IBM

OS/400 Graphical Operations Setup

Version 3

IBM

AS/400

OS/400 Graphical Operations Setup

Version 3

┌── **Take Note!** ──┐

Before using this information and the product it supports, be sure to read the general information under "Notices" on page ix.

└───┘

First Edition (September 1994)

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Overview

OS/400 Graphical Operations can make using the AS/400 system easier! OS/400 GraphicOps is designed for the casual end-user, providing a graphical user interface (GUI) as an alternative front end to system functions. GraphicOps is used to perform common tasks on an AS/400 system, such as managing your AS/400 printer output, jobs, and messages. With GraphicOps you don't need to remember complex commands. Pictures (called icons) represent work areas, lists, messages, and other AS/400 objects and resources; clicking on an icon is all you need to get started. You can create, copy, move, delete, view, or change objects. You can also tailor the user interface to meet your specific needs.

GraphicOps is a cooperative application between your AS/400 system and your personal computer (PC). The PC can run either the OS/2* 2.1 (or later) or the Microsoft Windows** 3.1 (or later) operating system. The AS/400 system acts as the server, making system operations services available to your client PC, which uses the services. GraphicOps provides you with a way to request the AS/400 system services from your PC.

Sample OS/400 Graphical Operations Configuration

Client Access/400

OS/2 Communication Manager and Client Access/400(optional)

Token-Ring Network

Token-Ring Network

Windows Client   AS/400 Host server   OS/2 Client
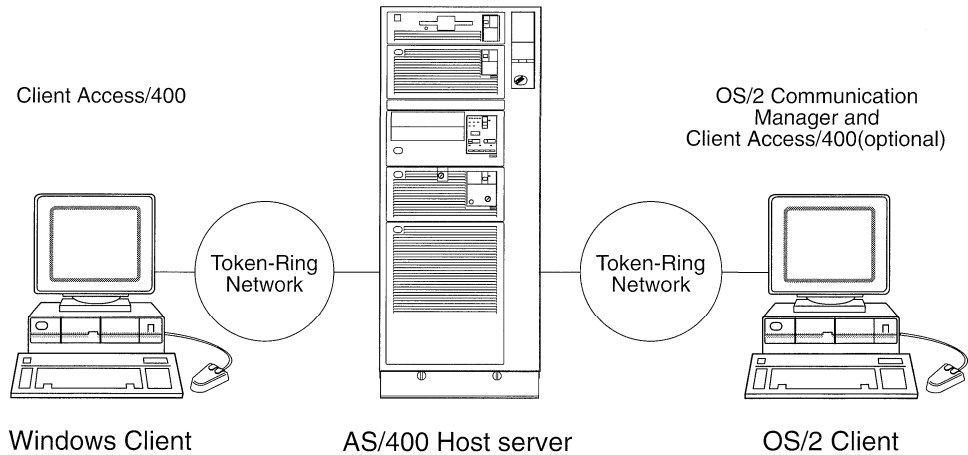
RV3U000-0

About This Guide

This guide is intended for individuals who need to do the following:

- Plan for GraphicOps
- Install GraphicOps
- Administer and support the GraphicOps environment, including security, maintenance, and performance

You may need to refer to other IBM manuals for more specific information about a particular topic. The *Publications Reference* manual, SC41-3003, provides information on all the manuals in the AS/400 library.

For a list of related publications, see the Bibliography.

Who Should Use This Guide

This guide is intended for the individual who has used a personal computer, is familiar with the Operating System/2 (OS/2) or Microsoft Windows environment, and has basic knowledge of OS/2 or DOS commands. You must know how to work with directories, copy and format diskettes, and work with icons and windows.

You should be familiar with Client Access/400 if you use OS/400 shared folders or directories to install and maintain GraphicOps. If you have a Windows system, you must be familiar with using Client Access/400 to communicate with the AS/400 system.

You should be able to sign on to an AS/400 system and use AS/400 displays. If you install or maintain the OS/400 host server function of GraphicOps, you should understand the OS/400 maintenance programs.

This guide explains how to plan, install, and administer GraphicOps on the AS/400 system and on the PC. It does not explain usage, which is addressed in the *OS/400 Graphical Operations – Getting Started* manual.

Guide Organization

The information in this guide is organized as follows:

- "Part 1. Installation" is your fast path through the installation process.

  - Chapter 1, "OS/400 Graphical Operations Requirements," lists the system and program requirements.

  - Chapter 2, "Installing OS/400 Graphical Operations from an AS/400," steps you through the Default and Custom installation methods for installing GraphicOps directly from an AS/400:

    If you have a typical environment, these steps may be all you need to complete your installation.

- "Part 2. Advanced Installation Assistance" gives you more detail on installing and managing the GraphicOps environment.

  - Chapter 3, "Personal Computer Installation Topics," describes how to install GraphicOps on your PC using an AS/400 connection, using a local area network (LAN) server, or using diskettes.

  - Chapter 4, "AS/400 Installation Topics" describes how to install GraphicOps onto the AS/400 system.

  - Chapter 5, "Advanced Installation Topics" describes how to start GraphicOps connections using an icon or command, support multiple languages, modify configuration files, and remove GraphicOps functions.

- "Part 3. Administration and Customization–Creating Your Own World" discusses how to customize and administer GraphicOps.

  - Chapter 6, "Understanding GraphicOps Objects" describes the types of objects in GraphicOps that you work with to set up your graphical user interface.

  - Chapter 7, "Customization" describes how to customize the user interface for GraphicOps users.

  - Chapter 8, "Basic Administration Concepts" describes some very basic concepts of how to set up security for GraphicOps users.

  - Chapter 9, "Basic Administration Using Model Profiles" describes how you can use model profiles to easily administer your users.

  - Chapter 10, "Advanced Administration Concepts" describes advanced administration details.

  - Chapter 11, "Advanced Administration Examples" contains advanced administration examples.

  - The last three chapters discuss other administration tasks for the AS/400 and PC environments.

    - Chapter 12, "Backing Up OS/400 Graphical Operations"
    - Chapter 13, "Installing and Distributing PTFs"
    - Chapter 14, "Performance and Capacity Planning"

- "Part 4. Appendixes" contains lists, tables, and commands to support the previous topics.

  - Appendix A, "Resolving OS/400 Graphical Operations Problems"
  - Appendix B, "OS/400 Graphical Operations Libraries and Folders and Directories"
  - Appendix C, "AS/400 National Language Version (NLV) Codes"
  - Appendix D, "SETCSTDTA (Set Customization Data) Command"
  - Appendix E, "Authorization Commands for Workstation Objects"
  - Appendix F, "Customization and Administration Planning Forms"

OS/400 Graphical Operations Information

The following is a summary of other information available for GraphicOps:

- *OS/400 Graphical Operations – Getting Started*: An introduction to the GraphicOps user interface, including an overview of GraphicOps functions, sample tasks, and mouse basics.

- Quick Tour: A graphical overview that guides you through the functions of GraphicOps.

Part 1. Installation

This part introduces you to OS/400 Graphical Operations and describes the procedures and tasks used to install OS/400 GraphicOps on your system.

Chapter 1. OS/400 Graphical Operations Requirements

To support personal computer client functions, GraphicOps uses the functions of several other programs. These include the OS/400 operating system, Client Access/400, OS/2 Extended Services Communications Manager (or Communications Manager/2, or Communications Manager/400), and the OS/2 and Windows operating systems.

This chapter provides you with the system and communications requirements necessary to install and use GraphicOps.

Personal Computer Requirements

Following are the PC requirements necessary to support GraphicOps:

OS/2 Requirements

The minimum system requirements for running GraphicOps in an OS/2 environment are:

- A 486 33 MHz, or faster, processor
- 24MB, or higher, total random access memory (RAM). More memory may be required if running multiple applications.
- Hard disk space, approximately 13MB available for GraphicOps
- Mouse
- OS/2 Version 2.1 (or later)
- Communications features supported by the OS/2 Extended Services Communications Manager, or Communications Manager/2, or Communications Manager/400

  Note: Any reference to OS/2 Extended Services Communications Manager is generic in nature. Communications Manager/2 or Communications Manager/400 is also inferred when referring to OS/2 Extended Services Communications Manager.

- Client Access/400

  GraphicOps uses Client Access/400 for installation and maintenance on OS/2. Client Access/400 Version 3 Release 1 is required on at least one PC to complete the installation and future maintenance of GraphicOps.

  Note: Client Access/400 Services (using DBCS)

  GraphicOps uses the Client Access/400 DBCS translation facilities. While all GraphicOps communication to the AS/400 goes through the OS/2 Extended Services Communications Manager, Client Access/400 must be started on the PC if you are using GraphicOps with a double-byte character set language, such as Kanji, or DBCS Katakana. For more information on double-byte language support, see DBCS Language Considerations under "National Language Support" on page 5-5.

Windows Requirements

The minimum system requirements for running GraphicOps in a Windows environment are:

- A 486 25 MHz, or faster, processor
- 16MB, or higher, total random access memory (RAM). More memory may be required if running multiple applications
- Hard disk space, approximately 9MB available for GraphicOps
- Mouse
- A 32-bit version of Microsoft Windows, such as Windows 3.1 with WIN32s platform extensions
- Client Access/400

Client Access/400 provides Windows users with a communications connection with the AS/400 system. GraphicOps also uses Client Access/400 for installation and maintenance on Windows systems. Client Access/400 Version 3 Release 1 is required.

- Permanent Swap File (optional)

  You will receive a warning during the installation program if Windows is not using a permanent swap file. For more information see Permanent Swap File under "Memory and Hard Disk" on page 14-2.

Additional memory and hard disk space are required if other applications are used at the same time as GraphicOps. The amount of memory and hard disk space depends on the applications you run. For information on the capacity of your personal computer, see your PC administrator, or see the documentation for each personal computer model.

AS/400 System Requirements

Following are the AS/400 system requirements necessary to support GraphicOps:

- To install the OS/2 version on your AS/400 system, you need a minimum of 15MB of disk storage space.

- To install the Windows version on your AS/400 system, you need a minimum of 11MB of disk storage space.

- To install both OS/2 and Windows versions on your AS/400 system, you need a minimum of 24MB of disk storage space.

For information on the disk capacity of your AS/400 system, see the *New Release Planning* manual for your system model.

The communications requirements for GraphicOps on an AS/400 system are:

- Communications features on the AS/400 system to support access to all PCs running GraphicOps. Any communications protocol supported by Client Access/400 can be used to support users of GraphicOps.

- Appropriate communications media, such as a nonswitched line, switched line, token-ring network, Ethernet network, or twinaxial connection to the PCs.

Chapter 2. Installing OS/400 Graphical Operations from an AS/400

There are three different ways to install OS/400 GraphicOps on your PC: from an AS/400, from diskette, or from a Local Area Network (LAN) server.

Following is a step-by-step description of how to install GraphicOps using an AS/400 connection.

Note: If you are installing from diskette or from a LAN server, see Chapter 3, "Personal Computer Installation Topics" for more information.

Choosing Default or Custom Installation

As you begin installation of GraphicOps, you are given the choice between Default or Custom installation. Both methods are easy to follow, with online help available for additional questions. Following are descriptions of the Default and Custom installation methods.

Default Installation
Default installation uses the default values for all of the installation options. This method takes the least amount of time.

Custom Installation
Custom installation allows you to view and to change any or all of the installation options before you perform the actual installation. This method takes a little more time, but allows you to define which installation options you want to keep or change.

Installation Options

Following are the installation options and their default values. Review these options to determine whether to use the Default or Custom installation method.

Source Drive and Directory
> Installs from the drive and directory from which the installation program was started.

Target Drive and Directory
> Installs into the drive or partition from which you have booted, such as the C or D drive. The default directory for OS/2 is OPSOS2, and for Windows is OPSWIN. For example, `C:\OPSOS2` is for OS/2 systems, and `C:\OPSWIN` is for Windows systems.

Enable Automatic Update
> Sets up the Client Access/400 Update function for GraphicOps.

Update CONFIG.SYS (OS/2 systems)
> Updates the GraphicOps directory in the LIBPATH and PATH variables in CONFIG.SYS.

Update AUTOEXEC.BAT (Windows systems)
> Updates the GraphicOps directory in the PATH variable in AUTOEXEC.BAT.

Install Quick Tour
> Copies GraphicOps Quick Tour files to the PC and creates a startup icon.

Languages to Install
> Installs the language in which the installation program is running.

Create AS/400 Icons
> Creates a connection icon for each AS/400 system defined in OS/2 Extended Services Communications Manager (for OS/2 systems) or in Client Access/400 (for Windows systems). This may include AS/400 systems on which GraphicOps is not installed.

> Following are the defaults for AS/400 icons to create:

> • **Icon label**

>   The AS/400 system name.

- **Sign-on Method**

  The Automatic option. This bypasses the additional sign-on window when you start GraphicOps.

- **Language**

  The language used during the installation.

- **Local LU Alias (OS/2 systems)**

  If there is a single LU alias defined, it is used as the default. If there are multiple LU aliases defined, 5250LU is used as the default. The LU alias is the name of your PC.

Starting the Installation Program

The installation program begins the same way for both Default and Custom installation. Following is the step-by-step method to start the installation program. Client Access/400 must be started before you begin the installation.

If you need help at any time, click on **Help** or press the **F1** key. For additional help, see Appendix A, "Resolving OS/400 Graphical Operations Problems."

To end the installation program at any time, click on **Cancel**. Use the information in "Removing OS/400 Graphical Operations Functions" on page 5-7, to remove any changes made by the installation program.

Note: Throughout the default and custom installation processes, there are a few differences between OS/2 and Windows systems. The differences are flagged with text boxes that indicate whether the step is for OS/2 or Windows systems. Please note that any text outside of an OS/2 or Windows text box is intended for both OS/2 and Windows systems.

Follow these steps to start the installation program:

```
┌─ OS/2 ──────────────────────────────────────────────────────────────────┐
│                                                                          │
│  1. At the OS/2 prompt, select the Client Access/400 drive.  This is     │
│     usually the I: drive.                                                │
│     Example:  C:\>  I:              (then press Enter)                    │
│                                                                          │
│  2. Change the directory to the GraphicOps shared folder or directory.   │
│     The shared folder or directory name is:                              │
│                                                                          │
│       • QGYOS2 (shared folder) - if you installed Client Access/400      │
│         for OS/2                                                          │
│       • QPWXGGY (directory) - if you installed Client Access/400 for     │
│         OS/2 2.1                                                         │
│     Example:  I:\>  CD QGYOS2       (then press Enter)                    │
│                                                                          │
│  3. Start the installation program with this command:                    │
│     I:\QGYOS2>  INSTALL           (then press Enter)                      │
│                                                                          │
└──────────────────────────────────────────────────────────────────────────┘
```

```
┌─ Windows ───────────────────────────────────────────────────────────────┐
│                                                                          │
│  1. Go to the Program Manager File pull-down menu and select Run.  On    │
│     the command line type:                                               │
│     I:\QPWXCGY\INSTALL            (then click on OK)                      │
│                                                                          │
│  Note:  You cannot install or run GraphicOps using WIN-OS/2.             │
│                                                                          │
└──────────────────────────────────────────────────────────────────────────┘
```

Continue following these steps to start the installation program:

- Select the language you want to use for the installation process:

    Note: This window is displayed only if your AS/400 system has more than one language compatible with your PC code page. For more information, see "Getting Multiple Language Choices During Installation" on page 5-5.

OS/400 Graphical Operations Installation Language

Select a language to use

English
*Francais

* Special characters may not display correctly

| OK | Cancel | Help |
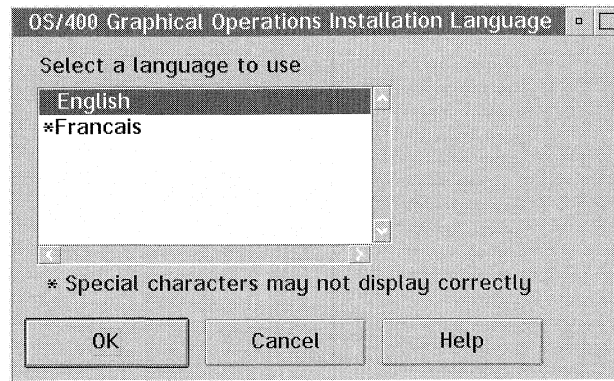
To choose the language:

1. Click on the name of the language you want to use. All text immediately changes to the selected language.

    Note: An asterisk (*) by a language in the list indicates that the language uses a different code page than the code page the PC is running in. This may cause some special characters to display incorrectly.

2. Click on **OK** to confirm the selection.

    This language is used for the remainder of the installation.

To continue the installation program using the default method, see "Using the Default Installation Method" on page 2-5. To continue the installation program using the custom method, see "Using the Custom Installation Method" on page 2-8.

Using the Default Installation Method

Follow these steps to complete Default installation:

1. The OS/400 Graphical Operations Installation window allows you to select Default or Custom installation.

   - Select **Default installation** and click on **Install** to accept the default values for the installation options and begin the installation process.

2. The Installation Progress window is displayed, which shows messages as the program completes the installation tasks.
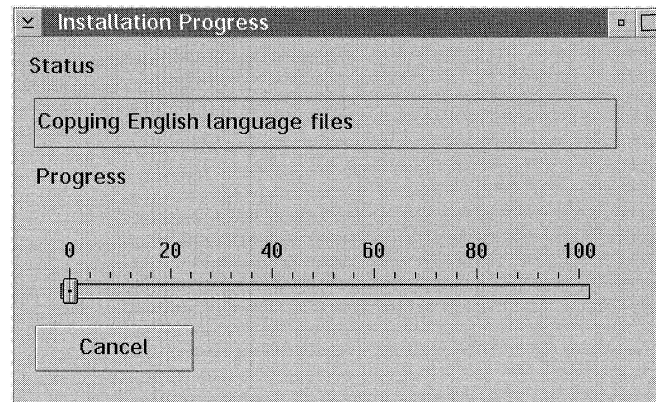
   Note: The progress indicator is active only when copying program files, copying language files, and creating AS/400 icons.

3. A warning message is displayed if your Windows system is not configured optimally. (This window does not appear on OS/2 systems.) After the installation is complete, change to a permanent swap file for optimum performance. For more information, see Permanent Swap File under "Memory and Hard Disk" on page 14-2.

- Click on **OK** to continue the installation.

```
┌────────────────────────────────────────────────────────┐
│                        GUI1C29                          │
├────────────────────────────────────────────────────────┤
│                                                         │
│                                                         │
│   Windows configured with a temporary swap file.        │
│                                                         │
│                                                         │
│   You can increase performance significantly            │
│   by changing to a permanent swap file.  You            │
│   can change the Windows swap file definition           │
│   through the Windows Main group, Control Panel,        │
│   386 Enhanced, Virtual Memory option.                  │
│                                                         │
│                    ┌──────────┐                         │
│                    │    OK    │                         │
│                    └──────────┘                         │
│                                                         │
└────────────────────────────────────────────────────────┘
```

4. The Installation Results window is displayed if configuration files have been modified. The file name and the backup file name are shown. The file and backup file name may vary depending on which Client Access/400 options are installed. For more information, see "Configuration Changes" on page 5-6.

- Click on **OK** to continue the installation.

```
┌────────────────────────────────────────────────────────┐
│                 Installation Results                    │
├────────────────────────────────────────────────────────┤
│                                                         │
│          The following files have been modified:        │
│                                                         │
│        File Name ──────▶ Backup File Name               │
│                                                         │
│   ┌─────────────────────────────────────────────┐       │
│   │  C:\CONFIG.SYS ──────────▶ C:\CONFIG.OPS     │       │
│   │  C:\PCS\CONFIG.PCS ──────▶ C:\PCS\CONFIG.OPS │       │
│   └─────────────────────────────────────────────┘       │
│                                                         │
│                                                         │
│                    ┌──────────┐                         │
│                    │    OK    │                         │
│                    └──────────┘                         │
│                                                         │
└────────────────────────────────────────────────────────┘
```

5. An information message similar to the following is displayed. The message explains how to start GraphicOps. The message may vary, depending on changes made to the configuration files.

   - Click on **OK** to exit the installation program.

   GUIIC07

   > OS/400 Graphical Operations has been installed.
   >
   > Use the OS/400 Graphical Operations folder to run OS/400 Graphical Operations.

   OK

   OS/2
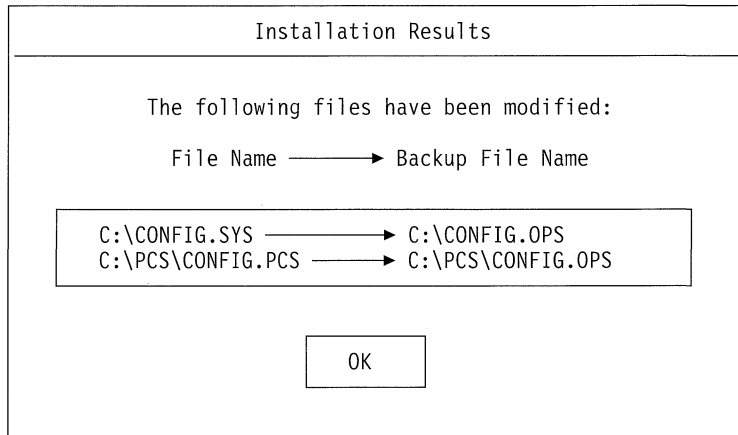
   - A folder named OS/400 Graphical Operations appears on your desktop with GraphicOps icons for all AS/400 systems defined in OS/2 Extended Services Communications Manager.

   Windows

   - A program group named OS/400 Graphical Operations appears with GraphicOps icons for all AS/400 systems defined in Client Access/400.

You have now completed the installation of OS/400 Graphical Operations using the Default installation method. You should run GraphicOps to verify a successful installation. For information on starting GraphicOps, see "Starting OS/400 Graphical Operations Connections" on page 5-1.

Using the Custom Installation Method

Follow these steps to complete Custom installation:

1. The OS/400 Graphical Operations Installation window allows you to select Default or Custom installation.

   - Select **Custom installation** and click on **Install** to begin customizing the installation.

   ```
   ┌─────────────────────────────────────────────────────┐
   │ ⌄  OS/400 Graphical Operations Installation    □  □ │
   ├─────────────────────────────────────────────────────┤
   │   ┌─How to install──────────────────────────┐       │
   │   │                                          │       │
   │   │   ○ Default installation                 │       │
   │   │                                          │       │
   │   │   ● Custom installation                  │       │
   │   │                                          │       │
   │   └──────────────────────────────────────────┘      │
   │                                                     │
   │     ┌──────────┐  ┌──────────┐  ┌──────────┐        │
   │     │ Install  │  │  Cancel  │  │   Help   │        │
   │     └──────────┘  └──────────┘  └──────────┘        │
   └─────────────────────────────────────────────────────┘
   ```
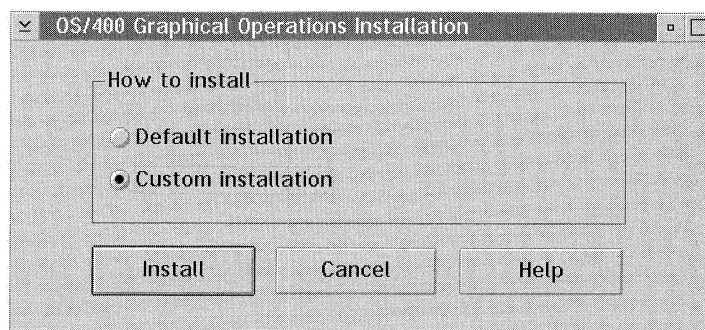
2. The Source Directory window is displayed.

   - Type the source drive and directory name from which the files should be copied, or use the default source drive and directory name that is displayed.

   - Click on **OK**.

   ```
   ┌─────────────────────────────────────────────────────┐
   │ ⌄  Source Directory                                 │
   ├─────────────────────────────────────────────────────┤
   │                                                     │
   │       Specify the path of the directory to copy files from │
   │                                                     │
   │   ┌─────────────────────────────────────────────┐   │
   │   │ :\QGYOS2\                                    │   │
   │   └─────────────────────────────────────────────┘   │
   │                                                     │
   │       ┌──────────┐              ┌──────────┐        │
   │       │    OK    │              │  Cancel  │        │
   │       └──────────┘              └──────────┘        │
   └─────────────────────────────────────────────────────┘
   ```
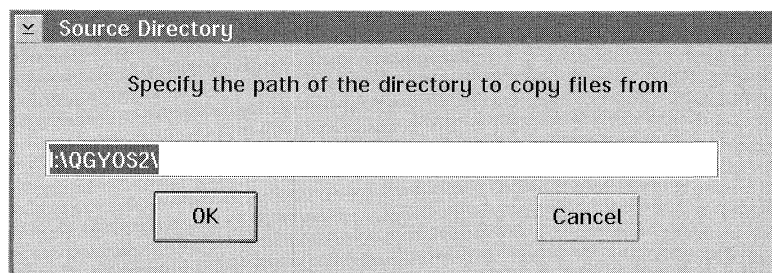
3. Installation options are displayed in the form of a notebook with tabs on the right-hand side of the window.

   - Make desired changes to the installation options.

   - When you are finished making your changes, click on **Install** to accept the changed options. It does not matter what notebook page you are on when you click on Install.
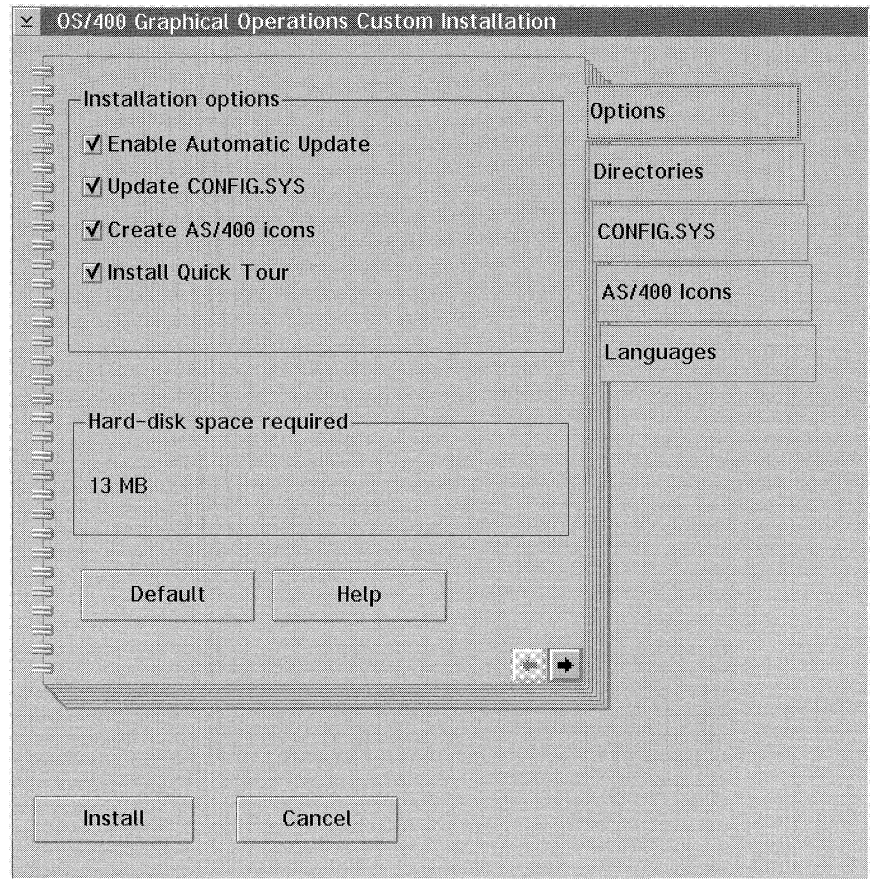
Notebook Tips

- You can access any notebook page, in any order and as many times as you want, by clicking on the notebook tab.

- You can change all, or just some, of the options on the notebook pages. Changes can be made in any order. The changes you make are saved as you go from page to page.

- Click on **Default** on any notebook page to return the options to their original default values.

- Click on **Help** on any notebook page for assistance.

- Click on **Cancel** to end the installation program. All changes are ignored.

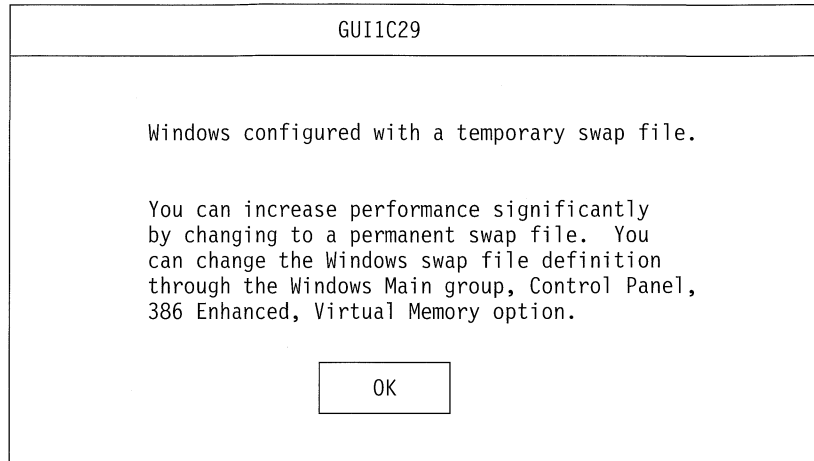**Note:** For detailed information on each notebook page, see "Custom Installation Notebook Pages" on page 2-12.

4. The Installation Progress window is displayed, which shows messages as the program completes the installation tasks.

```
┌─────────────────────────────────────────────────────┐
│ ⌄ Installation Progress                        ▫ □   │
│                                                       │
│ Status                                                │
│ ┌───────────────────────────────────────────────┐   │
│ │ Copying English language files                │   │
│ └───────────────────────────────────────────────┘   │
│                                                       │
│ Progress                                              │
│                                                       │
│                                                       │
│     0      20     40     60     80     100           │
│         ╷ ╷ ╷ ╷ ╷╷ ╷ ╷ ╷ ╷╷ ╷ ╷ ╷ ╷ ╷ ╷ ╷           │
│    ┌─┐                                                │
│    └─┴────────────────────────────────────────       │
│                                                       │
│   ┌──────────────┐                                    │
│   │    Cancel    │                                    │
│   └──────────────┘                                    │
│                                                       │
└─────────────────────────────────────────────────────┘
```
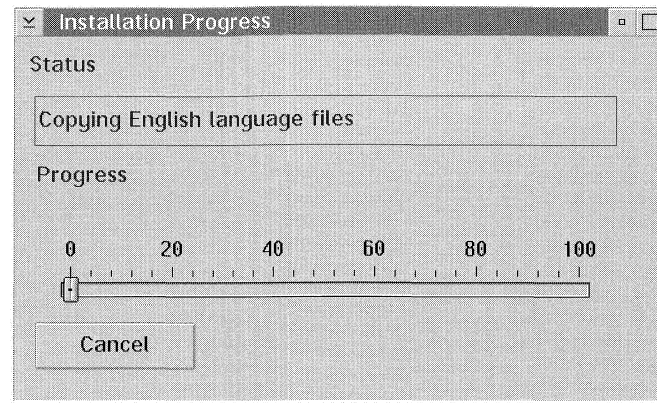
> **Note:** The progress indicator is active only when copying program files, copying language files, and creating AS/400 icons.

5. A warning message is displayed if your Windows system is not configured optimally. (This window does not appear on OS/2 systems.) After installation is complete, change to a permanent swap file for optimum performance. For more information, see Permanent Swap File under "Memory and Hard Disk" on page 14-2.

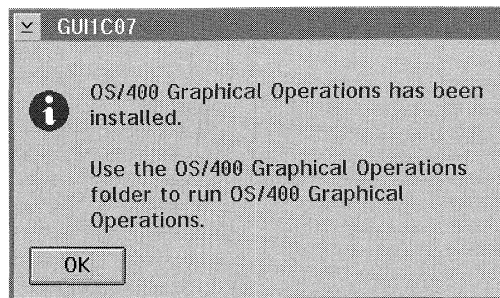   • Click on **OK** to continue the installation.

```
┌─────────────────────────────────────────────────────┐
│                      GUI1C29                          │
├─────────────────────────────────────────────────────┤
│                                                       │
│                                                       │
│     Windows configured with a temporary swap file.   │
│                                                       │
│                                                       │
│     You can increase performance significantly       │
│     by changing to a permanent swap file.  You       │
│     can change the Windows swap file definition       │
│     through the Windows Main group, Control Panel,   │
│     386 Enhanced, Virtual Memory option.             │
│                                                       │
│                ┌──────────────┐                       │
│                │      OK      │                       │
│                └──────────────┘                       │
│                                                       │
└─────────────────────────────────────────────────────┘
```
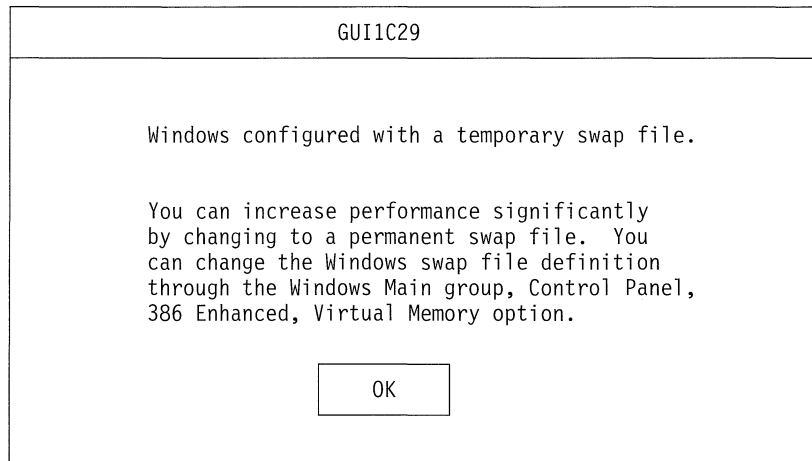
6. The Installation Results message is displayed if configuration files have been modified. The file name and the backup file name are shown. The file and backup file name may vary depending on which Client Access/400 options are installed. For more information, see "Configuration Changes" on page 5-6.

