



Installation Guide

**PROGRESS DATABASE
ON UNIX SERVER**



78-0358
MFG/PRO Version 9.0
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Using This Guide

You can use the instructions in this guide to:

- Install the MFG/PRO Version 9.0 server software on UNIX[®]
- Install MFG/PRO for Windows Version 9.0 software
- Convert an MFG/PRO Version 7.4, 8.5, or 8.6 production database to MFG/PRO Version 9.0

Audience

These instructions are for the MFG/PRO system administrator who manages the MFG/PRO database and is familiar with the UNIX environment, networking, PROGRESS[®], and Microsoft Windows[™].

Installation Errata

In addition to these instructions, you may receive a supplementary errata sheet with changes and additional instructions. Check your product package.

Release Bulletin

In conjunction with these instructions, see the *MFG/PRO 9.0 Release Bulletin* for additional utilities required for the modules you use. These utilities, which are related to a particular programming patch (ECO), correct possible corruptions in your data.

QAD Web Site

For QAD customers with a Web account, MFG/PRO documentation is available for review or downloading at:

<http://support.qad.com/documentation/>

To obtain a QAD Web account, go to:

<http://support.qad.com/>

Other MFG/PRO Version 9.0 Documentation

- For an overview of new features and software updates, see the *Release Bulletin*.
- For instructions on navigating the MFG/PRO environment, see the *User Interface Guide*.
- For information on the entire system, see the *User Guides*.
- For technical details, see the *File Relationships* and *Database Definitions*.
- For system administration information, see the *System Administration Reference Guide*.
- To view documents online in PDF format, see the *Documents on CD*.

Document Conventions

This guide uses the conventions listed in the following table.

If you see:	It means:
monospaced text	A command or file name.
<i>italicized monospaced text</i>	Italicized monospaced text indicates a variable name for a value you enter as part of an operating system command. For example, <i>YourCDROMDir</i> .
indented command line	A long command that you enter as one line although it appears in the text as two lines.

QAD's Global Technical Services

MFG/PRO installations have a wide variety of configuration possibilities, are highly scalable, and are easily customized. While this guide provides basic installation and conversion information, it cannot consider every possible MFG/PRO computing environment or configuration.

To take full advantage of MFG/PRO's flexibility and potential in your specific environment, contact your QAD support representative for information on the installation and customization offerings supplied by QAD's Global Technical Services. These offerings include performance enhancements—such as multiple-volume and split-schema databases—as well as technical and administration training and support for MFG/PRO conversions.

Installation Overview

This product is defined as MFG/PRO running against a PROGRESS database initialized for UNIX. This chapter presents basic system concepts that you should understand when completing the installation.

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Routing Code: 10-15000 OPERATION: 20 STANDARD OPERATION: 1030
 Work Center: MACHINE DESCRIPTION: INSPEC PER PROX-000
 Machines per Op: 1 Overlap Units: 1
 Queue Time: 1.0 Wait Time: 0.0
 Setup Time: 0.0

Installation and Conversion Summary

The basic MFG/PRO installation consists of the following major tasks. It is assumed you want to set up Windows clients.

Preinstallation

- Install PROGRESS for the UNIX server and for the Windows clients.
- Set up the network.
- Install the installation utility Q/ADMIN.

Database Server Setup

- From Q/ADMIN, launch the installation to load the UNIX files on the database server, build databases, and create start-up scripts.
- Start MFG/PRO and enter the license code.
- Load field help data from within MFG/PRO.
- Install the Service Pack Server media onto the server, if applicable.
- Set up hosts and services files.

▶ See “Loading Service Pack Media” on page 7.

Loading and Setting Up Windows Clients

- Load the Windows client media onto a file server.
- Load the Service Pack Windows Client media onto the file server, if applicable.
- Set up the needed files and Windows start-up icons on the first PC.
- Set up all other PCs; you can use the *express setup* feature.

Existing Database Conversion (optional)

Conversions are possible from MFG/PRO Versions 7.3 through 8.6 to MFG/PRO Version 9.0. If you are converting to MFG/PRO 9.0, read the prerequisites in *Chapter 7, “Convert an Existing Database,” on page 85* before you begin the MFG/PRO installation. The prerequisites explain differences in the way you should install MFG/PRO 9.0 depending upon the conversion you are performing.

Loading Service Pack Media

Service Packs contain MFG/PRO product updates issued between releases. Service Packs include important patches, code updates, system administration tools, drivers, and additional components. Service Packs offer a distinct advantage over the single-patch delivery mechanism by bundling a carefully controlled group of fixes and updates in an easily installed and well-documented package.

▶ See the Service Pack installation instructions in your product package for specific procedures.

Service Packs are not offered for every release of MFG/PRO. If your product package does not contain Service Pack media, your release does not currently have a Service Pack.

If you are performing a new installation, the following major tasks are required to load Service Pack media.

- Load the Service Pack Server media onto your MFG/PRO database server after installing and configuring your MFG/PRO databases.
- Load the Service Pack Windows Client media onto each Windows client or onto your network file server, depending upon your MFG/PRO configuration.

If you are performing a conversion or upgrade to an MFG/PRO release with a Service Pack, the following major tasks are required to load Service Pack media.

- Load the Service Pack media onto your MFG/PRO database server after completing your conversion or upgrade.
- Load the Service Pack Windows Client media onto each Windows client or onto your network file server, depending upon your MFG/PRO configuration.

Non-US English Language Installation Overview

To install a non-US English language version of MFG/PRO, use the basic installation instructions given in the “Installation and Conversion Summary” on page 6. However, be aware that additional steps are required before you install your database server. A summary of these steps is provided below. For more detailed instructions, see Chapter 3, “Non-US English Language Installation Setup,” on page 30.

▶ For PROGRESS specific information, see the *PROGRESS Internationalization Guide*.

Non-US Language Installation Setup

- Complete the Preinstallation tasks described in the “Installation and Conversion Summary” on page 6.
- Back up the `startup.pf`, `empty.db`, and associated files in your database server’s PROGRESS installation directory.
- Choose the appropriate three-character PROGRESS language code directory.
- From the PROGRESS language code directory, select the `.pf` file appropriate to the language you are installing and copy it to your PROGRESS installation directory.
- From the PROGRESS language code directory, copy the `empty.db` and associated files into your PROGRESS installation directory.
- Complete the Database Server Setup and the Loading and Setting Up Windows Clients tasks described earlier.

▶ See page 6.

Multiple Language Installation Overview

▶ For instructions, see Chapter 6, “Multiple Language Setup,” on page 73.

To install multiple languages, repeat the following installation tasks for each language.

- Load the UNIX files on the database server for each language.
- Load the Windows client CD-ROM on the file server.
- Load translated system data and online help.
- Create a new gui database with translated data.
- Create a set of language-specific databases for use in compiling.

▶ For more information, see “Terminal Type and Code Pages” on page 170.

Another factor in multi-language environments is the language codepage, which controls how PROGRESS stores and retrieves data. A codepage applies to one or more languages; for example, codepage `ibm850` applies to all western European languages. Because data storage and retrieval must use a single codepage, the languages in a multi-language environment must be in the same codepage family. The correct codepage for the MFG/PRO databases is assigned during installation.

Note If you use the European Monetary Union’s currency, the euro, your choice of codepage may change.

MFG/PRO Language Codes

During installation and user setup, you use an MFG/PRO language code to specify which language you are installing. Table 1.1 lists all MFG/PRO language codes. (Some languages may not be available for this release.) The language code also appears on the label of your product media.

Language	Code	Language	Code
Arabic	AR	Japanese	JP
Bulgarian	BU	Korean	KO
Chinese (Traditional)	TW	Norwegian	NO
Chinese (Simplified)	CH	Polish	PL
Czech	CZ	Portuguese	PO
Danish	DA	Romanian	RO
Dutch	DU	Russian	RU
Finnish	FI	Spanish (Castilian)	CS
French	FR	Spanish (Latin)	LS
German	GE	Swedish	SW
Greek	GR	Turkish	TU
Hungarian	HU	US English	US
Italian	IT		

Table 1.1
MFG/PRO
Language Codes

How Language Sessions Operate

After installation, you assign a language code to each user to determine which language they use. Based on the language code, the user connects to a language-specific set of programs and accesses language-specific system data including menus, messages, and help.

MFG/PRO for Windows Configuration

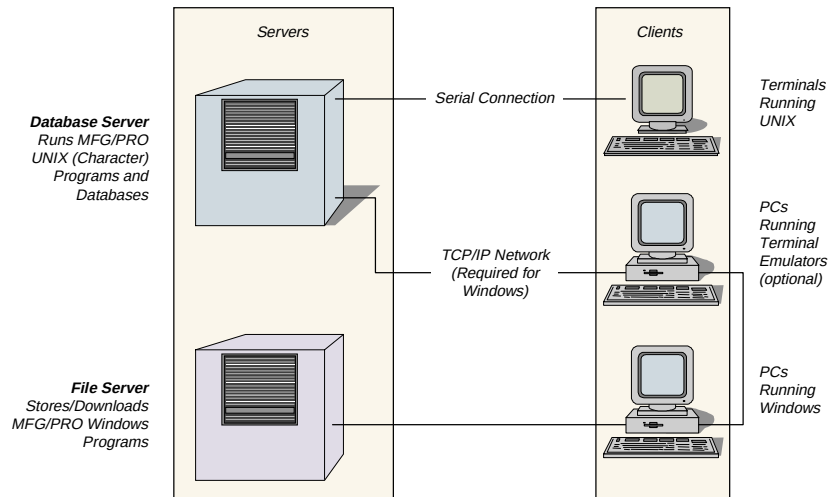
A client/server installation is *mandatory* for running MFG/PRO for Windows. If you are running MFG/PRO in character mode, the client/server installation is *optional*. Once you create a client/server installation, you can also concurrently run both Windows and character clients. The Windows clients are personal computers (PCs) that run MFG/PRO software programs locally. The database server machine is a

UNIX computer that runs the PROGRESS relational database management system (RDBMS). The database server is connected by a network to the Windows clients.

