

FactoryLink 7

Version 7.0



Installation Guide

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Preface

The *FactoryLink Installation Guide* provides installation requirements and step-by-step instructions on how to install FactoryLink Client and Server, Device Interfaces, and Monitor Pro Add-Ons on the Microsoft Windows NT and Windows 2000 platforms. It gives an overview of the new FactoryLink License Manager and contains a list of error messages that you might encounter during installation.

AUDIENCE

The major audience of this guide is those involved in the FactoryLink 7.0 installation.

This manual, and many others, are available in French and German in PDF format. These files are located on the FactoryLink “Client and Server” CD under the Documentation directory.

Ce manuel, et beaucoup d'autres, sont disponibles en français et en allemand dans le format pdf. Ces fichiers se trouvent sur le CD de “Client et Serveur” de FactoryLink dans le répertoire de Documentation.

Dieses Handbuch und viele andere, sind auf Französisch und Deutsch im pdf-Format vorhanden. Diese Dateien sind auf der FactoryLink- „Klient und Server” CD unter dem „Unterlagen” Verzeichnis aufgeführt.

STRUCTURE OF THE *FACTORYLINK INSTALLATION GUIDE*

The *FactoryLink Installation Guide* contains eight chapters and an appendix:

- Chapter 1, “Installation Requirements”
- Chapter 2, “Installing FactoryLink 7.0”
- Chapter 3, “Installing Monitor Pro Add-Ons”
- Chapter 4, “Installing Device Interfaces”
- Chapter 5, “Authorizing and Maintaining FactoryLink Installation”
- Chapter 6, “Additional Information and Procedures”
- Chapter 7, “License Manager”
- Chapter 8, “Error Messages”
- Appendix A, “Installing Microsoft SQL Server 7.0”

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- *Using This Guide*
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USING THIS GUIDE

The material in this guide is presented sequentially in performance order. We recommend you read the entire guide to familiarize yourself with all the information before you install FactoryLink 7.0.

GETTING HELP

For help, contact your USDATA Tier One Partner (TOP) or visit the USDATA Web site (www.usdata.com) to locate a TOP in your region.

Chapter 1

Installation Requirements

This chapter describes the minimum hardware and software requirements for the installation of FactoryLink 7.0 on the Microsoft Windows NT and Windows 2000 platforms. It also lists the content of the three CDs in the FactoryLink 7.0 package.

HARDWARE AND SOFTWARE REQUIREMENTS

Before installing FactoryLink 7.0, you need to make sure that you meet the following minimum hardware and software requirements:

- CPU: Pentium 233
- CD-ROM drive
- 128 MB RAM
- Monitor and SVGA (1024 X 768)
- Keyboard and Windows NT-compatible mouse
- Operating System:
 - Microsoft NT 4.0, Service Pack 4 or
 - Microsoft Windows 2000
- Internet Explorer 4.01

You can go to the following Web sites to install the required versions of service packs:

- Microsoft Windows NT: <http://www.microsoft.com/NTServer/all/downloads.asp>
- Internet Explorer: <http://www.microsoft.com/NTServer/all/downloads.asp>

Microsoft System Files

The FactoryLink 7.0 installation program automatically installs the following Microsoft system files:

- Microsoft Active Directory Service, version 4.1
- Microsoft Data Access Components, version 2.1, Service Pack 2
- Microsoft Visual Studio Component DLLs

- **INSTALLATION REQUIREMENTS**

- *Hardware and Software Requirements*

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Before beginning the installation process, verify that your system's functioning will not be adversely affected by the installation of or updates to these system files.

INSTALLATION REQUIREMENTS

FactoryLink Installation CDs

FACTORYLINK INSTALLATION CDS

Your FactoryLink 7.0 package contains three CDs:

- Client and Server
- Device Interfaces and Value-Added Products
- Microsoft SQL Server 7.0

Client and Server CD

The Client/Server CD contains the following items:

- FactoryLink 7.0 Client and Server installation program
- FactoryLink 7.0 Release Notes
- Adobe Acrobat Reader (in English, French, and German)
- FactoryLink 7.0 documentation
- Monitor Pro Add-Ons
- OPC Factory Server (Schneider Automation)

Device Interfaces and Value-Added Products CD

The Device Interfaces and Value-Added Products CD contains over 40 drivers that work with FactoryLink 7.0, which are purchased as options separately from the FactoryLink standard package. It also contains the documentation for the value-added products. The drivers are purchased as options separately from the FactoryLink standard package. For a list of the drivers, refer to Chapter 4, “Installing Device Interfaces.”

Microsoft SQL Server 7.0 CD

FactoryLink 7.0 installation includes the option of installing Microsoft SQL Server 7.0 for the Starter Application. If you select this option, use the SQL Server CD for installation. Install the SQL Server before installing FactoryLink.

Note: When you install the Microsoft SQL Server, you can install either the Desktop Edition for Windows NT Workstation or Windows 2000 Professional, or the Standard Edition, which has to be installed on a Windows NT Server or Windows 2000 Server. However, if you choose to install the Enterprise edition, you need to obtain a license key from Microsoft.

The SQL Server CD contains an installation program provided by Microsoft. For installation instructions, refer to *Appendix A: Installing Microsoft SQL Server* in this guide.

- **INSTALLATION REQUIREMENTS**
- *FactoryLink Installation CDs*
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Chapter 2

Installing FactoryLink 7.0

This chapter provides step-by-step instructions on how to use the Client and Server CD to install the FactoryLink 7.0 software on the Microsoft Windows NT or Windows 2000 platform.

Install Microsoft SQL Server 7.0 before installing FactoryLink 7.0, if you will use the SQL Server for the Starter Application.

Note: If you want to keep an existing FactoryLink 6.x.x version in your machine, you can install 7.0 in a different directory. However, before installing 7.0, make sure to delete all the existing FactoryLink environment variables including from the path.

INSTALLATION PROCEDURE

Perform the following steps to install FactoryLink 7.0:

- 1** Close all applications that are running. If any other application is running, the install program will not start properly.
- 2** Insert the FactoryLink 7.0 Client and Server CD into the CD-ROM drive.
- 3** If AutoRun is turned on, the **Setup** runs automatically. If AutoRun is turned off, click **Start>Run** in the Windows taskbar to run the **Setup** from the CD.

Note: The AutoRun feature will not work for the installation of FactoryLink on the Terminal Server. You need to go to the **Control Panel** and use **Add/Remove** to run the installation program.

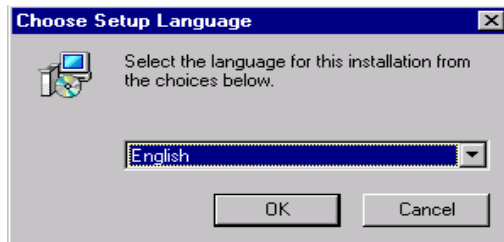
- **INSTALLING FACTORYLINK 7.0**

- *Installation Procedure*

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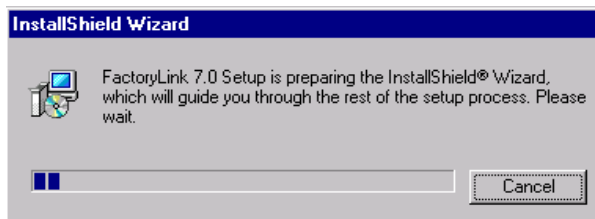
- 4 In the **Choose Setup Language** dialog box, select a language from the drop-down list: English, French (standard), or German (see Figure 2-1). Click **OK**.

Figure 2-1 Choose Setup Language Dialog Box



- 5 Wait for FactoryLink 7.0 Setup to finish preparing the InstallShield Wizard (see Figure 2-2).

Figure 2-2 InstallShield Wizard Dialog Box

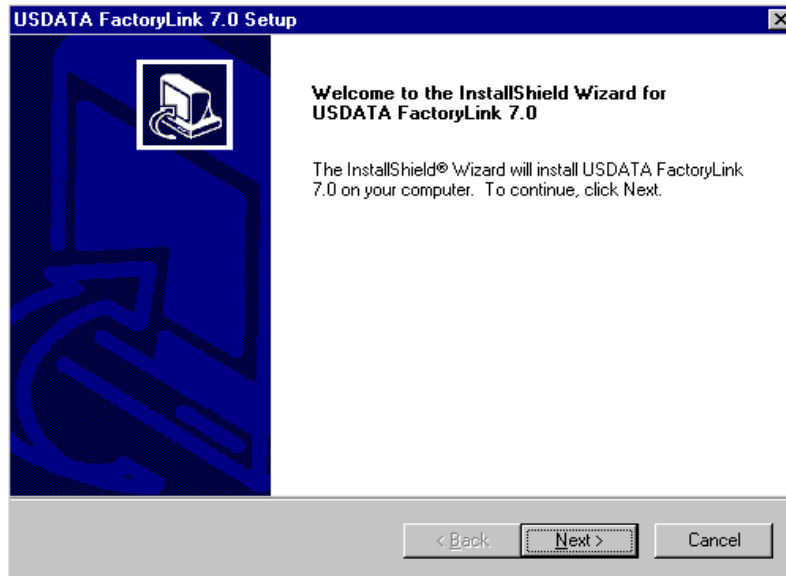


INSTALLING FACTORYLINK 7.0

Installation Procedure

- 6 In the **Welcome to the InstallShield Wizard for USDATA FactoryLink 7.0** dialog box, click **Next** (see Figure 2-3).

Figure 2-3 Welcome to the InstallShield Wizard for USDATA FactoryLink 7.0 Dialog Box



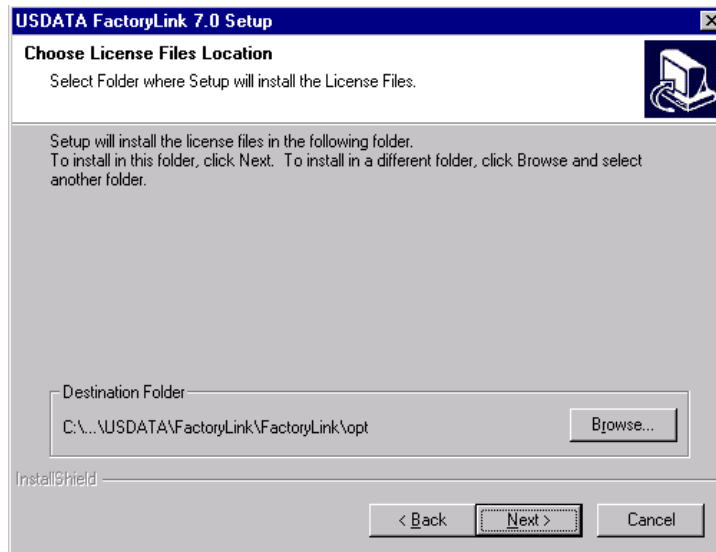
- **INSTALLING FACTORYLINK 7.0**

- *Installation Procedure*

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- 7 In the **Choose License Files Location** dialog box, accept the default folder for the license files or use the browse button to choose another one (see Figure 2-4). Click **Next**.

Figure 2-4 Choose License Files Location Dialog Box



- 8 In the **License Configuration** dialog box, enter your serial number and configuration sequence in “Exhibit A” of your FactoryLink shipping document (see Figure 2-5). Click **Next**.

Once you have entered the correct serial number and configuration sequence, both of which are case-insensitive, a registration code is generated automatically. Make a note of this code and contact USDATA to authorize your FactoryLink in one of the following three ways:

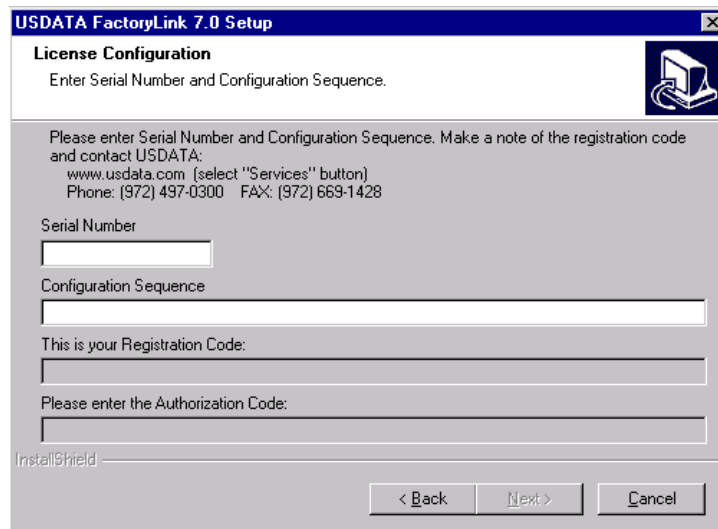
- Go to www.usdata.com (select “services”)
- Call USDATA: 972-497-0300
- Fax USDATA: 972-669-1428

For more information, refer to Chapter 5, “Authorizing and Maintaining FactoryLink Installation.”

INSTALLING FACTORYLINK 7.0

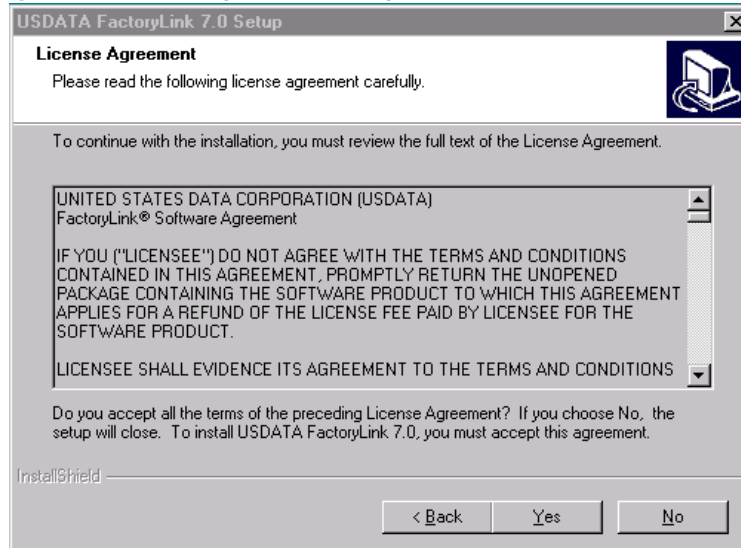
Installation Procedure

Figure 2-5 License Configuration Dialog Box



- 9 In the **License Agreement** dialog box, read through the **License Agreement** by using the Page Down key (see Figure 2-6). Click **Yes**.

Figure 2-6 License Agreement Dialog Box



- **INSTALLING FACTORYLINK 7.0**

- *Installation Procedure*

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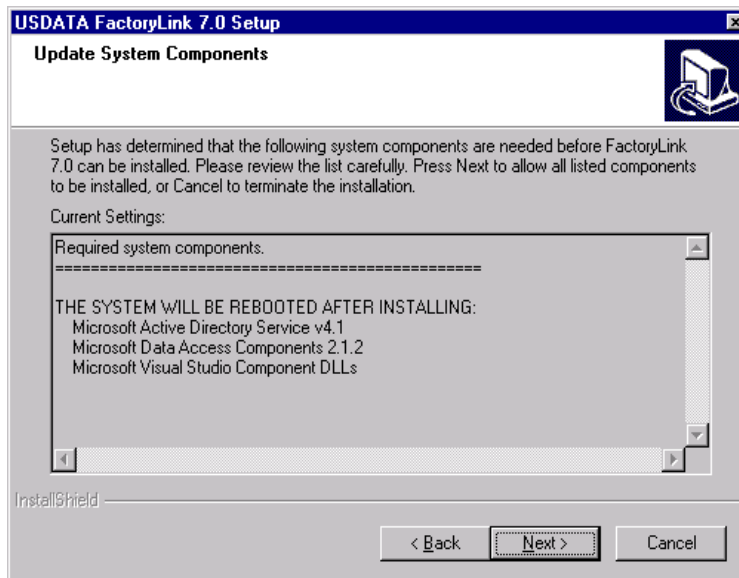
10 In the **Update System Components** dialog box, click **Next** to install the required system components (see Figure 2-7).

The following system files are required for the FactoryLink installation:

- Microsoft Active Directory Service V4.1
- Microsoft Data Access Components 2.1.2
- Microsoft Visual Studio Component DLLs

Make sure that your system's functioning will not be adversely affected by the installation of or updates to the required versions of these components.

Figure 2-7 Update System Components Dialog Box

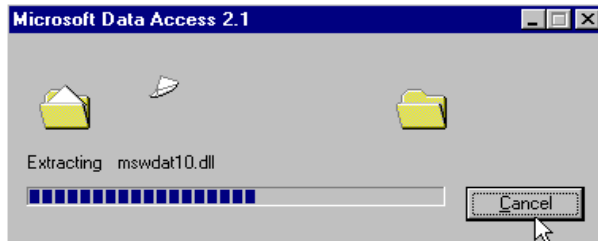


INSTALLING FACTORYLINK 7.0

Installation Procedure

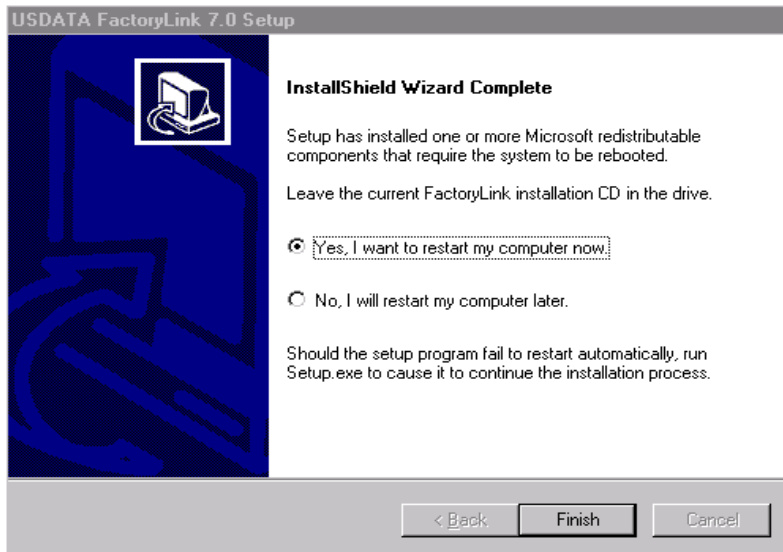
- 11 Wait for the installation of the system components to finish (see Figure 2-8).

Figure 2-8 Installing System Components



- 12 In the **InstallShield Wizard Complete** dialog box, select **Yes, I want to restart my computer now**, and click **finish** (see Figure 2-9).

Figure 2-9 InstallShield Wizard Complete Dialog Box



- 13 Restart the machine.

Do not take the current FactoryLink Server and Client CD out of the CD-ROM drive.

IMPORTANT: You have to restart your machine to continue the installation process.

- **INSTALLING FACTORYLINK 7.0**

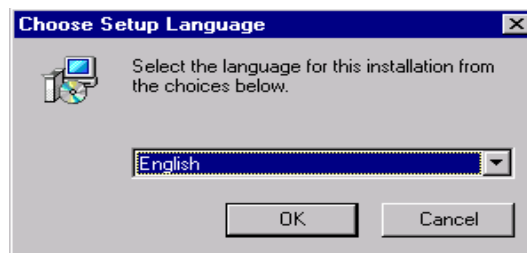
- *Installation Procedure*

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- 14 In the **Choose Setup Language** dialog box, select a language from the drop-down list: English, French (standard), or German (see Figure 2-10). Click **OK**.

