DNS, DHCP
- Windows Networking fundamentals including the Windows Neighborhood concept
- Internet concepts
- Backup concepts

Core Requirement (2 Tests):

Test 137	Test 138
OS/2 Warp 4.0 Fundamentals	OS/2 Warp Server for e-business

Benefits:

- *Certificate*
- *Wallet-size certificate*
- *Lapel pin*
- *Certification logo*

The information contained in this roadmap (as well as test objectives and sample tests) is available from our web site -- http://www.ibm.com/certify

IBM Certified Specialist
OS/2 Warp Server Administration

Specialist

Certification Requirement: 1 Test

Role Description:

IBM Certified Specialist - OS/2 Warp Server Administration: This one-test certification is designed to measure day-to-day OS/2 Warp Server network operations administration proficiency at managing OS/2 Warp Server users, groups, and shared resources; performing server backup/recovery and Remote Access administration; and discovering/managing systems through Systems Management tools.

Recommended Prerequisites:

- Fundamental DOS knowledge
- Experience using and customizing OS/2 Warp
- Experience as an OS/2 Warp Server administrator

Core Requirement (1 Test):

Test 134

OS/2 Warp Server Administration

Benefits:

- *Certificate*
- *Wallet-size certificate*
- *Lapel pin*
- *Certification logo*

The information contained in this roadmap (as well as test objectives and sample tests) is available from our web site -- http://www.ibm.com/certify

IBM Certified Systems Expert OS/2 Warp Server

IBM Certified ™
Systems Expert

Certification Requirement: 3 Tests

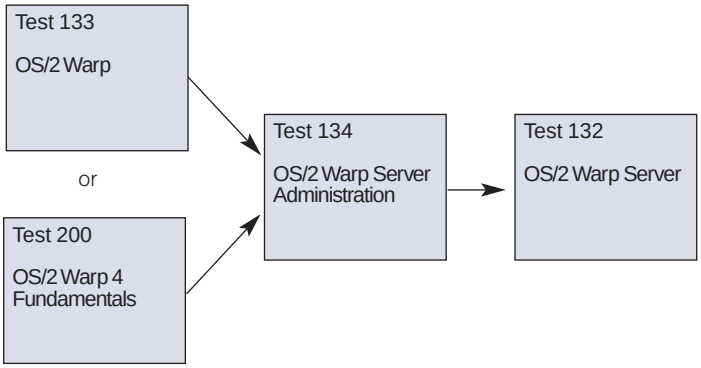
Role Description:

IBM Certified Systems Expert - OS/2 Warp Server: This certification validates skills in OS/2 Warp Server file and print operations, adapter, protocol and TCP/IP services, Remote Access Services, Systems Management, Backup/Recovery, Advanced Print Services, and problem determination.

Recommended Prerequisite:

- Experience using and customizing OS/2 Warp
- Experience installing, configuring and supporting OS/2 Warp Server
- Fundamental networking knowledge

Core Requirement (3 Tests):



NOTE: The ordering of core tests is recommended but not required.

Benefits:

- *Certificate*
- *Wallet-size certificate*
- *Lapel pin*
- *Certification logo*

The information contained in this roadmap (as well as test objectives and sample tests) is available from our web site -- http://www.ibm.com/certify

Courses for SecureWay Communications Server Certifications

Experience is essential for successful completion of certification exams. Education is not required, although the following courses may be useful in your exam preparation.

- *To register for courses or to request course objectives, call IBM Learning Services.*
- *Information is also available from the IBM Learning Services home page – http://www.training.ibm.com/ibmedu*
- *Specific education programs and promotions may be available for IBM Business Partners. Call your Business Partner program for more information.*

