

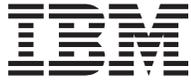
iSeries

Client Access Express for Windows - Setup

Version 5 Release 1 Modification 0

SC41-5507-02





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Note

Before using this information and the product it supports, be sure to read the information in "Appendix D. Notices" on page 71.

Third Edition (May 2001)

This edition replaces SC41-5507-01. This edition applies only to reduced instruction set computer (RISC) systems.

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About Client Access Express for Windows – Setup (SC41–5507–02)

Use this book to install and configure Client Access Express on both the iSeries server and the PC. This book is a supplement to *Software Installation*, SC41-5120-05.

Installation and configuration is necessary on both the iSeries server and the PC. This book assumes that the system administrator will install and configure the iSeries server, while the end user will be able to use this book to install Client Access Express on their PC.

Who should read this book

You should read and use this book if you are responsible for installing and configuring Client Access Express.

Conventions that are used in this book

Several conventions are used throughout this book.

- Express is used throughout this book to refer to Client Access™ Express.
- PC is used throughout this book to refer to personal computer.
- AS/400 NetServer is used throughout this book to refer to IBM® AS/400 Support for Windows Network Neighborhood.
- NT is used throughout this book to refer to Windows NT® 4.0 and Windows® 2000 unless otherwise noted.
- Windows 32-bit client is used to represent Windows 95, 98, Me, 2000, and NT unless otherwise noted.

Prerequisites and related information

This book contains directions for installing Client Access Express on both the iSeries server and the PC. iSeries and PC checklists are provided to guide you through the steps that you need to complete to be able to use Client Access Express. If you are installing and configuring the iSeries server for Client Access Express, a familiarity with the iSeries server is strongly recommended. If you are installing Client Access Express on a PC, you should be familiar with the Windows 32-bit client.

Use the iSeries Information Center as your starting point for looking up iSeries 400 and AS/400e technical information. You can access the Information Center two ways:

- From the following Web site:

<http://www.ibm.com/eserver/iseries/infocenter>

- From CD-ROMs that ship with your Operating System/400 order:

iSeries Information Center, SK3T-4091-00. This package also includes the PDF versions of iSeries manuals, *iSeries Information Center: Supplemental Manuals*, SK3T-4092-00, which replaces the Softcopy Library CD-ROM.

The iSeries Information Center contains advisors and important topics such as CL commands, system application programming interfaces (APIs), logical partitions, clustering, Java™, TCP/IP, Web serving, and secured networks. It also includes

related IBM Redbooks and contains Internet links to other IBM Web sites such as the Technical Studio and the IBM home page.

With every new hardware order, you receive the following CD-ROM information:

- *iSeries 400 Installation and Service Library*, SK3T-4096-00. This CD-ROM contains PDF manuals needed for installation and system maintenance of an IBM @server iSeries 400 server.
- *iSeries 400 Setup and Operations CD-ROM*, SK3T-4098-00. This CD-ROM contains IBM iSeries Client Access Express for Windows and the EZ-Setup wizard. Client Access Express offers a powerful set of client and server capabilities for connecting PCs to iSeries servers. The EZ-Setup wizard automates many of the iSeries setup tasks.

Use the Client Access Web site as a general source of information on Client Access:

<http://www.ibm.com/eserver/series/clientaccess/>

For a listing of additional sources of Client Access Express information, see “Appendix A. Sources of Information for Client Access Express” on page 55.

Operations Navigator

Operations Navigator is a powerful graphical interface for managing your iSeries and AS/400e servers. Operations Navigator functionality includes system navigation, configuration, planning capabilities, and online help to guide you through your tasks. Operations Navigator makes operation and administration of the server easier and more productive and is the only user interface to the new, advanced features of the OS/400 operating system. It also includes Management Central for managing multiple servers from a central server.

For more information on Operations Navigator, see the iSeries Information Center.

How to send your comments

Your feedback is important in helping to provide the most accurate and high-quality information. If you have any comments about this book or any other iSeries documentation, fill out the readers’ comment form at the back of this book.

- If you prefer to send comments by mail, use the readers’ comment form with the address that is printed on the back. If you are mailing a readers’ comment form from a country other than the United States, you can give the form to the local IBM branch office or IBM representative for postage-paid mailing.
- If you prefer to send comments by FAX, use either of the following numbers:
 - United States, Canada, and Puerto Rico: 1-800-937-3430
 - Other countries: 1-507-253-5192
- If you prefer to send comments electronically, use one of these e-mail addresses:
 - Comments on books:
RCHCLERK@us.ibm.com
 - Comments on the iSeries Information Center:
RCHINFOC@us.ibm.com

Be sure to include the following:

- The name of the book or iSeries Information Center topic.
- The publication number of the book.
- The page number or topic of a book to which your comment applies.

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Chapter 1. Before You Start

This chapter contains critical information for iSeries system administrators, local area network (LAN) administrators, and anyone else involved in installing Client Access Express. This includes the information that you need to gather before you begin your installation. This information includes what you need to know about setup on both the iSeries server and the PC.

What is Client Access Express?

Client Access Express is the latest offering in the iSeries Client Access Family for Windows (5722-XW1) product. It offers a powerful set of client/server capabilities for connecting PCs to iSeries servers. Express enables end users and application programmers to leverage business information, applications, and resources across an enterprise by extending the iSeries resources to the PC desktop. Integrated graphical user interface (GUI) features deliver increased productivity for end users who access resources on iSeries servers.

Client Access Express is compatible with Windows 95, Windows 98, Windows Me, Windows 2000, and Windows NT 4.0 operating systems.

Client Access Express:

- is a 32-bit, TCP/IP-only client.
- is a full-function client that includes many components from the Client Access for Windows 95/NT client, such as PC5250 and data transfer (with additional enhancements).
- can communicate with iSeries servers using a secure connection that utilizes Secure Sockets Layer (SSL).
- provides a streamlined installation which also gives administrators more flexibility and control.
- is Java-compatible.
- utilizes file and print serving capabilities integrated into AS/400 Support for Windows Network Neighborhood (AS/400 NetServer) function, which is included in OS/400[®] V4R2 (or later). This has improved overall stability and eliminated the need for daemons (background tasks) to run on the client.
- Includes an extensive number of application programming interfaces (APIs), such as APIs for ODBC, Active X, ADO, OLEDB, etc.

Where to find documentation on Client Access Express

You can obtain additional documentation about Client Access Express. The following are your options:

- Installing Express
 - Use this publication for complete documentation on setting up, installing, and configuring Client Access Express. You can find a PDF version in the iSeries Information Center, <http://www.ibm.com/eserver/iseries/infocenter>, by clicking **Client Access Express > Manuals and Redbooks > Client Access Express for Windows - Setup V5R1M0**.
- Using Express
 - For complete documentation on using the Express client, see the Express User's Guide, an online help system available on the PC after installation. The Express User's Guide can be found in the Client Access Express folder. You

can access the guide by clicking **Start > Programs > IBM AS400 Client Access Express > Express User's Guide**.

Note: The Express User's Guide is an optionally installable component of Client Access Express. If you did not find the Guide in the Client Access Express folder, you can use selective install to install it.

- For information about changes for this release and migration from Client Access for Windows 95/NT see the Welcome Wizard. The Welcome Wizard is available after installation in the Client Access Express folder by clicking **Start > Programs > IBM AS400 Client Access Express > Welcome Wizard**.

Note: The Welcome wizard is an optionally installable component of Client Access Express. If you did not find the wizard in the Client Access Express folder, you can use selective install to install Client Access Required Programs.

The Welcome wizard starts automatically after the installation of Client Access Express unless you chose not to start it in the installation wizard.

- For information about getting started, administering, and programming Client Access Express, see the Information Center located at <http://www.ibm.com/eserver/series/infocenter>. The Client Access Express topics covered in the Information Center include:
 - Information on configuring, maintaining, and controlling the PC clients in the network.
 - Information for the administration of AS/400[®] NetServer file and print sharing, policies, application administration, connections, host servers, installation, and multiple users.
 - Information on Express APIs and technical reference material.
- Additional information is available at the following websites:
 - The IBM iSeries Client Access Home Page at <http://www.ibm.com/eserver/series/clientaccess/>.
 - The IBM AS/400 NetServer Home Page at <http://www.ibm.com/eserver/series/netserver/index.htm>.
- For redbooks with related information, see:
 - *AS/400 Client Access Express for Windows: Implementing V4R4M0*, SG24-5191-00.
 - *The AS/400 Netserver Advantage*, SG24-5196-00.

You can find additional resources in "Appendix A. Sources of Information for Client Access Express" on page 55.

Connectivity Comparison Between Client Access for Windows 3.1, Client Access for Windows 95/NT, and Client Access Express

The following tables show the networks, application programming interfaces (APIs), communication programs, and LAN drivers that Client Access for Windows 3.1, Client Access for Windows 95/NT, and Client Access Express support. This table allows you to compare connectivity to other Client Access products with which you may be familiar .

Table 1. Connectivity Comparison Between Client Access for Windows 3.1, Client Access for Windows 95/NT, and Client Access Express

Functions	Client Access Enhanced for Windows 3.1 (5763-XK1, V3R1M0)	Client Access for Windows 95/NT (5763-XD1, V3R2M0)	Client Access Express (5722-XE1, V5R1M0)
SNA Networks			
Token-Ring	X	X	
Ethernet	X	X	
Twinax	X	X	
Synchronous Data Link Control (SDLC)	X	X	
Asynchronous	X	X	
X.25	X		
AutoSync	X	X	
Communications Programs Supported			
CA/400 NS/Windows (16-bit router)	X		
NS/Router (16-bit router)	X		
NetWare for SAA® (16-bit router)	X		
NS/Router (32-bit router)		X	
NetWare for SAA (32-bit router)		X	
MS SNA Server		X	
IBM Personal Communications		X	
IBM Comm Server		X	
WINAPPC compatible		X	
Winsock 1.1, 2.X compatible		X	X
LAN Drivers			
LAN Support Program	X		
MS DLC (16-bit)	X		
MS DLC (32-bit)		X	
Communication APIs Provided			
EHNAPPC (16-bit)	X	X	
EHNAPPC (32-bit)		X	
CPI-C	X	X	
TCP/IP Networks			
Token-Ring	XK1 only	X	X
Ethernet	XK1 only	X	X
ATM		X	X

Table 1. Connectivity Comparison Between Client Access for Windows 3.1, Client Access for Windows 95/NT, and Client Access Express (continued)

Functions	Client Access Enhanced for Windows 3.1 (5763-XK1, V3R1M0)	Client Access for Windows 95/NT (5763-XD1, V3R2M0)	Client Access Express (5722-XE1, V5R1M0)
Asynchronous (SLIP)	X	X	X
PPP (Point to Point Protocol)		X	X
Twinax		X	X
Note: Visit the following website for information on running TCP/IP over Twinax: http://www.networking.ibm.com/525tcpip/index.html .			
TCP/IP Networks (AnyNet)			
Token-Ring	X	X	
Ethernet	X	X	
Asynchronous (SLIP)	X	X	
TCP/IP Stacks Supported			
IBM DOS (V2.1.1)	X		
FTP OnNet 1.1 (Windows)	X		
Microsoft® WFW (32-bit)	X		
Novell (V4.2)	X		
WRQ V4.01 (Windows)	X		
NetManage Chameleon (Windows V4.01)	X		
Microsoft Windows (32-bit)		X	X

Note for Client Access for Windows 95/NT users: If you are migrating to Client Access Express and you are not using a domain name server, be aware that Express does not change the HOSTS file. You need to manually add to the HOSTS file any new iSeries connections that you configure. To do this, see "TCP/IP configuration on the PC - Updating the HOSTS file" on page 69.

Service Packs

Client Access Express incorporates all code fixes into a service pack. The most recent service pack contains all the fixes from the prior service packs in addition to new fixes that are contained in the current service pack.

Starting at V5R1, there is no separate service pack installation image directory on the iSeries server. When a service pack PTF is applied on the server, the original Client Access Express installation image is updated. Any client that installs from this updated installation image gets the new Client Access release plus the service pack level at the same time.

Important:

PTFs for the following components are provided independently of the Client Access Express service pack.

- Secure Sockets Layer (SSL)
- Operations Navigator plug-ins

Client Access Express check service level will find any of these PTFs that you apply to the iSeries server and will download the fix.

Be sure you have the most recent PTFs and service packs. You can avoid unnecessary calls to service for problems that may already have fixes, and create a more stable operating environment for your Client Access Express client.

Service packs are available in a PC-executable form at the following Web sites:

- The Client Access Service Packs page:
<http://www.ibm.com/eserver/iseries/clientaccess/casp.htm>
- The IBM FTP site:
<ftp://ftp.software.ibm.com>

Navigate down the AS/400 directory to
as400/products/clientaccess/win32/v5r1m0/servicepack.

License Information

IBM iSeries Client Access Express for Windows is a licensed program. Some components of Client Access Express require a Client Access Family for Windows (5722-XW1) license before you can use them. All components ship with the Client Access Express program.

The following components require a Client Access Family for Windows license and an OS/400 license before you can use them:

- PC5250 Display and Printer Emulator
- Data Transfer

Note: If you are connecting to OS/400 V4R5, these components require a license for Version 4 of the Client Access Family for Windows, 5769-XW1.