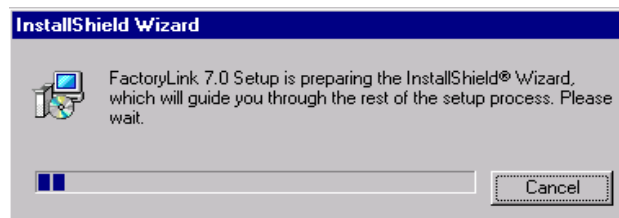
Note: This dialog box may not appear. In this case, the install will default to the initial language selection.

Figure 2-10 Choose Setup Language Dialog Box



- 15 Wait for the FactoryLink 7.0 Setup to finish preparing the **InstallShield Wizard** (see Figure 2-11).

Figure 2-11 InstallShield Wizard Dialog Box

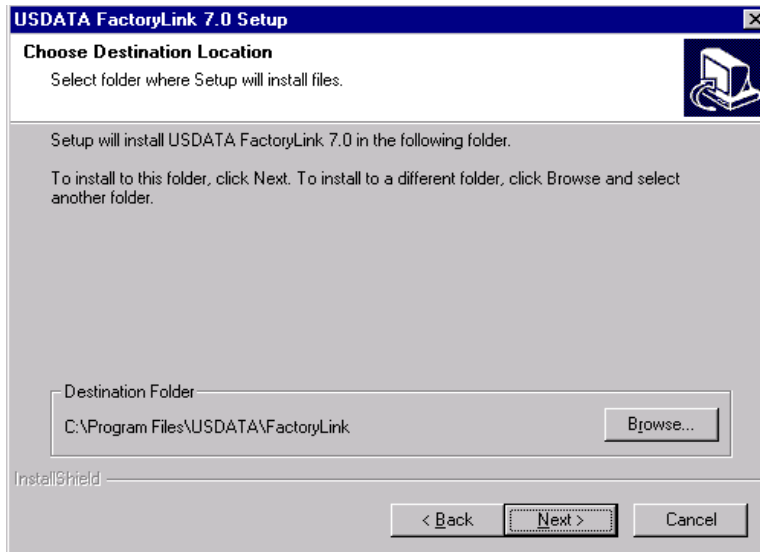


INSTALLING FACTORYLINK 7.0

Installation Procedure

- 16** In the **Choose Destination Location** dialog box, accept the default folder for the FactoryLink 7.0 files or use the browser to select another one (see Figure 2-12). Click **Next**.

Figure 2-12 Choose Destination Location Dialog Box



- 17** In the **Select Products** dialog box (see Figure 2-13), accept the default or uncheck the FactoryLink products you do not want to install. Click **Next**.

Click any product to view the description of the product and a list of its components. Click any component to view its description.

Only licensed FactoryLink products for the following will appear on the screen:

- FactoryLink Server
- FactoryLink Client
- FactoryLink Device Interfaces
- Documentation

You can install both the server and the client on one machine, or you can install the server on one machine and the client on another. For every FactoryLink package you purchase, you should have at least one server, but multiple clients, if you have purchased multiple licenses.

Install the Device Interface products and Starter Application on the server machine only.

- **INSTALLING FACTORYLINK 7.0**

- *Installation Procedure*

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Figure 2-13 Select FactoryLink Products Dialog Box

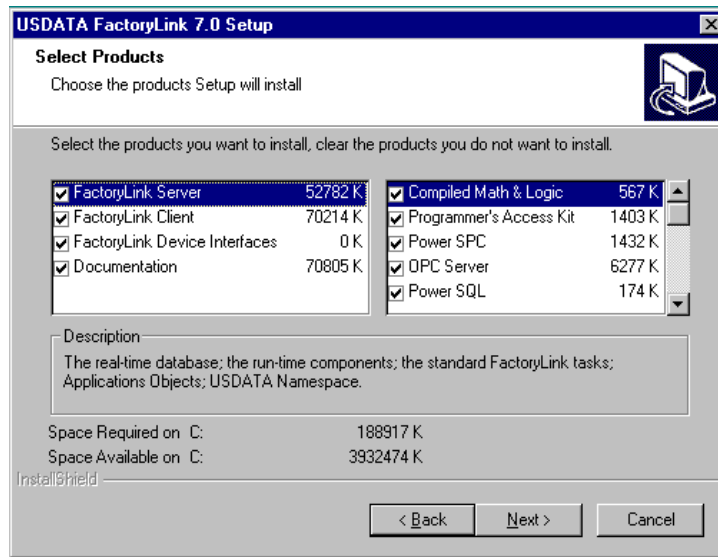


Table 2-1 provides a description of all the FactoryLink products.

Table 2-1 FactoryLink Products

FactoryLink Products	Description
FactoryLink Server	The real-time database; the run-time components, such as executable files and supporting utilities to run applications, the standard FactoryLink tasks, Application Objects, and USDATA Namespace
FactoryLink Client	Configuration and visualization tools: Configuration Explorer, Client Builder, Starter Project, WebClient, Application Editor, and Client Builder Clipart
Device Interfaces	External device interfaces and drivers, which are purchased separately from the FactoryLink package

INSTALLING FACTORYLINK 7.0

Installation Procedure

Table 2-1 FactoryLink Products

FactoryLink Products	Description
Documentation	A set of FactoryLink 7.0 manuals in PDF format that provide details for configuring and running FactoryLink

- 18** Click **FactoryLink Server** to choose the server components (see Figure 2-13). Uncheck the components you do not want to install. Click **OK**.

Table 2-2 provides a description of all the server components.

Note: Except for the OPC Server and the Starter Application, all these server components are optional and need to be purchased separately from the standard FactoryLink package.

Table 2-2 Server Components

Server Components	Description
Compiled Math & Logic (CML)	A combination of utilities and libraries that, at run time, create binary executable files from the program files you specified to run in the compiled mode. Microsoft Visual C++ compiler Version 6 is the recommended compiler to use with the FactoryLink CML processing.
Programmer's Access Kit (PAK)	A collection of optional FactoryLink software tools for use in design and implementation of FactoryLink-compatible tasks
Power Statistical Process Control (PowerSPC)	A management tool that monitors the quality level of a manufacturing process. It measures, inspects, and evaluates the quality of products based on predefined criteria.
OPC Server	Uses the OPC open standard interface to access tags in the FactoryLink real-time database

- **INSTALLING FACTORYLINK 7.0**

- *Installation Procedure*

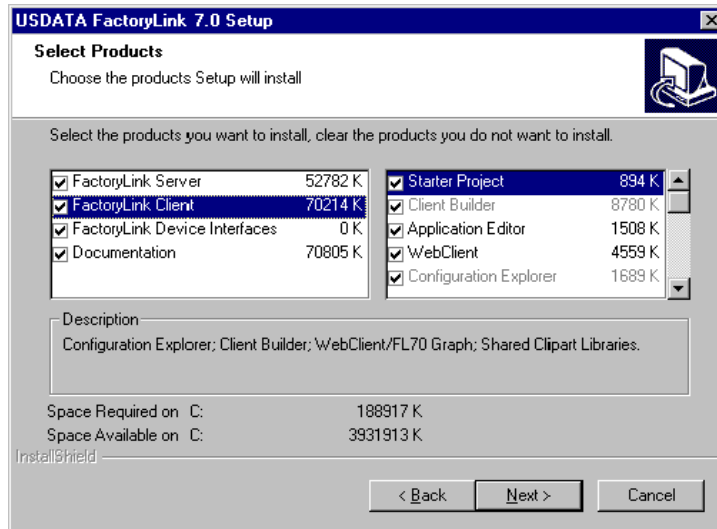
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Table 2-2 Server Components

Server Components	Description
PowerSQL	A Historian-client task that communicates with Historian through mailbox tags to send and receive historical information stored in an external database using SQL
Native Sybase Interface	Needed if you use Sybase as a relational database in your application. Provides a direct interface to the Sybase database for improved performance.
Native Oracle Interface	Needed if you use Oracle as a relational database in your application. Provides a direct interface to the Oracle database for improved performance.
Starter Application	A basic application that you can use to build your own application

19 Click **FactoryLink Client** to choose the client components (see Figure 2-14). Uncheck the components you do not want to install. Click **Next**.

Figure 2-14 Select Client Components Dialog Box



INSTALLING FACTORYLINK 7.0

Installation Procedure

Note: Client Builder is always installed if the Starter Project is selected. Configuration Explorer is always installed if the Application Editor is selected.

Table 2-3 provides a description of all the client components.

Table 2-3 Client Components

Client Components	Description
Starter Project	Client Builder project files related to the Starter Application. Requires the installation of Client Builder.
Client Builder	A graphics tool to build and design client applications, which can be used in the place of Application Editor in FactoryLink pre-7.0 versions. In addition to the same basic graphics-animation capabilities as supported by the pre-7.0 graphics product, Client Builder includes ActiveX controls for viewing alarm and trend data and for browsing database information. Client Builder can host WebClient control and other ActiveX controls.
Application Editor	An object-oriented drawing package with tools used to graphically illustrate user interface screens in FactoryLink applications. Users of pre-7.0 versions can continue to use this legacy graphics tool in FactoryLink 7.0. (Refer to the <i>FactoryLink ECS Application Editor Guide</i> .)
WebClient	A client feature that allows remote access to Application Editor graphics. It can be hosted in Client Builder and Configuration Explorer. (Refer to the <i>FactoryLink ECS WebClient User Guide</i> .)
Configuration Explorer	A management tool that centralizes control and administration of FactoryLink applications. A replacement of the Configuration Manager in FactoryLink pre-7.0 versions. (Refer to the <i>FactoryLink Configuration Explorer User Guide</i> .)
Clipart Shared Libraries	A clipart library for use in Client Builder graphics.

- **INSTALLING FACTORYLINK 7.0**

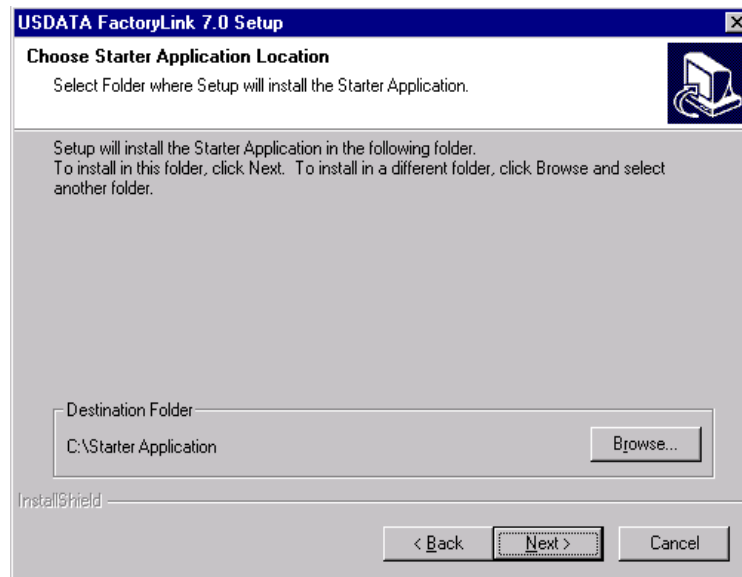
- *Installation Procedure*

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20 In the **Choose Starter Application Location** dialog box, accept the default directory or use the browser to select another one (see Figure 2-15). Click **Next**.

If you did not select Starter Application as a server component, go to Step 22.

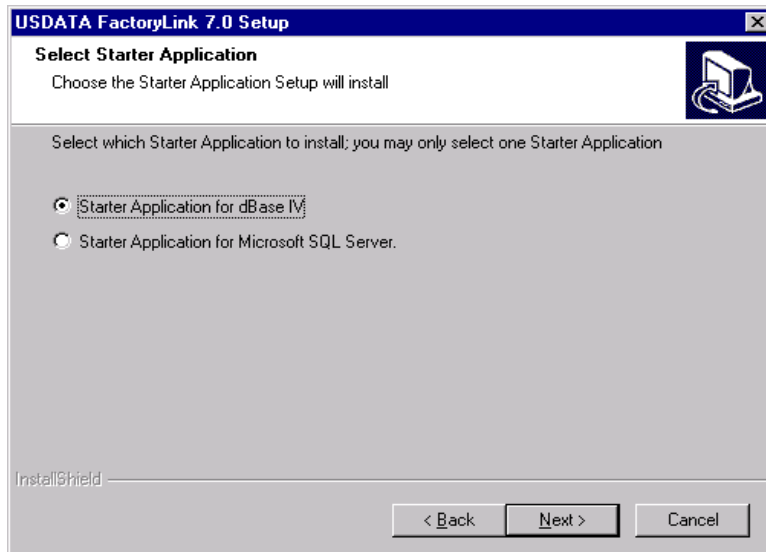
Figure 2-15 Choose Starter Application Location Dialog Box



INSTALLING FACTORYLINK 7.0
Installation Procedure

- 21 In the **Select Starter Application** dialog box, select **Starter Application for dBase IV** or **Microsoft SQL Server** (see Figure 2-16). Click **Next**.

Figure 2-16 Select Starter Application Dialog Box



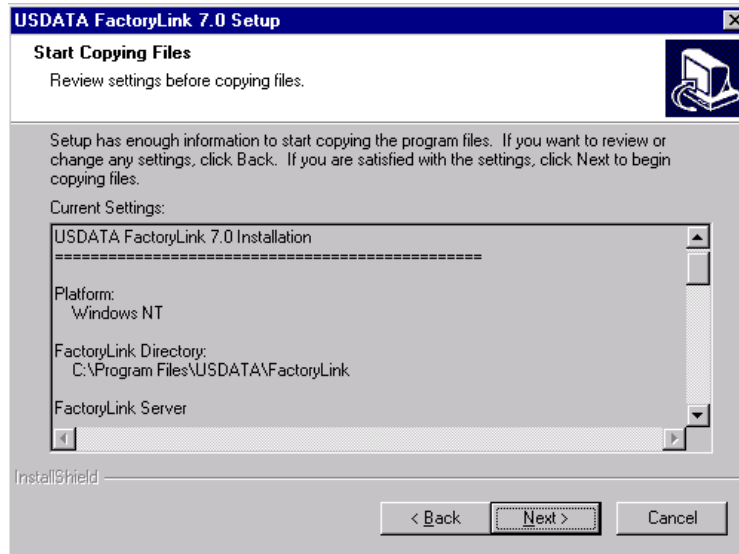
- **INSTALLING FACTORYLINK 7.0**

- *Installation Procedure*

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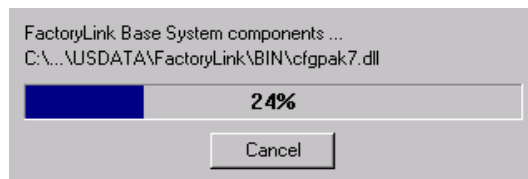
22 In the **Start Copying Files** dialog box, click **Next** (see Figure 2-17).

Figure 2-17 Start Copying Files Dialog Box



23 Wait for the copying progress meter to reach 100% (see Figure 2-18).

Figure 2-18 Copying Files



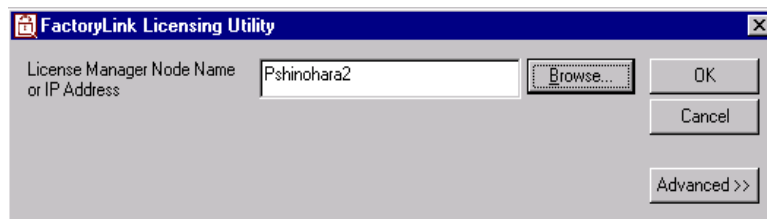
INSTALLING FACTORYLINK 7.0

Installation Procedure

- 24 In the **FactoryLink Licensing Utility** dialog box, accept the default, which is the name of the local machine, for the **License Manager Node Name or IP Address** (see Figure 2-19) or click the **Browse** button to select another computer where FactoryLink server is installed (see Figure 2-20).

Note: If you want to put in an IP address, you need to type it in manually.

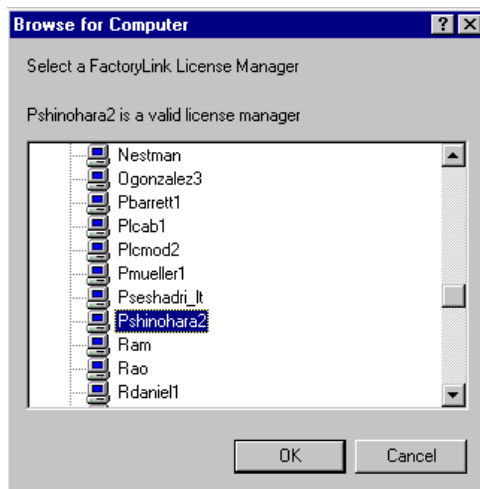
Figure 2-19 FactoryLink Licensing Utility Dialog Box



If you have selected a valid License Manager (a computer where FactoryLink is installed), you will see a message in the **Browse for Computer** dialog box: “(Your selection) is a valid license manager,” as shown in Figure 2-20. If you have selected an invalid License Manager, the message becomes: “Your selection is not a valid license manager!”

The **OK** button stays dimmed until you make a correct selection. Click **OK** to go back to the **FactoryLink Licensing Utility** dialog box.

Figure 2-20 Browse for Computer Dialog Box



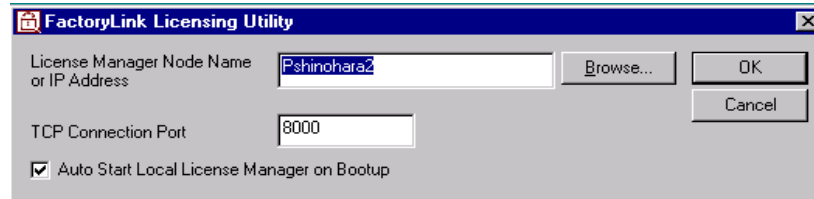
- **INSTALLING FACTORYLINK 7.0**

- *Installation Procedure*

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- 25 In the **FactoryLink Licensing Utility** dialog box, set the **TCP Connection Port** (see Figure 2-21). Click **OK**.

Figure 2-21 FactoryLink Licensing Utility Dialog Box



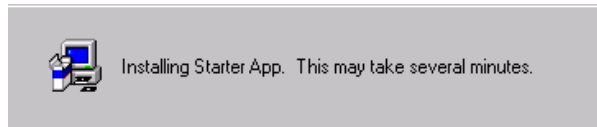
By default, the **TCP Connection Port** is set at 8000. If you decide to set a different TCP port for licensing connections, make sure that both the server and the client machines use the same port number. If you are unsure about which port numbers are available for use, consult your network administrator.

The **Auto Start Local License Manager on Bootup** is checked by default. This feature applies **ONLY** to a local machine. If you want the License Manager NT service to start up manually, uncheck this option.

For more information on the License Manager, refer to Chapter 7, “License Manager.”

- 26 Setup starts installing the Starter Application by displaying the following message (see Figure 2-22). This process may take several minutes.

Figure 2-22 Installing Starter Application

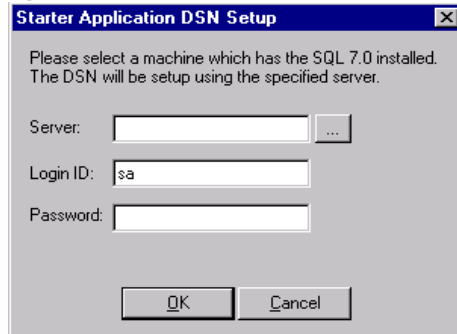


INSTALLING FACTORYLINK 7.0

Installation Procedure

- 27 In the **Starter Application DSN Setup** dialog box, browse to select a machine that has the Microsoft SQL Server installed (see Figure 2-23). Click **OK**.