Test Number	Course Title	Duration	Course No.
Test 550	**Data Communications Environment** This course covers the fundamental principles underlying networking in today's environment. Wide area networks, local area networks and interconnected networks are investigated emphasizing the functions of commonly installed hardware and software. The architectural rules that govern communications are highlighted for both the SNA and TCP/IP environments. This course provides a solid foundation for continued investigation in specific networking technologies.	4.5 Days	**NW02 (WW)** **G3645 (US)**
	Network Concepts Review Session This session provides a review of key topics and an opportunity for participants to ask additional questions before taking test 550, Networking Concepts.	.5 Day	**E4450 (US)**
Test 551	**Communications Server for OS/2 Warp and PCOMM Workshop** Hands-on labs and lecture course focused on providing skills required to support and perform operational services (installation, configuration, management, usage and problem determination) using Communications Server for OS/2 Warp and Personal Communications clients.	4 Days	**E441 (WW)** **N2028 (US)**
Test 552	**Communications Server for AIX Networking Workshop** This course offers hands-on labs and lectures focused on providing skills required to support and perform operational services (installation, configuration, management, usage, and problem determination) using Communications Server for AIX.	3 Days	**E447 (WW)** **E4470 (US)**
Test 556	**Communications Server for Windows NT and PCOMM Workshop** Hands-on labs and lecture course focused on providing the skills required to support and perform operational services (installation, configuration, management, usage and problem determination) using Communications Server for Windows NT and Personal Communications clients.	5 Days	**E443 (WW)** **E4430 (US)**

NA = North America US = United States WW = Worldwide

Publications for SecureWay Communications Server Certifications

To order a publication, refer to the IBM Direct publications catalog on the Internet at http://www.elink.ibmlink.ibm.com/pbl/pbl. Also, in the U.S., you can call 1-800-879-2755 and select option 1; in Canada, call 1-800-IBM-4YOU (1-800-426-4968).

Test Number	Publication Title	Order No.
Test 550	**Network Concepts Review Guide** This self-study review guide provides information and a diagnostic self-assessment on fundamental networking concepts in preparation for the Networking Concepts certification test 550.	**SR23-8107**
Test 551	**Communications Server for OS/2 Network Administration** This book provides an overview of Communications Server functions and the steps required to create Communications Server configurations for the supported workstations.	**SC31-8181**
	Communications Server for OS/2 Up & Running This book provides information on how to install and configure Communications Server and the access features. A list of all the Communications Server books is provided.	**GC31-8189**
	Communications Server for OS/2 Warp Enhancements This redbook (technical manual) is unique in its detailed coverage of Communications Server 4.0. It provides information about installation and configuration of the newly implemented architectures, such as High-Performance Routing (HPR), Dependent LU Requestor (DLUR), AnyNet functions and APPC Session Security among others. Some knowledge of previous releases of the IBM Communications Manager/2 is assumed, as well as a basic knowledge of networking concepts and terminology used in the Systems Network Architecture (SNA) and TCP/IP.	**SG24-4587**
	Personal Communications Up & Running These books contain installation instructions and basic user information. - OS/2 Warp - Windows NT - Windows 95 - Windows	 **SC31-8258** **GC31-8314** **SC31-8205** **SC31-8261**
Test 552	**IBM Communications Server for AIX: Understanding and Migrating to Version 5** This redbook (technical manual) addresses migration steps and issues. In addition, it gives a broadunderstanding of the new features and functions. The first four chapters take you through the migration process from previous releases of Communications Server for AIX and gives examples. The rest of the book explores the new functions. It starts by giving the reader an indepth overview of the Motif Administration function which replaces smit configuration for Communications Server for AIX.	**SG24-5215**
	Communications Server for AIX Quick Beginnings This book provides an overview of the function, installation steps and task sheets for basic administration and configuration.	**GC31-8583**
Test 556	**Communications Server for Windows NT Quick Beginnings** This book contains an introduction to IBM Software Servers, installation and configuration instructions, troubleshooting and basic user information.	**GC31-8424**
	Personal Communications Up & Running These books contain installation instructions and basic user information. - OS/2 Warp - Windows NT - Windows 95 - Windows	 **SC31-8258** **GC31-8314** **SC31-8205** **SC31-8261**

Courses for SecureWay Firewall Certifications

Experience is essential for successful completion of certification exams. Education is not required, although the following courses may be useful in your exam preparation.