- Click on **OK** to continue the installation.

```
┌─────────────────────────────────────────────────────┐
│              Installation Results                     │
│─────────────────────────────────────────────────────│
│                                                       │
│        The following files have been modified:        │
│                                                       │
│          File Name ─────────► Backup File Name        │
│                                                       │
│      ┌───────────────────────────────────────────┐    │
│      │  C:\CONFIG.SYS ────────► C:\CONFIG.OPS     │    │
│      │  C:\PCS\CONFIG.PCS ────► C:\PCS\CONFIG.OPS │    │
│      └───────────────────────────────────────────┘    │
│                                                       │
│                  ┌──────────────┐                     │
│                  │      OK      │                     │
│                  └──────────────┘                     │
│                                                       │
└─────────────────────────────────────────────────────┘
```

7. An information message similar to the following is displayed. The message explains how to start GraphicOps. The message may vary, depending on changes made to the configuration files.
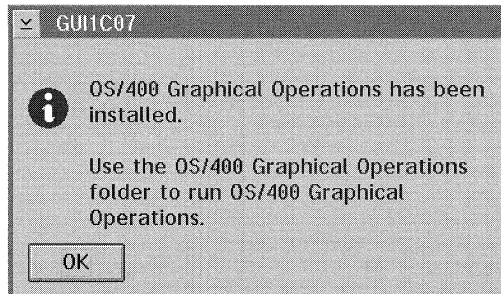
- Click on **OK** to exit the installation program.

```
┌─────────────────────────────────────┐
│ ⌄  GUI1C07                          │
│─────────────────────────────────────│
│                                     │
│   ⓘ   OS/400 Graphical Operations has been │
│        installed.                   │
│                                     │
│        Use the OS/400 Graphical Operations │
│        folder to run OS/400 Graphical │
│        Operations.                  │
│   ┌──────┐                          │
│   │  OK  │                          │
│   └──────┘                          │
└─────────────────────────────────────┘
```
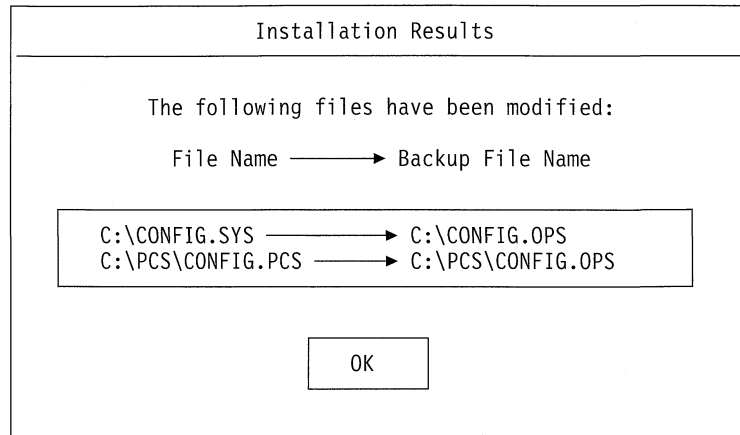
┌─ **OS/2** ──┐
│   │
│ • A folder named OS/400 Graphical Operations appears on your desktop with │
│   GraphicOps icons for all AS/400 systems you specified.   │
│   │
└──┘

┌─ **Windows** ───┐
│   │
│ • A program group named OS/400 Graphical Operations appears with   │
│   GraphicOps icons for all AS/400 systems you specified.   │
│   │
└──┘

You have now completed the installation of OS/400 Graphical Operations using the Custom installation method. You should run GraphicOps to verify a successful installation. For information on starting GraphicOps, see "Starting OS/400 Graphical Operations Connections" on page 5-1.
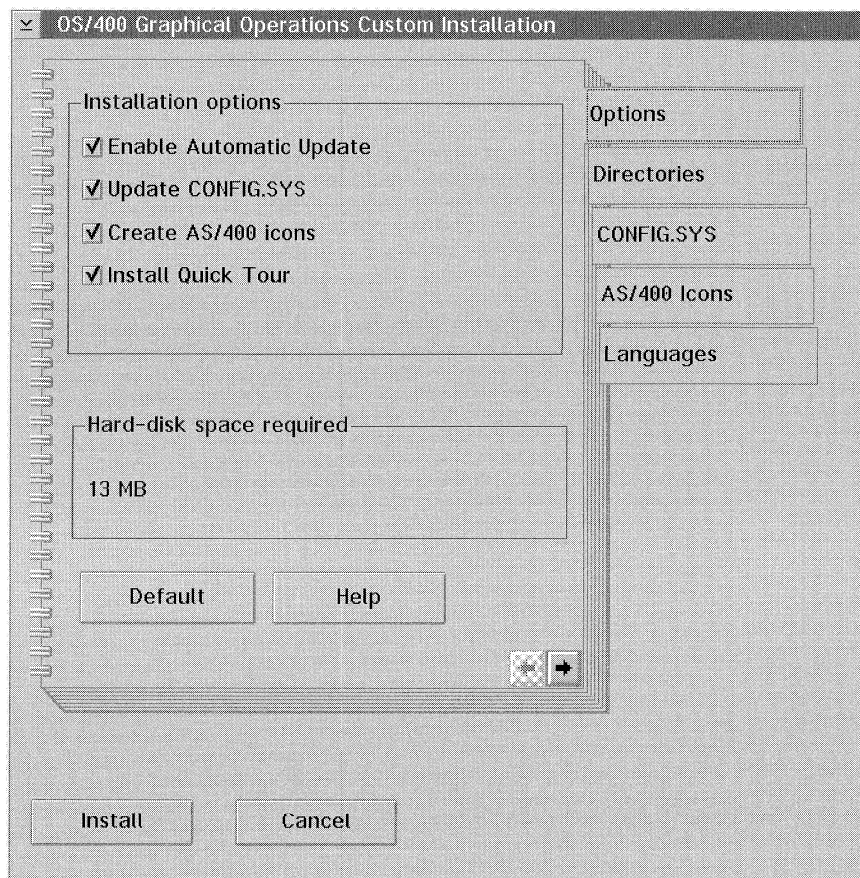
Custom Installation Notebook Pages

The following are descriptions of the notebook pages used during Custom installation.

Options Page

Select the Options page to specify the primary options for the installation program.
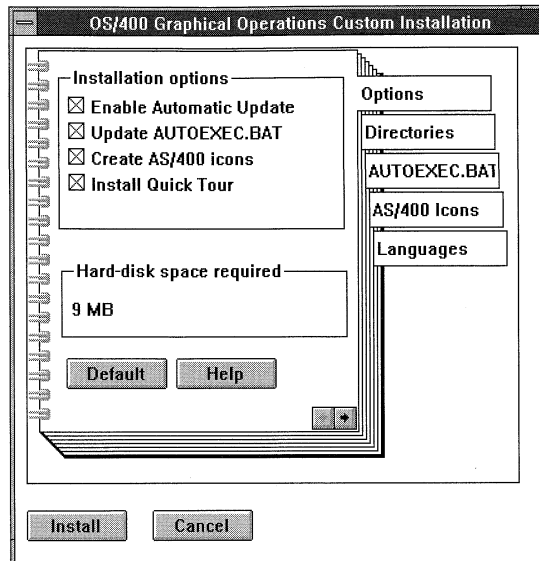

OS/2

- Following is the OS/2 options page.

Installation options

Displays the preselected options with a mark in the box. You can deselect any option by clicking on it.

Possible options are:

*   **Enable Automatic Update:** This option sets up GraphicOps for future program mainte-nance. The GraphicOps programs are automatically maintained by the Client Access/400 Update function.

    Note: For more information, see "Configuration Changes" on page 5-6.

*   **Update CONFIG.SYS:** This option does the following:

    ┌─ **OS/2** ──┐
    │   │
    │ • Updates the PATH and LIBPATH entries in the CONFIG.SYS file to include the │
    │   directory in which GraphicOps was installed.   │
    │   │
    │ **Note:** For more information, see "Configuration Changes" on page 5-6. │
    │   │
    └──┘

*   **Update AUTOEXEC.BAT:** This option does the following:

    ┌─ **Windows** ───┐
    │   │
    │ • Updates the PATH entry in the AUTOEXEC.BAT file to include the directory in │
    │   which GraphicOps was installed.   │
    │   │
    │ **Note:** For more information, see "Configuration Changes" on page 5-6. │
    │   │
    └──┘

- **Create AS/400 Icons:** This option automatically creates one or more icons for each AS/400 system and adds them to the OS/400 Graphical Operations folder (OS/2) or program group (Windows). The icons are used to start GraphicOps sessions.

  If you do not select this option you must define the icons manually, or start GraphicOps from the command line. For more information see, "OS/400 Graphical Operations Connections" on page 5-1.

- **Install Quick Tour:** This option installs the GraphicOps Quick Tour files. The Quick Tour is a graphical overview that guides you through the functions of GraphicOps. An icon is created and added to the OS/400 Graphical Operations folder or program group. This icon can be used to start the GraphicOps Quick Tour.
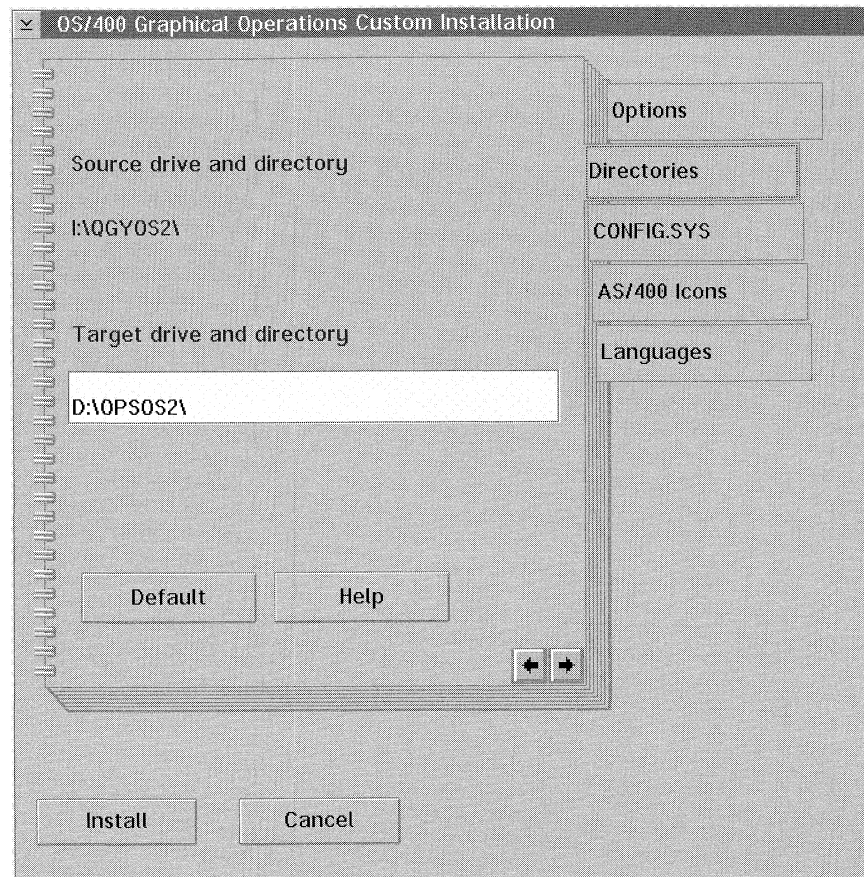
Hard-disk space required

Displays the amount of storage space needed to install GraphicOps. This amount will change as additional languages and the Install Quick Tour option are selected or deselected.

Note: The hard-disk space requirements may vary from the amount specified in Chapter 1, "OS/400 Graphical Operations Requirements." The hard-disk space requirement displayed on the Options page is accurate.

Directories Page

Select the Directories page to view the source location, which contains the GraphicOps files to be installed, and to specify the target location.

```
┌─────────────────────────────────────────────────────────────────────┐
│ ⌄  OS/400 Graphical Operations Custom Installation                   │
├─────────────────────────────────────────────────────────────────────┤
│                                                    ┌──────────────┐   │
│                                                    │  Options     │   │
│                                                    ├──────────────┤   │
│   Source drive and directory                       │ Directories  │   │
│                                                    ├──────────────┤   │
│   I:\QGYOS2\                                        │ CONFIG.SYS   │   │
│                                                    ├──────────────┤   │
│                                                    │ AS/400 Icons │   │
│   Target drive and directory                       ├──────────────┤   │
│                                                    │ Languages    │   │
│   ┌─────────────────────────────────────┐         └──────────────┘   │
│   │ D:\OPSOS2\                           │                            │
│   └─────────────────────────────────────┘                            │
│                                                                       │
│       ┌──────────┐      ┌──────────┐                                  │
│       │ Default  │      │  Help    │              ┌──┐ ┌──┐           │
│       └──────────┘      └──────────┘              │← │ │→ │           │
│                                                   └──┘ └──┘           │
│   ┌──────────┐      ┌──────────┐                                      │
│   │ Install  │      │  Cancel  │                                      │
│   └──────────┘      └──────────┘                                      │
└─────────────────────────────────────────────────────────────────────┘
```

Source drive and directory
Displays the location from which the files are copied during the installation or future maintenance. This is the location you specified when starting Custom installation.

To change the source drive and directory:

- Click on **Cancel**
    - You are returned to the OS/400 Graphical Operations Installation window.
- Select Custom Installation and click on **Install** to begin again.
    - You are prompted for the Source directory.
- Type the source drive and directory name from which the files should be copied, or use the default source drive and directory name that is displayed.

Target drive and directory
Specify the PC drive and directory to which the files are copied during the installation or future maintenance.

To specify the target drive and directory:

- Type the name of the PC drive and directory to which the files should be copied. The default drive is the drive from which you have booted, such as the C or D drive. The default directory for OS/2 is OPSOS2, and for Windows is OPSWIN. For example, D:\OPSOS2 is for OS/2 systems, and D:\OPSWIN is for Windows systems.

CONFIG.SYS Page

> **OS/2**
>
> - Select the CONFIG.SYS page to view the updates which will be made to the CONFIG.SYS file.
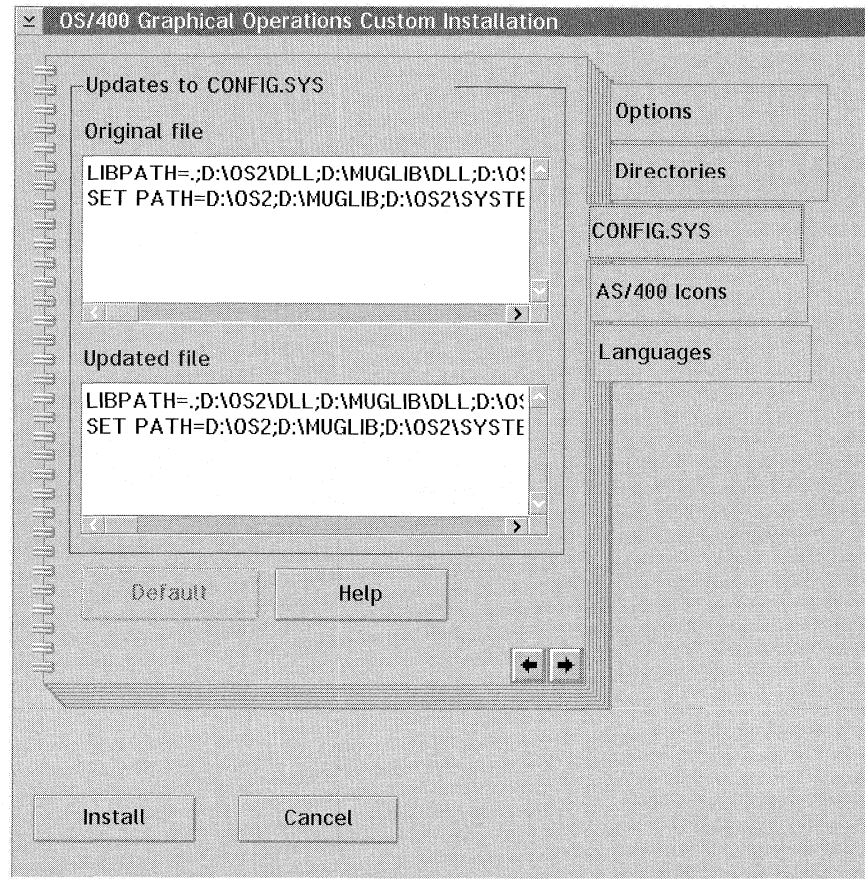
The updates are needed so that OS/2 can find the GraphicOps directory. You cannot edit the CONFIG.SYS file from this window; the information is displayed to show the changes that will be made. Changes are not made until you click on Install. For more information, see "Configuration Changes" on page 5-6.

The following information is displayed:

Original file
Displays what the PATH and LIBPATH entries in the CONFIG.SYS file for OS/2 look like before the file is updated.

Updated file
Displays what the PATH and LIBPATH entries in the CONFIG.SYS file for OS/2 will look like after the file is updated. Only the changed lines are displayed.

AUTOEXEC.BAT Page

Windows

- Select the AUTOEXEC.BAT page to view the updates which will be made to the AUTOEXEC.BAT file.

```
┌─────────────────────────────────────────────────────────┐
│     OS/400 Graphical Operations Custom Installation       │
│  ┌─Updates to AUTOEXEC.BAT ──┐ ┌──────────────┐          │
│  │ Original file             │ │ Options      │          │
│  │ PATH C:\WINDOWS;C:\DOS;C ▲│ ├──────────────┤          │
│  │                          ▼│ │ Directories  │          │
│  │ ◄                        ►│ ├──────────────┤          │
│  │ Updated file              │ │ AUTOEXEC.BAT │          │
│  │ PATH C:\WINDOWS;C:\DOS;C ▲│ ├──────────────┤          │
│  │                          ▼│ │ AS/400 Icons │          │
│  │ ◄                        ►│ ├──────────────┤          │
│  │ ┌────────┐ ┌────────┐     │ │ Languages    │          │
│  │ │Default │ │ Help   │     │ └──────────────┘          │
│  │ └────────┘ └────────┘  ◄► │                           │
│  └───────────────────────────┘                           │
│  ┌────────┐ ┌────────┐                                    │
│  │Install │ │ Cancel │                                    │
│  └────────┘ └────────┘                                    │
└─────────────────────────────────────────────────────────┘
```
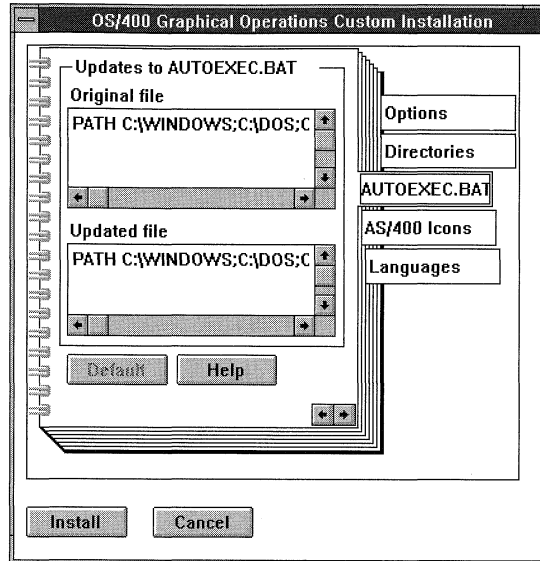
The updates are needed so that Windows can find the GraphicOps directory. You cannot edit the AUTOEXEC.BAT file from this window; the information is displayed to show the changes that will be made. Changes are not made until you click on Install. For more information, see "Configuration Changes" on page 5-6.

The following information is displayed:

Original file

Displays what the PATH entry in the AUTOEXEC.BAT file for Windows looks like before the file is updated.

Updated file

Displays what the PATH entry in the AUTOEXEC.BAT file for Windows will look like after the file is updated. Only the changed lines are displayed.

AS/400 Icons Page

Select the AS/400 Icons page to view and change the list of AS/400 systems for which one or more icons are created. You can also change the options associated with each icon. The icons are used to start GraphicOps sessions.
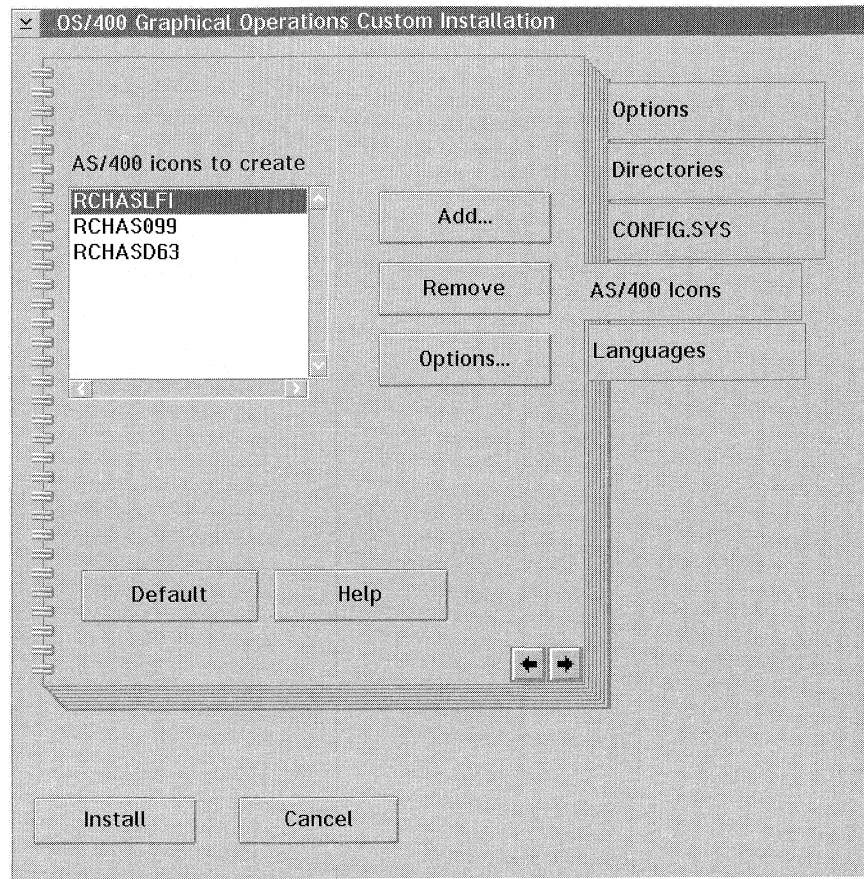
AS/400 icons to create

The network names of all AS/400 systems that are defined in either OS/2 Communications Manager (for OS/2 users) or Client Access/400 (for Windows users) are displayed. Icons are created either in a folder (for OS/2 systems) or in a program group (for Windows systems) named OS/400 Graphical Operations. One icon is created for each name in the list.

You might want to change the list of system names if:

- A GraphicOps connection is not needed for a system.

- You want to create additional connections to the same AS/400 system and specify different options for each connection.

  For example, for one connection you may want to create an icon using English as the language to run GraphicOps. For a separate connection, you may want to create another icon using French.

Add

To add a name to the list of AS/400 icons to create:

1. Click on **Add**.

> ┌─ **OS/2** ──
> - The Add AS/400 Icon window is displayed.
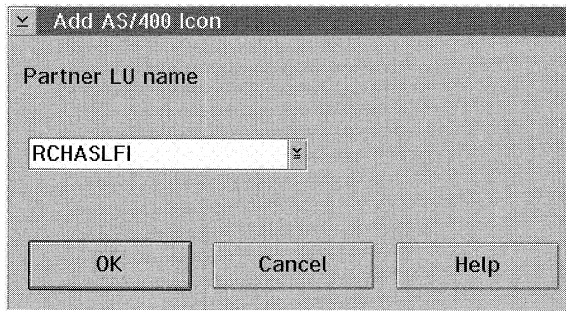
> ┌─ **Windows** ──────────────────────────────────────
> - The Add AS/400 Icon window is displayed.
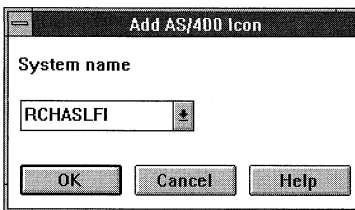
2. Click on the down arrow and select a name.
3. Click on **OK**.

Remove

To remove a name from the list of AS/400 icons to create:

1. Click on the name of the AS/400 system to remove.
2. Click on **Remove**.
   - The name is removed from the list. However, it is not removed from OS/2 Communications Manager (OS/2) or Client Access/400 (Windows).

Systems that do not have GraphicOps installed should be removed from the list using the Remove push button.

Options

To change the options associated with an AS/400 icon being created:

1. Click on the name of the AS/400 system whose options you want to change.
2. Click on **Options**.

┌─── **OS/2** ───┐
│   │
│   • The Options window is displayed.   │
│   │
└──┘

┌─── **Windows** ──┐
│   │
│   • The Options window is displayed.   │
│   │
└──┘

3. Change any of the options as described below:

Icon label

Type the name you want for your AS/400 icon. If a name is not specified, the AS/400 system name is used.

Sign-on method

Choose which sign-on method is best for you.

- **Automatic:** Select this method if you want to sign on automatically when starting GraphicOps.

    This method supports a single user ID using GraphicOps from a PC. GraphicOps uses the same user ID and password you specified when you signed on to the AS/400 system through OS/2 Extended Services Communications Manager or Client Access/400. You are prompted if you have not signed on.

- **Manual:** Select this method if you want to be prompted to sign on when you start GraphicOps.

    This method supports multiple user IDs using GraphicOps on the same PC. It also allows a single user to access one or more AS/400 systems using different user IDs.

    Specify the following for the Manual sign-on method.

    User ID: This is the AS/400 user profile name used to sign on to GraphicOps. Specify one of the following:

    - Select **Prompt at startup** if you want to be prompted for a user ID and password when you sign on to GraphicOps. This is the default.

    - Select **Name** and type the AS/400 user profile name you want to use when you sign on to GraphicOps. You are still prompted for the password.

Language

Specify the language you want to use when running GraphicOps. If you do not change this value, the language specified during the installation is used. Other languages are listed, if available.

Select one of the following:

- Select **Prompt at startup** if you want to be prompted for a language when you start GraphicOps.

- Select **Name** and click on the down arrow to select a language from the list.

Local LU Alias

> **OS/2**
>
> This is the PC (network) name that the AS/400 system uses to communicate with the PC. You need to specify a new network name if you use an alias other than the default. If you have multiple aliases defined, select the one you want to use for this GraphicOps connection.
>
> Select one of the following:
>
> - Select **Default (5250LU)** to use the default network name.
>
> - Select **Name** and click on the down arrow to select a name from the list.

4. When you have finished changing the options, click on **OK** to confirm the changes (click on **Cancel** to ignore the changes).

Languages Page

Select the Languages page to see a list of the available languages that you can install on your PC to run GraphicOps.
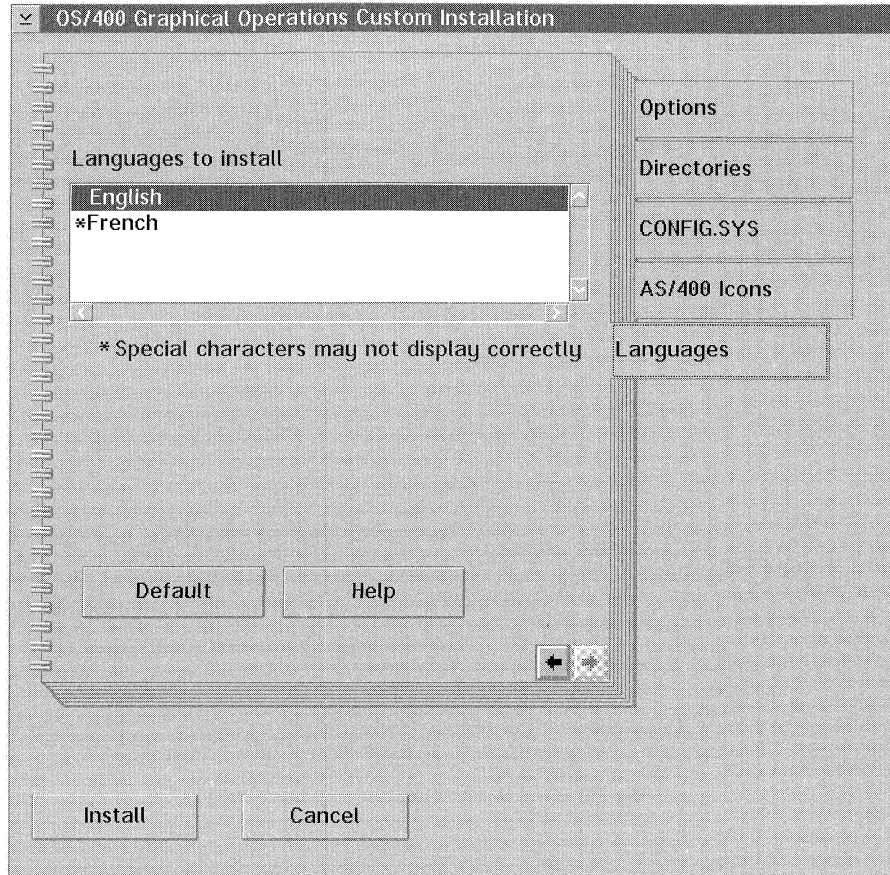
The language you select determines which language subdirectories are installed on the PC. The default language is the language in which the installation program is running.

To select a language:

- Click on the language you want to install.

  To select multiple languages, press and hold down the **Ctrl** key while you click on the languages you want to install.

Note: An asterisk (*) by a language in the list indicates that the language uses a different code page than the code page the PC is running in. This may cause some special characters to display incorrectly.

Part 2. Advanced Installation Assistance

This part describes the following OS/400 Graphical Operations installation topics:

- Personal computer installation methods, including using an AS/400 connection, LAN server, or diskettes
- AS/400 installation topics
- Starting GraphicOps with an icon or command
- Starting the Quick Tour
- Language options and considerations
- Configuration file changes
- Removing all or part of GraphicOps from your personal computer

Chapter 3. Personal Computer Installation Topics

Following are alternative methods of installing GraphicOps on your PC.

Choosing the Personal Computer Installation Method

GraphicOps can be installed on a PC in the following ways:

- Using an AS/400 connection
- Using a local area network (LAN) server
- Using diskettes

Each of these methods of installation is described below.

Using an AS/400 Connection

The PC has a Client Access/400 connection to the AS/400 system on which the GraphicOps PC programs are installed. Files are copied from an OS/400 shared folder or directory to the PC. Installation through the AS/400 connection is recommended for PCs that are locally attached (for example, with a token-ring or twinaxial connection). Use diskettes to install the programs on PCs that are remotely attached (for example, with a data link) because of the file sizes involved.

Using a Local Area Network (LAN) Server

GraphicOps PC programs are copied to a LAN server, usually by a LAN administrator. Each user has a connection to the LAN server, from which files are copied to the PC. Using this method, each user does not need a Client Access/400 connection to the AS/400 system in order to install GraphicOps.

Using Diskettes

GraphicOps PC programs are copied to diskettes on a locally-attached PC, usually by an administrator. Those diskettes are used to install the PC programs on other PCs. Use this method for users attached over data links or remote connections.

Using an AS/400 Connection

Chapter 2, "Installing OS/400 Graphical Operations from an AS/400" has a step-by-step description of how to install GraphicOps using an AS/400 connection.

Using a Local Area Network (LAN) Server

If you install using a local area network (LAN) server, the administrator must do one of the following:

- Install GraphicOps on the LAN server using the AS/400 connection method or installation diskettes.

- Install GraphicOps on a local PC using the AS/400 connection method or diskettes, and then copy the files to the LAN server.

  Following is an example of a command to copy files from the PC hard disk to the LAN server:

  ```
  XCOPY C:\OPSOS2 F:\OPSOS2 /S
  ```

- Copy the GraphicOps files from an OS/400 shared folder or directory to the LAN server.

  Following is an example of a command to copy files from an OS/400 or directory to the LAN server:

  ```
  XCOPY I:\QGYOS2 F:\OPSOS2 /S
  ```

For more information on the shared folders or directories that support GraphicOps, see Appendix B, "OS/400 Graphical Operations Libraries and Folders and Directories."

To install GraphicOps from the LAN server, start the installation program from the directory the GraphicOps files are in on the LAN server. To start the installation program, see "Starting the Installation Program" on page 2-3.

Note: When installing from a LAN server, you should make provisions for updating the GraphicOps files. Use the custom installation method and do not select to have automatic updates performed. If you do not make these provisions, an update function is added to Client Access/400 that may be inappropriate.

Using Diskettes

Installation diskettes are not shipped with GraphicOps. However, GraphicOps includes programs (SAVPCPGM and RSTPCPGM), that allow you to create installation diskettes and restore from them. These programs are located in the shared folder or directory that contain the GraphicOps PC programs. For more information on the shared folders or directories, see Appendix B, "OS/400 Graphical Operations Libraries and Folders and Directories" on page B-1.

To install using diskettes, do the following:

1. Create installation diskettes using the SAVPCPGM program. See "Save PC Program (SAVPCPGM)."

2. Restore the GraphicOps files into a directory on the target PC using the RSTPCPGM program. See "Restore PC Program (RSTPCPGM)" on page 3-3.

3. Start the installation program from that directory to perform the additional installation functions of updating and configuring files and creating icons (this step can be accomplished manually if desired).

   To start the installation program, see "Starting the Installation Program" on page 2-3.

Note: When installing from diskettes, you should make provisions for updating the GraphicOps files. Use the custom installation method and do not select to have automatic updates performed. If you do not make these provisions, the update function added to Client Access/400 may be inappropriate.

