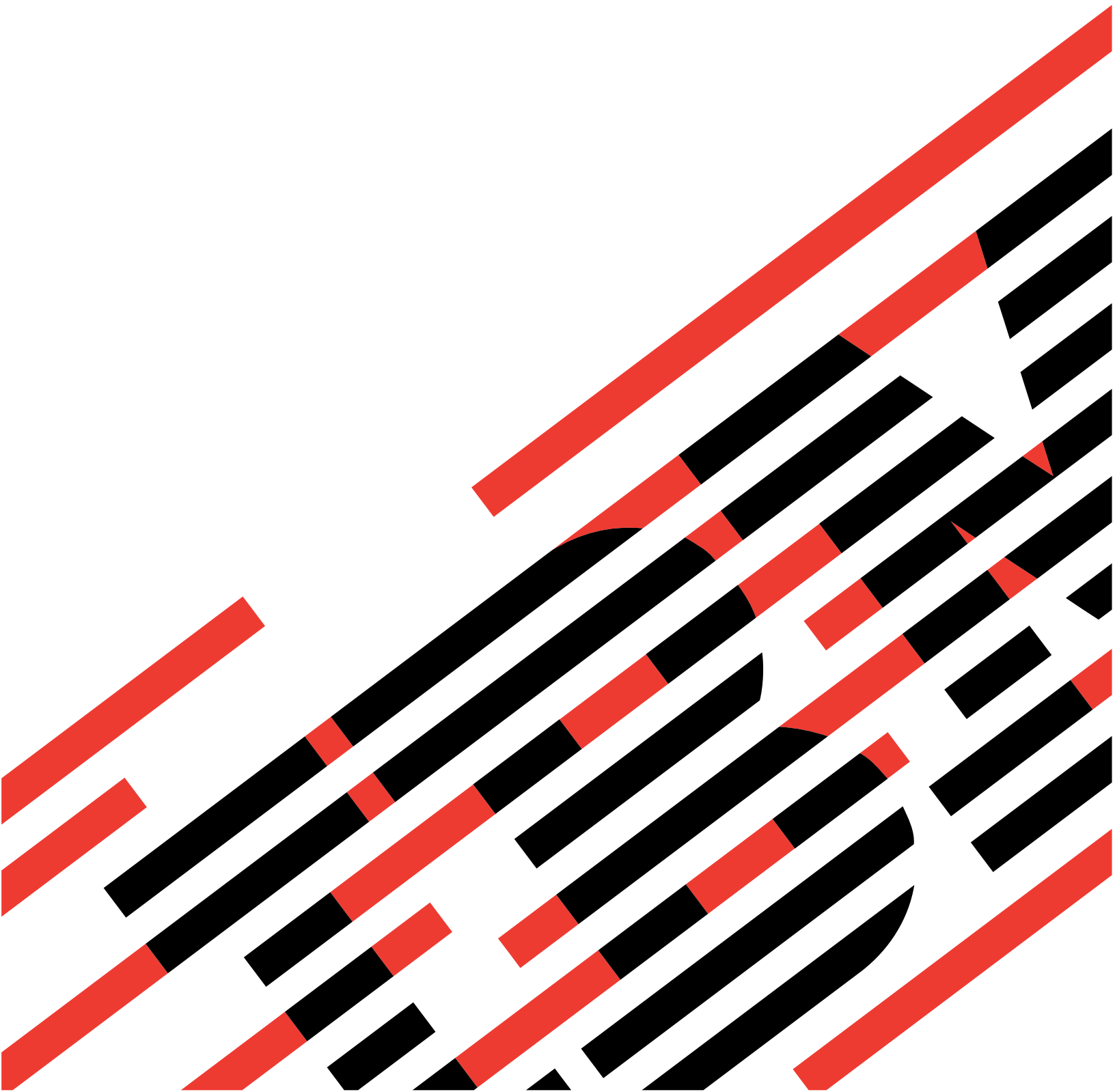
IBM

eserver

iSeries

Operations Console Setup

SC41-5508-02



iSeries

Operations Console Setup

SC41-5508-02

Note

Before using this information and the product it supports, be sure to read the information in "Safety and Environmental Notices" on page v and "Notices" on page 135.

Third Edition (May 2001)

This edition replaces SC41-5508-01. This edition applies only to reduced instruction set computer (RISC) systems.

© Copyright International Business Machines Corporation 1999, 2001. All rights reserved.
US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

© Copyright IBM Corp. 1999, 2001

Safety and Environmental Notices

DANGER

An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)

DANGER

To prevent a possible electrical shock when installing the device, ensure that the power cord for that device is unplugged before installing signal cables. (RSFTD204)

DANGER

To prevent a possible electrical shock when adding the device to a system, disconnect all power cords, if possible, from the existing system before connecting the signal cable to that device. (RSFTD205)

DANGER

To prevent a possible electrical shock during an electrical storm, do not connect or disconnect cables or station protectors for communications lines, display stations, printers, or telephones. (RSFTD003)

Product Recycling and Disposal

Components of the system, such as structural parts and circuit cards, can be recycled where recycling facilities exist. IBM does not currently collect and recycle used IBM products from customers in the United States other than those products that are involved in trade-in programs. Companies are available to disassemble, reutilize, recycle, or dispose of electronic products. Contact an IBM account representative for more information.

The system unit contains batteries and circuit boards with lead solder. Before you dispose of this unit, these batteries and circuit boards must be removed and discarded according to local regulations or recycled where facilities exist. This book contains specific information on each battery type where applicable.

Battery Return Program

In the United States, IBM has established a collection process for reuse, recycling, or proper disposal of used IBM batteries and battery packs. For information on proper disposal of the batteries in this unit, please contact IBM at 1-800-426-4333. Please have the IBM part number that is listed on the battery available when you make your call. For information on battery disposal outside the United States, contact your local waste disposal facility.

© Copyright IBM Corp. 1999, 2001

Environmental Design

The environmental efforts that have gone into the design of the system signify IBM's commitment to improve the quality of its products and processes. Some of these accomplishments include the elimination of the use of Class I ozone-depleting chemicals in the manufacturing process, reductions in manufacturing wastes, and increased product energy efficiency. For more information, contact an IBM account representative.

About Operations Console Setup (SC41-5508)

Use this book to install and configure Operations Console on the iSeries system and the PC. Installation and configuration is necessary on both the iSeries system and the PC.

Who should read this book

You should read and use this book if you are responsible for installing and configuring Operations Console.

EZ-Setup

The EZ-Setup wizard automates many of the iSeries setup tasks and is shipped as part of Client Access Express for Windows. It can be used in place of this book if you are *only* setting up Operations Console with directly cabled connectivity. If you want to configure Operations Console with LAN connectivity or a remote controlling system, you have to use this book. This wizard will install AS/400 Client Access Express for Windows and configure Operations Console.

If you ordered your iSeries server with feature code 0140 or 0205 use the iSeries 400 Setup and Operations CD-ROM and choose the following options on the CD browser:

1. Select **Set up your iSeries 400**.
2. Select **Use wizard and configure PC as console**.
3. Select **Operations Console setup**.

If you are setting up a new iSeries server preloaded with OS/400 V5R1 (including option 12 of the operating system, `OS/400 - HOST Servers`) and using the iSeries 400 Setup and Operations CD-ROM, start with the cabling instructions in the cabling poster and choose the following options on the CD browser:

1. Select **Set up your iSeries 400**.
2. Select **Use wizard and configure PC as console**.
3. Select **EZ-Setup wizard**.

If you are replacing an existing console with Operations Console and using the iSeries 400 Setup and Operations CD-ROM, start with the cabling instructions that came with your Operations Console cable and choose the following options on the CD browser:

1. Select **Set up your iSeries 400**.
2. Select **Use wizard and configure PC as console**.
3. Select **Operations Console setup**.

If you want to change your Operations Console configuration once you have completed EZ-Setup, continue with “Chapter 8. Preparing for Operations Console configuration” on page 53.

© Copyright IBM Corp. 1999, 2001

Prerequisite and related information

This book contains directions for installing Operations Console on your PC. If you are installing and configuring the iSeries system for Operations Console, familiarity with the iSeries system is strongly recommended. To install Operations Console on a PC, you should be familiar with the Windows 95, Windows 98, Windows Me, Windows NT, or Windows 2000 Professional operating systems.

Use the iSeries Information Center as your starting point for looking up iSeries 400 and AS/400e technical information. You can access the iSeries 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.
- *iSeries Operations Console Update, SK3T-4114-00.* This CD-ROM is required to set up Operations Console with LAN connectivity.

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

`http://www.ibm.com/eserver/iseries/clientaccess/`

After you set up Operations Console, see the Operations Console topic under Client Access Express in the iSeries Information Center for information about *using* Operations Console.

AS/400 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.

Installing Operations Navigator on Operations Console without LAN connectivity

Use this section to install Operations Navigator *only* on Operations Console local controlling system (LCS) configurations with directly cabled connectivity.

AS/400 Operations Navigator is a separately installable component of Client Access that contains many subcomponents. If you are installing for the first time and you use the **Typical** installation option, the following options are installed by default:

- Operations Navigator base support
- Basic operations (messages, printer output, and printers)

To select the subcomponents that you want to install, select the **Custom** installation option. (After Operations Navigator has been installed, you can add subcomponents by using Client Access Selective Setup.)

After you install Client Access, double-click the **AS400 Operations Navigator** icon on your desktop to access Operations Navigator and create an AS/400 connection.

Important: Type `localhost` (one word) as the system name. If you are using Windows 2000 Professional, there are no prerequisites for entering `localhost` as the system name. If you are using Windows 95/98/Me/NT, you need to comply with the following note before entering `localhost` as the system name.

Note to Windows 95/98/Me/NT users: To open an Operations Navigator window over your Operations Console connection, that is, have both an Operations Navigator view and a PC5250 view at your system console, your PC must have the following:

- Client Access Express Version 4 Release 4 Modification 0 or above.
- A `HOSTS` file in the operating system directory with the following entry:

  ```
  127.0.0.1    localhost
  ```

  Depending on the Windows version that you are running, you may have to create the file or create a copy of the sample file (which may be included in a Windows directory). The following are examples to rename the `HOSTS.SAM` file to `HOSTS`:

  Example for Windows 95/98/Me:

  ```
  COPY %WINDIR%\HOSTS.SAM %WINDIR%\HOSTS.TMP
  RENAME %WINDIR%\HOSTS.TMP %WINDIR%\HOSTS
  ```

  Example for Windows NT:

  ```
  COPY %WINDIR%\SYSTEM32\DRIVERS\ETC\HOSTS.SAM %WINDIR%\SYSTEM32\DRIVERS\ETC\HOSTS.TMP

  RENAME %WINDIR%\SYSTEM32\DRIVERS\ETC\HOSTS.TMP %WINDIR%\SYSTEM32\DRIVERS\ETC\HOSTS
  ```

  If you receive an error, you either do not have a `HOSTS.SAM` file or you already have a `HOSTS` file.

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.

Part 1. Getting Started

© Copyright IBM Corp. 1999, 2001

Chapter 1. Before you start

This chapter assists you in identifying and choosing an Operations Console configuration or configurations that best fit your needs.

AS/400® Operations Console overview

AS/400 Operations Console support is available on V4R3 or later releases of the OS/400® operating system. The only type of PC console that IBM iSeries 400® Models 270, 820, 830, and 840 support is Operations Console.

AS/400 Operations Console

The AS/400 Operations Console (hereafter referred to as Operations Console) allows a personal computer (PC) to become a local or remote console to your iSeries server. This eliminates the need for a twinaxial connection and allows a system administrator to watch the system from another location.

Operations Console has been enhanced to enable connections or console activities across a local area network (LAN), besides enabling directly cabled and dial-in (modem) connections. A single PC can have multiple connections to multiple iSeries servers and can be the console for multiple iSeries servers. An example would be a logically partitioned server using the same PC as the console for all partitions. Since each partition is considered a separate iSeries server, you need a separate connection to the partition for which you want to be the console. Operations Console allows multiple connections to a single iSeries server, but only one PC can have control of an iSeries server at a time.

Enhanced authentication and data encryption provide network security for console procedures. Operations Console with LAN connectivity uses a version of SSL which supports device and user authentication but without using certificates.

Operations Console has also been enhanced to enable automatic reconnections for all configurations. For example, if a user disconnects and reconnects, the user does not have to reenter a userID and password.

"Part 2. Setting up LAN Operations Console configurations" on page 11 guides you through the setup of Operations Console configurations with LAN connectivity. "Part 3. Setting up other Operations Console configurations" on page 45 helps you to set up directly cabled configurations as well as configurations that use a PC modem to connect to an iSeries server or another PC:

- If you are only setting up Operations Console *with* LAN connectivity, use "Part 2. Setting up LAN Operations Console configurations" on page 11.
- If you are only setting up Operations Console *without* LAN connectivity, use "Part 3. Setting up other Operations Console configurations" on page 45.
- If you are setting up *both* conectivities and you have not previously set up an Operations Console configuration, you may want to configure Operations Console with the directly cabled connectivity first, using "Part 3. Setting up other Operations Console configurations" on page 45. Then, you can use the directly cabled configuration to set up the iSeries system for the LAN configuration and use "Appendix B. Migrating from Operations Console with cable connectivity to Operations Console with LAN connectivity" on page 115 as a guideline to configure Operations Console with LAN connectivity.

© Copyright IBM Corp. 1999, 2001

Migration Considerations

The following scenarios are provided as a guide to assist planning your move to Operations Console.

iSeries software upgrades to V5R1M0

Previous versions of Operations Console will function with OS/400 V5R1M0. For example, if Operations Console V4R5 is used as the console type for your system running OS/400 V4R5M0, you do not need to upgrade the console when upgrading your iSeries to V5R1M0. However, before you can use the new passphrase, you need to upgrade the Operations Console client software to the V5R1M0 level of Client Access Express, along with the contents of the *iSeries Operations Console Update* CD.

If you are upgrading to OS/400 V5R1M0 but currently are using Client Access Async Console support, you should consider migrating to Client Access Operations Console (see "Migrations from Client Access Async Console").

Prerequisite information for Operations Console users migrating to V5R1: You *must* comply with the following *before* upgrading your software (OS/400, LIC, and so on) to V5R1:

1. If you are upgrading to V5R1 and you are currently using Operations Console at V4R5 on an iSeries Model 270, 820, 830, or 840 with a 2745 card and a 2771 card installed in the CEC, comply with the following (To check for the location of the 2771 card, look for it in the same proximity, vertically or horizontally, as the 2745 card, where the console is currently plugged in.):

   Power down the iSeries system and move the Operations Console cable from the 2745 card to the 2771 card, and then continue with step 2.
2. If you are upgrading from a pre-V5R1 version of OS/400 to V5R1 and you are currently using Operations Console at a previous release, there is no mechanism to change the passphrase on the iSeries. Therefore, after LIC installation, the character-based interface (5250 emulation) goes away and does not return unless you do *one* of the following *before* performing the software upgrade:
   - Establish a connection between the iSeries server and Operations Console PC using the user ID of 11111111 (there are eight 1s).
   - Update Client Access Express to V5R1 first.

Migrations from previous versions of Operations Console or from a twinaxial-attached console

Install the new V5R1M0 level of Client Access Express along with the *iSeries Operations Console Update* CD on your PC workstation that will be used for Operations Console function. Follow the specific instructions in this guide for information pertaining to the console connectivity method and PC operating system that you have selected for your Operations Console.

Migrations from Operations Console with cable connectivity to Operations Console with LAN connectivity

If you are currently using Operations Console with cable connectivity at a previous release and you want to migrate to Operations Console with LAN connectivity, see "Appendix B. Migrating from Operations Console with cable connectivity to Operations Console with LAN connectivity" on page 115.

Migrations from Client Access Async Console

Client Access Async Console was very similar to the Operations Console direct cable connection in terms of cabling. You may want to continue to use this

approach for console connectivity, or you may want to move to one of the other supported types, such as LAN connectivity. However, Client Access Async Console is not officially supported for connections to systems running V5R1 of OS/400. Therefore, it is recommended that you upgrade your console to Operations Console before installing V5R1 OS/400. Other than 5250 emulation user files, such as the .WS and .KMP files, no files or data need to be migrated from the PC you were using for Client Access Async Console to the PC you will be using for Operations Console. Installing V5R1M0 Client Access Express will not remove those files. A new connectivity cable will have to be ordered if you choose to use Operations Console via a direct cable attachment, but if you choose to use LAN connectivity, you will be using one of your standard LAN cables for attachment of the PC workstation. Refer to the PC and iSeries requirements chapters later in this guide to determine which hardware features meet your needs.

Console upgrades during iSeries hardware migrations

It is recommended that if you are going to be utilizing Operations Console on your new iSeries system (migrating from a different console type), that you configure the new Operations Console PC before the begining of the migration. At the point in the migration instructions where console function is required on the new iSeries system, you will be able to perform any required functions without the need for your current console device. The Operations Console features matching the connectivity you plan to use should be specified as part of the order for your new iSeries system.

Operations Console configuration considerations

Before you begin setting up your Operations Console, you need to determine how to best configure your Operations Console. The following information and "Connectivity examples" on page 7 will assist you in choosing your Operations Console configuration:

- A *remote control panel* is a graphical interface to the iSeries control panel. It allows you to perform most of the control panel functions from a local or remote location. You can use the remote control panel with any non-partitioned or primary partition using cable or LAN connectivity. You can also use the remote control panel for a logical partition of an iSeries server that is attached to a LAN. However, the remote control panel functions that you can perform when using LAN connectivity are limited. To use the remote control panel, you must install Operations Console and configure the remote control panel.
- Logical Partitions (LPAR) considerations:
  - The user profile must have the proper permissions to work with consoles, remote control panels, or both on the system or intended LPAR environment.
  - In a LAN environment, the remote control panel mode selections require security authorization for the user, such as that provided by QSECOFR, on the system or intended LPAR environments. Directly cabled configurations do not require this security authorization.
  - LAN console is the connectivity of choice for LPAR. A directly cabled configuration is allowed, but it is limited in function due to the lack of remote control panel support to secondary partitions.
- A *local controlling system* (*LCS*) is a PC that communicates to an iSeries server directly. The LCS can use a LAN connection (LAN LCS), a direct cable (stand-alone LCS or LCS with remote support), or a dial-up connection (dial-up LCS) to access the iSeries server. The PC may or may not be attached to a LAN. Using an LCS allows you to use your PC as the iSeries console (via a 5250-type of emulation), perform control panel functions (via the remote control panel), or both. The LCS may also allow users at remote controlling systems (RCSs) to

access the iSeries server. The following are the types of LCS configurations that Operations Console supports and their descriptions:

- A *stand-alone LCS* is a PC that does not support remote connections and communicates to an iSeries server through the Operations Console cable. It may or may not be attached to a LAN. This LCS allows you to use your PC to become the iSeries console, perform control panel functions, or both.
- An *LCS with remote support* is a PC that supports remote connections and communicates to an iSeries server through the Operations Console cable. It may or may not be attached to a LAN. This LCS allows you to use your PC to become the iSeries console, perform control panel functions, or both. It also allows remote controlling systems (RCSs) to connect if this LCS PC is running Windows NT® Workstation or Windows® 2000 Professional in order to access an iSeries server either with or without the intervention of an operator.
- A *dial-up LCS* is a PC that dials to a remote iSeries server that runs without a locally attached console device. It may or may not be attached to a LAN. This LCS allows the PC to become the iSeries console. This LCS does not support the remote control panel and does not allow remote users to connect to it.
- A *LAN LCS* is a PC that does not support remote connections and connects to an iSeries server using a network. This LCS allows your PC to become the iSeries console, perform control panel functions (limited function), or both.

Important:

- Operations Console allows multiple connections to a single iSeries server, but only one 5250 session can have control of an iSeries server at a time. It also allows multiple local controlling system (LCS) connections, but only one directly cabled LCS configuration (stand-alone LCS or LCS with remote support).
- The stand-alone LCS and LCS with remote support configurations also allow you to set up an Operations Navigator connection via the Operations Console cable. If you want to set up the Operations Navigator connection, see the following:
  - The `Setting up an Operations Navigator connection` topic in the iSeries Information Center under **Client Access Express -> Operations Console -> Setting up an Operations Navigator connection**:

    `http://www.ibm.com/eserver/iseries/infocenter`
  - "Installing Operations Navigator on Operations Console without LAN connectivity" on page ix
- There is a maximum of 26 emulator sessions available per PC.

- An *RCS* is a PC that connects to a directly cabled local controlling system (LCS) with remote support to communicate to an iSeries server. The PC can either dial into the LCS with remote support or connect to the LCS via LAN (*LAN RCS*). It may also be attached to a LAN even if it connects to the LCS using a dial-up connection (modem). Using an RCS allows you to use your PC to become the iSeries console, perform control panel functions, or both. To perform control panel functions from the RCS, the remote control panel must be installed and configured at the LCS.
- You can configure your PC as an LCS and as an RCS. Besides being able to configure multiple LCSs on your PC, you can also configure several RCSs.
- If you have Windows 95, Windows 98 or Windows Me, you can configure either a stand-alone LCS, dial-up LCS, or LAN LCS. You can also configure RCSs. However, only one dial (modem) connection can be active at a time. For example, you need to disconnect a directly cabled LCS to use an RCS via modem.

- If you have Windows NT or Windows 2000 Professional, you may consider adding remote capabilities to your PC. To do this:
  1. Configure an LCS with remote support on the PC that you will use as your Operations Console. To do this, go through "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47, "Chapter 8. Preparing for Operations Console configuration" on page 53, and "Chapter 9. Configuring a new Operations Console" on page 83.
  2. Configure an RCS that connects to the LCS via modem on your remote PC. To do this, go through "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47, "Chapter 8. Preparing for Operations Console configuration" on page 53, and "Chapter 9. Configuring a new Operations Console" on page 83.
- If you have Windows 95, Windows 98, Windows Me, Windows NT or Windows 2000 Professional, you can configure LAN LCSs and LAN RCSs.

To set up your Operations Console, make sure that you comply with these requirements:

- If you call a service representative to set up your new system, you must have the PC that you are going to use as a console ready to be connected to your iSeries server. This includes having all cables ready, and all software installed. For example, you must already have your operating system installed.
- If you are replacing an existing console with Operations Console, follow the instructions that came with your Operations Console cable.

Connectivity examples

The examples in this section illustrate the connectivity allowed by the various types of Operations Console configurations in LAN (V5R1) or non-LAN (pre-V5R1 and V5R1) environments. Study the figures and decide how you would like your system set up. Even though you may be setting up only a stand-alone local controlling system (LCS), if you plan ahead you can include other features in your configuration right now.

Figure 1 on page 8 and Figure 2 on page 8 illustrate the connectivity allowed in a non-LAN environment. In this case, the PCs are configured using "Part 3. Setting up other Operations Console configurations" on page 45.

Figure 3 on page 9 and Figure 4 on page 9 illustrate the connectivity allowed in a LAN environment. In this case, the PCs are configured as LAN LCSs using "Part 2. Setting up LAN Operations Console configurations" on page 11.

All other figures illustrate the connectivity allowed in a LAN environment together with connectivity which is also allowed in a non-LAN environment. In this case, some of the PCs are configured using only "Part 2. Setting up LAN Operations Console configurations" on page 11, and other PCs are configured using both "Part 2. Setting up LAN Operations Console configurations" on page 11 and "Part 3. Setting up other Operations Console configurations" on page 45. For example, in Figure 5 on page 10, the PCs must be configured as follows:

- PC1 and PC2 as LAN RCSs using "Part 2. Setting up LAN Operations Console configurations" on page 11.
- PC3 as an LCS with remote support using "Part 3. Setting up other Operations Console configurations" on page 45.

Example 1: Operations Console configuration in a non-LAN environment

Figure 1 shows an example of an Operations Console in a non-LAN environment. Locations 1 and 3 are LCSs with remote support. At these locations, the PCs are acting as consoles. These PCs are attached to their respective iSeries servers with an Operations Console cable and a remote control panel cable. The Operations Console cable is one of the requirements that allows the PC to become the console. The remote control panel cable is one of the requirements that allows the PC to run the remote control panel. The remote control panel is a graphical interface to the iSeries control panel that allows you to perform control panel functions as if you were at the iSeries server. Configuring these PCs with dial-in support allows a remote controlling system (RCS) at location 2 to become the console. The PC at location 1, if configured as an LCS (for the iSeries server at location 1) and as an RCS (for the iSeries server at location 3), could also be a console for the iSeries server at location 3. For example, this would be a good setup if you have one system administrator that oversees two iSeries servers. With this configuration, the administrator could have console access to all systems, from all locations, including home.

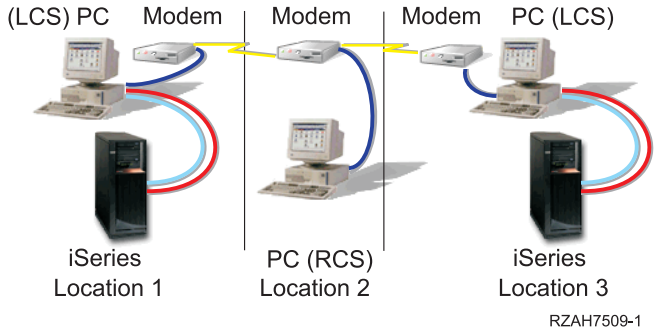


Figure 1. Example of an Operations Console configuration in a non-LAN environment

Example 2: Dial-up LCS environment

Figure 2 shows another example of how you can control an iSeries server remotely. In a dial-up LCS environment, the PC at location 2 is configured as a dial-up LCS. The iSeries server at location 1 does not have a locally attached console device. The PC dials the iSeries server directly to become the console. Nevertheless, this PC does not support the remote control panel and does not allow remote PCs to connect to it.

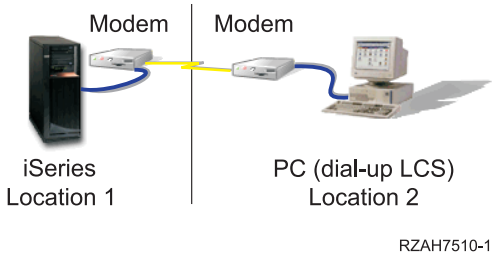


Figure 2. Example of a dial-up LCS environment

Example 3: Multiple LAN LCSs for an iSeries server

Figure 3 on page 9 shows an example of a local network environment in which PC1 and PC2 would be configured as an LCS to the iSeries server. Both PC1 and PC2 can be connected at the same time, however, only one active 5250 emulation session can exist. The first PC to start the emulator would become the console until

such time that the emulator or connection was disconnected. The other PC would be unable to start an active emulation session. A disadvantage to this configuration is that a problem with the network would leave the iSeries server without a console. One solution to this might be to add a modem to a PC (PC1, PC2 or any other), add an ECS modem (if one is not already installed), configure one or more of the PCs as a dial-up LCS that could connect directly to the server using the modems. Refer to Figure 2 on page 8.

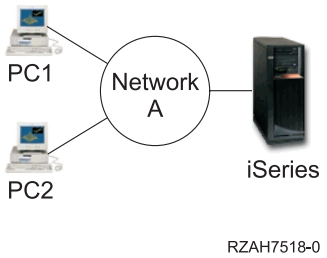


Figure 3. Example showing multiple LAN LCSs and an iSeries server

Example 4: A LAN LCS for multiple iSeries servers

Figure 4 shows that one LCS can be used as the console for multiple iSeries servers. PC1 must have been configured as a LAN LCS for each iSeries server (iSeries1, iSeries2, and iSeries3). Each console session (5250 emulator) would be available at the same time. You could also have additional PCs configured as LCSs and cabled to the server using an Operations Console cable so that each system has a console in the event that a network problem prevents PC1 and all other network-only PCs from being the console.

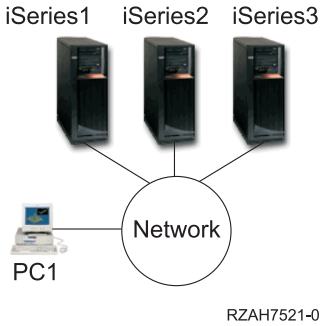


Figure 4. Example of a single PC being the console for multiple iSeries servers at the same time.

Example 5: Multiple LAN RCSs for an iSeries server

Figure 5 on page 10 shows an example of an LCS with remote support (PC3) which is connected to the iSeries server with Operations Console cables. In this network environment, PC1 and PC2 become RCSs which would connect to PC3 to become the console for the server. The Operations Console cable is one of the options that allows the PC to become the console. This configuration has the advantage that a network outage would not leave the server without a console. The remote control panel cable is one of the requirements that allows the PC to run the remote control panel. The remote control panel is a graphical interface to the iSeries control panel that allows you to perform control panel functions as if you were at the iSeries server.

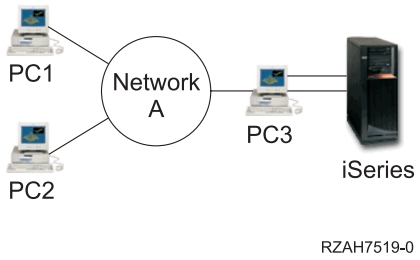


Figure 5. Example showing multiple LAN RCSs and an iSeries server

Example 6: An iSeries server connected to a LAN

Figure 6 shows that the addition of network support to the iSeries server increases the flexibility of the Operations Console configuration options. In this example PC3 can only be an LCS, but PC1 and PC2 could be configured as an LCS, RCS, or both depending on whether its connection was made to PC3 (making PC1 or PC2 an RCS or both) or the server (making PC1 or PC2 or both an LCS).

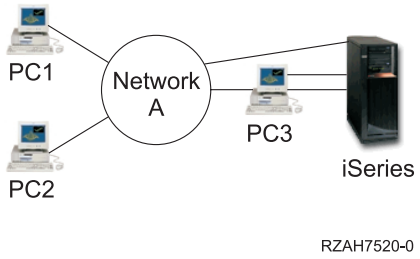


Figure 6. Example showing the iSeries server also being connected to a network

Example 7: Remote access to an iSeries server

Figure 7 shows that by adding a modem to PC2 you could allow another PC, from home for example, to connect to PC2 to become the console. A remote PC connection using a modem can only be made to an LCS that is connected to the iSeries server using an Operations Console cable. If PC2 did not exist a remote connection could be made by PC1 as shown in Figure 2 on page 8 with the addition of an ECS modem to the iSeries server.