QAD recommends that you use a network file server accessible from the Windows client for storing r-code. The r-code used by Windows clients is different from the character-based r-code loaded on the database server machine. The network file server eliminates the need to store programs on each Windows client, and you can then update programs on only one computer.

Although the file server and database server can be the same machine, performance is better with the file server as a separate machine. If the network file server is on a separate machine, it can be hosted by many types of network operating systems such as Windows NT.

The following illustration shows a sample network configuration for a client/server environment.



Warning Do not use an MFG/PRO for Windows client to run MRP, batch reports, and other large processes. This places extra demand on network communications and degrades system performance. Instead, use a UNIX character session running in single-user or batch mode.

Installation and Conversion Utilities

MFG/PRO 9.0 has various utilities to control the installation and conversion. The main utilities are:

- Q/ADMIN: the primary interface to installation and system maintenance functions for MFG/PRO and other QAD products.
- MFG/UTIL: a set of programs used specifically for installing and managing MFG/PRO (both for the server and Windows clients).
- MFG/CONV: conversion program for MFG/PRO.

Q/ADMIN

Q/ADMIN provides an interface to the installation and system maintenance programs for MFG/PRO and other QAD products on the UNIX server. This utility comes on separate media and should be installed prior to installing other QAD products. Q/ADMIN reads the software media and directories of QAD-compliant products and lets you choose the installation or maintenance programs you want to launch. Q/ADMIN also stores all installation log and system-related information in a database for reference and for program defaults.

The database server installation tasks are not performed by Q/ADMIN itself, but are performed by a script named `install`. This script is on the MFG/PRO delivery media, where Q/ADMIN launches it.

MFG/UTIL

MFG/UTIL is the installation and system management tool for MFG/PRO. It is launched automatically during installation of both the database server and windows clients. After installation, you can access MFG/UTIL to perform maintenance such as compilation and editing start-up scripts or Windows client icons. On the server, you access MFG/UTIL through the Q/ADMIN menu. On Windows clients, you access MFG/UTIL from its start-up icon.

► For more information, see the *9.0 System Administration Reference Guide*.

MFG/CONV

MFG/CONV is the conversion program for MFG/PRO that is installed on your database server during installation. For more information, see “Convert an Existing Database” on page 85.

Keyboard Commands

When using Q/ADMIN, MFG/UTIL, or MFG/CONV in a character user interface, the keyboard commands are as follows.

Keyboard Entry	Command Name	Description
F1	Go	Moves to next frame or run a program.
F2	Help	Displays context-sensitive help (may not be available on all windows).
F3	Menu Bar	Accesses the menu bar.
F4	End	Exits a frame, program, or menu.
Space Bar	Select	Selects check-boxes and on/off options.
Enter or Tab	Tab	Moves to next field or command.
Shift + Tab or Control + U	Back Tab	Moves to the previous field or command.

Note In the character interface, button commands appear within brackets; for example: < OK >. To choose a button command, use the Tab key to move to the button and press Enter.

In addition, Q/ADMIN uses the following keyboard commands.

Keyboard Entry	Command Name	Description
F5	Delete	Deletes command arguments from the selection lists.
F6	Save	Saves command arguments you have entered to the Q/ADMIN database.
Control + A	New Argument	Adds a new command argument for the selected program. Use within the Argument field.
Control + E	Edit Argument	Lets you edit a command argument for the selected program. Use within the Argument field.

Keyboard Entry	Command Name	Description
Control + K	Version	Displays in a pop-up window the version of Q/ADMIN and the selected program item if applicable.
Control + N	New Install	Starts the installation process for a new QAD product (short-cut for the New option on the Product menu).
Control + P	Product Programs	Toggles through the installation programs for installed QAD products (short-cut for the Product menu.)
Control + T	Tools Programs	Opens a selection list of system tools for the QAD product you have selected (short-cut for the Tools menu).

Log Files

You can refer to the following log files created by the installation utilities.

Utility	Log File Name	Directory Location
Q/ADMIN	qadmin.log	Sub-directory /log under the Q/ADMIN installation directory
Installation script	install.log and mfgpro.log	Sub-directory /log under the installation destination directory
MFG/UTIL	mfgutil.log	MFG/PRO installation directory

Each time MFG/UTIL runs a prolonged task such as compiling or loading a .df file, it creates a new log file. The most recent log file is always called `mfgutil.log`. Older log files are named with the convention `mfgulog.xxx`, where xxx is a number from 001 through 999. The lower the number, the older the file. For example, these files are listed newest to oldest:

```
mfgutil.log
mfgulog.002
mfgulog.001
```

MFG/UTIL does not delete or purge any log files. If you want to delete older log files, use the standard operating systems commands.

MFG/PRO Databases

During installation, you have the choice of which databases you want to create. Several of the databases, such as mfgempty and mfg, are built in two stages.

- 1 The installation creates an empty database, which has a schema but no data.
- 2 A copy of the empty database is created and default data loaded into it.

Table 1.2
Databases Created
During Installation

Databases	Notes
mfgempty and mfg	The mfgempty database consists of only the MFG/PRO schema with no system data. The mfg database is a copy of mfgempty, to which data from the mfg directory has been loaded. This data includes the default menus, messages, and minimum data required to start MFG/PRO. The mfg database is copied to make your production database.
hlpempty and mfghelp	A single help database is usually shared by a number of production or test databases. The mfghelp database is a copy of hlpempty with help data added to it.
guiempty and gui	The gui database includes the data needed to run MFG/PRO for Windows and all object programs. It is therefore required for character clients. The gui database is a copy of guiempty with data from the gui directory added to it.
cfempty and cfg	The cfg (Configurator) database stores the data from the Component Configurator maintenance programs. This module enables you to customize MFG/PRO object programs. The cfg database is a copy of cfempty with data from the cfg directory added to it.
mfgtrain	A copy of mfgempty, to which data from the mfgtrain directory has been loaded.
mfgdemo	A copy of mfgempty, to which data from the mfgdemo directory has been loaded.

Database Sets

One of the functions of MFG/UTIL is to configure start-up parameters using the concept of *database sets*. A database set defines the connection parameters for a group of databases. To run MFG/PRO, a database set must contain at least the following.

- Production, demonstration, or training database
- Help database
- Gui database
- Configurator database if you want to use the Component Configurator module

Optionally, you can also include custom side databases.

You can set up different database sets for different purposes. For example, in a Production set, you could connect to your production database, a help database, and a gui database. In a training database set, you could connect to a training database and the same help and gui databases used in the Production set.

In the UNIX environment, MFG/UTIL uses the database set information to create server and client start-up scripts. In Windows, it creates start-up icons, a Windows initialization file (for example, `progress.svg`), and a start-up parameter file (for example, `producti.pf`). The parameter file contains the required connection parameters for your databases.

User License Overview

MFG/PRO user licensing tracks user counts on MFG/PRO and alerts QAD customers to license violations. Additionally, user licensing alerts customers to the expiration of MFG/PRO evaluation software.

License utilities do not currently restrict the total number of users that can log into MFG/PRO. This means that a user is not prevented from logging in when the total number of licensed users is exceeded. User counts are tracked according to the two licensing schemes QAD currently sells: concurrent and named users.

Note The user license utility applies only to MFG/PRO modules licensed by user count. For example, it does not apply to the EDI module.

User Licensing System

When QAD ships an order, a unique license code is supplied to each customer site. When a product is not actually shipped (for example, a license upgrade to increase user count), a license code sheet is still sent to the customer site. This license code identifies to the software the number of users for which the site is licensed.

When the software is first installed, the first user logging into MFG/PRO—typically the system administrator—is prompted to enter the supplied license code.

When a user logs in and the number of logged-in users exceeds licensed users, two warning messages display. Once the messages are accepted, the user can log on without restriction.

When a user logs in within 10 days of evaluation software's expiration date, a warning displays. After expiration, no users can log in and the customer must contact their distributor or QAD for a renewal or temporary license code.

User Licensing Programs

The programs related to user licensing are on the Database Management Menu (36.16). They are:

- License Registration (36.16.10): program to modify the license code
- License Violation Report (36.16.11): a report showing system logins that violate the user license count
- User Inquiry (36.16.12): a browse to monitor the activity of users

Named and Concurrent User Licensing

The user count is calculated differently depending on whether you purchased concurrent or named user licensing. In concurrent user licensing, each concurrent login to MFG/PRO is counted as a concurrent user. If a single user logs into multiple MFG/PRO sessions simultaneously, each login is counted separately. In named user licensing, each physical user logging into MFG/PRO is counted as one user, regardless of how many simultaneous sessions they have.

Table 1.3 is an example of QAD licensing schemes.