Save PC Program (SAVPCPGM)

Following is the information needed to use the SAVPCPGM program to create installation diskettes.

```
┌─ SAVPCPGM Command Syntax ──────────────────────────────────────────┐
│                                                                     │
│  SAVPCPGM <Source Path> <Destination Path> <NLV ID>                 │
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```

Source path
> Drive and directory name containing the GraphicOps files. This can be the shared folder or directory on the AS/400 system, or a directory on a PC that you have already installed.

Destination path
> Diskette drive and directory name to which GraphicOps files are copied.

NLV ID

The national language version (NLV) ID for messages. This NLV number specifies which language is used to display messages from SAVPCPGM or RSTPCPGM, for example, 2924 for English. If you leave the NLV parameter off and have only one language subdirectory, SAVPCPGM uses that subdirectory. This parameter does not effect which languages will be copied. For a list of NLV codes, see Appendix C, "AS/400 National Language Version (NLV) Codes."

Following is an example of a command to copy files from the PC hard disk to diskettes:

```
C:\OPSOS2>  SAVPCPGM C:\OPSOS2 A: 2924
```

Restore PC Program (RSTPCPGM)

Following is the information needed to use the RSTPCPGM program to restore from diskettes:

```
┌─ RSTPCPGM Command Syntax ──────────────────────────────────────┐
│ RSTPCPGM <Source Path> <Destination Path>                      │
└────────────────────────────────────────────────────────────────┘
```

Source path

Diskette drive and directory name from which GraphicOps files are copied.

Destination path

Drive and directory name to contain the GraphicOps files.

Following is an example of a command to restore files from the installation diskettes to your hard drive:

```
A:>  RSTPCPGM A: C:\OPSOS2
```

Chapter 4. AS/400 Installation Topics

Following are several topics related to the installation of OS/400 GraphicOps on the AS/400 system.

Choosing the AS/400 Installation Options

The OS/400 installation program provides the following options that you may select to install GraphicOps programs on the AS/400 system.

- Host server programs
- Windows client programs
- OS/2 client programs

These options can be selected during a manual installation of the OS/400 operating system. If you use the automatic installation function, you must install the GraphicOps options after the OS/400 installation is complete.

Host Server Programs

This option installs all of the OS/400 host server functions into a library named QGY. You must install this option in order to run GraphicOps. If only this option is selected, only PC users who have previously installed the PC client programs can use GraphicOps services.

Windows Client Programs

This option installs all of the client programs for Windows into an OS/400 directory named QPWXCGY. If this option is selected, Windows users can install the GraphicOps programs onto their PCs.

OS/2 Client Programs
OS/2

> This option installs all of the client programs for OS/2 into an OS/400 shared folder named QGYOS2. If this option is selected, OS/2 users can install the GraphicOps programs onto their PCs.

OS/2 2.1

> This option installs all of the client programs for OS/2 into an OS/400 directory named QPWXGGY. If this option is selected, OS/2 users can install the GraphicOps programs onto their PCs.

Note: You must install the version of GraphicOps that matches the version of Client Access/400 you installed. For example, first install `Client Access/400 for OS/2 2.1`, and then `Client Access/400 - GraphicOps for OS/2 2.1`.

Parts of GraphicOps that are not installed initially can be installed at a later time, using the same procedures.

If you have secondary languages, see the installation information described in "Supporting Multiple Languages" on page 5-5.

Installing OS/400 Graphical Operations on the AS/400 System

Perform these steps to install GraphicOps:

1. Type GO LICPGM on the command line and press the Enter key to bring up the Work with Licensed Programs menu.

2. Select the GraphicOps options you want to install.

   - Select `OS/400 Host Servers` to install the host server programs.
   - Select `Client Access/400 for Windows 3.1`. (Must be installed before the Windows client programs.) For more information on installing Client Access/400 for Windows, see the *Client Access/400 for Windows 3.1 – Getting Started* manual.
   - Select `Client Access/400 - GraphicOps for Windows` to install the Windows client programs.

4-1

- Select `Client Access/400 for OS/2` or `Client Access/400 for OS/2 2.1`. (Must be installed before the OS/2 client programs.) For more information on installing Client Access/400 for OS/2, see the *Client Access/400 for OS/2 Setup* manual.
- Select the corresponding GraphicOps version, either `Client Access/400 - GraphicOps for OS/2` or `Client Access/400 - GraphicOps for OS/2 2.1` to install the OS/2 client programs.

For information on installing AS/400 programs and options, see the *Software Installation* manual. For a list of libraries, folders, and directories that are installed, see Appendix B, "OS/400 Graphical Operations Libraries and Folders and Directories."

Verifying Installation of OS/400 Graphical Operations

To verify that the GraphicOps options are installed on the AS/400 system, do the following:

1. Type GO LICPGM on the command line and press the Enter key to bring up the Work with Licensed Programs menu.

2. Select option 10 (Display installed licensed programs). The list shows you the licensed programs that are installed on the system.

3. Review the installed program list.

4. Verify that OS/400 Host Servers and the Client Access/400 option you chose (Windows, OS/2, or OS/2 2.1) are installed.

   The following options must appear in the list:

   - OS/400 Host Servers
   - Each of the Client Access/400 options you installed

Chapter 5. Advanced Installation Topics

Following are several advanced installation topics such as starting OS/400 GraphicOps using an icon or command, supporting national languages, modifying configuration files, and removing GraphicOps functions.

OS/400 Graphical Operations Connections

Following are topics related to GraphicOps connections. Topics include starting, adding, and changing connections.

Note: In this section, the term connection icon is used to refer to either a program object and its settings in OS/2 or a program item and its properties in Windows.

Starting OS/400 Graphical Operations Connections

You can start a GraphicOps connection using either an icon or a command.

Using an Icon to Start a Connection

The installation program automatically builds a folder (for OS/2 users) or program group (for Windows users) containing connection icons. Each host system you specified during the installation process is represented by a connection icon.

Note: Connection icons are created during installation only if the `Create AS/400 Icons` option is selected. For more information see "Installation options" on page 2-13.

You can start a connection simply by double clicking on its icon. All of the information needed for starting a connection is contained in the definition for the connection icon, including:

- Host system name
- User ID
- Sign-on method (manual or automatic)
- Language

For information on defining connection icons during installation, see "AS/400 Icons Page" on page 2-18. For information on defining connection icons after installation, see "Adding Connection Icons after Installation" on page 5-3.

To start a GraphicOps connection using a connection icon, follow these steps:

```
┌─ OS/2 ──────────────────────────────────────────────────────────────────┐

1. Start the OS/2 Extended Services Communications Manager. Type your user ID
   and password if prompted. This establishes the connection between the PC and the
   AS/400 system.

2. Open the OS/2 folder named OS/400 Graphical Operations.
└──────────────────────────────────────────────────────────────────────────┘
```

```
┌─ Windows ───────────────────────────────────────────────────────────────┐

1. Start Client Access/400, and type your user ID and password. This establishes the
   connection between the PC and the AS/400 system.

2. Open the Windows program group named OS/400 Graphical Operations.
└──────────────────────────────────────────────────────────────────────────┘
```

3. Double click on the icon that represents the AS/400 system to which you want to connect. This issues the command to start GraphicOps.

   - The start-up window is displayed.

4. If asked, type your user ID and password for the AS/400 system you are connecting to. This starts the GraphicOps host server.

Note: If you use Automatic sign-on, you are not asked to supply your user ID and password.

If the OS/400 Graphical Operations Work Area appears, the startup is successful. If the OS/400 Graphical Operations Work Area does not appear, see "Problem Analysis and Recovery While Using Graphical Operations" on page A-4.

Using a Command to Start a Connection

You can also start a GraphicOps connection using a command. The command supports the same parameters as the connection icon.

If you do not specify values for the command parameters, the program prompts you where necessary.

To start a GraphicOps connection using a command, follow these steps:

1. Start Client Access/400 (for Windows users) or OS/2 Extended Services Communications Manager (for OS/2 users) and type your user ID and password. This establishes the connection between the PC and the AS/400 system.

2. Type the OPS command and any desired parameters. This starts the GraphicOps program. The start-up window is displayed.

   Example:

   ```
   OPS /s RCHASLFI /l 5250LU /u FRED /n 2924 /m
   ```

3. If asked, type your user ID and password for the AS/400 system to which you want to connect. This starts the GraphicOps host server.

   Note: If you use Automatic sign-on, you are not asked to supply your user ID and password.

   If the OS/400 Graphical Operations Work Area appears, the startup is successful. If the OS/400 Graphical Operations Work Area does not appear, see "Problem Analysis and Recovery While Using Graphical Operations" on page A-4.

Command Parameters

Start Command (OPS)

Following is a description of the command to start GraphicOps from the PC command line. This command is also issued when you double-click on a connection icon.

```
┌─── OS/400 Graphical Operations Start Command ───────────────────┐
│                                                                 │
│  OPS /s system_name                                             │
│                                                                 │
│  /l local LU                                                    │
│                                                                 │
│  /u user_name                                                   │
│                                                                 │
│  /n nlv_id                                                      │
│                                                                 │
│  /a  or /m                                                      │
│                                                                 │
└─────────────────────────────────────────────────────────────────┘
```

Input Values

/s   (Optional) The name of the host AS/400 system for this session. This is the partner logical unit (LU) alias defined in OS/2 Extended Services Communications Manager (for OS/2 users) or the system name in Client Access/400 (for Windows users). This can also be a fully qualified logical unit (LU) name if no alias is configured (for example, NETID.CPNAME).

If not specified, GraphicOps asks for the system name.

/l (For OS/2 systems only, optional) The name of your PC for this session. This is the local logical unit (LU) alias defined in OS/2 Extended Services Communications Manager.

If the alias is not configured in OS/2 Extended Services Communications Manager, or is configured differently than the default (5250LU), you receive an error message. If this happens, check your OS/2 Extended Services Communications Manager configuration and change the LU name to match it.

/u (Optional) The user ID to use for this session.

/n (Optional) The national language version (NLV) to use for this session. For example, the NLV for English is 2924.

The national language version, if not specified, defaults to the language installed for GraphicOps. If multiple languages are installed, then GraphicOps asks for a language. For a list of NLV codes, see Appendix C, "AS/400 National Language Version (NLV) Codes."

/a (Optional) Use the automatic sign-on method. You are not prompted for sign-on information if you have already signed on to Client Access/400 (for Windows users) or OS/2 Extended Services Communications Manager (for OS/2 users) for the AS/400 system.

/m (Optional) Use the manual sign-on method. GraphicOps takes the user ID from the command line, or asks for it.

The /a and /m parameters are mutually exclusive. If both are specified, then the last one specified is the one used. If neither is specified, then /a is the default.

Adding Connection Icons after Installation

After installation, you can create connection icons to current AS/400 host servers or to new AS/400 servers. You can add connection icons in the following ways.

1. You can use the standard OS/2 or Windows functions to create a new connection icon or copy an existing one. You can set the parameters in the connection icon's settings or properties. For more information, see "Command Parameters" on page 5-2.

2. You can add a new connection icon using the installation program, as follows:

   - Start a Custom installation. For more information, see "Starting the Installation Program" on page 2-3.

   - Change the settings on the Options page so that only the `Create AS/400 Icons` option is selected. For more information, see "Options Page" on page 2-12.

   - Select the new system on the AS/400 Icons page. For more information, see "AS/400 Icons Page" on page 2-18.

   - Click on **Options** and use the AS/400 Icon Options window to complete the definition. Click on **OK**.

   - Remove any systems that already have connections defined.

   - Click on **Install** to add the system connection.

Changing Connection Icons after Installation

After installation, you may need to change some of the characteristics you selected during definition of the connection icons. There are two ways to make these modifications.

1. You can use the standard OS/2 or Windows functions to modify or delete an existing connection icon. You can change the parameters in the connection icon's settings or properties. For more information, see "Command Parameters" on page 5-2.

2. You can redefine a connection icon using the installation program, as follows:

   - Start a Custom installation. For more information, see "Starting the Installation Program" on page 2-3.

- Change the settings on the Options page so that only the `Create AS/400 Icons` option is selected. For more information, see "Options Page" on page 2-12.

- Remove the systems that you do not want to modify on the AS/400 Icons page. For more information, see "AS/400 Icons Page" on page 2-18.

- Select the system you want to modify.

- Click on **Options** and use the AS/400 Icon Options window to modify the definition. Click on **OK**.

- Click on **Install** to change the system connection.

Starting the Quick Tour

The Quick Tour is a graphical overview that guides you through the functions of GraphicOps. The Quick Tour runs in a Windows environment. To run under OS/2, you must have WIN-OS/2 installed. The Quick Tour is installed along with GraphicOps if the `Install Quick Tour` installation option is selected. For more information, see "Options Page" on page 2-12.

You can start the Quick Tour with either an icon or a command.

Starting the Quick Tour Using an Icon
Follow these steps to start the Quick Tour using an icon:

```
┌─ OS/2 ─────────────────────────────────────────────────────────────┐
│                                                                     │
│  1. Open the OS/2 folder named OS/400 Graphical Operations.         │
│                                                                     │
│  2. Double click on the Quick Tour icon to begin.                   │
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```

```
┌─ Windows ──────────────────────────────────────────────────────────┐
│                                                                     │
│  1. Open the Windows program group named OS/400 Graphical Operations.│
│                                                                     │
│  2. Double click on the Quick Tour icon to begin.                   │
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```

Starting the Quick Tour Using a Command
Follow these steps to start the Quick Tour using a command:

```
┌─ OS/2 ─────────────────────────────────────────────────────────────┐
│                                                                     │
│  1. In OS/2, start a WIN-OS/2 full screen session.                  │
│                                                                     │
│  2. Select Run... from the Program Manager File pull-down menu.     │
│                                                                     │
│  3. On the command line type D:\OPSOS2\QSTART\TBOOK.EXE GOTINTRO.TBK, where│
│     D:\OPSOS2 is the path in which GraphicOps is installed.          │
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```

```
┌─ Windows ──────────────────────────────────────────────────────────┐
│                                                                     │
│  1. Select Run... from the Program Manager File pull-down menu.     │
│                                                                     │
│  2. On the command line type C:\OPSWIN\QSTART\TBOOK.EXE GOTINTRO.TBK, where│
│     C:\OPSWIN is the path in which GraphicOps is installed.          │
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```

Supporting Multiple Languages

Following is a description of how to install secondary languages on the AS/400 system and on the PC to support GraphicOps.

Installing Multiple Languages on the AS/400 System

When you order the OS/400 operating system, you specify the secondary languages you want to install. You automatically receive the GraphicOps libraries to support each of the languages specified. All of the secondary language support for one language is shipped together on one OS/400 tape.

To install secondary language support for GraphicOps, do the following:

1. Verify that the GraphicOps options for your primary language are installed on the AS/400 system using the GO LICPGM command, as described in "Verifying Installation of OS/400 Graphical Operations" on page 4-2.

2. Install the secondary language tapes as described in the *Software Installation* manual.

   Because GraphicOps is already installed, the following occurs:

   - A new library named QSYSxxxx, where the xxxx stands for the national language version (NLV) ID, is created.
   - A new subdirectory named MRIxxxx, where the xxxx stands for the national language version (NLV) ID, is created in the QPWXGGY and QPWXCGY directories.

For a list of NLV IDs supported by GraphicOps, see Appendix C, "AS/400 National Language Version (NLV) Codes."

Installing Multiple Languages on the Personal Computer

Any GraphicOps languages that are installed in OS/400 shared folders or directories can be selected for installation on the personal computer. You can select the secondary languages to be installed by using the Languages page when you run the GraphicOps installation program. For more information, see "Languages Page" on page 2-22.

For each GraphicOps language selected, a subdirectory named MRIxxxx, where the xxxx stands for the national language version (NLV) ID, is created on your PC in the GraphicOps directory. For example, when you select English as your installation language, the MRI2924 subdirectory is created. When you choose a secondary language on the Languages page, another MRIxxxx subdirectory is created.

You should include all of the secondary language files in your planning for backup and recovery on the PC and the AS/400 system.

Getting Multiple Language Choices During Installation

If only one language option is available, you do not see the OS/400 Graphical Operations Installation Language window during installation. The window is displayed only when all of the following conditions are true:

- Multiple languages were ordered with the OS/400 operating system.
- Multiple language subdirectories were installed in the GraphicOps shared folders or directories.
- If the installation program is being run from the PC, multiple language subdirectories were previously copied to the PC.
- The additional languages are compatible with the code page your PC is running in.

If the list of available languages is not what you expect, review the following to determine where to go for help:

- If you run the installation program using an AS/400 connection, the language list is based on the GraphicOps directories in the shared folder or directory. If an expected language choice is missing from the list, see your OS/400 administrator for assistance.

- If you run the installation program from the PC, the language list is based on directories on the PC. If an expected language choice is missing from the list, see your OS/400 administrator for assistance.
- If the PC is running a double-byte character set (DBCS) language, a list of all available languages, single and double-byte, is displayed. If an expected language choice is missing from the list, see your OS/400 administrator for assistance.
- If the PC is running a single-byte character set (SBCS) language, only single-byte languages are displayed. If an expected language choice is missing from the list, see your PC administrator for assistance with features for your PC.

Multiple Language Considerations

If you use the same user ID to connect to the same AS/400 system using multiple languages, unexpected results may occur. For example, some of your icon titles may be in one language, while others are in another.

DBCS Language Considerations

Double-byte character set (DBCS) language support is only available for OS/2 systems. GraphicOps uses Client Access/400 code page conversion utilities to support DBCS languages under OS/2. Client Access/400 must be started prior to starting a GraphicOps session using a DBCS language under OS/2. For more information, see *National Language Support* manual.

Configuration Changes

During installation, several OS/2, Windows, and Client Access/400 files may be modified depending on the options you select and the state of your system. Whenever a file is modified, a backup is created with the same filename, but a different extension. The backup extension is OPS. If this backup extension already exists, a numeric extension file starting with 000 (for example, CONFIG.000, CONFIG.001, CONFIG.002) is used to store the backup file.

The following may be modified:

```
┌─ OS/2 ─────────────────────────────────────────────────────────────┐
```

- **CONFIG.SYS:** The directory that GraphicOps was installed in (the default is OPSOS2) is added to the PATH and LIBPATH statement if `Update CONFIG.SYS` was selected. This allows you to start GraphicOps from the command line without specifying a fully qualified path.

- **Client Access/400 automatic update:** If `Enable Automatic Update` was selected, Client Access/400 performs an automatic update. This causes any changes in the files on the server AS/400 to automatically be copied to the client PC. For more information, see the *Client Access/400 for OS/2 Setup* or *Client Access/400 for Windows 3.1 – Getting Started* manuals.

  Note: If you have installed Client Access/400 in a directory other than the default, or have changed the configuration file name from the default, you may be prompted to type the directory and configuration file name during installation.

```
┌─ Windows ──────────────────────────────────────────────────────────────────┐
│                                                                              │
│  • **AUTOEXEC.BAT:**  The directory that GraphicOps was installed in (the default is │
│    OPSWIN) is added to the PATH statement if `Update AUTOEXEC.BAT` was selected. │
│    This allows you to start GraphicOps from the command line without specifying a fully │
│    qualified path.                                                            │
│                                                                              │
│  • **Client Access/400 automatic update:**  If `Enable Automatic Update` was selected, │
│    Client Access/400 performs an automatic update.  This causes any changes in the │
│    files on the server AS/400 to automatically be copied to the client PC.  For more │
│    information, see the *Client Access/400 for OS/2 Setup* or *Client Access/400 for* │
│    *Windows 3.1 – Getting Started* manuals.                                   │
│                                                                              │
│    **Note:**  If you have installed Client Access/400 in a directory other than the default, │
│           or have changed the configuration file name from the default, you may be │
│           prompted to type the directory and configuration file name during installation. │
│                                                                              │
└──────────────────────────────────────────────────────────────────────────────┘
```

If an error occurs while attempting to update a configuration file, you are given the opportunity to cancel the installation program or continue without performing the modifications to the specified configuration file. If you choose to continue, make sure that you make the changes manually when the installation program completes.

Removing OS/400 Graphical Operations From the Personal Computer

Removing OS/400 Graphical Operations Functions

If you cancel the installation program before it ends, you may need to do several tasks to remove changes made by the installation program. The number of tasks you must do depends on how many tasks the installation program completed before you cancelled it. You may need to do some or all of the following:

• Remove all files from the GraphicOps directory and subdirectories.

• Remove the GraphicOps directory and subdirectories.

• Remove the GraphicOps folder and objects from the OS/2 system, or remove the program group and program items from the Windows system. The default folder or program group name is OS/400 Graphical Operations.

• For OS/2 systems, remove the directory that GraphicOps was installed in from the LIBPATH and PATH statements in the CONFIG.SYS file (the default is OPSOS2), or restore from the backup file if it was created.

• For Windows systems, remove the directory that GraphicOps was installed in from the PATH statements in the AUTOEXEC.BAT file (the default is OPSWIN), or restore from the backup file if it was created.

• Remove the Update function for GraphicOps from Client Access/400. For more information, see the *Client Access/400 for OS/2 Setup* or *Client Access/400 for Windows 3.1 – Getting Started* manuals.

You must do the same set of tasks if you want to remove GraphicOps from your PC after installation. For assistance with any of these tasks, see your PC administrator or OS/400 administrator.

Removing a Language Option

The installation program cannot be used to remove a language from the list of available languages. This must be done by physically removing that language subdirectory from the PC. The subdirectory is MRIxxxx, where the xxxx stands for national language version (NLV) ID. For more information, see Appendix C, "AS/400 National Language Version (NLV) Codes."

If you remove the language in which a connection icon is set up, you should modify the language parameter associated with that icon. If you do not modify this parameter, and there is more than one language installed, you are prompted for a language to use when you start GraphicOps. If there is only one language installed, that language is used.

See "Changing Connection Icons after Installation" on page 5-3 for more information.

Removing the Quick Tour

The installation program cannot be used to remove the Quick Tour. This must be done by physically removing the Quick Tour subdirectory from the PC.

To remove the Quick Tour, delete the QSTART subdirectory from the directory in which GraphicOps is installed, and delete the corresponding icon from the OS/400 Graphical Operations folder (OS/2) or program group (Windows).

Part 3. Administration and Customization–Creating Your Own World

Imagine being able to set up your own OS/400 graphical user interface or that of other users. Imagine creating your own work areas and putting whatever objects *you* want into those work areas. Imagine individualizing lists for different users. Imagine allowing your users to only see and use objects you want them to see and use. You can do all of these things by administering and customizing OS/400 GraphicOps.

GraphicOps is shipped with three different specialized work areas (Operator, Customization, and Template). You are free to use those, change them, or create all new ones. What you see is *not* all that you get.

Using AS/400 CL commands such as Edit Workstation Object Authority (EDTWSOAUT) and Edit Object Authority (EDTOBJAUT), and changing Personal Settings in GraphicOps, you can control your users' OS/400 graphical user interface.

Your roadmap for customizing and administering GraphicOps is as follows:

GraphicOps Concepts

Chapter 6, "Understanding GraphicOps Objects" describes the types of objects in GraphicOps that you work with to set up your graphical user interface. This section also describes what objects are shipped with GraphicOps.

Customization

Chapter 7, "Customization" describes how to change the way GraphicOps looks and works and shows many customization examples.

Basic Administration

Chapter 8, "Basic Administration Concepts" describes some very basic concepts of how to secure GraphicOps for your users.

Model Profiles

Chapter 9, "Basic Administration Using Model Profiles" describes how you can use model profiles to easily administer your users.

Advanced Administration

Chapter 10, "Advanced Administration Concepts" describes all of the administration details of GraphicOps. This section also includes the questions you can answer to do more advanced administration for your users.

Administration Examples

Chapter 11, "Advanced Administration Examples" goes through more advanced administration examples step by step to describe how you can fully use GraphicOps administration capabilities.

Planning Forms

Appendix F, "Customization and Administration Planning Forms" contains blank planning forms you can use to do your customization and administration planning.

Before You Customize GraphicOps

The following is recommended before attempting GraphicOps customization:

- Familiarize yourself with GraphicOps:

    - Read the *OS/400 Graphical Operations – Getting Started* manual.
    - Take the online *OS/400 GraphicOps Quick Tour.*
    - Use the product. The more you understand the concepts of GraphicOps, the easier it is to customize GraphicOps.

Before You Administer GraphicOps for Your Users

The following is recommended before attempting GraphicOps administration:

- Understand basic AS/400 security concepts.

- Be the security officer or at least have security officer authority.

- Understand the needs of all of your users (what they should and shouldn't have available to them) before you start.

    For example, some users may only need to see their own printer output and messages, while other users may need to see everyone's printer output and messages. Based on your users' needs, obvious groups will form. Use these groups to make administering GraphicOps easier. Users can also be administered on an individual basis.

- Create an AS/400 user profile for each GraphicOps user if one does not already exist.

- Create an authorization list for each group of GraphicOps users if one does not already exist.

Chapter 6. Understanding GraphicOps Objects

In OS/400 GraphicOps there are two major types of objects that can be administered and customized:

- Workstation objects
- AS/400 resources

You'll want to be familiar with the different types of GraphicOps objects to help you determine how you want to set up your users.

Workstation Objects

Workstation objects are objects that exist on the personal computer and are used to group, summarize, and work with AS/400 resources. They do not exist on the AS/400 system. For example, the Batch Job List is a workstation object that lists the jobs on the AS/400 system and allows the GraphicOps user to work with them. Workstation objects include primarily the following:

- **Work areas**

  Work areas group together related objects to assist the user in performing tasks.

- **Templates**

  Templates are used to create new workstation objects or AS/400 objects. For example, the Job List Template is used to create another job list with the same settings as the template.

  You can think of a template as a cookie cutter. You create a mold or shape that you use to create more cookies that look just like the original one.

- **Instances**

  Instances are basically the cookies that come from the template cookie cutters. The instances of workstation objects that come shipped with GraphicOps are what we cut out. For example, the Batch Job List is an instance of the job list template. You can create your own instances from the templates provided and refine them once they are created.

Work Areas

GraphicOps is shipped with the following work areas:

OS/400 Graphical Operations Work Area
  This work area serves as the starting point, providing access to the following GraphicOps objects (by default):
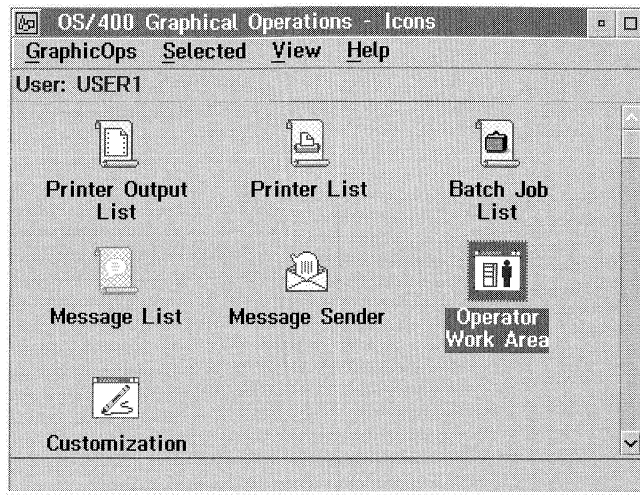
Operator Work Area

This work area contains the following objects (by default) that are used to perform common AS/400 operator tasks:
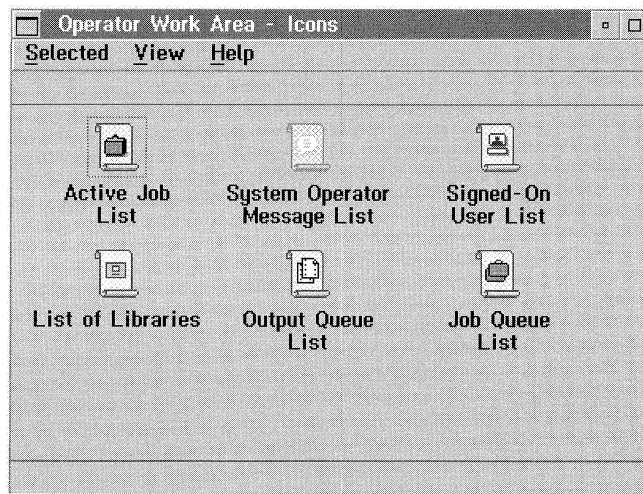
Note: Users with a user class of *USER do not see the Operator Work Area.

Customization Work Area

This work area contains the following objects (by default) that are used to change how GraphicOps looks and works:
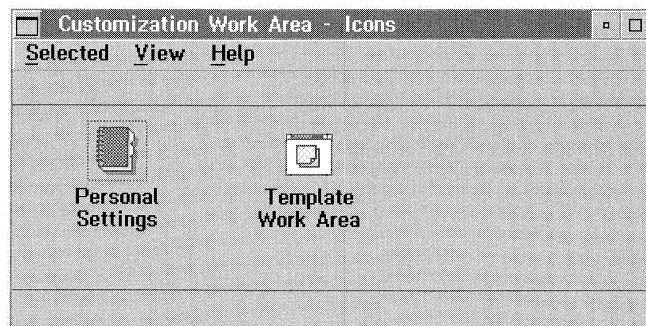
Template Work Area
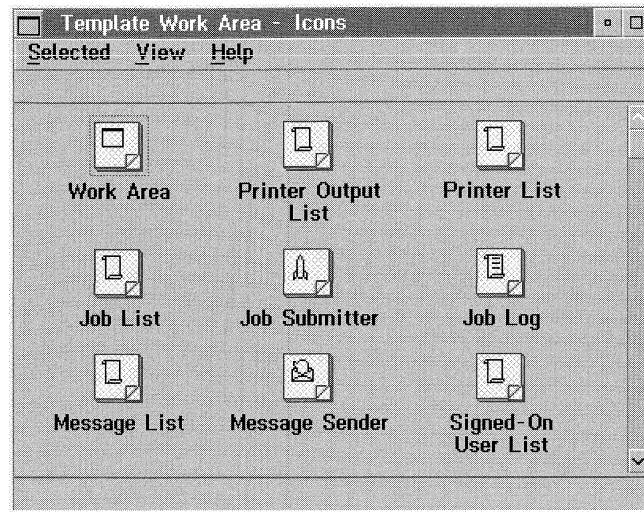
This work area contains the following objects (by default) that are used to create new objects:

- Work Area Template
- Printer Output List Template
- Printer List Template
- Job List Template
- Job Submitter Template
- Job Log Template
- Message List Template
- Message Sender Template
- Signed-On User List Template
- AS/400 Object List Template
- List of Libraries Template
- Output Queue List Template
- Job Queue List Template
- Library Template
- Output Queue Template
- Job Queue Template
- Message Queue Template

The GraphicOps work areas are shipped with these workstation objects. But, remember, how the work areas look for your users is up to *you*!

AS/400 Resources

AS/400 resources include AS/400 objects and other AS/400 resources that reside on the AS/400 system and are represented by GraphicOps on the PC. AS/400 resources supported by GraphicOps include items within lists such as libraries, jobs, and messages.

Following are AS/400 objects on the AS/400 system supported by GraphicOps:

- Output queue
- Job queue
- Message queue
- Library

Other resources that exist on the AS/400 system and are supported by GraphicOps are:

- Printer output
- Printer device
- Job
- Message

Chapter 7. Customization

This chapter describes:

- What customization is
- How customization works
- What customization data is
- What you can customize in OS/400 GraphicOps
- How to save customization data
- How to copy customization data to other users
- How to delete customization data

Also included in this chapter are many examples of customizing GraphicOps.

What Is Customization?

Customization is the process of changing how GraphicOps looks and works. GraphicOps gives you the flexibility of changing the user interface to include only those GraphicOps objects that you want to work with. Through customization you can also move objects to different work areas and create your own customized lists.

How Does Customization Work?

When you do any customizing in GraphicOps, you have the option of saving any changes you made to the user interface before you sign off GraphicOps. These changes are stored as *customization data* on the AS/400 system.

Customization data includes any changes made to:

- Personal Settings
- Settings views of individual workstation objects
- Contents of work areas

The customization data is associated with each user's profile. This allows customization data to be saved for each GraphicOps user and restored each time the user signs on to GraphicOps. Storing customization data on the AS/400 system lets you travel to another PC and still have your customized user interface.

Note: Any windows that are open when you sign off are also saved with your customization data. When you sign on again, those windows are opened again.

The GraphicOps user interface is shipped with default customization data. This customization data includes the titles of icons, the default double-click actions, whether short or full menus are shown, and so on. These are all items that users can tailor from the PC to fit their specific needs (if the users are authorized to change these objects).

What Can You Customize?

The GraphicOps user interface can be customized by:

- Changing Personal Settings
- Changing the settings of specific objects
- Changing the contents of work areas

Personal Settings

The Personal Settings workstation object allows you to globally customize your GraphicOps user interface. Use Personal Settings to set sign-off options and confirmations, and to customize the way your GraphicOps objects and windows look and work.

All changes made in Personal Settings affect the entire user interface. If you do not want to affect all of your objects, customize only the object you want to change by using the Settings view of that object. Modifying your personal settings changes any previously customized settings.

The Personal Settings object is in the Customization work area by default. Following are the settings you can change:

Confirm on sign off
Allows you to specify whether a confirmation window should be displayed when you exit GraphicOps.

Save customization data
Allows you to specify if you want to save your customization data when you exit GraphicOps. For example, if you create a new printer output list and then exit GraphicOps, the new list is not lost if you save your customization data.

Visual options
Allows you to specify whether the menu bar, status area, and information area should be displayed in all GraphicOps windows.

Display system name in title
Allows you to specify whether the AS/400 system name should appear in the title bar of all GraphicOps windows. For example, if you are only using one AS/400, you might not want to see the system name in the title bar.

Menu style
Allows you to specify whether short or full menus should be shown for all GraphicOps objects. Short menus show the minimum number of menu choices; full menus show all available menu choices.

For example, a short menu may include these choices:

- Open as
- Send message
- Sign off

In contrast, a full menu may include these choices:

- Open as
- Send message
- Sign off
- Hold
- Release
- Disconnect

Details view icon size
Allows you to specify whether normal or small icons are shown in details views of lists and work areas.

Confirmations
Allows you to specify whether a confirmation window is displayed when you delete, copy, or move objects. On the confirmation window, you can cancel or confirm the action. The confirmation window helps avoid taking these actions by mistake.

AS/400 resources
Allows you to customize AS/400 resources, such as printer output, as a group. Changes made to the group of objects affect each individual object of that type. You cannot customize these objects individually. For example, you can specify whether double-clicking on a piece of printer output should open a settings or contents view. Changes made would affect *all* printer output.

Object-Specific Settings

You can also customize individual GraphicOps workstation objects. Changes made to an individual object affect only that object. You can customize an individual object using the Settings view of that object.

Here are some common examples of settings you can change:

Double-click action
Allows you to specify which action should occur when you double-click on the icon representing the object. For example, you can specify whether double-clicking on a list of printers should open a details or icons view of that list. This information can be changed by using the Settings view for the specific object.

List organization
Allows you to specify how details and icons views of some lists should be organized. For example, the printer output list can be organized by printer. This information can be changed by using the Settings view for the specific list, or the `Organization` menu choice.

List columns
Allows you to specify which columns of information should be displayed in the details view of lists. This information can be changed by using the Settings view for the specific list, or the `Columns` menu choice.

List contents
Allows you to specify which objects should be included in the details and icons views of lists. For example, you can include all output or just the output for a specific printer in the printer output list. This information can be changed by using the Settings view for the specific list, or the `Include` menu choice.

Work Area Contents

You can also customize the contents of GraphicOps work areas by deleting, moving, shadowing, or copying existing objects, or by creating new objects. You can customize the contents of a work area using the pop-up menu for the object you want to change or by using drag and drop.

Creating new objects

Use the `Create another` menu choice to display a window where you can create another object based on the settings specified in the template for that object. You can tailor the template using the template Settings view. You can also create another object by using drag and drop from the template. Templates are located in the Template Work Area by default.

Copying objects

Use the `Copy to work area` menu choice to display a window where you can create another object based on the settings for the current object. You can also copy objects by holding down the Control key while dragging and dropping them.

Moving objects

Use the `Move to work area` menu choice to display a window where you can move an object to another work area. You can also move objects by dragging and dropping them.

Deleting objects

Use the `Delete from work area` menu choice to delete an object from a work area.

Shadowing objects

You can shadow AS/400 resources. Use the `Shadow` menu choice to create a duplicate image of an object, allowing you to view the object in a work area.

An object is usually represented by only one icon. However, for some tasks, it is convenient to create an additional icon, known as a shadow, which represents the original object. When you shadow an object, you can change either the shadowed object or the original and the change takes effect on both, as if the same object were in both places.

For example, you can shadow a printer and place it in your work area. Then you can work with the printer directly from the work area without opening up the Printer List.

Note: You can also create shadows by dragging and dropping the object from a list to a work area.

Saving Customization Data

Customization data can be saved in the following ways:

- At sign-off

  Customization data can be saved when you exit GraphicOps or close the OS/400 Graphical Operations Work Area.

  Note: The default value is specified in the *Save customization data* setting in Personal Settings.

- Using the `Save customization` menu choice

  Customization data can be saved by selecting the `Save customization` menu choice in the OS/400 Graphical Operations Work Area.

Until saved, changes are in effect but are not permanent. An abnormal end of GraphicOps causes changes to be lost.

Copying Customization Data

Once you have customized the user interface and saved the customization data, you can copy that data to other users so their GraphicOps user interface is customized the same way. Customization data can be copied to one or more users. Follow these steps to copy customization data:

1. Sign on to the AS/400 system as a security officer.

2. Use the SETCSTDTA command to copy a user's customization data to one or more other users.

The following command copies GraphicOps customization data from user profile TIM to user profile DENNIS. User profile DENNIS was created previously but does not have any customization data. After this command is run, user profile DENNIS will have the same customization data as user profile TIM.