- *To register for courses or to request course objectives, call IBM Learning Services.*
- *Information is also available from the IBM Learning Services home page – http://www.training.ibm.com/ibmedu*
- *Specific education programs and promotions may be available for IBM Business Partners. Call your Business Partner program for more information.*

Test Number	Course Title	Duration	Course No.
Test 250	**Internet Security and Firewalls** This course introduces the Internet, and it teaches how to use firewalls to safely connect to the Internet. Basic cryptographic concepts are also covered.	2 Days	**IN29 (WW)** **N3202 (US)**
	IBM Firewall for Windows NT Implementation This course covers installation and configuration of the IBM Firewall for Windows NT product in a lecture and extensive hands-on lab format.	3 Days	**IN34 (WW)** **N3204 (US)**
Test 558	**Internet Security and Firewalls** This course introduces the Internet, and it teaches how to use firewalls to safely connect to the Internet. This course also covers basic cryptographic concepts.	2 Days	**IN29 (WW)** **N3202 (US)**
	IBM Firewall for AIX This course teaches how to install and configure the IBM Firewall for AIX Version 3.1. This course utilizes extensive hands-on labs.	3 Days	**IN33 (WW)** **N3203 (US)**
	TCP/IP Architecture This course explores the architectural structure of Transmission Control Protocol/Internet Protocol (TCP/IP), the concepts and content of the major protocols, and key TCP/IP applications.	2 Days	**NW48 (WW)** **G3740 (US)**

NA = North America US = United States WW = Worldwide

Publications for SecureWay Firewall Certifications

To order a publication, refer to the IBM Direct publications catalog on the Internet at http://www.elink.ibmlink.ibm.com/pbl/pbl. Also, in the U.S., you can call 1-800-879-2755 and select option 1; in Canada, call 1-800-IBM-4YOU (1-800-426-4968).

Test Number	Publication Title	Order No.
Test 250	**Firewall for Windows NT** This technical reference book (redbook) covers issues involved with connecting private IP networks to the Internet. It describes the different kinds of firewall gateways that can be used for the connections and focuses on the implementation of those functions in the IBM eNetwork Firewall for Windows NT.	SG24-5209
	Firewall for AIX User's Guide This book is intended for network or system security administrators who install, administer, and use the IBM Firewall.	GC31-8419

Courses for OS/2 Warp Server Certifications

Experience is essential for successful completion of certification exams. Education is not required, although the following courses may be useful in your exam preparation.

- *To register for courses or to request course objectives, call IBM Learning Services.*
- *Information is also available from the IBM Learning Services home page – http://www.training.ibm.com/ibmedu*
- *Specific education programs and promotions may be available for IBM Business Partners. Call your business partner program for more information.*

Test Number	Course Title	Duration	Course No.
Test 132	*For those experienced with LAN Server:*		
	OS/2 Warp Server Update This course introduces the features and functions of OS/2 Warp Server. These include installation procedures and configuration techniques.	5 Days	**WS340**
	and		
	OS/2 Warp Server Service and Support This course focuses on adapter configurations and support, systems management, remote access services and network problem determination.	4 Days	**WS760**
	For those unfamiliar with LAN Server and OS/2 Warp Server:		
	OS/2 Warp Server Administration Workshop I This course teaches the skills to install OS/2 Warp Server and perform basic LAN administration tasks.	4 Days	**WS730**
	and		
	OS/2 Warp Server Administration Workshop II This course refines basic skills and provides advanced knowledge and techniques for planning, installing, administering and supporting the Entry and Advanced versions of OS/2 Warp Server.	4 Days	**WS740**
	and		
	OS/2 Warp Server Connectivity and Advanced Features This lab-intensive course covers adapter and protocol services, Novell Gateway, Internet Gateway, DHCP and DDNS, TCPBEUI on DOS LAN Services, and remote access services.	4 Days	**WS750**
	and		
	OS/2 Warp Server Service and Support This course focuses on adapter configurations and support, systems management, remote access services and network problem determination.	4 Days	**WS760**
Test 133	**OS/2 Technical Training Fastpath** Thsi course provides a fastpath for the six days of training offered in course P1170 (2 days) - OS/2 Warp: Using and Customizing and course P1171 (4 days) - OS/2 Warp: Implementation and Support.	5 Days	**P1103**
Test 134	**OS/2 Warp Server Administration Workshop I** This course teaches the skills to install OS/2 Warp Server and perform basic LAN administration tasks.	4 Days	**WS730 (US)**

NA = North America US = United States WW = Worldwide

* For worldwide equivalencies, refer to http://www.training.ibm.com/ibmedu and search for course codes by country.

Courses for OS/2 Warp Server Certifications

Experience is essential for successful completion of certification exams. Education is not required, although the following courses may be useful in your exam preparation.