Important: A software license key is required for Client Access Family for Windows 5722-XW1. Client Access Family for Windows is included on the V5R1 Keyed Stamped Media that comes with all OS/400 V5R1 software orders. You receive a license key if you order 5722-XW1. If you have not ordered 5722-XW1, you may evaluate the product from the keyed stamped media for 70 days. At the end of the 70-day evaluation period, the product will be disabled if you have not ordered the product and received a software license key. The software license key is an 18-digit authorization code that allows the software product and feature on the keyed stamped media to be used on a specified iSeries server.

For information on entering license key information, see “Required and Optional Programs to Install” on page 15.

Besides the PC5250 Display and Printer Emulator and Data Transfer components, all other components require only an OS/400 license before you can use them.

The type of install you choose to perform determines which components are installed. Following are the types of installs you can choose and whether or not the component requires a license to install:

Note: For the PC5250 Display and Data Transfer components, a license is not required to install these components. The license is required in order to **run** these components.

- The **Typical**, **PC5250 User**, and **Full** install choices include components that require a Client Access Family for Windows license.
- With the **Custom** install choice, you can choose which components to install. Depending on the components you select, you may or may not require a Client Access Family for Windows license. The setup program lists the components that require a license.

Client Access Family for Windows clients are licensed by the number of concurrently active PCs accessing iSeries servers. A PC holds a license through the duration of the licensed function plus additional time that is specified in the Client Access Express properties page. When this time expires, the license is available for another PC to use. If a PC accesses a licensed program on more than one iSeries server, that PC requires a license on each iSeries server to which it connects using a licensed function.

Each PC uses only one Client Access Family for Windows license per iSeries server regardless of the number of sessions that are established to that iSeries server. For example, you can start many 5250 emulation or Data Transfer sessions, but the PC requires only one license.

Licensing is managed at the Client Access Family for Windows level, not at the individual client level. Therefore, any combination of the Client Access clients is allowable up to the license limit. Customers who acquire Client Access Family for Windows licenses are entitled to use the Client Access Family for Windows clients in any combination.

To determine the Client Access Family for Windows usage limit:

- 1. Type the **WRKLICINF** command on the iSeries server to which you intend to connect. A list of products appears.
- 2. Type a **5** in the entry field next to the product 5722XW1. This will display the details for the Client Access License product, including the usage limit. The usage limit should be equal to the number of licenses that are purchased for the Client Access Family. Any number exceeding the purchased limit violates the IBM license agreement.

Using Client Access Express with Home PCs

The IBM iSeries Client Access Family for Windows does not support home PCs, such as the IBM Aptiva® PC, in a LAN environment. PCs that are designed solely for home use generally are not meant for commercial environments, where electromagnetic interference support and LAN card support are used. Client Access Express is supported on home PCs when they connect with PPP.

Before installing Client Access in this type of environment check your PC manufacturer's warranty information. For information on networking your IBM Aptiva PC, point your browser to the following Web site:

<http://www.pc.ibm.com/qtechinfo/PMYS-3W6R5L.html>

Chapter 2. iSeries Setup Checklist

To use Client Access Express, you must install and configure software on both an iSeries server and a PC. Use this checklist to guide you through the steps necessary to install and configure Client Access Express on the iSeries server. Client Access Express needs to be installed on your iSeries server before you can install Express service packs on your iSeries server. After installation on your server, you can install Express from the iSeries server to the client PCs.

1. Install Client Access Express on the iSeries server by using the instructions in “Chapter 4. Installing Client Access Express on the iSeries server” on page 15. The chapter steps you through installing the required and optional programs on the iSeries server.
2. Install the latest Program Temporary Fixes (PTFs) for the IBM Operating System/400 (OS/400) and for Client Access Express. For instructions on installing PTFs on the iSeries server, see the Managing fixes topic in the Information Center under **System planning and installation -> Getting started with iSeries -> Managing system operations**.
3. If you want to use the Document Library Services file system (QDLS), go to “Chapter 5. Enrolling Client Access Express users on the iSeries server” on page 21. Skip this step if your users were previously enrolled users for another client or if you do not use QDLS.
4. Configure TCP/IP on the iSeries server by using the resources provided in “Chapter 6. Configuring TCP/IP on the iSeries server” on page 23.
5. If you will allow end users to install Client Access Express from the iSeries server, you may need to configure AS/400 NetServer on the iSeries server. Network drive support that was available in Client Access for Windows 95/NT is no longer available. Instead, you can use AS/400 NetServer to make the Client Access Express install image on the iSeries server available to PC users. For configuration instructions on the iSeries server, see “Chapter 7. Configuring AS/400 NetServer on the iSeries server” on page 25.
6. You have completed installing and configuring Client Access Express on the iSeries server. Follow the “Chapter 3. PC Setup Checklist” on page 11 to install Client Access Express on the PC.

To learn more about Client Access Express, see the references provided in “Appendix A. Sources of Information for Client Access Express” on page 55.

Chapter 3. PC Setup Checklist

Use this checklist to guide you through the steps necessary to install and configure Client Access Express on the PC. The system administrator must install and configure Client Access Express on the iSeries server before you can install it from the iSeries server.

1. If you have a beta version of Client Access Express, you may have to remove it from your PC before installing the general availability product.

Note: If you are not sure whether you have a beta version that must be removed, the Client Access Express setup program will detect a beta version. Then a message appears stating that you must uninstall the beta version before continuing.

To remove the beta from your PC:

- a. Close any other applications that are open.
 - b. From the Windows desktop, click **Start > Settings > Control Panel**.
 - c. Click **Add/Remove Programs**.
 - d. Select **IBM AS/400 Client Access Express for Windows** from the list and click **Add/Remove** to start the Client Access Express Setup program.
 - e. From the Client Access Express setup program, select **Uninstall** and click **Next**.
 - f. Click **OK** on any confirmation dialogs that appear, and the Beta version will be removed.
 - g. Restart the PC before installing Client Access Express.
2. Verify that your PC meets the following requirements.

Table 2. PC requirements — Processor & Memory

Operating System	Client Access Express	Client Access Express with Operations Navigator
Windows 95/98/Me	Pentium® 100 MHz and at least 32 MB	Pentium 200 MHz and at least 64 MB, 128 MB recommended
Windows NT 4.0	Pentium 100 MHz and at least 32 MB	Pentium 200 MHz and at least 96 MB, 128 MB recommended
Windows 2000	Pentium 133 MHz and at least 64 MB	Pentium 200 MHz and at least 96 MB, 128 MB recommended

Note: If you do not plan to use Operations Navigator for anything other than managing your iSeries connections (adding, removing, and changing connection properties), it is recommended that you do not install the Operations Navigator base component. Installing that component will result in higher memory usage when managing your iSeries connections.

Table 3. Other PC requirements

Disk Space - Install	<ul style="list-style-type: none"> • Typical - 116 MB (approximately) • PC5250 User - 45.4 MB • Full - 186.8 MB (approximately) • Custom - variable depending upon components installed
<p>Notes:</p> <ol style="list-style-type: none"> a. You need 5 MB free on the drive where Windows is installed to accommodate temporary files that the Client Access Express setup program creates. b. Additional files download from the iSeries server when you use the FileSystems function of Operations Navigator. c. Service packs require additional space. d. The size for a Full installation could be different depending on whether SSL and plug-ins are in the install search path. 	
Disk Space - Component	You can check the disk space required by each component when performing a Custom install of Client Access Express.
Adapter Card	A communications adapter card that supports TCP/IP.

3. Client Access Express uses TCP/IP to connect to an iSeries server. Install and configure TCP/IP on your PC by using the instructions in "Chapter 8. Setting Up TCP/IP on the PC" on page 31.
4. If you plan on installing Client Access Express from an iSeries server, you need to configure AS/400 NetServer on your PC. See "Chapter 9. Configuring your PC for AS/400 NetServer Use" on page 37.
5. If you are migrating from a previous release of Client Access, skip the rest of this checklist and go to "Chapter 11. Migrating to Client Access Express" on page 43.
6. Install Client Access Express on your PC by using the instructions in "Chapter 10. Installing Client Access Express on the PC" on page 39.

Caution:

Client Access Express works with InstallShield during setup. Anti-virus programs can interfere with the compatibility of InstallShield. You should disable any anti-virus programs that are running on your PC, before you install Client Access Express.

7. You have completed setting up Client Access Express on your PC.

To learn more about Client Access Express, see the references provided in "Appendix A. Sources of Information for Client Access Express" on page 55.

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Chapter 4. Installing Client Access Express on the iSeries server

You can install Client Access Express for Windows V5R1M0 on OS/400 V4R5 and later, and IBM supports PC connections to servers with OS/400 V4R4 and later. If you are on an earlier release of OS/400, see *Software Installation*, SC41-5120-05, for instructions on upgrading your OS/400 to a supported release. Client Access Express PCs can connect to iSeries servers with older OS/400 releases, but will be limited in functionality. There is no IBM support for connection to these older releases. If you do need to install a new release of OS/400, be sure to follow the instructions in *Software Installation*, SC41-5120-05, before you continue installing Client Access Express.

Note: In order to configure the iSeries server, you need a security level of Security Officer (*SECOFR). This is the highest level of security on the iSeries server. This security level is required for configuration only, not for regular use of Client Access Express for Windows.

iSeries Storage Requirements

Your iSeries server must have sufficient storage to install Client Access Express, or the installation cannot complete.

Table 4. iSeries Space Required to Install Client Access Express for Windows

Amount	Purpose
112M	Install Image
11.6M*	Online help information, online user's guide, messages
*This size is for the 2924 (English) national language version. Sizes are different for every other NLV.	

For instructions on how to check the amount of storage your server has available, see the information about software installation in the Information Center.

Required and Optional Programs to Install

The programs you install depend on the features you will be using in Client Access Express. As you go through this section, write down the programs you need to install. You will need to know them for the next sections.

Note: The Client Access Express primary language on the iSeries server is set to the first Client Access Express language that you install. However, if you install a subsequent Client Access Express language that matches the OS/400 primary language, that language will become the new Express primary language on the iSeries server.

Required licensed program options:

Table 5. Required Programs to Install for Client Access Express

Program	Option	Description
5722-SS1	12	Operating System/400 Host Servers
5722-XE1	Base	Client Access Express
5722-XW1	Base	Client Access Family for Windows
5722-XW1	1	Client Access Family for Windows
5722-TC1		TCP/IP Utilities
Note: Each product that you install will need to be at the latest level.		

Notes:

1. Licensed Program 5722-XE1 is introduced in V5R1M0 and replaces 5769-XE1, which was introduced in V4R4M0.
2. You only need to install Client Access Family for Windows 5722-XW1 Base and Option 1 (or 5769-XW1 Base if connecting to OS/400 V4R5) if you want to use Data Transfer or PC5250.
3. Install 5722-XE1 on your server if you want to use the following parts of Client Access Express:
 - Service Pack management
 - Secondary Language support
 - Install and Selective Setup through the iSeries server
4. To use 57xx-XW1, update the usage limit for the 57xx-XW1 product on your server by doing the following:
 - ___ a. Type the **WRKLICINF** command on the iSeries server to which you intend to connect. A list of products appears.
 - ___ b. Type 2 in the entry field next to the product 5722XW1 Base, Feature 5050 (or 5769XW1 for OS/400 V4R5). Change the usage limit to the number of licenses that you have purchased for the Client Access Family for Windows. If you have purchased the processor-based option for Client Access Family for Windows, enter the value ***NOMAX** for usage limit. Entering any number that exceeds the purchased limit violates the IBM license agreement.
5. To use V5R1 5722-XW1, enter the license key information by doing the following:
 - ___ a. Type the **WRKLICINF** command on the iSeries server to which you intend to connect. A list of products appears.
 - ___ b. Type 1 in the entry field next to the product 5722XW1 Option 1, Feature 5101. Enter the license key information.
6. For more information about Client Access packaging, see the information about notes and packaging details for Client Access in the manual *Software Installation*, SC41-5120-05.

Optional licensed programs

Secure Sockets Layer (SSL) support with Client Access Express is available. SSL has been enhanced to add client authentication for PC5250 sessions. To use SSL, order and install the appropriate product from the following table. You are responsible for making sure that you are using the correct encryption for your country and the

countries that your iSeries server does business in.

Table 6. Programs required to Install SSL

If you want	Then install
56-bit server encryption	5722-AC2 (Cryptographic Access Provider) 5722-SS1 - Boss Option 34 5722-DG1 (HTTP Server)
128-bit server encryption	5722-AC3 (Cryptographic Access Provider) 5722-SS1 - Boss Option 34 5722-DG1 (HTTP Server)

SSL support can only be installed on a PC from the iSeries server, or from a peer server that contains copies of the Client Encryption install directories. If you plan on allowing end users to install SSL from this iSeries server, then you will want to install the appropriate level of client encryption. The following table lists the different levels. You can install more than one client encryption product on the iSeries server, but only one Cryptographic Access Provider (ACx). If you plan on allowing end users to install one of the following SSL products from the iSeries server, then 5722-XE1 (Client Access Express) needs to be on the iSeries server.

Note: The release of Client Access Express on the iSeries server must match the release of Client Access Express that is installed on the PC. If the release on the server and PC do not match, then SSL support will not show up in the selective setup component list.