```
SETCSTDTA  USRPRF(DENNIS) VALUE(TIM)
```

Replacing Customization Data

The following command copies GraphicOps customization data associated with the model user profile MODEL1 to user profiles DENNIS, SARA, and KAREN, and replaces any customization data associated with user profiles DENNIS, SARA, and KAREN.

```
SETCSTDTA  USRPRF(DENNIS SARA KAREN) VALUE(MODEL1) REPLACE(*YES)
```

Deleting (Resetting) Customization Data

Customization data can be deleted from one or more users. Follow these steps to delete customization data:

1. Sign on to the AS/400 system as a security officer.

2. Use the SETCSTDTA command. (Refer to Appendix E, "Authorization Commands for Workstation Objects" for more information.)

The following command removes all GraphicOps customization data associated with user profile DENNIS. The default settings are used the next time user DENNIS signs on to GraphicOps.

```
SETCSTDTA  USRPRF(DENNIS) VALUE(*NONE)
```

Customization Examples

This section goes through some examples of customizing different workstation objects.

Here's a list of the tasks you'll be doing:

- Create a model user profile.
- Sign on and customize the user interface:
  - Change Personal Settings
    - Specify No for the Confirm on sign off setting.
  - Change Settings of Objects
    - Printer output list: Change the title and organization (organize by printer).
    - Printer list: Show selected system printers.
    - Message list: Turn notification on.
  - Change Contents of Work Areas
    - Message Sender: Copy one to send when performing an IPL of the system.
    - Work Area: Create a new work area for job-related objects.
    - Batch Job List: Move the Batch Job List to the new job work area.
    - Job Submitter: Create one to save your library.
- Sign off and save customization data.
- Copy the customization data to other users.

Create Model User Profile

The first step should be to create a model user profile that you can use. Create a user profile of USER1 as your model. You will sign on to GraphicOps as that user and customize the user interface.

Sign On to GraphicOps

Sign on to GraphicOps as the model user profile, USER1.

Change Personal Settings

Next, you want to change the Confirm on sign off setting in the Personal Settings object.

1. Double-click on the **Personal Settings** icon in the Customization Work Area.
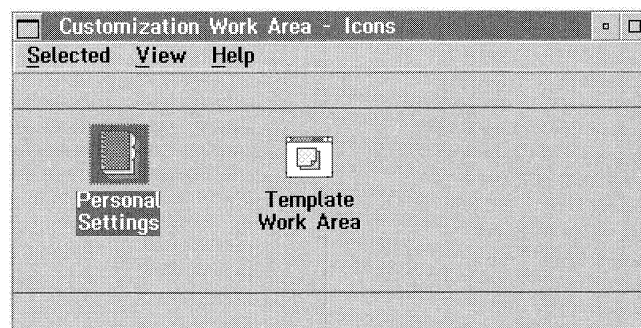
2. Click on the **Confirm on sign off** setting. Click on **No** and then click on **Save** to save the changed setting.

```
┌─────────────────────────────────────────────────────────────┐
│ ▣  Personal Settings ─ Settings                      □ │□│  │
│ Personal settings  View  Help                               │
├─────────────────────────────────────────────────────────────┤
│ ┌──────────────────────────────┐  ┌───────────────────────┐ │
│ │Setting              │Value   │  │Confirm on sign off    │ │
│ │Sign-off options     │       ▲│  │                       │ │
│ │ ▨ Confirm on sign off │Yes    │  │ ⦿ Yes                │ │
│ │ ▨   Save customization data No│  │ ○ No                  │ │
│ │All objects          │        │  │                       │ │
│ │   Visual options    │        │  │                       │ │
│ │ ▨      Display menu bar │Yes  │  │                       │ │
│ │ ▨      Display status area │Yes ▼│  │                    │ │
│ │◄                    │      ►│  │                       │ │
│ └──────────────────────────────┘  └───────────────────────┘ │
│  ┌────────┐   ┌────────┐   ┌────────┐                        │
│  │  Save  │   │ Cancel │   │  Help  │                        │
│  └────────┘   └────────┘   └────────┘                        │
└─────────────────────────────────────────────────────────────┘
```
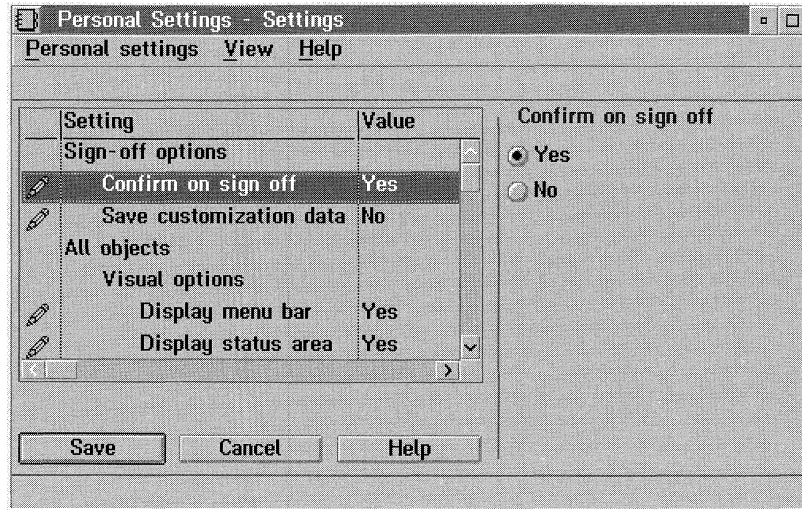
Change Printer Output List Settings

You want to change the title of the printer output list and organize the list by printer.

1. From the OS/400 Graphical Operations Work Area, open a Settings view of the Printer Output List.

```
┌─────────────────────────────────────────────────────────────┐
│ ▣  OS/400 Graphical Operations ─ Icons               □ │□│  │
│ GraphicOps  Selected  View  Help                            │
├─────────────────────────────────────────────────────────────┤
│ User: USER1 │ Open as              → │ Settings              │
│             │                        │ Icons               ▲ │
│         ┌─┐ │ Create another...      │ Details               │
│         │▯│ │                        │ ──────                │
│         └─┘ │ Copy to work area...   │                       │
│ Printer Ou  │ Move to work area...   │ Batch Job             │
│    List     │ Delete from work area..│ List                  │
│         ┌─┐ │                        │                       │
│         │▯│ │ Help                   │ ┌──┐                  │
│         └─┘ │         ◁              │ │▤▮│                ▼ │
│   ..    . . ..      ..   . .    . .                          │
└─────────────────────────────────────────────────────────────┘
```
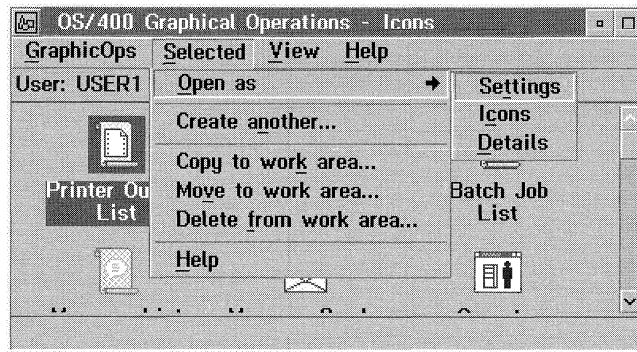
2. Click on the **Title** setting and then click in the **Title** input area and type the new title, My Printer Output.

```
┌─────────────────────────────────────────────────────────────┐
│ ▣  Printer Output List ─ Settings                    □ │□│  │
│ List  View  Help                                            │
├─────────────────────────────────────────────────────────────┤
│ ┌──────────────────────────────┐  ┌───────────────────────┐ │
│ │Setting              │Value   │  │Title                  │ │
│ │Visual options       │       ▲│  │┌─────────────────────┐│ │
│ │ ▨ Title            │My Printer Ou│  ││My Printer Output   ││ │
│ │ ▨   Organization   │No organizatio│  ││                    ││ │
│ │ ▨   Double-click action │Open as detail│  │└──────────────────┘│ │
│ └──────────────────────────────┘  └───────────────────────┘ │
└─────────────────────────────────────────────────────────────┘
```
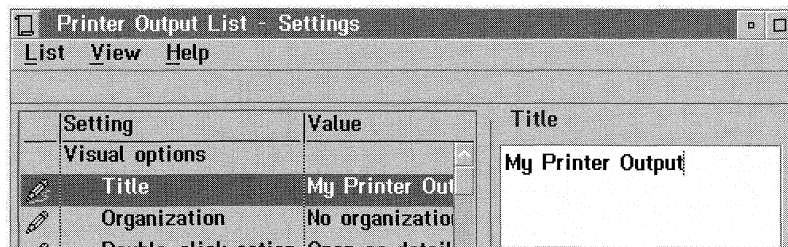
3. Click on the **Organization** setting and then click on **By printer**. Click on **Save** to save the changed settings.

```
┌─────────────────────────────────────────────────────────┐
│ ▣  Printer Output List - Settings            ▪ □        │
│ List  View  Help                                         │
├─────────────────────────────────────────────────────────┤
│                                                          │
│  ┌────────────┬──────────────┐  Organization            │
│  │Setting     │Value         │  ○ No organization       │
│  │Visual options            ▲│  ● By printer            │
│  │ ✎  Title     My Printer Ou│  ○ By output queue       │
│  │ ✎  Organization  By printer│                          │
│  │ ✎  Double-click action Open as detai│                │
│  │ ✎  Columns   Icon, Name, (│                          │
│  │ ✎  Menu style  Full      ▼│                          │
│  │ ◀            ▶│                          │
│  └────────────┴──────────────┘                          │
│                                                          │
│  ┌──────┐  ┌────────┐  ┌──────┐                         │
│  │ Save │  │ Cancel │  │ Help │                         │
│  └──────┘  └────────┘  └──────┘                         │
└─────────────────────────────────────────────────────────┘
```
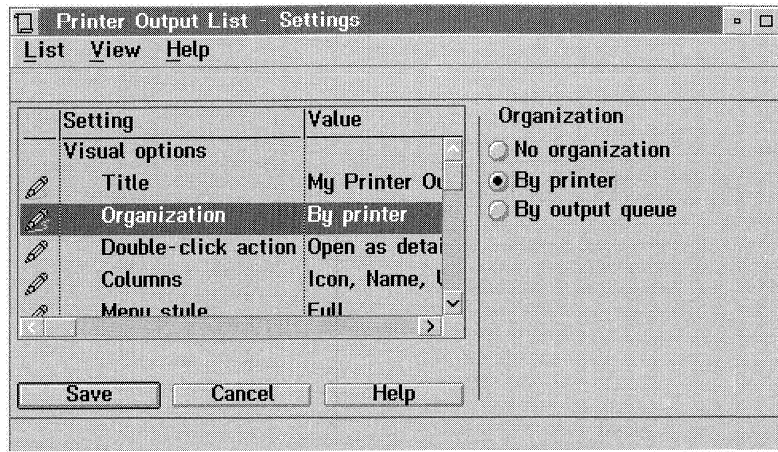
Change Printer List Settings

You want to change the printer list to only show printers PRT01 and PRT02.

1. From the OS/400 Graphical Operations Work Area, open the Settings view of the Printer List.

```
┌─────────────────────────────────────────────────────────┐
│ ▣  OS/400 Graphical Operations - Icons        ▪ □       │
│ GraphicOps  Selected  View  Help                         │
│ User: USER1                                              │
│                                                          │
│    ▯              ▯             ▯                        │
│                  ┌─────────────────────┬───────────┐     │
│  My Printer Output│ Open as          ➜ │ Settings  │     │
│                   ├─────────────────── │ Icons     │     │
│                   │ Create another...  │ Details   │     │
│                   ├─────────────────── └───────────┘     │
│    ▯              │ Copy to work area...                 │
│                   │ Move to work area...                 │
│  Message List  Messa│ Delete from work area...           │
│                   ├──────────────────                    │
│                   │ Help                                 │
│                   └──────────────────                    │
└─────────────────────────────────────────────────────────┘
```
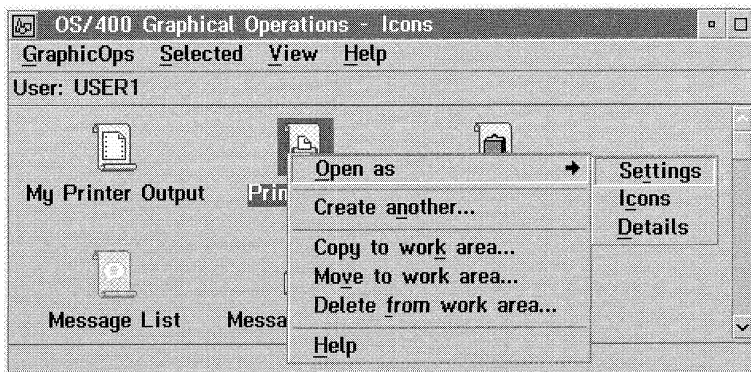
2. Click on **Printers** under the Include heading. Then click on **Names**. Type PRT01 in the input field and click on **Add** to add the printer to the list. Type PRT02 and click on **Add** to add that printer to the list. Click on **Save** to save the changed settings.

```
┌─────────────────────────────────────────────────────────┐
│ ▣  Printer List - Settings                    ▪ □       │
│ List  View  Help                                         │
├─────────────────────────────────────────────────────────┤
│  ┌────────────┬──────────────┐  Printers                │
│  │Setting     │Value         │  ○ All                   │
│  │Visual options            ▲│  ● Names                 │
│  │ ✎  Title     Printer List │  ┌──────┐  ┌────────┐    │
│  │ ✎  Double-click action Open as details│  │PRT02 │ │ Add │ │
│  │ ✎  Columns   Icon, Name, Sta│  └──────┘  └────────┘  │
│  │ ✎  Menu style  Full       │  ┌──────┐  ┌────────┐    │
│  │Include                     │  │PRT01 │ │Remove │     │
│  │ ✎  Printers  PRT02 PRT01 ▼│  └──────┘  ┌────────┐    │
│  │ ◀            ▶│             │ Find...│    │
│  └────────────┴──────────────┘             └────────┘   │
└─────────────────────────────────────────────────────────┘
```
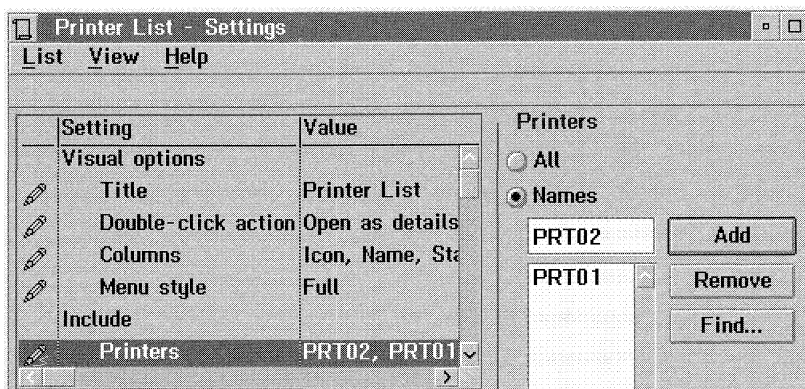
Start Message Notification

Next, you want to start message notification to notify users of new messages.

1. In the OS/400 Graphical Operations Work Area, click on the **Message List** icon and then click on the **Selected** menu-bar choice or get a pop-up menu. Click on the **Start notification** menu choice.
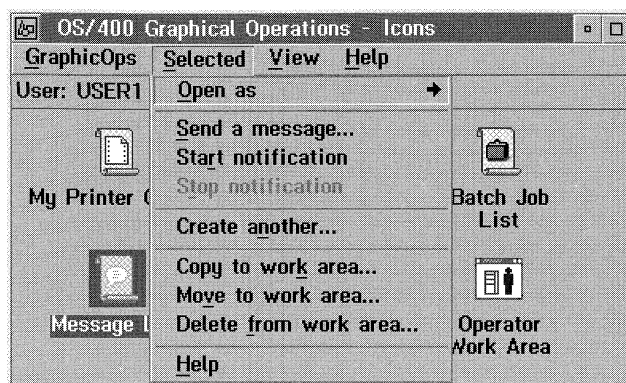
Copy the Message Sender and Change Settings

Now, copy the message sender and change the settings to have the message text say the system is going down. The operators can use this message sender when they need to perform an IPL of the system or take down the system for some reason.

1. In the OS/400 Graphical Operations Work Area, click on the **Message Sender** icon and then click on the **Selected** menu-bar choice or get a pop-up menu. Click on the **Copy to work area** menu choice.
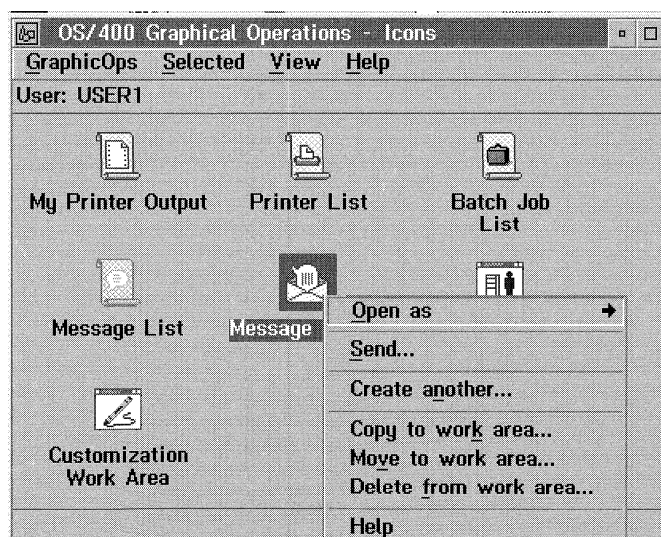
2. Under the Copy to work area option, click on **Operator work area**.
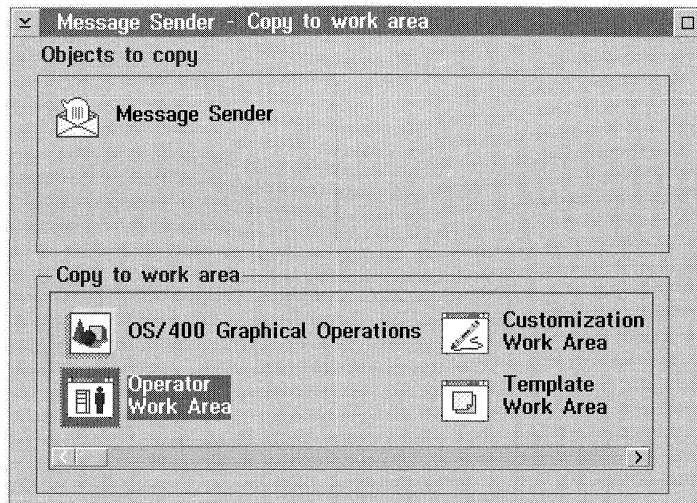
3. Under New name, click on **Name** and type the new title, IPL Message. Then, click on **Copy.** The new message sender appears in the Operator Work Area.
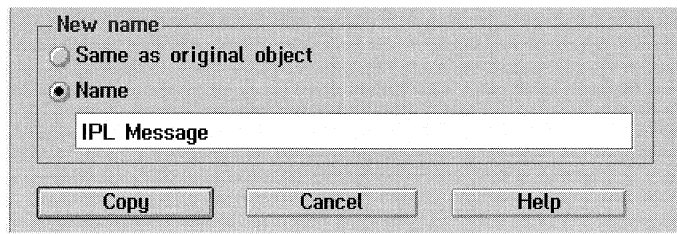
4. Next, you want to change the settings. In the Operator Work Area, click on the **IPL Message** icon and open it to the Settings view.
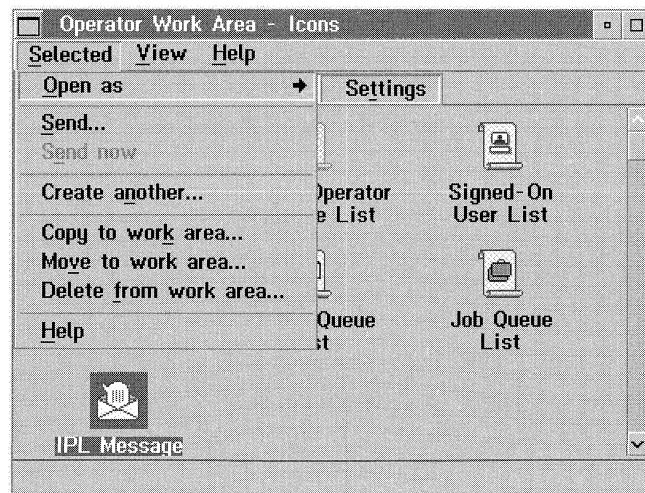
5. You want to be able to double-click on the IPL Message icon and have the message sent right away. Change the **Double-click action** setting to Send now.

```
┌──────────────────────────────────────────────────────────────┐
│ ▨ IPL Message - Settings                              □  □   │
│ Sender  View  Help                                           │
│                                                              │
│  ┌─────────────────────────────┐  ┌────────────────────────┐ │
│  │ Setting        │ Value      │  │ Double-click action    │ │
│  │ Visual options │          ▲ │  │ Open as settings     ▲ │ │
│  │  ⌀ Title       │ IPL Message│  │ Send...                │ │
│  │  ⌀ Double-click action Send now│ Send now              │ │
│  │  ⌀ Menu style  │ Full       │  │                        │ │
│  └─────────────────────────────┘  └────────────────────────┘ │
└──────────────────────────────────────────────────────────────┘
```
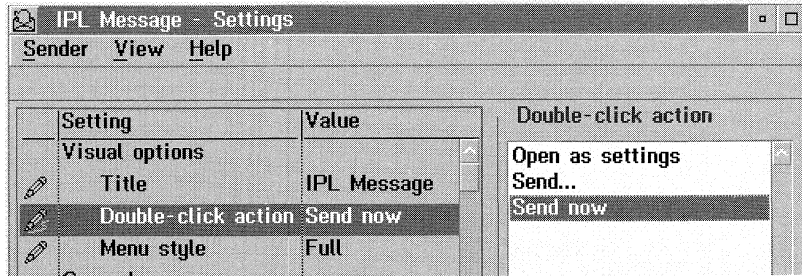
6. Change the **Message** setting to the following:

```
┌──────────────────────────────────────────────────────────────┐
│ ▨ IPL Message - Settings                              □  □   │
│ Sender  View  Help                                           │
│                                                              │
│  ┌─────────────────────────────┐  ┌────────────────────────┐ │
│  │ Setting        │ Value      │  │ Message                │ │
│  │ Visual options │          ▲ │  │ Please sign off.     ▲ │ │
│  │  ⌀ Title       │ IPL Message│  │ System going down in 5 │ │
│  │  ⌀ Double-click action Send now│ minutes.              │ │
│  │  ⌀ Menu style  │ Full       │  │                        │ │
│  │ General        │            │  │                        │ │
│  │  ⌀ Message     │ Please sign off│                       │ │
│  │  ⌀ Needs reply │ No       ▼ │  │                        │ │
│  │  ◄             │        ►   │  │                        │ │
│  └─────────────────────────────┘  └────────────────────────┘ │
└──────────────────────────────────────────────────────────────┘
```
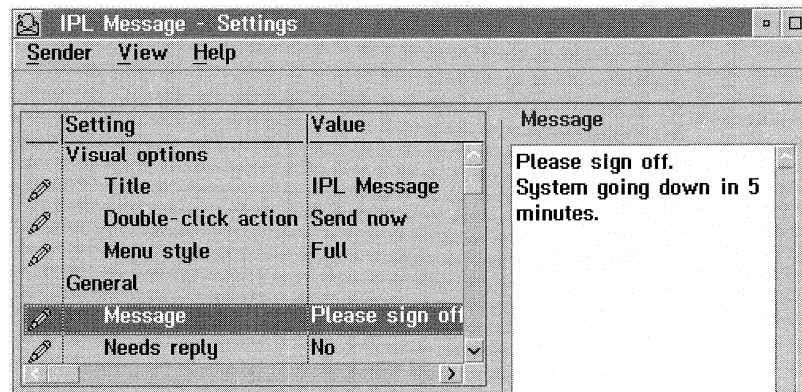
7. Change the **Interrupt** setting to **Yes** so that signed-on users get the message immediately.

```
┌──────────────────────────────────────────────────────────────┐
│ ▨ IPL Message - Settings                              □  □   │
│ Sender  View  Help                                           │
│                                                              │
│  ┌─────────────────────────────┐  ┌────────────────────────┐ │
│  │ Setting        │ Value      │  │ Interrupt              │ │
│  │ General        │          ▲ │  │ ⦿ Yes                  │ │
│  │  ⌀ Message     │ Please sign off│ ○ No                  │ │
│  │  ⌀ Needs reply │ No         │  │                        │ │
│  │  ⌀ Interrupt   │ Yes        │  │                        │ │
│  │  ⌀ Send to     │ All signed-on u│                       │ │
│  │  ⌀ Reply message queu None  ▼ │                        │ │
│  │  ◄             │        ►   │  │                        │ │
│  └─────────────────────────────┘  └────────────────────────┘ │
└──────────────────────────────────────────────────────────────┘
```
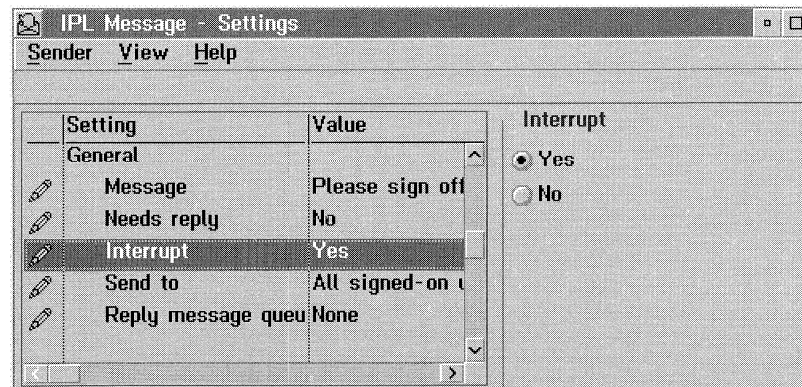
8. Change the **Send to** setting to **All signed-on users** so that the message is sent to all users signed onto the system. Then click on **Save** to save the changed settings.
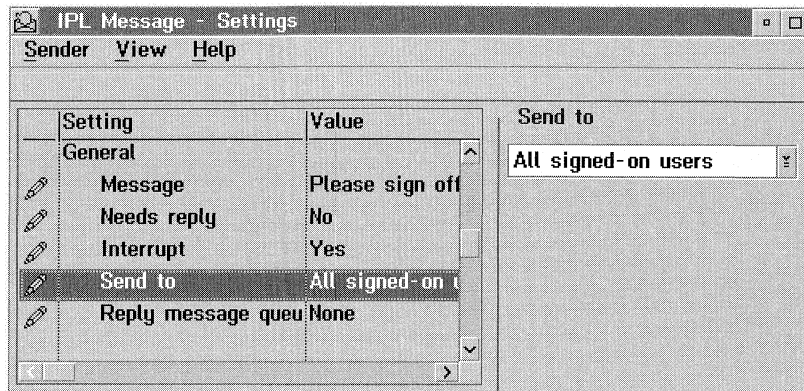
Create Job Work Area

You want to create a new work area to hold all of your objects that allow you to work with jobs.

1. In the Customization Work Area, double-click on the **Template Work Area** icon.
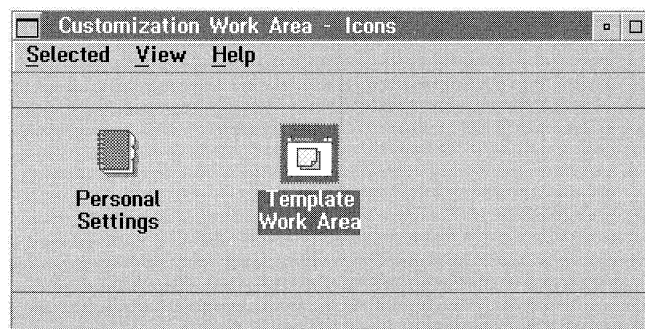
2. In the Template Work Area, click on the **Work Area** icon and then click on the **Selected** menu-bar choice or get a pop-up menu. Click on the **Create another** menu choice.
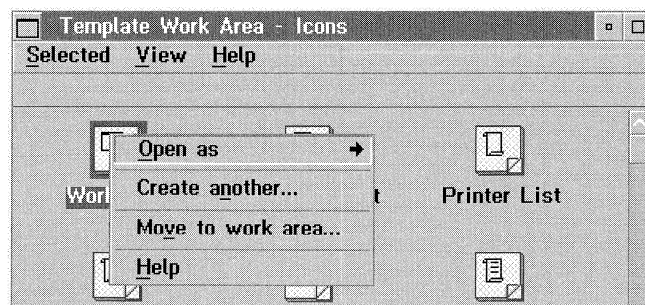
3. Click on the **Title** setting and type the title for the new work area, `Job Work Area`. Click on **Create** to create the new work area. The new work area appears in the OS/400 Graphical Operations Work Area.
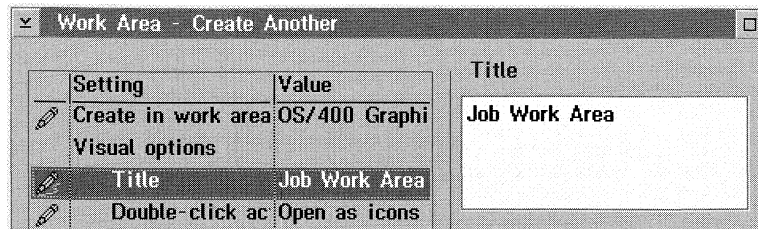
Move Batch Job List to New Job Work Area

You want to move your Batch Job List to the new Job Work Area you just created.

1. In the OS/400 Graphical Operations Work Area, click on the **Batch Job List** icon. While holding down the right mouse button, drag the icon to the Job Work Area icon in the OS/400 Graphical Operations Work Area and release the right mouse button.
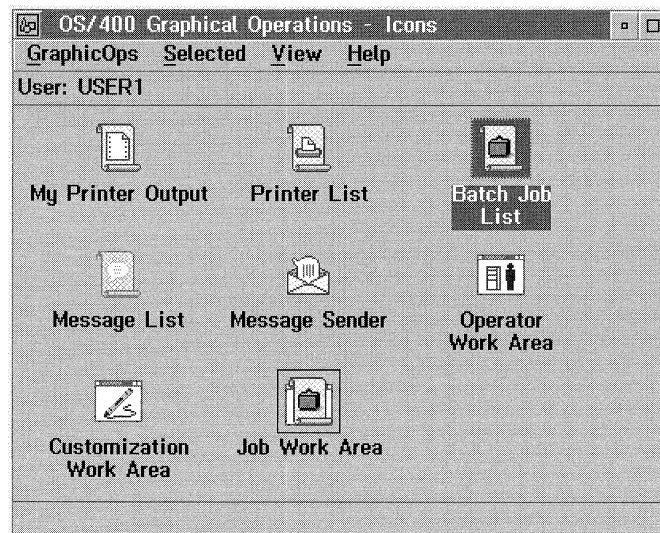
Create Job Submitter and Change Settings

You want to create a job submitter object that submits a job to save your library.

1. In the Template Work Area, click on the **Job Submitter** icon. While holding down the right mouse button, drag the icon to the Job Work Area icon in the OS/400 Graphical Operations Work Area and release the right mouse button. A job submitter is created in the Job Work Area.
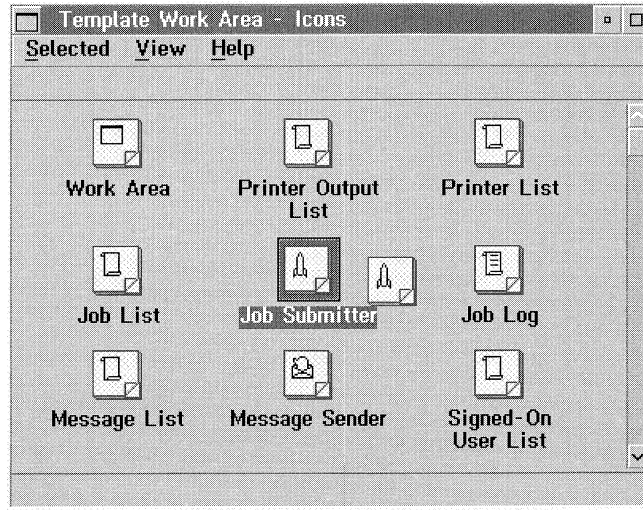
2. Next, you want to change the new job submitter settings so that it will submit the command you want to run.

   Go to the OS/400 Graphical Operations Work Area and double-click on the **Job Work Area** icon.
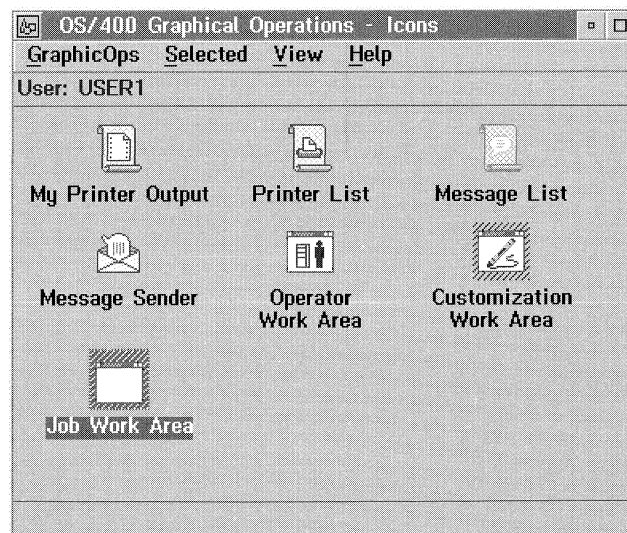
3. Open the Job Submitter icon to a Settings view.
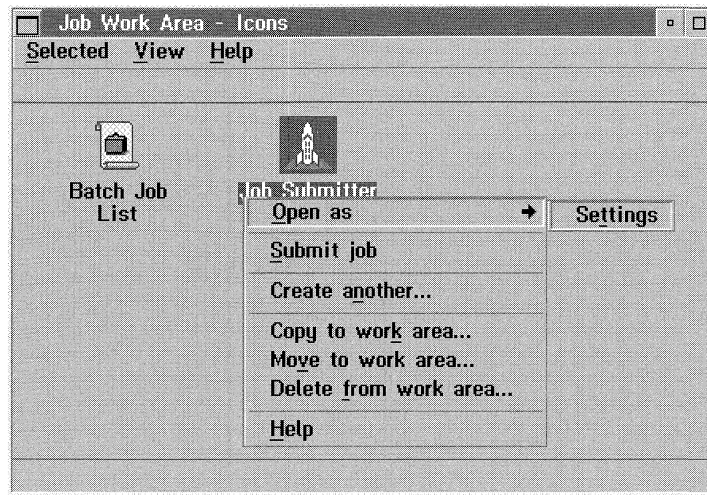
4. Click on the **Title** setting and change the title to `Submit SAVLIB`.
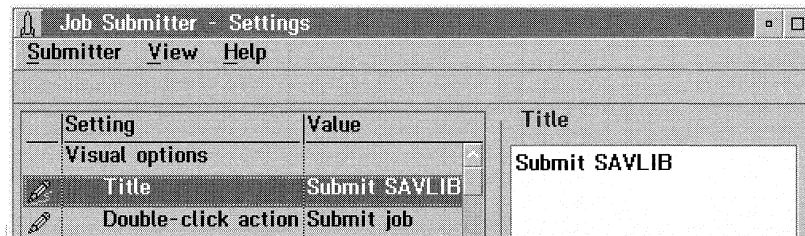
5. Click on the **Command to run** setting and type the following in the input field:
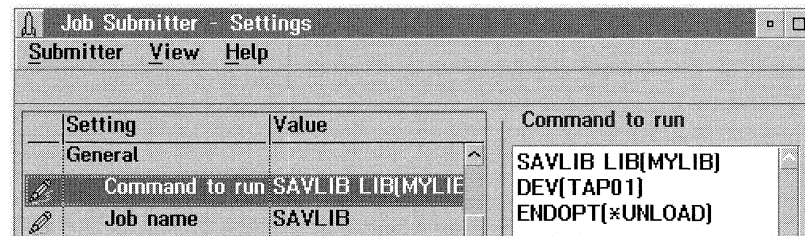
6. Click on the **Job name** setting and then click on **Name** and type `SAVLIB` for the job name.
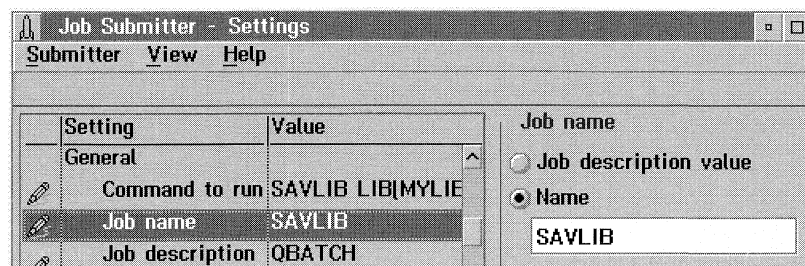
7. Click on the **Job description** setting and then click on **Name** and type QBATCH.
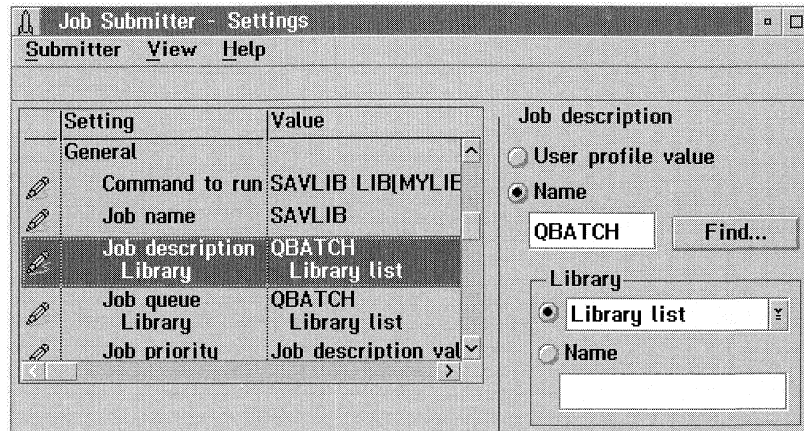
8. Click on the **Job queue** setting and then click on **Name** and type QBATCH. Click on **Save** to save the changed settings.
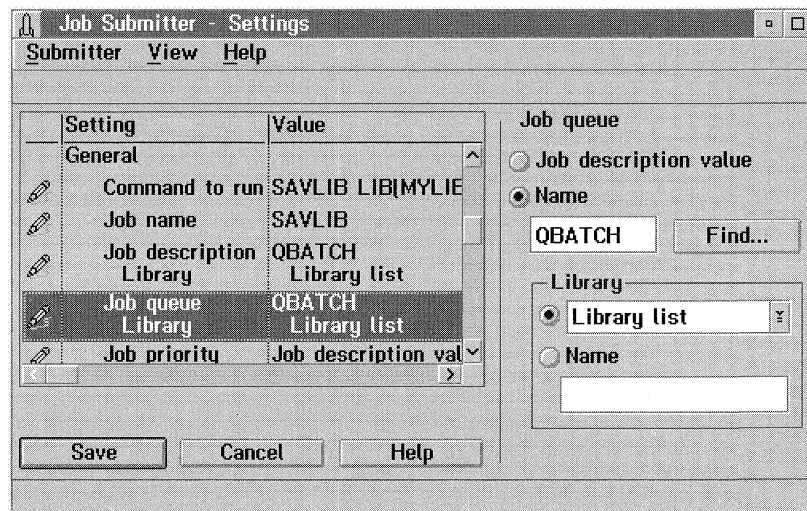
Sign Off and Save Customization Data

You can now sign off of GraphicOps. Make sure you save the customization data when you sign off. (This may happen automatically based on the value specified in your Personal Settings.)

Copy Customization Data

USER1's customization data can now be copied to the other users. Follow these steps to copy the customization data:

1. Sign on to the AS/400 system as a security officer.

2. Use the Set Customization Data (SETCSTDTA) command to copy USER1's customization data to USER1A and USER1B.

Type SETCSTDTA on the command line and press F4 (Prompt).

Type USER1A and USER1B in the *User profile* fields. Type USER1 in the *Customization data to use* field and *YES in the *Replace customization data* field. Press the Enter key.