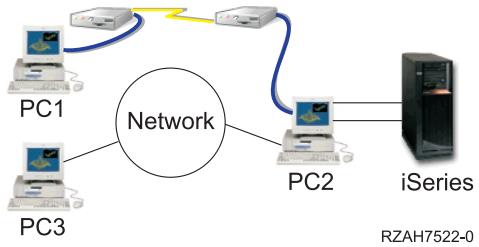


Figure 7. Example of remote access

Part 2. Setting up LAN Operations Console configurations

© Copyright IBM Corp. 1999, 2001

Chapter 2. PC and iSeries requirements for LAN configurations

This chapter will assist you in meeting the necessary hardware and software requirements according to your intended LAN Operations Console configuration. Before you continue, make sure that you have reviewed the migration and configuration considerations as well as the examples in "Chapter 1. Before you start" on page 3.

Important:

- IBM supports Operations Console with LAN connectivity only on IBM @server iSeries 400 Models 270, 820, 830, and 840.
- You must install the contents of the *iSeries Operations Console Update* CD-ROM to be able to use Operations Console with LAN connectivity. This must be done after Client Access Express (with the Operations Console component) is installed. After that, use Part 2 of this manual to create a LAN configuration. Failure to install the Operations Console Update will prevent you from setting up an Operations Console LAN configuration. To install Operations Console Update, see "Appendix F. iSeries Operations Console Update" on page 125.

Hardware requirements

This section describes the PC and iSeries hardware requirements for a LAN configuration.

Table 1 shows the PC requirements per operating system.

Table 1. PC requirements - Processor and Memory

Operating System (1,2)	Operations Console PC
Windows 95/98/Me	• Pentium® 266 MHz recommended (P6 or equivalent compatible microprocessor) • 32 MB memory minimum
Windows NT 4.0	• Pentium 266 MHz recommended • 32 MB memory minimum (64 MB recommended)
Windows 2000 Professional	• Pentium 266 MHz (P6 or equivalent compatible microprocessor) • 32 MB memory minimum (64 MB recommended)

© Copyright IBM Corp. 1999, 2001

Table 1. PC requirements - Processor and Memory (continued)

Notes:

1. If you are using Operations Navigator, refer to *Client Access Express for Windows - Setup*, SC41-5507-02. You can find a PDF version of this manual 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**. Look for the section that describes PC requirements.
2. If your PC has power management capabilities, turn it off. This PC may reset the communications port when power management is invoked, which would terminate any connections already established. Certain types of power management on the PC and in the operating system may cause System Reference Code (SRC) `0000DDDD` to appear in the iSeries control panel or remote control panel. This SRC data should clear when PC activity resumes.

If you want to use the LAN connectivity option of Operations Console, you need to install the LAN card for Operations Console according to your iSeries model. IBM supports Operations Console with LAN connectivity only on Models 270, 820, 830, and 840. Table 2 shows the supported cards for LAN connectivity. Table 3 shows the correct location for the LAN card. For locations based on your model, refer to Figure 18 on page 75, Figure 19 on page 76, Figure 20 on page 77, or Figure 21 on page 78.

Important: If an emergency arises where your LAN connection fails, you may configure Operations Console with cable connectivity. Table 3 also shows the correct location for the directly cabled console. To configure a directly cabled console, see "Part 3. Setting up other Operations Console configurations" on page 45.

Table 2. Supported cards for LAN connectivity

Card number	Description
2724	PCI 16/4 Mbps Token-ring IOA
2744	PCI 100Mbps Tokenring Adapter
2838	PCI 100/10 Mbps Ethernet IOA
6149	16/4 Mbps Token-Ring IOA

Table 3. iSeries requirements - Lan card location

Model	LAN console card location (1,2,3)	Operations Console cable location (2,3)
840/SB3	C04, second C06, third C10	C02
830/SB2	C04, second C06, third C10	C02
820	C04, second C03, third C11	C06
270	C06, second C05	C07

Table 3. iSeries requirements - Lan card location (continued)

Notes:

1. If you ordered Operations Console with LAN connectivity, your iSeries should already be configured. If, however, you are changing the console from another type, including the directly cabled Operations Console, to Operations Console with LAN, you need to configure the iSeries system console type before removing the current console. To do this, see "Appendix E. Verifying or configuring Operations Console as the console device" on page 123.
2. LPAR considerations for secondary partitions:
   - If both cable and LAN connected, the Operations Console card (async card) and the LAN card must be on the same IOP.
   - If the secondary partition has a LAN card on the same IOP as the Operations Console card, it will be activated for use with Operations Console. You may not be able to use the LAN card for its intended purpose. Thus, if you only want one connectivity, you should put only that connectivity in the IOP.
3. For the LAN card or Operations Console card location, refer to Figure 18 on page 75, Figure 19 on page 76, Figure 20 on page 77, or Figure 21 on page 78.

If you already have configured a directly cabled Operations Console configuration, you can use the configuration to set up the iSeries system for the LAN configuration and use "Appendix B. Migrating from Operations Console with cable connectivity to Operations Console with LAN connectivity" on page 115 as a guideline to configure Operations Console with LAN connectivity.

Software requirements

Before you continue, make sure that you have satisfied the hardware requirements according to your intended LAN configuration.

To use Operations Console with LAN connectivity, the iSeries system must be running OS/400 V5R1. Operations Console is supported on Windows 95, Windows 98, Windows Me, Windows NT Workstation 4.0 or later, or Windows 2000 Professional. Also, you *must* install the contents of the Operations Console Update CD-ROM. To do this, see "Appendix F. iSeries Operations Console Update" on page 125.

Important: IBM recommends that you have the latest Service Pack program temporary fix (PTF) for Client Access and the latest level of Client Access on your PC. 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.

For LAN configurations, the operating system can be any of the following:

- Windows 95
- Windows 98
- Windows Me

- Windows NT Workstation 4.0 or later. This operating system requires Service Pack 3 (at a minimum) or later.
- Windows 2000 Professional

Important: To use Operations Console with LAN connectivity, you are strongly encouraged to install the following products:

- Cryptographic Access Provider, 5722-AC2 or 5722-AC3 on the iSeries 400 server.
- Client Encryption, 5722-CE2 or 5722-CE3 on the Operations Console PC.
- In order for the console data to be encrypted, the iSeries 400 server must have one of the Cryptographic Access Provider products installed (5722-AC2 or 5722-AC3) and the PC must have one of the Client Encryption products (5722-CE2 or 5722-CE3) installed.

  Note: If no cryptographic products are installed, there will not be any data encryption.

  Table 4 summarizes the resulting encryption level.

Table 4. Resulting encryption level

Cryptographic Access Provider on the iSeries 400 server	Client Encryption on the Operations Console PC	Resulting Data Encryption
None	None	None
5722-AC2	5722-CE2	56 bit
5722-AC2	5722-CE3	56 bit
5722-AC3	5722-CE2	56 bit
5722-AC3	5722-CE3	128 bit

Chapter 3. Preparing for a network environment

Security considerations

Operations Console security consists of service device authentication, user authentication, data privacy, and data integrity. Operations Console with direct connectivity has implicit device authentication, data privacy, and data integrity due to its point to point connection. User authentication security is required to sign on to the console display. Operations Console was enhanced in V5R1 enabling console activities to be performed across a LAN. Enhanced authentication and data encryption were added to provide service device authentication, data privacy, and data integrity in a networked environment. User authentication security remains unchanged.

The iSeries 400 console security consists of service device authentication, user authentication, data privacy, and data integrity:

- *Service device authentication* assures which physical device is the console. Operations console with direct connectivity uses a physical connection similar to a twinaxial console. Operations console using a direct connection may be physically secured similar to a twinaxial connection to control access to the physical console device. Operations console with LAN connectivity uses a version of SSL which supports device and user authentication, but without using certificates.
- *User authentication* provides assurance as to who is using the service device. All issues related to user authentication are the same regardless of console type.
- *Data privacy* provides confidence that the console data can only be read by the intended recipient. Operations Console with direct connectivity uses a physical connection similar to a twinaxial console or secure network connection for LAN connectivity to protect console data. Operations Console using a direct connection has the same data privacy of a twinaxial connection. If the physical connection is secure, the console data remains protected. Operations Console using LAN connectivity uses a secure network connection if the appropriate cryptographic products are installed (ACx & CEx). The console session uses the strongest encryption possible depending on the cryptographic products installed on the iSeries 400 and the PC running Operations Console. If no cryptographic products are installed, there will not be any data encryption.
- *Data integrity* provides confidence that the console data has not changed in route to the recipient. Operations Console using a direct connection has the same data integrity of a twinaxial connection. If the physical connection is secure, the console data remains protected. Operations Console using LAN connectivity uses a secure network connection if the appropriate cryptographic products are installed (ACx & CEx). The console session uses the strongest encryption possible depending on the cryptographic products installed on the iSeries 400 and the PC running Operations Console. If no cryptographic products are installed, there will not be any data encryption.

Operations Console Security Enhancements

Operations Console was enhanced by enabling console activities to be performed across a LAN.

© Copyright IBM Corp. 1999, 2001

Enhanced authentication and data encryption provide network security for console procedures. Operations console with LAN connectivity uses a version of SSL which supports device and user authentication but without using certificates.

When using Operations Console with LAN connectivity, console device authentication is performed with a version of SSL which supports device and user authentication but without using certificates. The device authentication is based on a service tools device profile. Service tools device profiles are administered in DST. They consist of a device profile and a device profile password. The iSeries 400 is shipped with a default service tools device profile of QCONSOLE with a default password of QCONSOLE. Operations Console using LAN connectivity will encrypt and change the password during each successful connection.

When using Operations Console with LAN connectivity, the setup wizard will add the necessary information to the PC. The setup wizard asks for the service tools device profile, the service tools device profile password, and a password to protect the service tools device profile information.

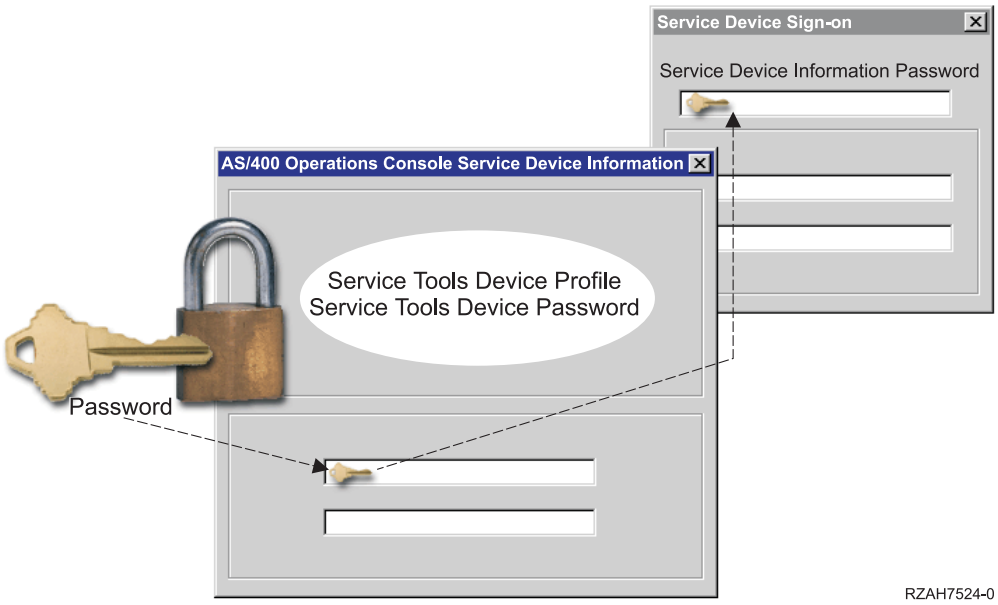


Figure 8. Service tools device profile information (service tools device profile and service tools device profile password) and password to access the service tools device profile information

Note: The service tools device profile information password is used to protect the service tools device profile information (service tools device profile and password) on the PC.

When establishing a network connection, the Operations Console setup wizard will prompt the user for the service device information password to access the encrypted service tools device profile and password. The user will also be prompted for a valid service tools user identification and password.

Operations Console administration

Operations Console administration allows system administrators to control access to console functions. When using Operations Console with LAN connectivity, device and user authentication is controlled through the service tools device and user profiles.

Important: Consider the following when administering Operations Console with LAN connectivity:

- For information about service tools user profiles, see the section about using service tools user profiles in Chapter 7 (Tips for Managing and Monitoring Authority) of The Tips and Tools for Securing your iSeries manual. A PDF version of this manual is available in the iSeries Information Center under **Security -> Manuals and Redbooks**.
- For the remote control panel, mode selections require security authorization for the user, such as that provided by QSECOFR.
- When a mismatch occurs in the service tools device password between the iSeries server and the Operations Console PC, you need to resynchronize the password on *both* the PC and the iSeries server. To do this, refer to "Appendix C. Resynchronizing the PC and iSeries device profile password" on page 117.

Tips for Protecting Operations Console using LAN connectivity

When using Operations Console with LAN connectivity, IBM recommends the following items:

1. Create another service tools device profile with console attributes.
2. Install Cryptographic Access Provider, 5722-AC2 or 5722-AC3 on the iSeries 400 server and Client Encryption, 5722-CE2 or 5722-CE3 on the Operations Console PC.
3. Choose a nontrivial service device information password.
4. Protect the Operations Console PC in the same manner you would protect a twinaxial console or an Operations Console with direct connectivity.
5. Change your password for the following DST user profiles: QSECOFR, 22222222, and QSRV.

Minimum network configuration

This section assists you in identifying and complying with the minimum network configuration required to set up a LAN Operations Console configuration.

Important: You need to install the LAN card for Operations Console according to your iSeries model. To do this, refer to Figure 18 on page 75, Figure 19 on page 76, Figure 20 on page 77, or Figure 21 on page 78 for the correct location.

Operations Console with LAN connectivity uses the BOOTstrap Protocol (BOOTP) to configure the iSeries *service* IP communication stack. The IP stack configuration plus iSeries serial number is requested in the Operations Console configuration wizard. The iSeries broadcasts a BOOTP request. The Operations Console PC replies with the information submitted during the configuration wizard. The iSeries then stores and uses the configuration information for the service IP communication stack.

There are several important details to note. First, the Operations Console PC must be placed on a network that is *reachable* by the iSeries. This can be the same physical network or a network which permits broadcast packets to flow. This is a one time set up requirement; normal console operation does not require this. It is recommended for this set up to occur on the same physical network.

Secondly, the BOOTP request carries the iSeries serial number. It is the iSeries serial number that is used to assign the IP configuration information. If you are having

problems configuring the service IP communication stack, check that the Operations Console PC is on the same physical network and the iSeries serial number is correct in the configuration.

Finally, Operations Console with LAN connectivity uses ports 2323 and 3001. If using Operations Console in a different physical network than the iSeries is connected to, the router(s)/firewall(s)/etc. must allow IP traffic on these ports.

The above information only applies to Operations Console using LAN connectivity. Operations Console using direct connectivity (direct connect LCS) and dial up (dial up LCS) do not utilize BOOTP.

Setting up service tools device profiles on the iSeries server

Important:

1. IBM strongly recommends that you create additional service tools device profiles to be used in case of emergency. Only users with QSECOFR level authority can create additional device or user profiles.
2. When you create user profiles, make sure that they have the proper permissions to work with consoles, remote control panels on the system or intended LPAR environments.

Do the following starting at the DST main menu:

Note: The Enter key may be the right Ctrl key on most keyboards. To change the keyboard definition so that the Enter key is the Enter key of your keyboard, see "Appendix J. Changing the keyboard definition for Operations Console" on page 133.

1. Select **Work with DST environment**.
2. Select **Service tools device profiles**.
3. Use option 1 to create a new device profile and enter the new device profile name in the blank name field on the first input line.

   Press Enter.
4. Enter the device profile password. Then, enter it again for verification. You may enter a description.

   Note: The device profile password may be in uppercase or lowercase letters. To configure a LAN LCS, you will need to remember whether you used uppercase or lowercase for the device profile password.

   Press Enter. You have finished creating a service tools device profile.
5. To continue creating additional device profiles, repeat the steps starting at step 3.
6. When you finish creating device profiles, press **PF3**.

Chapter 4. Preparing for Operations Console configuration

In this Chapter you install Client Access Express with the components necessary to create an Operations Console LAN configuration.

Determining installation for Client Access Express

Before you use AS/400 Operations Console, you must install Client Access Express. During the installation of Client Access Express, you are going to install a 5250 emulator (if you do not already have PC5250 or IBM Personal Communications V4.3 or later) and AS/400 Operations Console support.

If an emulator and AS/400 Operations Console support are already installed, go to "Chapter 5. Configuring a new LAN Operations Console" on page 23.

To check whether you have Client Access Express for Windows installed:

1. Click **Start** and select **Settings**.
2. Click **Control Panel**.
3. Double-click **Add/Remove Programs**.
4. Look for `IBM AS/400 Client Access Express for Windows`.
5. To close Add/Remove Programs, click **Cancel**.
6. Close the Control Panel.

If you have Client Access Express for Windows installed, go to "Installing Client Access Express with a minimum configuration" on page 22. If you do not have Client Access Express for Windows installed, continue with "Installing Client Access Express".

Installing Client Access Express

In this section, you are going to install Client Access Express for Windows using the *iSeries 400 Setup and Operations, SK3T-4098-00* CD-ROM.

If you do not have Client Access Express for Windows installed, use the *iSeries 400 Setup and Operations* CD-ROM to install it:

1. Insert the *iSeries 400 Setup and Operations* CD in the optical device drive (for example, a CD-ROM drive).
2. Select the **Client Access Express** option to start the installation.
3. Wait until the `IBM AS/400 Client Access Express for Windows` window appears.
4. To continue with the setup program, click **Next** and follow the prompts. Use the "Installing Client Access Express with a minimum configuration" on page 22 section, as your guide to what to install.

   Refer to *Client Access Express for Windows - Setup*, SC41-5507-02 for further installation assistance. You can find a PDF version of this manual 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**.

© Copyright IBM Corp. 1999, 2001

Installing Client Access Express with a minimum configuration

In this section, you are going to make sure that you have Client Access Express for Windows installed with the required components.

If you have Client Access Express for Windows installed, open the Client Access folder and look for the **AS/400 Operations Console** icon. If the icon is present, go to "Chapter 5. Configuring a new LAN Operations Console" on page 23. If the icon is not present, click the **Selective Setup** icon to add the AS/400 Operations Console component.

If you are installing Client Access Express for the first time, you have to ensure that you have a minimum configuration for running Operations Console. If you are only adding the AS/400 Operations Console component, add only the components necessary to meet this minimum configuration.

To ensure the minimum configuration, do a **Custom** install and select the following components:

1. **Express Required Programs**
2. **5250 Display and Printer Emulator** (if IBM Personal Communications V4.2 or later is not installed)

   You do not need a license to use 5250 Display Emulation just for AS/400 Operations Console, even though the screen says that you do.

   Important: If your Operations Console configuration is going to support only the remote control panel, you do not need to install an emulator.
3. **AS/400 Operations Console**. Then, click **Next** and follow the prompts.
4. IBM recommends that you have the latest Service Pack program temporary fix (PTF) for Client Access and the latest level of Client Access on your PC. 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.

Chapter 5. Configuring a new LAN Operations Console

Use this Chapter to create a new Operations Console LAN configuration.

Important:

- You must have installed the contents of the *iSeries Operations Console Update* CD-ROM. If you have not done so, see "Appendix F. iSeries Operations Console Update" on page 125.
- Both the client (PC) and the system must be active on the network at this time.
- If you are using Windows NT or Windows 2000 Professional, you must be a member of the Administrators group to create or modify Operations Console configurations.
- In a LAN environment, the remote control panel mode selections require security authorization for the user, such as that provided by QSECOFR.
- When using logical partitions, the user profile must have permission to the console, remote control panel, or both for the partition to be used.

Configuring a LAN local controlling system

Use this section to configure a LAN local controlling system (LAN LCS).

Important:

- If you are upgrading your console type to Operations Console with LAN connectivity, perform the instructions in "Appendix E. Verifying or configuring Operations Console as the console device" on page 123 before you proceed with this section. Failure to follow these instructions may prevent your iSeries server from being configured correctly.
- If you ordered the system with LAN connectivity for the console, your system should configure correctly.
- You need to delete and recreate your configuration if you want to change the configuration name or the partition associated with the configuration name.

To configure a LAN LCS for a non-partitioned system or primary partition, see "Configuring a LAN LCS for primary partitions".

To configure a LAN LCS for a secondary partition, see "Configuring a LAN LCS for secondary partitions" on page 26.

Configuring a LAN LCS for primary partitions

Important:

- IBM strongly recommends that you create additional device profiles in DST (Dedicated Service Tools) to be used in case of emergency. To do this, see "Setting up service tools device profiles on the iSeries server" on page 20.
- The iSeries server, must have the console type set to 3 (Operations Console LAN) before you continue with this section. To set the console type, refer to "Appendix E. Verifying or configuring Operations Console as the console device" on page 123.

© Copyright IBM Corp. 1999, 2001

- Your iSeries server must be powered on and you must have performed an IPL (Normal or Manual). Also, your server must be connected to the network attached to the service interface (Operations Console LAN adapter), along with the PC.

To configure a LAN LCS for a primary partition or non-partitioned system, do the following:

1. Start Operations Console if it is not already running:
   a. Click **Start** and select **Programs**.
   b. Select **IBM AS/400 Client Access Express**.
   c. Click **AS/400 Operations Console**.

   Note: If Operations Console had a previous configuration, the setup wizard does not start. Operations Console starts and may try to connect.
2. If the AS/400 Operations Console Connection wizard did not start, from the **Connection** menu, click **New Connection** to start the wizard.
3. In the Welcome window, click **Next**.
4. Click **Local Controlling System (LCS) to AS/400 system**. Then, click **Next**.
5. Click **Local Area Network (LAN)**. Then, click **Next**.

   Note: If you do not get a window allowing you to select the type of connectivity, you have not installed the contents of the *iSeries Operations Console Update* CD-ROM (refer to "Appendix F. iSeries Operations Console Update" on page 125 to install it).
6. Click **Standalone or primary partition**. Then, click **Next**.
7. Select the function (console, remote control panel, or both) that you want to use. Then, click **Next**.
8. If you *have* configured the Operations Console LAN adapter on the iSeries server, enter the service interface name of the system (system name of the Operations Console LAN adapter) as it is known on the network. Then, click **Next**.

   If you *have not* configured the Operations Console LAN adapter on the iSeries server, enter the service interface name of the system (system name of the Operations Console LAN adapter) that will be used for this LAN connection. Then, click **Next**.

   Note: The LAN adapter is location-dependent on an iSeries server for non-partioned systems and primary partitions. To see the LAN card location that applies to your server, refer to Figure 18 on page 75, Figure 19 on page 76, Figure 20 on page 77, or Figure 21 on page 78.
9. In the AS/400 System Service Interface Information window, do one of the following:
   - If the Service TCP/IP Address field does not show data, enter the correct IP address for your iSeries system. Also, enter the data for the remaining fields. Then, click **Next** to continue (the system will be configured during the first connection process). Go to step 10 on page 25.
   - If the AS/400 system service name and the Service TCP/IP Address fields show non-editable data, do one of the following:
     a. If you are sure that you have configured the Operations Console LAN adapter on the iSeries server, click **Next** to continue. Then, go to step 10 on page 25.

b. If you have not configured the Operations Console LAN adapter on the iSeries server, enter the data for the remaining fields. Then, click **Next** to continue.

10. In the AS/400 Operations Console Service Tools Device Information window, do the following to provide, for the system, the *Service Tools Device Profile Information* (service tools device profile name and password) and the *Service Tools Device Profile Information Password* (The Service Tools Device Profile Information Password is used to protect the Service Tools Device Profile Information.):

    Set the *Service Tools Device Profile Information* values as follows:

    a. For **Service tools device profile for this PC**, do one of the following:
        - If this is the first PC console device to be connected to the system, type `QCONSOLE` in uppercase.

          Note: New systems are shipped with `QCONSOLE` (in uppercase) as the default device profile name and the default device profile password.
        - If you created additional service tools device profiles, type the device profile name that you created.

    b. For **Password**, if you typed `QCONSOLE` in the previous field, type `QCONSOLE` in uppercase as the password. Otherwise, type the device profile password.

    c. For **Confirm password**, type the service tools device profile password again.

       Note: This password is used by the PC and iSeries and not by the user. You do not have to remember it for any other activity.

    Set the *Service Tools Device Profile Information Password* values as follows:

    a. For **Password to access the Service tools device profile information**, type the password you want to use to protect the Service Tools Device Profile Information.

       Note: The password is case sensitive and can be a maximum of 128 characters of mixed case. It is important that you remember this password. You will use *this* password later, during the connection process, to sign on the Service Device Sign-on window.

    b. For **Confirm password**, type the service tools device profile information password again.

    Important:

    - If, in this window, you need to make changes to the device profile password, see "Appendix G. Considerations for changing the service tools device profile password" on page 127 and "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129.
    - If, in this window, you need to make changes to the password used to access the service tools device profile information, see "Appendix I. Changing the password used to access the service tools device profile information" on page 131.
    - If, in this window, you need to make changes to both the device profile password and the password used to access the service tools device profile information, see "Appendix G. Considerations for changing the service tools

device profile password" on page 127, "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129, and "Appendix I. Changing the password used to access the service tools device profile information" on page 131.

Click **Next** to continue.

11. Click **Finish**.

    Note: It is recommended that you leave the `Start connection when Operations Console starts` check box unchecked until you verify that the connection and functions work properly. It is difficult to work with setup problems once the connection is started.

12. In the AS/400 Operations Console window, do the following to start the connection to the iSeries server:
    a. Select the configuration name (under AS/400 connection).
    b. From the **Connection** menu, click **Connect**.
13. Sign on using the service tools device profile information password for the system (refer to step 10 on page 25) and your assigned service tools user ID and password.

    Important:

    a. Use the correct case for the userID and passwords. Operations Console needs a valid service device information password, service tools user ID, and service tools password to authorize the connection between the LCS and the iSeries server.
    b. Authentication may fail for several reasons. If it fails, one possible solution is to resynchronize the device profile password on the PC and the iSeries server. To do this, see "Appendix C. Resynchronizing the PC and iSeries device profile password" on page 117.
14. If you configured the remote control panel, confirm that it appears.
15. Confirm that the console appears.
16. Follow the instructions in "Appendix J. Changing the keyboard definition for Operations Console" on page 133.
17. Go to "Setup Complete" on page 34.

Configuring a LAN LCS for secondary partitions

Important:

- The iSeries server, must have the console type set to 3 (Operations Console LAN). If you are upgrading your console type to Operations Console with LAN connectivity, perform the instructions in "Appendix E. Verifying or configuring Operations Console as the console device" on page 123 before you proceed with this section. Failure to follow these instructions may prevent your iSeries server from being configured correctly.
- If you are adding the console or remote control panel function, you must have an unused device profile available. The remote control panel function requires an unused device profile in the primary partition. The console function requires an unused device profile in the secondary partition.
- IBM strongly recommends that you create additional device profiles in DST (Dedicated Service Tools) to be used in case of emergency. To do this, see "Setting up service tools device profiles on the iSeries server" on page 20.
- LPAR considerations for secondary partitions:

- The user profile must have permission to the console, remote control panel, or both for the partition to be used.
- The IOP that will support the LAN connectivity for Operations Console must have been already assigned.
- If both cable and LAN connected, the Operations Console card (async card) and the LAN card must be in the same IOP.
- If the secondary partition has a LAN card in the same IOP as the async card, it will be activated for use with Operations Console. You may not be able to use the LAN card for its intended purpose. Thus, if you only want one connectivity, you should put only that connectivity in the IOP.
- For information about restarting and powering down a system, see the `Restarting and powering down a system with logical partitions` topic in the Information Center under **Systems Management -> Logical partitions -> Managing logical partitions**.

To configure a LAN LCS for a secondary partition, do the following:

1. Start Operations Console if it is not already running:
   a. Click **Start** and select **Programs**.
   b. Select **IBM AS/400 Client Access Express**.
   c. Click **AS/400 Operations Console**.

   Note: If Operations Console had a previous configuration, the setup wizard does not start. Operations Console starts and may try to connect.
2. If the AS/400 Operations Console Connection wizard did not start, from the **Connection** menu, click **New Connection** to start the wizard.
3. In the Welcome window, click **Next**.
4. Click **Local Controlling System (LCS) to AS/400 system**. Then, click **Next**.
5. Click **Local Area Network (LAN)**. Then, click **Next**.

   Note: If you do not get a window allowing you to select the type of connectivity, you have not installed the contents of the *iSeries Operations Console Update* CD-ROM (refer to "Appendix F. iSeries Operations Console Update" on page 125 to install it).
6. Click **Secondary partition**. Then, click **Next**.
7. Select the function (console, remote control panel, or both) that you want to use. Then, click **Next**.
8. If you are configuring only the remote control panel, enter a name to refer to this configuration. It does not have to be the primary service interface (Operations Console LAN Adapter) name. Then, go to step 12 on page 29.
9. If you *have* configured the Operations Console LAN adapter for the secondary partition on the iSeries server, enter the service interface name of the secondary partition (system name of the Operations Console LAN adapter) as it is known on the network. Then, click **Next**.

   If you *have not* configured the Operations Console LAN adapter for the secondary partition on the iSeries server, enter the service interface name of the secondary partition (system name of the Operations Console LAN adapter) that will be used for this LAN connection. Then, click **Next**.
10. In the AS/400 System Service Interface Information window, do one of the following:
    - If the Service TCP/IP Address field does not show data, proceed as follows:

a. Enter the correct IP address for your secondary partition.
b. Enter the data for the remaining fields and select the logical partition ID (1 is for the first logical (secondary) partition, 2 is for the second logical partition, etc.). Then, click **Next** to continue (the system will be configured during the first connection process). Go to step 11.

- If the AS/400 system service name and the Service TCP/IP Address fields show non-editable data, proceed as follows:
  a. If you are sure that you have configured the Operations Console LAN adapter for the secondary partition on the iSeries server, click **Next** to continue. Then, go to step 11.
  b. If you have not configured the Operations Console LAN adapter for the secondary partition on the iSeries server, enter the data for the remaining fields. Then, click **Next** to continue.

11. In the AS/400 Operations Console Service Tools Device Information window, do the following to provide, for the secondary partition, the *Service Tools Device Profile Information* (service tools device profile name and password) and the *Service Tools Device Profile Information Password* (The Service Tools Device Profile Information Password is used to protect the Service Tools Device Profile Information.):

    Set the *Service Tools Device Profile Information* values as follows:

    a. For **Service tools device profile for this PC**, do one of the following:
       - If this is the first PC console device to be connected to the secondary partition, type `QCONSOLE` in uppercase.

         Note: `QCONSOLE` (in uppercase) is the default device profile name and the default device profile password for a secondary partition.
       - If you created additional service tools device profiles, type the device profile name that you created.
    b. For **Password**, if you typed `QCONSOLE` in the previous field, type `QCONSOLE` in uppercase as the password. Otherwise, type the device profile password.
    c. For **Confirm password**, type the service tools device profile password again.