Figure 2-23 Starter Application DSN Setup

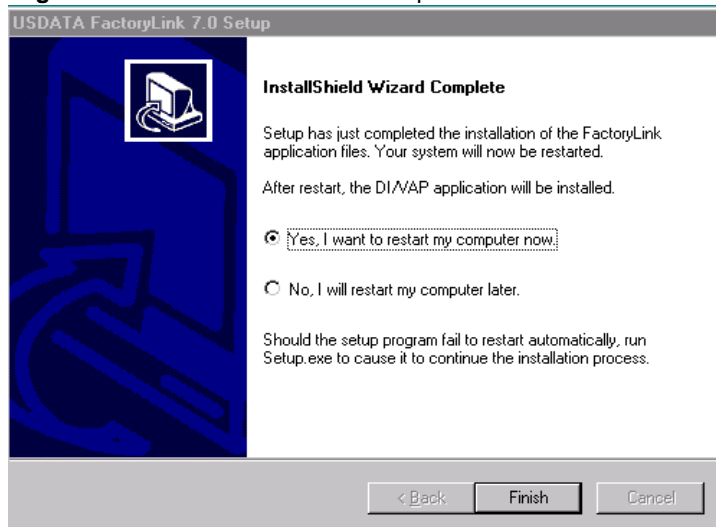


Note: If you have already installed the SQL Server locally or chosen dBase IV for the Starter Application, this screen will not appear.

- 28 In the **InstallShield Wizard Complete** dialog box, select **Yes, I want to restart my computer now** (see Figure 2-24). Click **Finish**.

Note: If the setup program fails to restart automatically, run **Setup.exe** to cause the program to complete the installation process.

Figure 2-24 InstallShield Wizard Complete



- **INSTALLING FACTORYLINK 7.0**

- *Installation Procedure*

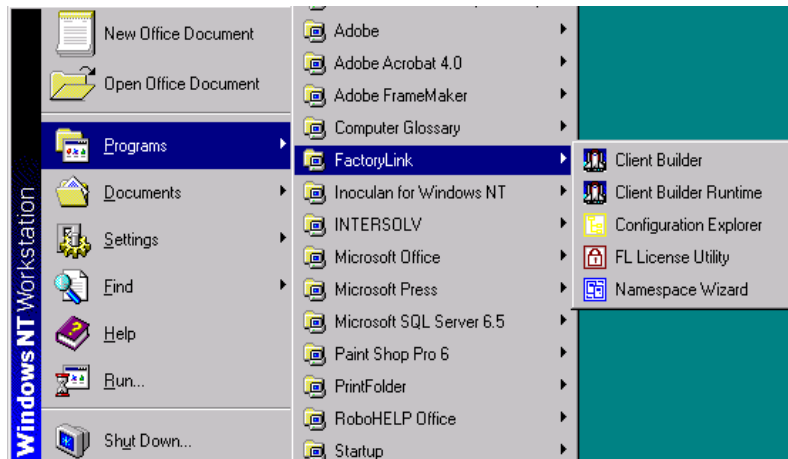
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FactoryLink Icons

The installation program creates five icons for the following components on your desktop as well as in the FactoryLink program group (see Figure 2-25):

- Client Builder
- Client Builder Runtime
- Configuration Explorer
- FL License Utility
- Namespace Wizard

Figure 2-25 FactoryLink Program Group



After the installation program is completed, invoke any of these components by clicking its icon from your desktop or the FactoryLink Program Group on the Start menu.

FactoryLink Shared Directories

The FactoryLink installation program creates five SHARED directories:

- Application Objects: A directory for Application Objects
- Projects: A directory for Client Builder Starter Projects
- FactoryLink: A directory for FactoryLink Server {Flink}
- Namespace: A directory for USDATA Namespace
- Starter Application: A directory for FactoryLink Starter Application

Chapter 3

Installing Monitor Pro Add-Ons

Monitor Pro Add-Ons are optional products manufactured by Schneider Automation, which can be purchased from USDATA. If you have not purchased these products, you can skip this chapter.

This chapter provides step-by-step instructions on how to install the Monitor Pro Add-Ons on the Microsoft Windows NT or Windows 2000 platform.

INSTALLATION PROCEDURE

Perform the following steps to install the Monitor Pro Add-Ons:

- 1 In the **Choose Setup Language** dialog box, use the drop-down list to select one language: English, French (standard), or German (see Figure 3-1). Click **OK**.

Note: This dialog box may not appear. In this case, the install will default to the initial language selection.

Figure 3-1 Choose Setup Language Dialog Box



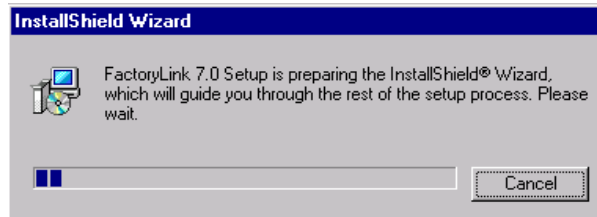
- **INSTALLING MONITOR PRO ADD-ONS**

- *Installation Procedure*

-
-

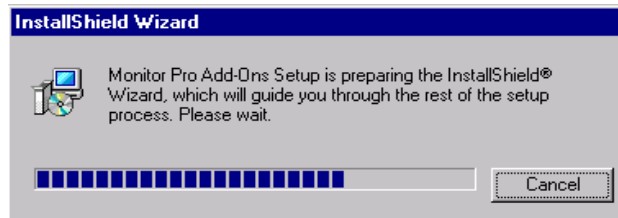
- 2 Wait for FactoryLink 7.0 Setup to finish preparing the InstallShield Wizard (see Figure 3-2). Click **Cancel** if you want to stop the setup process.

Figure 3-2 InstallShield Wizard Dialog Box



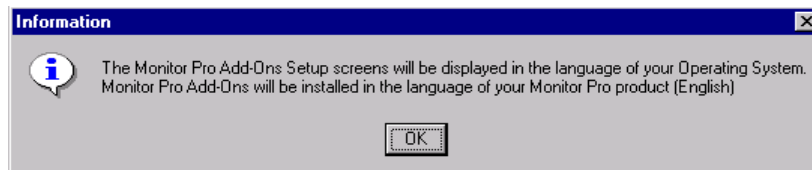
- 3 Wait for Monitor Pro Add-Ons Setup to finish preparing the InstallShield Wizard (see Figure 3-3). Click **Cancel** if you want to stop the setup process.

Figure 3-3 InstallShield Wizard Dialog Box



- 4 In the **Information** dialog box, click **OK** (see Figure 3-4).

Figure 3-4 Information Dialog Box

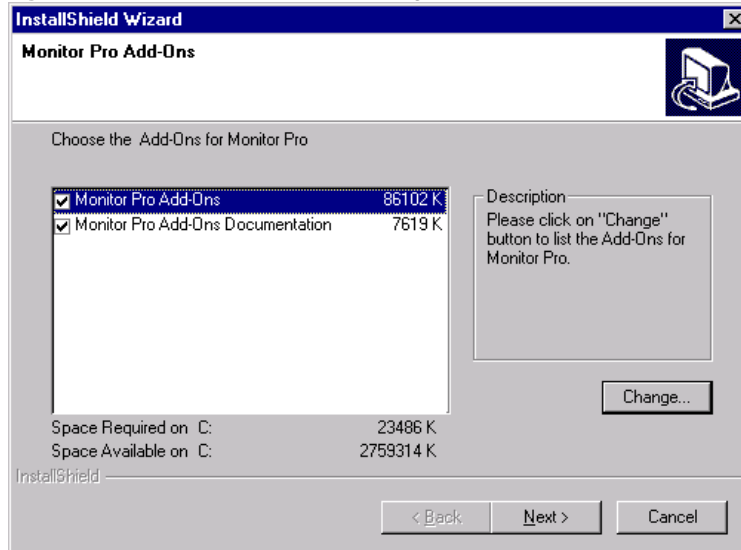


INSTALLING MONITOR PRO ADD-ONS

Installation Procedure

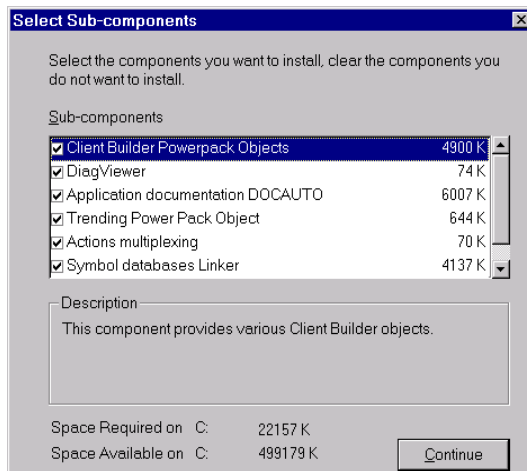
- 5 In the **Monitor Pro Add-Ons** dialog box, select **Monitor Pro Add-Ons** (see Figure 3-5). Click the **Change** button.

Figure 3-5 Monitor Pro Add-Ons Dialog Box



- 6 In the **Select Sub-components** dialog box, select the components you want to install (see Figure 3-6). Click **Continue**.

Figure 3-6 Select Subcomponents Dialog Box



- **INSTALLING MONITOR PRO ADD-ONS**

- *Installation Procedure*

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-

Table 3-1 provides a list of all the Monitor Pro Add-Ons.

Table 3-1 Monitor Pro Add-Ons

Add-Ons	Description
Client Builder Powerpack Objects	Provides various static objects in Client Builder symbol format.
DiagViewer	DiagViewer
Application documentation DOCAUTO	Generates a Monitor Pro application documentation
Trending Power Pack Object	Allows running six historical trending pens (chosen from ten available tags) with a single file import
Action multiplexing	Allows triggering several actions on tags (with or without conditions) using a single trigger
Symbol database linker	Configures automatically the communication configuration tables of an application using the symbol definitions provided in a PLC application
Static Powerpack Objects	Provides various static objects in Power Pack format. See readme file in <flink>\AddOns\Sta_Gpx folder.

7 In the **Monitor Pro Add-Ons** dialog box, select the **Monitor Pro Add-Ons Documentation** (see Figure 3-5). Click **Change**.

Note: You need Adobe Acrobat Reader to view the documentation. Adobe Acrobat 4.0 is provided on the FactoryLink Client and Server CD.

INSTALLING MONITOR PRO ADD-ONS
Installation Procedure

- 8 In the **Select Sub-components** dialog box, select the components you want to install (see Figure 3-7). Click **Continue**.

Figure 3-7 Select Documentation Subcomponents Dialog Box

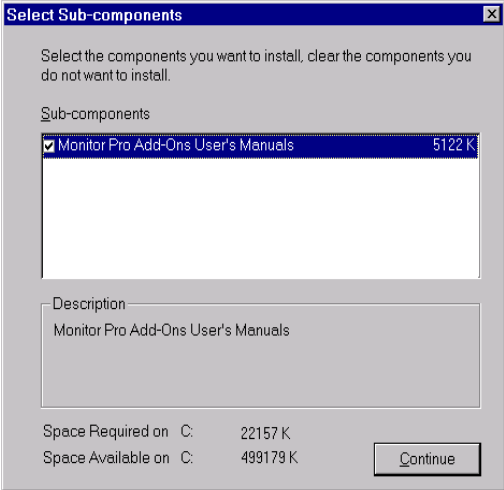


Table 3-2 provides a list of the documents.

Table 3-2 Monitor Pro Add-Ons Documentation

Document	Description
Monitor Pro Add-Ons User's Manual	A manual for Monitor Pro Add-Ons users

- **INSTALLING MONITOR PRO ADD-ONS**

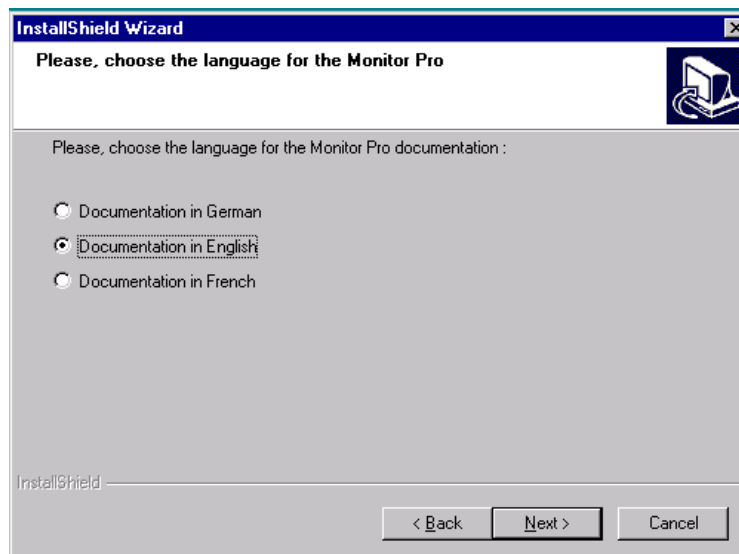
- *Installation Procedure*

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- 9 In the **Choose the Language for the Monitor Pro** dialog box, select a language for the Monitor Pro documentation (see Figure 3-8). Click **Next**.

Note: Make sure to select the same language for documentation as the one for the Monitor Pro.

Figure 3-8 Choose the Language for the Monitor Pro Dialog Box

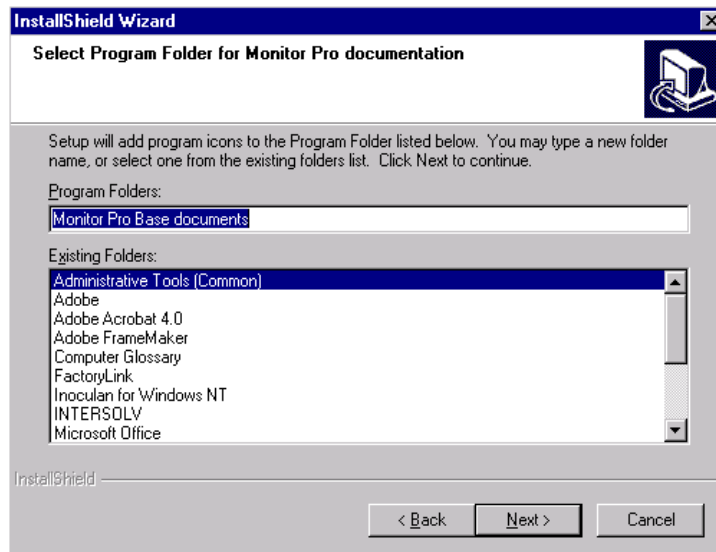


INSTALLING MONITOR PRO ADD-ONS

Installation Procedure

- 10 In the **Select Program Folder for Monitor Pro documentation** dialog box, select one folder from the existing folders or type in a new folder name (see Figure 3-9). Click **Next**.

Figure 3-9 Select a Program Folder for Monitor Pro Documentation Dialog Box



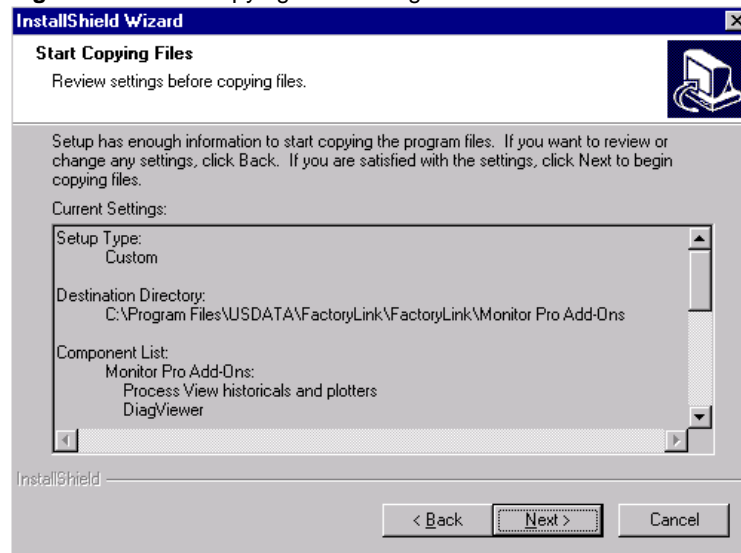
- **INSTALLING MONITOR PRO ADD-ONS**

- *Installation Procedure*

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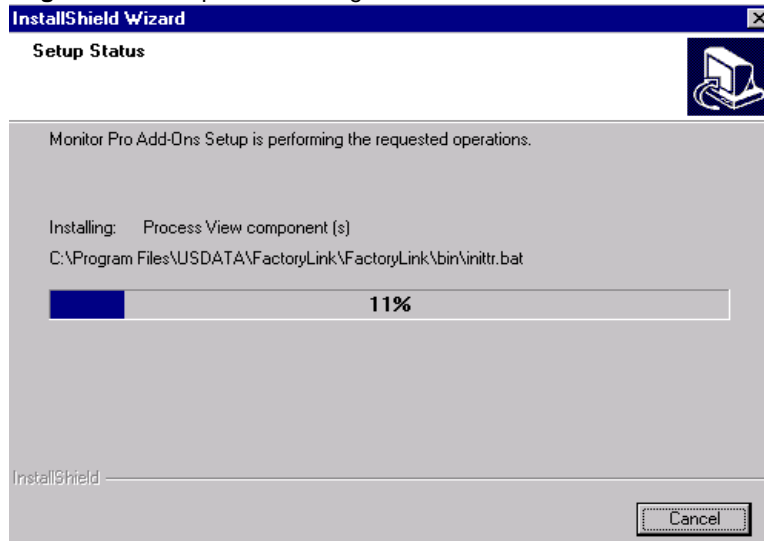
11 In the **Start Copying Files** dialog box, click **Next** to start copying files (see Figure 3-10).

Figure 3-10 Start Copying Files Dialog Box



12 Wait for the setup progress meter to reach 100% (see Figure 3-11). The install is completed.

Figure 3-11 Setup Status Dialog Box



Chapter 4

Installing Device Interfaces

If you want to install the FactoryLink Device Interfaces (DI), make sure to select this option when you install the FactoryLink Server and Client. If you install the FactoryLink Server and Client on different machines, install DI on the server machine.

The DI installation is started after the FactoryLink Server and Client and Monitor Pro Add-Ons (if selected) are installed.

INSTALLATION PROCEDURE

Perform the following steps to install the FactoryLink Device Interfaces:

- 1 Insert the Device Interfaces and Value-Added Products CD into the CD-ROM drive.
- 2 In the **Choose Setup Language** dialog box, select a language from the drop-down list: English, French (standard), or German (see Figure 4-1). Click **OK**.

Note: Make sure to select the same language that you selected for the FactoryLink Server and Client installation.

This dialog box may not appear. In this case, the install will default to the initial language selection.