```
                  Set Customization Data (SETCSTDTA)

 Type choices, press Enter.

 User profile . . . . . . . . .   USER1A       Name
              + for more values   USER1B
 Customization data to use  . . . USER1        Name, *NONE
 Replace customization data . . . *YES         *NO, *YES
```

Chapter 8. Basic Administration Concepts

8-1

This chapter provides a high-level overview of the basic administration concepts. If you have a good understanding of OS/400 security concepts and commands, you will see that OS/400 GraphicOps is based on the same concepts. For more details on administration, refer to Chapter 10, "Advanced Administration Concepts."

What Is GraphicOps Administration?

GraphicOps administration is a way of securing the GraphicOps user interface. Through administration you can decide what objects users can change, what objects they can just display, and what objects they cannot see at all. You can also decide what actions they can perform on the objects.

How Do You Administer GraphicOps?

The tasks for administering can all be done with OS/400 commands on the AS/400 system. Three commands are used to control access to GraphicOps workstation objects:

- EDTWSOAUT, to edit workstation object authority interactively
- GRTWSOAUT, to grant workstation object authority
- RVKWSOAUT, to revoke workstation object authority

These commands are similar in function to the OS/400 security commands, GRTOBJAUT, RVKOBJAUT, and EDTOBJAUT, which control access to AS/400 objects.

The commands use special values to identify each workstation object type and to specify a user's authority to each type.

For example, if you do not want your users to send messages or create objects to send messages, you set the authority to *EXCLUDE for *MSGSND (message sender object) and *TPLMSGSND (message sender template).

Note: If you want to prevent a user from working with *and* creating a type of object, you must exclude the object type and its template.

The *USE and *CHANGE values on the EDTWSOAUT, GRTWSOAUT, and RVKWSOAUT commands give users different authority. For example, if you want a user to be able to open up and display different workstation objects, but not change them, you would set the authority for those workstation object types to *USE. *CHANGE authority allows users to change the workstation objects and is the default authority given to the users.

The next chapter uses these basic commands to set up three model profiles.

Chapter 9. Basic Administration Using Model Profiles

There are many ways you can approach administering OS/400 GraphicOps for your users. In this chapter, we are going to use a simple approach for three different groups of users using model profiles. This simple approach is based on the assumption that each group of users has different authority to GraphicOps objects. The groups vary from being very limited in what they can see and do to being able to do everything.

In this chapter, we describe three model user profiles that you can use to simplify setting up your users. For these model profiles, we will show no customization. You could set up these model profiles as they are or decide to do some customization based on the needs of your users.

You can decide if you want to customize the user interface as part of the administration process. If the objects shipped by default with GraphicOps include the functions you want your users to have, then there is no need to create, modify, or delete objects through customization. Refer to Chapter 7, "Customization," for what you can customize and how you can customize.

The examples in Chapter 11, "Advanced Administration Examples" go into more detail on how you can secure and customize individual objects.

Planning

Probably the most important step in administering and customizing GraphicOps is planning. If you spend some time figuring out just what you want your users' interface to look like and what you want your users to be able to do or not to do, the implementation of your plans is much easier.

You need to decide if you want to follow any of the models in this chapter and what, if any, customization you want to do for your users.

Model 1

Model 1 models a group of users that has limited authority. They will have no authority to change the user interface beyond the defaults set in this model.

Based on their authority, the users:

• Can display their printer output
• Can display printers
• Can display their messages
• Can send messages
• Can display their jobs
• Cannot create, move, copy, delete, or change workstation objects

Based on a user class of *USER in their user profile, these users cannot see the Operator Work Area.

Note: This assumes no customization is being done. If you decide to do any customization and the contents of the work areas are changed in any way, the users may have access to more or fewer objects than what is stated here.

Step 1. Customize

If you want to do any customization for your users, follow these steps now before changing any authorities:

1. Create a model user profile (MODEL1).

2. Sign on as the model user profile and create, move, copy, delete, or change any objects you have decided to customize.

3. Copy the customization data from MODEL1 to any other users.

Refer to Chapter 7, "Customization" for what you can customize and how to customize these objects.

Step 2. Set Authority to Workstation Object Actions

Now that any customization is complete, you can set the authorities to the workstation objects. This is the step that allows the users to only see the objects but not change them.

For Model 1, the users should have the following authorities:

- *USE authority on work areas

  This means the users cannot change the work areas in any way. They cannot create, delete, copy, or move workstation objects.

- *USE authority on all instances of workstation objects

  This means the users cannot change the workstation objects.

- *EXCLUDE authority on all templates

  This means the users cannot use the templates to create workstation objects or AS/400 objects.

Since the default authority to all GraphicOps objects is *CHANGE, you need to change the authorities using the GRTWSOAUT command.

The following planning form shows the authority you want for each workstation object type. Blank planning forms can be found in Appendix F, "Customization and Administration Planning Forms."

Table 9-1. Planning Form 1: Object Authority for Model 1		Authority		
Done	Workstation Object Type (Special Value)	*USE	*CHANGE	*EXCLUDE
	AS/400 object list (*OBJL)*	X		
	Job list (*JOBL)	X		
	Job log (*JOBLOG)*	X		
	Job queue list (*JOBQL)**	X		
	Job submitter (*LAUNCH)*	X		
	List of libraries (*LIBSL)**	X		
	Message list (*MSGL)	X		
	Message sender (*MSGSND)	X		
	Output queue list (*OUTQL)**	X		
	Personal settings (*PRSSET)	X		
	Printer list (*PRTL)	X		
	Printer output list (*PRTOL)	X		
	Signed-on user list (*SGNUSL)**	X		
	Work area (*WRKARA)	X		
	AS/400 Object Templates			
	Job queue template (*TPLJOBQ)			X
	Library template (*TPLLIB)			X
	Message queue template (*TPLMSGQ)			X
	Output queue template (*TPLOUTQ)			X
	Workstation Object Templates			
	AS/400 object list template (*TPLOBJL)			X
	Job list template (*TPLJOBL)			X
	Job log template (*TPLJOBLOG)			X
	Job queue list template (*TPLJOBQL)			X
	Job submitter template (*TPLLAUNCH)			X
	List of libraries template (*TPLLIBSL)			X
	Message sender template (*TPLMSGSND)			X
	Message list template (*TPLMSGL)			X
	Output queue list template (*TPLOUTQL)			X
	Printer output list template (*TPLPRTOL)			X
	Printer list template (*TPLTPRTL)			X
	Signed-on user list template (*TPLSGNUSL)			X
	Work area template (*TPLWRKARA)			X

Notes:

* By default, these objects do not appear in any shipped work areas.
** By default, these objects appear in the Operator Work Area.

Set *USE Authority to Instances of Workstation Objects

First, you want to change the authority for any instances of workstation objects to *USE so the users can only use them but cannot change them.

To change the authority to workstation objects in GraphicOps, use the Edit Workstation Object Authority (EDTWSOAUT) and Grant Workstation Object Authority (GRTWSOAUT) commands.

1. Sign on to the AS/400 system (as security officer).

2. Type EDTWSOAUT on the command line and press F4 (Prompt).

3. On the Edit Workstation Object Aut (EDTWSOAUT) display, type the value for the first workstation object you want to change from Planning Form 1, *OBJL, and press the Enter key.

```
                Edit Workstation Object Aut (EDTWSOAUT)

 Type choices, press Enter.

 Workstation object type:
                                    *OBJL          *TPLWRKARA, *WRKARA...
```

4. On the Edit Object Authority display, press F6 (Add new users).

```
                      Edit Object Authority

 Object . . . . . . . :  QGYUOBJL      Object type . . . . :  *DTAARA
   Library . . . . . :    QUSRSYS      Owner . . . . . . . :  QSYS

 Type changes to current authorities, press Enter.

   Object secured by authorization list . . . . . . . . . . .   *NONE

                  Object
 User             Authority
 QSYS             *ALL
 *PUBLIC          *CHANGE




                                                            Bottom
 F3=Exit   F5=Refresh   F6=Add new users   F10=Grant with reference object
 F11=Display detail       F12=Cancel          F17=Top   F18=Bottom
 (C) COPYRIGHT IBM CORP. 1980, 1993.
```

5. On the Add New Users display, type the model user profile name, if you created one, along with the other users you want to have the same authority. For this example, we are using profiles MODEL1, USER1A, and USER1B. Type *USE in the *Object Authority* column and press the Enter key.

```
                         Add New Users

 Object . . . . . . . :  QGYUOBJL      Object type . . . . :  *DTAARA
   Library . . . . . :    QUSRSYS      Owner . . . . . . . :  QSYS

 Type new users, press Enter.

                  Object
 User             Authority
 MODEL1           *USE
 USER1A           *USE
 USER1B           *USE
```

6. On the Edit Object Authority display, press F3 (Exit).

```
                      Edit Object Authority

 Object . . . . . . . :  QGYUOBJL      Object type . . . . :  *DTAARA
   Library . . . . . :    QUSRSYS      Owner . . . . . . . :  QSYS

 Type changes to current authorities, press Enter.

   Object secured by authorization list . . . . . . . . . . .   *NONE

                  Object
 User             Authority
 QSYS             *ALL
 MODEL1           *USE
 USER1A           *USE
 USER1B           *USE
 *PUBLIC          *CHANGE



                                                            More...
 F3=Exit   F5=Refresh   F6=Add new users   F10=Grant with reference object
 F11=Display detail       F12=Cancel          F17=Top   F18=Bottom
 Object authorities changed.
```

7. Type GRTWSOAUT on the command line and press F4 (Prompt).

8. On the Grant Workstation Object Aut (GRTWSOAUT) display, type the value for the next workstation object you want to change from Planning Form 1, *JOBLOG, in the *Workstation object type* field. Type *OBJL in the *Reference workstation object* field and press the Enter key.

```
                     Grant Workstation Object Aut (GRTWSOAUT)

 Type choices, press Enter.

 Workstation object type:
                                 > *JOBLOG       *TPLWRKARA, *WRKARA...
 Users . . . . . . . . . . . . . >              Name, *PUBLIC
                                 >
               + for more values >
 Authority . . . . . . . . . . .   *CHANGE      *CHANGE, *ALL, *USE...
               + for more values
 Authorization list . . . . . . .  _____     Name
 Reference workstation object:
                                   *OBJL_____    *TPLWRKARA, *WRKARA...
```

9. Press F9 (Retrieve) to retrieve the command and then change the workstation object type (WSOTYPE) to the next one you want to change from Planning Form 1, *JOBL. Press the Enter key.

```
 Selection or command
 ===> GRTWSOAUT WSOTYPE(*JOBL) REFWSO(*OBJL)_____

 F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel   F13=Information Assistant
 F23=Set initial menu
```

10. Press F9 (Retrieve) to retrieve the command again and change the workstation object type (WSOTYPE) to the next one you want to change from Planning Form 1, *JOBLOG. Press the Enter key. Continue doing this for the remaining objects represented by these special values:

- *JOBQL
- *LAUNCH
- *LIBSL
- *MSGL
- *MSGSND
- *OUTQL
- *PRSSET
- *PRTL
- *PRTOL
- *SGNUSL
- *WRKARA

Set *EXCLUDE Authority to Templates

Next, you want to change the authorities for all of the templates to *EXCLUDE:

- Job Queue Template (*TPLJOBQ)
- Library Template (*TPLLIB)
- Message Queue Template (*TPLMSGQ)
- Output Queue Template (*TPLOUTQ)
- AS/400 Object List Template (*TPLOBJL)
- Job List Template (*TPLJOBL)
- Job Log Template (*TPLJOBLOG)
- Job Queue List Template (*TPLJOBQL)
- Job Submitter Template (*TPLLAUNCH)
- List of Libraries Template (*TPLLIBSL)
- Message Sender Template (*TPLMSGSND)
- Message List Template (*TPLMSGL)
- Output Queue List Template (*TPLOUTQL)

- Printer Output List Template (*TPLPRTOL)
- Printer List Template (*TPLPRTL)
- Signed-On User List Template (*TPLSGNUSL)
- Work Area Template (*TPLWRKARA)

1. Type EDTWSOAUT on the command line and press F4 (Prompt).

2. On the Edit Workstation Object Aut (EDTWSOAUT) display, type the value for the first template from Planning Form 1, *TPLJOBQ in the *Workstation object type* field. Press the Enter key.

```
          Edit Workstation Object Aut (EDTWSOAUT)

Type choices, press Enter.

Workstation object type:
                              *TPLJOBQ      *TPLWRKARA, *WRKARA...
```

3. On the Edit Object Authority display, press F6 (Add new users).

```
                         Edit Object Authority

Object . . . . . . . :   QGYTJOBQ        Object type  . . . . :   *DTAARA
   Library  . . . . . :   QUSRSYS         Owner  . . . . . . . :   QSYS

Type changes to current authorities, press Enter.

   Object secured by authorization list . . . . . . . . . . .   *NONE

                Object
User            Authority
QSYS            *ALL
*PUBLIC         *CHANGE




                                                          Bottom
F3=Exit    F5=Refresh   F6=Add new users   F10=Grant with reference object
F11=Display detail      F12=Cancel          F17=Top   F18=Bottom
(C) COPYRIGHT IBM CORP. 1980, 1993.
```

4. On the Add New Users display, type the names of the users, MODEL1, USER1A, and USER1B. Type *EXCLUDE in the *Object Authority* column and press the Enter key.

```
                          Add New Users

Object . . . . . . . :   QGYTJOBQ        Object type  . . . . :   *DTAARA
   Library  . . . . . :   QUSRSYS         Owner  . . . . . . . :   QSYS

Type new users, press Enter.

                Object
User            Authority
MODEL1          *EXCLUDE
USER1A          *EXCLUDE
USER1B          *EXCLUDE
_____        _____
```

5. On the Edit Object Authority display, press F3 (Exit).

```
                         Edit Object Authority

Object . . . . . . . :   QGYTJOBQ        Object type . . . . :   *DTAARA
  Library . . . . . :    QUSRSYS         Owner . . . . . . . :   QSYS

Type changes to current authorities, press Enter.

  Object secured by authorization list . . . . . . . . . . .   *NONE

            Object
User        Authority
QSYS        *ALL
USER1B      *EXCLUDE
USER1A      *EXCLUDE
MODEL1      *EXCLUDE
*PUBLIC     *CHANGE



                                                               Bottom
F3=Exit   F5=Refresh   F6=Add new users   F10=Grant with reference object
F11=Display detail     F12=Cancel         F17=Top   F18=Bottom
```

6. Type GRTWSOAUT on the command line and press F4 (Prompt).

7. On the Grant Workstation Object Aut (GRTWSOAUT) display, type the value for the next template you want to change from Planning Form 1, *TPLLIB, in the *Workstation object type* field. Type *TPLJOBQ in the *Reference workstation object* field and press the Enter key.

```
              Grant Workstation Object Aut (GRTWSOAUT)

Type choices, press Enter.

Workstation object type:
                                    *TPLLIB      *TPLWRKARA, *WRKARA...
Users . . . . . . . . . . . . .                  Name, *PUBLIC
              + for more values
Authority . . . . . . . . . . .     *CHANGE      *CHANGE, *ALL, *USE...
              + for more values
Authorization list . . . . . . .                 Name
Reference workstation object:
                                    *TPLJOBQ     *TPLWRKARA, *WRKARA...
```

8. Press F9 (Retrieve) to retrieve the command and then change the workstation object type (WSOTYPE) for the remaining templates represented by these special values:

   - *TPLMSGQ
   - *TPLOUTQ
   - *TPLOBJL
   - *TPLJOBL
   - *TPLJOBLOG
   - *TPLJOBQL
   - *TPLLAUNCH
   - *TPLLIBSL
   - *TPLMSGSND
   - *TPLMSGL
   - *TPLOUTQL
   - *TPLPRTOL
   - *TPLPRTL
   - *TPLSGNUSL
   - *TPLWRKARA

```
Selection or command
===> GRTWSOAUT WSOTYPE(*TPLMSGQ) REFWSO(*TPLJOBQ)

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel   F13=Information Assistant
F23=Set initial menu
```

Step 3. Set Authority to AS/400 Resource Actions

If you want to secure any OS/400 commands or programs for actions you do not want users to perform on AS/400 resources, set the authority for the users to those commands and programs now. For this model, you do not need to change any authority. Use Planning Form 5 in Appendix F, "Customization and Administration Planning Forms," if you want to do any further security planning.

Step 4. Test

Now that you have finished setting up the user interface, you should do some kind of verification testing. Sign on to GraphicOps as one of the users and check the user interface. You'll want to verify the following:

- The OS/400 Graphical Operations Work Area contains these objects unless the contents of the work area were changed during customization:
  - Printer output list
  - Printer list
  - Batch job list
  - Message list
  - Message sender
  - Customization work area

- Any customization changes you made are correct.

- The menu choices for each workstation object and AS/400 resource are correct. For example, Create another, Move to work area, Copy to work area, and Delete from work area should not appear for workstation objects.

Model 2

This group of users has more authority than in Model 1, but still cannot do everything. This model is aimed more toward operators.

Based on their authority, the users:

- Can work with all objects in the OS/400 Graphical Operations Work Area
- Can work with all objects in the Operator Work Area
- Can change workstation objects
- Cannot create, move, copy, or delete workstation objects
- Can create new AS/400 objects

Step 1. Customize

If you want to do any customization for your users, follow these steps now before changing any authorities:

1. Create a model user profile (MODEL2).

2. Sign on as the model user profile and create, move, copy, delete, or change any objects you have decided to customize.

3. Copy the customization data from MODEL2 to any other users.

Refer to Chapter 7, "Customization" for what you can customize and how to customize these objects.

Step 2. Set Authority to Workstation Object Actions

Now that any customization is complete, you can set the authorities to the workstation objects. For Model 2, the users should have the following authorities:

- *USE authority on the work areas

  This means the users cannot change the work areas in any way. They cannot create, delete, copy, or move workstation objects.

- *CHANGE authority on all instances of workstation objects

  This means the users can make changes to the workstation objects. For example, they can change what is displayed in a list.

- *EXCLUDE authority on all workstation object templates

  This means the users cannot create workstation objects.

- *CHANGE authority on all AS/400 object templates

  This means the users can create AS/400 objects.

Since the default authority to all GraphicOps objects is *CHANGE, you need to change the authority for the work area object and the templates using the GRTWSOAUT command.

The following planning form shows the authority you want for the workstation object types. Those with marks in the *Done* column have the default authority. Blank planning forms can be found in Appendix F, "Customization and Administration Planning Forms."

Table 9-2. Planning Form 1: Object Authority for Model 2		Authority		
Done	Workstation Object Type (Special Value)	*USE	*CHANGE	*EXCLUDE
—	AS/400 object list (*OBJL)*		X	
—	Job list (*JOBL)		X	
—	Job log (*JOBLOG)*		X	
—	Job queue list (*JOBQL)		X	
—	Job submitter (*LAUNCH)*		X	
—	List of libraries (*LIBSL)		X	
—	Message list (*MSGL)		X	
—	Message sender (*MSGSND)		X	
—	Output queue list (*OUTQL)		X	
—	Personal settings (*PRSSET)		X	
—	Printer list (*PRTL)		X	
—	Printer output list (*PRTOL)		X	
—	Signed-on user list (*SGNUSL)		X	
	Work area (*WRKARA)	X		
	AS/400 Object Templates			
	Job queue template (*TPLJOBQ)		X	
	Library template (*TPLLIB)		X	
	Message queue template (*TPLMSGQ)		X	
	Output queue template (*TPLOUTQ)		X	
	Workstation Object Templates			
	AS/400 object list template (*TPLOBJL)			X
	Job list template (*TPLJOBL)			X
	Job log template (*TPLJOBLOG)			X
	Job queue list template (*TPLJOBQL)			X
	Job submitter template (*TPLLAUNCH)			X
	List of libraries template (*TPLLIBSL)			X
	Message sender template (*TPLMSGSND)			X
	Message list template (*TPLMSGL)			X
	Output queue list template (*TPLOUTQL)			X
	Printer output list template (*TPLPRTOL)			X
	Printer list template (*TPLTPRTL)			X
	Signed-on user list template (*TPLSGNUSL)			X
	Work area template (*TPLWRKARA)			X

Note:

*   By default, these objects do not appear in any shipped work areas.

Set *USE Authority to Work Areas

First, you want to change the authority to the work areas to *USE.

1. Sign on to the AS/400 system (as security officer).

2. Type EDTWSOAUT on the command line and press F4 (Prompt).

3. On the Edit Workstation Object Aut (EDTWSOAUT) display, type the value for the workstation object you want to change from Planning Form 1, *WRKARA, and press the Enter key.

```
              Edit Workstation Object Aut (EDTWSOAUT)

Type choices, press Enter.

Workstation object type:
                        *WRkARA      *TPLWRKARA, *WRKARA...
```

4. On the Edit Object Authority display, press F6 (Add new users).

```
                        Edit Object Authority

Object . . . . . . . :   QGYUWRKARA      Object type . . . . :    *DTAARA
   Library . . . . . :   QUSRSYS         Owner . . . . . . . :    QSYS

Type changes to current authorities, press Enter.

   Object secured by authorization list . . . . . . . . . . .    *NONE____

           Object
User       Authority
QSYS       *ALL_
*PUBLIC    *CHANGE_



                                                               Bottom
F3=Exit   F5=Refresh   F6=Add new users   F10=Grant with reference object
F11=Display detail     F12=Cancel         F17=Top   F18=Bottom
(C) COPYRIGHT IBM CORP. 1980, 1993.
```

5. On the Add New Users display, type the model user profile name, if you created one, along with the other users you want to have the same authority. Type *USE in the *Object Authority* column and press the Enter key.

```
                         Add New Users

Object . . . . . . . :   QGYUWRKARA      Object type . . . . :    *DTAARA
   Library . . . . . :   QUSRSYS         Owner . . . . . . . :    QSYS

Type new users, press Enter.

           Object
User       Authority
MODEL2_    *USE
USER1C_    *USE
USER1D_    *USE

_____    _____
```

6. On the Edit Object Authority display, press F3 (Exit).

```
                        Edit Object Authority

Object . . . . . . . :   QGYUWRKARA      Object type . . . . :    *DTAARA
   Library . . . . . :   QUSRSYS         Owner . . . . . . . :    QSYS

Type changes to current authorities, press Enter.

   Object secured by authorization list . . . . . . . . . . .    *NONE____

           Object
User       Authority
QSYS       *ALL_
*PUBLIC    *CHANGE_
MODEL2     *USE_
USER1C     *USE_
USER1D     *USE_



                                                               More...
F3=Exit   F5=Refresh   F6=Add new users   F10=Grant with reference object
F11=Display detail     F12=Cancel         F17=Top   F18=Bottom
Object authorities changed.
```

Set *EXCLUDE Authority to Workstation Object Templates

Next, you want to change the authorities for all of the workstation object templates to *EXCLUDE:

- AS/400 Object List Template (*TPLOBJL)
- Job List Template (*TPLJOBL)
- Job Log Template (*TPLJOBLOG)
- Job Queue List Template (*TPLJOBQL)
- Job Submitter Template (*TPLLAUNCH)
- List of Libraries Template (*TPLLIBSL)
- Message Sender Template (*TPLMSGSND)
- Message List Template (*TPLMSGL)
- Output Queue List Template (*TPLOUTQL)
- Printer Output List Template (*TPLPRTOL)
- Printer List Template (*TPLPRTL)
- Signed-On User List Template (*TPLSGNUSL)
- Work Area Template (*TPLWRKARA)

1. Type EDTWSOAUT on the command line and press F4 (Prompt).

2. On the Edit Workstation Object Aut (EDTWSOAUT) display, type the value for the first template from Planning Form 1, *TPLOBJL, and press the Enter key.

```
                 Edit Workstation Object Aut (EDTWSOAUT)

Type choices, press Enter.

Workstation object type:
                            *TPLOBJL      *TPLWRKARA, *WRKARA...
```

3. On the Edit Object Authority display, press F6 (Add new users).

```
                          Edit Object Authority

Object . . . . . . . :   QGYTOBJL      Object type  . . . . :   *DTAARA
   Library . . . . . :   QUSRSYS       Owner  . . . . . . . :   QSYS

Type changes to current authorities, press Enter.

   Object secured by authorization list . . . . . . . . . . .   *NONE

             Object
User         Authority
QSYS         *ALL
*PUBLIC      *CHANGE

                                                                Bottom
F3=Exit   F5=Refresh   F6=Add new users   F10=Grant with reference object
F11=Display detail     F12=Cancel         F17=Top   F18=Bottom
(C) COPYRIGHT IBM CORP. 1980, 1993.
```

4. On the Add New Users display, type the names of the users, MODEL2, USER1C, and USER1D. Type *EXCLUDE in the *Object Authority* column and press the Enter key.

```
                               Add New Users

Object . . . . . . . :   QGYTOBJL      Object type . . . . :    *DTAARA
   Library . . . . . :   QUSRSYS       Owner . . . . . . . :    QSYS

Type new users, press Enter.

            Object
User        Authority
MODEL2      *EXCLUDE
USER1C      *EXCLUDE
USER1D      *EXCLUDE
_____     _____
```

5. On the Edit Object Authority display, press F3 (Exit).

```
                           Edit Object Authority

Object . . . . . . . :   QGYTOBJL      Object type . . . . :    *DTAARA
   Library . . . . . :   QUSRSYS       Owner . . . . . . . :    QSYS

Type changes to current authorities, press Enter.

   Object secured by authorization list . . . . . . . . . . .    *NONE_____

            Object
User        Authority
QSYS        *ALL_
MODEL2      *EXCLUDE
USER1C      *EXCLUDE
USER1D      *EXCLUDE
*PUBLIC     *CHANGE




                                                              Bottom
F3=Exit    F5=Refresh    F6=Add new users   F10=Grant with reference object
F11=Display detail    F12=Cancel    F17=Top    F18=Bottom
```

6. Type GRTWSOAUT on the command line and press F4 (Prompt).

7. On the Grant Workstation Object Aut (GRTWSOAUT) display, type the value for the next workstation object template you want to change from Planning Form 1, *TPLJOBL, in the *Workstation object type* field. Type *TPLOBJL in the *Reference workstation object* field and press the Enter key.

```
             Grant Workstation Object Aut (GRTWSOAUT)

Type choices, press Enter.