Physical Users	Named User License Count	Concurrent User License Count
John logs into an MFG/PRO session.	Counts as one user.	Counts as one user.
Mary logs into an MFG/PRO session.	Counts as one user.	Counts as one user.
Mary logs into another MFG/PRO session.	Does not count as an additional user.	Counts as one user.
Total Physical Users: 2	Total User Count: 2	Total User Count: 3

Table 1.3
Licensing Schemes

Online Help Options

During installation and implementation, keep in mind the two mechanisms for displaying MFG/PRO online help: the help database and Windows hyperlink files (WinHelp). Although the display methods differ, the help content is the same.

Method	Source	Interface	Custom Support
Help Database	Database mfghelp.db	Character or Windows GUI clients in any language.	Add custom help using Field Help Maintenance (36.4.13).
Windows Hyperlink Help (WinHelp)	The .hlp files under: <i>WinInstallDir/Language Dir/help</i>	Only Windows GUI clients in English.	Currently does not allow custom help.

Table 1.4
Comparison of online help methods.

You can control which type of help displays for each user through User Interface Profile (36.20.4).

Do not confuse a similar maintenance program, Window Help Maintenance (36.7.21), with the Windows hyperlink help. Window Help Maintenance controls a look-up feature called scrolling windows and does not affect the Windows hyperlink help.

CHAPTER 2

System Requirements and Sizing

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Routing Maintenance (Main Screen)

Routing Code:	10-15000	NONAD (75) COOLING
Operation:	20	
Standard Operation:	10:30	INSPECTION, ALL SITES
Work Center:		
Description:	INSPEC PER PROC-005	
Machines per Op:	1	Milestone:
Overlap Units:	1	
Queue Time:	1.0	
Wait Time:	0.0	
Setup Time:	0.0	

Route by Production Route

Minimum System Requirements

The following are the recommended *minimum* configurations for MFG/PRO 9.0 for UNIX.

Database Server

- PROGRESS Version 8.3 UNIX server is required. Contact your PROGRESS or MFG/PRO sales representative for the specific lettered release best suited to your hardware.
- PROGRESS Version 8.3 4GL: At least one license is required to perform system administration.
- For non-US English language installations: PROGRESS International Promessages Supplement.
- MFG/PRO Version 9.0 server media.
- Disk Space: You need at least 1 gigabyte (GB) of free disk space to install PROGRESS and MFG/PRO Version 9.0 on your database server machine. For each additional MFG/PRO language release you install, you need an additional 800 megabytes (MB).

Note If you are loading MFG/PRO server media from a tape cartridge, you need an additional 700MB temporary space to complete the installation.

Windows Clients

▶ See the
*PROGRESS
Networks Guide.*

- Network: In general, you need a client/server environment and a working knowledge of PROGRESS networking. The network should be a WINSOCK-compliant 1.1 TCP/IP protocol stack. QAD recommends a 10Mbit Ethernet or 16Mbit token ring network or faster.
- PC Clients:
 - 166MHz (or faster) Intel Pentium processor
 - RAM: 32MB for Windows 95, 98, NT Workstation
 - Super VGA video
 - 32-bit network card

- **File Server:** A file server machine is recommended to store and download Windows programs. To load the media, you must have a CD-ROM drive on the file server or on a PC networked to it. The recommended network operating system is Microsoft Windows NT. When installing PROGRESS, make sure to follow the network set-up instructions.
- **Disk Space:** Networked or local drive with 650MB for all modules. This estimate is based on the Windows NT file system (NTFS) disk format. If you use the file allocation table (FAT) disk format, you will need more disk space; however, a FAT disk format is not recommended for the Windows client media.
- **PROGRESS Version 8.3** software on each PC client or on a file server that is accessible to each PC client. Contact your PROGRESS or MFG/PRO sales representative for the specific 8.3 lettered release. You can install PROGRESS on each client PC (for best performance) or a shared network drive (for easier maintenance).
- **PROGRESS Query Version 8.3.**
- **For Double Byte Enabled (DBE) language installations:** PROGRESS DBE Supplement.
- **MFG/PRO Version 9.0** Windows media.

Sizing of Hardware and Databases

In considering minimum requirements for the MFG/PRO server, the key areas are:

- Disk space for MFG/PRO
- Memory size formula
- Database size
- Disk layout
- Server CPU sizing

Disk Space for MFG/PRO

Disk space requirements change as your production databases grow or as you reconfigure your system for performance. If you are unsure of the

actual disk space required, always overestimate the amount needed for installation. Use Table 2.1 as a guideline for the initial installation.

These estimates are based on NTFS disk format. If you use a FAT disk format, you will need more disk space; however, a FAT disk format is not recommended for the database server or file server.

Table 2.1
Disk Space
Requirements

To Install...	You should have at least this much available disk space...
MFG/PRO Database Server Software	1GB. An additional 650MB is needed for each additional MFG/PRO language you install, and an additional 300MB is needed if you load the source code cross-reference data.
MFG/PRO Windows GUI client (on File Server or PC)	650MB, including source code
PROGRESS NT Enterprise Server	55MB
ProVISION (single-user)	75 to 100MB
PROGRESS for Windows (Client PC)	60MB
Client PC MFG/PRO Directory	5 to 10MB depending on customization

Memory Size Formula

The memory size formula is:

$$[(6 \times \text{Number_of_Concurrent_Users}) + 32 + (\text{Number_DBs} \times 48)] \times 1.2 = \text{MB}$$

Here is an example with 50 users and 2 databases:

$$[(6 \times 50) + 32 + (2 \times 48)] \times 1.2 = 519.4\text{MB}$$

Database Size

For a site with 50 users, the database can be up to 1000MB (1 gigabyte).

This estimate is based on the following assumptions:

- Most MFG/PRO modules are being used, except Service/Support Management.
- General Ledger (GL) consolidations are done after period closing.

- One year of rolling history is kept online. For each additional year of history to be kept online, increase the database size by 50% of original size identified.

Disk Layout

This system should have at least four physical disk drives, minimum 2GB each, and at least two controller channels. An example disk layout is shown in Figure 2.1.

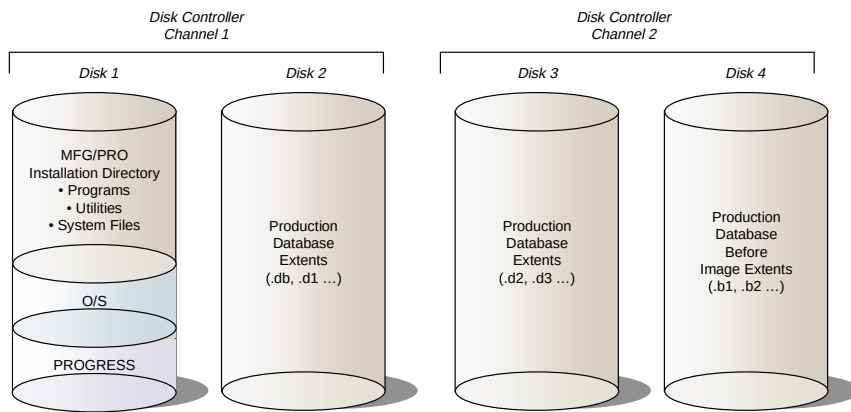


Fig. 2.1
Example Disk
Layout

There should not be more than four disk spindles per disk input/output channel with SCSI or SCSI II drives. Fast and Wide SCSI drives might handle five or six disk spindles.

Mirroring is strongly suggested on all drives except the drive containing the operating system, PROGRESS, and MFG/PRO programs.

Note Although RAID5 offers a cost advantage over mirroring, it does not resolve disk I/O issues caused by write-intensive applications. For this reason, mirroring is preferred over RAID5.

Before-Image File Relocation

By default, the installation places the database .bi file in the same directory as the .db file. It is recommended that you relocate the .bi file and modify start-up and shut-down scripts to redirect the system to the proper .bi location. This is done by using the -g parameter, along with the

.bi file name and location, on the script execution statement. Perform this relocation *after* you install, but be aware *before* you install that your hardware must be prepared and configured for this relocation.

While an additional production database can share the disk drive of another, there should be a separate drive for the additional .bi file.

CPU/Server and Client Sizing

CPU sizing varies depending on the installation model, number of users, number of transactions, and so on. For instance, if client/server is the primary model, then approximately 30% less CPU capacity would be required than for a host-based install. Several hardware vendors can make CPU recommendations with their equipment so we will not do so here. MFG/PRO and PROGRESS support Symmetric Multiprocessing environments and can use them very effectively for interactive functionality.

Network Design and Optimization

An important key to client/server performance is proper network design and flexibility. When designing the network, pay particular attention to configuration flexibility and utilization measurement capability. Unfortunately, it is difficult to predict what the access patterns or departmental utilization will be. Network performance is a dynamic and evolving target.

The initial network should consist of a high-speed backbone with switched-shared media segments. Initially, you should plan on between 10 and 12 PCs per 10Mbps local-area network (LAN) segment. The usage of each segment should be measured and adjusted as the MFG/PRO users begin to establish their access patterns.

After installation, the network must be constantly measured and adjusted to provide the most appropriate service to each user. For example, you might find that a certain LAN segment is over or under utilized, or you might upgrade a user or group of users from a 10Mbps to a 100Mbps network connection.

There are many ways to design a network to accomplish good client/server response time. Figure 2.2 illustrates a sample network design capable of supporting both power users and occasional users.