Figure 4-1 Choose Setup Language Dialog Box



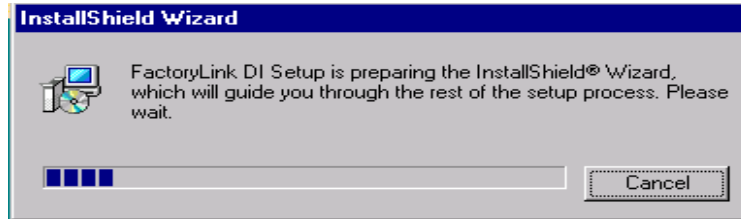
- **INSTALLING DEVICE INTERFACES**

- *Installation Procedure*

-
-

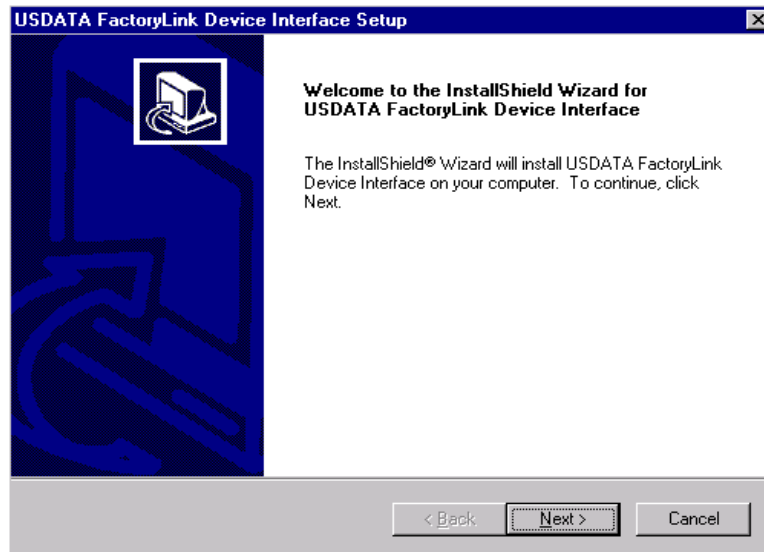
- 3 Wait for FactoryLink 7.0 Setup to finish preparing the InstallShield Wizard (see Figure 4-2). Click **Cancel** if you want to stop the setup process.

Figure 4-2 InstallShield Wizard Dialog Box



- 4 In the **Welcome to the InstallShield Wizard for USDATA FactoryLink Device Interface** dialog box, click **Next** (see Figure 4-3).

Figure 4-3 Welcome Dialog Box



INSTALLING DEVICE INTERFACES

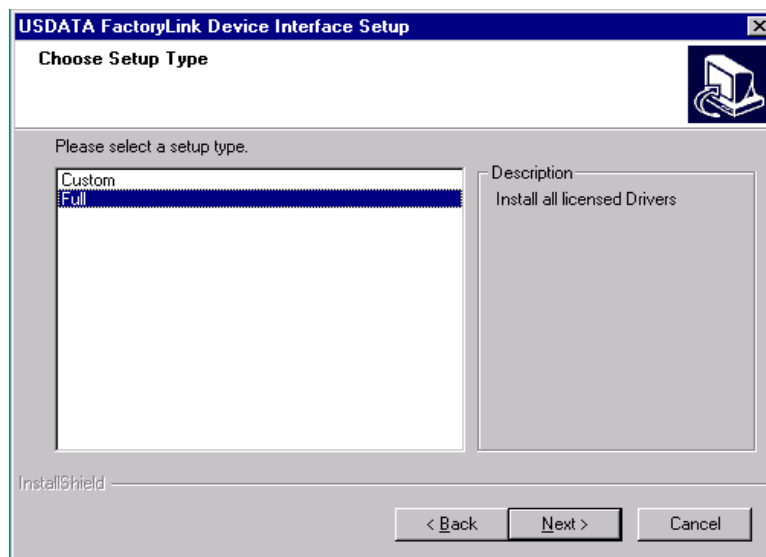
Installation Procedure

- 5 In the **Choose Setup Type** dialog box, select **Custom** to install selected licensed drivers or **Full** to install all licensed drivers available (see Figure 4-4). Click **Next**.

If you selected the **Full** install, go to Step 6 to continue.

If you selected **Custom**, go to Step 8 to continue.

Figure 4-4 Choose Setup Type Dialog Box



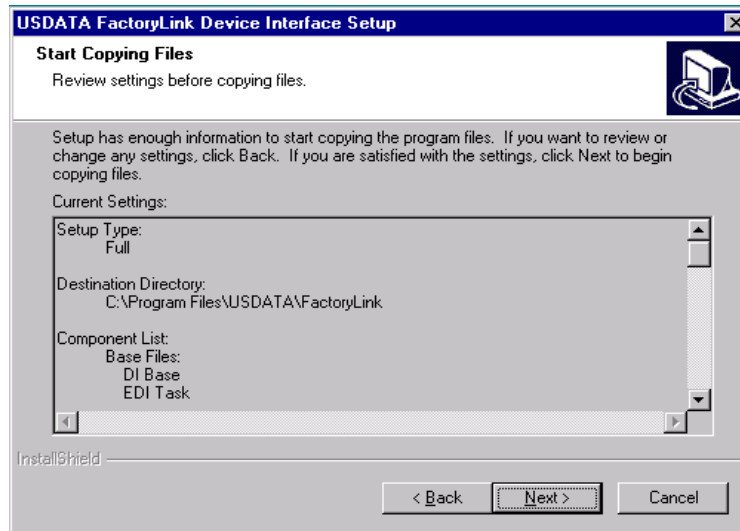
- **INSTALLING DEVICE INTERFACES**

- *Installation Procedure*

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-

- 6 In the **Start Copying Files** dialog box, click **Next** if you are satisfied with the settings (see Figure 4-5). Click **Back** to change the settings.

Figure 4-5 Start Copying Files Dialog Box

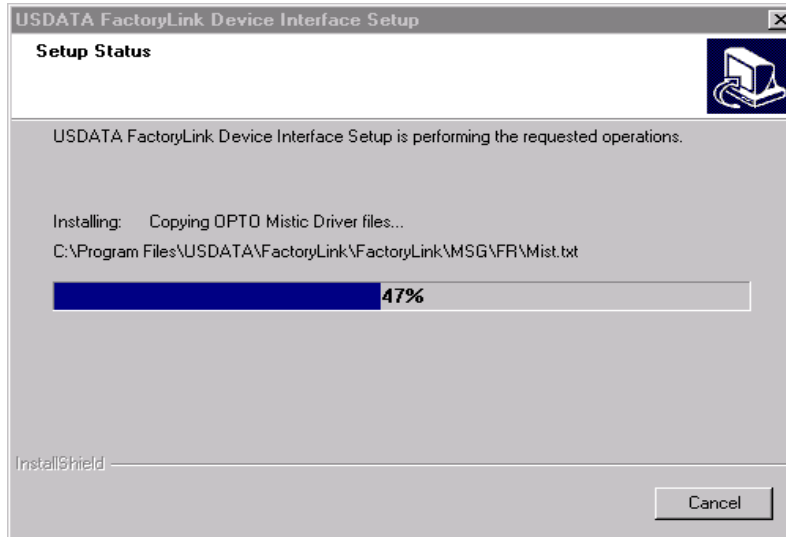


INSTALLING DEVICE INTERFACES

Installation Procedure

- 7 Wait for the copying progress meter to reach 100% (see Figure 4-6).

Figure 4-6 Setup Status Dialog Box



- **INSTALLING DEVICE INTERFACES**

- *Installation Procedure*

-
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8 If you selected **Custom** install, in the **Select Components** dialog box, select the group of drivers on the left side of the window and the individual drivers on the right (see Figure 4-7). Click **Next**.

Figure 4-7 Select Components Dialog Box

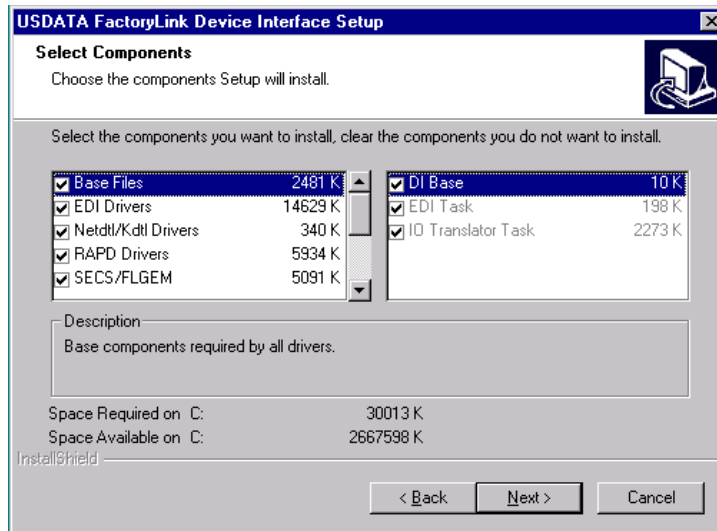


Table 4-1 provides a list of all the components.

Table 4-1 DI/VAP Components

Components	Description
Base files	Base components required by all drivers
EDI drivers	EDI drivers
Net DTL/KTDL drivers	Net DTL/KTDL drivers
RAPD drivers	RAPD drivers
SECS (HSMS) Ethernet drivers	SECS/FLGEM drivers with GW libraries
Telemecanique drivers	Ethway Communication task for April(R) Series 1000 PLCs. Available in English and French.

INSTALLING DEVICE INTERFACES

Installation Procedure

Table 4-2 provides a list of all the drivers.

Table 4-2 Drivers

Driver Group	Drivers
EDI	Allen Bradley Async Driver, Bailey Net90 Driver, Bristol Babcock Driver, Comm Wizard, Daniels 2500 Driver, Eagle Signal Driver, Fisher ROC Driver, GE Fanuc Driver, GEC Gem 80 Driver, GPI (Asyn) Driver, Leeds and Northrop Driver, Modbus Driver, Modbus Plus Driver, Moore Products Driver, Omron Driver, Omron V600 Driver, OPTO-22 Optomux Driver, OPTO Mystic Brick Driver, Reliance Driver, Siemens CP 525, Siemens Sinec H1 Driver, Square D Driver, Steeplechase VLC Driver, TCS/SSD Driver, Texas Instruments Driver, TI Series 300/400 Driver
Net DTL/KTDL	Allen Bradley Net DTL/KTDL
RAPD	Allen Bradley RSLinx Driver, DL Profibus RAPD Driver, DI Siemens 3946R Driver, DL Siemens RAPD H1 Driver, Modbus Ethernet Driver
SECS (HSMS) Ethernet	FLGEM Driver, SECS Serial Driver, SECS (HSMS) Ether Driver
Telemecanique	Ethway for Series 1000, JBUS Interface Driver, KS Functions on RS232, Modnet 1/SFB Interface, TE_DRQ Direct Reques, TE_LOAD Fiel Transfer, TE_COM Drivers

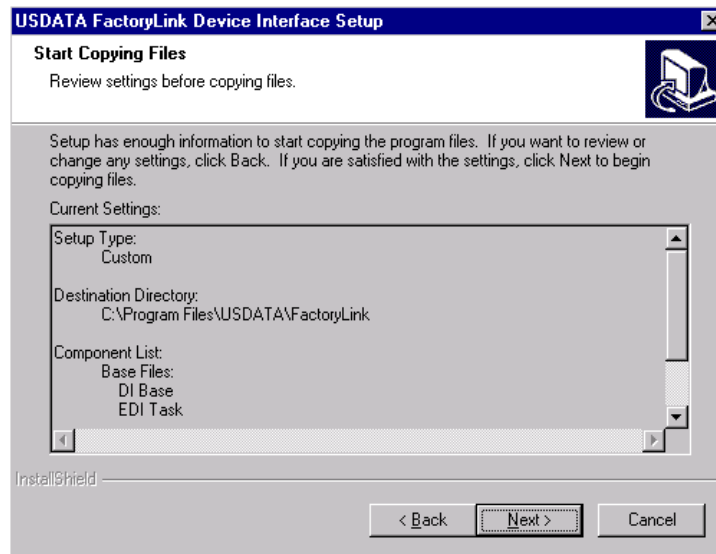
- **INSTALLING DEVICE INTERFACES**

- *Installation Procedure*

-
-

9 In the **Start Copying Files** dialog box, click **Next** to start copying files (see Figure 4-8).

Figure 4-8 Start Copying Files Dialog Box

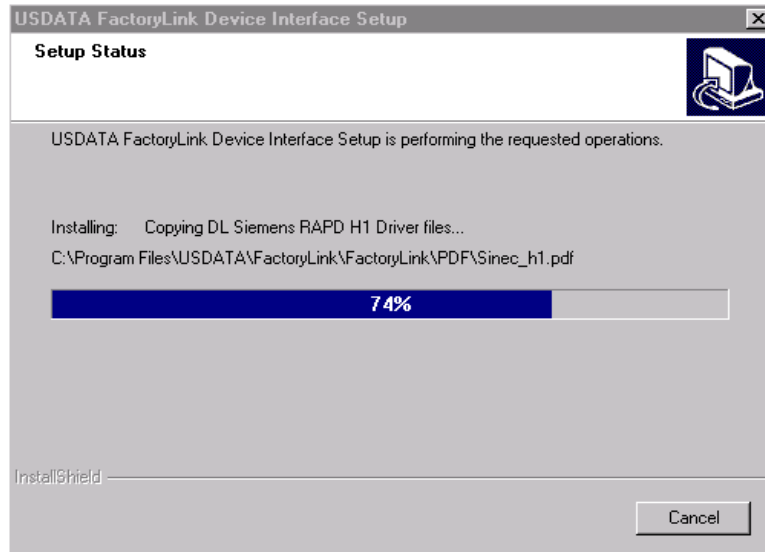


INSTALLING DEVICE INTERFACES

Installation Procedure

- 10 Wait for the copying progress meter to reach 100% (see Figure 4-9).

Figure 4-9 Setup Status Dialog Box



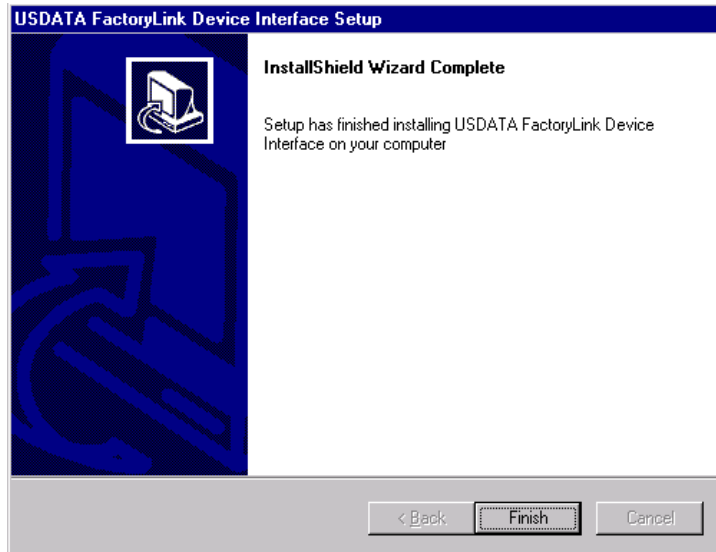
- **INSTALLING DEVICE INTERFACES**

- *Installation Procedure*

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-

11 In the **InstallShield Wizard Complete** dialog box, click **Finish** (see Figure 4-10).

Figure 4-10 InstallShield Wizard Complete Dialog Box



Note: You are not required to reboot after the DI/VAP installation is completed.

Chapter 5

Authorizing and Maintaining FactoryLink Installation

This chapter discusses the following topics on authorizing and maintaining FactoryLink installation:

- Authorizing FactoryLink
- Uninstalling FactoryLink
- Disabling FactoryLink Licensing
- Reinstalling and Reauthorizing FactoryLink

- **AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION**

- *Authorizing FactoryLink*

-
-

AUTHORIZING FACTORYLINK

FactoryLink runs for 10 days without authorization. For the FactoryLink software to continue to operate, perform the following tasks to have your FactoryLink 7.0 authorized:

- Obtain the registration code
- Obtain the authorization code
- Authorizing your FactoryLink

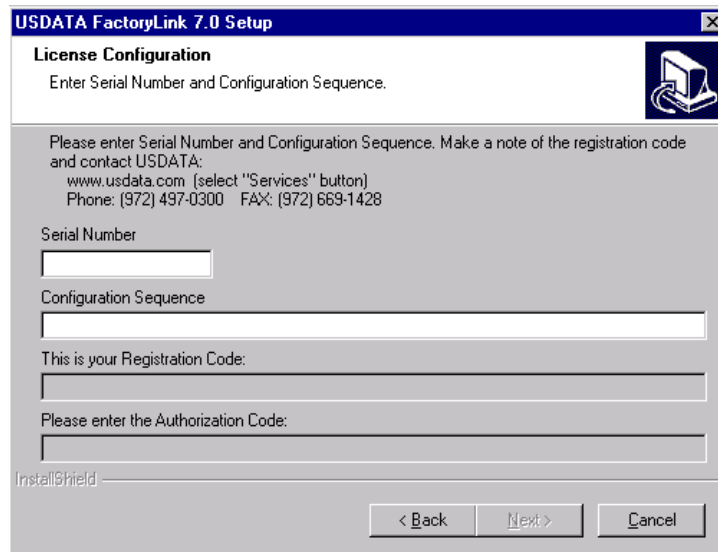
Obtaining the Registration Code

Perform the following steps to obtain your FactoryLink registration code:

- 1 Perform the installation Steps 1 to 7 as described in Chapter 2, “Installing FactoryLink 7.0.”
- 2 In the **License Configuration** dialog box, enter your serial number and configuration sequence in “Exhibit A” of your FactoryLink shipping document (see Figure 5-1).

Note: Both the serial number and the configuration sequence are case-insensitive.

Figure 5-1 License Configuration Dialog Box



The screenshot shows a Windows-style dialog box titled "USDATA FactoryLink 7.0 Setup" with a sub-title "License Configuration". The main text reads "Enter Serial Number and Configuration Sequence." Below this, there is a paragraph of instructions: "Please enter Serial Number and Configuration Sequence. Make a note of the registration code and contact USDATA: www.usdata.com (select 'Services' button) Phone: (972) 497-0300 FAX: (972) 669-1428". There are four input fields: "Serial Number", "Configuration Sequence", "This is your Registration Code:", and "Please enter the Authorization Code:". At the bottom, there are three buttons: "< Back", "Next >", and "Cancel". The text "InstallShield" is visible in the bottom left corner of the dialog box.

AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION

Authorizing FactoryLink

- 3 Make a note of the registration code, which is generated automatically once the correct serial number and configuration sequence are entered.
- 4 Go to the USDATA Web site, <http://www.usdata.com>, to obtain your authorization code.

Note: If you have purchased Monitor Pro products, refer to *Exhibit A* for information on authorizing your system.

If you do not have access to the Internet, call or send a fax to USDATA Customer Support (phone: 972-497-0300; fax: 972-669-1428).

- **AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION**

- *Authorizing FactoryLink*

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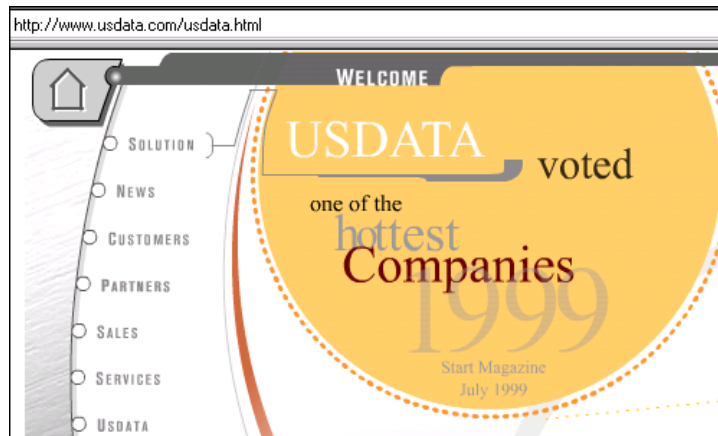
Obtaining the Authorization Code over the Internet

Using the Internet is the fastest way to obtain your authorization code.