       Note: This password is used by the PC and iSeries and not by the user. You do not have to remember it for any other activity.

    Set the *Service Tools Device Profile Information Password* values as follows:

    a. For **Password to access the Service tools device profile information**, type the password you want to use to protect the Service Tools Device Profile Information.

       Note: The password is case sensitive and can be a maximum of 128 characters of mixed case. You will use *this* password later (during the connection process), to sign on the Service Device Sign-on window. It is important that you remember this password.
    b. For **Confirm password**, type the service tools device profile information password again.

    Important:

    - If, in this window, you need to make changes to the device profile password, see "Appendix G. Considerations for changing the service tools

device profile password" on page 127 and "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129.

- If, in this window, you need to make changes to the password used to access the service tools device profile information, see "Appendix I. Changing the password used to access the service tools device profile information" on page 131.
- If, in this window, you need to make changes to both the device profile password and the password used to access the service tools device profile information, see "Appendix G. Considerations for changing the service tools device profile password" on page 127, "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129, and "Appendix I. Changing the password used to access the service tools device profile information" on page 131.

Click **Next** to continue.

12. Based on the functions you previously selected, do *one* of the following:
    - If you selected `Remote Control Panel and Console` in step 7 on page 27, type the service interface name to the primary partition (name of the Operations Console LAN adapter for the primary partition as it is known on the network. Then, click **Next**.
    - If you selected only the console function in step 7 on page 27, go to step 15 on page 30.
    - If you selected only the remote control panel, in step 7 on page 27, type the service interface name to the primary partition (name of the Operations Console LAN adapter for the primary partition as it is known on the network. Select the logical partition ID of the target partition. Then, click **Next**.
13. Click **Next** to specify the service tools device information for the primary partition.
14. In the AS/400 Operations Console Service Tools Device Information window, do the following to provide, for the primary partition, the *Service Tools Device Profile Information* (service tools device profile name and password) and the *Service Tools Device Profile Information Password* (The Service Tools Device Profile Information Password is used to protect the Service Tools Device Profile Information.):

    Note: If the primary partition has been configured for LAN connectivity, data is retrieved from the primary configuration. The passwords are displayed as asterisks (`*******`). Otherwise, if the primary partition has not been configured, you need to fill out all the fields.

    Set the *Service Tools Device Profile Information* values as follows:

    a. For **Service tools device profile for this PC**, do one of the following:
        - If this is the first PC console device to be connected to the primary partition, type `QCONSOLE` in uppercase.

          Note: New systems are shipped with `QCONSOLE` (in uppercase) as the default device profile name and the default device profile password.
        - If you created additional service tools device profiles, type the device profile name that you created.

b. For **Password**, if you typed `QCONSOLE` in the previous field, type `QCONSOLE` in uppercase as the password. Otherwise, type the device profile password.

c. For **Confirm password**, type the service tools device profile password again.

Note: This password is used by the PC and iSeries and not by the user. You do not have to remember it for any other activity.

Set the *Service Tools Device Profile Information Password* values as follows:

a. For **Password to access the Service tools device profile information**, type the password you want to use to protect the Service Tools Device Profile Information.

Note: The password is case sensitive and can be a maximum of 128 characters. If you are setting up only the remote control panel function, you will use this password later (during the connection process), to sign on the Service Device Sign-on window. It is important that you remember whether you type this password in uppercase or lowercase.

b. For **Confirm password**, type the service tools device profile information password again.

Important:

- If, in this window, you need to make changes to the device profile password, see "Appendix G. Considerations for changing the service tools device profile password" on page 127 and "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129.
- If, in this window, you need to make changes to the password used to access the service tools device profile information, see "Appendix I. Changing the password used to access the service tools device profile information" on page 131.
- If, in this window, you need to make changes to both the device profile password and the password used to access the service tools device profile information, see "Appendix G. Considerations for changing the service tools device profile password" on page 127, "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129, and "Appendix I. Changing the password used to access the service tools device profile information" on page 131.

Click **Next** to continue.

15. Click **Finish**.

Note: It is recommended that you leave the `Start connection when Operations Console starts` check box unchecked until you verify that the connection and functions work properly. It is difficult to work with setup problems once the connection is started.

16. In the AS/400 Operations Console window, do the following to start the connection:

a. Select the configuration name (under AS/400 connection).

b. From the **Connection** menu, click **Connect**.

17. To sign on the Service Device Sign-on window, make sure that you use the correct case for the userID and passwords and do one of the following:
    - If you are setting up only the remote control panel function, enter the service tools device profile information password for the primary partition (refer to step 14 on page 29). Also, enter your assigned service tools user ID and password.
    - If you are setting up only the console function, enter the service tools device profile information password for the secondary partition (refer to step 11 on page 28). Also, enter your assigned service tools user ID and password.
    - If you are setting up the console and the remote control panel, you will get two sign-on windows. Make sure that you check the title bar for the name of the primary and secondary partitions. For each sign-on window, enter the service tools device profile information password for the corresponding partition. For the console, you would enter the password for the secondary partition, and for the remote control panel, you would enter the password for the primary partition. Also, enter your assigned service tools user ID and password as defined for the corresponding partition.

    Important:

    a. Use the correct case for the userID and passwords. Operations Console needs a valid service device information password, service tools user ID, and service tools password to authorize the connection between the LCS and the iSeries server.
    b. Authentication may fail for several reasons. If it fails, one possible solution is to resynchronize the device profile password on the PC and the iSeries server. To do this, see "Appendix C. Resynchronizing the PC and iSeries device profile password" on page 117.

    After you sign on successfully, the connection status shows `Connected`. Then, click **OK**.
18. If you configured the remote control panel, confirm that it appears.
19. Confirm that the console appears, if configured.
20. Follow the instructions in "Appendix J. Changing the keyboard definition for Operations Console" on page 133.
21. Perform the instructions in "Appendix E. Verifying or configuring Operations Console as the console device" on page 123.
22. Go to "Setup Complete" on page 34.

Configuring a LAN remote controlling system

Use this section to configure a new LAN RCS on your PC. Before beginning creating a LAN RCS configuration, make sure that you have completed setting up the PC with all the necessary software and hardware. If you have not done so, go to "Chapter 2. PC and iSeries requirements for LAN configurations" on page 13, "Chapter 3. Preparing for a network environment" on page 17, and "Chapter 4. Preparing for Operations Console configuration" on page 21.

Important:

- If you are using Windows NT or Windows 2000 Professional, you must be a member of the Administrators group to create or modify Operations Console configurations.

- You must have an unused device profile available at the system location the LCS is connected to. If the LCS is configured as both the console and remote control panel in a non-partitioned system, you will need to have an unused device profile available to support the LAN RCS. If the LCS is configured as the console to a secondary partition, the LAN RCS needs an unused device profile in the secondary partition. If the LCS is configured as the remote control panel to a secondary partition, the LAN RCS needs an unused device profile in the primary partition to support the remote control panel. If the LCS is configured as both the console and remote control panel, the LAN RCS needs an unused device profile in the secondary partition to support the console and another in the primary to support the remote control panel.

To create a new LAN RCS configuration on your PC, follow these steps:

1. Start Operations Console if it is not already running:
   a. Click **Start** and select **Programs**.
   b. Select **IBM AS/400 Client Access Express**.
   c. Click **AS/400 Operations Console**.

      Note: If Operations Console had a previous configuration, the setup wizard does not start. Operations Console starts and may try to connect.
2. In the Welcome window, click **Next**.
3. Select **Remote Controlling System (RCS) PC to LCS**. Then, click **Next**.
4. Select **Local Area Network (LAN)**. Then, click **Next**.

   Note: If you do not get a window allowing you to select the type of connectivity, you have not installed the contents of the *iSeries Operations Console Update* CD-ROM (refer to "Appendix F. iSeries Operations Console Update" on page 125 to install it).
5. Type the system name of the iSeries server to which you want to connect. This is the system name as defined by the LCS.
6. Type the name of the local controlling system as it is known on the network. Then, click **Next**.
7. In the AS/400 Operations Console Service Tools Device Information window, do the following to provide, for the system, the *Service Tools Device Profile Information* (service tools device profile name and password) and the *Service Tools Device Profile Information Password* (The Service Tools Device Profile Information Password is used to protect the Service Tools Device Profile Information.):

   Note: If the system has been configured for LAN connectivity, data is retrieved from the system configuration. The passwords are displayed as asterisks (*******). Otherwise, if the system has not been configured, you need to fill out all the fields.

   Set the *Service Tools Device Profile Information* values as follows:
   a. For **Service tools device profile for this PC**, do one of the following:
      - If this is the first PC console device to be connected to the system, type `QCONSOLE` in uppercase.

        Note: New systems are shipped with `QCONSOLE` (in uppercase) as the default device profile name and the default device profile password.

- If you created additional service tools device profiles, type the device profile name that you created.

b. For **Password**, if you typed QCONSOLE in the previous field, type QCONSOLE in uppercase as the password. Otherwise, type the device profile password.

c. For **Confirm password**, type the service tools device profile password again.

Set the *Service Tools Device Profile Information Password* values as follows:

a. For **Password to access the Service tools device profile information**, type the password you want to use to protect the Service Tools Device Profile Information.

Note: The password is case sensitive and can be a maximum of 128 characters. This is the password you will use later to sign on the Service Device Sign-on window during the connection process.

b. For **Confirm password**, type the service tools device profile information password again.

Important:

- If, in this window, you need to make changes to the device profile password, see "Appendix G. Considerations for changing the service tools device profile password" on page 127 and "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129 .
- If, in this window, you need to make changes to the password used to access the service tools device profile information, see "Appendix I. Changing the password used to access the service tools device profile information" on page 131.
- If, in this window, you need to make changes to both the device profile password and the password used to access the service tools device profile information, see "Appendix G. Considerations for changing the service tools device profile password" on page 127, "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129, and "Appendix I. Changing the password used to access the service tools device profile information" on page 131.

Click **Next** to continue.

8. Click **Finish**.

Note: It is recommended that you leave the Start connection when Operations Console starts check box unchecked until you verify that the connection and functions work properly. It is difficult to work with setup problems once the connection is started.

9. The instructions for the wizard are written as if the RCS just configured is the only configuration and was not set to automatically start:
   - If you *do not* want to test the RCS connection, go to "Setup Complete" on page 34.
   - If you *do* want to test the RCS connection and the LCS you are connecting to is available, follow these steps:
     a. Select the configuration name (under AS/400 connection). This is the name that Operations Console uses to refer to a specific iSeries system.
     b. From the **Connection** menu, click **Connect**.

10. To sign on the Service Device Sign-on window, make sure that you use the correct case for the userID and passwords and enter the service tools device profile information password for the system (refer to step 7 on page 32). Also, enter your assigned service tools user ID and password.

    Important:

    a. Use the correct case for the userID and passwords. Operations Console needs a valid service device information password, service tools user ID, and service tools password to authorize the connection between the LCS and the iSeries server.

    b. Authentication may fail for several reasons. If it fails, one possible solution is to resynchronize the device profile password on the PC and the iSeries server. To do this, see "Appendix C. Resynchronizing the PC and iSeries device profile password" on page 117.

    After you sign on successfully, click **OK**. The connection status shows the same status the LCS has, usually `Connected`.

11. If you configured the remote control panel, confirm that it appears.
12. Confirm that the console appears, if configured.

    Important:

    - Even though the remote control panel may have started, in this state, the RCS has not yet requested control, so you are unable to actually do anything except look at the state of the system.
    - The Enter key of the character-based interface (5250 emulation) may be the right Ctrl key on your keyboard. To change the keyboard definition so that the Enter key is the Enter key of your keyboard, see "Appendix J. Changing the keyboard definition for Operations Console" on page 133.

13. Go to "Setup Complete".

Setup Complete

You have finished the setup process for Operations Console with LAN connectivity.

To start using your LAN configuration, see the Operations Console topic under Client Access Express in the iSeries Information Center:

`http://www.ibm.com/eserver/iseries/infocenter`

If your system has logical partitions, see also the `Restarting and powering down a system with logical partitions` topic in the iSeries Information Center under **Systems Management -> Logical partitions -> Managing logical partitions**.

Chapter 6. Changing an existing LAN configuration

Use this section to change an existing Operations Console LAN configuration.

Important:

- In a LAN environment, the remote control panel mode selections require security authorization for the user.
- If you are using Windows NT or Windows 2000 Professional, you must be a member of the Administrators group to create or modify Operations Console configurations.

Changing a LAN local controlling system

Important: You need to delete and recreate your configuration if you want to change the configuration name or the partition associated with the configuration name.

To change a LAN LCS for a non-partitioned system or primary partition, see "Changing a LAN LCS for primary partitions".

To change a LAN LCS for a secondary partition, see"Changing a LAN LCS for secondary partitions" on page 37.

Changing a LAN LCS for primary partitions

Important: IBM strongly recommends that you create additional device profiles in DST (Dedicated Service Tools) to be used in case of emergency. To do this, see "Setting up service tools device profiles on the iSeries server" on page 20.

To change a LAN LCS for a primary partition or non-partitioned system, do the following:

1. Start Operations Console if it is not already running:
   a. Click **Start** and select **Programs**.
   b. Select **IBM AS/400 Client Access Express**.
   c. Click **AS/400 Operations Console**.

   Note: If the configuration you will be changing is set to automatically connect, then disconnect it. To disconnect the configuration, do the following:
   1) If the Service Device Sign-on window appears, click **Cancel**.
   2) Select the configuration name (under `AS/400 Connection`). This is the name that Operations Console uses to refer to a specific iSeries system.
   3) From the **Connection** menu, click **Disconnect**. The connection status shows `Disconnecting`.
   4) Wait for the status to show `Disconnected`.
2. From the **Connection** menu, click **Configure Connection**. The values for the current configuration are going to be presented to you.
3. In the Welcome window, click **Next**.
4. Click **Local Area Network (LAN)**. Then, click **Next**.

© Copyright IBM Corp. 1999, 2001

5. Select the function (console, remote control panel, or both) that you want to use. Then, click **Next**.
6. In the AS/400 System Service Interface Information window, do one of the following:
   - If you are not changing the network data for your existing configuration, click **Next** to continue.
   - If you need to change the Service TCP/IP Address field and the field that contains non-editable data, you must delete the current configuration and create a new configuration using "Configuring a LAN LCS for primary partitions" on page 23.
   - If you need to change any data in any of the editable fields, you must fill out all the fields available.
   -

   Click **Next** to continue.
7. In the AS/400 Operations Console Service Tools Device Information window, you can only change passwords. Do one of the following:
   - If you do not need to change either password, click **Next**, and then go to step 8.
   - If, in this window, you need to make changes to the device profile password, see "Appendix G. Considerations for changing the service tools device profile password" on page 127 and "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129.
   - If, in this window, you need to make changes to the password used to access the service tools device profile information, see "Appendix I. Changing the password used to access the service tools device profile information" on page 131.
   - If, in this window, you need to make changes to both the device profile password and the password used to access the service tools device profile information, see "Appendix G. Considerations for changing the service tools device profile password" on page 127, "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129, and "Appendix I. Changing the password used to access the service tools device profile information" on page 131.

   Click **Next** to continue.
8. Click **Finish**.

   Note: It is recommended that you leave the `Start connection when Operations Console starts` check box unchecked until you verify that the connection and functions work properly. It is difficult to work with setup problems once the connection is started.
9. In the AS/400 Operations Console window, do the following to start the connection to the iSeries server:
   a. Select the configuration name (under AS/400 connection).
   b. From the **Connection** menu, click **Connect**.
10. Sign on using the service tools device profile information password for the system (refer to step 7) and your assigned service tools user ID and password.

    Important:

a. Use the correct case for the userID and passwords. Operations Console needs a valid service device information password, service tools user ID, and service tools password to authorize the connection between the LCS and the iSeries server.

b. Authentication may fail for several reasons. If it fails, one possible solution is to resynchronize the device profile password on the PC and the iSeries server. To do this, see "Appendix C. Resynchronizing the PC and iSeries device profile password" on page 117.

11. If you configured the remote control panel, confirm that it appears.
12. Confirm that the console appears.
13. Follow the instructions in "Appendix J. Changing the keyboard definition for Operations Console" on page 133.
14. Go to "Setup complete" on page 43.

Changing a LAN LCS for secondary partitions

Important:

- IBM strongly recommends that you create additional device profiles in DST (Dedicated Service Tools) to be used in case of emergency. To do this, see "Setting up service tools device profiles on the iSeries server" on page 20.
- If you are adding the console or remote control panel function, you must have an unused device profile available. The remote control panel function requires an unused device profile in the primary partition. The console function requires an unused device profile in the secondary partition.

To change a LAN LCS for a secondary partition, do the following:

1. Start Operations Console if it is not already running:
   a. Click **Start** and select **Programs**.
   b. Select **IBM AS/400 Client Access Express**.
   c. Click **AS/400 Operations Console**.

   Note: If the configuration you will be changing is set to automatically connect, then disconnect it. To disconnect the configuration, do the following:
   1) If the Service Device Sign-on window appears, click **Cancel**.
   2) Select the configuration name (under `AS/400 Connection`). This is the name that Operations Console uses to refer to a specific iSeries system.
   3) From the **Connection** menu, click **Disconnect**. The connection status shows `Disconnecting`.
   4) Wait for the status to show `Disconnected`.
2. From the **Connection** menu, click **Configure Connection**. The values for the current configuration are going to be presented to you.
3. In the Welcome window, click **Next**.
4. Click **Local Area Network (LAN)**. Then, click **Next**.
5. Select the function (console, remote control panel, or both) that you want to use. Then, click **Next**.
6. If you are configuring only the remote control panel, go to step 9 on page 39.
7. In the AS/400 System Service Interface Information window, do one of the following:

- If you are not changing the network data for your existing configuration, click **Next** to continue.
- If you need to change the Service TCP/IP Address field and the field that contains non-editable data, you must delete the current configuration and create a new configuration using "Configuring a LAN LCS for primary partitions" on page 23.
- If you need to change any data in any of the editable fields, you must fill out all the fields available.
- If you are adding the console function, do one of the following:
  - If the Service TCP/IP Address field does not show data, proceed as follows:
    a. Enter the correct IP address for your secondary partition.
    b. Enter the data for the remaining fields and select the logical partition ID (1 is for the first logical (secondary) partition, 2 is for the second logical partition, etc.). Then, click **Next** to continue (the system will be configured during the first connection process). Go to step 8.
  - If the AS/400 system service name and the Service TCP/IP Address fields show non-editable data, proceed as follows:
    a. If you are sure that you have configured the Operations Console LAN adapter for the secondary partition on the iSeries server, click **Next** to continue. Then, go to step 11 on page 28.
    b. If you have not configured the Operations Console LAN adapter for the secondary partition on the iSeries server, enter the data for the remaining fields. Then, click **Next** to continue.

Click **Next** to continue.

8. In the AS/400 Operations Console Service Tools Device Information window, you can only change passwords. Do one of the following:
   - If you do not need to change either password, click **Next**, and then go to step 9 on page 39.
   - If, in this window, you need to make changes to the device profile password, see "Appendix G. Considerations for changing the service tools device profile password" on page 127 and "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129.
   - If, in this window, you need to make changes to the password used to access the service tools device profile information, see "Appendix I. Changing the password used to access the service tools device profile information" on page 131.
   - If, in this window, you need to make changes to both the device profile password and the password used to access the service tools device profile information, see "Appendix G. Considerations for changing the service tools device profile password" on page 127, "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129, and "Appendix I. Changing the password used to access the service tools device profile information" on page 131.
   - If you are adding the console function, do the following:

     Set the *Service Tools Device Profile Information* values as follows:

     a. For **Service tools device profile for this PC**, do one of the following:
        - If this is the first PC console device to be connected to the secondary partition, type `QCONSOLE` in uppercase.

Note: QCONSOLE (in uppercase) is the default device profile name and the default device profile password for a secondary partition.

– If you created additional service tools device profiles, type the device profile name that you created.

b. For **Password**, if you typed QCONSOLE in the previous field, type QCONSOLE in uppercase as the password. Otherwise, type the device profile password.

c. For **Confirm password**, type the service tools device profile password again.

Note: This password is used by the PC and iSeries and not by the user. You do not have to remember it for any other activity.

Set the *Service Tools Device Profile Information Password* values as follows:

a. For **Password to access the Service tools device profile information**, type the password you want to use to protect the Service Tools Device Profile Information.

Note: The password is case sensitive and can be a maximum of 128 characters of mixed case. You will use *this* password later (during the connection process), to sign on the Service Device Sign-on window. It is important that you remember this password.

b. For **Confirm password**, type the service tools device profile information password again.

Click **Next** to continue.

9. If you are not using the remote control panel, go to step 12 on page 40. Otherwise, type the service interface name to the primary partition (name of the Operations Console LAN adapter for the primary partition as it is known on the network) to change it. If you are adding the remote control panel function, select the logical partition. Then, click **Next** to accept the current name.
10. Click **Next** to specify the service tools device information for the primary partition.
11. In the AS/400 Operations Console Service Tools Device Information window, you can only change passwords. Do one of the following:
    - If you do not need to change either password, click **Next**, and then go to step 12 on page 40.
    - If, in this window, you need to make changes to the device profile password, see "Appendix G. Considerations for changing the service tools device profile password" on page 127 and "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129.
    - If, in this window, you need to make changes to the password used to access the service tools device profile information, see "Appendix I. Changing the password used to access the service tools device profile information" on page 131.
    - If, in this window, you need to make changes to both the device profile password and the password used to access the service tools device profile information, see "Appendix G. Considerations for changing the service tools device profile password" on page 127, "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129,

and "Appendix I. Changing the password used to access the service tools device profile information" on page 131.

- If you are adding the remote control panel function, do the following:

  Note: If the primary partition has been configured for LAN connectivity, data is retrieved from the primary configuration. The passwords are displayed as asterisks (*******). Otherwise, if the primary partition has not been configured, you need to fill out all the fields.

  Set the *Service Tools Device Profile Information* values as follows:

  a. For **Service tools device profile for this PC**, do one of the following:
     - If this is the first PC console device to be connected to the primary partition, type `QCONSOLE` in uppercase.

       Note: New systems are shipped with `QCONSOLE` (in uppercase) as the default device profile name and the default device profile password.
     - If you created additional service tools device profiles, type the device profile name that you created.

  b. For **Password**, if you typed `QCONSOLE` in the previous field, type `QCONSOLE` in uppercase as the password. Otherwise, type the device profile password.

  c. For **Confirm password**, type the service tools device profile password again.

     Note: This password is used by the PC and iSeries and not by the user. You do not have to remember it for any other activity.

  Set the *Service Tools Device Profile Information Password* values as follows:

  a. For **Password to access the Service tools device profile information**, type the password you want to use to protect the Service Tools Device Profile Information.

     Note: The password is case sensitive and can be a maximum of 128 characters. If you are setting up only the remote control panel function, you will use this password later (during the connection process), to sign on the Service Device Sign-on window. It is important that you remember whether you type this password in uppercase or lowercase.

  b. For **Confirm password**, type the service tools device profile information password again.

  Click **Next** to continue.

12. Click **Finish**.

    Note: It is recommended that you leave the `Start connection when Operations Console starts` check box unchecked until you verify that the connection and functions work properly. It is difficult to work with setup problems once the connection is started.

13. In the AS/400 Operations Console window, do the following to start the connection:
    a. Select the configuration name (under AS/400 connection).
    b. From the **Connection** menu, click **Connect**.

14. To sign on the Service Device Sign-on window, make sure that you use the correct case for the userID and passwords and do one of the following:
    - If you are setting up only the remote control panel function, enter the service tools device profile information password for the primary partition (refer to step 11 on page 39). Also, enter your assigned service tools user ID and password.
    - If you are setting up only the console function, enter the service tools device profile information password for the secondary partition (refer to step 8 on page 38). Also, enter your assigned service tools user ID and password.
    - If you are setting up the console and the remote control panel, you will get two sign-on windows. Make sure that you check the title bar for the name of the primary and secondary partitions. For each sign-on window, enter the service tools device profile information password for the corresponding partition. For the console, you would enter the password for the secondary partition, and for the remote control panel, you would enter the password for the primary partition. Also, enter your assigned service tools user ID and password as defined for the corresponding partition.

    Important:

    a. Use the correct case for the userID and passwords. Operations Console needs a valid service device information password, service tools user ID, and service tools password to authorize the connection between the LCS and the iSeries server.

    b. Authentication may fail for several reasons. If it fails, one possible solution is to resynchronize the device profile password on the PC and the iSeries server. To do this, see "Appendix C. Resynchronizing the PC and iSeries device profile password" on page 117.

    After you sign on successfully, the connection status shows `Connected`. Then, click **OK**.
15. If you configured the remote control panel, confirm that it appears.
16. Confirm that the console appears, if configured.
17. Follow the instructions in "Appendix J. Changing the keyboard definition for Operations Console" on page 133.
18. Go to "Setup complete" on page 43.

Changing a LAN remote controlling system

Use this section to change an existing LAN RCS configuration on your PC.

Important: If you are using Windows NT or Windows 2000 Professional, you must be a member of the Administrators group to create or modify Operations Console configurations.

To change the LAN RCS configuration, follow these steps:

1. Start Operations Console if it is not already running:
    a. Click **Start** and select **Programs**.
    b. Select **IBM AS/400 Client Access Express**.
    c. Click **AS/400 Operations Console**.

Note: If the configuration you will be changing is set to automatically connect, then disconnect it. To disconnect the configuration, do the following:

1) If the Service Device Sign-on window appears, click **Cancel**.
2) Select the configuration name (under `AS/400 Connection`). This is the name that Operations Console uses to refer to a specific iSeries system.
3) From the **Connection** menu, click **Disconnect**. The connection status shows `Disconnecting`.
4) Wait for the status to show `Not connected to LCS`.

2. From the **Connection** menu, click **Configure Connection**. The values for the current configuration are going to be presented to you.
3. In the Welcome window, click **Next**.
4. Click **Local Area Network (LAN)**. Then, click **Next**.
5. In the AS/400 Operations Console Service Tools Device Information window, you can only change passwords. Do one of the following:
   - If you do not need to change either password, click **Next**. Go to step 6.
   - If, in this window, you need to make changes to the device profile password, see "Appendix G. Considerations for changing the service tools device profile password" on page 127 and "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129.
   - If, in this window, you need to make changes to the password used to access the service tools device profile information, see "Appendix I. Changing the password used to access the service tools device profile information" on page 131.
   - If, in this window, you need to make changes to both the device profile password and the password used to access the service tools device profile information, see "Appendix G. Considerations for changing the service tools device profile password" on page 127, "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129, and "Appendix I. Changing the password used to access the service tools device profile information" on page 131.

   Click **Next** to continue.
6. Click **Finish**.

   Note: It is recommended that you leave the `Start connection when Operations Console starts` check box unchecked until you verify that the connection and functions work properly. It is difficult to work with setup problems once the connection is started.
7. The instructions for the wizard are written as if the RCS just configured is the only configuration and was not set to automatically start:
   - If you *do not* want to test the RCS connection, go to "Setup Complete" on page 34.
   - If you *do* want to test the RCS connection and the LCS you are connecting to is available, follow these steps:
     a. Select the configuration name (under AS/400 connection). This is the name that Operations Console uses to refer to a specific iSeries system.
     b. From the **Connection** menu, click **Connect**.

8. To sign on the Service Device Sign-on window, make sure that you use the correct case for the userID and passwords and enter the service tools device profile information password for the system (refer to step 5 on page 42). Also, enter your assigned service tools user ID and password.

   Important:

   a. Use the correct case for the userID and passwords. Operations Console needs a valid service device information password, service tools user ID, and service tools password to authorize the connection between the LCS and the iSeries server.

   b. Authentication may fail for several reasons. If it fails, one possible solution is to resynchronize the device profile password on the PC and the iSeries server. To do this, see "Appendix C. Resynchronizing the PC and iSeries device profile password" on page 117.

   After you sign on successfully, click **OK**. The connection status shows `Connected to LCS`.

9. If you configured the remote control panel, confirm that it appears.
10. Confirm that the console appears, if configured.

    Important:

    - Even though the remote control panel may have started, in this state, the RCS has not yet requested control, so you are unable to actually do anything except look at the state of the system.
    - The Enter key of the character-based interface (5250 emulation) may be the right Ctrl key on your keyboard. To change the keyboard definition so that the Enter key is the Enter key of your keyboard, see "Appendix J. Changing the keyboard definition for Operations Console" on page 133.

11. Go to "Setup complete".

Setup complete

You have finished the setup process for Operations Console with LAN connectivity.

To start using your LAN configuration, see the Operations Console topic under Client Access Express in the iSeries Information Center:

`http://www.ibm.com/eserver/iseries/infocenter`

Part 3. Setting up other Operations Console configurations

© Copyright IBM Corp. 1999, 2001

Chapter 7. PC and iSeries requirements for non-LAN configurations

Use this chapter to configure Operations Console without LAN connectivity. The chapter will assist you in meeting the necessary hardware and software requirements according to your intended cable-connected LCS configuration or RCS configuration with modem connectivity.

Hardware requirements

Once you decide how to best configure your Operations Console, the next step is to meet the hardware and software requirements that apply to your intended configuration.

Important: Make sure that you fully install any network adapter cards (such as LAN or Ethernet adapters) before starting the AS/400 Operations Console setup. If your PC does not have a network adapter card or you removed the network adapter card from the PC, remove all network components from the Network folder. Then, reinstall Dial-Up Networking before proceeding with the Operations Console setup.

To identify the hardware requirements for the PC that the AS/400 Operations Console is going to use, see Table 5.