- *To register for courses or to request course objectives, call IBM Learning Services.*
- *Information is also available from the IBM Learning Services home page – http://www.training.ibm.com/ibmedu*
- *Specific education programs and promotions may be available for IBM Business Partners. Call your business partner program for more information.*

Test Number	*Course Title*	*Duration*	*Course No.*
Test 137	**OS/2 Warp 4 Implementation** This course is intended for those who have limited experience with previous versions of OS/2 or experience with only Windows, DOS or other non-OS/2 platforms. The course teaches how to plan, install, customize, and support OS/2 Warp 4.	3 Days	**WC61 (WW)** **WC610 (NA)**
Test 138	**OS/2 Warp Server for e-business** This course offers hands-on labs and lectures focused on providing skills required to support and perform operational services (installation, configuration, management, usage, and problem determination) using OS/2 Warp Server for e-business.	5 Days	**WS97 (WW)** **WS970 (NA)**
Test 200	**OS/2 Warp 4 Implementation** This course is intended for those who have limited experience with previous versions of OS/2 or experience with only Windows, DOS or other non-OS/2 platforms. The course teaches how to plan, install, customize, and support OS/2 Warp 4.	3 Days	**WC61 (WW)** **WC610 (NA)**

NA = North America US = United States WW = Worldwide

* For worldwide equivalencies, refer to http://www.training.ibm.com/ibmedu and search for course codes by country.

Publications for OS/2 Warp Server Certifications

Experience is essential for successful completion of certification exams. Although these publications cover most of the information on an exam, there is no guarantee that study of these publications will ensure passing an exam.

- *To order a publication, refer to the IBM Direct publications catalog on the Internet at http://www.elink.ibmlink.ibm.com/pbl/pbl*
- *Also, in the U.S. you can call 1-800-879-2755 and select option 1; in Canada call 1-800-IBM-4YOU (1-800-426-4968)*

Test Number	Publication Title	Order No.
Tests 132	**OS/2 Warp Server Certification Handbook** This tutorial covers the knowledge material addressed by the OS/2 Warp Server tests 126, 129, 131, and 132. Note that experience with OS/2 Warp Server is essential.	**SR23-7887-00** **ISBN 0-9655611-2-7**
Test 133	**OS/2 Certification Handbook** This tutorial includes topics such as installing, using and supporting OS/2, OS/2 performance, OS/2 commands and REXX for OS/2. To guide you in your study of this handbook, obtain the "Test 133 Study Bibliography" from our web site: www.ibm.com/certify	**SR28-5650**
Test 134	To guide your study of the following publications, obtain the "Test 134 Study Bibliography" from the OS/2 Warp Server Administration certification roadmap on our web site http://www.ibm.com/certify.	
	OS/2 LAN Server Certification Handbook This tutorial covers the LAN Server Administration functions (such as defining users, groups, and shared applications, setting up shared printers and home directories) that are part of the OS/2 Warp Server Administration role.	**SR28-5649**
	Inside OS/2 Warp Server, Vol. 1 and Vol. 2 These redbooks (technical reference books) provide information about OS/2 Warp Server functions such as Backup and Recovery, Remote Access Administration and System Management Setup.	**SG24-4602** **SG24-4702**
Tests 137	**OS/2 Warp 4 Certification Handbook** This book is a tutorial that covers the functions and features of OS/2 Warp 4. Note that experience with OS/2 Warp 4 is still essential to performing well on the exams.	**SG24-4869-00** **ISBN 0-9655611-1-9**
Tests 200	**OS/2 Warp 4 Certification Handbook** This book is a tutorial that covers the functions and features of OS/2 Warp 4. Note that experience with OS/2 Warp 4 is essential to performing well on the exams.	**SG24-4869-00** **ISBN 0-9655611-1-9**

General Program Information

Test Preparation

- **Education Courses** are offered through IBM Learning Services worldwide. For class schedules and prices, call the IBM Learning Services Center nearest you, or on the Internet go to – http://www.training.ibm.com/ibmedu.

- **Test Descriptions, Test Objectives and Sample Tests** are valuable tools to help you prepare for certification exams. This information is available from the Professional Certification Program from IBM web site – http://www.ibm.com/certify.

- **Publications** will help you prepare for the tests. You can order publications worldwide from the IBM Direct publications catalog on the Internet – http://elink.ibmlink.ibm.com/pbl/pbl. Also, in the U.S., you can call 1-800-879-2755 and select option 1; in Canada call 1-800-IBM-4YOU (1-800-476-4968).