Workstation object type:
                                   *TPLJOBL_     *TPLWRKARA, *WRKARA...
Users . . . . . . . . . . . . .    _____       Name, *PUBLIC
              + for more values    _____
Authority . . . . . . . . . . .    *CHANGE_      *CHANGE, *ALL, *USE...
              + for more values
Authorization list . . . . . . .   _____       Name
Reference workstation object:
                                   *TPLOBJL_     *TPLWRKARA, *WRKARA...
```

8. Press F9 to retrieve the command and change the workstation object type (WSOTYPE) for the remaining workstation object templates represented by these special values:

- *TPLJOBLOG
- *TPLJOBQL
- *TPLLAUNCH
- *TPLLIBSL
- *TPLMSGSND
- *TPLMSGL
- *TPLOBJL
- *TPLOUTQL
- *TPLPRTOL
- *TPLPRTL
- *TPLSGNUSL
- *TPLWRKARA

```
Selection or command
===> GRTWSOAUT WSOTYPE(*TPLJOBLOG) REFWSO(*TPLOBJL)

F3=Exit    F4=Prompt    F9=Retrieve    F12=Cancel    F13=Information Assistant
F23=Set initial menu
```

Step 3. Set Authority to AS/400 Resource Actions

If you wanted to secure any OS/400 commands or programs for actions you do not want users to perform on AS/400 resources, you would set the authority for the users to those commands and programs now. For this model, you do not need to change any authority. Use Planning Form 5 in Appendix F, "Customization and Administration Planning Forms," if you want to do any further security planning.

Step 4. Test

Now that you have finished setting up the user interface, you should do some kind of verification testing. Sign on to GraphicOps as one of the users and check the user interface. You'll want to verify the following:

- All of the work areas should contain the shipped objects unless the contents of the work areas were changed during customization.

- Any customization changes you made are correct.

- The menu choices for each workstation object and AS/400 resource are correct. For example, Create another, Move to work area, Copy to work area, and Delete from work area should not appear for workstation objects. You should be able to change the settings for a workstation object.

Model 3

This group of users basically has the authority to do anything in GraphicOps. They can change the work areas, create new objects, and move and delete objects.

Model 3 is the easiest profile to set up for your users because you do not have to make any changes. You can use the defaults.

For Model 3, the biggest effort is in deciding what customization you want to do ahead of time for these users. Because these users have the authority to customize their user interface, you may decide to let them do their own.

This set of users has *CHANGE authority to all objects.

Step 1. Customize

If you want to do any customization for your users, follow these steps now before changing any authorities:

1. Create a model user profile (MODEL3).
2. Sign on as the model user profile and create, move, copy, delete, or change any objects you have decided to customize.
3. Copy the customization data from MODEL3 to any other users.

Refer to Chapter 7, "Customization" for what you can customize and how to customize these objects.

Step 2. Set Authority to Workstation Object Actions

Now that any customization is complete, you can set the authorities to the workstation objects. For Model 3, the users should have:

- *CHANGE authority to everything

Since the default authority is *CHANGE, you do not need to make any changes.

Step 3. Set Authority to AS/400 Resource Actions

If you wanted to secure any OS/400 commands or programs for actions you do not want users to perform on AS/400 resources, you would set the authority for the users to those commands and programs now. For this model, you do not need to change any authority. Use Planning Form 5 in Appendix F, "Customization and Administration Planning Forms," if you want to do any further security planning.

Step 4. Test

If you have made any customization changes to the user interface, you should do some kind of verification testing. Sign on to GraphicOps as one of the users and check the user interface. You'll want to verify the following:

- You can work with all objects in all work areas.
- Any customization changes you made are correct.
- The menu choices for each workstation object and AS/400 resource are correct. All menu choices should be available for the workstation objects.

Chapter 10. Advanced Administration Concepts

This chapter describes the full details of OS/400 GraphicOps administration if you want more information or want to do more advanced administration.

To start securing GraphicOps, there are some fundamental questions you need to answer. In this chapter, we will ask the questions and then explain how you can start your administration tasks. Chapter 11, "Advanced Administration Examples" contains some step-by-step examples.

The following sections describe the ways to secure GraphicOps by:

- Controlling access to objects in work areas
- Controlling access to the operator work area
- Controlling authority to workstation object actions
- Controlling authority to AS/400 resource actions

Controlling Access to Objects in Work Areas

What workstation objects don't you want your users to see?

Based on the needs of a user, or a group of users, you have the ability to exclude them from certain types of GraphicOps objects. For example, the OS/400 Graphical Operations Work Area contains a Batch Jobs List. Maybe you don't want some users to be concerned with jobs. You can exclude the users from the objects that display information about jobs.

Three commands are used to control access to GraphicOps workstation objects:

- EDTWSOAUT, to edit workstation object authority
- GRTWSOAUT, to grant workstation object authority
- RVKWSOAUT, to revoke workstation object authority

These commands are similar in function to the OS/400 security commands, GRTOBJAUT, RVKOBJAUT, and EDTOBJAUT, which control access to AS/400 objects. Refer to Appendix E, "Authorization Commands for Workstation Objects" for more information on these commands.

The commands use special values to identify each workstation object type and to specify a user's authority to each type. From Table 10-1, find the special values associated with the workstation objects you don't want your users to see, and then set *EXCLUDE authority using the commands.

For example, if you do not want your users to send messages or create objects to send messages, you would set the authority to *EXCLUDE for *MSGSND (message sender object) and *TPLMSGSND (message sender template).

Note: If you want to prevent a user from working with and creating a type of object, you must exclude the object type and its template.

Workstation Object Special Values

Table 10-1 shows the special values assigned to workstation objects:

Table 10-1 (Page 1 of 2). Administration: Special Values for Workstation Objects

Workstation Object	Special Value
AS/400 object list	*OBJL
Job list	*JOBL
Job log	*JOBLOG
Job queue list	*JOBQL

Workstation Object	Special Value
Job submitter	*LAUNCH
List of libraries	*LIBSL
Message list	*MSGL
Message sender	*MSGSND
Output queue list	*OUTQL
Personal settings	*PRSSET
Printer list	*PRTL
Printer output list	*PRTOL
Signed-on user list	*SGNUSL
Work area	*WRKARA
Job queue template	*TPLJOBQ
Library template	*TPLLIB
Message queue template	*TPLMSGQ
Output queue template	*TPLOUTQ
AS/400 object list template	*TPLOBJL
Job list template	*TPLJOBL
Job log template	*TPLJOBLOG
Job queue list template	*TPLJOBQL
Job submitter template	*TPLLAUNCH
List of libraries template	*TPLLIBSL
Message sender template	*TPLMSGSND
Message list template	*TPLMSGL
Output queue list template	*TPLOUTQL
Printer output list template	*TPLPRTOL
Printer list template	*TPLTPRTL
Signed-on user list template	*TPLSGNUSL
Work Area template	*TPLWRKARA

Controlling Access to the Operator Work Area

The user class of a GraphicOps user controls which work areas are available.

Users with a user class of *USER specified in their user profile can work with the objects in the OS/400 Graphical Operations Work Area. Users with a higher user class have access to the Operator Work Area, which contains objects normally used by system operators.

You can exclude users from the Operator Work Area by giving them a user class of *USER. These users will have access to all work areas except the Operator Work Area.

Controlling Authority to Workstation Object Actions

What actions do you want users to be able to perform on workstation objects?

Once you have excluded users from workstation objects you don't want them to see, you need to figure out what you want them to be able to do with the workstation objects that are still available. For example, do you want them to be able to change their printer output list to see output on all printers? Do you want them to be able to create new job lists?

The actions to consider are:

- Display settings only
- Change settings
- Create another
- Copy to work area
- Move to work area
- Delete from work area

Use the *USE and *CHANGE values on the EDTWSOAUT, GRTWSOAUT, and RVKWSOAUT commands to give users different authority, as shown in the following tables. (*CHANGE is the default authority.)

Table 10-2 shows the minimum authority needed to perform the different actions listed for the workstation object templates:

- AS/400 object list template
- Job list template
- Job log template
- Job queue list template
- Job submitter template
- List of libraries template
- Message list template
- Message sender template
- Output queue list template
- Printer output list template
- Printer list template
- Signed-on user list template
- Work area template

For example, to be able to create a new workstation object from a template, you need a minimum authority of *USE for the template and *CHANGE for work areas.

Table 10-2. Authority for Workstation Object Template Actions

Workstation Object Template Actions	Minimum Authority Required			
	Work Area (*WRKARA)	Instance (*XXXX)	Template (*TXXXX)	AS/400 Resources
Display settings only	*USE	—	*USE	—
Change settings	*USE	—	*CHANGE	—
Create another	*CHANGE	—	*USE	—
Move to work area	*CHANGE	—	*USE	—
Note: *XXXX and *TXXXX refer to the special values that represent the instance or template as shown in Table 10-1 on page 10-1.				

Table 10-3 shows the minimum authority needed to perform the different actions listed for the AS/400 object templates:

- Job queue template
- Library template
- Message queue template
- Output queue template

Table 10-3. Authority for AS/400 Object Template Actions

AS/400 Object Template Actions	Minimum Authority Required			
	Work Area (*WRKARA)	Instance (*XXXX)	Template (*TXXXX)	AS/400 Resources
Display settings only	*USE	—	*USE	—
Change settings	*USE	—	*CHANGE	—
Create another	*USE	—	*USE	see Note 1
Move to work area	*CHANGE	—	*USE	—
Notes:				
1 Refer to Table 10-6 on page 10-6 for the commands to which you need authority. 2 *XXXX and *TXXXX refer to the special values that represent the instance or template as shown in Table 10-1 on page 10-1.				

Table 10-4 shows the minimum authority needed to perform the different actions listed for the workstation object instances:

- AS/400 object list
- Job list
- Job log
- Job queue list
- Job submitter
- List of libraries
- Message list
- Message sender
- Output queue list
- Personal settings
- Printer list
- Printer output list
- Signed-on user list

Table 10-4. Authority for Workstation Object Instance Actions

Workstation Object Instance Actions	Minimum Authority Required			
	Work Area (*WRKARA)	Instance (*XXXX)	Template (*TXXXX)	AS/400 Resources
Display settings only	*USE	*USE	—	—
Change settings	*USE	*CHANGE	—	—
Create another	*CHANGE	*USE	*USE	—
Copy to work area	*CHANGE	*CHANGE	*USE	—
Move to work area	*CHANGE	*USE	—	—
Delete from work area	*CHANGE	*CHANGE	—	—
Note: *XXXX and *TXXXX refer to the special values that represent the instance or template as shown in Table 10-1 on page 10-1.				

Table 10-5 shows the minimum authority needed to perform the different actions listed for AS/400 resources. Refer to Table 10-6 on page 10-6 for a list of commands and programs to which you need authority.

Table 10-5. Authority for AS/400 Resource Actions				
	Minimum Authority Required			
AS/400 Resource Actions	**Work Area (*WRKARA)**	**Instance (*XXXX)**	**Template (*TXXXX)**	**AS/400 Resources**
Display settings only	*USE	—	—	see Note 1
Change settings	*USE	—	—	see Note 1
Create another	*USE	—	—	see Note 1
Copy	*USE	—	—	see Note 1
Move	*USE	—	—	see Note 1
Delete	*USE	—	—	see Note 1
Shadow	*CHANGE	—	—	—
Move to work area	*CHANGE	—	—	—
Delete from work area	*CHANGE	—	—	—
Notes:				
1 Refer to Table 10-6 on page 10-6 for the commands to which you need authority. 2 *XXXX and *TXXXX refer to the special values that represent the instance or template as shown in Table 10-1 on page 10-1.				

Controlling Authority to AS/400 Resource Actions

What actions do you want users to perform on AS/400 resources?

To use a function in GraphicOps, a user must be authorized to use the corresponding OS/400 command (or program) and to use the resources it uses. Most of the commands and programs ship with a public authority of *USE. Exceptions are indicated with a double asterisk (**) in Table 10-6 on page 10-6.

The OS/400 Edit Object Authority (EDTOBJAUT) command allows you to work with the authority to an AS/400 object interactively. The Grant Object Authority (GRTOBJAUT) and Revoke Object Authority (RVKOBJAUT) commands allow you to specify the authorities for more than one object at a time. To specify the authority for an object, you must have at least the authority that you are granting to another user.

Output queues and job queues have special parameters that control whether users can view or change entries placed on the queue by other users. These parameters can be specified when you create the output queue or job queue. They can also be changed using the Change Output Queue (CHGOUTQ) and Change Job Queue (CHGJOBQ) commands, or by modifying the settings using GraphicOps.

The *Security – Basic* book provides more information about specifying object authority and setting output queue and job queue parameters.

Table 10-6 lists the OS/400 commands that are issued by each GraphicOps function. In this table, AS/400 resources listed are GraphicOps objects. Commands listed are issued in response to requests by those objects. Commands are control language (CL) commands. Commands marked with an asterisk (*) are application program interface (API) programs shipped with OS/400. The objects may have more or less function than the commands listed.

Table 10-6 (Page 1 of 2). OS/400 Commands/Programs Issued by GraphicOps		
GraphicOps AS/400 Resource	**Function**	**OS/400 Command/Program**
Printer Output List	Display	QUSRSPLA *
Printer Output	Display	DSPSPLF
	Change, Move, Print next	CHGSPLFA
	Hold	HLDSPLF
	Send	SNDNETSPLF
	Release	RLSSPLF
	Delete	DLTSPLF
Output Queue	Display	QSPROUTQ *
	Create	CRTOUTQ
	Change	CHGOUTQ
	Hold	HLDOUTQ
	Release	RLSOUTQ
	Clear	CLROUTQ
	Delete	DLTOUTQ
Printer	Display	QSPRWTRI *
	Stop	ENDWTR
	Restart	CHGSPLFA
	Make available, make unavailable	VRYCFG
	Start	STRPRTWTR
	Change	CHGWTR
	Hold	HLDWTR
	Release	RLSWTR, RLSOUTQ, RLSCMNDEV
	Rename	RNMOBJ
Job List	Display	QUSLJOB *
Job	Display	QUSRJOBI *
	Hold	HLDJOB
	Release	RLSJOB
	Move/Change	CHGJOB, CHGACGCDE
	Disconnect	DSCJOB
	Delete/End	ENDJOB
Job Queue	Display	QSPRJOBQ *
	Hold	HLDJOBQ
	Release	RLSJOBQ
	Clear	CLRJOBQ
	Create Another	CRTJOBQ
	Copy	CRTDUPOBJ
	Move	MOVOBJ
	Rename	RNMOBJ
	Delete	DLTJOBQ
Signed-On User List	Display	QEZLSGNU *
	Sign off	ENDJOB
	Temporarily sign off	DSCJOB
	Hold	HLDJOB
	Release	RLSJOB
Message List	Display	DSPMSG
	Delete all not needing reply	CLRMSGQ
Message Sender	Display	QMHLSTM *
	Send message	QEZSNDMG *
	Send break msg	SNDBRKMSG
	Reply	DSPMSG
Message Queue	Display	WRKMSGQ
	Clear	CLRMSGQ

Table 10-6 (Page 2 of 2). OS/400 Commands/Programs Issued by GraphicOps		
GraphicOps AS/400 Resource	**Function**	**OS/400 Command/Program**
	Change/Reset	CHGMSGQ
	Create Another	CRTMSGQ
	Copy	CRTDUPOBJ
	Move	MOVOBJ
	Rename	RNMOBJ
	Delete	DLTMSGQ
Job Log	Display	QMHLJOBL *
AS/400 Object List	Display	QUSLOBJ *
AS/400 Object	Display	QUSROBJD *
	Change	CHGOBJD, CHGOBJOWN
	Copy	CRTDUPOBJ
	Move	MOVOBJ
	Check authority	QUSCUSRA *
	Rename	RNMOBJ
	Delete	DLTxxx (where xxx is object type)
Library	Display	DSPLIB, WRKOBJ
	Change library	CHGLIB
	Change object	CHGOBJD
	Clear	CLRLIB
	Create another	CRTLIB
	Copy	CPYLIB
	Delete	DLTLIB
	Rename	RNMOBJ
	Become current library	CHGCURLIB
Job Submitter	Submit	SBMJOB
Note: Programs (*) are OS/400 GraphicOps application program interface (API) programs.		

Chapter 11. Advanced Administration Examples

This chapter uses two examples to describe each step involved in setting up GraphicOps for a group of end users and a group of operators. These examples show how you can use authorities to exclude objects from users rather than deleting the objects through customization. The examples show you how to combine the tasks of customization and administration.

The examples in this chapter help you go through some planning before taking the steps to set up the user interface. Some planning forms are provided. The forms are already filled in for you. Blank forms are provided in Appendix F, "Customization and Administration Planning Forms" for you to use in planning how you want to set up GraphicOps for your *real* users.

The tasks in this chapter include the following steps:

1. Fill out the planning forms, making the following decisions about your users:

   - What workstation objects should be excluded?
   - What do you want to customize?
   - What actions do you want the users to be able to perform on the workstation objects?
   - What actions do you want the users to be able to perform on the AS/400 resources?

2. Create a model user profile.

3. On the AS/400 system, use the EDTWSOAUT and GRTWSOAUT commands to exclude any objects that do not need to be customized and that you do not want your users to see.

4. Customize:

   a. Sign on to GraphicOps as the model user profile and customize the interface.
   b. Save the customization data.
   c. Copy the model user profile's customization data to the other users.

5. On the AS/400 system, use the EDTWSOAUT and GRTWSOAUT commands to change the authority to the workstation objects that you do not want users to be able to change.

6. Secure any OS/400 commands (or programs) for the actions you do not want users to perform on AS/400 resources.

7. Test.

Some of these steps may be optional based on the example.

End User Example

You have a small department of three end users, USER1, USER1A, and USER1B. You want to set up GraphicOps to give them minimal authority to change the user interface. The users are assumed to have *USER as their user class for this example.

Here are some decisions you have made. The users:

- Can display their printer output
- Can display their messages
- Can send messages
- Need a special message sender
- Can display their jobs
- Cannot create, move, copy, delete, or change workstation objects.

Step 1. Plan

Probably the most important step in administering and customizing GraphicOps is planning. If you spend some time figuring out just what you want your users' interface to look like and what you want your users to be able to do or not to do, the implementation of your plans is much easier.

Identify Authority to Workstation Objects

The first step is to identify what authority you want the users to have to each workstation object. To help out, we've provided a planning form. This form includes all of the objects. When you set the authority, you can check off the object in the *Done* column.

The form in Table 11-1 on page 11-3 has already been filled out for this example. Here are the steps you would go through to do your planning and to fill out the form:

1. Identify Objects to Exclude: The easiest way to start is to first identify the objects the users shouldn't have access to. You will exclude the users from those objects.

Go through and mark the objects in the *EXCLUDE* column that you don't want the users to see at all.

For this example, you will exclude all objects except:

- Job list
- Message list
- Message sender
- Printer output list
- Work area

2. Identify Authority to Workstation Object Actions: What actions do you want the users to be able to perform on workstation objects that are not being excluded?

Decide if the users should have *USE or *CHANGE authority to the objects and mark those. You can refer to the tables in Chapter 10, "Advanced Administration Concepts" for the actions you can perform based on the authority.

First, consider the actions controlled by the work area object (*WRKARA).

- *USE: Authority to use work areas only; users cannot create, move, copy, or delete workstation objects.

- *CHANGE: Users can create, move, copy, and delete workstation objects.

For this example, you don't want the users to change their work areas, so you want to give them *USE authority to the *WRKARA object.

Note: Because the users are specified as user class *USER, they do not have access to the Operator Work Area.

The next objects to look at are the job list, message list, and printer output list. You want your users to be able to display those lists but not change the lists or what's included in the lists. You want to give the users *USE authority to those lists. (*CHANGE authority would allow the users to change the settings for the lists.)

The last object is the message sender. Your users are allowed to send messages (they can use the message sender), but you don't want them to change the message sender settings. You want to give the users *USE authority to the message sender.

3. Identify What You Want to Customize: The next step in planning is to decide how you want the user interface to look. For each workstation object your users can work with, decide if there is anything you would like to customize. If *you*, as the administrator, need to customize or use an object that you are excluding, it is important that you customize or use the object first, then change the authority to *EXCLUDE.

For this example, you want to use the Message Sender Template to create another message sender for the users. Leave the authority at *CHANGE until you've created the message sender, then change the authority to *EXCLUDE.

Identify Authority to AS/400 Resource Actions

What actions do you want the users to be able to perform on AS/400 resources?

If you wanted to prevent users from performing actions on AS/400 resources, such as holding printer output, you could change the user's authority to the associated OS/400 commands. For this example, you don't need to change any command authorities. Refer to Table 10-6 on page 10-6 in Chapter 10, "Advanced Administration Concepts" for more information.

Table 11-1. Planning Form 1: Workstation Object Authority for End User Example

Done	Workstation Object (Special Value)	Authority			Customize
		*USE	*CHANGE	*EXCLUDE	
	AS/400 object list (*OBJL)*			X	
	Job list (*JOBL)	X			
	Job log (*JOBLOG)*			X	
	Job queue list (*JOBQL)			X	
	Job submitter (*LAUNCH)*			X	
	List of libraries (*LIBSL)			X	
	Message list (*MSGL)	X			
	Message sender (*MSGSND)	X			
	Output queue list (*OUTQL)			X	
	Personal settings (*PRSSET)			X	
	Printer list (*PRTL)			X	
	Printer output list (*PRTOL)	X			
	Signed-on user list (*SGNUSL)			X	
	Work area (*WRKARA)	X			
	AS/400 Object Templates				
	Job queue template (*TPLJOBQ)			X	
	Library template (*TPLLIB)			X	
	Message queue template (*TPLMSGQ)			X	
	Output queue template (*TPLOUTQ)			X	
	Workstation Object Templates				
	AS/400 object list template (*TPLOBJL)			X	
	Job list template (*TPLJOBL)			X	
	Job log template (*TPLJOBLOG)			X	
	Job queue list template (*TPLJOBQL)			X	
	Job submitter template (*TPLLAUNCH)			X	
	List of libraries template (*TPLLIBSL)			X	
	Message sender template (*TPLMSGSND)			X	X
	Message list template (*TPLMSGL)			X	
	Output queue list template (*TPLOUTQL)			X	
	Printer output list template (*TPLPRTOL)			X	
	Printer list template (*TPLTPRTL)			X	
	Signed-on user list template (*TPLSGNUSRL)			X	
	Work area template (*TPLWRKARA)			X	

Note:
* By default, these objects do not appear in any shipped work areas.

Step 2. Create Model User Profile

The next step is to create a model user profile that you can use. Create a user profile of USER as your model. Specify *USER for the user class because this user does not need to use the Operator Work Area. You will sign on to GraphicOps as that user and customize the user interface.

Step 3. Exclude Workstation Objects

Before doing any customization on GraphicOps, you can exclude the workstation objects you don't need to customize. This way, when you sign on to GraphicOps as the model user profile, you have fewer objects to work with and you can make sure that the objects you don't want the users to have do not appear.

To exclude workstation objects in GraphicOps, use the Edit Workstation Object Authority (EDTWSOAUT) and Grant Workstation Object Authority (GRTWSOAUT) commands.

1. Sign on to the AS/400 system (as a security officer).

2. Type EDTWSOAUT on the command line and press F4 (Prompt).

3. On the Edit Workstation Object Aut (EDTWSOAUT) display, type the value for the first workstation object you want to exclude from Planning Form 1, *JOBLOG, and press the Enter key.

```
                     Edit Workstation Object Aut (EDTWSOAUT)

Type choices, press Enter.

Workstation object type:
                                   *JOBLOG       *TPLWRKARA, *WRKARA...
```

4. On the Edit Object Authority display, press F6 (Add new users).

```
                              Edit Object Authority

Object . . . . . . . :   QGYUJOBLOG      Object type  . . . . :   *DTAARA
  Library  . . . . . :   QUSRSYS         Owner  . . . . . . . :   QSYS

Type changes to current authorities, press Enter.

  Object secured by authorization list  . . . . . . . . . . .   *NONE

            Object
User        Authority
QSYS        *ALL
*PUBLIC     *CHANGE




                                                                 Bottom
F3=Exit   F5=Refresh   F6=Add new users   F10=Grant with reference object
F11=Display detail    F12=Cancel          F17=Top   F18=Bottom
(C) COPYRIGHT IBM CORP. 1980, 1993.
```

5. On the Add New Users display, type the model user profile name and the names of the end users you want to have the same authority. Type *EXCLUDE in the *Object Authority* column and press the Enter key.

```
                          Add New Users

Object . . . . . . . :   QGYUJOBLOG      Object type  . . . . :   *DTAARA
   Library  . . . . . :   QUSRSYS         Owner  . . . . . . . :   QSYS

Type new users, press Enter.

                   Object
User               Authority
USER_____         *EXCLUDE
USER1_____         *EXCLUDE
USER1A____         *EXCLUDE
USER1B____         *EXCLUDE

_____             _____
```

6. On the Edit Object Authority display, press F3 (Exit).

```
                       Edit Object Authority

Object . . . . . . . :   QGYUJOBLOG      Object type  . . . . :   *DTAARA
   Library  . . . . . :   QUSRSYS         Owner  . . . . . . . :   QSYS

Type changes to current authorities, press Enter.

   Object secured by authorization list  . . . . . . . . . . .     *NONE____

                   Object
User               Authority
QSYS               *ALL_
USER               *EXCLUDE
USER1              *EXCLUDE
USER1A             *EXCLUDE
USER1B             *EXCLUDE
*PUBLIC            *CHANGE_

                                                              More...
F3=Exit    F5=Refresh    F6=Add new users    F10=Grant with reference object
F11=Display detail       F12=Cancel          F17=Top    F18=Bottom
Object authorities changed.
```

7. Type GRTWSOAUT on the command line and press F4 (Prompt).

8. On the Grant Workstation Object Aut (GRTWSOAUT) display, type the value for the next workstation object you want to exclude, *JOBQL, in the *Workstation object type* field. Type *JOBLOG in the *Reference workstation object* field and press the Enter key.

```
             Grant Workstation Object Aut (GRTWSOAUT)

Type choices, press Enter.

Workstation object type:
                              > *JOBQL____      *TPLWRKARA, *WRKARA...
Users  . . . . . . . . . . . . >               Name, *PUBLIC
                              >
               + for more values >
Authority  . . . . . . . . . .   *CHANGE____   *CHANGE, *ALL, *USE...
               + for more values _____
Authorization list . . . . . . .  _____     Name
Reference workstation object:
                              *JOBLOG____      *TPLWRKARA, *WRKARA...
```

9. Press F9 (Retrieve) to retrieve the command and then change the workstation object type (WSOTYPE) to the next object on the Planning Form, *LAUNCH. Press the Enter key.

```
Selection or command
===> GRTWSOAUT WSOTYPE(*LAUNCH) REFWSO(*JOBLOG)

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel   F13=Information Assistant
F23=Set initial menu
```

10. Press F9 (Retrieve) to retrieve the command again and change the workstation object type (WSOTYPE) to the next object on the Planning Form, *LIBSL. Press the Enter key. Continue doing this for the remaining objects you want to exclude from the Planning Form, except for the Message Sender Template.

    Note: Before you set any more authorities, you need to sign on to GraphicOps and do your customization (create another message sender). If you set all of your authorities first, you may prevent yourself from being able to customize some of the objects.

Step 4. Customize

If you want to do any customization for your users, follow these steps before changing any more authorities:

1. Sign on as the model user profile and create, modify, or delete any objects you have decided to customize.

   For this example, use the Message Sender Template and create another message sender in the OS/400 Graphical Operations Work Area for the users. Refer to Chapter 7, "Customization" for how to customize.

2. Copy the customization data from the model user profile to any other users.

Step 5. Set Authority to Workstation Object Actions

Now that any customization is complete, you can finish setting the authorities to the workstation objects. The steps here include:

- Excluding those objects you couldn't exclude before customization
- Setting *USE authority to the objects

First, sign on to to the AS/400 system as a security officer.

Exclude Workstation Objects

To start, just as you did earlier, you can use the GRTWSOAUT command and exclude the following object:

- *TPLMSGSND (message sender template)

You could not exclude this object earlier because you needed the template so you could create another message sender. Had you excluded the message sender template before customization, the **Create another** option would not have been available on the Message Sender object.

1. Type GRTWSOAUT on the command line and press F4 (Prompt).

2. On the Grant Workstation Object Aut (GRTWSOAUT) display, type *TPLMSGSND in the *Workstation object type* field, and *JOBLOG in the *Reference workstation object* field. Press the Enter key.

```
                    Grant Workstation Object Aut (GRTWSOAUT)

 Type choices, press Enter.

 Workstation object type:
                                     *TPLMSGSND    *TPLWRKARA, *WRKARA...
 Users  . . . . . . . . . . . . .    _____    Name, *PUBLIC
                + for more values
 Authority  . . . . . . . . . . .    *CHANGE       *CHANGE, *ALL, *USE...
                + for more values
 Authorization list . . . . . . .    _____    Name
 Reference workstation object:
                                     *JOBLOG       *TPLWRKARA, *WRKARA...
```

Set *USE Authority to Workstation Objects

Next, you want to change the authorities for the following objects to *USE:

- *JOBL (job list)
- *MSGL (message list)
- *MSGSND (message sender)
- *PRTOL (printer output list)
- *WRKARA (work area)

1. Type EDTWSOAUT on the command line and press F4 (Prompt).

2. Type *JOBL in the *Workstation object type* field and press the Enter key.

```
                     Edit Workstation Object Aut (EDTWSOAUT)

 Type choices, press Enter.

 Workstation object type:
                          *JOBL         *TPLWRKARA, *WRKARA...
```

3. On the Edit Object Authority display, press F6 (Add new users).

```
                        Edit Object Authority
Object . . . . . . . :   QGYUJOBL      Object type  . . . . :   *DTAARA
   Library  . . . . . :   QUSRSYS      Owner  . . . . . . . :   QSYS

Type changes to current authorities, press Enter.

   Object secured by authorization list  . . . . . . . . . . .   *NONE____

              Object
User          Authority
QSYS          *ALL___
*PUBLIC       *CHANGE_




                                                              Bottom
F3=Exit   F5=Refresh   F6=Add new users   F10=Grant with reference object
F11=Display detail      F12=Cancel        F17=Top   F18=Bottom
(C) COPYRIGHT IBM CORP. 1980, 1993.
```

4. On the Add New Users display, type the names of the users, USER, USER1, USER1A, and USER1B and then type *USE in the *Object Authority* column. Press the Enter key.

```
                         Add New Users

Object . . . . . . . :   QGYUJOBL      Object type  . . . . :   *DTAARA
   Library  . . . . . :   QUSRSYS      Owner  . . . . . . . :   QSYS

Type new users, press Enter.

              Object
User          Authority
USER          *USE
USER1         *USE
USER1A        *USE
USER1B        *USE
_____       _____
```

5. On the Edit Object Authority display, press F3 (Exit).

```
                        Edit Object Authority
Object . . . . . . . :   QGYUJOBL      Object type  . . . . :   *DTAARA
   Library  . . . . . :   QUSRSYS      Owner  . . . . . . . :   QSYS

Type changes to current authorities, press Enter.

   Object secured by authorization list  . . . . . . . . . . .   *NONE____

              Object
User          Authority
QSYS          *ALL___
USER1B        *USE___
USER1A        *USE___
USER1         *USE___
USER          *USE___
*PUBLIC       *CHANGE_



                                                              Bottom
F3=Exit   F5=Refresh   F6=Add new users   F10=Grant with reference object
F11=Display detail      F12=Cancel        F17=Top   F18=Bottom
```

6. Type GRTWSOAUT on the command line and press F4 (Prompt).

7. On the Grant Workstation Object Aut (GRTWSOAUT) display, type *MSGL in the *Work-station object type* field and *JOBL in the *Reference workstation object* field. Press the Enter key.

```
                  Grant Workstation Object Aut (GRTWSOAUT)

Type choices, press Enter.

Workstation object type:
                                        *MSGL         *TPLWRKARA, *WRKARA...
Users . . . . . . . . . . . . . .      _____      Name, *PUBLIC
              + for more values        _____
Authority . . . . . . . . . . .        *CHANGE       *CHANGE, *ALL, *USE...
              + for more values        _____
Authorization list . . . . . . .       _____      Name
Reference workstation object:
                                        *JOBL         *TPLWRKARA, *WRKARA...
```

8. Press F9 to retrieve the command and change the workstation object type (WSOTYPE)
   for the rest of the objects (*MSGSND, *PRTOL, and *WRKARA).