Table 5. Operations Console hardware requirements

Hardware requirement	Stand-alone LCS (1,5)	LCS with dial-in support (2,5)	RCS (3) or dial-up LCS (4,5)
PC hardware **(6)** • Windows 95/98/Me – Pentium 266 MHz recommended (P6 or equivalent compatible microprocessor) – 32 MB memory minimum	X		X
PC hardware **(6)** • Windows NT – Pentium 266 MHz recommended – 32 MB memory minimum (64 MB recommended)	X	X	X
PC hardware **(6)** • Windows 2000 Professional – Pentium 266 MHz (P6 or equivalent compatible microprocessor) – 32 MB memory minimum (64 MB recommended)	X	X	X
Operations Console cable (if installing the console)	X	X	

© Copyright IBM Corp. 1999, 2001

Table 5. Operations Console hardware requirements (continued)

Hardware requirement	Stand-alone LCS (1,5)	LCS with dial-in support (2,5)	RCS (3) or dial-up LCS (4,5)
Remote control panel cable (if installing the remote control panel)	X	X	
9600 BPS modem minimum		X	X
Available COM port for the console (if installing the console) **(7)**	X	X	
Available COM port for the remote control panel (if installing the remote control panel) **(7,8)**	X	X	
Available COM port (if using an external PC modem) **(7)**		X	X

Notes:

1. A stand-alone LCS is an LCS that does not allow remote PCs (RCSs) to connect to it.
2. An LCS with dial-in support allows remote PCs (RCSs) to connect to it.
3. An RCS allows your PC to dial into an LCS to have access to an iSeries server.
4. If you are configuring a dial-up LCS (a remote PC that dials into an iSeries server to become the console), you need to satisfy the same requirements as an RCS.
5. If you are configuring a PC as both an LCS and an RCS, you need to satisfy the hardware requirements for both configurations.
6. If your PC has power management capabilities, turn it off. This PC may reset the communications port when power management is invoked, which would terminate any connections already established. Certain types of power management on the PC and in the operating system may cause System Reference Code (SRC) `0000DDDD` to appear in the iSeries control panel or remote control panel. This SRC data should clear when PC activity resumes.
7. If you are using either COM3 or COM4, be sure that the addresses and the interrupt request (IRQ) settings do not conflict with other hardware resources. You cannot share IRQ settings for Operations Console devices.
8. If you are connecting the remote control panel cable to iSeries Models 270, 820, 830, or 840, you need an available parallel port (LPT) instead of a COM port. The parallel port must be configured to use Enhanced Parallel Port (EPP) support which may require the PC's Basic Input/Output Services (BIOS) to change. The level of EPP support has to be 1.9 compliant. Check with your PC manufacturer for any assistance, if needed. Due to the way EPP support is being implemented to support the remote control panel, there may be PCs that will not support the use of this function. Even some 1.9 compliant PCs may still not support the remote control panel.

To connect your console PC (LCS) to your iSeries system, you must use the correct cables. See Table 6 and Table 7 on page 49.

Table 6. Operations Console cards and cables

Server	Feature code (card)	Part number (cable)
9406 640/650/730/740/S30/S40	2699	97H7556
9406 600/620/720/S10/S20 9401 150	2721 or 2745	97H7557
9406 270/820/830/840/170/250	2745 or 2771 **(1)**	97H7557
9406 5xx or 9402 4xx	2609 or 2612	97H7555

Table 6. Operations Console cards and cables (continued)

Server	Feature code (card)	Part number (cable)
Note: 1. The 2771 card will be found and used by Operations Console wherever it is placed.		

Table 7. Remote control panel cables

Server	Part number (cable)
9406 640/650/S30/S40	97H7584
9406 270/820/830/840 **(1)**	04N5592 **(2)**
All other systems	97H7591

Notes:

1. Currently, these servers support the remote control panel only under Windows NT Workstation 4.0 or Windows 2000 Professional.
2. The connector with the missing pin goes on the server side.

Use the following information when installing or changing Operations Console configurations:

- If you are currently using electronic customer support, you must move the electronic customer support cabling to another communications port before trying to install Operations Console.

  Note: If you are configuring a dial-up LCS do not move the electronic customer support resources.
- If you are upgrading to V5R1 and have been using Operations Console, upgrade Operations Console to V5R1 first, then upgrade OS/400 to V5R1.
- If you are upgrading to OS/400 V4R3, V4R4 or V4R5 and want to replace an existing console with Operations Console, upgrade the system before changing the console. This will prevent any conflict between the existing console and the Operations Console.
- If you are going to add or remove the remote control panel cable to an existing LCS, go to "Installing Operations Console cable" on page 68.
- If you are adding a modem for remote capability, physically install the modem before starting with the AS/400 Operations Console setup. Also, if you are replacing an existing modem with a new modem, physically replace the modem before starting with the AS/400 Operations Console setup.
- If you are making a change (that does not require additional hardware) to an existing AS/400 Operations Console configuration , go to "Chapter 10. Changing an existing configuration" on page 93. Examples of this type of change are: A change in the telephone number or a change in the LCS running mode (attended or unattended).
- If you are removing the console function from an LCS configuration, do one of the following:
  - If you need to use another console type (for example, a twinaxial device) for a period of time and intend to return to Operations Console when finished, you only need to make Operations Console unavailable during an IPL so the iSeries server finds your other console. You can do this by not starting Operations Console on the PC or by removing the Operations Console cable from the PC.

When you want to return to Operations Console, connect the Operations Console cable to the PC (if needed). Then, start Operations Console. The iSeries server should find Operations Console.

- If you also use the remote control panel and want to use that function alone for a period of time and intend to use the console function again later, go to "Chapter 10. Changing an existing configuration" on page 93 to remove the console function from your configuration.
- If you are removing the console function permanently from an LCS configuration, you need to remove the AS/400 Operations Console connection modem and the Operations Console cable. To remove the AS/400 Operations Console connection modem, go to "Configuring different Operating Systems" on page 55. To remove the Operations Console cable, go to "Installing Operations Console cable" on page 68. Then, go to "Chapter 10. Changing an existing configuration" on page 93 to remove the console function from your configuration.

- If you are going to add the console function to an existing LCS configuration, you need to delete the current configuration and create a new configuration. Delete the configuration as follows:
  1. If the LCS that you want to delete is connected and is not in control, do the following to get iSeries control:
     a. Select the configuration name (under AS/400 Connection). This is the name that Operations Console uses to refer to a specific iSeries system.
     b. From the **Connection** menu, click **Request Control**.
  2. If the Service Device Sign-on window appears, click **Cancel**.
  3. Select the configuration name (under AS/400 Connection). This is the name that Operations Console uses to refer to a specific iSeries server.
  4. From the **Connection** menu, click **Disconnect**. The connection status shows `Disconnecting`.
  5. Wait for the status to show `Disconnected`.
  6. Select the configuration name (under AS/400 Connection) that you want to delete.
  7. From the **Connection** menu, click **Delete**.
  8. Click **Yes** to confirm the deletion.

  Note to Windows 95/98/Me/2000 users: You may need to delete the network object (Windows 2000) or DUN object (Windows 95/98) each time you delete a configuration entry in Operations Console. Do the following to verify that either the network object or the DUN object does not exist:
  1. If you are using Windows 2000 Professional, open the Network and Dial-up Connections folder in the Control Panel. If you are using Windows 95, Windows 98, or Windows Me, double-click **My Computer** and open the Dial-Up Networking folder.
  2. If you deleted an LCS configuration, look for an icon that has the name of the iSeries server that the LCS used to connect to. Otherwise, if you deleted an RCS configuration, look for an icon that has the computer name of the LCS that you used to connect to the iSeries server.
  3. If the icon exists, you need to delete the network object or DUN object as follows:
     a. Right-click the icon.
     b. Click **Delete**.

- For all other changes to an existing configuration, go to "Configuring different Operating Systems" on page 55.

Software requirements

Before you continue, make sure that you have satisfied the hardware requirements according to your intended configuration.

To use Operations Console, the iSeries system must be running OS/400 V4R3M0 or later. Operations Console is supported on Windows 95, Windows 98, Windows Me, Windows NT Workstation 4.0 or later, or Windows 2000 Professional.

Important:

- IBM recommends that you have the latest Service Pack program temporary fix (PTF) for Client Access and the latest level of Client Access on your PC. 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.
- For iSeries 400 Models 270, 820, 830, and 840, the remote control panel runs only under Windows NT and Windows 2000. For other servers, the remote control panel runs under Windows 95, Windows 98, Windows Me, Windows NT Workstation 4.0 or later, and Windows 2000 Professional.

If you are configuring a stand-alone LCS, the operating system can be any of the following:

- Windows 95 (with Dial-Up Networking support)
- Windows 98 (with Dial-Up Networking support)
- Windows Me
- Windows NT Workstation 4.0 or later, with Remote Access Service installed. Windows NT Workstation 4.0 requires Service Pack 3 (at a minimum) or later.
- Windows 2000 Professional

If your LCS is going to support an RCS, the operating system must be either Windows NT Workstation 4.0 (or later) or Windows 2000 Professional. For Windows NT Workstation 4.0 or later, Remote Access Services must be installed. Windows NT also requires Service Pack 3 (at a minimum) or later.

The Client Access versions, at the LCS and RCS, must be at the same level for proper operation of AS/400 Operations Console.

Notes:

- Make sure that you have the latest Service Pack for Client Access.
- If you are going to use Windows 95, you may need Microsoft® Dial-Up Networking Upgrade 1.3 or later. If you need to download and install the DUN upgrade, you can get a copy at the Microsoft Web site, `http://www.microsoft.com`
- If you run any software that makes your PC SOCKS enabled (the PC accesses the Internet through a firewall, such as Microsoft Proxy Client, Hummingbird®

SOCKS Client, NEC SOCKS 5, or others), you cannot route the subnet for 192.168.0.0 to the firewall. AS/400 Operations Console uses addresses in the range of 192.168.0.0 to 192.168.0.255. Incorrect routing will cause AS/400 Operations Console to fail. Check your SOCKS configuration and make sure that the entry is:

```
Direct    192.168.0.0    255.255.255.0
```

Chapter 8. Preparing for Operations Console configuration

This chapter covers the tasks that you have to follow in order to prepare the PC and the iSeries server for an Operations Console configuration. Before preparing the PC and iSeries server for an Operations Console configuration, you must satisfy hardware and software requirements. If you have not done so, go to "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47.

Important:

- To set up the PC with all the necessary software and hardware for your intended configuration, go through this chapter in its entirety.
- If you are making a change to an existing Operations Console configuration, make sure that you go through "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47. Then, return to this chapter.

Determining installation for Client Access Express

Before you use AS/400 Operations Console, you must install Client Access Express. During the installation of Client Access Express, you are going to install a 5250 emulator (if you do not already have PC5250 or IBM Personal Communications V4.3 or later) and AS/400 Operations Console support.

If you are using Operations Console with LAN connectivity or passphrase (long password) support on the iSeries, you also need to make sure that you have the V5R1 version of Client Access Express and that you install the latest Service Pack for Client Access.

If an emulator and AS/400 Operations Console support are already installed, go to "Configuring different Operating Systems" on page 55.

To check whether you have Client Access Express for Windows installed:

1. Click **Start** and select **Settings**.
2. Click **Control Panel**.
3. Double-click **Add/Remove Programs**.
4. Look for `IBM AS/400 Client Access Express for Windows`.
5. To close Add/Remove Programs, click **Cancel**.
6. Close the Control Panel.

If you have Client Access Express for Windows installed, go to "Installing Client Access Express with a minimum configuration" on page 54. If you do not have Client Access Express for Windows installed, continue with "Installing Client Access Express".

Installing Client Access Express

In this section, you are going to install Client Access Express for Windows using the *iSeries 400 Setup and Operations, SK3T-4098-00* CD-ROM.

If you do not have Client Access Express for Windows installed, use the *iSeries 400 Setup and Operations* CD-ROM to install it:

© Copyright IBM Corp. 1999, 2001

1. Insert the *iSeries 400 Setup and Operations* CD in the optical device drive (for example, a CD-ROM drive).
2. Select the **Client Access Express** option to start the installation.
3. Wait until the `IBM AS/400 Client Access Express for Windows` window appears.
4. To continue with the setup program, click **Next** and follow the prompts. Use the "Installing Client Access Express with a minimum configuration" section, as your guide to what to install.

   Refer to *Client Access Express for Windows - Setup*, SC41-5507-02 for further installation assistance. You can find a PDF version of this manual 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**.

   Important: After installing Client Access Express, install the contents of the *Operations Console Update, SK3T-4114–00* CD-ROM by double-clicking the Setup.exe file.

Installing Client Access Express with a minimum configuration

In this section, you are going to make sure that you have Client Access Express for Windows installed with the required components.

If you have Client Access Express for Windows installed, open the Client Access folder and look for the **AS/400 Operations Console** icon. If the icon is present, go to "Configuring different Operating Systems" on page 55. If the icon is not present, click the **Selective Setup** icon to add the AS/400 Operations Console component.

If you are installing Client Access Express for the first time, you have to ensure that you have a minimum configuration for running Operations Console. If you are only adding the AS/400 Operations Console component, add only the components necessary to meet this minimum configuration.

To ensure the minimum configuration, do a **Custom** install and select the following components:

1. **Express Required Programs**
2. **5250 Display and Printer Emulator** (if IBM Personal Communications V4.2 or later is not installed)

   You do not need a license to use 5250 Display Emulation just for AS/400 Operations Console, even though the screen says that you do.

   Important: If your Operations Console configuration is going to support only the remote control panel, you do not need to install an emulator.
3. **AS/400 Operations Console**. Then, click **Next** and follow the prompts.
4. IBM recommends that you have the latest Service Pack program temporary fix (PTF) for Client Access and the latest level of Client Access on your PC. 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.

Configuring different Operating Systems

At this point, you must have installed Client Access Express on your PC with the required components. If you have not installed Client Access Express, go to "Determining installation for Client Access Express" on page 53.

If you are creating an Operations Console configuration, use this section to make sure that your PC has the required networking components. If you are changing an existing configuration or you are adding or removing a PC modem, use this section to validate that the PC has the required components. You may also use this section to remove any components that may no longer be needed.

To make sure that your PC has the required components, do the following:

- If your PC is running **Windows 95** or **Windows 98**, go to "Installing necessary modems for Windows 95/98/Me".
- If your PC is running **Windows NT**, go to "Installing necessary modems for Windows NT" on page 58.
- If your PC is running **Windows 2000 Professional**, go to "Installing necessary modems for Windows 2000 Professional" on page 64.

Installing necessary modems for Windows 95/98/Me

Use this section to install the necessary modems for your intended Operations Console configuration. You may need to install the AS/400 Operations Console connection modem, a PC modem, or both. The AS/400 Operations Console connection modem is not a physical modem but a logical device driver that comes with Operations Console and allows an LCS to connect to an iSeries server.

To install the necessary modems for Windows 95 or Windows 98, follow these steps:

__ 1. Are you installing Operations Console only for the remote control panel?

No **Yes**

↓ Go to "Installing Operations Console cable" on page 68.

__ 2. Open the Modems folder to determine if you have modems installed:
   __ a. Click **Start** and select **Settings**.
   __ b. Click **Control Panel**.
   __ c. Double-click **Modems**.

__ 3. Choose the correct modems for your Operations Console configuration according to Table 8.

Table 8. Modems for AS/400 Operations Console configurations for Windows 95/98/Me

Desired configuration	Necessary modems
Stand-alone local controlling system (LCS)	AS/400 Operations Console connection[1]
Remote controlling system (RCS)	A PC modem
Dial-up local controlling system (LCS)	A PC modem
Stand-alone local controlling system (LCS) and Remote controlling system (RCS)	AS/400 Operations Console connection[1] and a PC modem
Note: 1. The AS/400 Operations Console connection modem is not a physical modem but a logical device driver that comes with Operations Console and allows an LCS to connect to an iSeries server. When it is present in the Modems folder, it shows as `AS400 Operations Console Connection`.	

__ 4. If you are working with an existing configuration and you have already satisfied the requirements for modems, based on Table 8 on page 55, close the Modems folder. Then, go to "Installing Operations Console cable" on page 68.

__ 5. If you are not adding a modem, close the Modems folder. Then, go to step 12 on page 57.

__ 6. Review these tips before continuing with step 7 to add the first (or the only) modem necessary to accomplish your Operations Console configuration:

Tips:

- You may have to install the AS/400 Operations Console connection modem, a PC modem, or both, to satisfy your intended configuration.
- If there are additional modems present that Operations Console will not use and you need them, do not remove them but disregard their presence while configuring Operations Console.
- The first time a modem is configured on a PC, a display appears. The display asks you for your telephone area code or country code. It also asks for any numbers necessary to access an outside line. If you get this display, add the information; then, click **Next** to exit that one-time display and continue with the next step.

__ 7. If you are **not** installing the AS/400 Operations Console connection modem, go to step 8 on page 57. Otherwise, if you are installing the AS/400 Operations Console connection modem, follow these steps:

a. If you are currently in the Modems folder, click **Add**.

b. Select the **Don't detect my modem; I will select it from a list** check box. Then, click **Next**.

c. Click **Have Disk**.

Note: If you know the full path to the `AS400 Operations Console Connection` driver, enter it here. Then, go to step 7e. If you do not know the path to the driver, continue with step 7d.

d. To locate the driver, do the following:

1) Click **Browse**.

2) Click the **down-arrow** to the right of the **Look in** field. Then, select the drive where you installed Client Access Express.

3) In the Folders section, select the folder where you installed Client Access. If you chose the default, do the following:

a) Double-click **Program Files** or **Progra~1**.

b) Double-click **IBM**.

c) Double-click **Client Access** or **Client~1**.

4) Double-click **Aoc**.

5) Double-click **Inf**. The `cwbopaoc.inf` driver should be listed.

6) Click **Open** or **OK**.

e. Click **OK**. `AS400 Operations Console Connection` should be listed.

f. Click **Next**.

g. Select the communications port where you are going to install the Operations Console cable (for example, **COM1**).

h. Click **Next**.

i. Click **Finish**. You should be back in the Modems folder.

j. Click **Properties**. Set **Maximum speed** to **115200**. Click **OK**.

Important: For AS/400 servers 4xx or 5xx, the speed must be set to **19200**.

k. If you are not going to install a PC modem, go to step 9.

__ 8. If you are installing a PC modem that requires specific drivers, use the instructions that the modem manufacturer provides. Otherwise, follow these steps to install the PC modem:

a. If you are currently in the Modems folder, click **Add**, then **Next**. Otherwise, if you are at the Install New Modem window, click **Next**.

The PC should find the new modem and report its location.

b. When the window shows the modem it found, click **Next** to accept it. The PC will now load the driver code to support it.

c. Click **Finish** to return you to the Modems folder.

__ 9. Close the Modems folder.

__ 10. If you get a message that indicates that you need to restart the PC before you can use the modem, click **OK**. Then, perform a shutdown and restart your PC.

Otherwise, you may be prompted to restart your PC. If so, click **Yes** or **OK** to perform the shutdown.

__ 11. If you were not prompted to restart the PC, IBM recommends that you restart it to force the PC to rewrite changed data.

__ 12. Continue with "Confirming the existence of TCP/IP for Windows 95/98/Me".

Confirming the existence of TCP/IP for Windows 95/98/Me

Use this section to satisfy the network requirements for Windows 95, Windows 98, or Windows Me. Be sure you fully install and configure any network adapter cards (such as LAN or Ethernet adapters) before starting the Operations Console installation.

Confirm the existence of TCP/IP as follows:

__ 1. Click **Start** and select **Settings**.

__ 2. Click **Control Panel**.

__ 3. Double-click **Network**.

__ 4. Is **TCP/IP** listed?

No	**Yes**
↓	Click **OK**. You have satisfied the network requirements. Go to "Verifying the level of Dial-Up Networking (DUN) for Windows 95/98/Me" on page 58.

__ 5. Click **Add**.

__ 6. Select **Protocol**.

__ 7. Click **Add**.

__ 8. Select **Microsoft** listed under **Manufacturers**.

__ 9. Select **TCP/IP** listed under **Network Protocols**.

__ 10. Click **OK** twice.

__ 11. Select **Yes** to restart the PC.

You have now satisfied the network portion of the requirements. Continue with "Verifying the level of Dial-Up Networking (DUN) for Windows 95/98/Me".

Verifying the level of Dial-Up Networking (DUN) for Windows 95/98/Me

In this section, you are going to install DUN or a DUN upgrade, if needed. Windows 95, Windows 98, and Windows Me require Dial-Up Networking (DUN).

To begin verifying the level of DUN on your system, perform these steps:

__ 1. Click **Start** and select **Settings**.

__ 2. Click **Control Panel**.

__ 3. Click **Add/Remove Programs**.

Windows 95 requires Microsoft Dial-Up Networking Upgrade 1.3 or later. Look for `Dial-Up Networking Upgrade` in the list. If it is not listed, you need to install it. If you need to download and install the DUN upgrade, you can get a copy at the Microsoft Web site, `http://www.microsoft.com`.

Note to Windows 95 users: Click **Cancel**. If you have to install the DUN upgrade, use the instructions that Microsoft provides. Otherwise, you have finished checking the DUN requirement. Go to "Installing Operations Console cable" on page 68.

To continue working with DUN on PCs with Windows 98 or Windows Me, do steps 4 through 7.

__ 4. In the Add/Remove Programs Properties window, click the **Windows Setup** tab.

__ 5. Click **Communications**.

__ 6. Click **Details**.

If Dial-Up Networking is installed, click **Cancel**. You have satisfied the DUN requirement. Go to "Installing Operations Console cable" on page 68.

If Dial-Up Networking is not installed, you can install it now:

__ 7. Click the box to select **Dial-Up Networking**. Then, follow these steps:

__ a. Click **OK**.

__ b. Click **Apply**.

__ c. Click **OK** to restart the PC.

You have satisfied the DUN requirement. Go to "Installing Operations Console cable" on page 68.

Installing necessary modems for Windows NT

Use this section to install, in the Modems folder, the modems that you need for your intended Operations Console configuration. You may need to install the AS/400 Operations Console connection modem, a PC modem, or both. The AS/400 Operations Console connection modem is not a physical modem but a logical device driver that comes with Operations Console and allows an LCS to connect to an iSeries server.

To install the necessary modems for Windows NT, follow these steps:

__ 1. Are you installing AS/400 Operations Console only for the remote control panel, and the console will not have PCs dialing into it?

No **Yes**

↓ Go to "Installing Operations Console cable" on page 68.

__ 2. Open the Modems folder to determine if you have modems installed:
   __ a. Click **Start** and select **Settings**.
   __ b. Click **Control Panel**.
   __ c. Double-click **Modems**.

__ 3. Using Table 9, identify the correct modems that you need to install in the Modems folder for your Operations Console configuration.

Table 9. Modems for AS/400 Operations Console configurations for Windows NT

Desired configuration	Necessary modems
Stand-alone local controlling system (LCS without remote dial-in support)	AS/400 Operations Console connection[1]
Local controlling system (LCS) with remote dial-in support	AS/400 Operations Console connection[1] and a PC modem
Remote controlling system (RCS)	A PC modem
Dial-up local controlling system (LCS)	A PC modem
Local controlling system (LCS) and Remote controlling system (RCS)	AS/400 Operations Console connection[1] and a PC modem
Note: 1. The AS/400 Operations Console connection modem is not a physical modem but a logical device driver that comes with Operations Console and allows an LCS to connect to an iSeries server. When it is present, it shows as `AS400 Operations Console Connection` in the Modems Properties window.	

__ 4. If you are working with an existing configuration and you have already satisfied the requirements for modems, based on Table 9, close the Modems folder. Then, go to "Installing Operations Console cable" on page 68.

__ 5. If you are not adding a modem, close the Modems folder. Then, go to step 11 on page 60.

__ 6. Review these tips before continuing with step 7 to add the first (or the only) modem necessary to accomplish your Operations Console configuration:

   Tips:

   - You may have to install the AS/400 Operations Console connection modem, a PC modem, or both, to satisfy your intended configuration.
   - If there are additional modems present that Operations Console will not use and you need them, do not remove them but disregard their presence while configuring Operations Console.
   - The first time a modem is configured on a PC, a display appears. The display asks you for your telephone area code or country code. It also asks for any numbers necessary to access an outside line. If you get this display, add the information; then, click **Next** to exit that one-time display and continue with the next step.

__ 7. If you are **not** installing the AS/400 Operations Console connection modem, go to step 9 on page 60.

__ 8. If you are installing the AS/400 Operations Console connection modem, follow these steps:
   a. If the Install New Modem window appears, go to the next step. Otherwise, if you are currently in the Modems Properties window, click **Add**.
   b. Select the **Don't detect my modem; I will select it from a list** check box. Then, click **Next**.
   c. Click **Have Disk**.

Note: If you know the full path to the `AS400 Operations Console Connection` driver, enter it here. Then, go to step 8e. If you do not know the path to the driver, continue with step 8d.

d. To locate the driver, do the following:

1) Click **Browse**.

Note: Microsoft expects the drivers to be on diskette and automatically checks the diskette drive on the PC. It is normal to expect a message that the drive is not ready.

2) If the **Locate File** message appears indicating **A:** is not accessible, click **Cancel**.

3) Click the **down-arrow** to the right of the **Look in** field. Then, select the drive where you installed Client Access Express.

4) In the Folders section, select the folder where you installed Client Access. If you chose the default, double-click **Program Files**, double-click **IBM**, and double-click **Client Access**.

5) Double-click **Aoc**.

6) Double-click **Inf**. The `cwbopaoc.inf` driver should be listed.

7) Click **Open**.

e. Click **OK**. `AS400 Operations Console Connection` should be listed.

f. Click **Next**.

g. Select the communications port where you are going to install the Operations Console cable (for example, **COM1**).

h. Click **Next**.

i. Click **Finish**. You should be back in the Modems Properties window.

j. Click **Properties**. For AS/400 servers 4xx or 5xx, set **Maximum speed** to **19200**. For other iSeries or AS/400 servers, set **Maximum speed** to **115200**.

k. Click **OK**.

l. If you are not going to install a PC modem, go to step 10.

__ 9. If you are installing a PC modem that requires specific drivers, use the instructions that the modem manufacturer provides. Otherwise, follow these steps to install the PC modem:

a. If you are currently in the Modems Properties window, click **Add**, then **Next**. Otherwise, if you are at the Install New Modem window, click **Next**.

The PC should find the new modem and report its location.

b. When the window shows the modem it found, click **Next** to accept it. The PC will now load the driver code to support it.

c. Click **Finish** to return you to the Modems Properties window.

__ 10. Close the Modems Properties window.

Note: If you get a **Modem Setup** message and it asks if you want to configure Dial-Up Networking now, click **No**.

__ 11. Continue with "Confirming the existence of network support for Windows NT" on page 61.

Confirming the existence of network support for Windows NT

Use this section to verify the existence of network support for Windows NT.

To confirm the existence of network support, do the following:

__ 1. Click **Start** and select **Settings**.

__ 2. Click **Control Panel**.

__ 3. Double-click **Network**.

If you can open the Network folder, you have met the network requirements. Continue with step 2.

If you cannot open the Network folder, you do not have Remote Access to the Network installed. Select **Yes** to install. Then, follow the instructions and make sure that you:

1. Select the **Remote access to the network** check box.
2. Clear the **Wired to the network** check box.

   Important: Make sure that you clear the **Wired to the network** check box even if you have an adapter card. You can configure the adapter card after you successfully install Operations Console.
3. Click **Next** twice.
4. Select the **TCP/IP Protocol** check box. Then, click **Next**.
5. Click **Next**.
6. In the Select Network Service window, click **OK**.
7. In the Network Setup Wizard window, click **Next**.
8. Enter path if needed. Then, click **Continue**.
9. If you do not use DHCP in your network, click **No**. If you use DHCP, click **Yes**.
10. Wait until the Add RAS Device window appears.
11. Continue with step 6 on page 62 in the "Installing and setting up Remote Access Service (RAS) for Windows NT" section.

Installing and setting up Remote Access Service (RAS) for Windows NT

In this section, you are going to make sure that you install and set up Remote Access Service (RAS) according to your intended configuration. During RAS setup, you are going to add and configure the modems needed for your configuration.

To install and set up RAS, follow these steps:

__ 1. Open the Network folder by doing the following:

   __ a. Click **Start** and select **Settings**.

   __ b. Click **Control Panel**.

   __ c. Double-click **Network**.

__ 2. Click the **Services** tab.

__ 3. Is Remote Access Service installed?

No	Yes
↓	Select **Remote Access Service**; then, click **Properties**. Go to step 6 on page 62.

__ 4. Click **Add**.

__ 5. To install Remote Access Service:

a. Put the Windows NT CD into the optical device drive (for example, a CD-ROM drive), unless installing from a network drive.

b. Select **Remote Access Service** and click **OK**.

c. Set the path the Windows NT files will be read from, then click **Continue**. When the necessary files have been copied, the Add RAS Device window should appear.

__ 6. Using Table 10, identify the correct modems that you need to add in RAS for your Operations Console configuration.

Important: You may have to add more than one modem in RAS to satisfy your intended configuration.

Under certain circumstances, such as when installing Windows NT and Remote Access Service, you may have had to install a nonexistent modem. If so, any modem you intend to use with AS/400 Operations Console may not show up in the Add RAS Device window even though it was previously installed. In these cases, you will need to **Remove** the previously installed modem from Remote Access Service, and later from the Modems folder, since it may be on the same COM port. In this way, the intended modem is made available to be selected. Remote Access Service does not allow more than one modem for the same COM port.

Table 10. Modems for AS/400 Operations Console configurations for Windows NT

Desired configuration	Necessary modems
Stand-alone local controlling system (LCS without remote dial-in support)	AS/400 Operations Console connection[1]
Local controlling system (LCS) with remote dial-in support	AS/400 Operations Console connection[1] and a PC modem
Remote controlling system (RCS)	A PC modem
Dial-up local controlling system (LCS)	A PC modem
Local controlling system (LCS) and Remote controlling system (RCS)	AS/400 Operations Console connection[1] and a PC modem
Note: 1. The AS/400 Operations Console connection modem is not a physical modem but a logical device driver that comes with Operations Console and allows an LCS to connect to an iSeries server. When it is present, it shows as `AS400 Operations Console Connection` in the Remote Access Setup window.	

__ 7. To add the first or the only modem, do the following:

a. If you are in the Remote Access Setup window, click **Add**.

b. In the Add RAS Device window, select the modem.

c. Click **OK**. You should be at the Remote Access Setup window.

d. If you have satisfied the modems for your intended configuration, go to step 9.

__ 8. If Table 10 indicates that you need to add another modem, add the modem as follows:

a. Click **Add**.

b. In the Add RAS Device window, select the modem.

c. Click **OK**. You should be at the Remote Access Setup window.

__ 9. In the Remote Access Setup window, is there an `AS400 Operations Console Connection` entry present?

No **Yes**

↓

__ a. Select **AS400 Operations Console Connection**, then click **Configure**.

__ b. Click **Dial out only**. Then, click **OK**.

__ c. Click **Network**.

__ d. Select **TCP/IP**. Then, click **OK**.

__ 10. In the Remote Access Setup window, is there a PC modem present ?

Yes **No**

↓ Go to step 13 on page 64.

__ 11. Select the PC modem. Then, click **Configure**. Do *one* of the following:

- To configure only an RCS, select **Dial out only**.
- To configure a dial-up LCS, select **Dial out only**.
- To configure an LCS to receive calls (LCS with dial-in support), select **Receive calls only**.
- To configure as both an LCS and RCS, select **Dial out and Receive calls**.

Click **OK**.