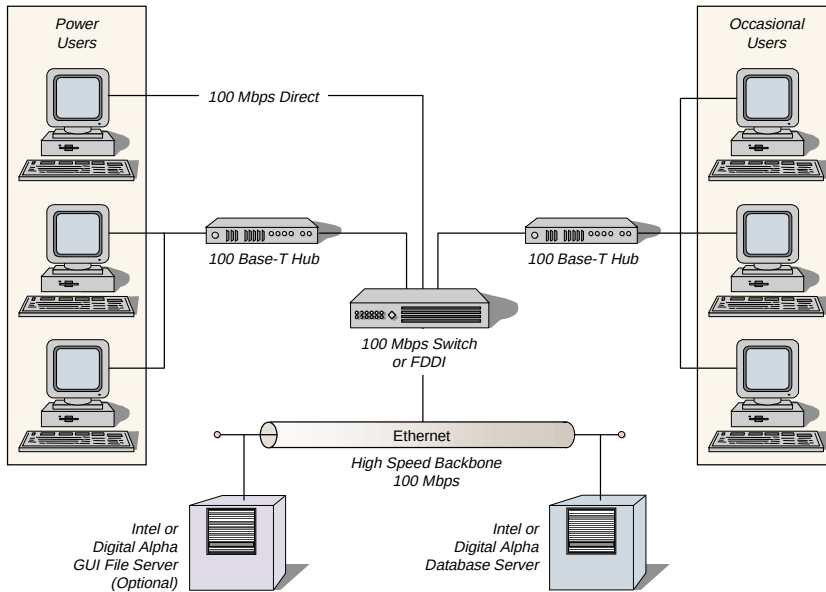
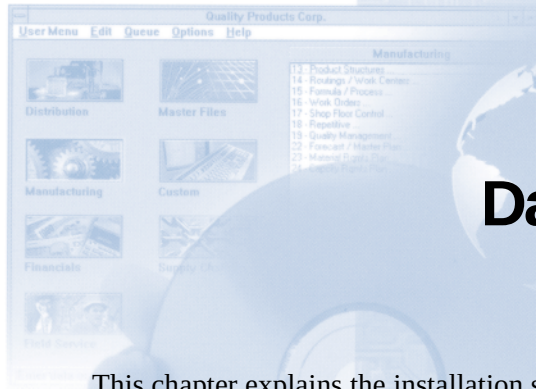


Fig. 2.2
Network Design

This sample network configuration is a LAN design. Take additional care if you are planning to have GUI or character mode client/server users log in over a wide-area network (WAN). There are other solutions, such as WinFrame® by Citrix, that can provide acceptable client/server performance over a WAN.

Database Server Setup



This chapter explains the installation steps for the UNIX database server.

▶ See Chapter 4, “Loading Client Media,” on page 51 for instructions.

Note While setting up the database server, you can simultaneously load the Windows client media onto the file server—provided it is a separate machine.

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Loading MFG/PRO from Tape Media

Complete these steps only if you are installing from tape media. If the software is on CD-ROM, skip to “Mounting the CD-ROM” on page 29.

♦ See “Running the Database Server Installation” on page 29.

You must load the tape media into a temporary directory and then, as described in the next section, extract MFG/PRO from the temporary directory into a permanent installation directory. The temporary directory requires 700MB disk space in addition to the space required for MFG/PRO. After you complete all the installation tasks, you can remove the temporary directory and its contents.

- 1 Create a temporary installation directory on the same machine as your MFG/PRO installation directory.

Note Make sure you have an extra 700MB disk space on your machine in addition to the space required for MFG/PRO.

- 2 Insert the tape into the tape drive.

- 3 Change to the temporary installation directory.

```
cd TemporaryTapeDir
```

- 4 Choose and enter the applicable load command from the following table.

On this type of hardware...	Enter this load command...
NCR Tower 600 or Unisys 5000/50	<code>dd if=/dev/rtp conv=swab cpio -iumvdBc</code>
HP 9000/800 Series, 1/4" cartridge	<code>tcio -i /dev/rct/<i>YourTapeDevice</i> cpio -iumvdBc</code>
All others	<code>cpio -iumvdBc < /dev/<i>YourTapeDevice</i></code>

Note All MFG/PRO tapes are written using a block size of 5120 bytes.

- 5 Remove the tape and store it safely.
- 6 Continue with “Running the Database Server Installation” on page 29.

Mounting the CD-ROM

If you are installing from CD-ROM media, follow these steps to mount the CD-ROM.

- 1 Log on as the root user ID.
- 2 Make a CD-ROM directory if it does not already exist. The installation process assumes the directory name is `/cdrom`.
- 3 Place the MFG/PRO Database Server CD-ROM into the CD-ROM drive.
- 4 Mount the CD-ROM. The mount command differs from system to system. Listed below are example commands for mounting the MFG/PRO CD-ROM.

Hardware:	Mount Command:
Sun	<code>volcheck cdrom</code>
HP	<code>mount /dev/dsk/<i>YourcdDevice</i> /cdrom</code>
All others	Refer to your hardware system documentation or vendor for requirements to mount a CD-ROM. You may be able to type <code>man mount</code> to determine the correct command.

Running the Database Server Installation

Complete these steps to install MFG/PRO Version 9.0 on your UNIX server and to set up UNIX character clients.

Preliminary Setup

- 1 Install Q/ADMIN, the installation tool, if you have not done so already. Separate instructions are provided with the Q/ADMIN software. You can perform the MFG/PRO installation without Q/ADMIN, but it is *not* recommended.

Note These instructions assume you are using the Q/ADMIN utility.

▶ See the *Q/ADMIN Installation Guide* for instructions.

- 2 Log on as user `mfg` under the group `qad`. This step is *mandatory*, whether or not you use `Q/ADMIN` for the installation.

Note You should have already created this user when you installed `Q/ADMIN`.

- 3 Use the standard terminal types while installing MFG/PRO. For example, for a `vt100`, set your `TERM` variable to `vt100` during the installation. Once the MFG/PRO software has been installed, you can use one of the language-dependent versions of `vt100`, such as `vt100fr`.
- 4 Determine the following information.
 - MFG/PRO Version 9.0 installation directory. You can create this directory now or let the installation process create it for you. In either case, ensure that the user `mfg` has permission to use this directory.
 - Directory locations of PROGRESS for the database server.
 - The machine name for the database server.

Non-US English Language Installation Setup

▶ For more information on codepages, see Chapter 9, “Terminal Type and Code Pages,” on page 170.

During installation, MFG/UTIL creates MFG/PRO databases using the PROGRESS `startup.pf`, `empty.db`, and some associated files located in your database server’s PROGRESS installation directory. These files include language-specific coalition table and codepage information. Before running MFG/UTIL and creating your MFG/PRO databases, be sure that the appropriate files are being used.

Use the following instructions to set up language-specific `startup.pf` and `empty.db` files.

- 1 From the operating system prompt, back up the original `startup.pf`, `empty.db`, and associated files located in your database server’s PROGRESS installation directory. These instructions refer to this directory as *PROGRESSInstallDir*.

```
cd PROGRESSInstallDir
cp startup.pf startupORIG.pf
cp empty.* emptyORIG.*
```

- 2 Choose the appropriate three-character PROGRESS language code directory from *PROGRESSInstallDir/prolang*. These instructions refer to this directory as *xxx*.
- 3 From *PROGRESSInstallDir/prolang/xxx*, choose the *.pf* file appropriate to the language you are installing. For example, to install Canadian English, choose *engcan.pf*.

For information on PROGRESS language codes, see the *PROGRESS Internationalization Guide*.

Language variables specific to a Canadian English installation.

```
# /dlc/prolang/ame/engcan.pf
# Country: Canada
# Language: English-American
# Set PROMSGS environment variable to: /dlc/prolang/ame/promsgs.ame
```

```
-d dmy
-lng "English"
-cpcase Basic
-cpcoll Basic
```

Any line beginning with # is explanatory, and does not affect the installation.

```
# -cpinternal (or -charset) - Specifies the code page for all internal
#                               data processing.
# Code Page
# -cpinternal ibm850
# ISO Standard Code Page
# -cpinternal iso8859-1

# -cpstream (or -stream) - Specifies the code page for all stream files
# Code Page
# -cpstream ibm850
# ISO Standard Code Page
# -cpstream iso8859-1
```

- 4 Copy the language-specific *.pf* (referred to as *your lang.pf*) from *PROGRESSInstallDir/prolang/xxx* to your *PROGRESSInstallDir* directory, and name it *startup.pf*.

```
cd PROGRESSInstallDir/prolang/xxx
cp yourlang.pf PROGRESSInstallDir/startup.pf
```

- 5 Use a text editor to remove the *-E* and *-d dmy* parameters from your *startup.pf* file.

```
cd PROGRESSInstallDir
vi startup.pf
```

Note You can reintroduce the *-E* and *-d* parameters when building database sets with MFG/UTIL.

- 6 Copy the `empty.db` and associated files from *PROGRESSInstallDir/prolang/xxx* to your *PROGRESSInstallDir* directory.

```
cd PROGRESSInstallDir/prolang/xxx
cp empty.* PROGRESSInstallDir/empty
```

Start Installation

- 1 Change to the `bin` sub-directory of your Q/ADMIN installation directory:

```
cd QAdminInstallDir/bin
```

- 2 Start Q/ADMIN by typing the following command:

```
./start
```

Note If you do not have Q/ADMIN, you must do the following in place of this step: (a) from a UNIX prompt, change to the drive containing the MFG/PRO media, and (b) execute the script `install`.