Table 7. Programs needed to install SSL support to the PC

If you want	Then install
56-bit client encryption	5722-CE2 (Client Encryption)
128-bit client encryption	5722-CE3 (Client Encryption)

Notes:

1. If you are migrating from V4R4 or V4R5 to V5R1M0 and you had the CE1, CE2, or CE3 component installed on your PC, Client Access Express will automatically uninstall the component from your PC. It will also install the matching V5R1M0 component if it is available. Since V4 CE1 is no longer available in V5, it will be matched with V5 CE2.
2. Client Encryption products (5722-CEx) contain encryption software from RSA Data Security, Inc.

After installing the Client Encryption product on the iSeries server, you need to authorize the users to the files. To help you meet the SSL legal responsibilities, the files in 5722-CEx are shipped so that the users are not allowed to access the files. Therefore, you must change the authority of the directory that contains the SSL files to allow users to access the files. In order to change the authority, use the `wrk1nk` command and select option 9.

For more information on configuring SSL, see the **Client Access Express > Administering** section of the Information Center.

Installing Client Access Express on the iSeries server

The following steps guide you through installing Client Access Express on a V4R5 and a later release of OS/400:

1. Sign off all workstation users and end all connections.
2. Sign on to the iSeries server with *SECOFR authority.
3. Load the medium containing the licensed programs on the installation device. If the licensed programs are contained on more than one medium, you can load any one of them.
4. If you are installing 5722-SS1, Option 12 (Operating System/400 Host Servers), then you must put the iSeries server in a restricted state. To put the iSeries server in a restricted state:
 - a. At the iSeries command prompt, type CHGMSGQ QSYSOPR *BREAK SEV(60) and press Enter.
 - b. If the Display Messages screen appears, press Enter. You will return to the iSeries command prompt.
 - c. At the iSeries command prompt, type ENDSBS *ALL *IMMED and press Enter.
 - d. The message System ended to restricted condition appears. Press Enter to continue.
 - e. At the iSeries command prompt, type CHGMSGQ QSYSOPR SEV(95) and press Enter.
 - f. If the Display Messages screen appears, press Enter. You will return to the iSeries command prompt.

The iSeries server should now be in a restricted state.

5. At the iSeries command prompt, type G0 LICPGM, then select Option 11.

Note: For information about option 11, see the book *Software Installation*, SC41-5120-05.

6. Type 1 in the Option column next to each of the licensed programs that you need to install. For a list of the programs you need to install, see "Required and Optional Programs to Install" on page 15.

Note: If you are installing Client Access Express on OS/400 V4R5, Client Access Express will be displayed in the list of licensed programs as 5769XE1 rather than 5722XE1. Selecting 5769XE1 will automatically detect and install 5722XE1 from the installation media.

Press Enter to continue.

7. The Confirm Install of Licensed Programs screen appears. Press Enter to confirm your choices.
8. The Install Options screen appears. Specify the following values and press Enter:

Parameter	Value
Installation Device	Name of the installation device. For example, OPT01.
Objects to Install	1
Automatic IPL	N

9. The licensed programs will now install.
 - You will see a screen that indicates the status of the install. You do not need to respond to the status screen.
 - If the licensed programs that you selected are on multiple volumes, the install program will prompt you for a new volume. Load the next media volume, press G and then Enter. If you do not have any additional media volumes, press X and then Enter.

10. When the installation completes, you will see the Work with Licensed Programs screen.
 - If the installation ran successfully, you will see Work with licensed programs function has completed. Press F3 to return to the iSeries command prompt.
 - If the installation failed, you will see Work with licensed programs function not complete. See the "Recovery Procedures" Appendix in *Software Installation* to determine the problem.
11. Once you have installed all of the desired licensed programs, you need to install the latest cumulative PTF package on the iSeries server. If you have already installed the latest cumulative package, you need to install all 5722-XE1 PTFs from the cumulative PTF package. This includes PTFs for any other products you installed.

For information on how to install PTFs on the iSeries server, see the Managing fixes topic in the Information Center under **System planning and installation -> Getting started with iSeries -> Managing system operations**.

For a list of PTFs that you will need to apply, see the Client Access Express Informational APARs Web site:

<http://www.ibm.com/eserver/iseries/clientaccess/caiixe1.htm>
12. Verify that Client Access Express installed correctly by typing CHKPRDOPT 5722XE1 at the iSeries command prompt. If Client Access Express installed correctly, you will receive a message that CHKPRDOPT did not detect any errors.

Deleting Client Access Express

To save disk space or to remove features that you no longer use, you may decide to delete features from the iSeries server.

1. Sign on to the iSeries server with a user ID that has security officer (*SECOFR) authority.
2. Type DLTLICPGM at the iSeries command prompt. Specify the following parameters and values and use the defaults for the other parameters.

Parameter	Value
Product	5722XE1
Language for licensed program	Type xxxx, where xxxx is the National Language Version (NLV) identifier. Ignore this field if the NLV is English.

Note: Any optional programs for Client Access Express that you installed such as 5722-CE2 and 5722-CE3 will need to be uninstalled separately.

Chapter 5. Enrolling Client Access Express users on the iSeries server

Note: You only need to do this if you want to use the Document Library Services (QDLS) file system.

To enroll Client Access Express users on the iSeries server:

1. Type *GO PCSTSK* at the iSeries command prompt.

```
PCSTSK                               Client Access Tasks                System:  SYSTEM1
Select one of the following:

User Tasks
  1. Copy PC document to database
  2. Copy database to PC document

Administrator Tasks
  20. Work with Client Access administrators
  21. Enroll Client Access users
```

Figure 1. Client Access Tasks (*GO PCSTSK*)

2. Select the Enroll Client Access Users option.

```
                                Enroll Client Access Users
Type choices, press Enter.

User profile . . . . . AARON           Name
User identifier:
  User ID . . . . . AARON             Character value
  Address . . . . . SYSTEM1          Character value
User description . . . . . AARON B.
Add to system directory . . *NO       *NO, *YES
```

Figure 2. Enroll Client Access Users display

3. Enter the appropriate information for:
 - User profile (name)
 - User ID (usually the same as the User profile name)
 - User address (usually the same as the system name)
 - User description
 - Add to system directory (use *YES if you want to use the QDLS file system)

See the online help for a complete description of the entry fields.

4. Repeat steps 1-3 to enroll other users in the Directory Entry Database.

Chapter 6. Configuring TCP/IP on the iSeries server

TCP/IP is a licensed program that is shipped with Operating System/400. This chapter assumes that you have TCP/IP installed on your iSeries server. The process of installing TCP/IP on your iSeries server can be found in "Chapter 4. Installing Client Access Express on the iSeries server" on page 15.

If you have TCP/IP already set up on your iSeries server, then you do not need to perform any additional TCP/IP configuration for Client Access Express.

Note: VPN is an option for secure remote connections. For iSeries VPN information, see the following:

- The iSeries Information Center at the following location: **Networking > Networking security > Virtual private networking**.
- The redbook *AS/400 Internet Security: Implementing AS/400 Virtual Private Networks*, SG24-5404-00. Chapters 10 and 11 discuss VPN clients.
- The redbook *AS/400 Internet Security Scenarios: A Practical Approach*, SG24-5954-00. Chapter 7 includes a scenario using VPN client (see section 7.4). Chapter 12 includes remote VPN client with Win2000.

Configuring TCP/IP for LAN use

If you plan on using Client Access Express over a LAN, then you must configure TCP/IP for LAN use. For information on configuring TCP/IP on your iSeries server, see the TCP/IP Setup topic in the Information Center under **Networking -> TCP/IP**.

Configuring TCP/IP for PPP or SLIP connections

If you are using SLIP or PPP to connect the PC to the iSeries server, see the topic about PPP connections in the Information Center under **Networking -> TCP/IP** for information on configuring point-to-point TCP/IP.

Configuring TCP/IP over Twinax connections

The driver required to support TCP/IP over a twinax connection is not shipped with Client Access Express. You must download it from the following Web site:

<http://www.networking.ibm.com/525tcpip/index.html>

If you are using TCP/IP over a twinax connection, see Information APAR II11022 for Client Access support statement on this type of connection.

Chapter 7. Configuring AS/400 NetServer on the iSeries server

This chapter contains the minimum information needed to get AS/400 NetServer on your iSeries server. Then PC users in your network can install Client Access Express from your iSeries server.

Client Access Express for Windows does not include support for network drives or network printers, though these capabilities are still available to you. With Express, these capabilities are provided by AS/400 Support for Windows Network Neighborhood (AS/400 NetServer), available with OS/400 V4R2 and later. By relying on AS/400 NetServer, Express is able to take advantage of the file and print sharing capabilities integrated into Windows 32-bit operating systems.

Note: Starting at V5R1M0, NetServer NetLogon support is active. For information on setting up policy files on the iSeries server and setting up the client for automatic policy lookup, see the following Information Center location:
Networking > TCP/IP > AS/400 NetServer.

PCs can access and benefit from AS/400 NetServer without additional software. However, if you need to administer AS/400 NetServer properties from your PC client, you must have Client Access Express for Windows and Operations Navigator installed.

Note: To take advantage of AS/400 NetServer file and print sharing capabilities without installing Operations Navigator, you can configure AS/400 NetServer with command prompts. Instructions for setting up file and print sharing are available at the following Information Center locations:

- For file sharing, **Networking > TCP/IP > AS/400 NetServer > AS/400 NetServer file shares.**
- For print sharing, **Networking > TCP/IP > AS/400 NetServer > AS/400 NetServer print shares.**

Additional configuration instructions are available at the following locations:

- The iSeries Information Center at the following location: **Networking > TCP/IP > AS/400 NetServer > Getting Started with AS/400 NetServer.**
- In the redbook *The AS/400 Netserver Advantage*, SG24-5196-00.
- In the redbook *AS/400 Client Access Express for Windows: Implementing V4R4M0*, SG24-5191-00.

Configuring AS/400 NetServer

The following iSeries configuration is necessary if users in your network will be using file and print sharing.

Note:

- The following instructions assume that you have TCP/IP installed and configured on your iSeries server. If you do not, follow the instructions in “Chapter 4. Installing Client Access Express on the iSeries server” on page 15 and “Chapter 6. Configuring TCP/IP on the iSeries server” on page 23.
- The following configuration instructions require you to already have access to a PC with Operations Navigator.

To configure your iSeries server for AS/400 NetServer support with Operations Navigator, do one of the following:

- Use the Netserver setup wizard, which is available in V5R1.
- Follow these steps:
 1. Open a connection to **Operations Navigator** on your iSeries server.
 2. Expand **Network**.
 3. Expand **Servers**.
 4. Click **TCP/IP**.
 5. Right-click **AS/400 NetServer** and select **Properties**.
 6. A configuration notebook appears showing the current settings for AS/400 NetServer. Select the **General** page.
 - Click **Next Start** to change the general properties.
 - Check **Start when TCP/IP is started** if you want AS/400 NetServer to automatically start when you start TCP/IP. You may want to deselect the box for security reasons.

Note: NetServer starts automatically when TCP/IP is started in OS/400 V4R4 and later.

- The **Server Name** lists the currently configured AS/400 NetServer server name. The server name is defaulted to the iSeries system name preceded by the letter Q. There is a limit of 15 characters for the name. Use letters (A through Z) and numbers (0 through 9).

If you have not used AS/400 NetServer yet, the server name may contain the iSeries serial number. By default, the iSeries server name is the serial number. If this is the case, and you are not using the serial number for your system name, you should change the system name. Follow these guidelines to change the system name:

- If you have a mixed environment with both Windows 95/NT and Express clients, the AS/400 NetServer name and the iSeries system name need to be different.
- The AS/400 NetServer server name should be the same as your iSeries system name, if the following match your setup:
 - You have no Client Access for Windows 95/NT clients.
 - You have no users who have network drives and printers mapped to AS/400 NetServer shared resources.
- If you have AS/400 NetServer users with mapped drives, but no Client Access for Windows 95/NT clients, do not change the AS/400 NetServer name. Select **Allow AS/400 NetServer access by using iSeries name**.
- If you are migrating an entire network from the Windows 95/NT client to Express client, **migrate** all Windows desktops to the Express client.
 - Select **Allow AS/400 NetServer access using AS/400 name**.
 - After the AS/400 NetServer Properties have been changed, you can use the iSeries system name when configuring additional Express clients and AS/400 NetServer users.

Be careful in configuring the AS/400 NetServer server name. Allowing users to access your AS/400 NetServer by using the iSeries system name is not enabled by default. This can cause conflicts if you still have Windows 95/NT clients in your network. You should follow the recommendations above when enabling AS/400 NetServer support and Express client support in your network.

- The **Allow AS/400 NetServer access using AS/400 name** checkbox will allow AS/400 NetServer access using the iSeries name or the server name specified on this page.

- The **Domain name** field defines the name of the domain or workgroup where the AS/400 NetServer will be a member. It is best to place AS/400 NetServer in the same domain as your client PCs.

Note: You can use an existing domain or workgroup in your LAN environment. You should place the AS/400 NetServer in the same domain or workgroup as your client PCs. There are no restrictions for the domain name.