__ 12. Click **Network** on the right side of the window. Do *one* of the following:

- To configure only an RCS, follow these steps:
  a. For **Dial out Protocols**, select the **TCP/IP** check box.
  b. Click **OK**.
  c. Go to step 13 on page 64.
- To configure only a dial-up LCS, follow these steps:
  a. For **Dial out Protocols**, select the **TCP/IP** check box.
  b. Click **OK**.
  c. Go to step 13 on page 64.
- To configure an LCS to receive calls from an RCS, select the following values:
  a. For **Allow remote clients running**, select the **TCP/IP** check box and clear any others (unless your own operation requires them).
  b. For **Encryption settings**, click **Allow any authentication including clear text**.
  c. Click **Configure** (located to the right of TCP/IP).
  d. For **Allow remote TCP/IP clients to access**, click **This computer only**.
  e. Click **Use Static address pool**.
  f. In the **Begin** field, type the address `192.168.000.005`
  g. In the **End** field, type the address `192.168.000.024`
  h. Select the **Allow remote clients to request a predetermined IP address** check box.
  i. Click **OK**.
  j. Click **OK** again. Go to step 13 on page 64.
- To configure as both an LCS that receives calls and an RCS, select the following values:

__ a. For **Dial out Protocols**, select the **TCP/IP** check box and clear any others (unless your own operation requires them).

__ b. For **Allow remote clients running**, select the **TCP/IP** check box and clear any others (unless your own operation requires them).

__ c. For **Encryption settings**, click **Allow any authentication including clear text**.

__ d. Click **Configure** (located to the right of TCP/IP).

__ e. For **Allow Remote TCP/IP client to access**, click **This computer only**.

__ f. Click **Use Static address pool**.

__ g. In the **Begin** field, type the address `192.168.000.005`

__ h. In the **End** field, type the address `192.168.000.024`

__ i. Select the **Allow remote clients to request a predetermined IP address** check box.

__ j. Click **OK**.

__ k. Click **OK** again.

__ 13. To complete the setup:

a. Click **Continue**.

b. If you get a message that says that the PC does not have a network adapter installed, click **OK**.

c. If you get a message that says that `Remote Access Service has been successfully installed`, click **OK**.

This message does not appear for all installations.

d. Click **Close**.

e. Click **Yes** to restart.

__ 14. Continue with "Service Pack".

Service Pack

Anytime Remote Access Service is either installed or reinstalled, you need to install Windows NT Service Pack 3 (minimum level) before attempting to use Operations Console.

If you need a Service Pack and have Internet capabilities, download the latest Service Pack from `http://www.microsoft.com`. Otherwise, contact Microsoft for the latest update.

Go to "Installing Operations Console cable" on page 68.

Installing necessary modems for Windows 2000 Professional

Use this section to install the modems that you need for your intended Operations Console configuration. You may need to install the AS/400 Operations Console connection modem, a PC modem, or both. The AS/400 Operations Console connection modem is not a physical modem but a logical device driver that comes with Operations Console and allows an LCS to connect to an iSeries server.

To install the necessary modems for Windows 2000 Professional, follow these steps:

__ 1. Are you installing AS/400 Operations Console only for the remote control panel?

No **Yes**

↓ Go to "Installing Operations Console cable" on page 68.

__ 2. Open the Phone and Modem Options folder to determine if you have modems installed:

__ a. Click **Start** and select **Settings**.

__ b. Select **Control Panel**.

__ c. Click **Phone and Modem Options**. Then, click the **Modems** tab.

__ 3. Using Table 11, identify the correct modems that you need to install for your Operations Console configuration.

Table 11. Modems for AS/400 Operations Console configurations for Windows 2000 Professional

Desired configuration	Necessary modems
Stand-alone local controlling system (LCS without remote dial-in support)	AS/400 Operations Console connection[1]
Local controlling system (LCS) with remote dial-in support	AS/400 Operations Console connection[1] and a PC modem
Remote controlling system (RCS)	A PC modem
Dial-up local controlling system (LCS)	A PC modem
Local controlling system (LCS) and Remote controlling system (RCS)	AS/400 Operations Console connection[1] and a PC modem
Note: 1. The AS/400 Operations Console connection modem is not a physical modem but a logical device driver that comes with Operations Console and allows an LCS to connect to an iSeries server. When it is present in the Phone and Modem options folder, it shows as `AS400 Operations Console Connection`.	

__ 4. If you are working with an existing configuration and you have already satisfied the requirements for modems, based on Table 11, close the Phone and Modem Options folder. Then, go to "Installing Operations Console cable" on page 68.

__ 5. If you are not adding a modem, close the Phone and Modem Options folder. Then, go to step 11 on page 67.

__ 6. Review these tips before continuing with step 7 to add the first (or the only) modem necessary to accomplish your Operations Console configuration:

Tips:

- You may have to install the AS/400 Operations Console connection modem, a PC modem, or both, to satisfy your intended configuration.
- If there are additional modems present that Operations Console will not use and you need them, do not remove them but disregard their presence while configuring Operations Console.
- The first time a modem is configured on a PC, a display appears. The display asks you for your telephone area code or country code. It also asks for any numbers necessary to access an outside line. If you get this display, add the information; then, click **Next** to exit that one-time display and continue with the next step.

__ 7. If you are **not** installing the AS/400 Operations Console connection modem, go to step 8 on page 66. If you are installing the AS/400 Operations Console connection modem, follow these steps:

a. In the Modems tab of the Phone and Modem Options folder, click **Add**.

b. Select the **Don't detect my modem; I will select it from a list** check box. Then, click **Next**.

c. Click **Have Disk**.

Note: If you know the full path to the `AS400 Operations Console Connection` driver, enter it here. Then, go to step 7e. If you do not know the path, continue with step 7d.

d. To locate the driver, do the following:

1) Click **Browse**.

Note: If you arrived at the Inf folder and the `cwbopaoc.inf` file appears listed, go to step 7e.

2) Click the **down-arrow** to the right of the **Look in** field. Then, select the drive where you installed Client Access Express.

3) In the Folders section, select the folder where you installed Client Access Express. If you chose the default, double-click **Program Files**, double-click **IBM**, and double-click **Client Access**.

4) Double-click **Aoc**.

5) Double-click **Inf**. The `cwbopaoc.inf` driver should be listed.

6) Click **Open**.

e. Click **OK**. `AS400 Operations Console Connection` should be listed.

f. Click **Next**.

g. Select the communications port where you are going to install the Operations Console cable (for example, **COM1**).

h. Click **Next**.

i. If the Digital Signature Not Found window appears, click **Yes**.

j. Click **Finish**. You should be back in the Modems tab of the Phone and Modem Options folder.

k. Click **Properties**. For AS/400 servers 4xx or 5xx, set **Maximum Port Speed** to **19200**. For other iSeries or AS/400 servers, set **Maximum Port Speed** to **115200**.

l. Click **OK**.

m. If you are not going to install a PC modem, go to step 9.

__ 8. If you are installing a PC modem that requires specific drivers, use the instructions that the modem manufacturer provides. Otherwise, follow these steps to install the PC modem:

a. If you are currently in the Modems tab of the Phone and Modem Options folder, click **Add**; then, click **Next**. Otherwise, if you are at the Install New Modem window, click **Next**.

The PC should find the new modem and report its location.

b. When the window shows the modem it found, click **Next** to accept it. The PC will now load the driver code to support it.

c. Click **Finish** to return you to the Phone and Modem Options folder.

__ 9. Close the Phone and Modem Options folder.

__ 10. If you get a message that indicates that you need to restart the PC before you can use the modem, click **OK**. Then, perform a shutdown and restart your PC.

Otherwise, you may be prompted to restart the PC. If that is the case, click **Yes** or **OK** to perform the shutdown.

Note: If you were not prompted to restart the PC, IBM recommends that you restart it to force the PC to rewrite changed data.

__ 11. If you are installing an LCS that is going to have remote PCs (RCSs) dialing in, go to "Setting up Windows 2000 Professional to receive calls". Otherwise, you have satisfied the Windows 2000 requirements. Go to "Installing Operations Console cable" on page 68.

Setting up Windows 2000 Professional to receive calls

Use this section to configure Incoming Connections to allow an LCS to receive calls from RCSs.

To configure Incoming Connections, follow these steps:

__ 1. If you are not creating an LCS that accepts connections from RCSs, go to "Installing Operations Console cable" on page 68.

__ 2. Open the Network and Dial-up Connections folder as follows:
   a. Click **Start** and select **Settings**.
   b. Click **Control Panel**.
   c. Double-click **Network and Dial-up Connections**.

__ 3. Look for the Incoming Connections icon.

__ 4. If Incoming Connections exists, configure Incoming Connections as follows:
   __ a. Double-click **Incoming Connections**.
   __ b. In the General tab, select the PC modem that is going to receive the calls.
   __ c. Click the **Users** tab.
   __ d. Select or add any users who are going to dial into the LCS.
   __ e. Click **OK** to exit. Then, close the Network and Dial-up Connections folder.
   __ f. Go to "Installing Operations Console cable" on page 68.

   If Incoming Connections does not exist, do steps 5 through 16 on page 68 to create and configure Incoming Connections.

__ 5. Double-click **Make New Connection**. The Welcome to the Network Connection Wizard window appears.

__ 6. Click **Next**.

__ 7. Click **Accept incoming connections**. Then, click **Next**.

__ 8. Select the check box for the PC modem that is going to receive the calls from the RCSs. Make sure that the `AS400 Operations Console Connection` check box is not selected. If other check boxes are selected, do not change them. Then, click **Next**.

__ 9. Click **Do not allow virtual private connections**. Then, click **Next**.

__ 10. Select or add any users who are going to dial into the LCS. Then, click **Next**.

__ 11. Select the **Internet Protocol (TCP/IP)** check box (if needed). Then, click **Properties**.

__ 12. Make sure that the `Allow callers to access my local area network` check box is not selected unless you have specific needs that require it.

__ 13. If your network uses Dynamic Host Configuration Protocol (DHCP), click **Specify TCP/IP addresses automatically using DHCP**. Then, go to the next step.

   If your network does not use DHCP, click **Specify TCP/IP addresses**. Then, do the following to specify the addresses:

a. In the **From** field, type the address `192.168.1.0`
b. In the **To** field, type the address `192.168.1.24`
c. The Total field shows `25`

__ 14. Select the **Allow calling computer to specify its own IP address** check box. Then, click **OK**.

__ 15. Click **Next**.

__ 16. Click **Finish** to save Incoming Connections.

Note: Incoming Connections is the default name of the connection. You can not change the name at this time.

You have created or configured (or both) Incoming Connections. Go to "Installing Operations Console cable".

Installing Operations Console cable

Use this section to install or remove the Operations Console cable, the remote control panel cable, or both, according to your iSeries server.

If you are configuring a dial-up LCS, go to "Chapter 11. Setting up a dial-up LCS" on page 101.

If you are not going to add or remove system cables, such as when configuring an RCS or changing an existing modem, proceed as follows:

- If you are creating a new RCS, go to "Chapter 9. Configuring a new Operations Console" on page 83.
- If you are changing an existing LCS or RCS configuration, go to "Chapter 10. Changing an existing configuration" on page 93.

If you are changing the console device, the iSeries system value **QAUTOCFG** must be set to **ON**. Use one of the following to verify or set this system value on the iSeries server:

- Use the **WRKSYSVAL QAUTOCFG** OS/400 command.
- During a manual IPL, in the IPL Options window, for **Set major system options**, select **Y**. Then, for **Enable automatic configuration**, select **Y**.

DANGER

To prevent a possible electrical shock when adding or removing any devices to or from the system, ensure that the power cords for those devices are unplugged before the signal cables are connected or disconnected. If possible, disconnect all power cords from the existing system before you add or remove a device. (RSFTD203)

Important: Do **not** power on the iSeries system until you are instructed to do so.

If you *have set up* any personal computers that will be connected to the system unit:

1. Power off all PCs.
2. Unplug all PC power cords from the electrical outlets.

If you *have not set up* the PC that will be used as your system unit console:

1. Place the PC not more than 6 meters (20 feet) from the system unit.

2. Follow the instructions that came with the PC to set it up.
3. Power off all PCs.
4. Unplug all PC power cords from the electrical outlets.

You need to install the Operations Console cable (**A**) if you want to use the console function (5250 emulation or command interface to iSeries server). You need to install the remote control panel cable (**B**) if you want to use the remote control panel function (optional graphical control panel that allows you to operate the iSeries control panel). If you want to use the console function and the remote control panel function, you need to install the Operations Console cable and the remote control panel cable.

In the next steps, you install the cables. Figure 9 is an overview of your system unit, console (PC), Operations Console cable, and remote control panel cable. This overview is intended to show you a general setup. The port location and part numbers could be different depending on the system and configuration that you have.

Note: You can also use the following steps if you are removing one or more cables.

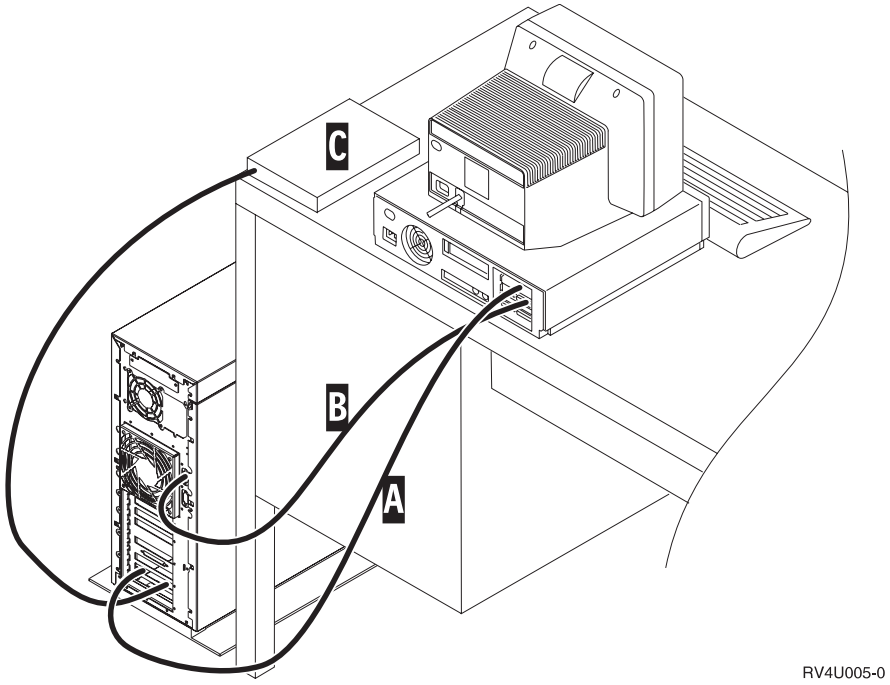


Figure 9. Cabling Setup Example of Operations Console

A Operations Console cable from iSeries system unit to console (PC)

B Remote control panel cable

C Modem for electronic customer support

The installed PC console includes support for an optional graphical control panel (remote control panel) and requires a special cable (**B**). For **iSeries Models 270, 820, 830 and 840**, a special parallel cable connects a PC parallel port to the Debug port. For **other servers**, a special serial cable connects a PC serial port to the iSeries machine interface (MI) port.

To install the cables:

__ 1. If you are going to install only the remote control panel function, go to step 7 on page 78.

__ 2. Use one of the blank labels that are provided to label the Operations Console cable with the adapter card port number according to the graphics.

__ 3. Based on the following graphics, connect the cable **A** to the appropriate port on the adapter card on the system unit. Push in the cable connector and tighten the thumbscrews.

The following figures show the different iSeries or AS/400 servers, with labels, for the locations of the Operations Console cable and remote control panel cable. See the figure that applies to your server.

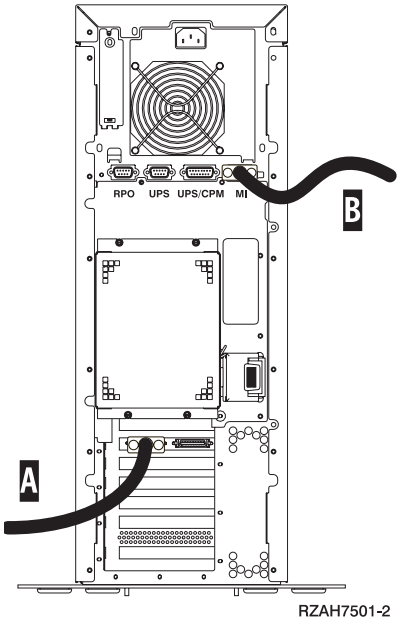


Figure 10. Server 170/250 Operations Console ports (IBM does not support LAN connectivity; A is the C08 port and B is the Machine Interface (MI) port)

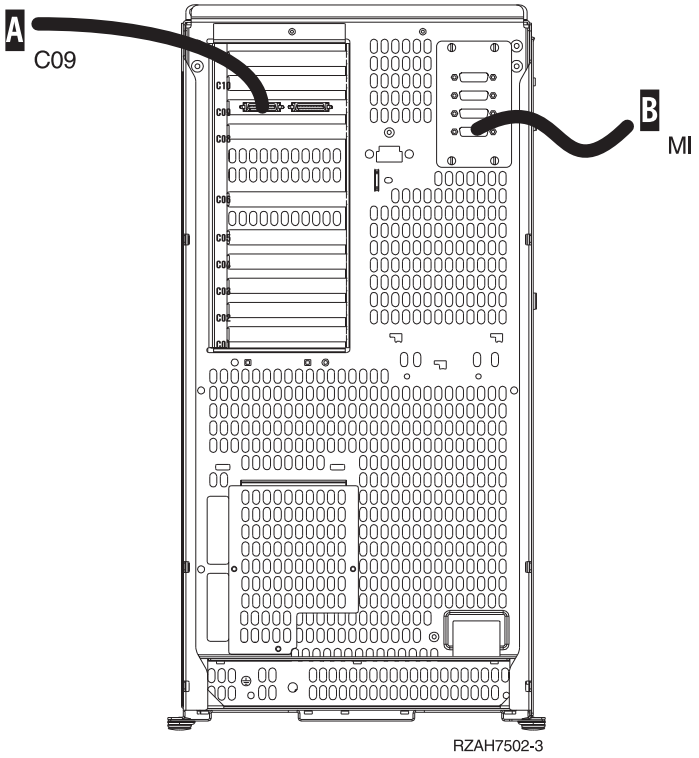


Figure 11. Server 600/S10 Operations Console ports (IBM does not support LAN connectivity)

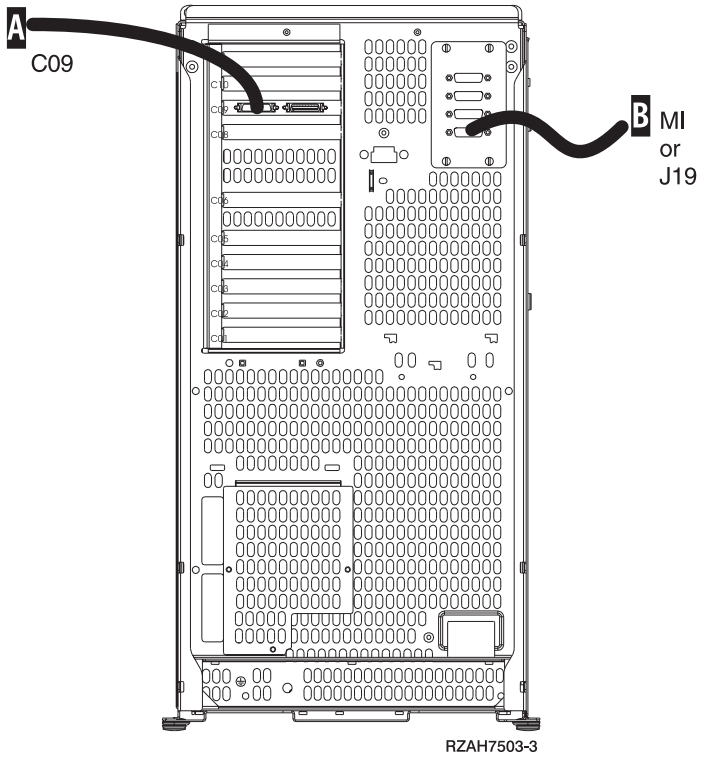


Figure 12. Server 620/720/S20 Operations Console ports (IBM does not support LAN connectivity)

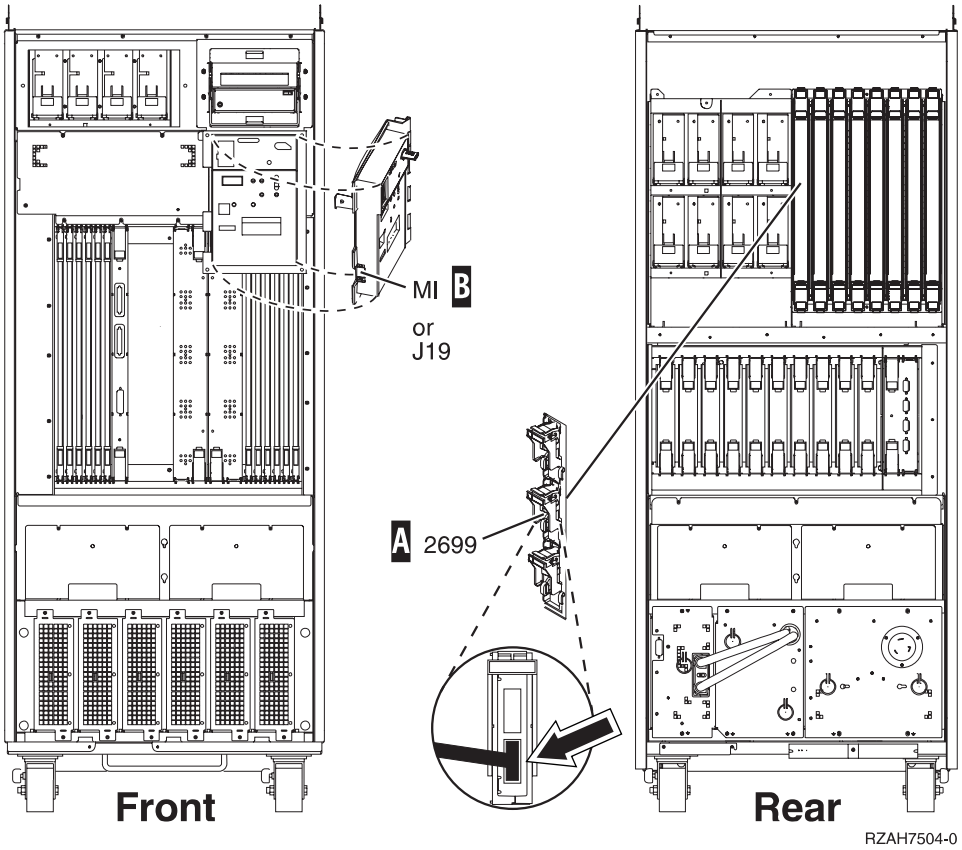


Figure 13. Server 640/730/S30 Operations Console ports (IBM does not support LAN connectivity)

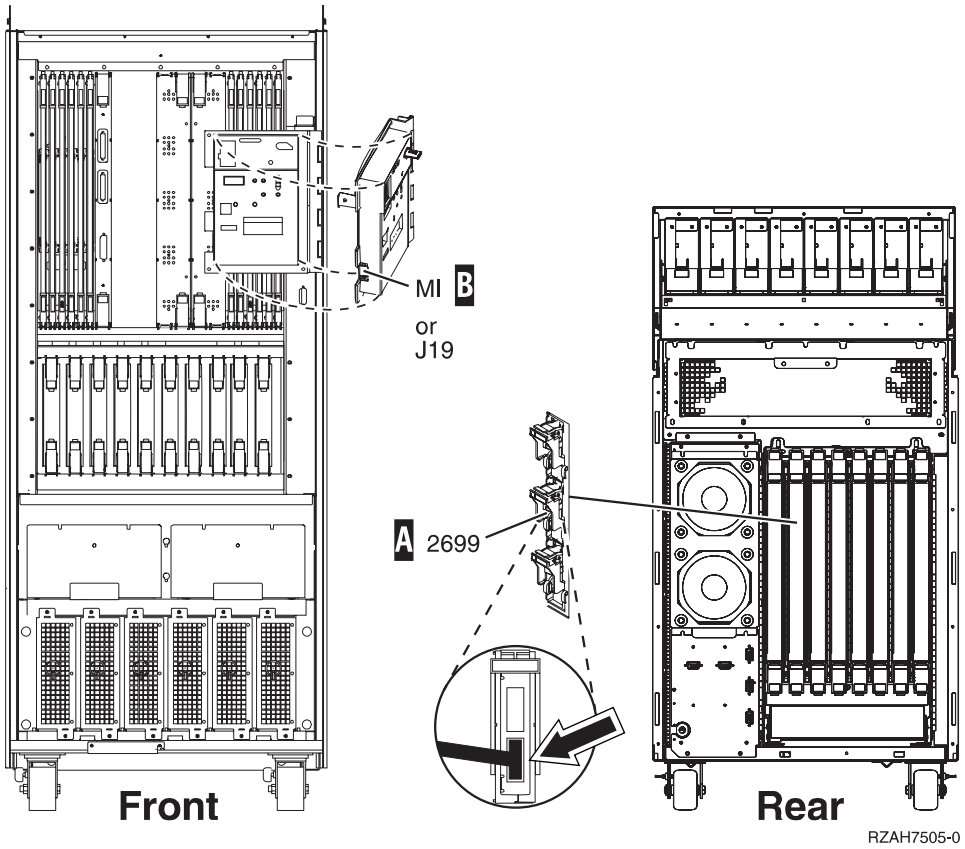


Figure 14. Server 650/740/S40 Operations Console ports (IBM does not support LAN connectivity)

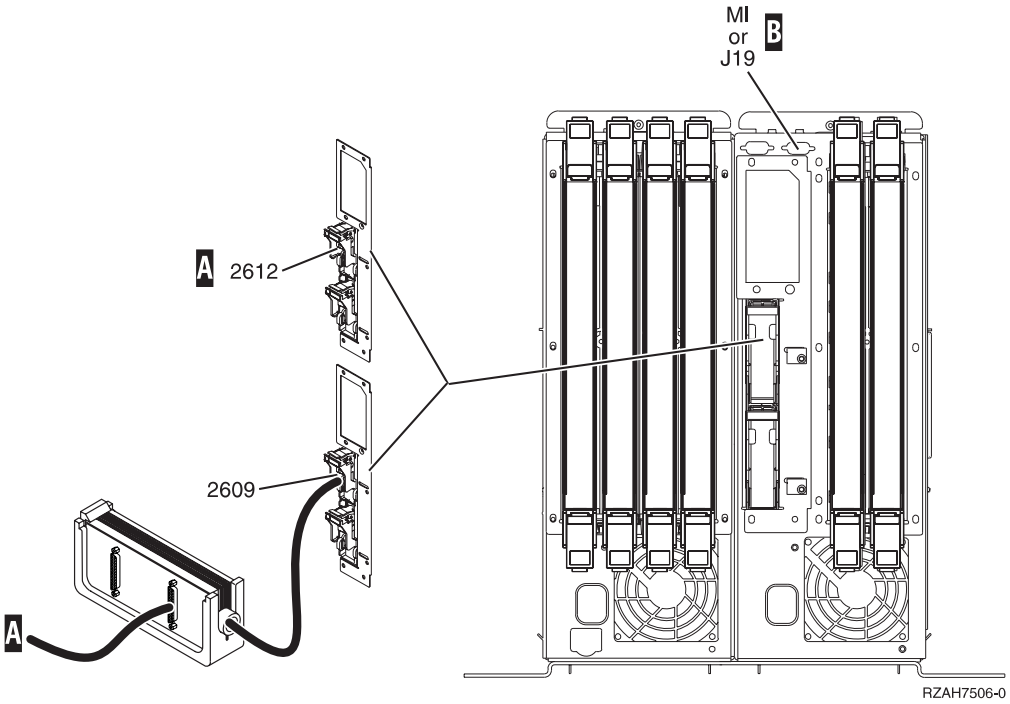


Figure 15. Server 4xx Operations Console ports (IBM does not support LAN connectivity)

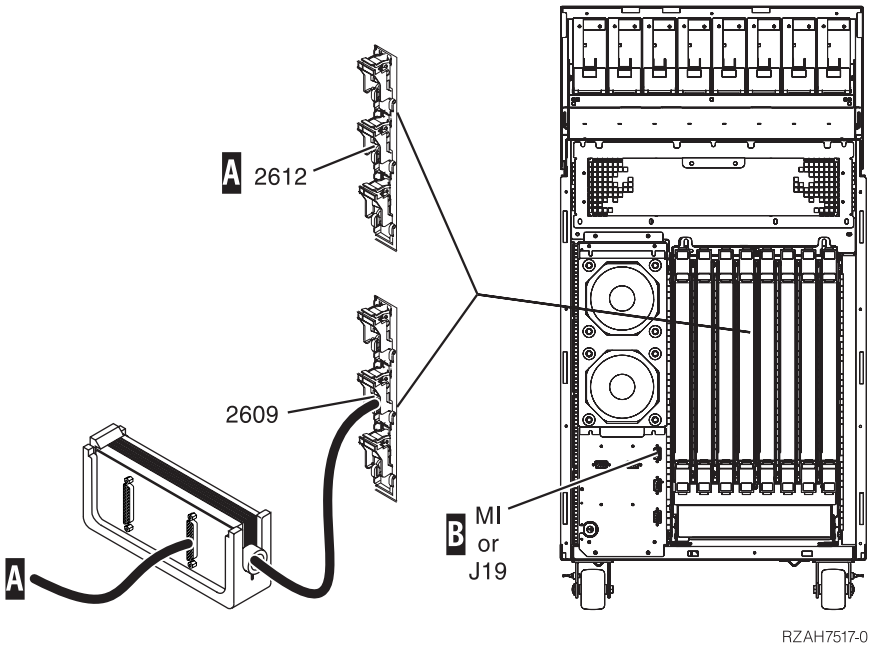


Figure 16. Server 500/510/50S Operations Console ports (IBM does not support LAN connectivity)