Perform the following steps to obtain your authorization code:

- 1 Open the USDATA Web site at <http://www.usdata.com> (see Figure 5-2). Click **Services**.

Figure 5-2 USDATA Web Site



- 2 In the **Services** group, click **authorization** (see Figure 5-3).

Figure 5-3 Selecting Services



AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION

Authorizing FactoryLink

- 3 From the **FactoryLink Product Authorization** page, click **authorize your product** (see Figure 5-4).

Figure 5-4 FactoryLink Product Authorization Dialog Box

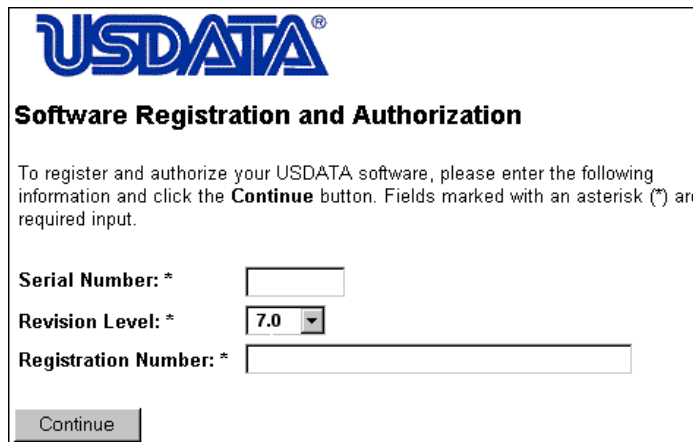


FactoryLink Product Authorization

To **authorize your product**, have your serial number at hand.

- 4 From the **USDATA Software Registration and Authorization** page, enter your **Serial Number** and **Registration Number** (see Figure 5-5). Click **Continue**.

Figure 5-5 Software Registration and Authorization Dialog Box



USDATA®

Software Registration and Authorization

To register and authorize your USDATA software, please enter the following information and click the **Continue** button. Fields marked with an asterisk (*) are required input.

Serial Number: *

Revision Level: *

Registration Number: *

- **AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION**

- *Authorizing FactoryLink*

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-

5 If you are registering/authorizing FactoryLink for the first time, this dialog box will not appear (see Figure 5-6). Go to Step 6.

If you are reregistering/reauthorizing the FactoryLink software, in the **Software Registration and Authorization** dialog box, select a reason. Click **Continue**.

Figure 5-6 Software Registration and Authorization Dialog Box



AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION

Authorizing FactoryLink

- 6 In the **Registration and Authorization** dialog box, fill in the required information about your company (see Figure 5-7). Click **Continue**.

Figure 5-7 Registration and Authorization Dialog Box

USDATA[®]

Registration and Authorization

Please validate the End User location information for this system and click the **Continue** button when correct. If the End User location information has changed, click the **Wrong Location** button to select a different location. Fields marked with an asterisk (*) are required input.

End User Location Id:

Company Name*:

Address 1*:

Address 2:

Address 3:

Country*:

City*:

State / Postal Code*:

Province:

Contact Name*:

Contact Phone*:

Contact EMail:

Systems at this Site: 1

- **AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION**

- *Authorizing FactoryLink*

-
-

7 The next **Software and Authorization** screen summarizes your company’s purchase and registration/authorization information (see Figure 5-8).

Note: USDATA grants Customer a nonexclusive license to use the FactoryLink Software Program on a single computer for the point and tag counts and the number of Client Access License (CAL) connections defined above. Please refer to the FactoryLink Software Agreement for complete software license terms and conditions.

Figure 5-8 Software Registration and Authorization

USDATA®

Software Registration and Authorization

Thank you for registering/authorizing your USDATA software product. Please record your End User Location Id for future use in registering/authorizing other USDATA products. To register/authorize another product, click the **Register Another** button. To return to the USDATA home page, click the **Home** button.

End User Location Id:

Item	Part Number	Description

Serial Number:

Revision Level:

Configuration Sequence:	<input type="text"/>
Registration Number:	<input type="text"/>
Authorization Code:	<input type="text"/>

8 Make a note of the authorization code and continue with the authorization process as described in the next subsection.

AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION

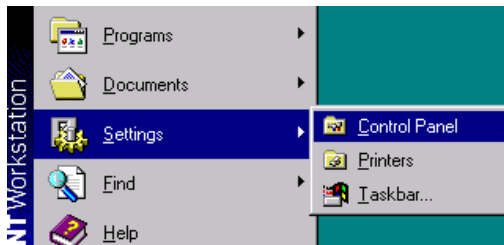
Authorizing FactoryLink

Authorizing FactoryLink

Perform the following steps to authorize your FactoryLink:

- 1 From the Windows **Start** menu, select **Settings>Control Panel** (see Figure 5-9).

Figure 5-9 Start Menu



- 2 In the **Control Panel**, click **Add/Remove Programs** (see Figure 5-10).

Figure 5-10 Control Panel



- **AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION**

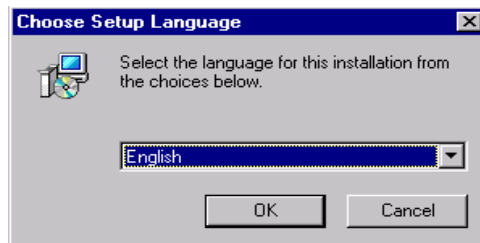
- *Authorizing FactoryLink*

-
-

- 3 In the **Choose Setup Language** dialog box, select a language from the drop-down list: English, French (standard), or German (see Figure 5-11). Click **OK**.

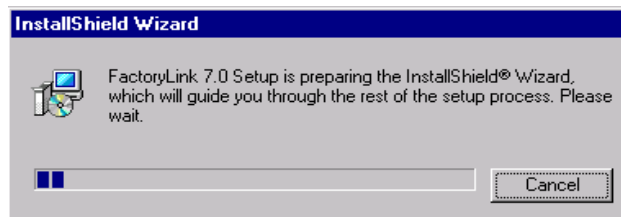
Note: Make sure to select the same language that you selected for the FactoryLink Server and Client installation.

Figure 5-11 Choose Setup Language Dialog Box



- 4 Wait for FactoryLink 7.0 Setup to finish preparing the **InstallShield Wizard** (see Figure 5-12).

Figure 5-12 InstallShield Wizard Dialog Box

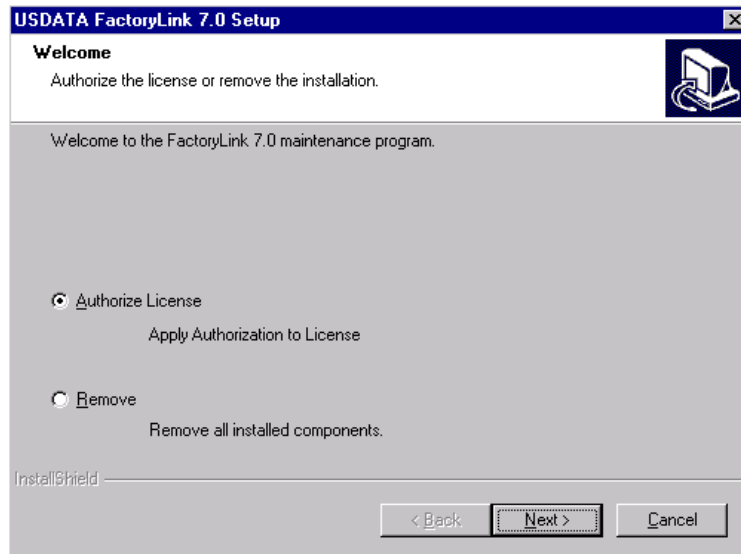


AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION

Authorizing FactoryLink

- 5 In the **Welcome** dialog box, select **Authorize License** (see Figure 5-13). Click **Next**.

Figure 5-13 Welcome Dialog Box



- **AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION**

- *Authorizing FactoryLink*

-
-

- 6 In the **License Configuration** dialog box, enter your authorization code (see Figure 5-14). Click **Next**.

Figure 5-14 License Configuration Dialog Box



The screenshot shows a Windows-style dialog box titled "USDATA FactoryLink 7.0 Setup" with a close button (X) in the top right corner. The main title is "License Configuration" and the instruction is "Enter Serial Number and Configuration Sequence." There is a small icon of a computer monitor with a circular arrow on the right side. Below the title, there is a paragraph of text: "Please enter Serial Number and Configuration Sequence. Make a note of the registration code and contact USDATA: www.usdata.com (select 'Services' button) Phone: (972) 497-0300 FAX: (972) 669-1428". There are four input fields: "Serial Number" (a small box), "Configuration Sequence" (a long box), "This is your Registration Code:" (a box), and "Please enter the Authorization Code:" (a box). At the bottom left, it says "InstallShield". At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

- 7 Follow the prompts to complete the authorization process.

AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION

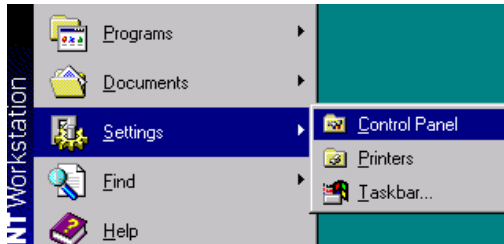
Uninstalling FactoryLink

UNINSTALLING FACTORYLINK

Perform the following steps to uninstall FactoryLink 7.0:

- 1 From the Windows **Start** menu, select **Settings>Control Panel** (see Figure 5-15).

Figure 5-15 Start Menu



- 2 In the **Control Panel**, double-click **Add/Remove Programs** (see Figure 5-16).

Figure 5-16 Control Panel



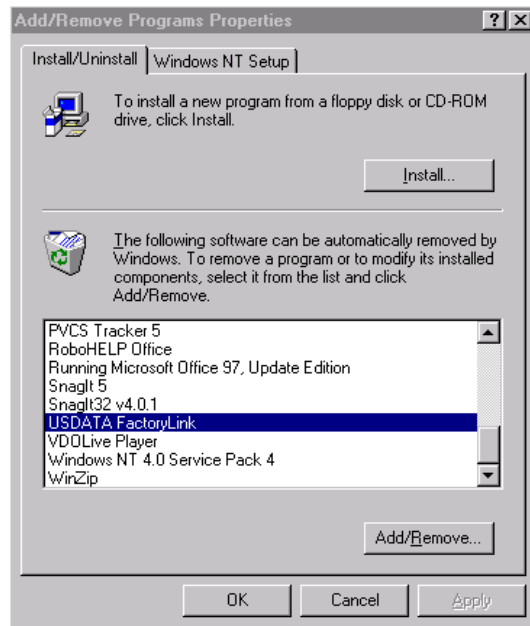
- **AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION**

- *Uninstalling FactoryLink*

-
-

3 In the **Add/Remove Programs Properties** dialog box, select the FactoryLink component you want to remove (see Figure 5-17). Click **Add/Remove**.

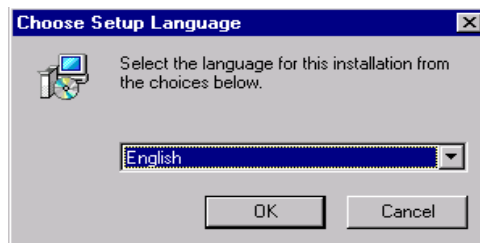
Figure 5-17 Add/Remove Programs Properties Dialog Box



4 In the **Choose Setup Language** dialog box, select a language for the removal of the product (see Figure 5-18). Click **OK**.

Note: Make sure to select the same language that you selected for the installation.

Figure 5-18 Choose Setup Language Dialog Box

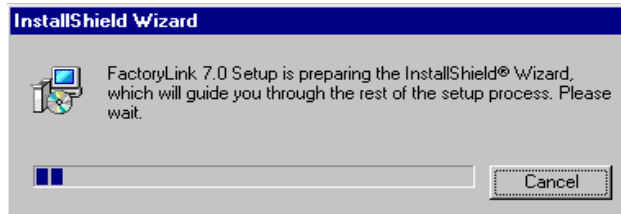


AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION

Uninstalling FactoryLink

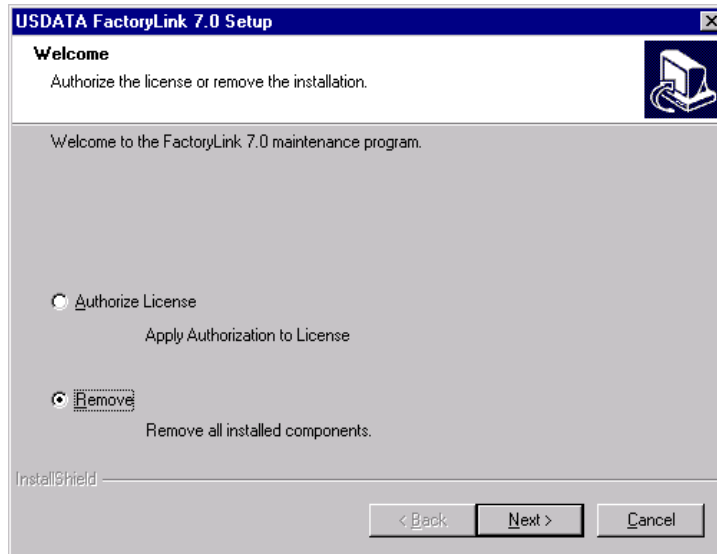
- 5 Wait for FactoryLink 7.0 Setup to finish preparing the **InstallShield Wizard** (see Figure 5-19).

Figure 5-19 InstallShield Wizard Dialog Box



- 6 In the **Welcome** dialog box, select **Remove** (see Figure 5-20). Click **Next**.

Figure 5-20 Welcome Dialog Box



Note: Removing FactoryLink automatically removes Device Interfaces and Monitor Pro Add-Ons, if they are installed. However, removing the Device Interfaces or Monitor Pro Add-Ons does not automatically remove FactoryLink.

- **AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION**

- *Uninstalling FactoryLink*

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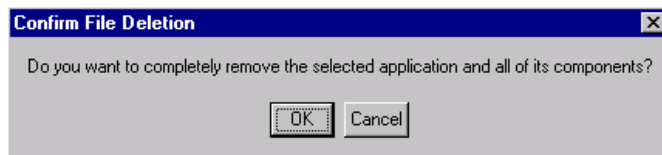
7 If you installed the Device Interfaces, in the **Information** dialog box, click **OK** (see Figure 5-21). Otherwise, go to Step 10.

Figure 5-21 Information Dialog Box



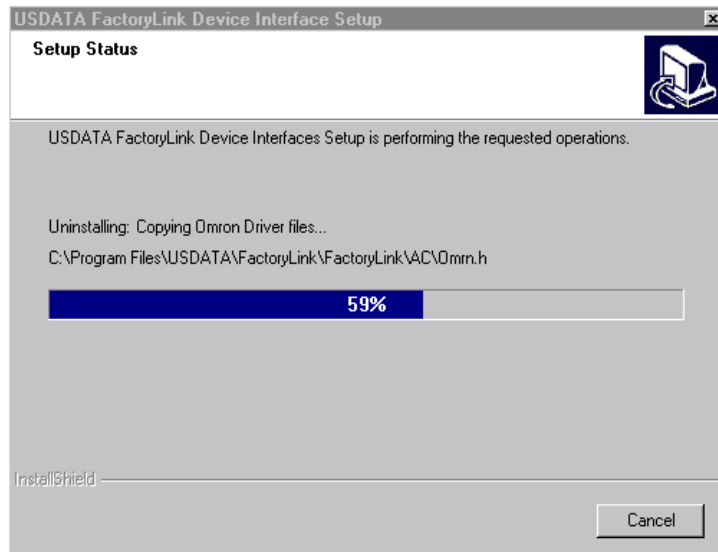
8 In the **Confirm File Deletion** dialog box, click **OK** (see Figure 5-22).

Figure 5-22 Confirm File Deletion Dialog Box



9 Wait for the **Setup** meter to reach 100% (see Figure 5-23).

Figure 5-23 Setup Status Dialog Box

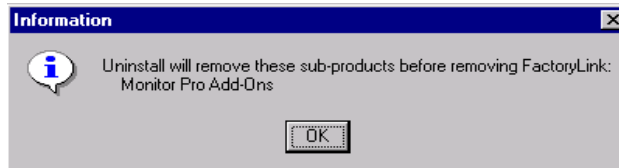


AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION

Uninstalling FactoryLink

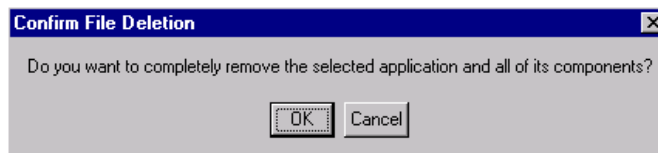
- 10 If you installed Monitor Pro Add-Ons, in the **Information** dialog box, click **OK** (see Figure 5-24). Otherwise, go to Step 13.

Figure 5-24 Information Dialog Box



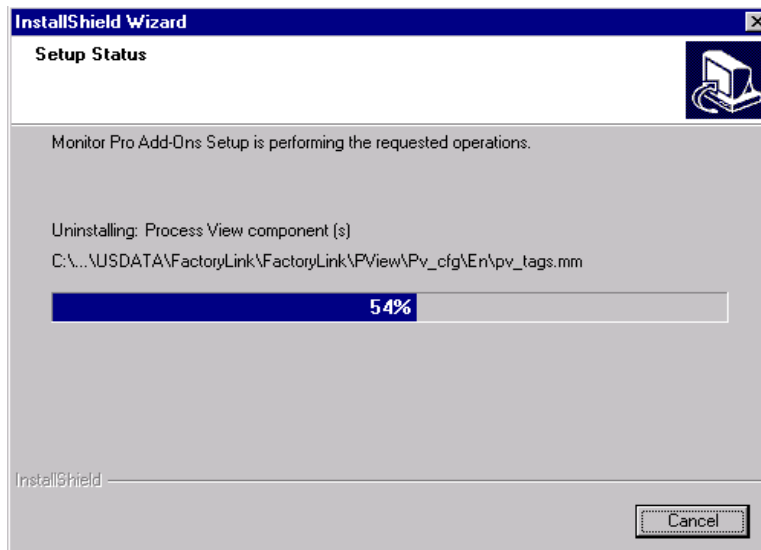
- 11 In the **Confirm File Deletion** dialog box, click **OK** (see Figure 5-25).

Figure 5-25 Confirm File Deletion Dialog Box



- 12 In the **Setup Status** dialog box, wait for the progress meter to reach 100% (see Figure 5-26).