```
Selection or command
===> GRTWSOAUT WSOTYPE(*MSGSND) REFWSO(*JOBL)
_____

 F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel   F13=Information Assistant
 F23=Set initial menu
```

Step 6. Set Authority to AS/400 Resource Actions

If you want to secure any OS/400 commands or programs for actions you do not want users
to perform on AS/400 resources, set the authority for the users to those commands and
programs now. For this example, you do not need to change any authority. Use Planning
Form 5 in Appendix F, "Customization and Administration Planning Forms," if you want to do
any further security planning.

Step 7. Test

Now that you have set up the user interface, you should do some kind of verification testing.
Sign on to GraphicOps as one of the users and check the interface. You'll want to verify the
following:

- The work areas contain the right objects.

  The OS/400 Graphical Operations Work Area contains:

  - Printer Output List
  - Batch Job List
  - Message List
  - Message Sender
  - Customization Work Area
  - Another message sender

- Any customization changes you made are correct.

  Another message sender was created in the OS/400 Graphical Operations Work Area.

- The menu choices for each workstation object and AS/400 resource are correct.

  The Create another, Copy to work area, Move to work area, and Delete from work area
  menu choices should not appear.

Operator Example

You have three system operators you want to set up to use GraphicOps. The operators have a user class of *SYSOPR so they have access to the Operator Work Area. The operators, OPER1, OPER2, and OPER3, will have the same user interface.

The operators don't need the following workstation objects:

- List of libraries and list of libraries template
- Library template
- Output queue, job queue, and message queue templates
- AS/400 object list and AS/400 object list template
- Output queue list template

The operators can create, copy, move, and delete the workstation objects they are authorized to see.

Step 1. Plan

Identify Authority to Workstation Objects

First, you need to identify what authority you want the operators to have to each workstation object. To help out, we've provided a planning form. This form includes all of the objects. When you set the authority, you can check off the object in the *Done* column.

The form in Table 11-2 on page 11-11 has already been filled out for this example. Here are the steps you would go through to do your planning and to fill out the form:

1. Identify Objects to Exclude: Go through and mark the objects you don't want the operators to see at all. You will exclude the users from those objects.

2. Identify Authority to Workstation Object Actions: What actions do you want the operators to be able to perform on workstation objects that are not being excluded?

Decide if the operators should have *USE or *CHANGE authority to the objects not excluded and mark those. You can refer to the tables in Chapter 10, "Advanced Administration Concepts" for the actions you can perform based on the authority.

First, consider the actions controlled by the work area object (*WRKARA).

- *USE: Authority to use work areas only; users cannot create, move, copy, or delete workstation objects.
- *CHANGE: Users can create, move, copy, and delete workstation objects.

For this example, you want your operators to be able to change their work areas, so you want to give them *CHANGE authority to the *WRKARA object.

The next objects to look at are the lists and the other workstation objects. You want your operators to be able to change these objects and possibly create new ones if they need to. Therefore, the operators can have *CHANGE authority to those workstation objects you have not excluded.

3. Identify What You Want to Customize: The next step in planning is to decide how you want the user interface to look. For each workstation object your users can work with, decide if there is anything you would like to customize. If you need to customize or use an object that you are excluding, it is important that you customize or use the object first, then change the authority to *EXCLUDE.

For this example, no customization is being done.

Identify Authority to AS/400 Resource Actions

What actions do you want the users to be able to perform on AS/400 resources?

If you want to prevent the operators from performing actions on AS/400 resources, such as holding printer output, you could change their authority to the associated OS/400 commands. For this example, you don't need to change any command authorities. Refer to Table 10-6 on page 10-6 for more information.

Table 11-2. Planning Form 1: Object Authority for Operator Example

Done	Workstation Object (Special Value)	Authority			Customize
		*USE	*CHANGE	*EXCLUDE	
	AS/400 object list (*OBJL)*			X	
—	Job list (*JOBL)		X		
	Job log (*JOBLOG)*		X		
—	Job queue list (*JOBQL)		X		
—	Job submitter (*LAUNCH)*		X		
	List of libraries (*LIBSL)			X	
—	Message list (*MSGL)		X		
—	Message sender (*MSGSND)		X		
—	Output queue list (*OUTQL)		X		
—	Personal settings (*PRSSET)		X		
—	Printer list (*PRTL)		X		
—	Printer Output list (*PRTOL)		X		
—	Signed-on user list (*SGNUSL)		X		
—	Work area (*WRKARA)		X		
	AS/400 Object Templates				
	Job queue template (*TPLJOBQ)			X	
	Library template (*TPLLIB)			X	
	Message queue template (*TPLMSGQ)			X	
	Output queue template (*TPLOUTQ)			X	
	Workstation Object Templates				
	AS/400 object list template (*TPLOBJL)			X	
—	Job list template (*TPLJOBL)		X		
	Job log template (*TPLJOBLOG)		X		
—	Job queue list template (*TPLJOBQL)		X		
—	Job submitter template (*TPLLAUNCH)		X		
	List of libraries template (*TPLLIBSL)			X	
—	Message sender template (*TPLMSGSND)		X		
—	Message list template (*TPLMSGL)		X		
	Output queue list template (*TPLOUTQL)			X	
—	Printer output list template (*TPLPRTOL)		X		
—	Printer list template (*TPLTPRTL)		X		
—	Signed-on user list template (*TPLSGNUSRL)		X		
—	Work area template (*TPLWRKARA)		X		
Note:					
* By default, these objects do not appear in any shipped work areas.					

Step 2. Create Model User Profile

The next step is to create a model user profile. Create a user profile of OPER as your model. Specify *SYSOPR for the user class so the user has access to the Operator Work Area. You will sign on to to GraphicOps as that user to customize the user interface.

Step 3. Exclude Workstation Objects

Before doing any customization on GraphicOps, you can exclude the workstation objects you don't need to customize. This way, when you sign on to GraphicOps as the model user profile, you have fewer objects to work with and you can make sure that the objects you don't want the users to have do not appear.

To exclude workstation objects in GraphicOps, use the Edit Workstation Object Authority (EDTWSOAUT) and Grant Workstation Object Authority (GRTWSOAUT) commands.

1. Sign on to the AS/400 system (as a security officer).

2. Type EDTWSOAUT on the command line and press F4 (Prompt).

3. On the Edit Workstation Object Aut (EDTWSOAUT) display, type the value for the first workstation object you want exclude (*LIBSL) and press the Enter key.

```
                   Edit Workstation Object Aut (EDTWSOAUT)

 Type choices, press Enter.

 Workstation object type:
                                   *LIBSL       *TPLWRKARA, *WRKARA...
```

4. On the Edit Object Authority display, press F6 (Add new users).

```
                          Edit Object Authority

 Object . . . . . . . :    QGYULIBSL       Object type  . . . . :   *DTAARA
   Library  . . . . . :    QUSRSYS         Owner  . . . . . . . :   QSYS

 Type changes to current authorities, press Enter.

   Object secured by authorization list . . . . . . . . . . . .   *NONE

              Object
 User         Authority
 QSYS         *ALL
 USER1        *EXCLUDE
 USER1A       *EXCLUDE
 USER1B       *EXCLUDE
 *PUBLIC      *CHANGE




                                                         More...

 F3=Exit   F5=Refresh   F6=Add new users   F10=Grant with reference object
 F11=Display detail      F12=Cancel         F17=Top   F18=Bottom
 (C) COPYRIGHT IBM CORP. 1980, 1993.
```

5. On the Add New Users display, type the model user profile name along with the other operators you want to have the same authority. Type *EXCLUDE in the *Object Authority* column and press the Enter key.

```
                           Add New Users

 Object . . . . . . . . :   QGYULIBSL      Object type . . . . :    *DTAARA
   Library . . . . . :      QUSRSYS        Owner . . . . . . . . :  QSYS

 Type new users, press Enter.

               Object
 User          Authority
 OPER_____    *EXCLUDE
 OPER1_____    *EXCLUDE
 OPER2_____    *EXCLUDE
 OPER3_____    *EXCLUDE
 _____    _____
```

6. On the Edit Object Authority display, press F3 (Exit).

```
                         Edit Object Authority

 Object . . . . . . . . :   QGYULIBSL      Object type . . . . :    *DTAARA
   Library . . . . . :      QUSRSYS        Owner . . . . . . . . :  QSYS

 Type changes to current authorities, press Enter.

   Object secured by authorization list . . . . . . . . . . . .   *NONE____

               Object
 User          Authority
 QSYS          *ALL__
 USER1         *EXCLUDE
 USER1A        *EXCLUDE
 USER1B        *EXCLUDE
 OPER1         *EXCLUDE
 OPER2         *EXCLUDE
 OPER3         *EXCLUDE
                                                                   More...


 F3=Exit    F5=Refresh    F6=Add new users    F10=Grant with reference object
 F11=Display detail      F12=Cancel         F17=Top   F18=Bottom
 Object authorities changed.
```

7. Type `GRTWSOAUT` on the command line and press F4 (Prompt).

8. On the Grant Workstation Object Aut (GRTWSOAUT) display, type the value for the
   next workstation object you want to exclude, *OBJL, in the *Workstation object type* field.
   Type *LIBSL in the *Reference workstation object* field and press the Enter key.

```
                 Grant Workstation Object Aut (GRTWSOAUT)

 Type choices, press Enter.

 Workstation object type:
                                    > *OBJL_____      *TPLWRKARA, *WRKARA...
 Users . . . . . . . . . . . . .     _____       Name, *PUBLIC
              + for more values     _____
 Authority . . . . . . . . . . .     *CHANGE___      *CHANGE, *ALL, *USE...
              + for more values     _____
 Authorization list . . . . . . .    _____       Name
 Reference workstation object:
                                     *LIBSL____      *TPLWRKARA, *WRKARA...
```

9. Press F9 to retrieve the command and then change the workstation object type
   (WSOTYPE) to the next one you want to exclude from the Planning Form, *OBJL. Press
   the Enter key. Continue doing this for the remaining objects you want to exclude.

```
 Selection or command
 ===> GRTWSOAUT WSOTYPE(*TPLJOBQ) REFWSO(*LIBSL)_____

 F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel   F13=Information Assistant
 F23=Set initial menu
```

Step 4. Customize

If you want to do any customization for your users, follow these steps before changing any authorities:

1. Sign on as the model user profile and create, modify, or delete any objects you have decided to customize.

2. Copy the customization data from the model user profile to any other users.

Refer to Chapter 7, "Customization," for instructions on how to customize.

Step 5. Set Authority to Workstation Object Actions

Now that any customization is complete, you can finish setting the authorities to the workstation objects. For this example, the operators have *CHANGE authority to all of the objects from which they are not excluded. Because the default authority is *CHANGE, no additional changes are necessary.

Step 6. Set Authority to AS/400 Resource Actions

If you want to secure any OS/400 commands or programs for actions you do not want users to perform on AS/400 resources, set the authority for the users to those commands and programs now. For this example, you do not need to change any authority. Use Planning Form 5 in Appendix F, "Customization and Administration Planning Forms," to do any further security planning.

Step 7. Test

Now that you have set up the user interface, you should do some kind of verification testing. Sign on to GraphicOps as one of the users and check the interface. You'll want to verify the following:

- The work areas contain the right objects.
- Any customization changes you made are correct.
- The menu choices for each workstation object and AS/400 resource are correct.

Chapter 12. Backing Up OS/400 Graphical Operations

This section describes the tasks to back up OS/400 GraphicOps on the AS/400 system and the PC.

Backing Up OS/400 Graphical Operations on the AS/400 System

Back up libraries, shared folders, and directories for GraphicOps the same way you back up other OS/400 objects. For information on OS/400 backup programs, see the GO LICPGM commands in the *System Operation* and *Backup and Recovery – Basic* manuals.

For a list of GraphicOps object names, see Appendix B, "OS/400 Graphical Operations Libraries and Folders and Directories."

Backing Up OS/400 Graphical Operations on the Personal Computer

You do not need to back up GraphicOps on your PC because you can reinstall at any time.

Chapter 13. Installing and Distributing PTFs

This section describes the tasks to install program temporary fixes (PTFs) for OS/400 GraphicOps on the AS/400 system and the PC.

Installing a PTF on the AS/400 System

PTFs are distributed through electronic customer support using standard PTF processes, for example, shipping in cumulative PTF packages. PTFs are installed using standard OS/400 commands, such as APYPTF.

For more information, see the *System Operation* manual.

Distributing a PTF to PCs

GraphicOps uses the Automatic Update function of Client Access/400 to distribute PTFs to user PCs. For information on setting up Automatic Update during your initial installation, see "Options Page" on page 2-12. For information on the update function, see the *Client Access/400 for OS/2 Setup* or *Client Access/400 for Windows 3.1 – Getting Started* manuals.

If you do not use the Automatic Update function for all users, distribute the PTF using the same method you used for the initial installation.

Chapter 14. Performance and Capacity Planning

This section describes topics related to planning for OS/400 GraphicOps performance on the AS/400 system and the PC.

Planning for Performance on the AS/400 System

To set up performance management and capacity planning for GraphicOps on the AS/400 system, do the following:

1. Review the following items that can affect performance:

    - OS/400 jobs supporting each user
    - Subsystem in which GraphicOps runs
    - Maximum storage for each user
    - Data link speed

2. Assess the impact of each of these items on your system.

3. Adjust your performance management and capacity planning information if the growth rate of these factors is higher than your original projections.

OS/400 Jobs for Each User

As each PC user starts a connection with GraphicOps, a job is started on the AS/400 system. The job handles the requests from GraphicOps.

The number of GraphicOps users and the frequency of requests have an effect on your AS/400 resources. This is especially true for long-running functions. You may see increased use of system cycles, main storage, disk space, and communications media. The anticipated number of users and the type of work that they do should be included in capacity planning for the AS/400 system.

Subsystem for GraphicOps

Your GraphicOps job runs in the same subsystem as Client Access/400. Since your GraphicOps job is interactive in nature, the system adjusts the runtime attributes of the GraphicOps job to be as close to an interactive job as possible. A class description is created in library QUSRSYS when Option 12 of the operating system is installed. GraphicOps uses the values stored in this class description to determine what run priority, default wait time, timeslice, and purge eligibility to assign to the GraphicOps job.

If you are not satisfied with the runtime characteristics of GraphicOps jobs on your system, you may change this class using the Change Class (CHGCLS) command. The name of the class is QGYECLS and it is in the library QUSRSYS. It is shipped with the same values as the QINTER class.

Only run priority, default wait time, timeslice, and purge eligibility are used to change the job. The Change Class command allows you to set other attributes in the class; however, GraphicOps ignores them.

On a typical system, GraphicOps runs in the base storage pool. GraphicOps is memory sensitive. If it is not running in a large enough pool, its performance may be affected. GraphicOps runs under the same subsystem as Client Access/400. If GraphicOps is experiencing performance problems and there is an excessive amount of paging in this subsystem's pools, it may be necessary to increase the size of one or more of the pools. Start by increasing the pool size one megabyte at a time, until paging in this pool decreases. In general, the larger the more information you are working with, the more AS/400 memory GraphicOps needs.

Another option is to create a separate, shared pool. Client Access/400, by default, runs in the *BASE pool and, therefore, so does GraphicOps. If paging is a problem in *BASE, GraphicOps performance may improve if Client Access/400 jobs are moved to a different,

shared pool. For more information on optimal pool sizes, refer to the *Work Management, SC41-3306* manual.

Maximum Storage for Each User

A low setting for the maximum storage (MAXSTG) value in the user profile can have an effect on the performance of long-running tasks. For example, the MAXSTG value can affect requests for large amounts of information. Having too little disk space can cause unexpected results. For example, the request may complete successfully at some times but fail at other times.

Data Link Speed

Data link speed is the rate at which characters of information are sent over a data link between the PC and the AS/400 system. Inadequate data link speed causes information to collect on the AS/400 system while being sent to the PC. This occurs when the system is returning large amounts of information in response to user requests. This can lengthen OS/400 queues. Long queue lengths could use large amounts of AS/400 main storage, disk space, and system cycles.

To avoid delays, make sure that your data link speed is 9600 bps, or higher, or use a token-ring network.

Planning for Performance on the Personal Computer

To set up performance management and capacity planning for GraphicOps on the PC, do the following:

1. Review factors influencing performance in the PC environment:

   - Multiple programs
   - Memory and hard disk
   - Communications
   - Types of GraphicOps functions requested by users

2. Assess the impact of these factors on your PC.

3. Adjust your performance management and capacity planning information if the growth rate of these factors is higher than your original projections.

Multiple Programs

The number of programs running simultaneously with GraphicOps can have a significant impact on its performance. Each program that is running requires memory and disk space from the PC. If it is actively performing a task, GraphicOps uses the PC's CPU.

If you have performance problems with GraphicOps, consider ending some programs that are large.

Memory and Hard Disk

In today's virtual memory operating systems, the amount of memory and hard disk space available to applications play an important role in the application's performance. You can enhance the performance of GraphicOps by adding more main memory to your PC. This additional memory provides a larger space for your applications to run.

Additionally, when you run a memory intensive application, such as GraphicOps, the amount of virtual memory required is sometimes greater than the physical memory installed on your system. In these cases, the operating system uses space on your hard disk as if it were actual memory. This space on the disk is commonly referred to as a swap file. Its size usually grows and shrinks dynamically, based upon the demands on the PC.

As a general rule, the more hard disk space that can be freed on the PC, the easier it is to dynamically allocate the swap file, therefore optimizing the overall performance.

Permanent Swap File: (Windows systems only) When running GraphicOps under Windows, you can significantly improve performance by using a permanent swap file. Swap

files are often dynamically managed. You can eliminate the overhead of the dynamic management (at the cost of a potentially less efficient use of space) by changing to a permanent swap file.

To change the swap file settings:

1. In Program Manager, double click on Main.
2. Double click on the Control Panel.
3. Double click on the 386 Enhanced icon.
4. Click on **Virtual Memory**.

   • The virtual memory dialog box appears, displaying the current settings.

5. Click on **Change**.
6. Change the type to `permanent`.
7. Click on **OK**.
8. In the Virtual Memory confirmation message window, click on **OK**.

Communications

The speed of the network to the AS/400 system and type of communications protocol used can have an impact on how long data takes to reach the PC from the AS/400 system. A faster network and a higher bandwidth improves the flow and speed of data to your PC.

The amount of traffic on the network and from your PC can also affect the speed at which data appears. Review the volume of network usage, and be aware of other applications on the PC that may be generating network traffic along with GraphicOps.

Types of GraphicOps Functions Requested by User

Lists represent the primary information display mechanism in GraphicOps. The lists that are shipped with GraphicOps may be overly generalized, or may display columns of information that aren't necessary for your needs. Likewise, the templates for lists may have defaults with similar limitations. You may be able to improve performance by customizing lists and their templates.

Performance can be affected by several factors:

• Which columns are displayed in a list
• How a list is organized
• Which items are included in a list
• The double-click action

Changing list columns

You may be able to improve performance of some lists by decreasing the number of columns displayed. Select only those columns that you absolutely need to display. Lists open more quickly if you do not display all of the columns.

Changing list organization

The way that the data is organized in a list may also affect performance. For example, a printer output list can be organized by printer, by output queue, or have no organization. Lists display more quickly if you select no organization, so you may be decreasing your performance if you organize the list by printer or output queue.

Changing list contents

The amount of data included in a list affects the amount of time it takes to display that list. Wherever possible, set up your lists to display only the items you need.

Changing double-click action

The double-click action also affects the amount of time it takes to display a list. Wherever possible, select the icons view for the double-click action of a list to open the list more quickly.

Note: For customization techniques and examples, see Chapter 6, "Understanding GraphicOps Objects."

Part 4. Appendixes

This part includes lists, tables, and commands that support both installation and administration of OS/400 Graphical Operations, including the following topics:

- Resolving OS/400 GraphicOps Problems
- OS/400 libraries, folders, and directories for GraphicOps
- AS/400 national language version (NLV) codes
- SETCSTDTA (Set Customization Data) command
- Authorization commands for workstation objects
  - GRTWSOAUT (Grant Workstation Object Authority)
  - EDTWSOAUT (Edit Workstation Object Authority)
  - RVKWSOAUT (Revoke Workstation Object Authority)
- Customization and administration planning forms

Appendix A. Resolving OS/400 Graphical Operations Problems

This section describes how to diagnose and resolve OS/400 GraphicOps problems. Problem analysis and recovery tables explain the symptoms, probable cause, and recovery actions for problems encountered during installation or use of GraphicOps.

Error Messages

To resolve a problem reported by a message from GraphicOps, or the OS/400, OS/2, or Windows operating system, do the following (as needed):

1. Follow the instructions in the message window and try to resolve the problem.

2. Use online help.

3. Use appropriate documentation:

   - For OS/400 messages, use the *System Operation* manual. Error messages for GraphicOps use an OS/400 message identifier of GUIxxxx, where xxxx is the message identifier.
   - For OS/2 or Windows messages, use the documentation supplied with the OS/2 or Windows operating system.

4. Contact your PC or OS/400 administrator if you cannot resolve the problem.

Textless Error Messages

It is possible for GraphicOps to have a problem with missing subdirectories or language information before you select a language. In that case, no text appears with the error message.

Following are possible error messages that are displayed with only the message number. To correct the problem, see the "Problem Analysis and Recovery Tables" on page A-2.

GUI1E00
> The program could not find a valid language subdirectory to use.

GUI1E01
> A language subdirectory was found, but did not contain the necessary text.

GUI1E02
> No language subdirectories are compatible with the PC code page.

GUI1E03
> Unable to load text from the specified language subdirectory.

GUI1C01
> Destination path is too long.

GUI1C02
> SAVRSTPC.STF file does not exist in the language subdirectory.

GUI1C03
> Could not open SAVRSTPC.STF file.

GUI1C04
> Error in reading SAVRSTPC.STF file.

GUI1C05
> User did not specify a national language version (NLV) ID and the program could not properly identify a language subdirectory to use.

GUI1C06
> Incorrect (non-integer) NLV ID.

GUI1C07
> Source path is incorrect.

Using Error Recovery Support

To recover from errors, do the following (as needed):

- Use OS/400 logs and queues.
- Use OS/400 error recovery functions for OS/400 data errors.

Using OS/400 Logs and Queues

Standard OS/400 error message handling is done by the GraphicOps host server program. Error messages are stored in the OS/400 job log and system operator message queue using standard techniques. The OS/400 history log, job log, and system operator message queue contain error messages and other types of information that are useful in problem analysis.

Using OS/400 Data Error Recovery Functions

No unique error recovery is provided in GraphicOps. GraphicOps uses the existing error recovery techniques for those OS/400 objects and resources with which it works. For example, no error recovery is provided by GraphicOps for lost or damaged OS/400 data. You must use the standard OS/400 error recovery techniques for OS/400 data and resources.

Software Problem

If a software problem occurs while installing or using GraphicOps, the following message is shown: A software problem is being handled. Additional information may be logged on the PC or the AS/400 system. Contact your IBM Service Representative for assistance with these types of problems.

Problem Analysis and Recovery Tables

Problem Analysis and Recovery During Installation

Table A-1 (Page 1 of 2). Problem Analysis and Recovery During Installation

Symptom	Probable Cause	Action
Installing from shared folders or directories, cannot find GraphicOps files	• Wrong host system name • Client Access/400 is not installed on the host • Client Access/400 is not started • GraphicOps is not installed on the host • Wrong drive is assigned to shared folder or directory • Wrong shared folder name or directory • No authority to the shared folder or directory	• See OS/400 administrator
Installing from a local area network (LAN) server, cannot find GraphicOps files	• Wrong LAN server • GraphicOps is not installed on the LAN server • Wrong drive is assigned to the LAN server • Wrong subdirectory name	• See PC or LAN administrator
Installing from diskettes, cannot find GraphicOps files	• Wrong diskettes • Missing some diskettes • Diskette density is different than expected or supported • Subdirectories are not copied to diskettes	• See "Problem Analysis and Recovery During Diskette Installation" on page A-4 • See PC administrator
Not enough hard disk space to install GraphicOps	• Installing too many files for the available disk space	• Select fewer options • Erase unnecessary files on hard disk • Install larger hard disk

Table A-1 (Page 2 of 2). Problem Analysis and Recovery During Installation

Symptom	Probable Cause	Action
Cannot install a language choice, GUI1E00, GUI1E01	• Language shared folder or subdirectory is not on the OS/400 system • Language subdirectory is not on the LAN server	• Install additional language on the OS/400 system • Copy additional language subdirectory to the LAN server
Cannot select a language, GUI1E02	• Language subdirectory is not on the PC • Language may not be compatible with the PC code page	• Copy additional language subdirectory to the PC • Change PC code page
Target directory does not exist	• Directory has not been defined on the PC • Directory name is spelled wrong	• To create directory, click on **OK** • To research directory name, click on **Cancel**
Unable to create target directory	• Incorrect path name was specified for directory	• Click on **OK**, then enter another name from the directories page from custom installation
Source and target directories cannot be the same	• The same name was entered for both directories	• Click on **OK**, then select a different directory for installing GraphicOps from the directories page from custom installation
Cannot install into Client Access/400 directory	• Installing GraphicOps and Client Access/400 in the same directory is not allowed by GraphicOps	• Click on **OK**, then select a different directory for installing GraphicOps from the directories page from custom installation
GraphicOps does not remain current with upgrades on the AS/400	• The Automatic Update option was not selected on the Options page	• Reinstall selecting the **Automatic Update** option
Unable to open source file	• File is missing from the OS/400 shared folder or the LAN server • The shared folder or directory specified does not contain GraphicOps files	• Verify the file exists and retry • Verify you have authority to the file • Reinstall GraphicOps on the AS/400 and retry
Unable to create objects in the workplace	• A Windows user selected the Create AS/400 Icons option on the Options page and did not use the Program Manager shell	• Click on **OK**, then do not select the Create AS/400 Icons option
Prompted to enter Client Access/400 directory name	• Could not find the directory in which Client Access/400 was installed	• If you want update service, enter the directory name and press **OK** • If you do not want update service, click on **Cancel** and then press **OK**. Arrange for other procedures to keep GraphicOps current, such as using a LAN server or diskettes
Icon does not show up	• A System not defined in OS/2 Extended Services Communication Manager or Client Access/400 • OS/2 Extended Services Communication Manager or Client Access/400 not started • System removed from list of icons to create • Duplicate icon names specified	• Define system in OS/2 Extended Services Communication Manager or Client Access/400 • Start OS/2 Extended Services Communication Manager or Client Access/400 • Verify on list • Verify different label name

Problem Analysis and Recovery While Using Graphical Operations

Table   A-2. Problem Analysis and Recovery While Using GraphicOps

Symptom	Probable Cause	Action
Connected to AS/400 system, cannot start the GraphicOps host server	• User ID or password is not correct • User is not authorized to start GraphicOps • Start command (OPS) values are typed wrong • GraphicOps host server is not installed on the AS/400 system selected	• If sign-on method is manual, enter the correct user ID or password • If sign-on method is automatic, correct the Client Access/400 or OS/2 Extended Services Communications Manager sign-on definitions • If not authorized, see the OS/400 administrator • Select another AS/400 system with a GraphicOps host server installed
OS/400 Graphical Operations Work Area does not appear	• Program error or security problem during host server start • Customization data may be damaged	• Check the OS/400 job log for error messages
Expected objects do not appear in the work area	• Individual or group user authority to that object has been taken away • AS/400 system access to that object has been deleted	• See OS/400 administrator for individual or group authority • Possibly reinstall GraphicOps on the AS/400 system to reestablish AS/400 authority
Cannot customize an object	• Individual or group authority to change a template or to use a settings view has been taken away	• See OS/400 administrator for individual or group authority
Cannot use an object function	• GraphicOps host server ended, normally or abnormally • AS/400 system or program problem • Communications problem • Not authorized to the associated host command	• See the OS/400 job log and QSYSOPR messages

Problem Analysis and Recovery During Diskette Installation

Table   A-3 (Page 1 of 2). Problem Analysis and Recovery During Diskette Installation

Symptom	Probable Cause	Action
Cannot use the message file SAVRSTPC.STF, GUI1C02, GUI1C03, GUI1C04	• SAVRSTPC.STF is missing • SAVRSTPC.STF is corrupt	• Restore SAVRSTPC.STF from backup
Could not find the proper language subdirectory, GUI1C05, GUI1C06	• NLV parameter was missing and program could not find unique language subdirectory • Invalid NLV number	• Use proper NLV number. For more information, see Appendix C, "AS/400 National Language Version (NLV) Codes"
SAVPCPGM displays *CONTROL*.* file(s) exist on... and asks for a different diskette	• The user inserted a diskette that was used previously by SAVPCPGM	• Replace diskette in drive with an unused diskette
Incorrect message or unreadable text appears during SAVPCPGM or RSTPCPGM	• SAVRSTPC.STF, the file that stores the messages for SAVPCPGM.EXE and RSTPCPGM.EXE, is corrupt (for example: wrong version, lines deleted, etc).	• Restore SAVRSTPC.STF from backup
In OS/2, program halts with a Control Program name, return code, and other data	• The OS/2 Control Program failed	• Refer to OS/2 2.0 (or later) *Technical Library Control Programming Reference* for the reason why the command failed
Destination path file name is too long, GUI1C01	• The length of the source path and language subdirectory name is longer than 128	• Use a shorter source path

Table A-3 (Page 2 of 2). Problem Analysis and Recovery During Diskette Installation

Symptom	Probable Cause	Action
Source path is invalid, GUI1C07	• A typographical error was made	• Type the command correctly

Appendix B. OS/400 Graphical Operations Libraries and Folders and Directories

Following are the libraries, folders, and directories that support OS/400 GraphicOps on the AS/400 system.

OS/2 Client Programs

- QUSRSYS library (GraphicOps commands)

- QGY library (GraphicOps programs)

- QGYOS2 library (product loads and exit routines)

- QGYOS2 shared folder (PC programs)

    - MRI29xx subdirectory (first language)

    - MRI29yy subdirectory (second language, and so on)

    - QSTART subdirectory (GraphicOps Quick Tour files)

OS/2 2.1 Client Programs

- QUSRSYS library (GraphicOps commands)

- QGY library (GraphicOps programs)

- QPWXGGY library (product loads and exit routines)

- QPWXGGY directory (PC programs)

    - MRI29xx subdirectory (first language)

    - MRI29yy subdirectory (second language, and so on)

    - QSTART subdirectory (GraphicOps Quick Tour files)

Windows Client Programs

- QUSRSYS library (GraphicOps commands)

- QGY library (GraphicOps programs)

- QPWXCGY library (product loads and exit routines)

- QPWXCGY directory (PC programs)

    - MRI29xx subdirectory (first language)

    - MRI29yy subdirectory (second language, and so on)

    - QSTART subdirectory (GraphicOps Quick Tour files)

Appendix C. AS/400 National Language Version (NLV) Codes

The following table lists the national language version (NLV) code for each national language supported by the AS/400. GraphicOps may not support all of these languages. GraphicOps only supports the languages that have been translated. Each country is responsible for making this decision.

These codes can be specified in the start command (OPS) for a GraphicOps connection. These codes are part of the OS/400 shared folder or directory name for the language. They are also part of the PC directory name.

Table C-1. Installation: AS/400 National Language Version (NLV) Codes

Language	NLV Code
Arabic	2954
Belgian Dutch	2963
Belgian French	2966
Brazilian Portuguese	2980
Canadian French	2981
Czech	2975
Croation	2912
Danish	2926
Dutch Netherlands	2923
English	2924
English Uppercase	2950
English UK	N/A
English Uppercase (DBCS)	2938
English (DBCS)	2984
Farsi	2998
Finnish	2925
French	2928
French MNCS	2940
German	2929
German MNCS	2939
Greek	2957
Hebrew	2961
Hungarian	2976
Icelandic	2958
Italian	2932
Italian MNCS	2942
Japanese Kanji DBCS	2962
Korean	E186
Korean DBCS	2986
Norwegian	2933
Polish	2978
Portuguese	2922
Portuguese MNCS	2996
Russian	2979
Simplified Chinese	E189
Simplified Chinese DBCS (PRC)	2989
Slovakian	2994
Slovenian	2911
Spanish	2931
Spanish LAD	2931
Swedish	2937
Thai	2972
Traditional Chinese DBCS	2987
Traditional Chinese DBCS	E187
Turkish	2956
Yugoslavian	N/A

Appendix D. SETCSTDTA (Set Customization Data) Command

Customization data can be copied to one or more users by copying the customization data associated with one user's profile to another. A user's customization data can also be reset or deleted.

The following AS/400 command performs both functions: SETCSTDTA.

Job: B,I Pgm: B,I REXX: B,I Exec

```
>>──SETCSTDTA──USRPRF(──┬──user-profile-name──┬─(1)──)──VALUE(──┬──*NONE──────────────┬──)─(P)──────────────>
                        └─────────────────────┘                └─user-profile-name───┘

>──┬──────────────────────────┬────────────────────────────────────────────────────────────────────────><
   │          ┌─*NO──┐        │
   └─REPLACE(──┴─*YES─┴──)────┘
```

Notes:

[1] A maximum of 300 repetitions.

[P] All parameters preceding this point can be specified in positional form.

Purpose

The Set Customization Data (SETCSTDTA) command can be used to copy and delete information in order to customize GraphicOps support. For example, work area contents and mouse double-click actions can be customized for one user and copied to other users.

By using this command, administrators do not need to manually set up each GraphicOps user. The administrators can set up users by modeling one user and patterning all subsequent users after the model user. The administrators can also reset user customization so they can restart the customization process if needed.

Parameters

USRPRF

Specifies the user profile to receive the customization data.

user-profile-name: Specify the names of the user profiles to reset or to which to copy. A maximum of 300 user profile names can be specified.

VALUE

Specifies the value to which the customization information is set.

*NONE: The customization data for the user profile name is removed.

user-profile-name: Specify the name of the user profile from which to copy customization information.

Optional Parameter

REPLACE

Specifies whether to replace existing customization data for the user profile name specified on the USRPRF parameter.

*NO: The customization data is not replaced. An exception message is issued.

*YES: The customization data for the user profile name is replaced.

Examples

Example 1: Copying Customization Data to a User Profile

```
SETCSTDTA   USRPRF(TOM)   VALUE(ERIC)
```

This command copies GraphicOps customization data associated with the user profile name ERIC to the new user profile name TOM.

Example 2: Replacing Customization Data

```
SETCSTDTA   USRPRF(TOM)   VALUE(MODEL1)   REPLACE(*YES)
```

This command copies GraphicOps customization data associated with the model user profile name MODEL1 to the user profile name TOM and replaces any customization data associated with the user profile name TOM.

Example 3: Removing Customization Data

```
SETCSTDTA   USRPRF(TOM) VALUE(*NONE)
```

This command removes all GraphicOps customization data associated with user profile name TOM.

Appendix E. Authorization Commands for Workstation Objects

GraphicOps uses three commands to control access to GraphicOps workstation objects. These GraphicOps commands include:

- GRTWSOAUT, to grant workstation object authority interactively
- EDTWSOAUT, to edit workstation object authority
- RVKWSOAUT, to revoke workstation object authority

The commands are similar in function to the OS/400 security commands, GRTOBJAUT, RVKOBJAUT, and EDTOBJAUT, which control access to OS/400 objects. However, the GraphicOps commands control access to GraphicOps workstation objects. These objects include work areas, templates, and the workstation objects you create using templates (such as lists).

Special Values for Authorizing Objects

Each template and workstation object is assigned a special value that is used in GraphicOps authorization commands. The following tables list the templates and workstation objects and the special value associated with each object. The shipped public authority to each object is *CHANGE.

Table E-1. Special Values for Workstation Objects

Special Value	Workstation Objects
*TPLWRKARA	Work area template
*WRKARA	Work area objects
*TPLPRTOL	Printer output list template
*PRTOL	Printer output list objects
*TPLTPRTL	Printer list template
*PRTL	Printer list objects
*TPLOUTQ	Output queue template
*TPLOUTQL	Output queue list template
*OUTQL	Output queue list objects
*TPLJOBL	Job list template
*JOBL	Job list objects
*TPLJOBQ	Job queue template
*TPLJOBLOG	Job log template
*JOBLOG	Job log objects
*TPLJOBQL	Job queue list template
*JOBQL	Job queue list objects
*TPLMSGL	Message list template
*MSGL	Message list objects
*TPLMSGQ	Message queue template
*TPLMSGSND	Message sender template
*MSGSND	Message sender
*TPLSGNUSL	Signed-on user list template
*SGNUSL	Signed-on user list objects
*TPLOBJL	Object list template
*OBJL	Object list objects
*TPLLIBSL	Library list template
*LIBSL	Library list objects
*TPLLIB	Library template
*TPLLAUNCH	Job submitter template
*LAUNCH	Job submitter objects
*PRSSET	Personal setting objects

Authorization Commands

Following are descriptions of the three GraphicOps authorization commands and their parameters.

GRTWSOAUT (Grant Workstation Object Authority) Command

Job: B,I Pgm: B,I REXX: B,I Exec