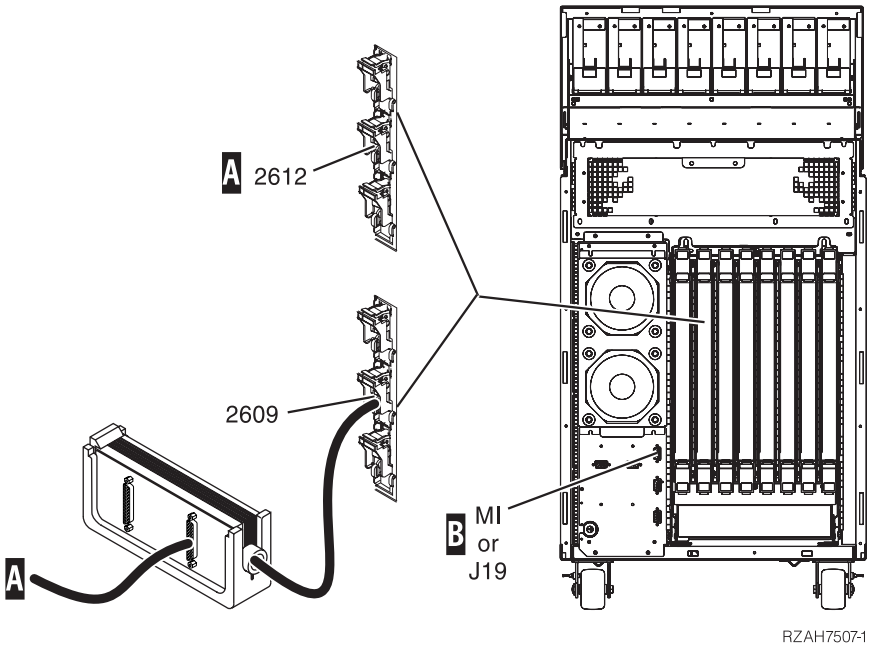


Figure 17. Server 530/53S Operations Console ports (IBM does not support LAN connectivity)

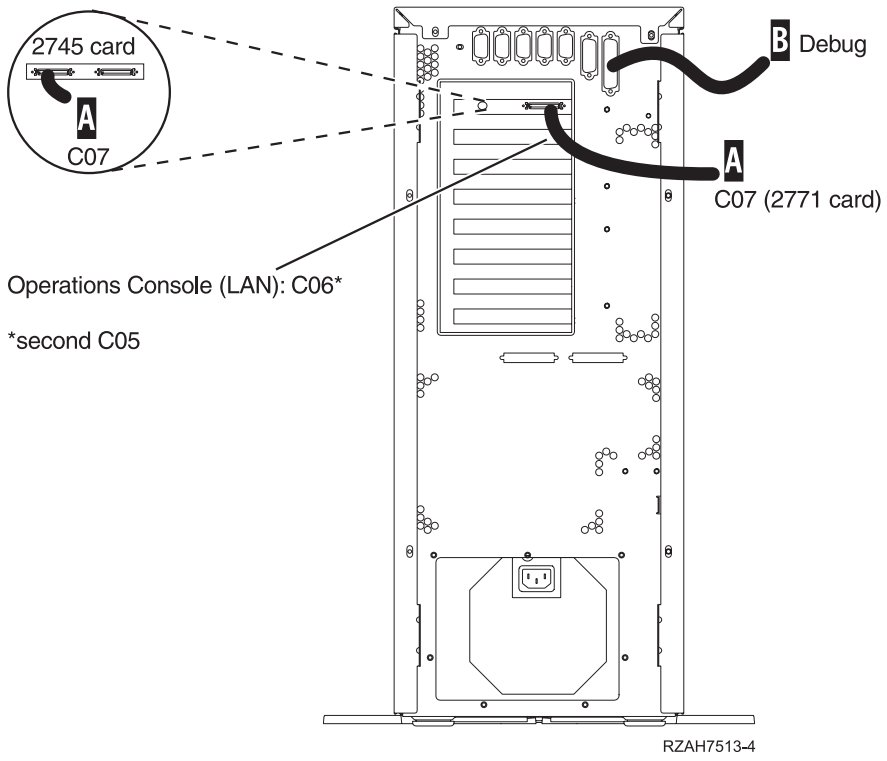


Figure 18. Server 270 Operations Console ports

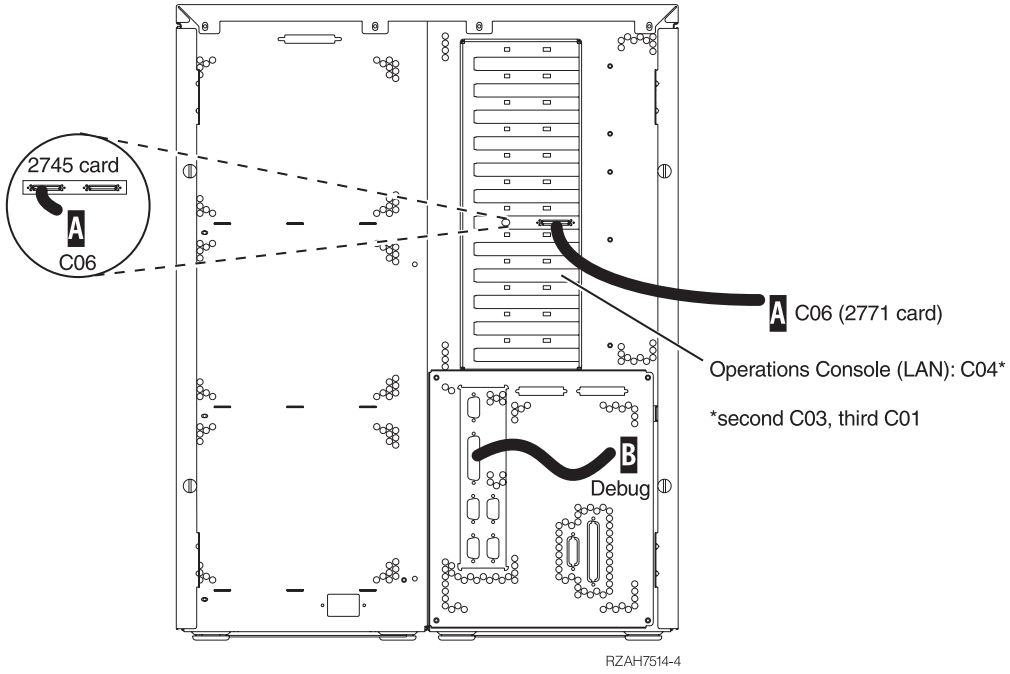


Figure 19. Server 820 Operations Console ports

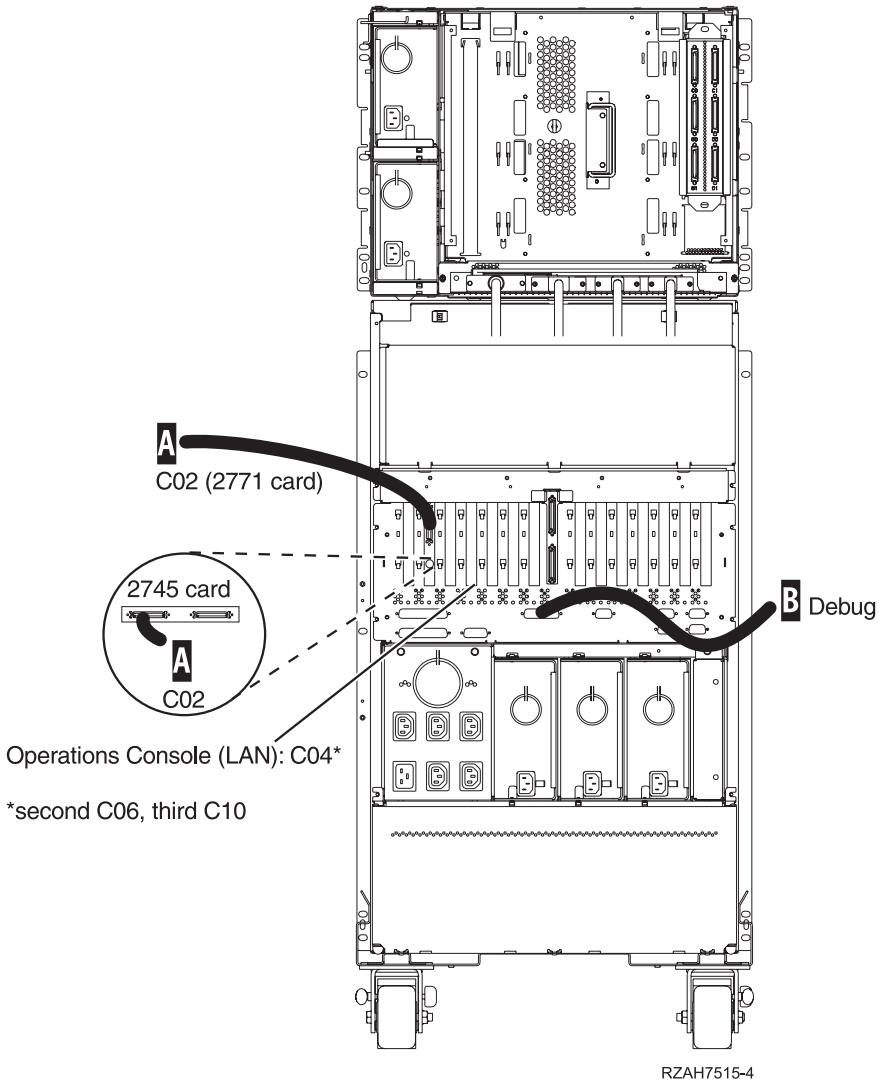


Figure 20. Server 830/SB2 Operations Console ports

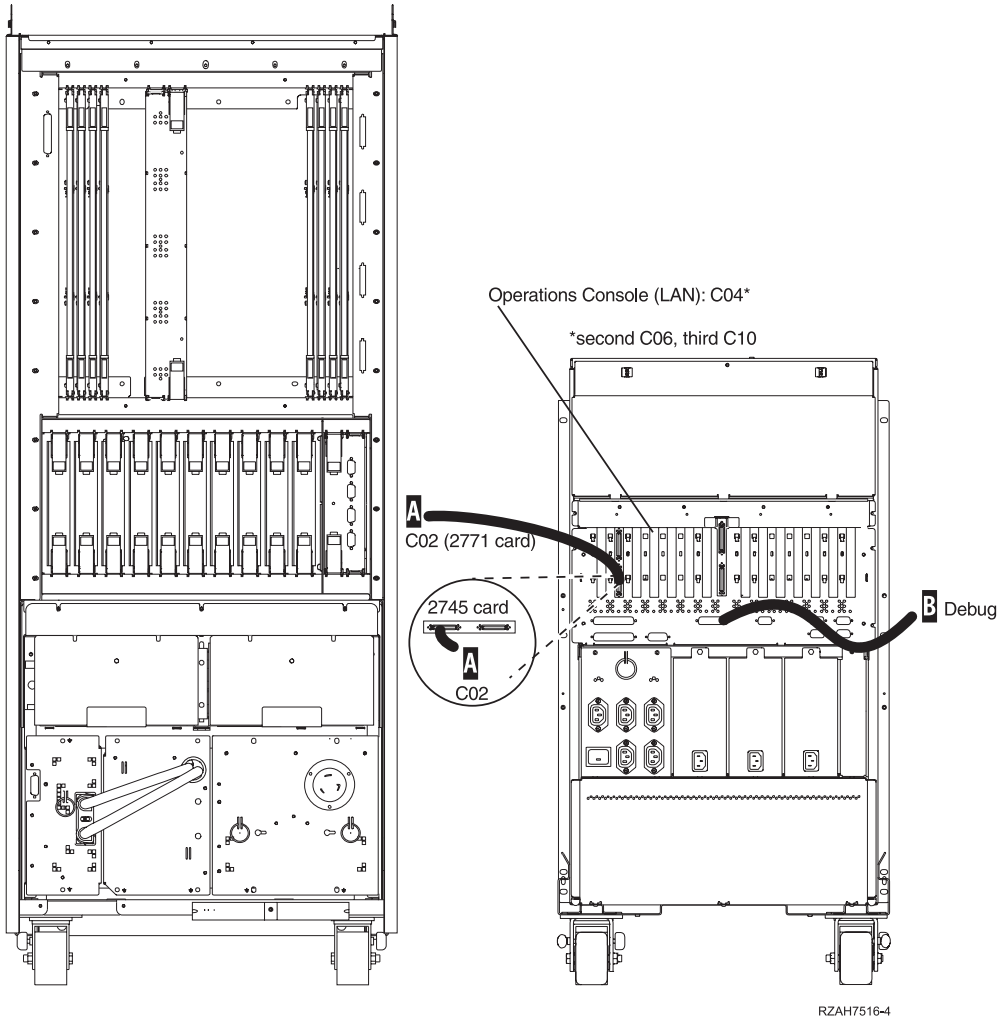


Figure 21. Server 840/SB3 Operations Console ports

__ 4. If you have a system console that you are changing to Operations Console, make sure that the console (or any qualifying alternate console devices) is not powered on when you power on the iSeries system later in these instructions. An alternate console would be any display device on any twinaxial work station controllers on bus 0, with port 0 (address 0 or 1), or port 1 (address 0 or 1).

__ 5. Connect the other end of the Operations Console cable to your console (PC). The connector on your console is the first available serial port.

If the cable does not correctly match the connector on the personal computer, you may use a 9-to-25 pin adapter, part number 46G0298. This adapter was shipped with your system materials.

__ 6. Push in the cable connector and tighten the thumbscrews.

__ 7. Do you have a remote control panel cable for your system and want to add this function?

Yes **No**

↓ If you intended to install a remote control panel, go to Table 6 on page 48 to find the feature code and order number for the cable to fit your system. You can add it later. Go to step 9 on page 79.

__ 8. Install the remote control panel cable (B) as follows:
- For **iSeries Models 270, 820, 830 and 840**, do the following:
  a. Write `Debug` on one of the blank labels that are provided. Then, attach the label to the remote control panel cable.
  b. Remove the cover over the connector that is labeled **Debug** on the back of your system unit, if present.
  c. Connect the cable to the connector that is labeled **Debug**.

     Note: The connector with the missing pin goes on the server side.
  d. Connect the other end of the cable to your console (PC). The connector on your console is the first available parallel port. Go to step 9.
- For **other servers**, do the following:
  a. Write `MI port` on one of the blank labels that are provided. Then, attach the label to the remote control panel cable.
  b. Connect the cable to the connector that is labeled **MI** on the back of your system unit (or the location specified in the figure representing your server).
  c. Connect the other end of the cable to your console (PC). The connector on your console is the next available serial port, usually port 2.

__ 9. Power on the PC where you are going to use Operations Console. You need to be at the desktop.

__ 10. Plug the system unit power cord into an electrical outlet or an uninterruptible power supply. If your iSeries system uses a keystick, insert it in the key slot now. Do not power on the iSeries system until instructed to do so.

__ 11. Are you changing the iSeries console device from another type to Operations Console or removing your Operations Console?

Yes **No**

↓ Press the **Power** button that is located on the iSeries control panel.

Are you adding dial-in support or the remote control panel function to an existing configuration?

No **Yes**

↓ Go to "Chapter 10. Changing an existing configuration" on page 93.

Go to "Chapter 9. Configuring a new Operations Console" on page 83.

Continue with "Starting the system using a manual IPL".

Starting the system using a manual IPL

Use this section to start your iSeries server by performing a manual initial program load (IPL).

To perform a manual IPL, follow these steps:

__ 1. Look at the Function/Data display on the iSeries control panel.

Systems with a keystick should show the mode as **Manual** and **01 B** in the Function/Data display.

__ 2. Is the system in **Manual** mode to IPL on the **B** side?

No **Yes**

↓ Go to step 8.

__ 3. Is the Function/Data display lit?

Yes **No**

↓ Before calling your hardware service representative, do the following:

- Confirm that the electrical outlet is functioning by plugging in a suitable device for the voltage.
- Ensure that the power cord is securely plugged into the system unit and electrical outlet.

__ 4. Press the **Up** or **Down** button until **02** appears in the Function/Data display.

Note: If your system uses a keystick, select **Manual** by using the **Mode** button.

__ 5. Press the **Enter** button on the iSeries control panel.

__ 6. Press the **Up** or **Down** button until **B M** appears in the Function/Data display. If your system uses a keystick, select **B**. The Function/Data display should show **02 B**.

__ 7. Press the **Enter** button on the iSeries control panel.

__ 8. Press the **Power** button on the iSeries control panel.

The system takes approximately 5 to 10 minutes to power on and progress through an IPL far enough to continue with these instructions. You should see that the data changes in the Function/Data display. The last step of the IPL may take 5 minutes to complete before the Attention light is turned on.

__ 9. Do you see reference code **x6004031** or **x6004501** (where x can be any letter) in the Function/Data display?

No **Yes**

↓ Go to "Chapter 9. Configuring a new Operations Console" on page 83.

__ 10. Is the Attention light lit?

Yes **No**

↓ Your system may not have progressed through an IPL far enough to continue with these instructions. Wait at least 10 minutes before going any further.

If, after 10 minutes, you do not see any system activity and the Attention light did not light: See the Troubleshooting your System topic in the Information Center under **Planning and Installation -> Getting Started with iSeries -> Handling system problems and getting help**.

When the problem has been resolved, start at the beginning of this section again.

__ 11. Do you see System Reference Code (SRC) **x6xx500x** (where the x can be any letter or number) in the Function/Data display?

Yes **No**

↓ See the Troubleshooting your System topic in the Information Center under **Planning and Installation -> Getting Started with iSeries -> Handling system problems and getting help**. Then, continue with "Chapter 9. Configuring a new Operations Console" on page 83.

__ 12. Do you see System Reference Code (SRC) **x6xx5008** (where the x can be any letter or number) in the Function/Data display?

Yes **No**

↓ Go to "Chapter 9. Configuring a new Operations Console" on page 83.

If you have an 8xx server, see the information about Operations Console Problem Isolation Procedure PIP-3 in your *iSeries Model 270, and 820 Problem Analysis, Repair and Parts*, SY44-5967-01 and *iSeries Model 830, 840, SB2, and SB3 Problem Analysis, Repair and Parts*, SY44-5969-01.

Chapter 9. Configuring a new Operations Console

This chapter covers the steps to configure a new Operations Console. The chapter refers to the drop-down menus, but you can also use the toolbar. Before configuring a new directly cabled LCS or RCS (which dials into an LCS PC via modem), make sure that you have completed setting up the PC with all the necessary software and hardware. If you have not done so, go to "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47 and "Chapter 8. Preparing for Operations Console configuration" on page 53, and return to this chapter.

Important:

- If you are installing a dial-up LCS (a remote PC that dials into an iSeries server that does not have a local console attached), go to "Chapter 11. Setting up a dial-up LCS" on page 101.
- The remote control panel and iSeries control panel may indicate 0000DDDD at certain times. This is normal and should clear on its own. Certain types of power management on the PC and in the operating system may also cause this SRC data to show up, but it should clear when PC activity is resumed.
- If you are using Windows NT or Windows 2000 Professional, you must be a member of the Administrators group to create or modify Operations Console configurations.
- Operations Console allows you to configure only one cable-connected LCS (stand-alone LCS or LCS with remote support) and more than one RCS.

To configure a new LCS, go to "Configuring a local controlling system".

To configure a new RCS, go to "Configuring a remote controlling system" on page 89.

Configuring a local controlling system

Use this section to configure a new LCS on your PC. Before you begin creating an LCS configuration, make sure that you have completed setting up the PC with all the necessary software and hardware. If you have not done so, go to "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47 and "Chapter 8. Preparing for Operations Console configuration" on page 53, and return to this section.

Important:

- Consider that you can configure only one cable-connected LCS.
- If you are using Windows NT or Windows 2000 Professional, you must be a member of the Administrators group to create or modify Operations Console configurations.
- If you are installing the console function (5250 emulation), you must perform a manual IPL on step 35 on page 89 to set the iSeries system value **QAUTOCFG** to **ON**. You need to set this value to **ON** if it is currently set to **OFF**.

To create a new LCS configuration on your PC, follow these steps:

__ 1. Start Operations Console if it is not already running:

© Copyright IBM Corp. 1999, 2001

a. Click **Start** and select **Programs**.
b. Select **IBM AS/400 Client Access Express**.
c. Click **AS/400 Operations Console**.

Note: If Operations Console had a previous configuration, the setup wizard does not start. Operations Console starts and may try to connect.

__ 2. If the AS/400 Operations Console Connection wizard did not start, from the **Connection** menu, click **New Connection** to start the wizard.

__ 3. In the Welcome window, click **Next**.

__ 4. Click **Local Controlling System (LCS) to AS/400 system**.

__ 5. Click **Next**.

__ 6. Select **Direct Cable Connection**. Then, click **Next**.

__ 7. Type any name that you want to assign to the iSeries or AS/400 server you want to connect to. Then, click **Next**.

Important: The name that you supply here is how you will refer to the system for Operations Console. This name does not have to be the actual system name as found in the system attributes.

__ 8. Indicate which Operations Console functions you want to use with your iSeries system. If you installed both console cable and remote control panel cable, you need to select **Remote Control Panel and Console**. Then, click **Next**.

Important: If you chose to install only the console, or only the remote control panel, only those windows that are associated with your choice are shown. Skip the steps not pertaining to your choice.

__ 9. Click **Next** to allow the system to detect the console communications port. The system should find the port. It also selects the port automatically.

__ 10. Do you see a window that says that it could not find the console communications port?

No **Yes**

↓ Click **Next** to select a communications port to use. If you are not actually connecting the cable to the iSeries server, note the name of the communications port. You need this information when you attach the cable. The system automatically selects the next available serial port that is installed on the PC. If you would like to use another port, use the down arrow to select it.

↓

__ 11. In the Select AS/400 Operations Console Communication Port window, click **Next**. This accepts the communications port that the PC detected or the port you want to connect to the console cable.

__ 12. If you are installing only the console, go to step 17 on page 85.

__ 13. If you are not using Windows NT or Windows 2000 Professional for the LCS, go to the next step. If you are using Windows NT, select the type of interface for the remote control panel as follows:

- For iSeries Models 270, 820, 830, and 840, click **Enhanced Parallel Port Cable** to indicate a parallel interface for the remote control panel. Then, click **Next**.
- For other servers, click **Serial Cable PN 97H7584 or 97H7591** to indicate a serial interface for the remote control panel. Then, click **Next**.

__ 14. Click **Next** to allow the system to detect the remote control panel communications port. The system should find the port. It selects the port automatically.

__ 15. Do you see a window that says that it could not find the remote control panel communications port?

No **Yes**

↓ Click **Next** to select a communications port to use. If you are not actually connecting the cable to the iSeries server, note the name of the communications port. You need this information when you attach the cable. The system automatically selects the next available serial port (except for servers using a parallel interface) that is installed on the PC. If you would like to use another port, use the down arrow to select it.

↓

__ 16. In the Select AS/400 Remote Control Panel Port window, click **Next**. This accepts the communications port that the PC detected or the port you want to connect the remote control panel cable.

__ 17. Are you using Windows NT or Windows 2000 Professional?

Yes **No**

↓ Go to step 22 on page 86.

__ 18. You should be in the Grant RCS Access window. If remote PCs are going to dial this LCS, click **Yes, allow remote PCs to connect**. Then, click **Next** and go to the next step.

If this PC is being configured as an LCS without remote PCs dialing in, click **No, do not allow remote PCs to connect**. Then, click **Next** and go to step 22 on page 86.

__ 19. Select **Attended** or **Unattended** to indicate how you want this LCS to operate. It is recommended that your initial configuration be set to run **Attended**, and then return to set it to **Unattended** after you have everything working.

Then, click **Next**.

Note: Click **Help** for assistance in determining which mode is best for you.

Start-up mode: There is a difference in the way Operations Console initially starts for each of these modes:

- If you choose the **Attended** mode, Operations Console automatically starts the functions (remote control panel, console, or both) you have cabled and configured. The remote control panel starts first; then, after authenticating the password, the console (5250 emulator) starts.
- If you choose the **Unattended** mode, it is assumed that no one is at the console. Therefore, the functions (remote control panel, console, or both) do not start automatically. You can check the status for `Pending Authorization` to be certain that the functions are available. Should you need to work with a function, you can manually start it by using the toolbar or the drop-down menu.

There is no relationship between the IPL mode and the attended or unattended modes.

__ 20. If you are using **Windows NT**, do the following:

a. If you have previously administered all the users authorities and have no need to start User Manager, go to step 21.
b. If you want to administer all the users authorities now, follow these steps:
   1) Click **Start User Manager** to use Operations Console to access the User Manager. A list of Users in a description window appears.
   2) Verify that all your users have the proper authority. If remote controlling systems dial into this LCS, make sure that each user at those remote systems has dial-in authority using the **Dial-In** option.
   3) Close the window.
   4) Go to step 21.

If you are using **Windows 2000 Professional**, do the following:

a. If you have previously administered dial-in users, go to step 22.
b. If you want to administer dial-in users now, follow these steps:
   1) Click **Start** and select **Settings**.
   2) Select **Control Panel**.
   3) Select **Network and Dial-up Connections**.
   4) Click **Incoming Connections**.
   5) Click the **Users** tab.
   6) In the **Users allowed to connect** field, select the check box next to each user ID for which you want to allow a connection to the LCS.
   7) Close the Incoming Connections folder. Then, go to step 22.

__ 21. In the Setup User Access for RCS Connections window, click **Next**.

__ 22. If you arrived at the AS/400 Operations Console LCS Configuration Complete window, click **Finish**.

If you arrived at the AS/400 Operations Console Restart Required window, do the following:

a. Before restarting the PC, disconnect any connected configurations as follows:

   Note: You can select **No, I will restart my PC later**, but the remote control panel will fail to function until the PC is restarted.

   1) If the Service Device Sign-on window appears, click **Cancel**.
   2) Select the configuration name (under `AS/400 Connection`). This is the name that Operations Console uses to refer to a specific iSeries system.
   3) From the **Connection** menu, click **Disconnect**. The connection status shows `Disconnecting`.
   4) Wait for the status to show `Disconnected` or `Not connected to LCS`.
b. Select **Yes, I want to restart my PC now**, and then click **Next**.
c. Start Operations Console as follows:
   1) Click **Start** and select **Programs**.
   2) Select **IBM AS/400 Client Access Express**.
   3) Click **AS/400 Operations Console**.

If you had an existing configuration, Operations Console may not automatically start. You need to manually connect:

a. Select the configuration name (under `AS/400 Connection`). This is the name that Operations Console uses to refer to a specific iSeries system.
b. From the **Connection** menu, click **Connect**.

If you are setting up the LCS to run **Unattended**, then the following functions (remote control panel, console, or both) will not start automatically.

__ 23. Is Operations Console configured for the remote control panel function?

No **Yes**

↓ Did the remote control panel start when the setup was finished? (If the console is set to run in unattended mode, start the remote control panel function now: From the **Connection** menu, click **Remote Control Panel**.)

Yes **No**

↓ Verify that the PC has the necessary hardware and software for your intended configuration. Also, verify that the cables are connected properly. To do this, go to "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47, "Chapter 8. Preparing for Operations Console configuration" on page 53, and "Installing Operations Console cable" on page 68. Then, return to step 1 on page 83 .

Go to the next step.

__ 24. Is Operations Console configured for the console function?

Yes **No**

↓ Go to "Setup complete" on page 92.

__ 25. Did the Service Device Sign-on window appear? (If the window does not appear in a reasonable amount of time, check behind any other open windows or click on AS/400 Operations Console located in the taskbar to bring it to the foreground.)

Yes **No**

↓ Verify that the PC has the necessary hardware and software for your intended configuration. Also, verify that the cables are connected properly. To do this, go to "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47, "Chapter 8. Preparing for Operations Console configuration" on page 53, and "Installing Operations Console cable" on page 68. Then, return to step 1 on page 83.

__ 26. Sign on using the following (if you have made changes, use an appropriate user ID and password.):
a. In the **User** field, type **11111111** (there are eight 1s).
b. In the **Password** field, type **11111111** (there are eight 1s).
c. Click **OK**.

__ 27. Did the console emulation session start? If the console is set to run in unattended mode, start the console function now (from the **Connection** menu, click **Console**) or check the status. The status should have gone from `Connecting Console` or `Pending Authorization` to `Connected`.

No **Yes**

↓ Are you changing the iSeries console device from another type to Operations Console or removing the Operations Console?

Yes **No**

↓ Will you also be configuring Operations Console for an RCS?

No **Yes**

↓ Go to "Configuring a remote controlling system" on page 89.

Go to "Setup complete" on page 92.

You should be at the `IPL or Install the System` window. Select **Use Dedicated Service Tools (DST)**. Go to step 28.

__ 28. Did you get the display that prompts you for a Dedicated Service Tools (DST) user ID and password?

Yes **No**

↓ Verify that the PC has the necessary hardware and software for your intended configuration. Also, verify that the cables are connected properly. To do this, go to "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47, "Chapter 8. Preparing for Operations Console configuration" on page 53, and "Installing Operations Console cable" on page 68. Then, return to step 1 on page 83.

__ 29. Sign on the iSeries system display. If the security-level user ID or password has been changed, use those new values instead of the default QSECOFR.

In the **User** field, type **QSECOFR**.

In the **Password** field, type **QSECOFR**.

Note: If you used the default QSECOFR for the userID, you may be required to change the default password.

Important:

- There are authorizations being set up at this time. Therefore, sign on with security-level authority.
- The Enter key of the character-based interface (5250 emulation) may be the right Ctrl key on your keyboard. To change the keyboard definition so that the Enter key is the Enter key of your keyboard, see "Appendix J. Changing the keyboard definition for Operations Console" on page 133.

__ 30. Select **Work with DST environment**.

__ 31. Select **System devices**.

__ 32. Select **Console mode**.

__ 33. Select **Operations Console (DIRECT)**.

Important:

- Make sure that you type `2` and press Enter even if `2` already exists. This forces a rewrite of the value.
- If you are removing the Operations Console and replacing it with another console type, type `1` or `3` and press Enter.

__ 34. Press **PF3**.

Note: You have completed the setup for the LCS.

__ 35. Do you want to continue with the manual IPL?

No **Yes**

↓ Select **Perform an IPL**. If you are installing the console function (5250 emulation) and you have not set the iSeries system value **QAUTOCFG** to **ON**, do the following:

a. Sign on to OS/400.

b. If the Select Products to Work with PTFs window appears, press **PF3** to exit. The IPL Options window appears.

c. For **Set major system options**, select **Y**. Then, for **Enable automatic configuration**, select **Y**.

d. Continue with the IPL.

Note: You may change the value of QAUTOCFG back to OFF later. You may do this after you have completed the first IPL in normal mode and the system has created any necessary resources.

Go to step 39.

__ 36. Select **Start a service tool**.

__ 37. Select **Operator panel functions**.

__ 38. To power down and IPL in a particular mode, select the desired options and press the appropriate PF key.

__ 39. Are you going to set this workstation up as an RCS too?

Yes **No**

↓ Go to "Setup complete" on page 92.

__ 40. Continue with "Configuring a remote controlling system".

Configuring a remote controlling system

Use this section to configure a new RCS on your PC. This RCS uses a PC modem to dial into a directly cabled local controlling system (LCS) with remote support to communicate to an iSeries server. Before beginning creating the RCS configuration, make sure that you have completed setting up the PC with all the necessary software and hardware. If you have not done so, go to "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47 and "Chapter 8. Preparing for Operations Console configuration" on page 53, and return to this section.