Figure 5-26 Setup Status Dialog Box



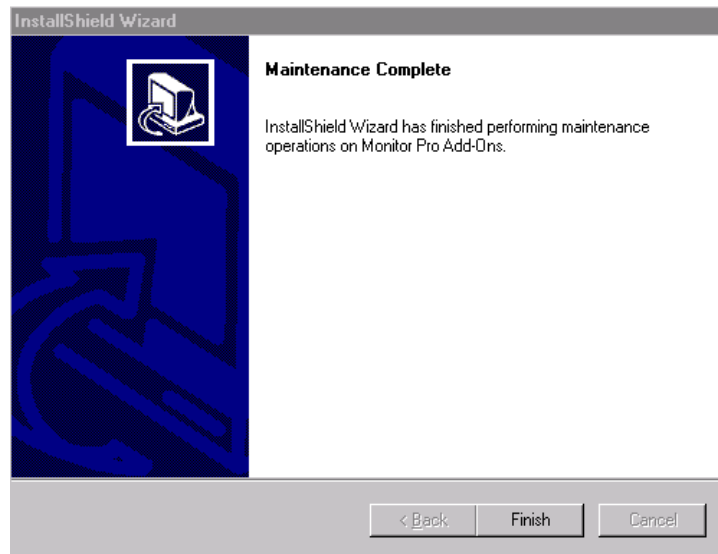
- **AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION**

- *Uninstalling FactoryLink*

-
-

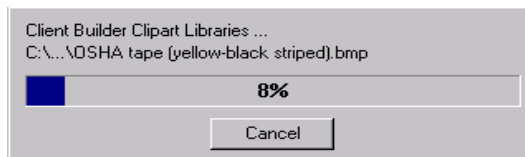
13 In the **Maintenance Complete** dialog box, click **Finish** (see Figure 5-27).

Figure 5-27 Maintenance Complete Dialog Box



14 Wait for the remove progress meter to reach 100% (see Figure 5-28).

Figure 5-28 Remove Progress Meter



AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION

Uninstalling FactoryLink

- 15 In the **InstallShield Wizard Complete** dialog box, select **Yes, I want to restart my computer now** (see Figure 5-29). Click **Finish** to restart your machine.

Figure 5-29 InstallShield Wizard Complete Dialog Box



USDATA recommends that you go to the directory where you installed the FactoryLink product, for example, **C:\Program Files\USDATA\FactoryLink\FactoryLink**, and remove the corresponding folders for the components of the product.

- **AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION**

- *Disabling FactoryLink License*

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DISABLING FACTORYLINK LICENSE

You can use the deinstall utility to remove the existing FactoryLink license information to facilitate the following:

- **Upgrading operating system version**
- **Changing hard drives**
- **Changing processors**
- **Moving to new systems**
- **Changing the Network Interface Card (NIC)**

Deinstall does not delete the FactoryLink files; it merely removes the license information. This disables the FactoryLink files. To enable the files again, simply obtain a new registration number. Do not reinstall FactoryLink.

Perform the following steps to disable the FactoryLink license:

1 Enter the following command at the prompt to initiate deinstall:

```
deinstal
```

The system issues a warning that FactoryLink license disables and prompts for confirmation as shown below.

```
- W A R N I N G -
```

```
This will de-install FactoryLink from your system. Are  
you sure you want to de-install FactoryLink? (Y/N)
```

2 Enter Y to continue the process. The deinstall utility removes the license information and issues the following statement:

```
FactoryLink successfully de-installed.
```

A deinstallation number is displayed on the screen.

```
De-installation number: XXXX XXXX XXXX XXXX XXXX XXXX XX
```

AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION

Disabling FactoryLink License

- 3** Write down the deinstallation number. You need this number to enable the license when you are ready to use FactoryLink again.
- 4** Contact the USDATA Authorization Desk (Phone: 972-497-0293) and provide the displayed deinstallation number and the registration number. The USDATA Authorization Desk will provide you with a new authorization code. Use this code to reenale the FactoryLink license.

- **AUTHORIZING AND MAINTAINING FACTORYLINK INSTALLATION**

- *Reinstalling and Reauthorizing FactoryLink*

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-

REINSTALLING AND REAUTHORIZING FACTORYLINK

To uninstall FactoryLink 7.0 from one computer and install it on another, perform the following steps:

- 1** Deinstall FactoryLink from the first computer. (Refer to “Disabling FactoryLink License” on page 68)
- 2** Uninstall FactoryLink 7.0 from the first computer. (Refer to “Uninstalling FactoryLink” on page 61)
- 3** Install FactoryLink 7.0 on the new computer. (Refer to Chapter 2, “Installing FactoryLink 7.0.”)
- 4** Authorize FactoryLink 7.0 again. (Refer to “Authorizing FactoryLink” on page 50).

Unfortunately, there is no shortcut.

Chapter 6

Additional Information and Procedures

After you have installed FactoryLink as described in Chapter 2, “Installing FactoryLink 7.0,” you may need to perform additional installation tasks depending on your FactoryLink installation needs. This chapter provides step-by-step instructions on performing the following procedures:

- Setting up memory size for Microsoft SQL Server 7.0
- Setting up DCOM security

- **ADDITIONAL INFORMATION AND PROCEDURES**

- *Setting up Memory Size for Microsoft SQL Server 7.0*

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-

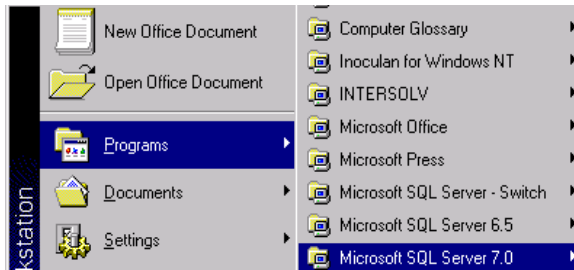
SETTING UP MEMORY SIZE FOR MICROSOFT SQL SERVER 7.0

After you have installed FactoryLink 7.0 and the Microsoft SQL Server 7.0, you need to set up a maximum memory limit on the SQL Server. The setup will prevent the SQL Server from consuming all the memory available to it and ensure the operation and speed of FactoryLink tasks.

Perform the following steps to set up the memory size for the SQL Server:

- 1 From the Windows **Start** menu, select **Programs>Microsoft SQL Server 7.0** (see Figure 6-1).

Figure 6-1 Start Menu



- 2 From the **Microsoft SQL Server 7.0** menu, select **Enterprise Manager** (see Figure 6-2).

Figure 6-2 Select Enterprise Manager

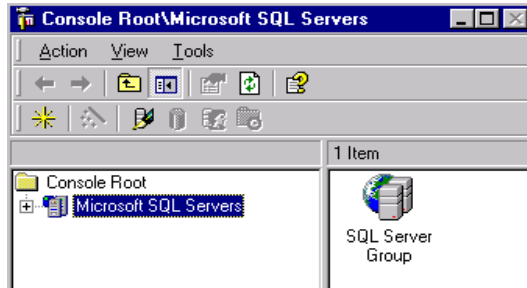


ADDITIONAL INFORMATION AND PROCEDURES

Setting up Memory Size for Microsoft SQL Server 7.0

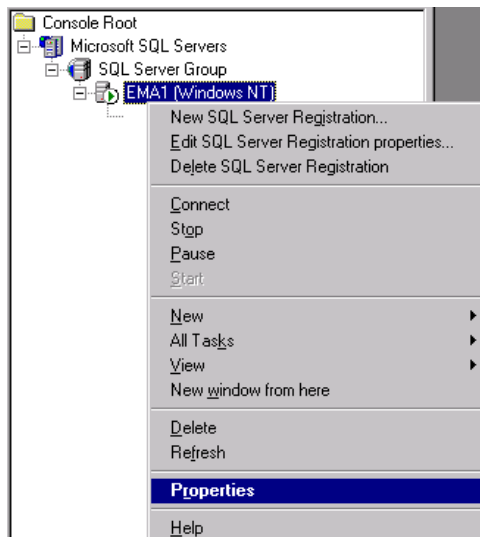
- 3 In the **Console Root/Microsoft SQL Servers** window, from the **Console Root** folder, select **Microsoft SQL Servers>SQL Server Group** (see Figure 6-3).

Figure 6-3 Selecting SQL Server Group



- 4 From the **SQL Server Group**, right-click the **Host Name (Windows NT)** and select **Properties** in the pop-up menu (see Figure 6-4).

Figure 6-4 Selecting Properties



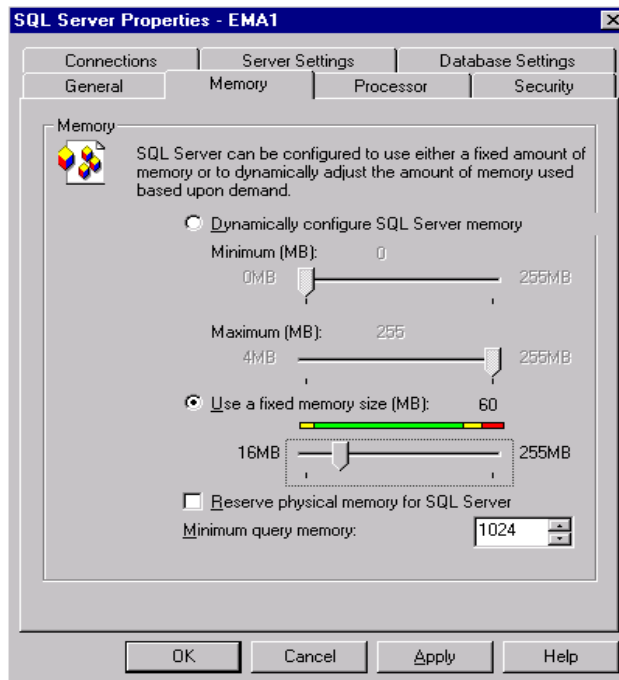
- **ADDITIONAL INFORMATION AND PROCEDURES**

- *Setting up Memory Size for Microsoft SQL Server 7.0*

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-

5 In the **SQL Server Properties** dialog box, click the **Memory** tab (see Figure 6-5).

Figure 6-5 Setting Memory Properties



6 Change the default setting **Dynamically configure SQL Server memory** to **Use a fixed memory size (MB)**.

7 Use the lever to set the memory size in the range of 40 to 80 MB, as recommended by Microsoft, depending on your system's RAM size and virtual memory size.

8 Click **Apply**. Then click **OK**.

9 Close the **Console Root/Microsoft SQL Servers** window.

The memory size for your SQL Server is now set up.

ADDITIONAL INFORMATION AND PROCEDURES

Setting up the DCOM Security

SETTING UP THE DCOM SECURITY

This section provides guidelines about setting up the Microsoft Distributed Component Object Model (DCOM) security for FactoryLink 7.0. For general information about the DCOM setup, refer to the *OPC DCOM White Paper, Revision 2—Thursday, April 9, 1998*, which can be accessed at the OPC Foundation Web site, <http://www.opcfoundation.org>.

DCOM is a protocol that enables software components to communicate directly over a network in a reliable, secure, and efficient manner. Previously called “Network OLE,” DCOM is designed for use across multiple network transports, including Internet protocols such as HTTP.

The FactoryLink 7.0 DCOM security authenticates and authorizes the client during its attempt to access the server. If the client does not meet with the security requirement, the access will be denied.

When the event notification or call-back mechanism is used between the server and the DCOM client, the server becomes the client (caller), and the client becomes the server (callee). That is why sometimes a client can successfully connect to a server, but attempts to use asynchronous updates fail. Other terms that refer to this mechanism are “connection points” and “event notification.”

DCOMCNFG.EXE

DCOMCNFG.EXE is an offline tool that makes modifications to the DCOM configuration keys stored in the registry. The system reads DCOM configuration from the registry at the application startup time.

Use the **DCOMCNFG.EXE** tool to configure the two security configuration settings that affect application (client or server) calls in DCOM:

- Specific application setting, using the AppId
- Default setting for all applications that do not rely on specific settings or/and do not have an AppId

- **ADDITIONAL INFORMATION AND PROCEDURES**

- *Setting up the DCOM Security*

-
-

DCOM Configuration Values

Set up the DCOM security in both the client and the server machines. If the client and server machines are members of an NT domain, use the values in Table 6-1 for the DCOM configuration.

Table 6-1 DCOM Configuration Values

Configuration Properties	Client Machine	Server Machine
Authentication Level	Call	Connect
Impersonation Level	Identify	Impersonate
Access Permission	Lists of users defined using the DCOMCNFG tool	List of users defined using the DCOMCNFG tool + Interactive + Network + System
Launch Permission	N/A	List of users defined using the DCOMCNFG tool + Interactive + System

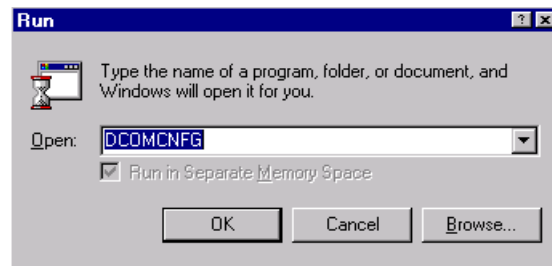
If the client and server machines are not members of an NT domain, you need to create users on both the server and the client machines with identical user names and passwords.

Using the DCOM Configuration Tool

Perform the following steps to set up an application to utilize an established user account:

- 1 From the **Start** menu, select **Run** and type in **DCOMCNFG** (see Figure 6-6). Click **OK**.

Figure 6-6 Running DCOMCNFG

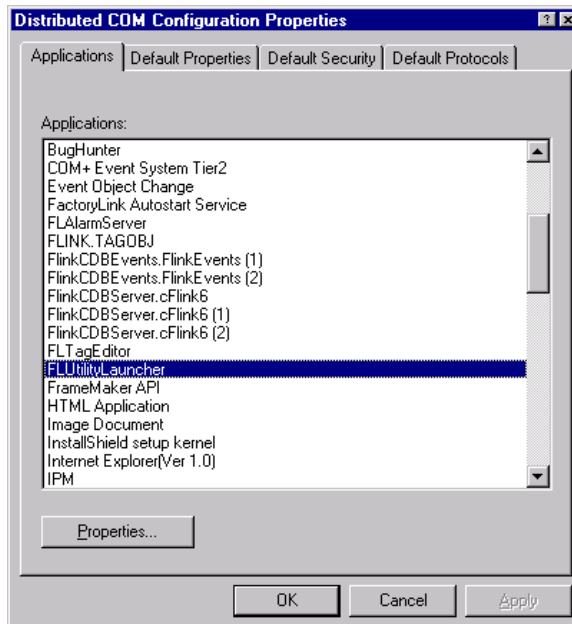


ADDITIONAL INFORMATION AND PROCEDURES

Setting up the DCOM Security

- 2 In the **Distributed COM Configuration Properties** dialog box, select **FLUtilityLauncher** from the list and click **Properties** (see Figure 6-7).

Figure 6-7 Distributed COM Configuration Properties



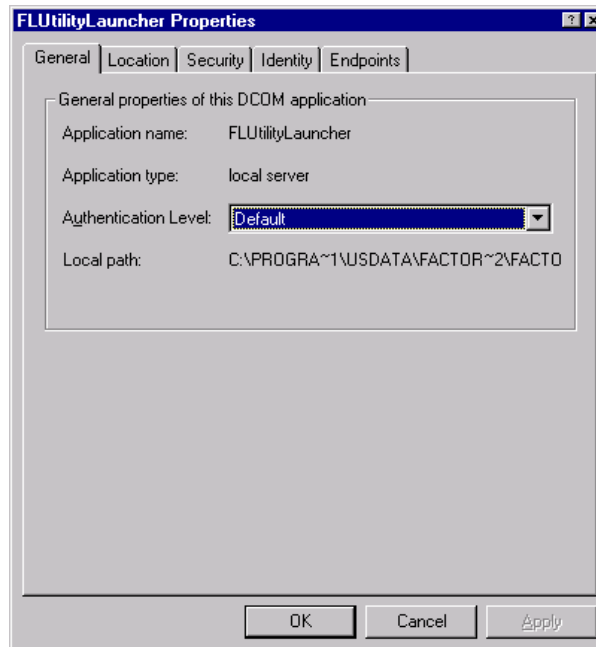
- **ADDITIONAL INFORMATION AND PROCEDURES**

- *Setting up the DCOM Security*

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3 In the **FLUtilityLauncher Properties** dialog box, click the **Identity** tab (see Figure 6-8).

Figure 6-8 FLUtilityLauncher Properties



4 In the **Identity** dialog box, click the **Browse** button to select a user. Click **Add**.

Note: USDATA recommends that you create a single user account for the following five components:

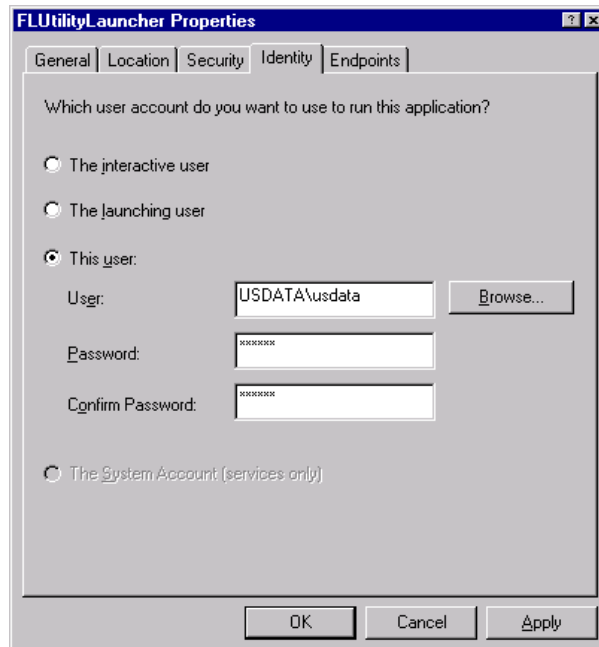
- USDATA Trend Database Server
- USDATA OPC Development Server
- USDATA OPC Server
- FLUtilityLauncher
- USDATA FactoryLink OLE Server

ADDITIONAL INFORMATION AND PROCEDURES

Setting up the DCOM Security

- 5 In the **Identity** dialog box, the **User** name is filled in automatically after Step 4 was taken (see Figure 6-9). Fill in the **Password** and **Confirm Password**. Click **OK**.

Figure 6-9 FLUtilityLauncher Properties - Identity



- **ADDITIONAL INFORMATION AND PROCEDURES**

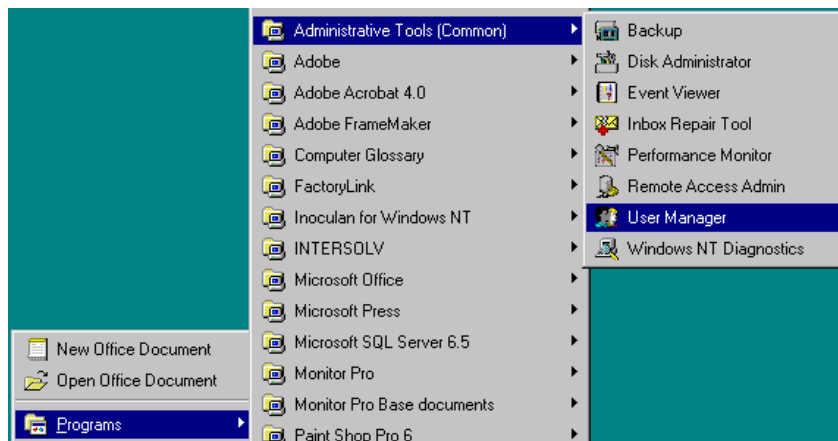
- *Setting up the DCOM Security*
-
-

Configuring the User Manager

Perform the following steps to configure the User Manager:

- 1 From the **Start** menu, select **Programs>Administrative Tools (Common)**. Click **User Manager** (see Figure 6-10).