- 3 When Q/ADMIN opens, select the Product menu and choose New, or press the short-cut key, Ctrl + N.

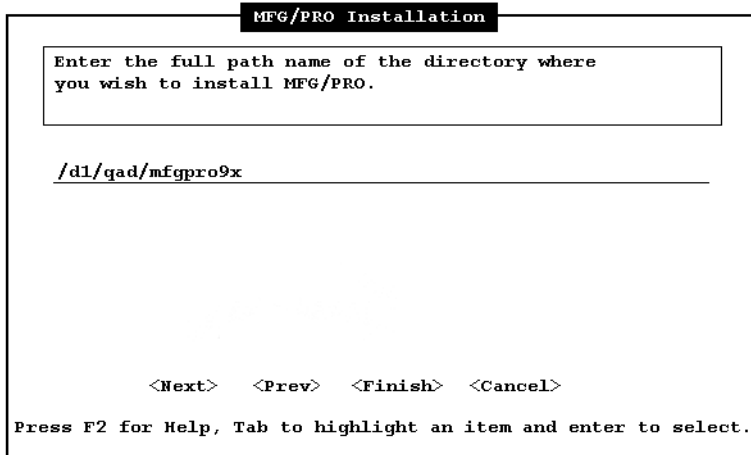
Q/ADMIN attempts to launch the installation from the directory `cdrom`. If you do not have a CD-ROM mounted in this directory, the system prompts you for a different directory. If you loaded MFG/PRO from tape, enter the temporary installation directory at this time.

- 4 At the confirmation prompt, choose OK.
- 5 Complete the following prompts or accept the defaults.

Enter Progress installation directory

Enter your terminal type

- 6 When the installation wizard appears (Figure 3.1), enter an explicit directory name for your MFG/PRO installation directory. If it does not already exist, it will be created. Choose Finish.



MFG/PRO Installation

Enter the full path name of the directory where you wish to install MFG/PRO.

/d1/qad/mfgpro9x

<Next> <Prev> <Finish> <Cancel>

Press F2 for Help, Tab to highlight an item and enter to select.

Fig. 3.1
Installation Wizard

- 7 When the following prompt appears, answer Yes to continue or No if you are not ready.

Expand the media to *InstallDir* now (y/n)?

Note The installation script first checks for available disk space. If there is not enough space, the installation stops and you must obtain adequate disk space and restart the installation.

- 8 Wait for the installation script to unload MFG/PRO. This process can take several hours. You can leave it unattended while it is copying.

Configure Database Sets

- 1 After the media is unloaded, the database set configuration process begins. This process uses programs from the MFG/UTIL installation tool.

First complete the Company Information screen. The only required fields are Host Name and License Count. In Host Name, enter your UNIX machine name. In License Count, enter the number of MFG/PRO user licenses you purchased.

Company Information	
Please begin installation by entering your company profile below.	
The Host Name and the License Count are required fields.	
On completion, press OK, and continue with the installation.	
Host Name: <u>hp-server</u>	License Count: <u>45</u>
Company Name: <u>Binder Supplies</u>	
Site Name: <u>Houston</u>	
Support Contact: _____	
Name: <u>Sarah Wienhart</u>	
Voice Phone: <u>500-444-1212</u>	Fax: <u>500-444-1313</u>
Electronic Mail: _____	
< Help > < OK > < Cancel >	
Enter data or press F4 to end.	

When you have completed the company information, choose OK.

Note For more information on MFG/UTIL keyboard commands, see “Keyboard Commands” on page 12.

- 2 When the PROPATH Specification window appears, you can accept the default PROPATH or change it. You can also add any directories that contain custom programs. Do so by separating the directory paths with a comma.

PROPATH Specification	
Specify the PROPATH used for MFG/PRO clients	
<u>./mfgpro9,/mfgpro9/us/bbi</u>	
< Help > < OK > < Cancel >	

Note The PROPATH starts with a period (.) to represent the current directory at the time you start an MFG/PRO session.

- 3 Choose OK to accept the PROPATH. The Build Databases screen appears.

Build the checked databases:

- [X]Build the MFG/PRO databases: mfgempty.db and mfg.db.
- [X]Build the help databases: hlpempty.db and mfghelp.db
- [X]Build the GUI databases: guiempty.db and gui.db
- [X]Build the Configurator databases: cfempty.db and cfg.db
- [X]Build the training database: mfgtrain.db
- [X]Build the demonstration database: mfgdemo.db

< OK > < Cancel > < Help >

Enter data or press PF4 to end.

- 4 On this screen, select the empty and initialized databases you want to create. Choose OK to build the selected databases. You can build one or more of these databases at a later time.

Database Option	Notes
mfgempty and mfg	The mfgempty database consists of only the MFG/PRO schema with no system data. The mfg database is a copy of mfgempty, to which data from the mfg directory has been loaded. This data includes the default menus, messages, and minimum data required to start MFG/PRO. The mfg database is copied to make the production, training, and demonstration databases.
hlpempty and mfghelp	A single help database is usually shared by a number of production or test databases. The mfghelp database is a copy of hlpempty, to which help data has been loaded.
guiempty and gui	The gui database includes the data needed to run MFG/PRO for Windows and all object programs. (It is therefore required for character clients.) The gui database is a copy of guiempty, to which data from the gui directory has been loaded.
cfempty and cfg	The cfg (Configurator) database stores the data from the Component Configurator maintenance programs. This module enables you to customize MFG/PRO object programs. The cfg database is a copy of cfempty, to which data from the cfg directory has been loaded.

Database Option	Notes
mfgtrain	A copy of mfgempty, to which data from the mfgtrain directory has been loaded.
mfgdemo	A copy of mfgempty, to which data from the mfgdemo directory has been loaded.

- 5 The installation performs a series of steps to build your chosen databases. It also generates dump and load procedures. The status of the process is displayed in the Installation Log Window.

```

Building guiempty...
DF Load begins: 08/15/96 at 09:39:31
Searching for Environment variables
Found DLC=/usr/dlc73c
Creating: guiempty.db
Converting the character set for: guiempty.db
Running echo y | /usr/dlc73c/bin/proutil guiempty.db -C convchar convert
undefined > errfile

```

Note These installation tasks are time-consuming. You can leave the process unattended while it runs.

- 6 When the Physical Database Name screen appears, enter a name for the new Version 9.0 production database in the Physical File Name field and choose OK. The installation copies the initialized database, mfg, to create your Version 9.0 production database.

If you are performing an incremental conversion, you can use a “dummy” name and then delete it after the installation, because you will perform the update or incremental conversion on your existing production database.

Physical Database Name

Please pick a name for your production MFG/PRO Database
This name will be used in your production Database Set.

Physical File Name: mfgpro9 <Choose... >

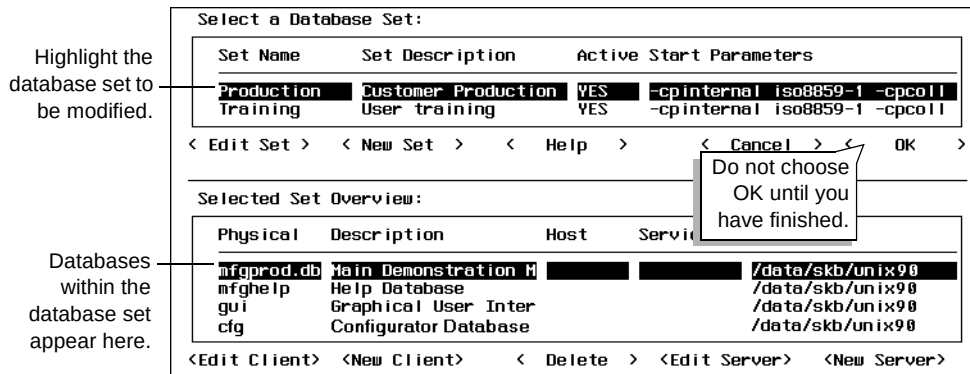
<
OK
>
<
Cancel
>
<
Help
>

- 7 Choose OK at the following message.



- 8 The Database Set Configuration screen displays, where you can construct the database sets you want to run. Review the following notes to become familiar with this window.

See “Database Sets” on page 15.



- 9 If the Active flag in the Select a Database Set part of the Database Set Configuration window is set to Yes, MFG/UTIL will build a server start-up icon for that database set.

To change the setting of the Active flag, select the database set name and choose Edit Set. The Database Sets screen displays. Select the Active field, enter No, and choose OK.

- 10 Highlight the Production database set. The global parameters for this set appear to the right. Normally, you do not need to change them, but you can by choosing Edit Set.

- 11 Configure the client view of the Production database** by selecting the production database (with the name you specified earlier) and choosing the Edit Client button.

Selected Set Overview:

Physical	Description	Host	Service	Path
mfgprod.db	Main Demonstration M			/data/skb/unix90
mfghelp	Help Database			/data/skb/unix90
gui	Graphical User Inter			/data/skb/unix90
cfg	Configurator Database			/data/skb/unix90

Your production database should be highlighted.

- a** When the Client View of Database Parameters window appears, complete the fields using the following table and example illustration.