- You can enter a **Description** and display it as a comment when using the Find/Computer on Windows.
 - **Reset to Current** will undo any changes made to the General page. If you press this button, you will lose any changes that you have made. Only select the **Reset to Current** option if you want to return to the currently configured values.
 - To accept changes, click **OK**. The changes become valid the next time AS/400 NetServer is restarted. See step 8.
7. For easier management and resolution of TCP/IP addresses, add an entry for the AS/400 NetServer to a Domain Name Server (DNS) or a Windows Internet Name Server (WINS).

Note: Configuration instructions are located in the Operations Navigator online help and in the iSeries Information Center at the following location: **AS/400 NetServer > Quick start guide for AS/400 NetServer > Setting up your PC client to use AS/400 NetServer > Setting up a Windows 95/98/NT PC client to find AS/400 NetServer.**

8. Changes made to your AS/400 NetServer properties do not take effect until the next time AS/400 NetServer is started. To Start or Stop AS/400 NetServer:
- a. Open a connection to **Operations Navigator** on your iSeries server.
 - b. Expand **Network**.
 - c. Expand **Servers**.
 - d. Click **TCP/IP**.
 - e. Right-click **AS/400 NetServer** and select **Start** or **Stop**.

Part 3. PC Setup and Installation

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Chapter 8. Setting Up TCP/IP on the PC

Notes:

1. This chapter assumes that you have TCP/IP configured on your iSeries server. If TCP/IP is not configured on your iSeries server, see "Chapter 6. Configuring TCP/IP on the iSeries server" on page 23.
2. VPN is an option for secure remote connections.

Note: Client Access connections through a VPN connection to an iSeries server are only supported on PCs running Windows 2000, and only to iSeries servers with OS/400 V4R5 and later.

For iSeries VPN information, see the following:

- The iSeries Information Center at the following location: **Networking > Networking security > Virtual private networking.**
- The redbook *AS/400 Internet Security: Implementing AS/400 Virtual Private Networks*, SG24-5404-00. Chapters 10 and 11 discuss VPN clients.
- The redbook *AS/400 Internet Security Scenarios: A Practical Approach*, SG24-5954-00. Chapter 7 includes a scenario using VPN client (see section 7.4). Chapter 12 includes remote VPN client with Win2000.

This chapter explains how to configure TCP/IP on Windows 95, 98, Me, NT, and 2000. TCP/IP must be correctly installed and configured before you try to connect to an iSeries server.

Installing a Network Adapter or Modem

In order to set up TCP/IP on your PC, you must have a network adapter or modem installed in your PC. If you will be connecting to the iSeries server over a LAN, then you will need a network adapter installed. If you will be connecting to the iSeries server using a SLIP or PPP connection from a remote location, then you will need to install a modem. For information on installing a network adapter or modem, refer to the manufacturer's documentation provided with the hardware. The manufacturer's documentation should also provide information on installing a driver for the hardware.

Configuring TCP/IP Support on the PC

This topic provides the steps that are necessary to configure the Microsoft TCP/IP support that is supplied with Windows. There is no list of supported TCP/IP stacks for the Windows 95, 98, Me, NT, or 2000 operating systems. If a TCP/IP stack is compatible with WinSock 1.1 or later, the stack should work. A TCP/IP stack is the software that allows your computer to communicate via the TCP/IP communications protocol. If you need to use a TCP/IP stack other than the one that is provided with the operating system, make sure that the stack is compatible with Winsock 1.1 or later.

Note: When dial-up connections are being used on Windows 95, install Winsock 2.x and Dial-Up Networking 1.3 or later. For Windows NT 4.0 users, make sure that NT service pack 5 or later is installed.

Windows 95/98/Me

To install and configure the TCP/IP network protocol on Windows 95 or Windows 98 or Windows Me, do the following:

1. Click **Start > Settings > Control Panel**.
2. Double-click **Network**.
3. Click **Add...** from the **Configuration** tab.
4. Click **Protocol**, and then click **Add**.
5. Click **Microsoft**, click **TCP/IP**, and then click **OK**. When you click **OK**, TCP/IP is added to the Network dialog box. Close the Network Window by clicking **OK**. You may be prompted to restart the PC. Restart the PC now, then continue with the following steps.
6. Click **Start > Settings > Control Panel**.
7. Double-click **Network**.
8. Click **TCP/IP**, and then click **Properties**.
9. Click the **IP Address** tab.
10. Click **Specify an IP address**.
11. Enter the IP address of your PC (for example, 199.5.83.205).
12. Enter the Subnet Mask (for example, 255.255.255.0).
13. If you are using a default route, click **Gateway** and
 - a. Enter the IP address of the gateway or router in **New gateway**.
 - b. Click **Add**.
14. If you are using a domain name server, click **DNS Configuration** and
 - a. Enter the Host name of your PC (for example, cameron).
 - b. Enter the Domain (for example, acme.com).
 - c. Enter the IP address of the domain name server.
15. If you are using a Windows Internet Name Server, click **WINS Address** and
 - a. Enter the Primary WINS Server (for example, 199.5.83.205).
 - b. Enter the Secondary WINS Server (for example, 199.5.83.205).
16. Click **OK**.
17. You may be asked to restart your computer. Close any applications that are running and click **OK**.

Windows NT

To install and configure the TCP/IP network protocol on Windows NT:

1. Click **Start > Settings > Control Panel**.
2. On the control panel, double-click **Network**.
3. Click on the **Protocols** tab.
4. Click **Add...**, then click **TCP/IP**, and click **OK**.

When you click **OK**, TCP/IP is added to the Network protocols page. Close the Network Window by clicking **OK**. You may be asked to restart your PC. Reboot the PC and continue with the following steps.
5. Return to the **Control Panel** to configure the TCP/IP network protocol by clicking **Start > Settings > Control Panel**.
6. Double-click **Network**.
7. Click **TCP/IP**, and then click **Properties**.
 - a. Click the **IP Address** tab.
 - b. Click **Specify an IP address**.
 - c. Enter the IP address of your PC (for example, 199.5.83.205).
 - d. Enter the Subnet Mask (for example, 255.255.255.0).
 - e. If you are using a default route, click **Gateway** and
 - 1) Enter the IP address of the gateway or router in **New gateway**.
 - 2) Click **Add**.
 - f. If you are using a domain name server, click **DNS** and
 - 1) Enter the Host name of your PC (for example, cameron).
 - 2) Enter the Domain (for example, acme.com).
 - 3) Enter the IP address of the domain name server.

- g. If you are using a Windows Internet Name Server, click **WINS Address** and
 - 1) Enter the Primary WINS Server (for example, 199.5.83.205).
 - 2) Enter the Secondary WINS Server (for example, 199.5.83.205).
 - 3) Enable DNS for Windows Resolution, by selecting the checkbox.
 - 4) Enable LMHOSTS Lookup, by selecting the checkbox.
- h. Click **OK**.
- i. You may be asked to restart your computer. Close any applications that are running and click **OK**.

Windows 2000

To install and configure the TCP/IP network protocol on Windows 2000:

- Click **Start>Settings>Control Panel**.
- On the control panel, double-click **Network and Dial-Up Connections**.
- Right-click **Local Area Connection**.
- Click on **Properties**.
- Click on **Install**.
- Select **Protocol**, and then click **Add**.
- Select **Internet Protocol (TCP/IP)**, and then click **OK**. This returns you to the *Local Area Connection Properties* window.
- Select **Internet Protocol (TCP/IP)**, and then click on **Properties**.
- Select **Using the Following IP Address**.
 - Enter the IP address of your PC (for example, 199.5.83.205).
 - Enter the Subnet Mask (for example, 255.255.255.0).
 - Enter the Default Gateway (for example, 199.5.83.1).
 - Enter the Preferred DNS Server (for example, 199.5.100.75).
 - Enter the Alternate DNS Server (for example, 199.5.100.76).
- If you are using a Windows Internet Name Server, click on the **Advanced** tab and select **WINS Address**.
 - 1. Click on **Add**.
 - 2. Enter the Primary WINS Server (for example, 199.5.83.205).
 - 3. Enter the Secondary WINS Server (for example, 199.5.83.205).
 - 4. The remaining settings should remain at the defaults.
- Click **OK** on the **Local Area Connection Properties** window. It is not necessary to reboot your PC.

If you are not using a domain name server, you need to add the iSeries server's name, with which you want to communicate, to the HOSTS file. Also, add the AS/400 NetServer server name to the LMHOSTS file if you are relying on AS/400 NetServer for file and print serving. For instructions on updating your LMHOSTS file, see "Chapter 9. Configuring your PC for AS/400 NetServer Use" on page 37.

To create or change the HOSTS file:

1. Open a DOS window.
2. Change to the directory that should contain the HOSTS file. For example:


```
c:\>cd\winnt\system32\drivers\etc
```

Note: The examples in this section use the `\winnt\system32\drivers\etc` directory, which is a Windows NT and Windows 2000 directory. On Windows 95, Windows 98, and Windows Me, the directory would be `\windows`.

3. If a file named HOSTS already exists in this directory, skip this step. Copy the sample hosts file (supplied by Windows) to the hosts file after you have verified that no HOSTS file exists.

For example:

```
c:\winnt\system32\drivers\etc>copy hosts.sam hosts
```

4. Edit the HOSTS file. For example:
`c:\winnt\system32\drivers\etc>edit hosts`

Please Note

With Windows NT 4.0 and Windows 2000, the HOSTS file MUST be in the **winnt\system32\drivers\etc** directory.

Follow the instructions in the HOSTS sample file to add the IP address and name of the iSeries server that you want to connect to.

5. Save the HOSTS file.

Note: For PC5250, if you do not use a name server or hosts table, you cannot start the 5250 emulator delivered with Client Access Express. The left bottom corner of your emulation display indicates a 657 communication error (*Resolving TELNET 5250 server host-domain name*).

You may choose to use a HOSTS file if you have very few machines using TCP/IP. This requires that you maintain an up-to-date list on each computer. When an iSeries address changes, you **must** change the HOSTS file entry if one exists.

Installing Dial-Up Networking on the PC

If you will be connecting to the iSeries server over a SLIP or PPP connection (using a modem), you need to install Dial-Up Networking on your PC. If you are connecting to your iSeries server over a LAN, or if you already have Dial-Up Networking installed on your PC, you can continue with "Verifying TCP/IP Configuration" on page 35.

To install Dial-Up Networking on Windows 95:

1. Point your web browser to <http://www.microsoft.com>
2. Click the Search link
3. Enter dial-up networking upgrade in the search field and press Enter to search.
4. Navigate to the download link
5. Click the link to begin downloading the dial-up networking upgrade code to your computer
6. Follow the installation instructions provided with Dial-Up Networking to install it on your PC.

To install Dial-Up Networking on Windows 98/Me:

1. Click **Start > Settings > Control Panel**
2. Double-click **Add/Remove Programs**
3. On the Windows Setup tab, place a check next to Communications if it is not already checked
4. Click **Details**
5. Place a check next to Dial-Up Networking
6. Click **OK** twice and insert the Windows 98 or Windows Me CD if prompted
7. Click **OK**. Setup will install the Dial-Up Networking files. You will need to reboot the system before you can use Dial-Up Networking

If you are using Windows NT, you still need to install Dial-Up Networking. When Dial-up Networking installation completes, you are prompted to set up the Remote Access Services. You can find the instructions to do so at Microsoft's Web site:

1. Point your web browser to <http://www.microsoft.com>

2. Click the Search link
3. Enter Dial-Up Networking in the search field and press Enter to search.
4. One of the entries in the search results will contain the instructions necessary to install and configure both Dial-Up Networking and Remote Access Service on Windows NT.

Note: If you plan to make dial-up connections, we recommend that you install NT Service Pack 5 or later. The service pack will improve the stability of your dial-up connection.

Verifying TCP/IP Configuration

You can verify that TCP/IP is set up correctly on your PC by performing a PING to the iSeries server:

1. Open a DOS window or Command Prompt.
2. Type PING system where system is the name of the iSeries server that you wish to connect to.
3. If your TCP/IP configuration is correct, you should see reply messages from the iSeries server. If you do not see these reply messages, here are some possible reasons why PING failed:
 - a. You may be trying to PING the wrong address. Check the address of the iSeries server.
 - b. You may have an incorrect IP address listed for the iSeries server in your HOSTS file or DNS entry. This occurs only when you try to PING an iSeries server by name (as opposed to the IP address). If so, try PING nnn.nnn.nnn.nnn where nnn.nnn.nnn.nnn is the IP address of the iSeries server that you want to connect to. You can obtain the IP address of the iSeries server from your system administrator. If that works, update your HOSTS file or DNS entry with the correct address.
 - c. Incorrect LAN adapter address set in the adapter properties on the PC
 - d. There is no actual physical connection to the iSeries server
 - e. The iSeries server or network name is not correct
 - f. TCP/IP is not configured correctly on the PC
 - g. TCP/IP is not installed or configured correctly, or is not started, on the iSeries server. These problems need to be addressed by the system administrator.
 - h. The iSeries server is down.
 - i. Unexplained causes. Reboot and go through the configuration process again.