Important:

- If you are using Windows NT or Windows 2000 Professional, comply with the following:
  - You must be a member of the Administrators group to create or modify Operations Console configurations.
  - You must have dial-in authority so the operating system at the LCS allows the connection between the PCs.
- Operations Console allows you to configure more than one RCS.
- If you are using Windows 95, Windows 98, or Windows Me, only one modem connection is allowed at a time. You will have to disconnect a directly cabled LCS to connect the RCS.

To create a new RCS configuration on your PC, follow these steps:

__ 1. Start Operations Console if it is not already running. Follow these steps to start Operations Console:
   a. Click **Start** and select **Programs**.
   b. Select **IBM AS/400 Client Access Express**.
   c. Click **AS/400 Operations Console**.

   The setup wizard starts if no previous configurations exist.

__ 2. If the AS/400 Operations Console Connection wizard did not start, from the **Connection** menu, click **New Connection** to start the wizard.

__ 3. In the Welcome window, click **Next**.

__ 4. Click **Remote Controlling System (RCS) PC to LCS**. Then, click **Next**.

__ 5. Click **Dial-up**. Then, click **Next**.

__ 6. Type the system name of the iSeries server to which you want to connect. This is the system name as defined by the LCS.

__ 7. Type the computer name of the local controlling system you will use to connect to this iSeries system. Then, click **Next**.

__ 8. Click **Dial-up Networking...**.

__ 9. Type the Entry name (if appropriate) and telephone number (for example, 123-456-7890). Verify that the correct modem is listed. Click **OK**.

   Note: Entry name is the name of the LCS PC you will be dialing into.

__ 10. Click **Next** to continue.

   It is recommended that you leave the **Start connection when Operations Console starts** check box unchecked until you have all of Operations Console working in the way that you desire. It is difficult to work with setup problems once the connection is started.

__ 11. Click **Finish** to save your configuration information.

__ 12. Operations Console automatically starts, but it does not attempt to connect unless an LCS is also configured (which would start connecting) or unless you configured the RCS to automatically start.

   Important:

   a. If your LCS and RCS run Windows 2000 Professional, you must follow these instructions to assign the proper security setup:
      1) If you get a message from Operations Console stating that the RAS connection failed, click **OK**.
      2) Open the Network and Dial-up Connections folder as follows:
         a) Click **Start** and select **Settings**.
         b) Click **Control Panel**.
         c) Double-click **Network and Dial-up Connections**.
      3) Right-click the object (icon) representing the computer name of the LCS. Then, select **Properties**.
      4) Click the **Security** tab.
      5) Expand the options for the **Validate my identity as follows** field, and then select **Require secured password**.
      6) Select the **Automatically use my Windows logon name and passwords (and domain if any)** check box.
      7) Click **OK**.

b. The instructions for the wizard are written as if the RCS just configured is the only configuration and was not set to automatically start. If there is also an LCS and it is attempting to connect, proceed as follows:

- If you **do** want to test the RCS connection and you are using Windows 95, Windows 98, or Windows Me, disconnect the LCS and go to step 13. To disconnect the LCS, do the following:
  1) If your LCS is running in unattended mode and you have not requested control, do the following to get iSeries control:
     a) Select the configuration name (under `AS/400 Connection`). This is the name that Operations Console uses to refer to a specific iSeries system.
     b) From the **Connection** menu, click **Request Control**.
  2) If the Service Device Sign-on window appears, click **Cancel**.
  3) Select the configuration name (under `AS/400 Connection`). This is the name that Operations Console uses to refer to a specific iSeries system.
  4) From the **Connection** menu, click **Disconnect**. The connection status shows `Disconnecting`.
  5) Wait for the status to show `Disconnected` or `Not connected to LCS`.
- If you **do not** want to test the RCS connection, go to "Setup complete" on page 92.

__ 13. Currently, the Operations Console window shows a status of `Not connected to LCS`.

If the LCS you are dialing to is available for a connection, you can verify proper operation. Select the RCS configuration and click the **Connect** icon on the toolbar.

When the modems are finished making the connection, you may get the User Logon window.

If you did get the User Logon window, sign on to the LCS. To sign on, use your own user ID and password (not the DST user ID and password). If the RCS PC you are using has a domain assigned you will also have to provide that information during the sign in process. When your user ID and password are validated by the LCS, you may get the remote control panel window (if it is installed and configured at the LCS). The status in the Operations Console window shows the current state of the LCS (which may be `Connected`).

If you did not get the User Logon window, Windows NT or Windows 2000 Professional security features may have authenticated you automatically. The remote control panel, if installed, starts immediately.

Important:

- Even though the remote control panel may have started, in this state, the RCS has not yet requested control, so you are unable to actually do anything except look at the state of the system.
- The Enter key of the character-based interface (5250 emulation) may be the right Ctrl key on your keyboard. To change the keyboard definition so that the Enter key is the Enter key of your keyboard, see "Appendix J. Changing the keyboard definition for Operations Console" on page 133.

__ 14. Go to "Setup complete" on page 92.

Setup complete

You have finished the setup process for Operations Console. Your system should be powered on and in use, or ready to sign on. If you need to configure additional functions, go to “Chapter 10. Changing an existing configuration” on page 93.

To start using your LCS or RCS, see the Operations Console topic under Client Access Express in the Information Center:

`http://www.ibm.com/eserver/iseries/infocenter`

Consider that only one dial (modem) connection can be active at a time. For example, you need to disconnect a directly cabled LCS to use an RCS via modem.

Chapter 10. Changing an existing configuration

This chapter explains how you change an existing Operations Console configuration. The chapter refers to the drop-down menus, but you can also use the toolbar. Before changing an LCS or RCS configuration, make sure that you have completed setting up the PC with all the necessary software and hardware. If you have not done so, go to "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47 and "Chapter 8. Preparing for Operations Console configuration" on page 53, and return to this chapter.

Important:

- If you are changing a system name, or in the case of an RCS, an LCS name, you have to delete the current configuration and re-create it with the new names. To do this, go to "Deleting a configuration" on page 94. Then, go to "Chapter 9. Configuring a new Operations Console" on page 83 to create a new configuration.
- If you are adding the console function to an existing configuration, you need to delete the current configuration and create a new configuration. To do this, follow these steps:
  1. Delete the current configuration according to "Deleting a configuration" on page 94.
  2. Go to "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47 and "Chapter 8. Preparing for Operations Console configuration" on page 53 to make sure that the PC has the required components for your intended configuration.
  3. Create a new configuration according to "Chapter 9. Configuring a new Operations Console" on page 83.
- If you are changing a stand-alone LCS to an LCS with dial-in support, follow these steps:
  1. Go to "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47 and "Chapter 8. Preparing for Operations Console configuration" on page 53 to make sure that the PC has the required components for an LCS with remote support.
  2. Change the LCS configuration according to "Changing a local controlling system" on page 95.

In this chapter, you are going to find information on the following:

- Deleting a configuration
- Changing how the LCS connects with an iSeries server
- Adding remote capability to an LCS (only Windows NT and Windows 2000 Professional)
- Assigning a different modem
- Changing the telephone number to dial
- Changing the LCS running mode (attended or unattended)
- Adding or removing the Operations Console (this document does not cover the removal of Operations Console when hardware will be added, removed, or moved)
- Adding or removing the remote control panel

© Copyright IBM Corp. 1999, 2001

- Reassigning COM ports for the Operations Console, remote control panel, or modem

You are not going to find information on the following. These items are covered in Chapters 1, 2, and 3:

- Adding or removing cables that go to an iSeries server
- Installing a PC modem or AS/400 Operations Console Connection modem
- Changing the TCP/IP configuration within RAS
- Starting the system

To change an LCS, go to "Changing a local controlling system" on page 95.

To change an RCS, go to "Changing a remote controlling system" on page 99.

Deleting a configuration

Use this section to delete an existing Operations Console configuration.

To delete an LCS or RCS configuration, follow these steps:

1. If you want to delete an LCS, and the LCS is connected but is not in control, do the following to get iSeries control:
   a. Select the configuration name (under AS/400 Connection). This is the name that Operations Console uses to refer to a specific iSeries system.
   b. From the **Connection** menu, click **Request Control**.
   c. If the Service Device Sign-on window appears, click **Cancel**.
2. Select the configuration name (under AS/400 Connection). This is the name that Operations Console uses to refer to a specific iSeries system.
3. From the **Connection** menu, click **Disconnect**. The connection status shows `Disconnecting`.
4. Wait for the status to show `Disconnected` or `Not connected to LCS`.
5. Select the configuration name (under AS/400 Connection) that you want to delete.
6. From the **Connection** menu, click **Delete**.
7. Click **Yes** to confirm the deletion.

Note to Windows 95/98/Me/2000 users: You may need to delete the network object (Windows 2000) or DUN object (Windows 95/98/Me) each time you delete a configuration entry in Operations Console. Do the following to verify that either the network object or the DUN object does not exist:

1. If you are using Windows 2000 Professional, open the Network and Dial-up Connections folder in the Control Panel. If you are using Windows 95, Windows 98, or Windows Me, double-click **My Computer** and open the Dial-Up Networking folder.
2. If you deleted an LCS configuration, look for an icon that has the name of the iSeries system that the LCS used to connect to. Otherwise, if you deleted an RCS configuration, look for an icon that has the computer name of the LCS that you used to connect to the iSeries system.
3. If the icon exists, you need to delete the network object or DUN object as follows:
   a. Right-click the icon.
   b. Click **Delete**.

Changing a local controlling system

Use this section to change an existing LCS configuration. Before modifying an LCS configuration, make sure that you have completed setting up the PC with all the necessary software and hardware. If you have not done so, go to "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47 and "Chapter 8. Preparing for Operations Console configuration" on page 53, and return to this section.

Important:

- If you are using Windows NT or Windows 2000 Professional, you must be a member of the Administrators group to create or modify Operations Console configurations.
- Consider that you can configure only one cable-connected LCS.

To change your LCS configuration, follow these steps:

__ 1. Start Operations Console if it is not already running:
   a. Click **Start** and select **Programs**.
   b. Select **IBM AS/400 Client Access Express**.
   c. Click **AS/400 Operations Console**.

   Note: If the existing LCS configuration is set to automatically connect, then disconnect it. To disconnect the configuration, do the following:
   a. If your LCS is running in unattended mode and you have not requested control, do the following to get iSeries control:
      1) Select the configuration name (under `AS/400 Connection`). This is the name that Operations Console uses to refer to a specific iSeries system.
      2) From the **Connection** menu, click **Request Control**.
   b. If the Service Device Sign-on window appears, click **Cancel**.
   c. Select the configuration name (under `AS/400 Connection`). This is the name that Operations Console uses to refer to a specific iSeries system.
   d. From the **Connection** menu, click **Disconnect**. The connection status shows `Disconnecting`.
   e. Wait for the status to show `Disconnected`.

__ 2. Select the configuration name that you want to change (the LCS configuration).

__ 3. From the **Connection** menu, click **Configure Connection**. The values for the current configuration are going to be presented to you.

   This is where you can change the connection method:

   - If you are changing information regarding a stand-alone LCS or an LCS with dial-in support, select **Direct Cable Connection**.
   - If you are changing information regarding a dial-up LCS, select **Dial-Up Connection**.

__ 4. Did you select **Dial-Up Connection**?

Yes	No
↓	Click **Next**. Then, go to step 9 on page 96.

This is where you can change the telephone number to dial, the modem, or the modem properties for the dial-up LCS.

__ 5. Click the **Dial-Up Networking** button.

__ 6. Validate that the Entry name is the name of the LCS PC you will be dialing into. Also, validate that the modem listed is the one to be used to make the connection.

__ 7. Enter the telephone number (for example, 123-456-7890) of the modem at the iSeries server. Then, click **OK**.

__ 8. Click **Next**.

This is where you can change the startup mode of the dial-up LCS to automatically dial the iSeries server.

If you want to automatically dial the iSeries server, select the **Start connection when Operations Console starts** check box. If this is the only change that you want to make, click **Finish**. Then, go to "Setup complete" on page 100.

This is where you continue to make changes to your stand-alone LCS or LCS with remote support.

__ 9. Indicate which Operations Console functions you want to use with your iSeries system. If you installed both the console cable and the remote control panel cable, you need to select **Remote Control Panel and Console**. Then, click **Next**.

Important: If you chose to install only the console or only the remote control panel, only those windows that are associated with your choice are shown. Skip the steps not pertaining to your choice.

This is where you can reassign COM ports for the console, the remote control panel, or both.

To reassign the COM ports, follow steps 10 through 17 on page 97. The **Detect ...** check box is not going to be selected. If you are adding a cable or reassigning the port for an existing cable, select this check box to allow the PC to detect the cable.

__ 10. Click **Next** to allow the system to detect the console communications port or accept the previous port assignment. The system should find the port. It also selects the port automatically.

__ 11. Do you see a window that says that it could not find the console communications port?

No **Yes**

↓ Click **Next** to select a communications port to use. If you are not actually connecting the cable to the iSeries server, note the name of the communications port. You need this information when you attach the cable. The system automatically selects the next available serial port that is installed on the PC. If you would like to use another port, use the down arrow to select it.

↓

__ 12. In the Select AS/400 Operations Console Communication Port window, click **Next**. This accepts the communications port that the PC detected or the port you want to connect to the console cable.

Note: You can manually reassign COM ports for the console.

__ 13. If you are not installing the remote control panel, go to step 18 on page 97.

__ 14. If you are not using Windows NT or Windows 2000 Professional for the LCS, go to the next step. If you are using Windows NT or Windows 2000 Professional, select the type of interface for the remote control panel as follows:

- For iSeries Models 270, 820, 830, and 840, click **Enhanced Parallel Port Cable** to indicate a parallel interface for the remote control panel. Then, click **Next**.
- For other servers, click **Serial Cable PN 97H7584 or 97H7591** to indicate a serial interface for the remote control panel. Then, click **Next**.

__ 15. Click **Next** to allow the system to detect the remote control panel communications port or accept the previous port assignment. The system should find the port. It also selects the port automatically.

__ 16. Do you see a window that says that it could not find the remote control panel communications port?

No **Yes**

↓ Click **Next** to select a communications port to use. If you are not actually connecting the cable to the iSeries server, note the name of the communications port. You need this information when you attach the cable. The system automatically selects the next available serial port (except for servers using a parallel interface) that is installed on the PC. If you would like to use another port, use the down arrow to select it.

↓

__ 17. In the Select AS/400 Remote Control Panel Port window, click **Next**. This accepts the communications port that the PC detected or the port you want to connect to the remote control panel cable.

Note: You can manually reassign COM ports for the remote control panel.

__ 18. Are you using Windows NT or Windows 2000 Professional?

Yes **No**

↓ Go to step 23 on page 98.

This is where you can add and remove the support for other PCs to dial into the iSeries server.

__ 19. If remote PCs are going to dial this LCS, click **Yes, allow remote PCs to connect**. Then, click **Next** and go to the next step.

If this PC is being configured as an LCS without remote PCs dialing in, click **No, do not allow remote PCs to connect**. Then, click **Next** and go to step 23 on page 98.

You can change whether the LCS runs in attended or unattended mode.

__ 20. Select **Attended** or **Unattended** to indicate how you want this LCS to operate. It is recommended that your initial configuration be set to run **Attended**, and then return to set it to **Unattended** after you have everything working.

Then, click **Next**.

Note: Click **Help** for assistance in determining which mode is best for you.

Start-up mode: There is a difference in the way Operations Console initially starts for each of these modes:

- If you choose the **Attended** mode, Operations Console automatically starts the functions (remote control panel, console, or both) you have

cabled and configured. The remote control panel starts first. Then, after you authenticate the password, the 5250 emulator starts.

- If you choose the **Unattended** mode, it is assumed that no one will be at the console. Therefore, the functions (remote control panel, console, or both) do not start automatically. You can check the status for `Connected` to be certain that the functions are available. Should you need to work with a function, you can manually start it by using the toolbar or drop-down menu.

__ 21. If your PC is running **Windows NT**, do the following:

a. If you have previously administered all the users authorities and have no need to start User Manager, go to step 22.

b. If you want to administer all the users authorities now, follow these steps:

1) Click **Start User Manager**. A list of Users in a description window appears.

Note: Even though Windows NT gives you access to the User Manager from the desktop, you can still use Operations Console to access the User Manager from here in order to make changes to user authorities.

2) Verify that all your users have the proper authority. If remote controlling systems dial into this LCS, make sure that each user at those remote systems has dial-in authority. To do this, use the **Dial-In** option.

3) Close the window.

4) Go to step 22.

If your PC is running **Windows 2000 Professional**, do the following:

a. If you have previously administered dial-in users, go to step 23.

b. If you want to administer dial-in users now, follow these steps:

1) Click **Start** and select **Settings**.

2) Select **Control Panel**.

3) Select **Network and Dial-up Connections**.

4) Click **Incoming Connections**.

5) Click the **Users** tab.

6) Verify that all your users have the proper authority. If remote controlling systems dial into this LCS, make sure that each user at those remote systems can connect to the LCS. To do this, select the check box preceeding a user ID in the **Users allowed to connect** field.

7) Close the Incoming Connections folder. Then, go to step 23.

__ 22. Click **Next**.

__ 23. If you arrived at the AS/400 Operations Console LCS Configuration Complete window, click **Finish**.

If you arrived at the AS/400 Operations Console Restart Required window, do the following:

a. Before restarting the PC, disconnect any connected configurations as follows:

Note: You can select **No, I will restart my PC later**, but the remote control panel will fail to function until the PC is restarted.

1) If the Service Device Sign-on window appears, click **Cancel**.
2) Select the configuration name (under `AS/400 Connection`). This is the name that Operations Console uses to refer to a specific iSeries system.
3) From the **Connection** menu, click **Disconnect**. The connection status shows `Disconnecting`.
4) Wait for the status to show `Disconnected` or `Not connected to LCS`.

b. Select **Yes, I want to restart my PC now**, and then click **Next**.
c. Start Operations Console as follows:
1) Click **Start** and select **Programs**.
2) Select **IBM AS/400 Client Access Express**.
3) Click **AS/400 Operations Console**.

If you had an existing configuration, Operations Console may not automatically start. You need to manually connect:

a. Select the configuration name (under `AS/400 Connection`). This is the name that Operations Console uses to refer to a specific iSeries system.
b. From the **Connection** menu, click **Connect**.

If you are setting up the LCS to run **Unattended**, then the following functions (remote control panel, console, or both) will not start automatically.

__ 24. Close Operations Console and restart it to ensure that changes take effect on the next connection.

You have now finished the LCS configuration. Go to "Setup complete" on page 100.

Changing a remote controlling system

Use this section to change an existing RCS configuration. Before modifying an RCS configuration, make sure that you have completed setting up the PC with all the necessary software and hardware. If you have not done so, go to "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47 and "Chapter 8. Preparing for Operations Console configuration" on page 53, and return to this section.

Important:

- If you are using Windows NT or Windows 2000 Professional, comply with the following:
  - You must be a member of the Administrators group to create or modify Operations Console configurations.
  - You must have dial-in authority so the operating system at the LCS allows the connection between the PCs.
- Operations Console allows you to configure more than one RCS.

To change your RCS configuration, follow these steps:

__ 1. Start Operations Console if it is not already running. Follow these steps to start Operations Console:
a. Click **Start** and select **Programs**.
b. Select **IBM AS/400 Client Access Express**.
c. Click **AS/400 Operations Console**.

Operations Console starts and may try to connect the configuration you may want to change. If Operations Console tries to connect, follow these steps to disconnect it:

- Select the configuration name (under `AS/400 Connection`). This is the name that Operations Console uses to refer to a specific iSeries system.
- From the **Connection** menu, click **Disconnect**. The connection status shows `Disconnecting`.
- Wait for the status to show `Not connected to LCS`.

__ 2. Select the configuration name (under `AS/400 Connection`) of the RCS that you want to change.

__ 3. From the **Connection** menu, click **Configure Connection**.

If you need to make changes to the phone number to dial, the modem, or the modem properties, go to the next step. Otherwise, go to step 8.

__ 4. Click **Dial-up**.

__ 5. Click **Dial-Up Networking ...** and verify or change the needed data.

__ 6. Type the Entry name, if needed, then the telephone number (for example, 123-456-7890).

Note: Entry name is the name of the LCS PC you will be dialing into.

__ 7. Verify that the correct modem is listed in **dial using**. Click **OK**.

__ 8. Click **Next** to continue.

__ 9. This is where you can set up the RCS to automatically dial the LCS, but only if this PC does not function as an LCS.

If you want the RCS to automatically dial the LCS, select the **Start connection when Operations Console starts** check box.

__ 10. Click **Finish** to save your configuration information.

__ 11. Operations Console automatically starts, but it does not attempt to connect unless an LCS is also configured (which would start connecting) or unless you configured the RCS to automatically start.

Setup complete

You have finished the setup process for Operations Console. Your system should be powered on and in use, or ready to sign on. If your current configuration needs additional functions, however, start at the beginning of this chapter and follow the instructions.

To start using your LCS or RCS, see the Operations Console topic under Client Access Express in the Information Center:

`http://www.ibm.com/eserver/iseries/infocenter`

Chapter 11. Setting up a dial-up LCS

Before setting up a dial-up LCS, make sure that you have completed setting up the PC with all the necessary software and hardware. If you have not done so, go to "Chapter 7. PC and iSeries requirements for non-LAN configurations" on page 47 and "Chapter 8. Preparing for Operations Console configuration" on page 53, and return to this chapter.

Dial-up LCS is designed for systems that will be running without a locally attached console device. Initially, however, a local console must be connected to the iSeries server to properly configure it to receive calls. For this purpose, you can use any valid console device.

Important:

- The dial-up LCS does not support the remote control panel or connections from an RCS.
- If you are using Windows NT or Windows 2000 Professional, you must be a member of the Administrators group to create or modify Operations Console configurations.
- Set the iSeries system value **QAUTOCFG** to **ON**. This allows the system to create any necessary resources to complete the Operations Console configuration. Use one of the following to verify or set this system value on the iSeries server:
  - Use the **WRKSYSVAL QAUTOCFG** OS/400 command.
  - During a manual IPL, in the IPL Options window, for **Set major system options**, select **Y**. Then, for **Enable automatic configuration**, select **Y**.

    To perform a manual IPL, see "Starting the system using a manual IPL" on page 79.

  Note: You may change the value of QAUTOCFG back to OFF after you have completed the first IPL in normal mode and successfully completed a dial-in connection. The system will have created any necessary resources at this time.

Setting up the iSeries server

The iSeries server requires that a valid modem be attached. Usually, this is the electronic customer support modem. Supported types are 7852-400, 7855-10, and 7857-017.

To configure the iSeries server, you need to go to Dedicated Service Tools (DST). If there is already a console device present, you may use it. Otherwise, you may need to temporarily attach another console such as:

- A twinax-attached console
- An Operations Console connected locally (if an Operations Console cable is available)

Normally, you can get to DST any of the following ways. You need authorization to make changes in this environment:

© Copyright IBM Corp. 1999, 2001

- Perform an IPL in manual mode and select option **3** (Dedicated Service Tools). To perform a manual IPL, go to "Starting the system using a manual IPL" on page 79.
- If you have already performed an IPL on your system, you can issue a function 21 from the iSeries control panel or from a remote control panel.
- If you are using a **twinax-attached console** and the system is running in debug mode, do the following:
  1. Do a System Request by pressing the Alt key and the System Request key simultaneously.
  2. Type `DST` on the command line at the bottom of the screen.

  If you are using an **Operations Console** and the system is running in debug mode, do the following:
  1. Do a System Request. To do this on most keyboards, you can press the Shift key and the ESC key simultaneously.
  2. Type `DST` on the command line at the bottom of the screen.

  Debug mode is a diagnostic mode that is turned on by the user (under the direction of a support representative) in DST, only during a manual IPL.

Plug the electronic customer support cable into the same port as the Operations Console cable (see "Installing Operations Console cable" on page 68).

Selecting the correct modem for Operations Console

Use this section to select the correct modem for your iSeries server.

Do the following starting at the DST main menu:

1. Select **Work with remote service support**.
2. Select **Change service attributes**.
3. In the **Modem Type** field, select the modem that you are going to use.

   If you select option **9** (Other), then the **Other modem initialization string** field becomes available. In this field, you can enter a special string for your original equipment manufacturer (OEM) modem. Any data placed in the **Other modem initialization string** field is not used unless you select option 9 (Other) as the modem type.

   Important:
   - You need to determine the correct initialization string for the OEM modem. For assistance in determining the initialization string, see "Appendix A. Modem initialization and configuration" on page 109.
   - The OEM modem must be in asynchronous mode before sending the string data to the modem.
4. Press the PF3 key until you reach the DST main menu.

Selecting Operations Console as the console device

Use this section to select AS/400 Operations Console as the console device for your dial-up LCS.

1. From the DST main menu, select **Work with DST environment**.
2. Select **System devices**.
3. Select **Console mode**.

4. Select **Operations console**.

   Important: Make sure that you type 2 and press Enter even if 2 already exists. This forces a rewrite of the value.
5. Press the PF3 key until you reach the DST main menu.

At this time Operations Console does not need a locally connected console. Unless you need to set up something else, the next steps power down the system to allow the locally attached console to be disconnected:

1. Select **Start a service tool**.
2. Select **Operator panel functions**.
3. To power down and perform an initial program load (IPL), select the desired options and press the appropriate PF key.
4. Press Enter to confirm that you want to power down or restart the iSeries server.

   Note: After the system has fully powered down, you may remove the locally-attached console device. Then, you will most likely perform an IPL in normal mode and allow users to access the system.

Setting up the PC

Use this section to set up the PC for your dial-up LCS.

To create a dial-up LCS configuration, follow these steps:

1. Start Operations Console as follows:
   a. Click **Start** and select **Programs**.
   b. Select **IBM AS/400 Client Access Express**.
   c. Click **AS/400 Operations Console**.
2. If this is the first configuration for Operations Console, the Configure AS/400 Operations Console Connection window appears. If this window appears, go to step 4. If the Configure AS/400 Operations Console Connection window does not appear, a configuration already exists.

   To create a dial-up LCS configuration, from the **Connection** menu, click **New Configuration**.
3. In the Welcome window, click **Next**.
4. Click **Local Controlling System (LCS) to AS/400 system**. Then, click **Next**.
5. Click **Dial-Up**. Then, click **Next**.
6. Enter the name of the iSeries server you will be dialing into. Then, click **Next**.
7. Click **Dial-up Networking**.
8. Type the Entry name (if appropriate) and the telephone number of the modem of the iSeries server (for example, 123-456-7890). Also, validate that the correct modem is selected, and click **OK**.

   Note: Entry name is the name of the iSeries server you will be dialing into.
9. Click **Next** to continue.
10. Leave the **Start connection when Operations Console starts** check box unchecked until you have Operations Console working in the way that you desire. It is difficult to work with setup problems once the connection starts.
11. Click **Finish**.

The PC is now ready to call the iSeries server. Nevertheless, there is additional work that you must do before the connection can start.

Configuring the modem

It is assumed that the modem that the iSeries server is using, is currently configured for electronic customer support. Therefore, the modem is set for synchronous connections.

Important: If you are going to use the modem for electronic customer support and for a dial-up LCS, it must be capable of switching between synchronous and asynchronous modes. You may also need to manually switch between modes before and after the dial-up LCS connection.

The iSeries server uses any of the following modems:

- *7852*: Configuration switches are on one side. The modem automatically uses synchronous connections and can be set to asynchronous mode without changing any switches. You are not expected to make any changes to this modem.
- *7855*: You can configure it by using the buttons on the front of the modem. It also uses synchronous connections automatically, and you can switch it to asynchronous mode without intervention. You are not expected to make any changes to this modem.
- *7857*: You can configure it by using the buttons on the front of the modem. It also uses synchronous connections automatically, and you can switch it to asynchronous mode without intervention. Nevertheless, you have to perform an additional configuration every time you attempt to connect to this modem.

To configure the 7857 modem:

1. Press the Up arrow key 11 times until `C106 (CTS) U11` is shown.
2. Press the Right arrow key 3 times until `C106 Always follows C105` is shown.
3. Press the Enter key twice.
4. This should turn on the CTS light.

   Important: Check the light before activating the communications line.

You must perform the steps before attempting to activate the iSeries communications line. If the attempt fails, you must again perform the steps. You may have to do this setup more than once.

For more information on configuring a modem, see "Appendix A. Modem initialization and configuration" on page 109.

Activating the communications line on the iSeries server

Use this section to manually activate the communications line on the iSeries server.

First, if your iSeries server uses a keystick, insert it in the key slot now. Then, follow these steps:

1. Place the iSeries server into **manual** mode by using the system's control panel.
2. Using the up and down buttons, select function **25** and press the Enter button.
3. Use the up button to select function **26** and press the Enter button.
4. Use the down button to select function **66** and press the Enter button.

The system attempts to initialize the attached modem. If it is successful, the Function/Data window responds with **D1008066**. If it could not initialize the modem, it responds with **D1008065**.

Deactivating the communications line on the iSeries server

Use this section to manually deactivate the communications line on the iSeries server. Your system should be in manual mode and the extended control panel functions activated. The extended functions are activated from when the communications line was activated.

To deactivate the communications line on the iSeries server, do the following:

1. If your system is not in manual mode, the extended functions are not activated, or both, follow these steps:
   a. First, if your iSeries server uses a keystick, insert it in the key slot.
   b. Place the iSeries server into **manual** mode by using the system's control panel.
   c. Using the up and down buttons, select function **25**. Then, press the Enter button.
   d. Use the up button to select function **26**. Then, press the Enter button.
2. Use the down button to select function **65**. Then, press the Enter button.

If the deactivation is successful, the Function/Data window responds with **D1008065**.

Dialing the iSeries server

Once someone activates the line at the iSeries server, the LCS PC has to dial into the system. Start a connection just as you would to connect to an LCS. Once fully connected, you receive control automatically. Disconnect when finished.

To disconnect, follow these steps:

1. Select the configuration name (under `AS/400 Connection`). This is the name that Operations Console uses to refer to a specific iSeries system.
2. From the **Connection** menu, click **Disconnect**. The connection status shows `Disconnecting`.
3. Wait for the status to show `Disconnected`.

When you disconnect, the iSeries server automatically deactivates the communications line.

If you fail to connect, the person at the iSeries server again has to activate the line. Moreover, if you are dialing a 7857 modem, you also have to follow the configuration steps for this modem again.

Part 4. Appendixes

© Copyright IBM Corp. 1999, 2001

Appendix A. Modem initialization and configuration

This appendix assists you in modifying the initialization strings for modems that work in a dial-up LCS environment. It also assists you in finding a workable string for your original equipment manufacturer (OEM) modem at the AS/400 side of the connection.