Field	Description
Physical:	Enter the physical name of your database; accept the default if there is one. If you are performing an update or incremental conversion, enter the name of your existing production database.
Logical:	Do <i>not</i> change the logical name for any database. It should be blank for the production database, as well as the training and demonstration databases.
Description:	Enter a different description if you want.
Connect Params:	Enter any PROGRESS connection parameters you want that apply specifically to client connections to this database.
Connection Type:	In most cases, choose the default, Local, so that the UNIX start-up scripts connect locally to the database server. The Client/Server option is only needed if the UNIX client connects to a remote database server using PROGRESS networking.
Path:	If you choose a Local connection type, enter or accept the full path to the directory containing the Version 9.0 database.
Host:	If you choose the Client/Server connection type, enter the host name.
Service:	If you choose the Client/Server connection type, enter the Service parameter, to correspond to an entry in your <code>/etc/services</code> file. You must make the entries in your <code>/etc/services</code> file with a text editor; the installation does not change this file.

Client View of Database Parameters:

Physical: mfgpro9x

Logical:

Description: Main Production

Connect Params: trig triggers

Connection Type: Local

Path: /mfgpro9

Example Physical database name.

Leave the Logical field blank for the production database.

< OK > < Cancel > < Help > < New > < Delete >

Enter data or press PF4 to end.

b Choose OK in the Client View of Database Parameters window.

12 Configure the server view of the Production database by choosing the Edit Server button.

a When the Server View of Database Parameters window appears, complete the fields using the following table and example illustration.

Field	Description
Physical:	Enter or accept the database name to include in this set. PROGRESS has a 60-character limit on the absolute database name. If you are performing an update or incremental conversion, enter the name of your existing production database.
Description:	Enter a different description if you want.
Server Params:	The most common parameters are included by default. You can change these as needed. For more information, refer to the <i>PROGRESS System Administration Guide</i> .
Service:	If you are setting up Windows clients or other client/server connections, enter the Service parameter, to correspond to an entry in your <code>/etc/services</code> file. Be sure to use the same services name when you set up your Windows clients later during the installation. You must make the entries in your <code>/etc/services</code> file with a text editor; the installation does not change this file.
Path:	Defaults to your MFG/PRO server installation directory. Enter the directory where the Version 9.0 databases are stored.

Server View of Database Parameters:

Physical: mfgpro9x
 Description: Main Production
 Server Params: -L 8000 -c 250 -B 1000
 Service: mfgpro9x-srv
 Path: /mfgpro9

< **OK** > < Cancel > < Help > < New > < Delete >

Enter data or press PF4 to end.

Tip

You must configure the GUI database even if you do not implement Windows clients because object-based programs utilize this database.

- b** Choose OK in the Server View of Database Parameters window.

13 Configure the Help, GUI, and Configurator databases using the following substeps.

Important Do not change the logical database names of the Help, GUI and Configurator databases.

- a** Choose the Edit Client button and complete the dialog box.

- b** Choose the Edit Server button and complete the dialog box.

The following table shows an example of a completed database set.

Database	Physical	Logical	Path	Service
Production	mfgpro90	<i>leave blank</i>	/mfgpro90	mfgpro90
Help	mfghelp	qadhelp	/mfgpro90/us	mfghelp
GUI	gui	qadgui	/mfgpro90/us	gui
Configurator	cfg	qadcf	/mfgpro90/us	cfg

- 14** If you want to configure a Demonstration or Training database set, highlight the set name in the Database Set Configuration window and complete the parameters as described in the preceding steps.

- 15** When you have entered information for all the database sets you are installing, choose OK in the Database Set Configuration window.

The installation creates the following scripts for each database. Use these scripts, or copies of them, for all future start-up and shutdown processes.

Script	Description
<i>client.DBsetName</i>	Start an MFG/PRO session in multiuser mode; for example, <i>client.Production</i> .
<i>start.DBsetName</i>	Start the database servers in the database set.
<i>single.DBsetName</i>	Start an MFG/PRO session in single-user mode.
<i>stop.DBsetName</i>	Shut down all databases within the database set.

As these scripts are created, they appear in the Installation Log Window.

- 16** When the <Print> and <Close> options appear in the Installation Log Window, choose <Close>.

Note If you are installing on a DEC Alpha machine, the installation recompiles MFG/PRO automatically. This process can take several hours.

- 17** At the following prompt, type Yes to have the installation process remove temporary files.

Cleanup the /tmp/mfgpro stage directory? (y/n)

- 18** At the following prompt, choose OK.

Installation complete; see product log for details.

- 19** When the Q/ADMIN menu reappears, select the File menu and choose Exit.

- 20** Before you proceed, review the log file *mfgutil.log* for any errors. It is located in the MFG/PRO installation directory.

- 21** The MFG/PRO Version 9.0 UNIX server installation and character client installation are now complete.

♦ See step 11 on page 38.

Note If you are setting up Windows clients or other client/server connections, be sure to make service entries in your `/etc/services` file with a text editor; the installation does not change this file. For each database set, enter the same service name used during installation. Additionally, you must enter service names during Windows client setup later in the installation.

Installing Additional Languages

If you have multiple languages, complete the database server setup for your first language and then refer to Chapter 6, “Multiple Language Setup,” for additional instructions.

Loading Service Pack Media

♦ See “Loading Service Pack Media” on page 7.

If your release of MFG/PRO has a Service Pack, use the installation instructions provided with the Service Pack Server media to load and update your new MFG/PRO databases.

Modifying Hosts and Services Files

If this is the first installation of MFG/PRO, you must tailor your `hosts` and `services` files to enable client/server database connections. Moreover, if you add any new services names after installation, you have to modify your `services` file.

In general, all service names, host names, and port numbers must match for all machines on the TCP/IP network. Each client PC needs to have the `services` file updated to match the service name and port numbers on the database server. In addition, each client PC needs to have the server name and TCP/IP address added to its `hosts` file.

The location of the `hosts` and `services` files on the server may vary depending on the manufacturer of your operating system (OS). Usually, the `hosts` and `services` files are in the `/etc` directory. For specific information about your system, contact your system administrator or network administrator.

Modify the Hosts File on the Server

You must enter the host name specified during the MFG/PRO server installation, along with the user-assigned IP address. (See your network administrator for IP address assignments.) The following `hosts` file example shows `qad_serv` as the computer name with an IP address of 200.100.100.004. Update the `hosts` file information on each client PC.

IP Address	Host Name	Comment
127.0.0.1	localhost	
200.100.100.001	perf_lab1	
200.100.100.004	qad_serv	# MFG/PRO DB Server

Modify the Services File on the Server

You must add the names of your database services to your `services` file. The `services` file must include all the database services names as specified in the MFG/UTIL database set configuration.

Note The service name must be limited to 16 characters.

You can use any unused service port numbers. The following table shows example service names and port numbers for the demonstration database set.

Service Name	Port No./Protocol	Comment
mfghelp	5501/tcp	# Help Database
mfgdemo	5511/tcp	# Demonstration Database
gui	5521/tcp	# GUI Database

Note To allow for PROGRESS processing, make sure there are at least five numbers—and possibly more—between each port number. The more users you expect to have, the more numbers you should leave open.

Modify the Hosts and Services Files on Client PCs

For each client workstation to be configured, you must edit the `hosts` and `services` files. The hosts and services names and TCP/IP addresses and port numbers must match those specified on the database server.

Start-Up Files and Parameters

There are start-up files for both the UNIX server and Windows clients. The UNIX start-up script starts database processes. Each database process has a corresponding network service name in the `services` file on the UNIX server.

When Windows clients connect to the database processes, the client references the associated service names, stored in a start-up parameter file (extension `.pf`) on the client PC. The following is an example of a Windows client start-up parameter file.

```
-db mfgdemo -H qad_serv -S mfgdemo -N TCP
-db mfghelp -ld qadhelp -H qad_serv -S mfghelp -N TCP
-db gui -ld qadgui -H qad_serv -S gui -N TCP
#-----other items may appear here-----
```

Starting MFG/PRO and Registering the License

Test your start-up scripts with the following steps. These are the same steps you will use on a regular basis for starting MFG/PRO servers and UNIX clients.

Note If necessary, you can use MFG/UTIL to change the start-up scripts; see the section, “Using MFG/UTIL and Q/ADMIN for System Administration” on page 48.

- 1 Change to MFG/PRO installation directory.

```
cd /InstallDir
```

- 2 Start the servers for a database set.

```
./start.DBSetName
```

- 3 Start a multiuser session.

```
./client.DBSetName
```

Note The installation also produces a single-user start-up script, `single.DBSetName`. However, to start in single-user mode, there should be no servers running. The single-user session blocks out any other sessions.

License Registration

You must register your MFG/PRO license the first time you log on. These steps require that you have the license code sheet included with your release media.

For background information on MFG/PRO licensing, see “User License Overview” on page 15.

- 1 At the MFG/PRO Sign On screen, press Return.
- 2 At the License Details screen, choose Register.

*** WELCOME ***

License Details

Product: MFG/PRO

License Code

Product Not Registered

Status

< Register > < Ok >

User ID: cup

Password:

- 3 At the Registered Products screen, choose Add.

Registered Products

Products:

Name	Description
> MFG/PRO	

< Add > < Edit > < Remove >

< Ok > < Cancel >

- 4 In the Add Product screen, complete the License Code fields by entering the codes from the license code sheet included with your release media. Choose Ok.
- 5 When the Registered Products screen reappears, choose Ok. Your license code and details display in the License Detail screen.
- 6 Choose Ok at the License Detail screen. You are returned to the operating system. To begin a session, restart MFG/PRO and log in.

Note If you need to modify your license code, use License Registration (36.16.10).