Chapter 9. Configuring your PC for AS/400 NetServer Use

This chapter contains the minimum information needed to configure the PC as an IBM AS/400 Support for Windows Network Neighborhood (AS/400 NetServer) client. Instructions for setting up file and print sharing are available at the following Information Center locations:

- For file sharing, **Networking > TCP/IP > AS/400 NetServer > AS/400 NetServer file shares.**
- For print sharing, **Networking > TCP/IP > AS/400 NetServer > AS/400 NetServer print shares.**

Additional configuration instructions are available at the following locations:

- The iSeries Information Center at the following location: **Networking > TCP/IP > AS/400 NetServer > Getting Started with AS/400 NetServer.**
- In the redbook *The AS/400 Netserver Advantage*, SG24-5196-00.
- In the redbook *AS/400 Client Access Express for Windows: Implementing V4R4M0*, SG24-5191-00.

Installing Client Access Express over a network can be done using AS/400 NetServer. This support does not require any additional software on your PC. AS/400 NetServer takes advantage of the native file and print sharing capability in Windows 95, Windows 98, Windows Me, Windows 2000 and Windows NT, enabled using the X/Open Company industry-standard Server Message Block (SMB) protocol. In order to configure the PC for AS/400 NetServer use, you must have:

- TCP/IP configured on both the iSeries server and the PC (see “Chapter 6. Configuring TCP/IP on the iSeries server” on page 23 and “Chapter 8. Setting Up TCP/IP on the PC” on page 31).
- AS/400 NetServer configured on the iSeries server (see “Chapter 7. Configuring AS/400 NetServer on the iSeries server” on page 25).

Configuring the PC as an AS/400 NetServer Client

To configure your PC for AS/400 NetServer support, the steps vary depending on which operating system you are using. Go to the section below for your operating system.

1. **Check Windows 95/98/Me settings.**
 - a. From the Windows desktop, click **Start > Settings > Control Panel.**
 - b. Double-click **Network.**
 - c. Go to the **Configuration** tab and verify that you have Client for Microsoft Networks and TCP/IP added and configured.
 - d. Go to the **Identification** tab and verify that you have a unique Computer Name on the network.
 - e. Make sure that you have a valid Workgroup name that is configured (preferably the same one as the AS/400 NetServer Domain name)
 - f. Go to step 4 on page 38.
2. **Check Windows NT settings.**
 - a. From the Windows desktop, click **Start > Settings > Control Panel.**
 - b. Double-click **Network.**
 - c. Select **Services** and verify that you have workstation added.
 - d. Click on the **Identification** tab. Make sure that you have a unique Computer Name and a valid Domain (workgroup) name configured (preferably the same one as the AS/400 NetServer).

- e. Go to the **Protocols** tab and make sure that the TCP/IP Protocol is there and is configured properly.
 - f. Continue with step 4.
3. **Check Windows 2000 settings.**
- a. From the Windows desktop, right-click **My Network Places**. Then, click **Properties**.
 - b. Click **Network identification**. Make sure that you have a unique Computer Name and a valid Domain (workgroup) name configured (preferably the same one as the AS/400 NetServer).
 - c. Right-click your Local Area Connection icon and select **Properties**. Make sure that the TCP/IP Protocol is there and is configured properly.
 - d. Continue with step 4.

4. **Check TCP/IP Support.**

- a. Open a DOS window.
- b. There are two ways to check PC client to AS/400 NetServer connectivity. Type the following to make sure that your PC can talk to the AS/400 NetServer.

```
NBTSTAT -a AS/400-NetServer-server-name
```

If the NBTSTAT command fails, verify that your IP address resolution strategy is correct by trying the following:

```
PING AS/400-NetServer-server-name
```

- c. If your results fail, try adding an entry to the AS/400 NetServer to the PC's local LMHOSTS file.
 - 1) Look in either the \Windows directory for Windows 95/98/Me or the \WINNT\system32\drivers\etc directory for Windows NT for the LMHOSTS file.

Note: If you cannot find the LMHOSTS file in the specified directory, you have two options:

- create a new LMHOSTS file
- copy or rename LMHOSTS.SAM in that same directory to LMHOSTS

- 2) Complete instructions are provided in the LMHOSTS.SAM file.
- 3) Type the following to reload PC cache from the updated LMHOSTS file.

```
NBTSTAT -R
```

5. **Find AS/400 NetServer and Shared Resources.**

- a. From the Windows desktop, click **Start > Find > Computer**.
- b. Type in the AS/400 NetServer name. Double-click on the AS/400 NetServer name to display the AS/400 NetServer shares that the administrator has made available to you.

For more information about finding AS/400 Netserver, including troubleshooting tips, see the redbook *The AS/400 Netserver Advantage*, SG24-5196-00.

Chapter 10. Installing Client Access Express on the PC

You can install Client Access Express on a PC over a network by using AS/400 NetServer, from a CD-ROM, or from a peer server. Client Access Express does not support installation from diskettes.

If you are migrating from a previous client, please follow the instructions in "Chapter 11. Migrating to Client Access Express" on page 43.

If you are upgrading Client Access Express, you can install additional Client Access functions.

Caution:

Client Access Express works with InstallShield during setup. Anti-virus programs can interfere with the compatibility of InstallShield. You should disable any anti-virus programs that are running on your PC, before you install Client Access Express.

Notes:

1. To install the same functions on several PCs, you may consider using the silent install feature of Client Access Express. For information on silent installation, see the following Information Center location: **Client Access Express > Client Access Express Administration > Installing or migrating on multiple PCs.**
2. There are some components of Client Access Express that do not need the "Client Access Express required programs" component. They include Express User's Guide, Client Access Express Toolkit Headers, Lotus® 123 File Format Support, IBM Java Toolbox, SSL 56-bit and SSL 128-bit components, and Headers, Libraries and Documentation. Client Access Express will not automatically check for new Service Packs or Upgrades to be installed on the PC, unless **Client Access Express required programs** was installed.
3. On Windows NT 4.0 systems with multiple users configured, you **must** apply Windows NT 4.0 Service Pack 3 or later before you install Client Access Express. For any other Windows NT environment, you must install Service Pack 3 or later for SSL support.
4. Client Access installs MDAC 1.5 if you select any components that require database access and if MDAC 1.5 (or later) is not already installed. However, some functions require a higher level of MDAC. If you are going to use any of the following functions with the Client Access ODBC driver, you need to install MDAC 2.5 or later before you run them:
 - Connection pooling
 - MTS

In addition, all functions of the Client Access OLE DB provider require MDAC 2.5. Therefore, you need to install MDAC 2.5 or later before you install the Client Access OLE DB provider component.

If you are running Windows 95, you may need to install MS DCOM95 before installing MDAC 2.5.

Attention: If you do not install MDAC 2.5, Client Access Express will not allow the OLE DB component to be installed. If you have a **Typical** install with a

previous version of Client Access Express, and then you want to upgrade to V5R1M0, the OLE DB component will be deleted from your PC if MDAC 2.5 is not installed before the upgrade.

You can download MDAC 2.5 or later from this Microsoft Web Site:

<http://www.microsoft.com/data>

5. To install Client Access Express on a PC that is running Microsoft Windows Terminal Server Edition, follow the install instructions in Information APAR II11373. For information on obtaining APARs, see “Information Authorized Program Analysis Report (Information APAR) and PTFs” on page 55.
6. If you want to install the Operations Console component, see the manual *Operations Console Setup*, SC41-5508-02.

Using AS/400 NetServer to install Client Access Express

You must have AS/400 NetServer configured on your iSeries server and your PC configured to use AS/400 NetServer before following these instructions. If you have not already done so, follow the steps in “Chapter 7. Configuring AS/400 NetServer on the iSeries server” on page 25 and “Chapter 9. Configuring your PC for AS/400 NetServer Use” on page 37 to set up AS/400 NetServer.

Users installing from pre-V4R5 AS/400 NetServer onto Windows 2000 PCs will need to make sure that there are AS/400 NetServer PTFs applied to the iSeries server before doing the install. For more information, see Information APAR II11938.

To install Client Access Express from an AS/400 NetServer (instructions may vary depending on your Windows operating system):

1. From the Windows desktop, click **Start > Find > Computer**.

Note for Windows 2000 users: To quickly access the search computer function, right-click the **My Network places** icon, and then click **Search for Computers**.

2. Type in the AS/400 NetServer name that you want to use to install Client Access Express and click **Find Now**.

Note for all Windows users except Windows 95 users: If you cannot find AS/400 NetServer by name, type in the IP address instead of the AS/400 NetServer name. To find the IP address, perform a PING to the iSeries server as follows:

- a. Open a DOS window or Command Prompt.
 - b. Type PING system where system is the name of the iSeries server that you wish to connect to.
3. Double-click on the computer name when it appears. This starts the Windows Explorer.
 4. Double-click **QIBM > ProdData > Ca400 > Express > Install > Image > Setup.exe** to start the setup program.

Note: If the system administrator creates his own share point to the Image directory, you will **not** be able to install SSL, add-ins, plug-ins, and secondary languages that are installed on the iSeries server during the Client Access Express install. See the online help and Information Center for more information on SSL, add-ins, and plug-ins.

This starts the installation wizard. Step through the wizard and choose which kind of installation you want and where you want to store Client Access Express.

Installing Client Access Express from CD

To install Client Access Express from the *iSeries 400 Setup and Operations CD-ROM*, SK3T-4098-00 CD-ROM, do the following (For V5R1, the CD name changed from Client Access Family for Windows to iSeries 400 Setup and Operations):

1. Insert the CD-ROM in the optical device drive (for example, a CD-ROM drive).
2. If your optical device is set to automatically run programs, follow these steps:
 - a. In the Welcome window, click **Install Client Access Express for Windows (V5R1M0)**.
 - b. Go to step 4.
3. If your optical device is **not** set to automatically run programs, follow these steps:
 - a. Go to the root directory of the CD-ROM and double-click **launch.exe**.
 - b. In the Welcome window, click **Install Client Access Express for Windows (V5R1M0)**.
4. Once the Client Access Express setup program begins, follow the instructions and online help in the program.

Notes:

1. You cannot install Secure Sockets Layer (SSL) from the *iSeries 400 Setup and Operations CD-ROM*. This is because the Client Encryption products required (5722-CEx) are not packaged on the *iSeries 400 Setup and Operations CD-ROM*. To install SSL support on the PC, you must install from a server that has your desired 5722-CEx product installed.
2. You will not be able to install SSL, add-ins, plug-ins, and secondary languages that are installed on the iSeries server during Client Access Express installation. After the CD install completes, you can use selective install to add these components.
3. If you want to configure an install source for automatic Service Pack and release upgrades, use the **Service** page of **Client Access Properties**.

Note: If you are installing Client Access Express for the first time and you do not update the install source in Client Access Properties, CheckVersion will try to check the CD-ROM drive for service packs and upgrades. If you are upgrading Client Access Express and if CheckVersion is configured to check a certain directory, CheckVersion will check the directory and will not be changed to check the CD.

4. See the online help and Information Center for more information on SSL, add-ins, and plug-ins.

Installing Client Access Express from a Peer Server

If you do not have a file server but are in a LAN environment, you can install Client Access Express from the hard disk of one PC to all PCs on the LAN. To do this, you need to configure the PCs to enable the peer sharing feature of Windows, as described in the following sections.

Notes:

1. You cannot install SSL, add-ins, plug-ins, and secondary languages that are installed on the iSeries server during the peer server installation of Client Access Express. These products and features are not packaged with Client Access Express. After the install completes, you can use selective install to add these components.
2. To get the SSL component, select the server that has your desired 5722-CEx product installed as your source directory during selective setup.

3. To get add-ins, plug-ins or secondary languages, select the server that has these components as your source directory during selective setup.
4. If you want to configure an install source for automatic Service Pack and release upgrades, use the **Service** page of **Client Access Properties** after the install completes.
5. See the online help and Information Center for more information on SSL, add-ins, plug-ins and service.

Copy the Client Access Express Install Image to a server PC

To copy the Client Access Express install image to a server PC, you need to do the following:

1. Turn on file sharing on the PC. To turn on file sharing for your operating system, use the instructions that Microsoft provides.
2. Copy all files from the Express\Install\Image directory to the server directory where you want the install image stored.
3. Verify that your end users can access the server directory to install Client Access Express.

Install Client Access Express from Another PC

In order to install Client Access Express from a peer server, ensure that your PC is set up for peer connections:

1. From the Windows desktop, click **Start > Settings > Control Panel**.
2. Double-click **Network** from the Control Panel.
3. Select the **Identification** tab and enter a name for your PC and a workgroup (use the same workgroup name you have entered previously).
4. Click **OK** and restart your computer when prompted.

To install from a peer server:

1. From the Windows desktop, double-click the **Network Neighborhood** icon. A list of PCs that are in your workgroup will display.
2. Double-click on the PC that contains the Client Access Express install image. This will display any shared resources on that PC.
3. Double-click the drive where the Client Access Express install image is located.
4. Double-click **setup.exe** to begin the Client Access Express setup program.