Figure 6-10 Programs Menu

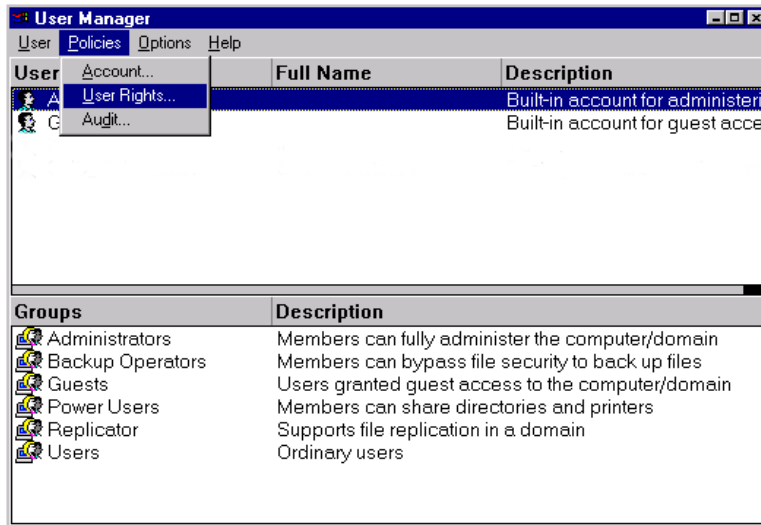


ADDITIONAL INFORMATION AND PROCEDURES

Setting up the DCOM Security

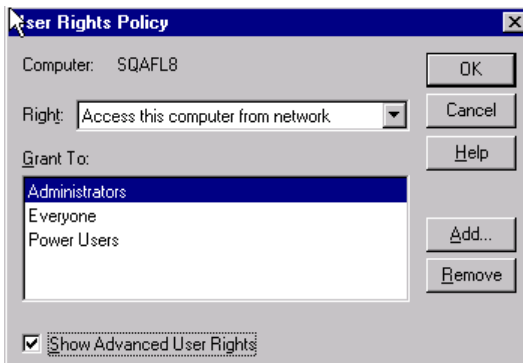
- 2 In the **User Manager** screen, from the **Policies** menu, select **User Rights** (see Figure 6-11).

Figure 6-11 User Manager Screen



- 3 In the **User Rights Policy** dialog box, check **Show Advanced User Rights** (see Figure 6-12).

Figure 6-12 User Rights Policy Dialog Box



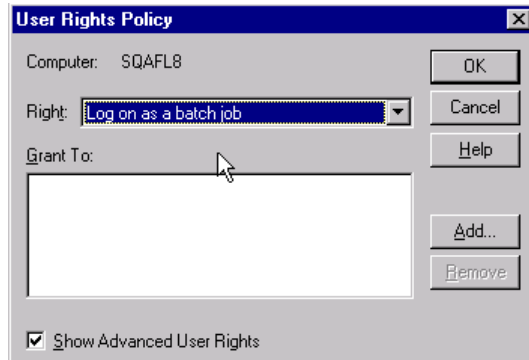
- **ADDITIONAL INFORMATION AND PROCEDURES**

- *Setting up the DCOM Security*

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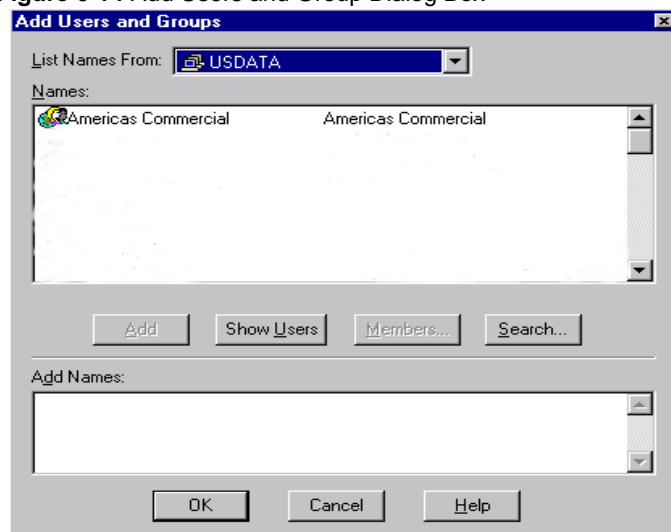
4 In the **Right** drop-down list, select **Log on as a batch job**. Click **Add** (see Figure 6-13).

Figure 6-13 User Rights Policy



5 In the **Add Users and Groups** dialog box, click **Show Users**.

Figure 6-14 Add Users and Group Dialog Box



6 Select a user account that has been set up by the DCOM configuration tool. Click **Add**. Then click **OK**.

7 In the **User Rights Policy** dialog box, click **OK**. Your **User Manager** is set up.

ADDITIONAL INFORMATION AND PROCEDURES

Setting up the DCOM Security

Microsoft Windows NT Cross-Domain Issue

For the clients and servers to exist in different domains, the network administrator must establish a mutual trust relationship in between. A trust relationship is a link between two domains that enables a user with an account in one domain to have access to the resources of another domain.

For more information, refer to the Microsoft Windows NT manual or search the Microsoft Web site at <http://www.msdn.microsoft.com/library>.

- **ADDITIONAL INFORMATION AND PROCEDURES**
- *Setting up the DCOM Security*
-
-

Chapter 7

License Manager

In versions prior to FactoryLink 7.0, licensing to protect FactoryLink tasks was on the server side. It became effective through registration and authorization of the software.

In FactoryLink 7.0, the server-side licensing is still intact. In addition, the 7.0 version introduces a License Manager on the client side to control the run-time instances and connection of five client products to a FactoryLink Server:

- Client Builder

The License Manager controls Client Builder's run-time instances and connection to the FactoryLink Server. It requires a pair of licenses for Client Builder to run successfully: one for connection and one for run-time instance. If one of the licenses is missing, Client Builder will not be able to start.

- Configuration Explorer

The License Manager controls Configuration Explorer's connection to the FactoryLink Server. Without a connection license from the License Manager, Configuration Explorer will shut down upon startup.

- WebClient

The License Manager controls WebClient's connection to the FactoryLink Server. If WebClient does not have a connection license from the License Manager, the WebClient graphics will not display.

- Graph

The License Manager controls the startup of the local Graph task. If the Graph task cannot obtain a connection license from the License Manager, no local graphics will be displayed, although the other FactoryLink tasks can still be started.

- Third-party OPC Clients

Connection licensing only applies to third-party (non-USDATA) OPC clients. USDATA OPC clients, namely USDATA OPC Client, Client Builder, and Configuration Explorer, do not require the use of a connection license. When a third-party OPC client attempts to connect to the FactoryLink OPC Server, the server will attempt to obtain a connection license from the License Manager. If no license is available, the FactoryLink OPC server will refuse a connection to the third-party OPC Client.

IMPORTANT: FactoryLink licensing uses windows socket services to communicate between client products and the License Manager. Therefore, you must install Microsoft TCP/IP services on the machine for the License Manager to run.

- **LICENSE MANAGER**

- *License Utility*

-
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LICENSE UTILITY

The FactoryLink 7.0 installation program installs the license utility, **FLLicenseUtility.exe**, on the FactoryLink Server. For installation information on the license utility, refer to Chapter 2, “Installing FactoryLink 7.0.”

Figure 7-1 shows the license utility screen during the installation program.

Figure 7-1 FactoryLink Licensing Utility Dialog Box



The installation program also creates a desktop icon for the license utility, which you can invoke any time after installation (see Figure 7-2).

Figure 7-2 FL License Utility Icon



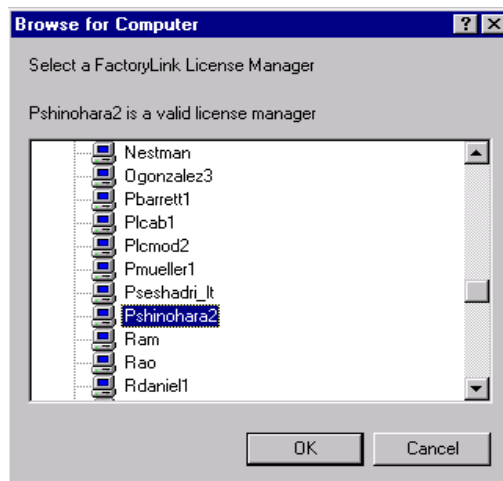
FUNCTIONS

The license utility has three basic functions:

- Find and select a License Manager on the network.

By default, the License Manager service is installed on a machine where the FactoryLink server products have been installed. The license utility provides the option to designate a License Manager on any other known FactoryLink Server on the network. The License Manager has a browse feature to identify these machines that contain a License Manager (see Figure 7-3).

Figure 7-3 Browse for Computer Dialog Box



- **LICENSE MANAGER**

- *Functions*

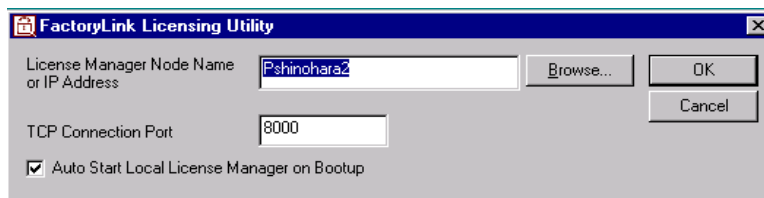
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- Set the local TCP/IP port.

TCP/IP is the connection mechanism between the client products and the License Manager. To successfully communicate with the FactoryLink server, the client products must use the same port number as the License Manager. If you are unsure about which port numbers are available for use, consult your network administrator.

The license utility is the only means to define the TCP/IP port. By default, the License Manager uses port 8000 (see Figure 7-4).

Figure 7-4 Defining TCP/IP Connection Port



If a client product fails to get a license and you have verified that the license is available, check the services file in **C:\WINNT\System32\Drivers\ETC\Services** for possible port conflict. Make sure that the port you use for the License Manager is not used by another NT service or program.

You can change the TCP/IP port number after installation by performing the following steps:

- 1) Shut down the License Manager and the client product you are running.
 - 2) Invoke the License Utility by clicking the icon on your desktop.
 - 3) Restart the License Manager and the client product to apply the changes.
- Select auto-start for the local License Manager upon the machine startup.

Auto-start is the default setting. To change the setting, you can uncheck this option in the License Utility dialog box.

To set it back to auto-start after installation, you can go to the **Control Panel**, select **Services**, and then set FactoryLink License Manager to auto-start.

LICENSE MANAGER

NT Service

NT SERVICE

The FactoryLink License Manager is installed as an NT service. The executable is **usdlicenseserver.exe** (located in the FactoryLink bin directory). By default, the License Manager starts up automatically upon a reboot of the machine.

The NT service must be running for licensing to work properly. If it is not running, any licensing request will fail.

GRACE PERIOD

Should a License Manager become unavailable, a client product can still be started repeatedly for a three-day grace period. The grace period starts from the time the license was successfully allocated. If the License Manager is unavailable on the fourth day, the product will not be able to start or run. To get another new license, it requires a running License Manager.

- **LICENSE MANAGER**

- *Demo Mode*

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DEMO MODE

The License Manager can detect whether your FactoryLink server installation is a demo version or a fully authorized version. If you use a demo version, a pop-up message box appears every 15 minutes after Configuration Explorer, Client Builder, or WebClient starts up. The message urges you to contact USDATA or your reseller to purchase the FactoryLink product (see Figure 7-5).

Figure 7-5 Configuration Explorer Demo Message



Note: This message does not appear for OPC Client connections.

If you are running multiple instances of any of the four client products, the product will generate multiple pop-up messages for that product, because each connection to the License Manager is unique.

If the FactoryLink Server is running in a demo mode, it shuts down in one hour from start, the same as in previous versions of FactoryLink. The server shutdown does not stop Configuration Explorer, Client Builder, and WebClient from running remotely, but their data connection to the FactoryLink Server will be terminated.

LICENSE MANAGER

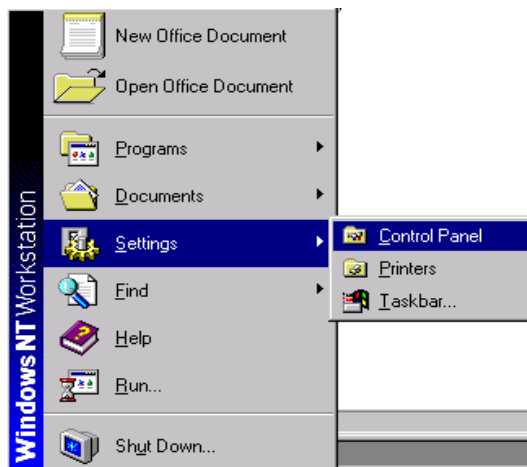
Installing the License File on a Shared Drive

INSTALLING THE LICENSE FILE ON A SHARED DRIVE

During the installation program, you have the option of installing the license file to the default directory **USDATA\FactoryLink\FactoryLinkOpt**. If you did not take the default setting and installed the license file to a shared directory, perform the following steps to set up the FactoryLink License Manager:

- 1 From the **Start** menu, select **Settings>Control Panel** (see Figure 7-6).

Figure 7-6 Start Menu



- **LICENSE MANAGER**
- *Installing the License File on a Shared Drive*
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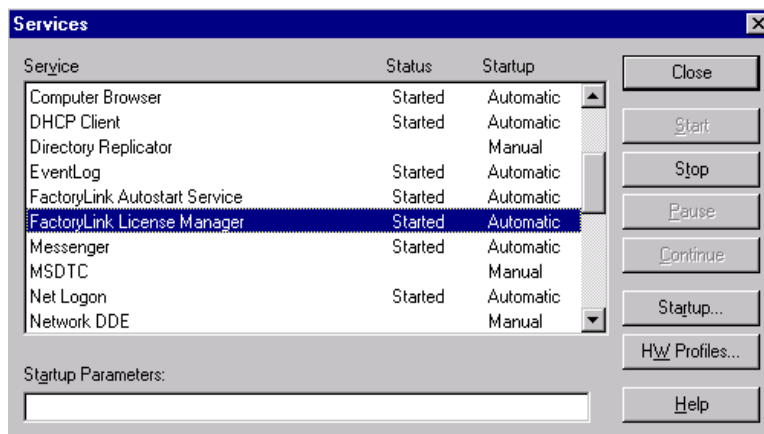
2 In the **Control Panel**, select **Services** (see Figure 7-7).

Figure 7-7 Control Panel



3 In the **Services** dialog box, select **FactoryLink License Manager**, click **Stop**, and then double-click **FactoryLink License Manager** (see Figure 7-8).

Figure 7-8 Services Dialog Box

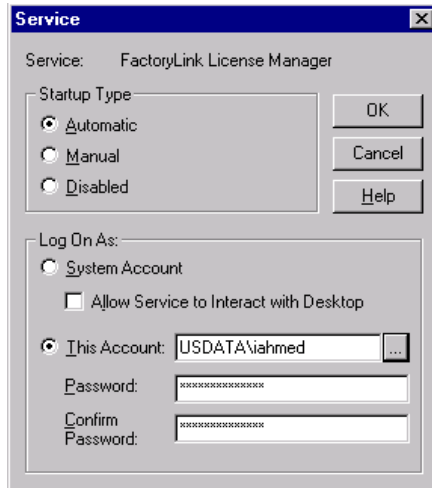


LICENSE MANAGER

Installing the License File on a Shared Drive

- 4 In the **Service** dialog box for the FactoryLink License Manager, change the default for **Log On As** from **System Account** to **This Account** (see Figure 7-9).

Figure 7-9 Service Dialog Box

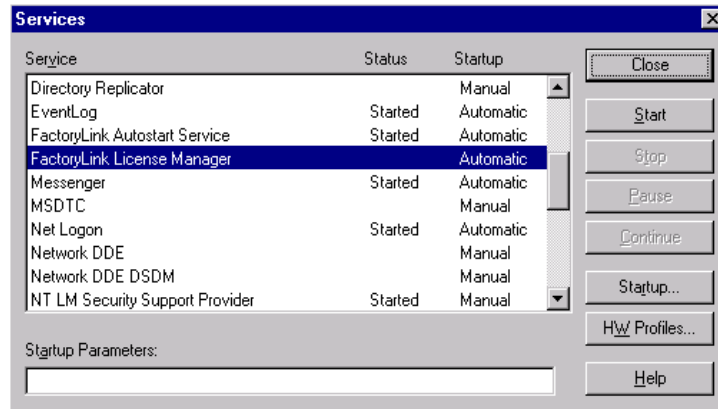


- 5 Browse to whichever account has the access to the shared drive.
- 6 Type in the password for this account. Confirm the password. Click **OK**.

- **LICENSE MANAGER**
- *Installing the License File on a Shared Drive*
-
-

7 In the **Services** dialog box, select **FactoryLink License Manager** (see Figure 7-10). Click **Start**.

Figure 7-10 Services Dialog Box



Chapter 8

Error Messages

An error message appears on screen if you encounter a problem during the FactoryLink 7.0 installation. This chapter lists all the messages that can occur during the installation process, describes their possible causes, and provides corrective actions.

The **USDFLInstall.log** file is located in the root directory of the C: drive.

A component could not be registered.

Component: <COM component filename>

Note: The symbol <> indicates the text that comes up during run-time operation.

Action: The most likely cause is either that the component file is missing, or that a dependent component file is missing or is not on the system PATH.

Action: You can try registering manually.

A component could not be unregistered.

Cause: During uninstall, a file cannot be removed from the registry.

Action: No action needed; however, some unused data will be left in the registry.

An error occurred during the move data process.

Cause: InstallShield internal problem.

Action: Contact USDATA Customer Support and report the error code.

An unknown error has been encountered in the Destination Directories dialog. The installation will be aborted.

Cause: While the installation script was able to create the Destination Directories dialog, an unknown error is preventing the dialog from operating correctly.

Action: Contact USDATA FactoryLink support.

- **ERROR MESSAGES**

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**An unknown error has been encountered in the License Configuration dialog.
The installation will be aborted.**

Cause: While the installation script was able to create the License Configuration dialog, an unknown error is preventing the dialog from operating correctly.

Action: Contact USDATA FactoryLink support.

**An unknown error has been encountered in the Show Document dialog.
The installation will be aborted.**

Cause: While the installation script was able to create the Show Document dialog, an unknown error is preventing the dialog from operating correctly.

Action: Contact USDATA FactoryLink support.

ComponentError returned the following data transfer error. Setup will now abort.

Media Name: %s

Component: %s

File Group: %s

File: %s

Error Number: %ld

Cause: InstallShield internal problem.

Action: Contact USDATA Customer Support and report the error message.

**ComponentError returned the following data transfer error.
Setup will now abort.**

Media Name: <CAB file being accessed.>

Component: <installation component being accessed.>

File Group: <group being accessed.>

File: <file being accessed.>

Error Number: <InstallShield error value.>

Cause: Unknown.

Action: Contact USDATA FactoryLink support.

Could not add a new key to the registry.

Cause: Most likely the currently logged-on user does not have sufficient rights to the FactoryLink product.

Action: The user must log on using an account that has Administrator rights before starting the installation.

ERROR MESSAGES

Could not add the \\n\n“%s”\n\ndirectory to the system path.

Cause: The user does not have the privileges to add to the system environment.