Exiting MFG/PRO

- 1 Exit MFG/PRO by pressing End (F4) at the Main Menu.
- 2 Shut down the database servers within this database set.

```
./stop.DBSetName
```

Note The shutdown script terminates all user sessions and all database servers. For this reason, other database sets you have running, such as demo and training, may also shut down if they use common database servers, such as help and gui.

Loading the Field Help Data

You can load field help data in either single- or multiple-user mode.

- 1 Start an MFG/PRO session using the scripts created during installation.
- 2 From the MFG/PRO Main Menu, select Field Help Load (36.4.19).
- 3 In the Language field, enter the language code of your first language. (The language code should be listed on the product media.)

- 4 Skip to the Field Help Load File field. Enter the two-letter language code directory followed by the help file `fieldhlp.fhd`. For example, for the us language, enter: `us/fieldhlp.fhd`.

Note If you enter an uninstalled language code, the following message displays: `Field Help file not found. Continue with English? Respond with Yes to load the default English field help file. Respond with No to return to the Language field and enter a language code. If you input an invalid language code a second time, the default field help data file is loaded.`

- 5 Accept the default value in the following field:
`Skip loading help with lower status: yes`
- 6 Press Go to begin the load process. As the load proceeds, the number of records read and loaded displays on the screen.

Loading the Source Code Cross-Reference (Optional)

Loading the source code cross-reference data into your help database is optional. It substantially increases the size of the help database. Load the cross-reference data only once for all languages.

- 1 Shut down the `mfgHELP` server if one is running. To shut down an entire database set, type the following command:

```
./stop.DBSetName
```

Note You must shut down `mfgHELP.db` because the load is executed in batch mode and requires single-user access to the `mfgHELP` database.

- 2 Start the `ldxref` script and specify your help database name.

```
./ldxref mfgHELP
```

Note Do *not* run `ldxref` more than once against the help database. Doing so may create duplicate records.

- 3 When the load is complete, you can log out from single-user mode and start the server in multiuser mode.

Backing Up and Recovering

Before using a newly installed MFG/PRO system, you should perform a full backup of the files and directories created during installation. You can use this backup to restore your original MFG/PRO system if required.

Moreover, you should back up the system as part of regular maintenance. Adhering to the following guidelines enables you to quickly recover from a database failure.

- Back up your production database every day.
- Back up the full system every week.
- Rotate the back-up media so that if there is an error on one tape, you have others to restore.

Before running the backup, you must perform the following steps.

- 1 Ensure that no one is using the database.
- 2 Shut down the database servers for the databases you want to back up.

Using MFG/UTIL and Q/ADMIN for System Administration

There are various system maintenance programs in MFG/UTIL. Table 3.1 lists some of the MFG/UTIL features you may want to use. For details on using MFG/UTIL, refer to the *MFG/PRO 9.0 System Administration Reference Guide*.

Table 3.1
MFG/UTIL
Features

Features	Description
Start MFG/UTIL	From the MFG/PRO installation directory, type: <code>./mfgutil</code> .
Modify Start-Up Scripts	From the MFG/UTIL Configure menu, choose Any Database Set and complete the Database Set Configuration window. To save your changes to the start-up scripts, choose one of the generate options from the Scripts menu.
Split Database Schema	To increase performance, you may want to split the production MFG/PRO database across disks or machines. This task requires expertise in PROGRESS and MFG/PRO. Once you know how you want to split the database, you can use the Split Database Schema option under the MFG/UTIL Database menu to create multiple database definition files from the <code>mfgempty.d</code> definition file. Note: If you have the ECommerce Gateway module implemented, QAD recommends that you split your Production database schema.
Compile Code	To compile source programs, select the MFG/UTIL Program menu and choose Compile Procedures.
Set Up Training Databases	To set up speciality MFG/PRO training database, create a database server for the training database and create client connections.

As an option, you can also start MFG/UTIL from the Q/ADMIN interface. Refer to the following illustration for guidelines. To start Q/ADMIN, change to the `bin` sub-directory of your Q/ADMIN installation directory and run the start script.

For a given QAD product, a selection appears showing the installation and maintenance programs.

When you select a program, a list of run-time arguments appears, if applicable. You can choose to run the program with a default argument, a new argument, or no argument.

F1=Run F2=Help F3=Menu F4=Cancel F5=DeleteArgStr F6=SaveArgStr Ctrl-a=new_args
Ctrl-e=edit_args Ctrl-k=version Ctrl-n=install Ctrl-p=programs Ctrl-t=tools
Enter data or press F4 to end.

Note If you encounter errors when starting MFG/UTIL from Q/ADMIN, try opening the script mfgutil and adding the following line before the command that executes MFG/UTIL.

```
cd InstallDir
```

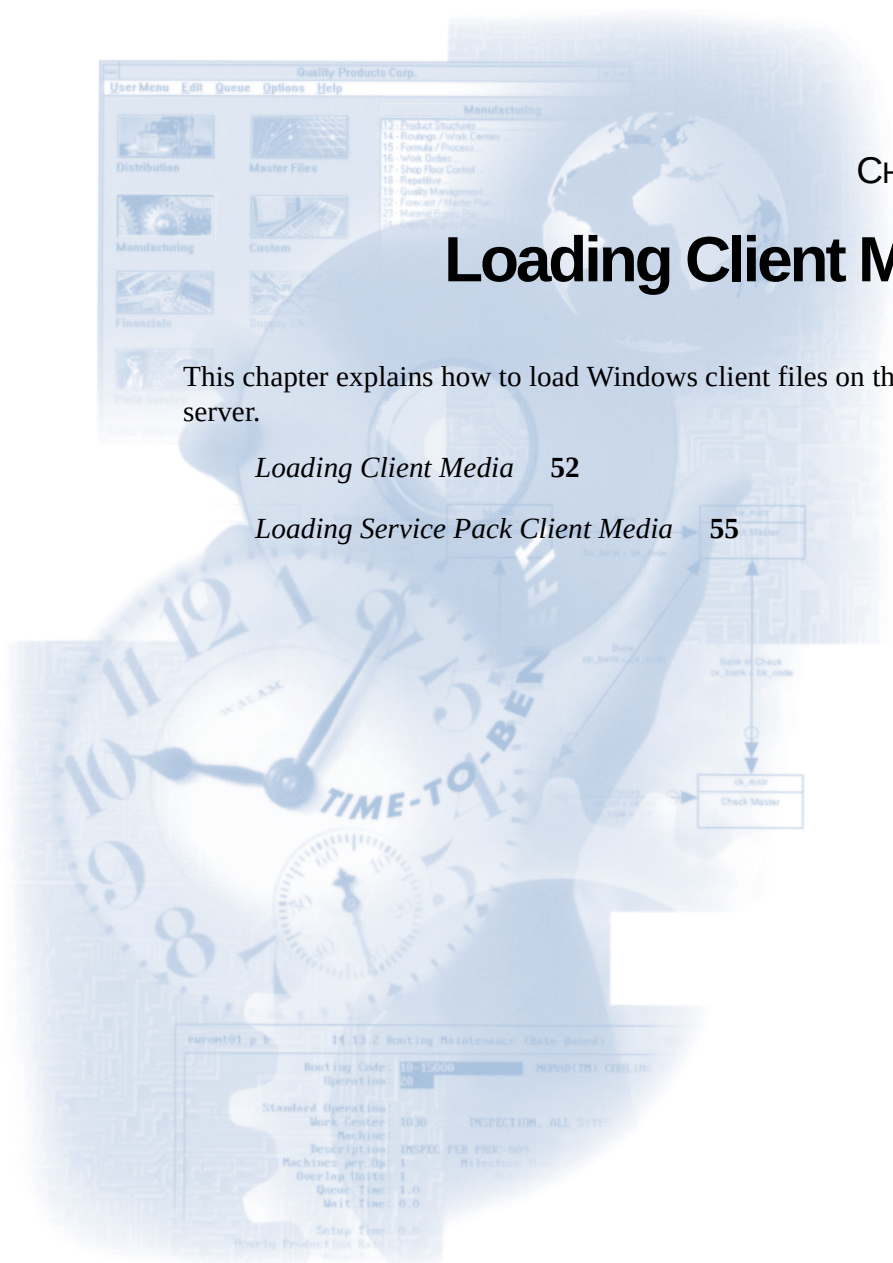
CHAPTER 4

Loading Client Media

This chapter explains how to load Windows client files on the file server.

Loading Client Media 52

Loading Service Pack Client Media 55



Routing Maintenance (Date Based)

Routing Code:	10-15000	NONAD(75) COOLING
Operation:	20	
Standard Operation		
Work Center	1030	INSPECTION, ALL SITES
Machine		
Description	INSPEC PER PROX-005	
Machines per Op	1	Milestone
Overlap Units	1	
Queue Time	1.0	
Wait Time	0.0	
Setup Time	0.0	

Route by Production Build

Loading Client Media

Preliminary

Before you install the Windows client files from your CD-ROM, you should:

- Know the directory name where you will store the MFG/PRO for Windows files.
- Log on to your network with write permission for this directory.