Determining the initialization string for OEM modems

This section assists you in determining the appropriate initialization string for your OEM modem.

If you are going to use an OEM modem, you may need to use a trial-and-error approach to determine the initialization string. The string commands and their meaning, provided in the "Modem initialization strings for the iSeries server and PC" section, may not be appropriate for your modem. If so, to determine comparable functions, refer to the documentation that the modem manufacturer provides.

Tip: To determine the initialization string, start with the basics such as just sending the AT command. Most modems return a positive response and should activate the line, even though connection data will probably not be exchanged. Add commands, one or two at a time, and deactivate the line between attempts. When you determine that enough commands have been added to support a true data connection, test it using a PC setup as a dial-up LCS that is as close to AS/400 as possible. This allows you to monitor both sides of the connection and support further debug of the initialization string.

Modem initialization strings for the iSeries server and PC

Use this section to modify the modem initialization strings for your iSeries server and PC according to your modem type. Strings for modem types supported by IBM (7852, 7855, and 7857) and for OEM modems are listed below.

Important: If you experience problems connecting to AS/400 in a dial-up LCS configuration, you may have to add the appropriate initialization string for the PC modem to negotiate. You may also have to connect at only 9600 BPS. The initialization string is dependent on the modem and will differ from type and model used.

The following initialization strings are for the **7852**, **7855**, and **7857** modems:

7852–400

For the 7852-400 modem, the initialization string for the AS/400 system is:

```
AT&FE0M0X2S0=2
AT - ATTENTION
&F - LOAD FACTORY SET (SWITCH SET TO SYNC)
E0 - DISABLE ECHO
M0 - DISABLE SPEAKER
X2 - CHECK FOR DIAL TONE BEFORE DIALING
S0 = 2 SPECIFIES ANSWER ON SECOND RING
```

© Copyright IBM Corp. 1999, 2001

For the 7852-400 modem, the initialization string for the PC is:

```
AT&FE0M0X2$BA1&W0$MB9600S0=0
AT - ATTENTION
&F - LOAD FACTORY SET (SWITCH SET TO SYNC)
E0 - DISABLE ECHO
M0 - DISABLE SPEAKER
X2 - CHECK FOR DIAL TONE BEFORE DIALING
$BA1&W0 - TURN OFF SPEED CONVERSION
$MB9600 - CONNECT AT 9600 ONLY
S0 = 0 SPECIFIES NO AUTO ANSWER
```

7855-10

For the 7855-10 modem, the initialization string for the AS/400 system is:

```
AT&F1&C1E0M0V1X4&S1S0=2\R2\Q2
AT - ATTENTION
&F1 - LOAD FACTORY ASYNC SETTINGS
&C1 - CD ON ONLY WHEN CONNECTED
E0 - DISABLE ECHO
M0 - DISABLE SPEAKER
V1 - RESULT CODES ARE WORDS
X4 - DETECT DIAL TONE AND BUSY
&S1 - DSR FOLLOWS CD
S0 = 2 SPECIFIES ANSWER ON SECOND RING
\R2 - DTE USES RTS
\Q2 - MODEM USES RFS
```

For the 7855-10 modem, the initialization string for the PC is:

```
AT&F1&C1E0M0V1X4S0=0\R2\Q2
AT - ATTENTION
&F1 - LOAD FACTORY ASYNC SETTINGS
&C1 - CD ON ONLY WHEN CONNECTED
E0 - DISABLE ECHO
M0 - DISABLE SPEAKER
V1 - RESULT CODES ARE WORDS
X4 - DETECT DIAL TONE AND BUSY
S0 = 0 SPECIFIES NO AUTO ANSWER
\R2 - DTE USES RTS
\Q2 - MODEM USES RFS
```

7857-017

For the 7857-017 modem, the initialization string for the AS/400 system is:

```
AT&F0&C1E0M0V1X2S0=2&K2&U4&D2*I8
AT - ATTENTION
&F0 - LOAD FACTORY ASYNC SETTINGS
&C1 - DSR&CD IN NORMAL MODE
E0 - DISABLE ECHO
M0 - DISABLE SPEAKER
V1 - RESULT CODES ARE WORDS
S0 = 2 ANSWER ON SECOND RING
&D2 - RETURN MODEM TO COMMAND MODE WHEN THE LINE DROPS
*I8 - USE 9600 BPS DTE ONLY (important for internal port speed)
```

For the 7857-017 modem, the initialization string for the PC is:

```
AT&F0&C1E0M0V1X2S0=0&K2&U4&D2F8*I8&E2
AT - ATTENTION
&F0 - LOAD FACTORY ASYNC SETTINGS
&C1 - DSR&CD IN NORMAL MODE
E0 - DISABLE ECHO
M0 - DISABLE SPEAKER
V1 - RESULT CODES ARE WORDS
S0 = 0 NO AUTO ANSWER
```

```
&K2 - USE CTS(C106) DTE FLOW CONTROL
&U4 - USE RTS(C105) DATA FLOW CONTROL
&D2 - DROP LINE WHEN DTR GOES OFF
F8 - USE 9600 BPS ONLY
*I8 - USE 9600 BPS ONLY
&E2 - USE ERROR CORRECTION
```

The following initialization strings are for **OEM** modems:

ZOOM

For ZOOM VFXV32BIS, the initialization string for the AS/400 system is:

```
AT&FE0M0S0=2&C1&D2&K3&S1
AT - ATTENTION
&F - LOAD FACTORY ASYNC SETTINGS
E0 - DISABLE ECHO
M0 - DISABLE SPEAKER
S0 = 0 NO AUTO ANSWER
&C1 - CD ON ONLY WHEN CONNECTED
&D2 - DTR GOING OFF DROPS LINE AND TURNS OFF AUTO ANSWER
&K3 - USE RTS/CTS FLOW CONTROL
&S1 - DSR FOLLOWS CD
```

For ZOOM VFXV32BIS, the initialization string for the PC is:

```
AT&F&C1E0M0S0=0&D2&K3N0S37=9
AT - ATTENTION
&F - LOAD FACTORY ASYNC SETTINGS
&C1 - CD ON ONLY WHEN CONNECTED
E0 - DISABLE ECHO
M0 - DISABLE SPEAKER
S0 = 0 NO AUTO ANSWER
&D2 - DTR GOING OFF DROPS LINE AND TURNS OFF AUTO ANSWER
&K3 - USE RTS/CTS FLOW CONTROL
N0 - USE S37 REGISTER FOR SPEED
S37 = 9 - CONNECT AT 9600 ONLY
```

Intel 144e FaxModem

For Intel 144e FaxModem, the initialization string for the AS/400 system is:

```
AT&F&C1E0M0V1X4F8S0=2
```

For Intel 144e FaxModem, the initialization string for the PC is:

```
AT&F&C1E0M0V1X4F8S0=0
```

USRobotics Sportster 28.8

For USRobotics Sportster 28.8, the initialization string for the AS/400 system is:

```
AT&FE0M0S0=2&N6
```

For USRobotics Sportster 28.8, the initialization string for the PC is:

```
AT&FE0M0S0=0&N6
```

Other OEM modems

For other OEM modems, try using the 7852 initialization string. It should work for most OEM ASYNC-only modems. You may also try this basic string:

```
AT&FnS0=N
```

(Where n and N are numbers, and N in S0=N only applies for AS/400 and represents the number of rings before the modem answers a call.)

When using the basic string, verify that &F is not using options that are not supported in the remote environment. You may need to try all &F selections to find out whether one will work.

Resetting the modem for synchronous use

Use this section for resetting the 7855, 7857, and 7852 modems for use with electronic customer support.

To reset the 7855 modem for synchronous use, follow these steps:

1. Press the Right-arrow and Left-arrow buttons, at the same time, until Exit Enter is shown.
2. Press the Right-arrow button.
3. Press the Down-arrow button until First Setup is shown.
4. Press the Right-arrow button.
5. Press the Down-arrow button until Reset to Factory is shown.
6. Press the Right-arrow button.
7. Press the Left-arrow button at Profiles Only and the light should briefly light and return you to First Setup.
8. Press the Left-arrow button, and Exit Enter shows.
9. Press the Left-arrow button, and Remain Unlocked shows.
10. Press the Left-arrow button, and Save Profile 0 shows.
11. Press the Left-arrow button to complete the configuration change.

To reset the 7857 modem for synchronous use, follow these steps:

1. Press the Down-arrow button until Configurations is shown.
2. Press the Right-arrow button, and Select Factory shows on the bottom line.
3. Press the Enter button, and an underscore shows.
4. Press the Up-arrow button until 3 is shown. At this point, 3 begins to alternate with the cursor.
5. Press the Enter button, and IBM 7857 V25BIS aa shows.

To reset the 7852 modem for synchronous or asynchronous use, use the switch settings below:

```
1               16
UUDDUUUDDUDUUUUU
```

(Where U=up and D=down.)

Resetting the modem for asynchronous use

Use this section for resetting the 7855, 7857, and 7852 modems for asynchronous use.

To reset the 7855 modem for asynchronous use, follow these steps:

1. Press the Right-arrow and Left-arrow buttons (at the same time) until Exit Enter is shown.
2. Press the Right-arrow button.

3. Press the Down-arrow button until `First Setup` is shown.
4. Press the Right-arrow button.
5. Press the Down-arrow button until `Reset to Factory` is shown.
6. Press the Right-arrow button.
7. Press the Left-arrow button at `Profiles Only`. The light should briefly light and return you to `First Setup`.
8. Press the Right-arrow button.
9. Press the Down-arrow button until `Asynchronous AT` is shown.
10. Press the Left-arrow button, and `First Setup` shows.
11. Press the Right-arrow button.
12. Press the Down-arrow button until `Power on Profile` is shown.
13. Press the Right-arrow button, and `Profile NVM 0` shows.
14. Press the Down-arrow button, and `Profile NVM 1` shows.
15. Press the Left-arrow button, and `First Setup` shows.
16. Press the Left-arrow button, and `Exit Enter` shows.
17. Press the Left-arrow button, and `Remain Unlocked` shows.
18. Press the Left-arrow button, and `Save Profile 0` shows.
19. Press the Left-arrow button, and `ASYN8N A 9600 a` shows.

To reset the 7857 modem for asynchronous use, follow these steps:

1. Press the Down-arrow button until `Configurations` is shown.
2. Press the Right-arrow button, and `Select Factory` shows on the bottom line.
3. Press the Enter button, and an `underscore` shows.
4. Press the Up-arrow button until `0` is shown. At this point, `0` begins to alternate with the cursor.
5. Press the Enter button, and `IBM 7857 AT CMD aa` shows.

To reset the 7852 modem only for asynchronous, use the switch settings below:

```
1               16
UUDDUUUDDUDDUUUU
```

(Where U=up and D=down.)

Appendix B. Migrating from Operations Console with cable connectivity to Operations Console with LAN connectivity

Use this section to migrate an existing Operations Console LCS configuration using a directly cabled connection between the PC and the system, to a LAN LCS configuration using a LAN connection between the PC and system. Before you begin, make sure that you have satisfied all the hardware requirements for the PC and iSeries server. To do this, see "Hardware requirements" on page 13.

To migrate Operations Console with cable connectivity to Operations Console with LAN connectivity, you must perform steps on *both* the PC and the iSeries server.

Follow these steps on the *iSeries* server:

1. Using the existing console, go to Dedicated Service Tools (DST). You need QSECOFR authorization to make changes in this environment. You can get to DST any of the following ways:
   - Perform an IPL in manual mode and select option **3** (Dedicated Service Tools). To perform a manual IPL, go to "Starting the system using a manual IPL" on page 79.
   - If you have already performed an IPL on your system, you can issue a function 21 from the iSeries control panel or from a remote control panel.
   - If you are using Operations Console with cable connectivity and the system is running in debug mode, do the following:
     a. Do a System Request. To do this on most keyboards, you can press the Shift key and the ESC key simultaneously.
     b. Type `DST` on the command line at the bottom of the screen.

     Debug mode is a diagnostic mode that is turned on by the user (under the direction of a support representative) in DST, only during a manual IPL.
2. Select **Work with DST environment**.
3. Select **System Devices**.
4. Select **Console mode**.
5. Select **Operations Console (LAN)**. You should see the Verify Operations Console Adapters window. This is the resource found by the system to be used for your Lan connection.

   If you get a message stating that the Lan adapter was not found, you have not satisfied the hardware requirements for Operations Console. See "Hardware requirements" on page 13.
6. Press **F11** to configure the adapter.
7. Enter the appropriate network data.
8. Press **F7** to store the data.
9. Press **F14** to activate the adapter for use by Operations Console.
10. Press **F3** to return to the DST main menu.

The system is now configured for use by Operations Console using LAN connectivity.

To configure the PC to use the new console type, follow these steps:

1. Disconnect the current console connection. To disconnect, do the following:

© Copyright IBM Corp. 1999, 2001

a. Select the configuration name (under AS/400 Connection). This is the name that Operations Console uses to refer to a specific iSeries system.
b. From the **Connection** menu, click **Disconnect**. The connection status shows `Disconnecting`.
c. Wait for the status to show `Disconnected`.

2. Delete the current configuration if you will not be using the cabled connection as a backup console. To delete the configuration, do the following:
   a. Select the configuration name (under AS/400 Connection).
   b. From the **Connection** menu, click **Delete**.
   c. Click **Yes** to confirm the deletion.
3. Use "Part 2. Setting up LAN Operations Console configurations" on page 11 to configure the new console type.

If you will not be using the cabled connection as a backup console, you may remove the console, remote control panel, or both cables from the PC at this time. It is recommended that you power down the iSeries before removing the cables from the iSeries.

The next IPL will allow you to use your new console type.

Appendix C. Resynchronizing the PC and iSeries device profile password

When a mismatch occurs in the service tools device password between the iSeries server and the Operations Console PC, you need to resynchronize the password by performing recovery steps on *both* the PC and the iSeries server.

Note: You will need to go to Dedicated Service Tools (DST) to perform the reset using the service tool device. If there is already a console device present, you may use it. Otherwise, you may need to temporarily attach another console such as:

- A different LAN LCS, if available.
- Reconfigure the same LAN LCS using unused emergency device profile.
- An Operations Console connected locally (if an Operations Console cable is available)
- A twinax-attached console

Normally, you can get to DST any of the following ways. You need authorization to make changes in this environment:

- Perform an IPL in manual mode and select option **3** (Dedicated Service Tools). To perform a manual IPL, go to "Starting the system using a manual IPL" on page 79.
- If you have already performed an IPL on your system, you can issue a function 21 from the iSeries control panel or from a remote control panel.
- If you are using a **twinax-attached console** and the system is running in debug mode, do the following:
  1. Do a System Request by pressing the Alt key and the System Request key simultaneously.
  2. Type `DST` on the command line at the bottom of the screen.

  If you are using an **Operations Console** and the system is running in debug mode, do the following:
  1. Do a System Request. To do this on most keyboards, you can press the Shift key and the ESC key simultaneously.
  2. Type `DST` on the command line at the bottom of the screen.

  Debug mode is a diagnostic mode that is turned on by the user (under the direction of a support representative) in DST, only during a manual IPL.

To recover on the *iSeries* server, do one of the following:

- Do one of the following if you can obtain a console session using another device:
  - Reset the device profile password. By doing this, the device profile password becomes the device profile name, in uppercase. To reset the device profile, perform these steps:
    1. From the DST main menu, do the following:
       a. Select **Work with DST environment**.
       b. Select **Service tools device profiles**.

© Copyright IBM Corp. 1999, 2001

2. Type 2 in front of the service tools device profile to be reset, and then press Enter.
3. Press Enter again to confirm the reset.

– If you do not want your device profile name and device profile password to be the same, delete the device profile and create a new device profile with a password of your choice. To do this, perform these steps from the DST main menu:
  1. Select **Work with DST environment**.
  2. Select **Service tools device profiles**.
  3. Type 3 in front of the old device profile you want to delete, and then press Enter.
  4. Press Enter again to confirm the deletion.
  5. Using option 1, create a new device profile and assign the password of your choice.

- If you do *not* have another device to sign on to the system, but do have an unused device profile, do the following on the PC:
  1. Delete the current configuration as follows:
     a. Select the configuration name (under AS/400 connection).
     b. From the **Connection** menu, click **Delete**.
     c. Click **Yes** to confirm the deletion.
  2. Create a new configuration and use the unused device profile during the configuration.
  3. Use one of the methods above to reset the failing device profile.
- If you cannot use another device or device profile to sign on and you are using the QCONSOLE device profile, you will have to use the control panel to reset the device profile password by following these steps:
  1. If there is an async communications card in the location normally used to provide communications to a cabled LCS (Operations Console), the cable must be removed from the system end. This is true even if the communications card is not being used for Operations Console.
  2. Place the system in Manual mode. Systems without a keystick will show 01 B in the Function/Data display.

     Note: Systems with a keystick should show the mode as Manual and 01 B in the Function/Data display.
  3. From the control panel, use the up or down buttons so that Function/Data display shows 25. Then, press the Enter button. The Function/Data display should show 25 00.
  4. Use the up button once to increment the data to 26. Then, press the Enter button. The system will most likely respond with 01 B in the Function/Data display.
  5. Using the down button, decrement the data to 65, then press the Enter button. The system will respond with 65 00.
  6. Wait for the system to respond with D1008065 in the Function/Data display.
  7. Press the up button once to increment the data to 66, then press the Enter button. The system will respond with 66 00.
  8. Press the down button once to decrement the data to 65 again, then press the Enter button. The system will again respond with 65 00. The QCONSOLE service device profile password has been reset to QCONSOLE.

9. If you removed the Operations Console cable in step 1 on page 118, reconnect it at this time.
10. You will need to delete and recreate, or change the device profile password on the configuration for Operations Console on the PC using the default QCONSOLE service device information profile and password.

To recover on the *PC*, do one of the following:

- To delete the configuration and recreate it, follow these steps:
  1. If connected, disconnect as follows:
     a. Select the configuration name (under AS/400 Connection). This is the name that Operations Console uses to refer to a specific system.
     b. From the **Connection** menu, click **Disconnect**. The connection status shows `Disconnecting` .
     c. Wait for the status to show `Not connected to LCS` or `Disconnected`.
  2. Delete the configuration:
     a. Select the configuration name (under AS/400 Connection) that you want to delete.
     b. From the **Connection** menu, click **Delete**.
     c. Click **Yes** to confirm the deletion.
  3. Recreate the configuration with the device profile password you previously reset or with the new device profile. To do this, see "Chapter 5. Configuring a new LAN Operations Console" on page 23.
- To change or reset the password for the *same* device profile, see "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129.

Appendix D. Applying Client Access Express Service Packs using Operations Navigator

This section describes how to use Operations Navigator, when connected to the iSeries server using the cable connectivity of Operations Console, to install a Client Access Express Service Pack to the console (PC). Configurations that use only the remote control panel will not have this capability. The following statements must be true:

- Operations Navigator must have a localhost connection configured. Use "Installing Operations Navigator on Operations Console without LAN connectivity" on page ix to install this connectivity if it isn't already available.
- The 5769XE1 product must be installed on the iSeries server.
- The Program Temporary Fix (PTF) containing the service pack to be installed on the client must already be loaded and applied on the iSeries server.
- An Operations Console connection to the iSeries server must be active (usually the status `Connected` or `Pending Authorization` would be displayed.) The console device does not need to be active, however.

To install the Client Access Express Service Pack to the console, follow these steps:

1. Start Operations Navigator, if it is not already started.
2. Double-click **localhost** to start a connection. Sign on normally. This will cause the functions available to show up under localhost.
3. Double-click **File Systems** to expand those functions.
4. Click **File Shares**.
5. Double-click **Qibm**.
6. Double-click **ProdData**.
7. Double-click **CA400**.
8. Double-click **Express**.
9. Double-click **Service**.
10. Double-click **Image**.
11. Copy all files from the Image directory on the system to a local drive on the PC. To do this, select all files, and then drag them to a directory on your local drive.
12. From the location you copied the files to, double-click **Setup.exe** and follow the instructions provided during the installation.

© Copyright IBM Corp. 1999, 2001

Appendix E. Verifying or configuring Operations Console as the console device

Note: In these instructions, the Enter key may be the right Ctrl key on most keyboards. To change the keyboard definition so that the Enter key is the Enter key of your keyboard, see "Appendix J. Changing the keyboard definition for Operations Console" on page 133.

Do the following starting at the DST main menu:

1. Select **Work with DST environment**.
2. Select **System devices**.
3. Select **Console mode**.
4. Select **Operations Console (LAN)** . This is where you may press **F11** to configure the Operations Console LAN Adapter, if desired.
5. If a LAN adapter is *not* found, you do not have a supported configuration for Operations Console with LAN connectivity (see "Hardware requirements" on page 13).

   Otherwise, If a LAN adapter *is* found, press Enter to select it.

   Note: Optionally, you may use PF11 to configure the network card for use on your network. If you do the configuration before setting up the client (PC), you do not have to reenter the network data on the `AS/400 System Service Interface Information` window. When you get to that window, check that the `Service TCP/IP address` field is filled in, and then press **Next**.

   Also, the AS/400 system value **QAUTOCFG** must be set to **ON**. Use one of the following to verify or set this system value on the iSeries server:

   - Use the **WRKSYSVAL QAUTOCFG** OS/400 command.
   - During a manual IPL, in the IPL Options window, for **Set major system options**, select **Y**. Then, for **Enable automatic configuration**, select **Y**.
6. Exit Dedicated Service Tools.

© Copyright IBM Corp. 1999, 2001

Appendix F. iSeries Operations Console Update

The *iSeries Operations Console Update, SK3T-4114-00* CD-ROM, is required to set up Operations Console with LAN connectivity.

If you do not install the contents of the CD-ROM, you will *not* be able to install and use the LAN functionality of Operations Console.

To install the Operations Console Update, follow these steps:

1. If you are upgrading a secondary partition to OS/400 V5R1, you must upgrade the PC to V5R1 Client Access Express prior to upgrading the Operating System of your iSeries server to V5R1.

   Important: You cannot upgrade a non-partitioned system or primary partition to OS/400 V5R1 using Operations Console with LAN connectivity. You must use a directly cabled Operations Console or another console to upgrade to OS/400 V5R1.
2. Install Operations Console Update from the CD-ROM by double-clicking the Setup.exe file. This will install a service pack that enables LAN connectivity for Operations Console.
3. Install, if applicable, the latest Service Pack for Client Access Express.

© Copyright IBM Corp. 1999, 2001

Appendix G. Considerations for changing the service tools device profile password

Review these considerations before you change the service tools device profile password:

- **Important:** The device profile password on the PC must be the same as the device profile password on the iSeries server.
- Operations Console encrypts the service tools device profile password when you click **Next** in the AS/400 Operations Console Service Tools Device Information window.
- If you are creating a new LAN configuration (you have not connected yet) and click **Cancel** in the Service Tools Device Information window, you can recreate the configuration with the same device profile.
- If you have previously connected successfully using this LAN configuration, you need to reset the device profile password on the PC and the iSeries server. To do this, see "Appendix C. Resynchronizing the PC and iSeries device profile password" on page 117.
- If after clicking **Next** in the Service Tools Device Information window, you click **Back**, only the fields for the service device profile password and for the password to access the service device profile information appear in Edit mode.

  Note: When you are changing a LAN configuration, these passwords are also the only editable fields in the Service Tools Device Information window.
- Operations Console reencrypts changes and reencrypts the service tools device profile password during each successful connection.
- If you delete the LAN LCS or LAN RCS configuration, you need to reset the device profile password on the iSeries server before you reuse the profile for a new LAN LCS or LAN RCS configuration. Thus, when you create the new configuration, you can use the reset device profile name and also use the original device profile password to make a successful connection. For instructions on resetting the device profile password, see "Appendix C. Resynchronizing the PC and iSeries device profile password" on page 117.

If you need to change the service tools device profile password, see "Appendix H. Changing the service tools device profile password on the PC and iSeries server" on page 129.

© Copyright IBM Corp. 1999, 2001

Appendix H. Changing the service tools device profile password on the PC and iSeries server

When you click **Next** in the Service Tools Device Information Window, Operations Console encrypts the service tools device profile password. If you are changing your configuration or if after clicking **Next**, you click **Back**, do one of the following to change the data in this window to avoid authentication errors:

- If you *can* access DST, do the following:
  1. Leave the Service Tools Device Information window opened.
  2. Go to DST to reset the service tools device profile password.

     Important: When you reset the password in DST, the device profile password becomes the device profile name. If you will be using a password other than the device name, you will have to delete the current device profile and create a new profile with your desired password.
  3. In the Service Tools Device Information window, for **Password**, enter the service tools device profile password. Press Tab. The **Confirm password** field appears.
  4. For **Confirm password**, enter the service tools device profile password again.
  5. Enter the current password to access the service tools device profile password. Click **Next**.

     Note: If you want to change the password used to access the service tools device profile password (used to sign on when making a connection), see "Appendix I. Changing the password used to access the service tools device profile information" on page 131.
- If you *cannot* access DST now, follow the instructions in "Appendix C. Resynchronizing the PC and iSeries device profile password" on page 117.

© Copyright IBM Corp. 1999, 2001

Appendix I. Changing the password used to access the service tools device profile information

You can change the password used to access the service tools device profile information at any time during the creation of a new LAN configuration or while you are changing an existing LAN configuration. If you are working with logical partitions, you can change this password for the corresponding partition.

To change the access password, set the *Service Tools Device Profile Information Password* values as follows:

1. For **Password to access the Service tools device profile information**, type the password you want to use to protect the Service Tools Device Profile Information. The `Confirm password` field appears.

   Note: The password is case sensitive and can be a maximum of 128 characters of mixed case. It is important that you remember this password. You will use this password later, during the connection process, to sign on the Service Device Sign-on window.

2. For **Confirm password**, type the service tools device profile information password again. Click **Next**. The Change password window appears. You need to enter the old password, and then click **OK**.

© Copyright IBM Corp. 1999, 2001

Appendix J. Changing the keyboard definition for Operations Console

When you start your character-based interface (5250 emulation session), the Enter key of the interface is probably the right Ctrl key of your PC. You can change the keyboard definition so that the Enter key is the Enter key of your keyboard:

1. In the character-based interface, using the drop-down menu, do the following:
   a. Click **Edit**.
   b. Click **preferences**.
   c. Click **keyboard**.
2. Click **User-Defined**.
3. Click **Browse**, and then navigate to where Client Access Express was installed. Then, under the Client Access folder, navigate to the Emulator folder, followed by the Private folder.
4. Select **as400.kmp**.
5. Click **OK**.
6. Click **OK** again. The Enter key of the character-based interface is now mapped to the Enter keys of your PC.

© Copyright IBM Corp. 1999, 2001

Notices

This information was developed for products and services offered in the U.S.A. IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
500 Columbus Avenue
Thornwood, NY 10594
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:
INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of

© Copyright IBM Corp. 1999, 2001

performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation
Software Interoperability Coordinator
3605 Highway 52 N
Rochester, MN 55901-7829
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this information and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement, or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurement may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

The drawings and specifications contained herein shall not be reproduced in whole or in part without the written permission of IBM.

IBM has prepared this publication for use by customer personnel for operating and planning for the specific machines indicated. IBM makes no representations that it is suitable for any other purpose.

Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, or other countries, or both:

Application System/400
AS/400
e (Stylized)
iSeries
iSeries 400
Client Access
Hummingbird
IBM
Operating System/400
OS/400
400

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Pentium and Intel are trademarks of Intel Corporation in the United States, other countries, or both.

Other company, product, and service names may be the trademarks or service marks of others.

Electronic Emission Notices

Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible Party:

International Business Machines Corporation
New Orchard Road
Armonk, NY 10504

Telephone: 1-919-543-2193

Industry Canada Compliance Statement

This Class A digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Community Compliance Statement

This product is in conformity with the protection requirements of EU Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

Australia and New Zealand Class A Statement

Attention: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Electronic Emission Notices

The following Statement applies to this IBM product. The statement for other IBM products intended for use with this product will appear in their accompanying manuals.

Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a class B digital devices, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM authorized dealer or service representative for help.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Proper cables and connectors are available from IBM authorized dealers. IBM is not responsible for any radio or television interference caused by using other than recommended cables or connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interferences, and (2) this device must accept any interferences received, including interference that may cause undesired operation.

Responsible Party:

International Business Machines Corporation
New Orchard Road
Armonk, NY 10504

Telephone: 1-919-543-2193

Industry Canada Compliance Statement

This Class B digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe B respecte toutes les exigences du Réglement sur le matériel brouilleur du Canada.

European Community Compliance Statement

This product is in conformity with the protection requirements of EC Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to CISPR 22 / European Standard EN 55022. The limits for Class B equipment were derived for typical residential environments to provide reasonable protection against interference with licensed communication devices.

Properly shielded and grounded cables and connectors (IBM part number 75G5958 or its equivalent) must be used in order to reduce the potential for causing interference to radio and TV communications and to other electrical or electronic equipment. Such cables and connectors are available from IBM authorized dealers. IBM cannot accept responsibility for an interference caused by using other than recommended cables and connectors.

Readers' Comments — We'd Like to Hear from You

iSeries
Operations Console Setup

Publication No. SC41-5508-02

Overall, how satisfied are you with the information in this book?

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Overall satisfaction	☐	☐	☐	☐	☐

How satisfied are you that the information in this book is:

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Accurate	☐	☐	☐	☐	☐
Complete	☐	☐	☐	☐	☐
Easy to find	☐	☐	☐	☐	☐
Easy to understand	☐	☐	☐	☐	☐
Well organized	☐	☐	☐	☐	☐
Applicable to your tasks	☐	☐	☐	☐	☐

Please tell us how we can improve this book:

Thank you for your responses. May we contact you? ☐ Yes ☐ No

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute your comments in any way it believes appropriate without incurring any obligation to you.

Name

Address

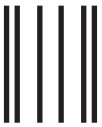
Company or Organization

Phone No.

Readers' Comments — We'd Like to Hear from You
SC41-5508-02

Cut or Fold
Along Line

Fold and Tape | **Please do not staple** | Fold and Tape



NO POSTAGE
NECESSARY
IF MAILED IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 40 ARMONK, NEW YORK

POSTAGE WILL BE PAID BY ADDRESSEE

IBM CORPORATION
ATTN DEPT 542 IDCLERK
3605 HWY 52 N
ROCHESTER MN 55901-7829

Fold and Tape | **Please do not staple** | Fold and Tape

Cut or Fold
Along Line

Printed in the United States of America
on recycled paper containing 10%
recovered post-consumer fiber.

SC41-5508-02

Spine information:

iSeries

AS/400 Operations Console Setup V5R1