```
►►──GRTWSOAUT──WSOTYPE(──┬──*TPLWRKARA──┬──)──────────────────────────────────────►
                         ├──*WRKARA─────┤
                         ├──*TPLPRTOL───┤
                         ├──*PRTOL──────┤
                         ├──*TPLTPRTL───┤
                         ├──*PRTL───────┤
                         ├──*TPLOUTQ────┤
                         ├──*TPLOUTQL───┤
                         ├──*OUTQL──────┤
                         ├──*TPLJOBL────┤
                         ├──*JOBL───────┤
                         ├──*TPLJOBQ────┤
                         ├──*TPLJOBLOG──┤
                         ├──*JOBLOG─────┤
                         ├──*TPLJOBQL───┤
                         ├──*JOBQL──────┤
                         ├──*TPLMSGL────┤
                         ├──*MSGL───────┤
                         ├──*TPLMSGQ────┤
                         ├──*TPLMSGSND──┤
                         ├──*MSGSND─────┤
                         ├──*TPLSGNUSL──┤
                         ├──*SGNUSL─────┤
                         ├──*TPLOBJL────┤
                         ├──*OBJL───────┤
                         ├──*TPLLIBSL───┤
                         ├──*LIBSL──────┤
                         ├──*TPLLIB─────┤
                         ├──*TPLLAUNCH──┤
                         ├──*LAUNCH─────┤
                         └──*PRSSET─────┘

►──┬─USER(──┬──*PUBLIC──────────────┬──)─┬─┬──────────────────────(P)─────────►◄
   │        │                       │    │ │  ┌──*CHANGE──────┐
   │        └──user-profile-name──(1)┘   │ └─AUT(──┼──*ALL─────────┼──)─┤
   │                                     │         ├──*USE─────────┤
   │                                     │         ├──*EXCLUDE─────┤
   │                                     │         ├──*AUTL──(2)────┤
   │                                     │         │  ┌──*OBJALTER─┐(3)
   │                                     │         └──┼──*OBJALTER─┤
   │                                     │            ├──*OBJEXIST─┤
   │                                     │            ├──*OBJMGT───┤
   │                                     │            ├──*OBJOPR───┤
   │                                     │            ├──*OBJREF───┤
   │                                     │            ├──*ADD──────┤
   │                                     │            ├──*DLT──────┤
   │                                     │            ├──*EXECUTE──┤
   │                                     │            ├──*READ─────┤
   │                                     │            └──*UPD──────┘
   ├─AUTL(──authorization-list-name──)──────────────────────────┤
   └─REFOBJ(──same-values-as-WSOTYPE──)─────────────────────────┘
```

Notes:

1 A maximum of 50 repetitions.

2 This value is valid only if USER(*PUBLIC) is specified.

3 Select one or more, 10 maximum.

P All parameters preceding this point can be specified in positional form.

Purpose

The Grant Workstation Object Authority (GRTWSOAUT) command is used by one user to grant specific authority for the workstation object named in this command to another user or group of users. Workstation objects are used in the GraphicOps feature of the operating system.

Authority can be given to:

- Named users.
- Users (*PUBLIC) who do not have authority specifically given to them either for the object or for the authorization list.
- Groups of users who do not have any authority to the object or are not on the authorization list that secures the object.
- Users of the referenced workstation object (specified on the REFOBJ parameter).
- Users on an established authorization list.

When AUT(*AUTL) is specified, the user can specify the authority for:

- All users who do not have authority specifically given to them for an object.
- Users who are not on the authorization list that secures the object.
- Users whose user group does not have authority specifically given to it.
- Users whose user group is not on the authorization list that secures the object.

This command can be used by an object owner, by the security officer, or by a user with object management authority for the specified object.

Restrictions:

1. A user must be either the owner of the object or have *ALL authority to use the AUTL parameter.

2. The user must have object management authority to the object to grant authority to the object.

3. AUT(*AUTL) can be specified only with USER(*PUBLIC). User profile names cannot be secured by an authorization list (*AUTL).

4. Only the owner of the object, or someone with all object authority (*ALLOBJ), can grant object management authority to a user.

Parameters

WSOTYPE
Specifies the name of the workstation object for which specific authorities are given to one or more users or to an authorization list.

The special values for this parameter are described in the table under "Special Values for Authorizing Objects" on page E-1.

USER
Specifies the user profile names of one or more users to whom authorities for the named object are being given. If user names are specified, the authorities are given specifically to those users. Authority given by this command can be revoked specifically by the Revoke Workstation Object Authority (RVKWSOAUT) command.

*PUBLIC: All users of the system, who do not have authority specifically given to them for the object, who are not on the authorization list, whose user group does not have any authority, or whose user group is not on the authorization list, are authorized to use the object as specified on the AUT parameter.

user-profile-name: Specify the user profile names of one or more users who have specific authority for the object. A maximum of 50 user profile names can be specified.

AUTL
Specifies the name of the authorization list whose members are given authority for the object specified on the WSOTYPE parameter.

REFOBJ
Specifies the name of the object being queried to obtain authorization information. Those authorizations are given to the object specified on the WSOTYPE parameter. Users authorized to the referenced object are authorized in the same manner to the object for which authority is being given. If the referenced object is secured by an authorization list, that authorization list secures the object specified on the WSOTYPE parameter. Specify the name of the object.

Optional Parameter

AUT
Specifies the authority given to users specified on the USER parameter. Users must have *AUTLMGT authority to manage the authorization list.

<u>*CHANGE:</u> The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence and specify the security for the object, change the object, and perform basic functions on the object. The user can also change ownership of the workstation object.

***USE:** The user can perform basic operations on the workstation object, such as running a program or reading a file. The user cannot change the workstation object. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the workstation object.

***AUTL:** The public authority of the authorization list specified on the AUTL parameter is used for the public authority for the object.

A maximum of 10 of the following values can be specified:

***OBJALTER:** Object alter authority provides the authority needed to alter the attributes of an object. If the user has this authority on a database file, the user can add and remove triggers, add and remove referential and unique constraints, and change the attributes of the database file. If the user has this authority on an SQL package, the user can change the attributes of the SQL package. This authority is currently only used for database files and SQL packages.

***OBJEXIST:** Object existence authority provides the authority to control the object's existence and ownership. This authority is necessary for users who want to delete the object, free storage of the object, perform save and restore operations for the object, or transfer ownership of the object. (If a user has special save system authority (*SAVSYS), object existence authority is not required.) Object existence authority is required to create an object that has been named by an authority holder.

***OBJMGT:** Object management authority provides the authority to specify the security for the object, move or rename the object, and add members to database files.

***OBJOPR:** Object operational authority provides authority to look at the description of an object and use the object, as determined by the data authorities that the user has to the object.

***OBJREF:** Object reference authority provides the authority needed to reference an object from another object such that operations on that object may be restricted by the other object. If the user has this authority on a physical file, the user can add referential constraints in which the physical file is the parent. This authority is currently only used for database files.

***ADD:** Add authority provides the authority to add entries to an object (for example, job entries to a queue or records to a file).

*DLT: Delete authority allows the user to remove entries from an object, for example, remove messages from a message queue or records from a file.

*EXECUTE: Execute authority provides the authority needed to run a program or to locate an object in a library.

*READ: Read authority provides the authority needed to get the contents of an entry in an object or to run a program.

*UPD: Update authority provides the authority needed to change the entries in an object.

Example

```
GRTWSOAUT   WSOTYPE(*TPLWRKARA)   AUTL(KLIST)
```

This command gives authority to the work area template to the users with authority specified for them on the authorization list KLIST.

EDTWSOAUT (Edit Workstation Object Authority) Command

Job: I Pgm: I REXX: I Exec

```
►►──EDTWSOAUT──WSOTYPE(──┬──*TPLWRKARA──┬──)──(P)─────────────────────────────►◄
                         ├──*WRKARA─────┤
                         ├──*TPLPRTOL───┤
                         ├──*PRTOL──────┤
                         ├──*TPLTPRTL───┤
                         ├──*PRTL───────┤
                         ├──*TPLOUTQ────┤
                         ├──*TPLOUTQL───┤
                         ├──*OUTQL──────┤
                         ├──*TPLJOBL────┤
                         ├──*JOBL───────┤
                         ├──*TPLJOBQ────┤
                         ├──*TPLJOBLOG──┤
                         ├──*JOBLOG─────┤
                         ├──*TPLJOBQL───┤
                         ├──*JOBQL──────┤
                         ├──*TPLMSGL────┤
                         ├──*MSGL───────┤
                         ├──*TPLMSGQ────┤
                         ├──*TPLMSGSND──┤
                         ├──*MSGSND─────┤
                         ├──*TPLSGNUSL──┤
                         ├──*SGNUSL─────┤
                         ├──*TPLOBJL────┤
                         ├──*OBJL───────┤
                         ├──*TPLLIBSL───┤
                         ├──*LIBSL──────┤
                         ├──*TPLLIB─────┤
                         ├──*TPLLAUNCH──┤
                         ├──*LAUNCH─────┤
                         └──*PRSSET─────┘
```

Note:
P All parameters preceding this point can be specified in positional form.

Purpose

The Edit Workstation Object Authority (EDTWSOAUT) command shows the list of authorized users of a workstation object and the users' associated authorities. Workstation objects are used in the GraphicOps feature of the operating system. If you own the object or are the security officer, you can add, change, or remove authority for the object. If you have object management authority for the object, you can remove your specific authorities or grant or remove them for other users.

The following are displayed for the specified object:

- The object name
- The name of the library containing the object
- The name of the object owner, the object's type, and a list of all the users who are authorized to use the object
- The authorities that each user has for the object

If an object does not have an owner name associated with it, no authorities for the object are shown.

Restrictions:

1. The user must have object management authority to the object to use this command.
2. If the object is a file, the user must have object operational and object management authorities to use this command.

Required Parameter

WSOTYPE

Specifies the name of the workstation object for which specific authorities are to be shown or edited.

The special values for this parameter are described in the table under "Special Values for Authorizing Objects" on page E-1.

Example

```
EDTWSOAUT    WSOTYPE(*TPLMSGQ)
```

This command shows the list of authorized users to the message queue template.

RVKWSOAUT (Revoke Workstation Object Authority) Command

Job: B,I Pgm: B,I REXX: B,I Exec

```
►►──RVKOBJAUT──WSOTYPE(──┬──*TPLWRKARA──┬──)──────────────────────────────────►
                         ├──*WRKARA─────┤
                         ├──*TPLPRTOL───┤
                         ├──*PRTOL──────┤
                         ├──*TPLTPRTL───┤
                         ├──*PRTL───────┤
                         ├──*TPLOUTQ────┤
                         ├──*TPLOUTQL───┤
                         ├──*OUTQL──────┤
                         ├──*TPLJOBL────┤
                         ├──*JOBL───────┤
                         ├──*TPLJOBQ────┤
                         ├──*TPLJOBLOG──┤
                         ├──*JOBLOG─────┤
                         ├──*TPLJOBQL───┤
                         ├──*JOBQL──────┤
                         ├──*TPLMSGL────┤
                         ├──*MSGL───────┤
                         ├──*TPLMSGQ────┤
                         ├──*TPLMSGSND──┤
                         ├──*MSGSND─────┤
                         ├──*TPLSGNUSL──┤
                         ├──*SGNUSL─────┤
                         ├──*TPLOBJL────┤
                         ├──*OBJL───────┤
                         ├──*TPLLIBSL───┤
                         ├──*LIBSL──────┤
                         ├──*TPLLIB─────┤
                         ├──*TPLLAUNCH──┤
                         ├──*LAUNCH─────┤
                         └──*PRSSET─────┘

►──┬──USER(──┬──*ALL──────────────────┬──)──┬────────────────────────────(P)──►◄
   │         ├──*PUBLIC────────────────┤    │        ┌──*CHANGE────────┐
   │         │                         │    └──AUT(──┼──*ALL───────────┼──)──┘
   │         └──▼─user-profile-name─┬──(1)           ├──*USE───────────┤
   │                                                 ├──*EXCLUDE───────┤
   │                                                 ├──*AUTL──(2)──────┤
   │                                                 │
   │                                                 ▼──*OBJALTER──┬──(3)
   │                                                 ├──*OBJEXIST──┤
   │                                                 ├──*OBJMGT────┤
   │                                                 ├──*OBJOPR────┤
   │                                                 ├──*OBJREF────┤
   │                                                 ├──*ADD───────┤
   │                                                 ├──*DLT───────┤
   │                                                 ├──*EXECUTE───┤
   │                                                 ├──*READ──────┤
   │                                                 └──*UPD───────┘
   └──AUTL(──authorization-list-name──)────────────────────────────────────
```
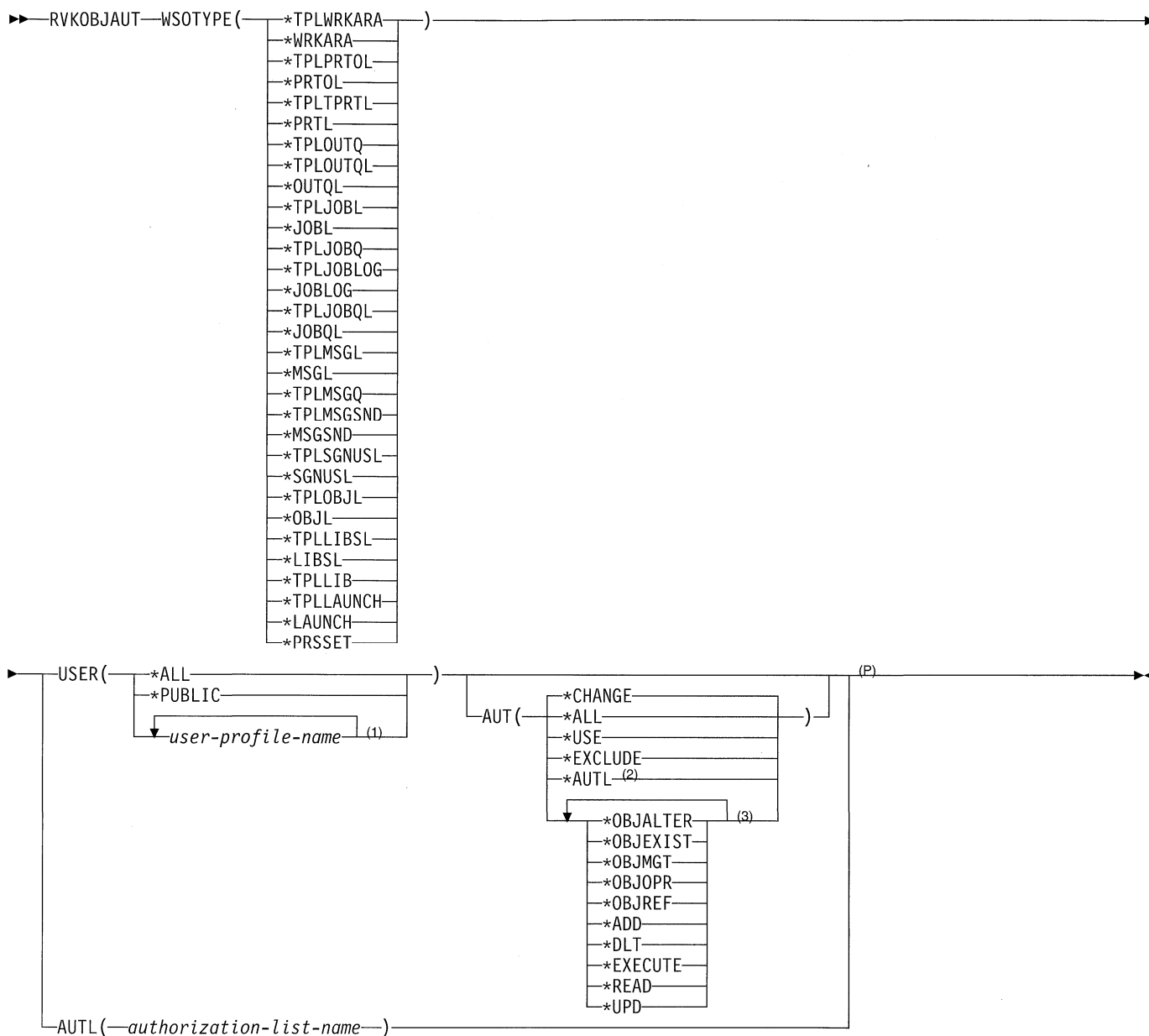
Notes:

[1] A maximum of 50 repetitions.

[2] AUT(*AUTL) is valid only if USER(*PUBLIC) is specified.

[3] Select one or more, 10 maximum.

[P] All parameters preceding this point can be specified in positional form.

Purpose

The Revoke Workstation Object Authority (RVKWSOAUT) command is used to take away authority for a workstation object used in the GraphicOps feature of the operating system. Specific or all authority can be taken away from one or more users named in the command. You also can take away the authority of an authorization list for a named object.

This command can be issued by a security officer, by an object owner, or by a user who has object management authority to the object for which authority is to be revoked. If a specific authority (other than *ALL) is specified on the AUT parameter, and that authority is not revoked, a message is issued that indicates the authority that is not revoked.

> ── **Security Risk** ──────────────────────────────
>
> Revoking all authorities specifically given to a user for an object can result in the user having more authority than before the revoke operation. If a user has *USE authority for an object and *CHANGE authority on the authorization list that secures the object, revoking *USE authority results in the user having *CHANGE authority to the object.

Restrictions:

1. If you have object management authority, you can revoke only the explicit authority that you have.
2. You might not be able to revoke authority for an object that has been allocated (locked) to another job. Authority cannot be revoked for an object that is currently in use.

Parameters

WSOTYPE

Specifies the name of the workstation object for which specific authorities are to be revoked.

The special values for this parameter are described in the table under "Special Values for Authorizing Objects" on page E-1.

USER

Specifies the user profile names of one or more users whose specific authorities to the named object are being revoked.

Authorities revoked by this command are related to those given by the Grant Workstation Object (GRTWSOAUT) command. If users have public authority to an object because USER(*PUBLIC) was specified on the GRTWSOAUT command, that public authority is revoked when *PUBLIC is specified on this parameter. If users have specific authorities to an object because their names were specified on the GRTWSOAUT command, their names must be specified on this parameter to revoke the same authorities.

Note: Either this parameter or the AUTL parameter must be specified.

*ALL: The authorities specified on the AUT parameter are taken away from all enrolled users of the system except the owner, if they are publicly or explicitly authorized.

*PUBLIC: The specified authorities are taken away from users who do not have specific authority for the object, who are not on the authorization list, and whose group has no authority. Users who have specific authority still retain their authorities to the object.

user-profile-name: Specify the user profile names of one or more users that are having the specified authorities revoked. The authorities specified in the AUT parameter are being specifically taken away from each specified user. This parameter cannot be used to remove public authority from specific users; only authorities that were specifically given to them can be specifically revoked.

AUTL

Specifies the authorization list that is revoked from the object specified on the WSOTYPE parameter. If public authority to the object is *AUTL, it is changed to *EXCLUDE. The authorization list's authority is then removed.

Either this parameter or the USER parameter must be specified. If this parameter is specified, the AUT parameter is ignored.

Optional Parameter

AUT

Specifies the authority to be taken away from users who do not have specific authority to the object, who are not on an authorization list, and whose user group has no specific authority to the object.

<u>*CHANGE:</u> The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user can also change ownership of the workstation object. Revoking *ALL authority from *PUBLIC causes the *PUBLIC authority to change to *EXCLUDE.

***USE:** The user can perform basic operations on the workstation object, such as running a program or reading a file. The user cannot change the workstation object. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the workstation object.

***AUTL:** The public authority of the authorization list specified in this parameter is revoked for the object. The public authority for the object becomes *EXCLUDE.

A maximum of 10 of the following values can be specified:

***OBJALTER:** Object alter authority provides the authority needed to alter the attributes of an object. If the user has this authority on a database file, the user can add and remove triggers, add and remove referential and unique constraints, and change the attributes of the database file. If the user has this authority on an SQL package, the user can change the attributes of the SQL package. This authority is currently only used for database files and SQL packages.

***OBJEXIST:** Object existence authority provides the authority to control the object's existence and ownership. These authorities are necessary for users who want to delete the object, free storage of the object, perform save and restore operations for the object, or transfer ownership of the object. If a user has special save system authority (*SAVSYS), object existence authority is not needed. Object existence authority is required to create an object that has been named by an authority holder.

***OBJMGT:** Object management authority provides the authority to specify the security for the object, move or rename the object, and add members to database files.

***OBJOPR:** Object operational authority provides authority to look at the description of an object and use the object as determined by the user's data authorities to that object.

***OBJREF:** Object reference authority provides the authority needed to reference an object from another object such that operations on that object may be restricted by the other object. If the user has this authority on a physical file, the user can add referential constraints in which the physical file is the parent. This authority is currently only used for database files.

***ADD:** Add authority provides the authority to add entries to an object (for example, job entries to a queue or records to a file).

***DLT:** Delete authority allows the user to remove entries from an object, for example, remove messages from a message queue or records from a file.

*EXECUTE: Execute authority provides the authority needed to run a program or to locate an object in a library.

*READ: Read authority provides the authority needed to show the contents of an entry in the object or to run a program.

*UPD: Update authority provides the authority needed to change the entries in the object.

Example

```
RVKWSOAUT   WSOTYPE(*SGNUSL)   USER(HEANDERSON)
  AUT(*DLT *UPD)
```

This command removes the delete and the update authorities for signed-on user list objects from the user profile name HEANDERSON.

Appendix F. Customization and Administration Planning Forms

This appendix contains blank planning forms that you can copy and use to do your customization and administration planning.

The planning forms included are:

> **Planning Form 1**
>
> Use to determine the authority you want for each workstation object.

> **Planning Form 2**
>
> Use to determine which workstation objects you want to customize and what customization actions you want to perform.

> **Planning Form 3**
>
> Use to determine what workstation object settings you want to change.

> **Planning Form 4**
>
> Use to determine what Personal Settings you want to change.

> **Planning Form 5**
>
> Use to determine which AS/400 resources and actions you want to secure.

Table F-1. Planning Form 1: Workstation Object Authority Planning

Instructions:

1. Check the ***EXCLUDE** column for the objects you don't want users to see.
2. Decide if users should have *USE or *CHANGE authority to the objects not excluded and mark those. Refer to the tables in Chapter 10, "Advanced Administration Concepts," for the actions you can perform based on the authority.
3. Check the objects you want to customize. If you need to customize or use an object that you are excluding, you need to customize or use the object first, and then change the authority to *EXCLUDE.
4. Fill out Planning Form 2 for each object you plan to customize.
5. When you set the authority, you can check off the object in the **Done** column.

Done	Workstation Object (Special Value)	Authority			Customize
		*USE	***CHANGE**	***EXCLUDE**	
	AS/400 object list (*OBJL)*				
	Job list (*JOBL)				
	Job log (*JOBLOG)*				
	Job queue list (*JOBQL)				
	Job submitter (*LAUNCH)*				
	List of libraries (*LIBSL)				
	Message list (*MSGL)				
	Message sender (*MSGSND)				
	Output queue list (*OUTQL)				
	Personal settings (*PRSSET)				
	Printer list (*PRTL)				
	Printer output list (*PRTOL)				
	Signed-on user list (*SGNUSL)				
	Work area (*WRKARA)				
	AS/400 Object Templates				
	Job queue template (*TPLJOBQ)				
	Library template (*TPLLIB)				
	Message queue template (*TPLMSGQ)				
	Output queue template (*TPLOUTQ)				
	Workstation Object Templates				
	AS/400 object list template (*TPLOBJL)				
	Job list template (*TPLJOBL)				
	Job log template (*TPLJOBLOG)				
	Job queue list template (*TPLJOBQL)				
	Job submitter template (*TPLLAUNCH)				
	List of libraries template (*TPLLIBSL)				
	Message sender template (*TPLMSGSND)				
	Message list template (*TPLMSGL)				
	Output queue list template (*TPLOUTQL)				
	Printer output list template (*TPLPRTOL)				
	Printer list template (*TPLTPRTL)				
	Signed-on user list template (*TPLSGNUSRL)				
	Work area template (*TPLWRKARA)				

Note:

*   By default, these objects do not appear in any shipped work areas.

Table F-2. Planning Form 2: Workstation Object Customization Planning

Instructions:

1. Check any customization actions you want to take on each workstation object.
2. In the *Notes* column, enter any additional information about the customization action you want to take.
3. Fill out Planning Form 3 for each workstation object that you marked to change settings.
4. Fill out Planning Form 4 to plan any changes to Personal Settings.
5. Once you have done the customization action on GraphicOps, check the *Done* column.

Done	Workstation Object	Customization Action					Notes
		Change Settings	**Create Another**	**Copy**	**Move**	**Delete**	
	AS/400 object list						
	Job list						
	Job log						
	Job queue list						
	Job submitter						
	List of libraries						
	Message list						
	Message sender						
	Output queue list						
	Personal settings						
	Printer list						
	Printer output list						
	Signed-on user list						
	Work Area						
	AS/400 Object Templates						
	Job queue						
	Library						
	Message queue						
	Output queue						
	Workstation Object Templates						
	Job list						
	Job log						
	Job queue list						
	Job submitter						
	List of libraries						
	Message						
	Message list						
	Object list						
	Output queue list						
	Printer output list						
	Printer list						
	Signed-on user list						
	Work area						

Table F-3. Planning Form 3: Changes to Workstation Object Settings

Instructions:

1. For **Object Name**, fill in the name of the workstation object.
2. Check the **Change** column for any settings you want to change and in the **Notes** column, fill in what change you want to make.
3. Check the **N/A** column for any settings that do not apply to this object.
4. The **Default** column is optional. You can enter the setting default value so you know if you want to change it. You can also just mark the column if you plan to use the default value.
5. Add any additional settings you want to change in the additional blank rows.
6. When you change the setting, you can check off the setting in the **Done** column.

Object Name:

Done	Setting	Change	N/A	Use Default	Notes
	Title				
	Double-click action				
	Menu style				
	Include				
	Organization				
	Columns				

Table F-4. Planning Form 3: Changes to Workstation Object Settings

Instructions:

1. For **Object Name**, fill in the name of the workstation object.
2. Check the **Change** column for any settings you want to change and in the **Notes** column, fill in what change you want to make.
3. Check the **N/A** column for any settings that do not apply to this object.
4. The **Default** column is optional. You can enter the setting default value so you know if you want to change it. You can also just mark the column if you plan to use the default value.
5. Add any additional settings you want to change in the additional blank rows.
6. When you change the setting, you can check off the setting in the **Done** column.

Object Name:

Done	Setting	Change	N/A	Use Default	Notes
	Title				
	Double-click action				
	Menu style				
	Include				
	Organization				
	Columns				

Table F-5. Planning Form 4: Changes to Personal Settings

Instructions:

1. Check the *Change* column for settings you want to change. Under *Notes*, fill in the changes needed.
2. The *Default* column shows the default value for the setting.
3. When you change the setting, you can check off the setting in the *Done* column.

Object Name: Personal Settings

Done	Setting	Change	Default	Notes
Sign-Off Options				
	Confirm on sign off		Yes	
	Save customization data		Yes	
All Objects: Visual Options				
	Display menu bar		Yes	
	Display status area		Yes	
	Display information area		Yes	
	Display system name in title		Yes	
	Menu style		Full*	
	Details view icon size		Small	
All Objects: Confirmations				
	Confirm on delete		Yes	
	Confirm on work area delete		Yes	
	Confirm on copy		No	
	Confirm on move		No	
AS/400 Resources				
	Printer Output Double-click action Menu style		Contents Full*	
	Printer Double-click action Menu style		Details Full*	
	Output queue Double-click action Menu style		Details Full*	
	Job Double-click action Menu style		Settings Full*	
	Job Queue Double-click action Menu style		Details Full*	
	Signed-On User Double-click action Menu style		Settings Full*	
	Message Double-click action Menu style		Contents Full*	
	Message Queue Double-click action Menu style		Details Full*	
	Library Double-click action Menu style		Icons Full*	
	AS/400 Object Double-click action Menu style		Settings Full*	

* A user profile with a user class of *USER defaults to short menus.

Table F-6 (Page 1 of 2). Planning Form 5: AS/400 Resource Authority Planning

Instructions:

1. Check the *Secure* column for OS/400 commands and programs you want to secure.
2. Use the appropriate OS/400 commands to secure the commands and programs.
3. When you secure the command or program, you can check it off in the *Done* column.

Done	GraphicOps AS/400 Resource	Function	OS/400 Command/Program	Secure
	Printer Output List	Display	QUSRSPLA *	
	Printer Output	Display Change, Move, Print next Hold Send Release Delete	DSPSPLF CHGSPLFA HLDSPLF SNDNETSPLF RLSSPLF DLTSPLF	
	Output Queue	Display Create Change Hold Release Clear Delete	QSPROUTQ * CRTOUTQ CHGOUTQ HLDOUTQ RLSOUTQ CLROUTQ DLTOUTQ	
	Printer	Display Stop Restart Make available, make unavailable Start Change Hold Release Rename	QSPRWTRI * ENDWTR CHGSPLFA VRYCFG STRPRTWTR CHGWTR HLDWTR RLSWTR, RLSOUTQ, RLSCMNDEV RNMOBJ	
	Job List	Display	QUSLJOB *	
	Job	Display Hold Release Move/Change Disconnect Delete/End	QUSRJOBI * HLDJOB RLSJOB CHGJOB, CHGACGCDE DSCJOB ENDJOB	
	Job Queue	Display Hold Release Clear Create Another Copy Move Rename Delete	QSPRJOBQ * HLDJOBQ RLSJOBQ CLRJOBQ CRTJOBQ CRTDUPOBJ MOVOBJ RNMOBJ DLTJOBQ	
	Signed-On User List	Display Sign off Temporarily sign off Hold Release	QEZLSGNU * ENDJOB DSCJOB HLDJOB RLSJOB	
	Message List	Display Delete all not needing reply	DSPMSG CLRMSGQ	

	Message Sender	Display Send message Send break msg Reply	QMHLSTM * QEZSNDMG * SNDBRKMSG DSPMSG	
	Message Queue	Display Clear Change/Reset Create Another Copy Move Rename Delete	WRKMSGQ CLRMSGQ CHGMSGQ CRTMSGQ CRTDUPOBJ MOVOBJ RNMOBJ DLTMSGQ	
	Job Log	Display	QMHLJOBL *	
	AS/400 Object List	Display	QUSLOBJ *	
	AS/400 Object	Display Change Copy Move Check authority Rename Delete	QUSROBJD * CHGOBJD, CHGOBJOWN CRTDUPOBJ MOVOBJ QUSCUSRA * RNMOBJ DLTxxx (where xxx is object type)	
	Library	Display Change library Change object Clear Create another Copy Delete Rename Become current library	DSPLIB, WRKOBJ CHGLIB CHGOBJD CLRLIB CRTLIB CPYLIB DLTLIB RNMOBJ CHGCURLIB	
	Job Submitter	Submit	SBMJOB	

Note: Programs (*) are OS/400 application program interface (API) programs.

Bibliography

The following is a summary of the documentation available for OS/400 Graphical Operations.

- *OS/400 Graphical Operations – Getting Started*, SC41-3202: provides an introduction to OS/400 GraphicOps. It contains chapters on starting and using GraphicOps, an overview of GraphicOps functions, sample tasks, and mouse basics.

The following documents contain information related to the installation and administration of OS/400 Graphical Operations.

- *New Release Planning*, SA41-3100: provides high-level information about new products and enhancements to existing products and features (both hardware and software) in each new release of the AS/400 system. The information is to be used in planning for how new releases and products being added to the system will affect current applications and installations.

- *Software Installation*, SC41-3120: provides step-by-step procedures for initial install, installing licensed programs, program temporary fixes (PTFs), and secondary languages from IBM.

- *Security – Basic*, SC41-3301: explains why security is necessary, defines major concepts, and provides information on planning, implementing, and monitoring basic security on the AS/400 system.

- *Security – Reference*, SC41-3302: tells how system security support can be used to protect the system and the data from being used by people who do not have the proper authorization, protect the data from intentional or unintentional damage or destruction, keep security information up-to-date, and set up security on the system.

- *Backup and Recovery – Basic*, SC41-3304: contains information about planning a backup and recovery strategy, the different types of media available to save and restore system data, save and restore procedures, and disk recovery procedures. It also describes how to install the system again from backup.

- *Communications Configuration*, SC41-3401: provides information on how to configure the communications functions available with the OS/400 licensed program, including detailed descriptions of network interface, line, controller, device, mode, and class-of-service descriptions; configuration lists; and connection lists.

- *Client Access/400 for Windows 3.1 – Getting Started*, SC41-3530: provides information about installing Client Access/400 for Windows 3.1. It also information to introduce the user to the product, including online information.

- *Client Access/400 for OS/2 Setup*, SC41-3520: provides information about installing, configuring, and administering Client Access/400 for OS/2. It also contains chapters on analyzing problems, and appendixes on memory requirements, installation work sheets for OS/2, and using AS/400 national language support with Client Access/400.

- *Client Access/400 for OS/2 Setup (DBCS)*, SC41-3522: provides information about installing configuring, and administering Client Access/400 for OS/2 double-byte character set (DBCS) users. It also contains chapters on analyzing problems, and appendixes on memory requirements, installation work sheets for DOS, and using AS/400 national language support with Client Access/400.

- *Client Access/400 for OS/2 User Guide*, SC41-3521: provides concepts and examples of how to use the Client Access/400 functions. It assumes that the Client Access/400 product is already installed and set up. This manual is intended for users of personal computers using the OS/2 operation system.

- *Client Access/400 for OS/2 User Guide (DBCS)*, SC41-3523: provides concepts and examples of how to use the Client Access/400 functions with the OS/2 system. It assumes that the Client Access/400 product is already installed and set up. This manual is intended for users with PS/55 (double-byte character set) personal computers using the OS/2 operating system.

- *System Operation for New Users*, SC41-3200: provides beginner information about how to sign on and off; send and receive messages; respond to keyboard error messages; use function keys; use display, command, and help information; and control and manage jobs.

- *National Language Support*, SC41-3101: provides information required to understand and use the national language support function on the AS/400 system. This manual prepares the AS/400 user for planning and using the national language support (NLS) and the multilingual support of the AS/400 system.

- *System Operation*, SC41-3203: provides information about how to use the system unit control panel and console; send and receive messages; respond to error messages; start and stop the system; and work with jobs, printing, messages, tapes and diskettes, online education; program temporary fixes (PTFs), and problems.

- *OS/2 Extended Services Communications Manager Configuration Guide*

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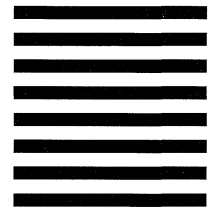Fold and Tape   **Please do not staple**   Fold and Tape

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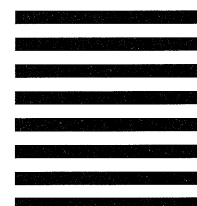
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