Action: Make sure the user has administrative privileges.

Could not copy a file

Source file: <source filename>

Destination file: <destination filename>

Cause: Either the source or destination filename is invalid. The most likely cause is that the user choose an invalid installation directory name (such as one that can't be created).

Action: Restart the installation and check the validity of each install destination directory.

Could not create a new directory.

Directory: <directory >

Cause: The most likely cause is that the user chose an invalid installation directory name (such as one that can't be created).

Action: Restart the installation and check the validity of the related installation directory.

Could not create the following USDATA FactoryLink registry set. The installation will be aborted.

Cause: The most likely cause is that the user does not have Administrator rights to install the FactoryLink product.

Action: The user must log on using an account that has Administrator rights before starting the installation.

Could not load helper module.

Module: <module filename>

Cause: For unknown reasons the specified DLL installation helper module could not be initialized. It is possible that either it or one of its dependent modules are corrupted or cannot be found.

Action: Contact USDATA FactoryLink support.

- **ERROR MESSAGES**

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Could not open the FLBuild.ID file to retrieve the version information.

Cause: The FLBuild.ID file is missing or corrupted.

Action: Contact USDATA FactoryLink support.

Could not open installation log file.

[InstallShield error message text]

Cause: The installation log file could not be opened for the above reason.

Action: Contact USDATA FactoryLink support.

Could not register <file> because the file does not exist.

Cause: Install could not find the specified file to register.

Action: Contact USDATA FactoryLink support.

Could not retrieve a registry value.

Key: <key name>

ValueName: <value name>

Cause: The most likely cause of this error is that the currently logged on user does not have sufficient rights to install the FactoryLink product.

Action: The user must log on using an account that has Administrator rights before starting the installation.

Could not retrieve a value from the environment.

Env: <environment value name>

Cause: The value expected to be in the environment is not yet there. The cause is unknown.

Action: Contact USDATA FactoryLink support.

Could not set a new value into the environment.

Env: %s

Value: %s

Cause: The most likely cause is that the user does not have Administrator rights to install the FactoryLink product.

Action: The user must log on using an account that has Administrator rights before starting the installation.

ERROR MESSAGES

Could not set DCOM permissions. <DCOM permission string>

Cause: The most likely cause is that the user does not have Administrator rights to install the FactoryLink product.

Action: The user must log on using an account that has Administrator rights before starting the installation.

Could not set a registry value.

Key: <key name>

ValueName: <value name>

Value: <value >

Cause: The most likely cause of this error is that the currently logged on user does not have sufficient rights to install the FactoryLink product.

Action: The user must log on using an account that has Administrator rights before starting the installation.

Could not set up DSN.

Cause: Internal database error.

Action: Contact USDATA FactoryLink support.

Could not start a Windows NT service.

Service: <NT service filename>

Cause: The most likely cause is either that the component file is missing, or that a dependent component file is missing or is not on the system PATH.

Action: Contact USDATA FactoryLink support.

Could not write an entry to the installation log file.

Logoff: <installation log filename>

Entry: <entry that was being added to the log file>

Cause: An unknown problem is interfering with the process of writing to the installation log file.

Action: Contact USDATA FactoryLink support.

- **ERROR MESSAGES**

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**Could not write the initial installation information into the registry.
The installation will be aborted.**

Cause: The most likely cause of this error is that the currently logged on user does not have sufficient rights to install the FactoryLink product.

Action: The user must log on using an account that has Administrator rights before starting the installation.

!kernel error

Cause: The user does not have administrator privileges.

Action: The user needs to install with administrator privileges.

**The current user does not have administrator privileges.
The installation will be aborted.**

Cause: The user must have Administrator rights to install the FactoryLink product.

Action: The user must log on using an account that has Administrator rights before starting the installation.

The directory does not exist:\n\nDirectory: %s.

Cause: Internal database error.

Action: Contact USDATA FactoryLink support.

The installation was aborted.

Cause: An unrecoverable error was encountered. (In the vast majority of the cases, a preceding message box will already have been presented to the user.)

Action: Contact USDATA FactoryLink support.

The source disk is not the FactoryLink DI/VAP installation CD.

Cause: The installation script was expecting the DI/VAP CD to be inserted, but another CD was inserted instead.

Action: Remove whatever CD is in the CD drive and insert the DI/VAP CD.

ERROR MESSAGES

The source disk is not the Microsoft SQL 7 installation CD.

Cause: The installation script was expecting the Microsoft SQL Server CD to be inserted, but another CD was inserted instead.

Action: Remove whatever CD is in the CD drive and insert the Microsoft SQL Server CD.

The version number file could not be found. The installation will be aborted.

Cause: While the installation script was able to find and read the FLBuild.ID file, the FactoryLink version number could not be determined.

Action: Contact USDATA FactoryLink support.

This product may be installed only on Windows NT or Windows 2000. The installation will be aborted.

Cause: The system on which the user is attempting to install FactoryLink is not Windows NT 4.0 or Windows NT 2000.

Action: FactoryLink may be installed only on a system running Windows NT 4.0 or Windows NT 2000.

This program requires VGA resolution of 1024 x 768 or better

Cause: The display resolution is set to values smaller than either 1024 pixels horizontally or 768 pixels vertically, or both.

Action: Set display resolution at 1024 x 768 or better.

Unable to create or display the License Configuration dialog box. The installation will be aborted.

Cause: The resource containing the License Configuration dialog has been corrupted or is missing.

Action: Contact USDATA FactoryLink support.

Unable to create or display the Show Document dialog box. The installation will be aborted.

Cause: The resource containing the Show Document dialog has been corrupted or is missing.

Action: Contact USDATA FactoryLink support.

- **ERROR MESSAGES**
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Appendix A. . . .

Installing Microsoft SQL Server 7.0

USDATA provides Microsoft SQL Server 7.0 and Service Pack 2 (SP2) on CD 3 in the standard FactoryLink package. Please note that SP2 is in two parts: Database Components and OLAP Services Components. FactoryLink requires the installation of Database Components.

The minimum requirement for Windows 2000 Server is Microsoft SQL Server 7.0.

For foreign language considerations and for loading with Windows NT, you must load the proper code-page and language support from the Custom Install option.

Perform the following steps to install Microsoft SQL Server 7.0:

- 1** Insert the Microsoft SQL 7.0 CD into the CD-ROM drive.
- 1** Read the *Release Notes*, especially if a previous 6.5 installation exists.
- 2** Click **Install SQL Server 7.0 Components**.
- 3** In the **Install SQL Server 7.0 Components** dialog box, click **Database Server - Standard Edition**.

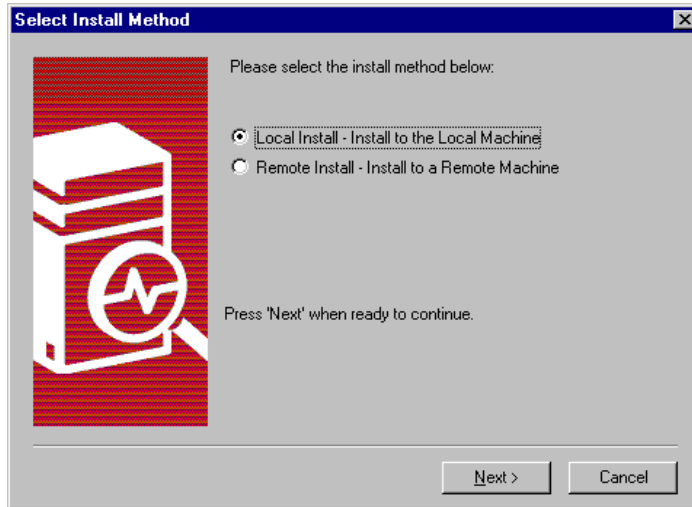
Note: You can also install the Desktop Edition.

- **INSTALLING MICROSOFT SQL SERVER 7.0**

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4 In the **Select Install Method** dialog box, click **Local Install** and click **Next** (see Figure 8-1).

Figure 8-1 Select Install Method Dialog Box



5 In the **Welcome** dialog box, click **Next** (see Figure 8-2).

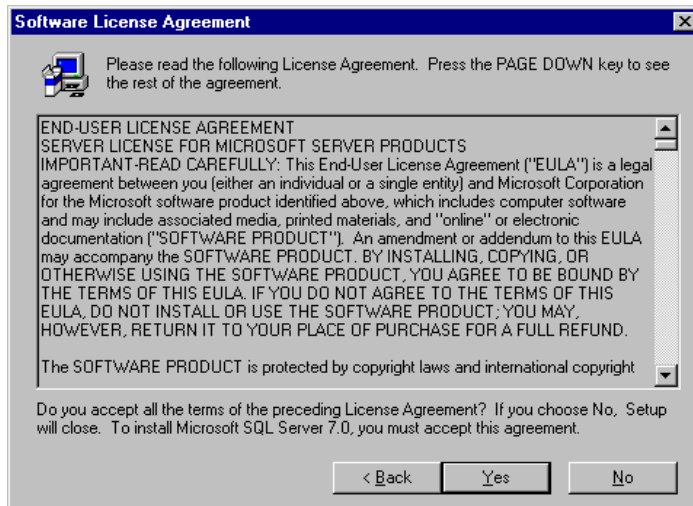
Figure 8-2 Welcome Dialog Box.



INSTALLING MICROSOFT SQL SERVER 7.0

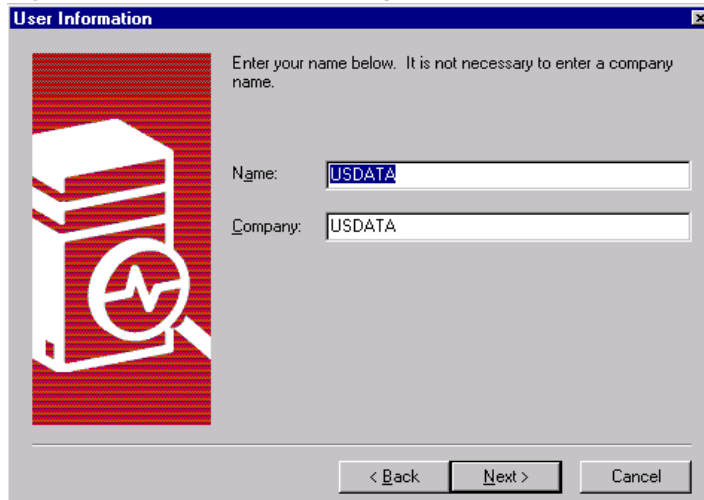
- 6 In the **Software License Agreement** dialog box, scroll down to read the Licensing Agreement (see Figure 8-3). Click **Yes**.

Figure 8-3 Software License Agreement Dialog Box



- 7 In the **User Information** dialog box, enter **Name**, **Company** (optional), and click **Next** (see Figure 8-4).

Figure 8-4 . User Information Dialog Box



- **INSTALLING MICROSOFT SQL SERVER 7.0**

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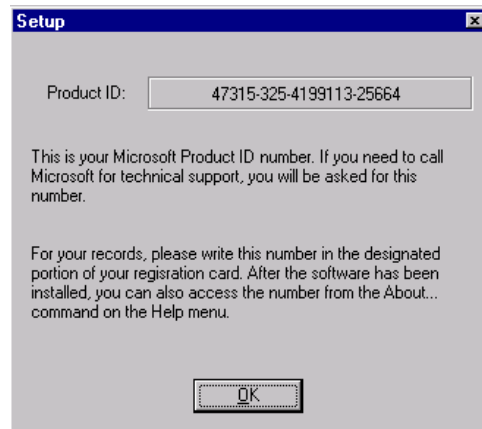
8 In the **Setup** dialog box, enter the CD Key: **325-4199113** (see Figure 8-5). Click **OK**.

Figure 8-5 Setup Dialog Box



9 In the next **Setup** dialog box, the **Product ID** appears (see Figure 8-6). Click **OK**.

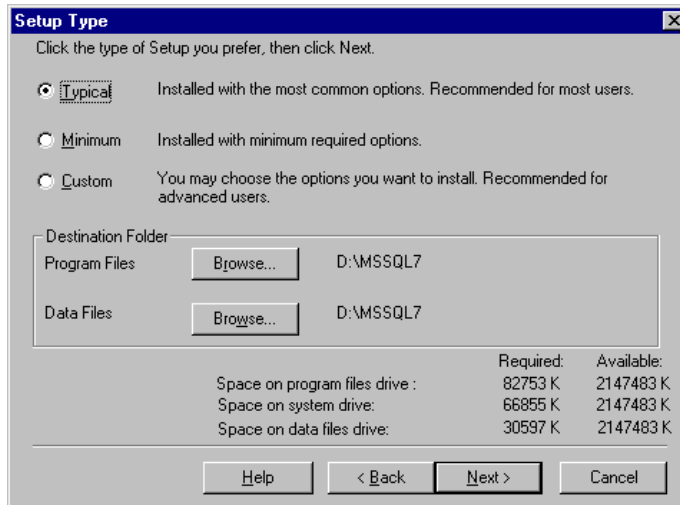
Figure 8-6 Setup Dialog Box



INSTALLING MICROSOFT SQL SERVER 7.0

10 In the **Setup Type** dialog box, select **Typical** and click **Next** (see Figure 8-7).

Figure 8-7 Setup Type Dialog Box.

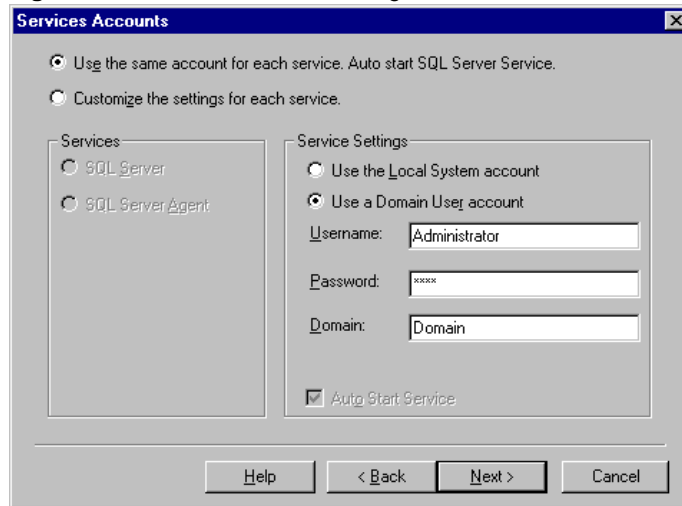


- **INSTALLING MICROSOFT SQL SERVER 7.0**

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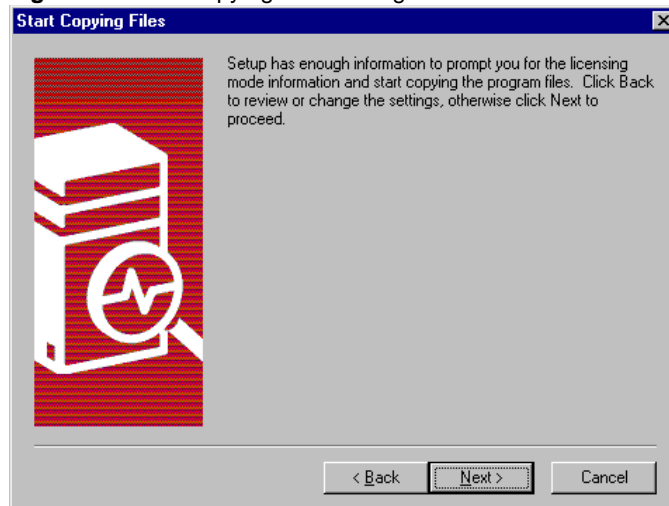
- 11 In the **Services Accounts** dialog box, select **Use the Same Account for Each Service** (see Figure 8-8). Under **Service Settings**, select **Use a Domain User Account**. Type the **Username**, **Password**, and **Domain**. Click **Next**.

Figure 8-8 Services Accounts Dialog Box



- 12 In the **Start Copying Files** dialog box, click **Next** (see Figure 8-9).

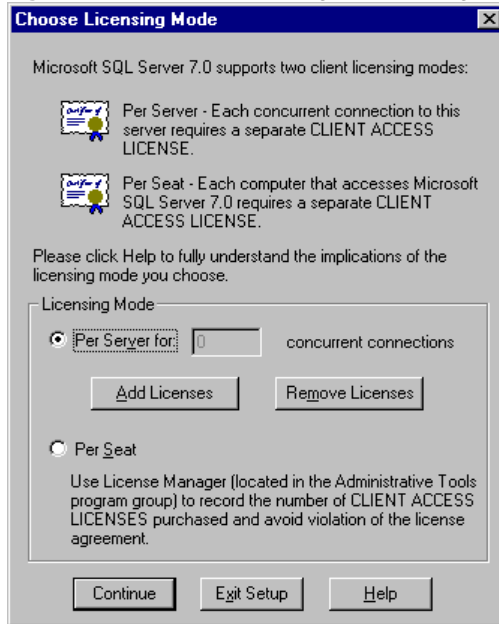
Figure 8-9 Start Copying Files Dialog Box



INSTALLING MICROSOFT SQL SERVER 7.0

- 13 In the **Choose Licensing Mode** dialog box, select **Per Server** and click **Add Licenses** (see Figure 8-10). Click **Continue**.

Figure 8-10 Choose Licensing Mode Dialog Box



- 14 In the **New Client Access License** dialog box, enter the number of purchased FactoryLink 7.0 Client Access Licenses (CALs) and click **OK** (see Figure 8-11).

Figure 8-11 New Client Access License Dialog Box



- **INSTALLING MICROSOFT SQL SERVER 7.0**

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15 In the **Per Server Licensing** dialog box, select **I agree that** and click **OK** (see Figure 8-12).

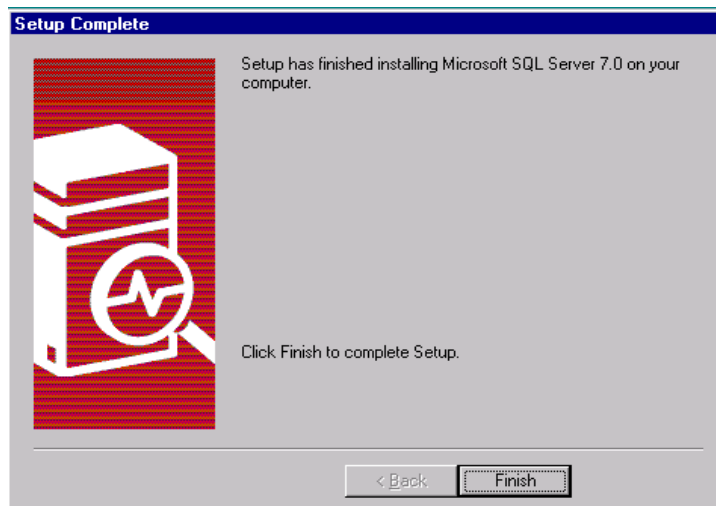
Figure 8-12 Per Server Licensing Dialog Box



16 In the **Choose licensing Mode** dialog box, click **Continue**.

17 In the **Setup Complete** dialog box, click **Finish** to complete the installation (see Figure 8-13).

Figure 8-13 Setup Complete Dialog Box



INSTALLING MICROSOFT SQL SERVER 7.0

- 18 Reboot the computer.
- 19 Execute the installation of the SQL Server, Service Pack 2, from the **Service Pack 2** directory of CD 3.

- **INSTALLING MICROSOFT SQL SERVER 7.0**
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