Selective Setup

If you have Client Access Express installed on your PC and want to install an additional component of Express, you can use Selective Setup. Selective Setup allows you to install or remove individual components of Client Access Express. To start Selective Setup:

1. From the Windows desktop, click **Start > Programs > IBM AS/400 Client Access Express > Selective Setup**.
2. Follow the instructions and online help that are provided by Selective Setup

Chapter 11. Migrating to Client Access Express

Client Access Express includes a migration wizard that converts configuration information from previous clients in the Client Access family of products into the format that is used by Client Access Express for Windows. You can migrate information from the following clients to Client Access Express (XE1):

- Client Access for Windows 3.1 (XC1)
- Client Access Enhanced for Windows 3.1 (XK1)
- Client Access for Windows 95/NT (XD1), V3R1M3 and V3R2M0 only

The migration wizard starts automatically after the Client Access Express setup program has completed and the computer has been restarted. You can choose to run the wizard or wait until later and start it by clicking on the Migration Wizard icon. The migration wizard looks for data from Client Access for Windows 95/NT first. If it does not find that data, it looks for Client Access Enhanced for Windows 3.1 and Client Access for Windows 3.1 data.

Note:

- If the PC is used by different users that have individual user IDs on the PC, Client Access configuration information that is unique to each user will be migrated to Client Access Express.
- Migrating your clients to Express may affect the naming scheme that you should use for AS/400 NetServer. See “Chapter 7. Configuring AS/400 NetServer on the iSeries server” on page 25, for more information on AS/400 NetServer naming.

Migrating from Client Access for Windows 95/NT

Client Access for Windows 95/NT (XD1) and Client Access Express for Windows cannot co-exist on the same PC. If you are currently using Client Access for Windows 95/NT, the Client Access Express setup program will remove it before installing Client Access Express.

Note: Client Access Express will only migrate configuration information from V3R1M3 and V3R2M0 Client Access for Windows 95/NT.

The migration wizard gathers Client Access for Windows 95/NT configuration information and saves that information before Client Access for Windows 95/NT is uninstalled. The migration wizard creates a directory called CWBMI under the Windows directory. The Client Access Express install will not delete any of these configuration files since you may use them again if you decide to reinstall Client Access Express in the future. If you do not want these files on your PC, you will need to remove them manually after Client Access Express has been installed and the files have been migrated.

Read the following notes before you migrate to Client Access Express:

Notes:

1. Network drives are not available in Client Access Express. Therefore, you cannot migrate to Client Access Express over a Client Access network drives connection. Network drives will be uninstalled and will no longer exist in Client Access Express. In Client Access Express, network drives support is available only through AS/400 NetServer.

Network printers are also not available in Client Access Express. The Information Center provides more information on migrating network drives and printers to AS/400 NetServer file and print shares. More information can be found at the iSeries Information Center at the following location: **Client Access Express > Administering Client Access Express > AS/400 NetServer Administration**. From the AS/400 NetServer Administration topic, take the link to **AS/400 NetServer**, and then the link to **Getting Started with AS/400 NetServer**.

2. Data transfer configuration information is not migrated with the migration wizard. Data transfer configuration information is migrated when used in Client Access Express.
3. All environments are migrated, but only TCP/IP connections are migrated.
4. The active environment becomes the active environment for Client Access Express.
5. The Async console is not supported in the Client Access Express product. You can use Operations Console in Client Access Express for console support. If you need Async console, you need to stay with Client Access for Windows 95/NT on the console PC.
6. The only type of PC console that IBM @server iSeries 400 Models 270, 820, 830, and 840 support is Operations Console.
7. OS/400 V5R1 only supports Operations Console. If the console for an iSeries server is currently an Async console, you must migrate to Client Access Express V5R1M0 and configure an Operations Console session before upgrading OS/400 to V5R1. For information on setting up and configuring Operations Console, see the manual *Operations Console Setup*, SC41-5508-02.
8. If you had the following installed or configured on Client Access for Windows 95/NT and you chose to install them when you installed Client Access Express, they are migrated.
 - Environments and TCP/IP connections
 - Directory update
 - Password properties
 - Service pack properties
 - Language properties
 - Logging properties and tracing properties
 - Client Access desktop icons
 - Operations Navigator
 - PC5250 Emulation
 - AFP™ Workbench Viewer
 - SDK for ActiveX and OLE DB
 - ODBC data sources

Note: In V5R1M0 several ODBC DSN options have been removed and replaced with new options. Each option is associated with a keyword. For example, in V4R5 there were keywords named SCROLLABLE and RECBLOCK, and then in V5R1M0 the ODBC driver maps these keywords to new keywords as follows:

SCROLLABLE	BLOCKFETCH
0	1 (ON)
1	0 (OFF)
RECBLOCK	CONCURRENCY
0	1 (ON)
1	0 (OFF)
2	0 (OFF)

This applies not only when you are configuring a pre-V5R1 ODBC DSN through ODBC Administrator, but also when you are attempting to make a connection through ODBC. It is recommended that pre-V5R1 ODBC DSNs are configured once before being used to ensure that this mapping of keywords matches what is desired.

For the SEARCHPATTERN keyword, if this was set to 1 (ON) in V4R5, then an underscore was treated as a wildcard search pattern. In V5R1M0 the meaning of this keyword changes slightly. The keyword now controls the default behavior for the connection attribute SQL_ATTR_METADATA_ID. When making an ODBC connection, the driver calculates the default value for SQL_ATTR_METADATA_ID as follows:

SEARCHPATTERN	Value for SQL_ATTR_METADATA_ID
0	SQL_TRUE
1	SQL_FALSE

9. If you are not using a domain name server and you are going to configure additional iSeries servers, you need to update the HOSTS file on every PC that will be connecting to one or more of these iSeries servers. To do this, see "TCP/IP configuration on the PC - Updating the HOSTS file" on page 69.

To migrate from Client Access for Windows 95/NT, start the Client Access Express setup program as described in "Chapter 10. Installing Client Access Express on the PC" on page 39. The Client Access Express setup program:

- Gathers your configuration information for Client Access for Windows 95/NT and saves it
- Removes Client Access for Windows 95/NT
- Reboots the PC and automatically restarts after the reboot
- Installs Client Access Express
- Starts the Migration wizard

The migration wizard will then step you through the steps necessary to migrate from Client Access for Windows 95/NT.

See "Chapter 12. Using Client Access Express" on page 49 for information on how to use Client Access Express and for differences between Client Access for Windows 95/NT and Client Access Express. For information on migrating from Client Access for Windows 95/NT to Client Access Express while upgrading to Windows 2000, see "Migrating to Windows 2000" on page 69.

Migrating from Windows 3.1 Clients

Client Access Express supports a limited migration from Windows 3.1 clients. If you are migrating from Client Access Enhanced for Windows 3.1 (XK1), PC5250 information is the only information that migrates. If you are migrating from Client Access for Windows 3.1 (XC1), the only information that migrates is the RUMBA and PC5250 information. Client Access for Windows 3.1 and Client Access Enhanced for Windows 3.1 do **not** have to be removed before you install Client Access Express.

To install Client Access Express and migrate information from Client Access for Windows 3.1, do the following:

1. Install Client Access Express. See "Chapter 10. Installing Client Access Express on the PC" on page 39.

2. At the end of the Client Access Express setup program, the migration wizard starts. The migration wizard captures the following information for use by Client Access Express:

Client Access Enhanced for Windows 3.1

- a. PC5250 icon objects
- b. PC5250 terminal and printer session profiles
- c. PC5250 keyboard mappings
- d. PC5250 macros
- e. PC5250 popup keypads

Client Access for Windows 3.1

- a. RUMBA/400 icon objects (migrated to PC5250)
 - b. RUMBA/400 terminal and printer session profiles (migrated to PC5250)
 - c. RUMBA/400 keyboard mappings (migrated to PC5250)
 - d. PC5250 icon objects
 - e. PC5250 terminal and printer session profiles
 - f. PC5250 keyboard mappings
 - g. PC5250 macros
 - h. PC5250 popup keypads
3. See “Chapter 12. Using Client Access Express” on page 49 for information on how to use Client Access Express.

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Chapter 12. Using Client Access Express

You can find information on using Client Access Express in the **Express User's Guide**, an online help system available with Express. To open the Express User's Guide:

- From the Windows desktop, click **Start > Programs > IBM AS400 Client Access Express > Express User's Guide**

If you do not have the Express User's Guide installed, you can install it through Selective Setup.

Differences between Windows 95/NT client and Express

Client Access Express has simplified many functions of the previous clients, such as installing, configuring, and managing your system connections.

Install Client Access Express has been improved to give administrators more control over what end users may install. Client Access Express provides both required programs that must be installed and optionally installable components that facilitate and enhance your PC-to-iSeries server interaction.

iSeries connections

Configuration of connections to iSeries servers is easier now using Client Access Express. Client Access Express uses TCP/IP to connect to the iSeries server. Since Client Access Express uses only TCP/IP, the iSeries Connections program used by previous clients is no longer needed. Instead, you can specify the iSeries server to connect to when you run a Client Access Express application. Client Access Express maintains a list of iSeries servers that you recently connected to, called the system list.

Note: You can manage your system list through Operations Navigator. In fact, the default configuration parameters for each configured iSeries server can only be managed through Operations Navigator. An Operations Navigator icon and enough of the Operations Navigator function necessary to manage your connections will be installed, even if Operations Navigator is not installed.

Access to network drives and network printers

AS/400 NetServer is available with OS/400 V4R2 and later and provides support for file and print serving. Previous clients, such as Client Access for Windows 95/NT, included file and print serving within the client, though not without a price. Utilizing the capabilities of AS/400 NetServer allows for several advantages. They include a smaller PC client footprint and the elimination of background tasks and daemons. Using AS/400 NetServer allows Client Access Express to take advantage of the file and print sharing capabilities of Windows 95/98/Me/NT operating systems. You need to set up the AS/400 NetServer that comes with your V4R2 or later level of OS/400 to perform file and print serving to the iSeries server. For further information, see "Chapter 9. Configuring your PC for AS/400 NetServer Use" on page 37.

Secure Sockets Layer (SSL)

Client Access Express includes optionally installable support for Secure

Sockets Layer (SSL). SSL is a popular security scheme that allows the PC client to authenticate the server and encrypts all data and requests to the iSeries server.

AS/400 Desktop Icon wizard

You can create a desktop icon that will launch an application, such as Operations Navigator or PC5250, to provide easy connection to the iSeries server you specify. A step-by-step AS/400 Desktop Icon wizard is provided to guide you through the creation of the icon. Once created, you can change the icons properties. For example, you can change the application you would like the icon to launch.

Logging and tracing

A utility, Diagnostic Tools, provides a unified interface for starting, stopping, displaying, and working with the properties of the History log, Detail trace, and Entry point trace. When started, this utility is placed in the Windows system tray in the lower right corner of the desktop. Unlike previous Client Access clients, Express does not automatically start History logging. You must start them manually using the Diagnostic Tools utility. Starting with the V5R1 client, the log and trace files are stored by default beneath the My Documents folder of each user.

16-bit applications

Client Access Express does not support 16-bit applications.

ODBC

The Client Access Express ODBC driver, starting with V5R1, complies with the Microsoft ODBC version 3.5 specifications and includes support for Unicode, BIGINT (64-bit integer), and Microsoft Transaction Server (MTS) applications.

To see what is new in V5R1 for Client Access Express, see the Welcome Wizard. The Welcome Wizard is available after installation in the Client Access Express folder by clicking **Start > Programs > IBM AS400 Client Access Express > Welcome Wizard**. It also starts automatically after the installation of Client Access Express.

Chapter 13. Using Client Access Express with Facsimile Support for iSeries

Express provides the IBM AFP printer driver, which allows you to fax documents from your personal computer applications when used with Facsimile Support for iSeries. This fax support allows you to send documents to remote fax devices.

The following steps summarize the tasks you need to do to set up Client Access Express for faxing personal computer documents:

1. Create a fax printer device description on the iSeries server.
2. Set up a network printer on the workstation.

For information about how to use or install the Facsimile Support for iSeries product, refer to the following publications in the V4R2 Online Library:

- *Facsimile Support for AS/400 Installation Guide*, SC41-0654.
- *Facsimile Support for AS/400 User's Guide*, SC41-0655

Note: These publications are no longer being updated.

Create a Fax Printer Device Description on the iSeries server

1. Type STRFAXSPT at the iSeries command prompt and press the F4 Prompt key to display the parameters for the STRFAXSPT command.
2. Specify a fax description. This can be a fax description you previously configured.
3. Specify *YES for the Enhanced services (EHNSRV) parameter.
4. Press Enter.

This starts the Enhanced Services and creates the QFQFS4PRTD printer device, which is required for faxing personal computer documents. The QFQFAXSRV job is started in the QFQSBS subsystem and processes the personal computer documents as they are received on the QFQFS4PRTD output queue.

The printer share that is set up for Facsimile Support must be configured to use the output queue QFQFS4PRTD and a spooled file type of Advanced Function Printing™. For information on creating a printer share, see the online Express User's Guide.

Set up a network printer on the Client Access Express PC

To set up a network printer, you must have a connection to an iSeries server.

1. From the Windows desktop, click **Start > Find > Computer**.
2. Enter the AS/400 NetServer server name and click the Find Now button. If AS/400 NetServer is not found, you may need to start AS/400 NetServer on the iSeries server.
3. Double-click on the AS/400 NetServer name in the list below. A dialog will appear with currently configured AS/400 NetServer file and print shares. If no print shares are listed, you may need to configure one.

Note: You can configure a print share from the Printers in Operations Navigator. Right click the printer (this assumes a printer has been configured on the iSeries server) and select **Sharing**. This brings up the

AS/400 NetServer print share dialog box where you can specify the share name, description, printer file, etc.