Certification Testing

Tests for the Professional Certification Program from IBM are administered worldwide by Sylvan Prometric testing centers. In Europe and China, tests are also available through IBM Learning Services. For more information or to schedule an exam, call the center nearest you.

Professional Certification Program from IBM web site –

http://www.ibm.com/certify

Customer Support for Professional Certification Program from IBM

Email:

certify@us.ibm.com

Telephone:

English 1.800.426.8322
. . . . . or 44(0)1475.557.040

French . . . . . 44(0)1475.557.041

German . . . . . 44(0)1475.557.042

Italian . . . . . 44(0)1475.557.043

Spanish . . . . . 44(0)1475.557.044

IBM Learning Services

United States and Canada:
. . . . . 1.800.426.8322(1.800.IBM.TEACH)

Sylvan Prometric Testing Centers

United States and Canada:
. . . . . 1.800.959.3926(1-800-959-EXAM)
Eastern Europe: . . . . . 31(0)320.239895
U.K., Ireland, Scandinavia, The Middle East, South Africa: . . . 44(0)181.607.3850
France: . . . . . 33(0)1.4289.3122
Spain & Portugal . . . . 31(0)320.239898
North Africa . . . . . 31(0)320.239892
Japan 813.3269.9620
Australia 61.2.9414.3663
Latin America 001.612.820.5200

You may also call toll free in the following countries:

Australia 1.800.806.944
Austria 0800.8582
Belgium. 0800.1.7414
Brazil 000.817.965.5340
China 10800.610.0036
Germany 0130.839708
Guam 1888.249.6392
Hong Kong. 800.96.8444
Indonesia. 001.803.61608
Ireland 1.800.626.104
Italy 1768.78441
Japan 0120.387737
Malaysia 1800.80.0508
Mexico 95.800.332.1034
Netherlands 0800.022.75.84
New Zealand. 0800.44.1689
Philippines 1.800.1.611.0126
Singapore 800.616.1132
South Korea 007.8611.3095
Switzerland. 0800.556.966
Taiwan 008.061.1141
Thailand 001.800.611.2401
UK 0800.592.873

IBM Learning Services Inquiry Centers

Australia 1.800.801.088
Austria . . . . . 43(0)1.211.45 Ext. 6140
Belgium. . . . . 32(0)2.655.5214
China. . . . . 86(021)6280.2288x2168
. . . . . 86(021)6437.6677x3368
Denmark. . . . . 45(0)4523.3000
Finland . . . . . 358(9)459.4444
France. . . . . .
Bordeaux . . . . 33(0)5.56.29.53.48
Lille . . . . . 33(0)3.20.45.52.98
Lyon . . . . . 33(0)4.72.29.42.90
Nantes . . . . . 33(0)2.40.41.43.91
Nice . . . . . 33(0)4.92.11.88.17
Marseille . . . . . 33(0)4.91.22.44.64
Montpellier . . . . 33(0)4.67.34.61.43
Paris. . . . . 33(0)1.4914.5252
Strasbourg . . . . 33(0)3.88.37.43.18
Toulouse . . . . . 33(0)5.62.16.53.63
Germany . . . . . 49(0)211.476.1403
Greece . . . . . 30(0)1.995.3302
Hong Kong 852.2825.7800
Italy. . . . . 39(0)1.67.017.001
Israel 972.3.6978926
Netherlands . . . . . 31(0)20.513.3940
Norway . . . . . 47(0)6699.8299
Portugal . . . . . 351(0)1.7915669
South Africa 27.11.302.6655
South Korea 82.2.828.0706
Spain . . . . . 34(0)1.397.5573
Sweden . . . . . 46(0)879.34.408
Switzerland . . . . . 41(0)844.80.3232
Taiwan . . . . . 886(02)2719.3299
Turkey . . . . . 90(0)212.280.0900
U.K. . . . . 44(0)345.62.60.31

© International Business Machines Corporation 1999

Printed in the U.S.A.
9/99

All Rights Reserved

® IBM, DB2, OS/2, AIX, MQSeries, MQSeries Three Tier, MVS/ESA and CICS are registered trademarks of International Business Machines Corporation

Java is a trademark of Sun Microsystems, Inc.

Windows and Windows NT are trademarks of Microsoft Corporation.

All other trademarks are properties of their respective owners.