4. Right click the printer share you wish to use, click Install, then follow the online instructions.

Note: When presented with the **Add Printer Wizard** and asked to select the manufacturer and model of your printer, choose **IBM** as the manufacturer and **IBM AFP Facsimile Support/400** as the printer.

5. For more information, visit the iSeries Information Center at the following location: **Client Access Express > Administering Client Access Express > AS/400 NetServer Administration**. From the AS/400 NetServer Administration topic, take the link to **AS/400 NetServer**, and then the link to **Getting Started with AS/400 NetServer**.

Part 5. Appendixes

Appendix A. Sources of Information for Client Access Express

There are several places you can find additional information about Client Access Express.

Information Authorized Program Analysis Report (Information APAR) and PTFs

An **Information Authorized Program Analysis Report (Info APAR)** is an electronic document that is used to communicate information not found in publications, the online Express User's Guide, critical fix information, or other sources.

Information APARs for Client Access Express are available on the Internet or from the IBM fax information service. If you have Internet access, you can view the index to Client Access Express Information APARs at:

<http://www.ibm.com/eserver/iseries/clientaccess/caiixe1.htm>

Program temporary fixes (PTFs) are available to ensure that you have the latest program fixes for OS/400 and Client Access Express.

You can also get the APARs and PTFs for Client Access Express by using the Electronic Customer Support feature on your iSeries server. You need to have Electronic Customer Support configured and operational.

You can order informational APARs just like a PTF. You will receive a cover letter that contains all of the information in the APAR, however, no code or 'fix' comes with it.

To order an Information APAR, use the following OS/400 command:

```
SNDPTFORD PTFID(IIxxxxx)
```

where IIxxxxx is the APAR number.

After you loaded the APAR on the iSeries server, display or print it using the following:

```
DSPPTF LICPGM(INFOAS4)
```

For example, to see Client Access Express information APAR II11853, use the following command:

```
DSPPTF LICPGM(INFOAS4)
```

Look for II11853. When you find it, use Option 5 to display.

Using the SNDPTFORD command requires Electronic Customer Support to be enabled on your iSeries server. If electronic customer support is not enabled, order the Information APAR the way that you normally get PTFs.

If you are not sure if an APAR is on your iSeries server, use the following to display all APARs:

1. Start Programming Development Manager (STRPDM)
2. Work with Members
3. File(QAPZCOVER), Library(QGPL), Name and Type(*ALL)

Client Access Express Information on the Web

IBM has a wealth of information on the Internet. The iSeries Information Center contains many articles about the iSeries server, including Client Access Express administrating and programming information. It also contains links to the Information Center: Supplemental Manuals site (replaces the Online Library site) and the IBM home page. The Information Center can be accessed at:

www.ibm.com/eserver/series/infocenter

In addition, you can access information on the World Wide Web (WWW) from the Client Access Express folder. This folder is available after you install Client Access Express. Click the **Internet Information** icon. Other places you may want to get information from are listed in the following table, along with their web page addresses.

Table 8. Web Page Addresses Related to Client Access Express

Web Page Address	Title
www.ibm.com	IBM Home Page
www.ibm.com/eserver/series	IBM iSeries Home Page
www.ibm.com/eserver/series/clientaccess	IBM iSeries Client Access Home Page
www.ibm.com/eserver/series/oper_nav	IBM Operations Navigator Home Page
www.ibm.com/eserver/series/netserver	IBM AS/400 NetServer Home Page
www.pc.ibm.com	IBM Personal Computers Home Page
www.software.ibm.com	IBM Software Home Page
www.as400service.ibm.com	IBM AS/400 Service Home Page
www.networking.ibm.com	IBM Networking Home Page
www.networking.ibm.com/525	IBM Headquarters for 5250 Emulation Software and Hardware
www.ibm.com/software/network/pcomm/	IBM Personal Communications
www.redbooks.ibm.com	IBM Redbooks Home Page

Client Access Express ReadMe File

The Client Access Express ReadMe file (README.TXT) is on the CD-ROM and in the Client Access Express folder on your desktop after you install Client Access Express. The ReadMe file contains important information or technical changes to the product that were too late to include in the documentation.

README.TXT is also in the Client Access Express install image on AS/400 and you can view it there prior to installation.

Express User's Guide

After installing Client Access Express, you have a valuable resource at your fingertips called the online **Express User's Guide**. This guide helps you find and correct problems and contains how-to procedures. Use the index in the guide to search for a specific topic. The Express User's Guide walks you through many complex situations and helps you solve most problems.

Note: You may not have the Express User's Guide installed if you performed a custom or 5250 User install of Client Access Express. You can install the Express User's Guide through Selective Setup.

Related Information

You may need to refer to other IBM books or the Information Center for more specific information about a particular topic.

Books:

- *AS/400 Road Map for Changing to PowerPC Technology*, SA41-5150
- *AS/400 Road Map for Changing to PowerPC Technology*, SA41-5150-05
- *Communications Configuration*, SC41-5401-00
- *Getting Started with Integrated Netfinity Server*, SC41-5123-01
- *LAN, Frame-Relay and ATM Support*, SC41-5404-01
- *Remote Work Station Support*, SC41-5402-00
- *Software Installation*, SC41-5120-05
- *iSeries Security Reference*, SC41-5302-04
- *Getting Your AS/400 Working For You*, SC41-5161
- These redbooks:
 - *AS/400 Client Access Express for Windows: Implementing V4R4M0*, SG24-5191-00
 - *The AS/400 Netserver Advantage*, SG24-5196-00
 - *AS/400 Printing IV*, GG24-4389

Notes:

1. You can view these books at this Web site:
<http://publib.boulder.ibm.com/>
2. For an additional list of Client Access and related books, see the following Web site:
<http://www.ibm.com/eserver/iseries/clientaccess/calib.htm>

Information Center:

- TCP/IP topic located under Networking
- Systems Management topic
- Host server administration topic located under **Client Access Express -> Administering Client Access Express**

Appendix B. PC5250 Information

Lao Support

Installation of Fonts

Client Access Express installs the correct PC5250 fonts based on the ANSI code page of the PC. At the time of this writing, there is no Lao version of Windows. The ANSI code page is not set to Lao and the Lao fonts are not installed during a typical install.

To install the Lao fonts, use the Client Access Express Custom install or Selective install. On the component selection dialog, click **5250 Display and Emulator > Standard PC5250 > PC5250 Fonts** and check Lao Fonts.

After the install is complete, you **MUST** change a variable in the **win.ini** file that is located in your Windows directory. Edit the file, find **sCountry** and change **sCountry = United States** to **sCountry = Laos**.

Configuring a PC5250 session for Lao Support

From the PC5250 window menu bar:

1. Click **Communication > Configure**.
2. Click the **Host Code-Page** arrow and select 1132 Lao.

To enable Lao keyboard:

1. Click **Edit> Preferences> Keyboard....**
2. Select Lao for the **Keyboard Layout**.

Lao Display Mode Selection (Lao only)

From the PC5250 window menu bar:

1. Click **Edit> Preferences**.
2. Select the **Appearance** pull-down menu while in the emulator session.
3. Select **> Lao Compose Mode....**

Switching between Lao and Latin Keyboard

Press either **Alt+left shift** or **Alt+right shift** to toggle between the Lao and Latin Keyboards.

Language Shift Status

The language shift indicator is shown in the status line of each emulator session. If the keyboard is in Lao language shift, the indicator 'Lao' is shown in the status line.

Lao Display Composed mode

Mode 1

Non-compose mode

There is no character composing in this mode.

Mode 2

Composed Mode

Lao character is auto composed in this mode. No column realignment is performed.

Mode 3

Composed with space alignment

During this mode of composing, column realignment is also performed by three consecutive spaces. When the composing routine finds three consecutive spaces, column realignment occurs. So, if all fields have at least three trailing spaces, then all fields of all records are properly aligned.

Mode 4

Composed with EOF alignment

During this mode of composing, column realignment is also performed by the EOF character (Hexadecimal 'EA'). When the composing routine finds a single EOF, it deletes this character and performs column realignment. If two consecutive EOFs are found, no realignment occurs; one EOF is deleted and one is treated as data.

Mode 5

Composed with space and EOF alignment

This mode of composing performs the column realignment functions of both Mode 3 and Mode 4.

Lao-Scaleable (Truetype) Font for Printing

PC5250 provides a Lao Truetype font (Khamla).

To print Lao characters, you have to install the Lao scaleable (Truetype) font. See "Installation of Fonts" on page 59.

Print Space Adjustment

If any printer needs space adjustment for Lao printing, add the following statement to the PCSWIN.INI in the PRIVATE directory:

```
[Lao]  
PrintAdjust=x
```

The value of x can be:

- 0 = no adjustment (same as no PrintAdjust statement)
- 1 = Perform adjustment when find three consecutive spaces
- 2 = Perform adjustment when find EOF character
- 3 = Perform adjustment when find three consecutive spaces or EOF character (1 and 2 combined)

Configuring PC5250 for Thai (Thai only)

1. Click **Communication > Configure**.
2. Click the **Host Code-Page** arrow and select 838 Thai.
3. To enable Thai keyboard input (while you are in a PC5250 session):
 1. Click **Edit > Preferences > Keyboard...**
 2. Select Thai for the **Keyboard Layout**.

Note: Thai features are enabled when Client Access runs on Windows 95/98/Me only and these Thai setting are the defaults.

Thai Display Mode Selection (Thai only)

Click Edit > Preferences > Thai Compose Mode....

Switching between Thai and Latin Keyboard

Press either Alt+left shift or Alt+right shift to toggle between the Thai and Latin Keyboards.

Language Shift Status (Thai only)

The language shift indicator is shown in the status line of each emulator session. If the keyboard is in Thai language shift, the indicator 'TH' is shown in the status line.

Thai Display Composed mode (Thai only)

Mode 1

Non-compose mode

There is no character composing in this mode.

Mode 2

Composed Mode

Thai character is auto that is composed in this mode. No column realignment is performed.

Mode 3

Composed with space alignment

During this mode of composing, column realignment is also performed by three consecutive spaces. When the composing routine finds three consecutive spaces, column realignment occurs. So, if all fields have at least three trailing spaces, then all fields of all records are properly aligned.

Mode 4

Composed with EOF alignment

During this mode of composing, column realignment is also performed by the EOF character (Hexadecimal 'EA'). When the composing routine finds a single EOF, it deletes this character and performs column realignment. If two consecutive EOFs are found, no realignment occurs; one EOF is deleted and one is treated as data.

Mode 5

Composed with space and EOF alignment

This mode of composing performs the column realignment functions of both Mode 3 and Mode 4.

Bidirectional Arabic Support

Limitations

- The Bidirectional Text Assist component is not supported in the PC5250 iSeries component. As a result, the user cannot run Bidirectional OfficeVision/400™.
- If running under Arabic Windows, COPYLINK component produces unexpected results with Arabic letters.

Installation Tips

- After PC5250 is installed, please follow the steps that are defined in the online Express User's Guide to install the Arabic font file PCSANSIA.FON. This can be found under the heading of **Special Fonts for PC5250**.
- To set up an Arabic WorkStation, verify that you have fulfilled the following definitions:
 - Click **Communication > Configure**.
 - Click the **Host Code-Page** arrow and select 420 Arabic Speaking.
 - Click **Edit > Preferences > Keyboard....**
 - Select **Hebrew (Bulletin Code or Old Code)** as the **Keyboard Layout**.
 - Click **Edit > Preferences > Appearance > Font....** Select **Font Size** from the **Appearance** pull-down menu. Select **ARB3270** at the **Automatic Sizing** list box or at the **Fixed size** font selection. This ensures that the active font for display is the Arabic font.
 - Click **Edit > Preferences > API....** Select **864** as the **DDE/EHLLAPI PC Code-Page**.

Bidirectional Keyboard Components

This section describes the keys and components that are unique to Bidirectional PC5250 support.

The keys unique to Bidirectional PC5250 support are:

- Language selection

This component is activated by the key combination **ALT + SHIFT**.

This component allows changing the language layer. If the language layer is Latin, by pressing **ALT + RightShift** key combination the language layer will change to Arabic. If the language layer is Arabic, by pressing **ALT + LeftShift** this key combination, the language layer will change to Latin.

- Screen Reverse

This component is activated by the key combination **ALT + ENTER**.

This component reverses the screen image. If the screen orientation is Left-to-Right, by pressing this key combination the screen image will be reversed to Right-to-Left. If the screen orientation is Right-to-Left, pressing this key combination the screen image is reversed to Left-to-Right.

Note that the operator information area is not reversed by this operation.

When the screen orientation is changed, the language layer is changed to the default language of the new screen orientation. If the screen is reversed to Right-to-Left, then the language is changed to Arabic. If the screen is reversed to Left-to-Right, then the language is changed to Latin.

The inversion of the screen causes directional characters to be replaced by their counterparts.

- Field Reverse

This component is activated by the key combination **NumLock**.

This component toggles the field orientation to either Left-to-Right or Right-to-Left. The text in the field is not inverted. The cursor orientation is set equal to the new field orientation, and the language layer is selected accordingly.

If the cursor was in the first logical position of a field or line, when selecting field reverse component, the cursor skips to the other side of that field or line, which now becomes the first logical position. If the cursor was not in the first position of the field or line, when selecting field reverse component, the cursor remains in its position and allows natural and correct editing of existing text.

- Close

This component is activated by the key combination **NumPad /**.

This component is provided so that the data entered in one keying direction can be concatenated with the data that was previously entered in the opposite direction. It operates as follows:

- All embedded Nulls are removed from the current line.
 - Concatenated text is moved to the right bound of the field (if the field direction is right-to-left) or to the left bound (if the field direction is left-to-right).
 - The cursor direction is set to the field direction
 - The language layer is set to the default for the field direction
 - If the cursor position is now Left-to-Right, the cursor is positioned at the first null to the right of the concatenated text.
 - If the cursor position is now Right-to-left, the cursor is positioned at the first null to the left of the concatenated text.
- **BASE**

This component is activated by the key combination "CTRL + HOME".

The "BASE" key is a toggle key that activates or deactivates the Automatic Shape determination component for Arabic RTL text. It is valid only when processing RTL Arabic text. If it is pressed in an LTR field an operator error 0027 results.

Operator Information Area Indicators

In the Host session the bottom line of the screen is called the Operator Information Area (OIA). This line is always displayed from Left-to-Right. In the Arabic environment, the following symbols were added:

- Language Indicator:
 - Isolated **EIN**- Current language, Arabic
 - E - Current language, English
- Screen Direction:
 - S> - Left-to-Right screen direction
 - <S - Right-to-Left screen direction
- Typing Direction
 - => - Left-to-Right direction
 - <= - Right-to-Left direction
- Arabic Character Shape Mode:
 - The character **Alef-Madda**: indicates CSD mode.
 - Isolated **GHEIN**: indicates Base or Isolated Shaping Mode.

Bidirectional Hebrew Support

Limitations

- If running under Hebrew Windows, cut & paste with Windows applications might produce unexpected results.
- The Keyboard re-map function that is available for the Windows-mode product - supports re-mapping of Hebrew and Bi-Directional components only for the data keys (The 61 keys which are located on the main part of the enhanced keyboard).

Installation Tips

- After PC5250 is installed, please follow the steps defined in the online Express User's Guide to install the Hebrew font file PCSANSIH.FON. This can be found under the heading of **Special Fonts for PC5250**.
- To setup a Hebrew WorkStation, verify that you have fulfilled the following definitions:

- Click **Communication > Configure**.
- Click the **Host Code-Page** arrow and select 424 Hebrew.
- Click **Edit > Preferences > Keyboard...**
- Select **Hebrew** (Bulletin Code or Old Code) as the **Keyboard Layout**.
- Click **Edit > Preferences > Appearance > Font....** Select **HEB3270** at the **Automatic Sizing** list box or at the **Fixed size** font selection. This ensures that the active font for display is the Hebrew font.
- Click **Edit > Preferences > API...** Select **862** or **916** as the **DDE/EHLLAPI PC Code-Page**.
-

Bidirectional Keyboard Components

This section describes the keys and components that are unique to Bidirectional PC5250 support.

The keys unique to Bidirectional PC5250 support are:

- Language selection

This component is activated by the key combination **ALT + SHIFT**.

This component allows changing the language layer. If the language layer is Latin, by pressing **ALT + RightShift** key combination the language layer will change to Hebrew. If the language layer is Hebrew, by pressing **ALT + LeftShift** key combination, the language layer will change to Latin.

- Screen Reverse

This component is activated by the key combination **ALT + ENTER**.

This component reverses the screen image. If the screen orientation is Left-to-Right, pressing this key combination, the screen image is reversed to Right-to-Left. If the screen orientation is Right-to-Left, pressing this key combination, the screen image is reversed to Left-to-Right.

Note: The operator information area is not reversed by this operation. When the screen orientation is changed, the language layer is changed to the default language of the new screen orientation. If the screen is reversed to Right-to-Left, then the language is changed to Hebrew. If the screen is reversed to Left-to-Right, then the language is changed to Latin.

- Field Reverse

This component is activated by the key combination **Numlock**.

This component toggles the field orientation to either Left-to-Right or Right-to-Left. The text in the field is not inverted. The cursor orientation is set equal to the new field orientation, and the language layer is selected accordingly. If the cursor was in the first logical position of a field or line, when selecting field reverse component, the cursor skips to the other side of that field or line. The other side now becomes the first logical position. If the cursor was not in the first position of the field or line, when selecting field reverse component, the cursor remains in its position. This allows natural and correct editing of existing text.

- Close

This component is activated by the key combination **NumPad /**.

This component is provided so that the data entered in one keying direction can be concatenated with the data that was previously entered in the opposite direction. It operates as follows:

- All embedded null characters are removed from the current line (or field, if the field is contained on one line).

- Joined text is moved to the RIGHT bound of the field if the field direction is RIGHT-TO-LEFT. It is moved to the LEFT bound if the field direction is LEFT-TO-RIGHT.
- The remainder of the line (or the field, if contained on the same line) is padded with the NULL characters.
- The cursor direction is set to the field direction.
- If the cursor direction is now LEFT-TO-RIGHT, the cursor is positioned at the first NULL character to RIGHT of the joined text. If the cursor direction is now RIGHT-TO-LEFT, the cursor is positioned at the first NULL character to LEFT of the joined text.
- Insert mode is reset.

Operator Information Area Indicators

In the Host session the bottom line of the screen is called the Operator Information Area (OIA). This line is always displayed from Left to-Right. In the Hebrew environment, the following symbols were added:

- Language Indicator:
 - H - Current language, Hebrew
 - E - Current language, English
- Screen Direction:
 - S> - Left-to-Right screen direction
 - <S - Right-to-Left screen direction
- Typing Direction
 - => - Left-to-Right direction
 - <= - Right-to-Left direction

Appendix C. Problems and Problem Reporting

Technical Support

See the following sources for known problems:

- AS/400 Technical Support Web Site
<http://www.as400service.ibm.com>
- APARs and Information APARs
http://as400service.rochester.ibm.com/n_dir/nas4apar.nsf/nas4aparhome
- Support Line Knowledge Base
<http://as400service.rochester.ibm.com/supporthome.nsf/Document/10000051>
- Client Access Information APARs (known problems and support statements)
<http://www.ibm.com/eserver/series/clientaccess/caiipar.htm>
- Client Access Frequently Asked Questions (marketing, strategy, ordering, support, links to forums, etc.)
<http://www.ibm.com/eserver/series/clientaccess/cafaq.htm>

For other sources of information for Client Access Express, see “Appendix A. Sources of Information for Client Access Express” on page 55.

Overlaid Icons

After you install Client Access Express on your PC, it may look like some of the components were not installed because some icons seem to be missing. These icons are actually overlaying each other. To fix this:

- Open the folder that has the problem.
- Press the right mouse button.
- Select the Arrange Icons option.

The icons are arranged and you can now see all of them.

Dial-Up Networking Prompt

If you see a Dial-Up Networking unwanted prompt, one of the following may apply to you. Either you have Internet Access or you may need to make some changes to your Dial-Up Networking configuration to stop this.

- If you have Internet access:
 1. From the Windows desktop, click **Start > Settings > Control Panel**. You see the Control Panel folder.
 2. From the Control Panel folder, double-click on the Internet item. In the next panel, uncheck the box for the **Use Autodial** option.
- If Internet access is not your problem:
 1. You need to make some changes to the Dial-Up Networking settings.
 - a. From the Windows desktop, click **Start > Programs > Accessories > Dial-Up Networking**. You see the Dial-Up Networking folder.
 - b. From the Dial-Up Networking folder, click **Connections**, then click on **Settings**. You see the Dial-Up Networking properties page.
 - c. Click **Don't prompt to use Dial-Up Networking**.
 - d. Click **OK** to save your change. Now if you want to use Dial-Up Networking, you have to manually start it.
 2. You also need to make a change to your Network configuration.

- a. From the Windows desktop, click **Start > Settings > Control Panel**. You see the Control Panel folder.
- b. From the Control Panel folder, double-click the **Network** icon. You see the Network property page.
- c. You need to "bind" the Dial-Up Networking only to those protocols that you intend to use over the remote connection. Look for a TCP/IP protocol in your list. Click to select it, then click the **Properties** button.
- d. Click the **Bindings** tab and make sure that Dial-Up Networking is only checked for the protocol you use for your Internet provider or external access.

To get full auto-dial support, you need to be at Windows 95 Service Pack 1 or OSR2 with Internet Explorer 2.x or higher installed. Within the properties of Internet Explorer, there is a "Connect to the Internet as needed" prompt. This prompt enables or disables the auto-dial feature for the TCP/IP stack.

Problem Reporting - Gathering Information for IBM Support

If you decide to open a problem record to IBM Support, please have the following information available when you place the call:

- The level of Client Access Express on the PC:
From the Windows desktop, click **Start > Programs > IBM AS400 Client Access Express > Client Access Properties**. From the General tab, record the Version, Release, Modification Level, and Service Level.
- The iSeries Cumulative PTF level.
Type DSPPTF (Display Program Temporary Fix) on the iSeries command prompt. Record the first PTF ID in the list. It will have the format Tzxyyy where xx is the year, yyy is the julian date and z is either L or C.
- The IBM Operating System/400 (OS/400) version (for example, V5R1M0).
You can also find this at the DSPPTF screen. Record the Release field at the top of the screen.
- The version of Dial-Up Networking, if you are connecting over a SLIP or PPP connection.
- The PC application used and its version.
- A description of what you were attempting when the failure occurred.
- The exact text and error numbers of any error message that the PC application produced.

Note: If you do not have a printer attached to the PC, press the Print Screen key to copy a bitmap of the current screen to the clipboard. Open the Microsoft Windows Paint accessory or WordPad under the Accessories group. Select Edit, Paste, and then save this printed screen in a file for future reference.

- Any VLOGs that are generated at the time the error occurred, if the VLOGs have any of the following codes:
 - Major code of 0700 and a minor code of either F230 or F299
 - Major code of 4400 and any minor code
 - Major code of 4401 and any minor code

Also, if the problem you are having is ODBC-related:

- The version of the PC's ODBC driver.
Use the Windows Explorer to find CWBODBC.DLL in the Client Access directory. Place the cursor on CWBODBC.DLL and click the right mouse button. Select Properties from the menu. Go to the Version page and record the File version.

- The QZDASOINIT job log if it was produced.

Migrating to Windows 2000

Users who have Client Access Express or Client Access for Windows 95/NT installed and who want to upgrade to Windows 2000, need to follow the following recommendations.

Do the following to upgrade to Windows 2000 (**Exception:** If you are upgrading Express from Windows NT 4.0 and the PC5250, SSL, AFP Printer Driver, and SCS Printer Driver components are not installed, you can proceed to upgrade to Windows 2000. If the PC5250, SSL, AFP Printer Driver, and SCS Printer Driver components are installed, you can uninstall them, and then reinstall them after the upgrade):

1. If you are migrating to a Windows 2000 PC with Client Access Express running in an NTFS partition, there are some special considerations that you need to be aware of. For more information, see the Information Center under **Client Access Express -> Getting started with Client Access Express -> Client Access family of products**.
2. Uninstall Client Access Express or Client Access for Windows 95/NT.
3. Upgrade to Windows 2000.
4. Install Client Access Express

TCP/IP configuration on the PC - Updating the HOSTS file

If you are migrating from Client Access for Windows 95/NT to Client Access Express and you are not using a domain name server, be aware that Express does not modify the HOSTS file. You need to manually add to the HOSTS file any new iSeries connections that you configure. The HOSTS file needs to contain the IP address and the name of the iSeries server that you want to connect to.

If you do not update the HOSTS file, you get one of the following error messages:

```
CWBC01003 - Winsock error function returned 11001, [system name]
CWBC01010 - Remote address could not be resolved
```

These messages reveal that the iSeries system name was not found during TCP/IP lookup. You will also experience a blank 5250 emulation screen.

To update the HOSTS file:

1. Open a DOS window.
2. Change to the directory that should contain the HOSTS file. For example:
c:\>cd\winnt\system32\drivers\etc

Note: The examples in this section use the \winnt\system32\drivers\etc directory, which is a Windows NT and Windows 2000 directory. On Windows 95 and Windows 98, the directory would be \windows.

3. Edit the HOSTS file. For example:
c:\winnt\system32\drivers\etc>edit hosts

Please Note

With Windows NT 4.0 and Windows 2000, the HOSTS file MUST be in the **winnt\system32\drivers\etc** directory.

Follow the instructions in the HOSTS sample file to add the IP address and name of the iSeries server that you want to connect to.

4. Save the HOSTS file.

Note: For PC5250, if you do not use a domain name server (DNS) or hosts table, you cannot use a system name or host name to start the 5250 emulator delivered with Client Access Express. The left bottom corner of your emulation display indicates a 657 communication error (*Resolving TELNET 5250 server host-domain name*). You may, however, use the iSeries IP address (For example, 10.20.30.40) in place of a name.

You may choose to use a HOSTS file if you have very few machines using TCP/IP. This requires that you maintain an up-to-date list on each computer. When an iSeries address changes, you **must** change the HOSTS file entry if one exists.

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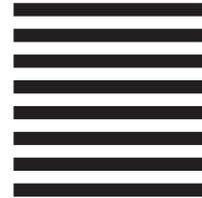
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