Running the Client Installation

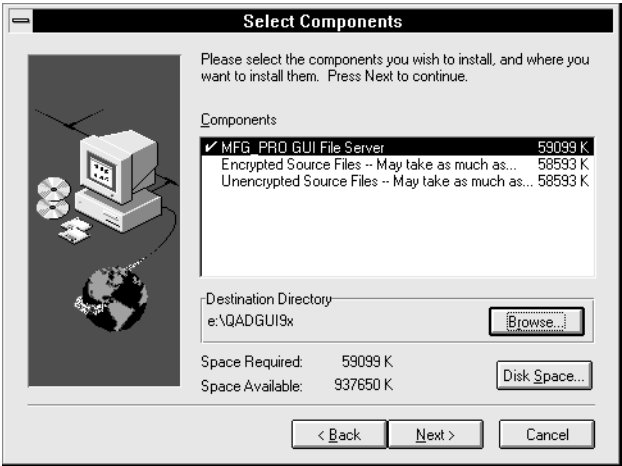
- 1 Insert the MFG/PRO for Windows CD-ROM in the CD-ROM drive.
- 2 Run the `install.exe` program using File Manager, Explorer, or the Start button.

CD-ROMDriveName:\install.exe

- 3 Choose Next when the welcome message window appears.

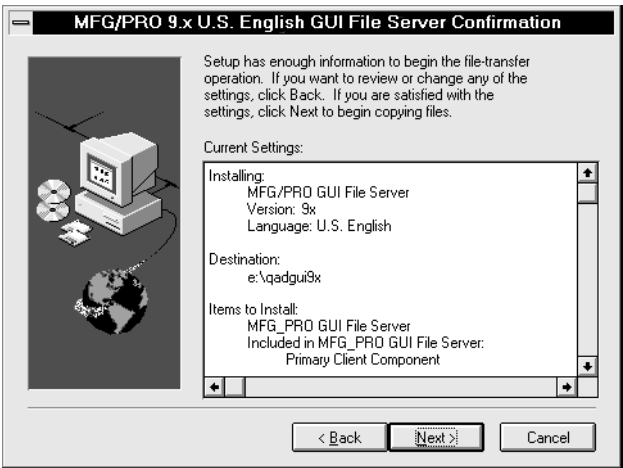


- 4 In the following window, choose the components to install by selecting the item and pressing Spacebar. Also specify the destination directory. Choose Next when finished.

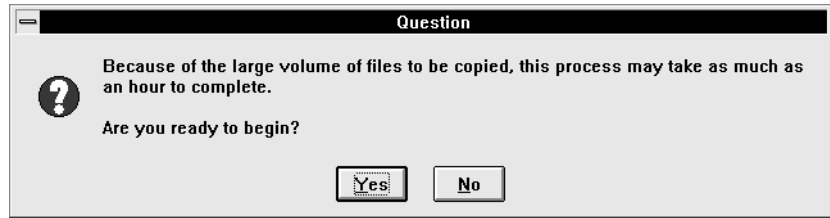


Destination Directory	You should specify a directory that identifies the MFG/PRO version; for example, C:\qadgui9. Choose Browse to select an alternate directory.
Disk Space	This button shows available disk space on any connected drive.

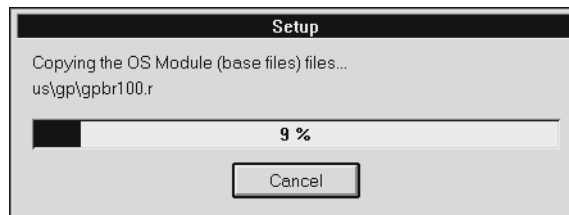
- 5 At the confirmation window, verify that the installation information is correct. Choose Next to begin installing or choose Back to make changes.



- 6 Choose Yes at the following prompt when you are ready.



During the load, the following window appears.



- 7 After the files are copied, the following window appears; choose Finish.



- 8 If you have multiple languages, repeat the preceding steps for each language. However, note the following differences.
- Specify a different installation directory; for example, qadfrgui (where fr is the French language code).
 - Once the second language is loaded, open File Manager or Windows Explorer and find the two-letter language code directory under the new installation directory. For example, fr is for French.
 - Copy the language code sub-directory into the first installation directory. The language directories must be on the same directory level.

Loading Service Pack Client Media

If your MFG/PRO release has a Service Pack, after installing your MFG/PRO client files, use the installation instructions provided with the Service Pack Windows Client media to load client update files on your file server.

♦ See “Loading Service Pack Media” on page 7.

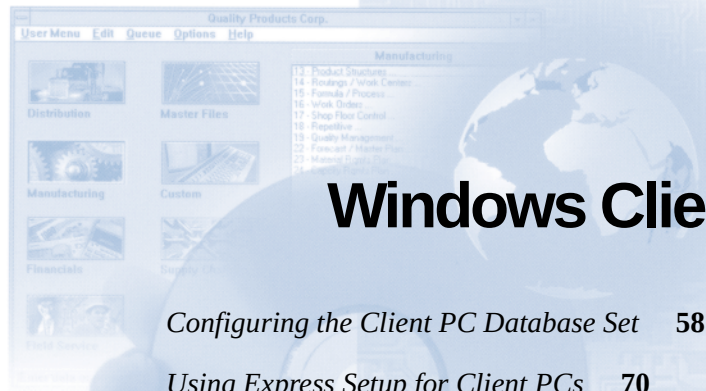
CHAPTER 5

Windows Client Setup

Configuring the Client PC Database Set 58

Using Express Setup for Client PCs 70

Changing a Client's PROPATH After Setup 70



Routing Maintenance (Main Screen)	
Routing Code: 10-15000	DESCRIPTION: INSPEC PER PROX-005
Operation: 20	Standard Operation: 10.00
	Work Center: Machine
	Description: INSPEC PER PROX-005
	Machines per Op: 1
	Overlap Units: 1
	Queue Time: 1.0
	Wait Time: 0.0
	Setup Time: 0.0
Route by Production Route	

Configuring the Client PC Database Set

After installing the client files on the file server, you must configure each client PC. The goal of configuration is to copy needed files onto the client PC and create start-up icons. Creating the start-up icons requires setting up database sets.

▶ See “Database Sets” on page 15 for more information.

Once you define a database set for the first time, MFG/UTIL gives you the option of storing your settings on the file server so that subsequent client PC installations can reuse the same settings. This feature is called *express setup*.

If you encounter an error when running MFG/PRO or need to change the database sets after you first define them, choose Any Database Set from the MFG/UTIL Configure menu, make your changes, and choose Generate User Startup from the Scripts menu.

Note These steps assume you have loaded the Windows client programs onto a file server—not on each client PC.

Setup Prerequisites

Before setting up Windows clients, verify that you have met the following prerequisites.

- You have met the system requirements for Windows clients.
- You have set up hosts and services files on the database server and client machines.
- You have loaded the Windows client programs. It is recommended that you load them onto a file server.
- Your network is operating.
- PROGRESS client software is installed on each client PC or is accessible from a network drive.
- You have mapped network drives for any components installed on a file server, including Windows GUI client files or PROGRESS.
- The first client PC has write access to the file server installation directory. Write access is needed to use the express setup feature.

Client Setup

- 1 Start on any PC connected to the network file server. Verify that your display resolution is no greater than 800 x 600dpi. If you are using a higher resolution, follow the procedures for your video card to change the resolution to 800 x 600dpi.
- 2 Start the `setup.exe` program using File Manager, Explorer, or the Start button.

InstallDrive:\WinInstallDir\setup.exe

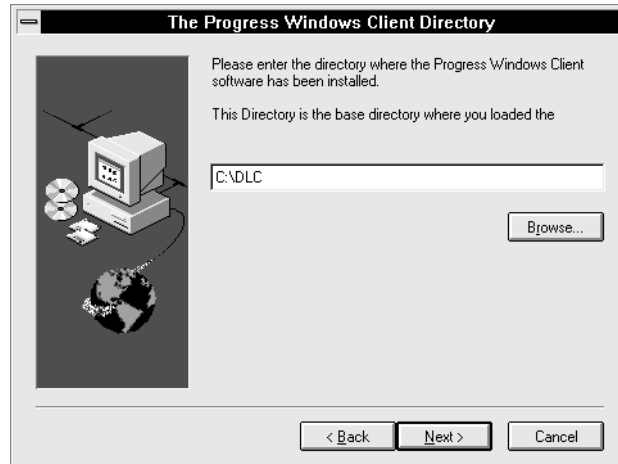
Note *InstallDrive* and *WinInstallDir* correspond to the path you used to install MFG/PRO for Windows.

♦ See “Loading Client Media” on page 51.

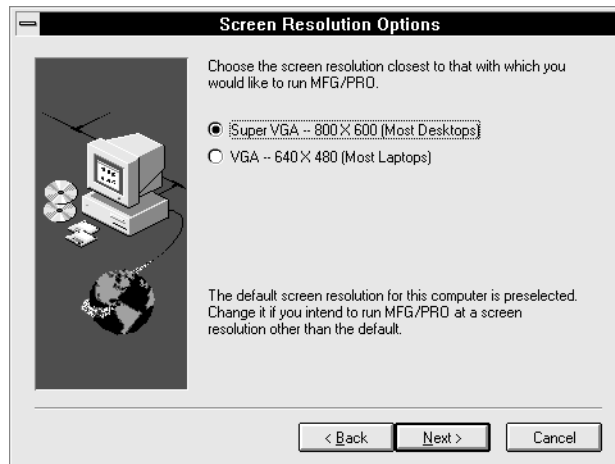
- 3 Choose Next when the welcome message window appears.
- 4 Accept the default working directory, QADCLI, or specify a different directory. Use the Browse button to select an alternate directory. Choose Next to continue.



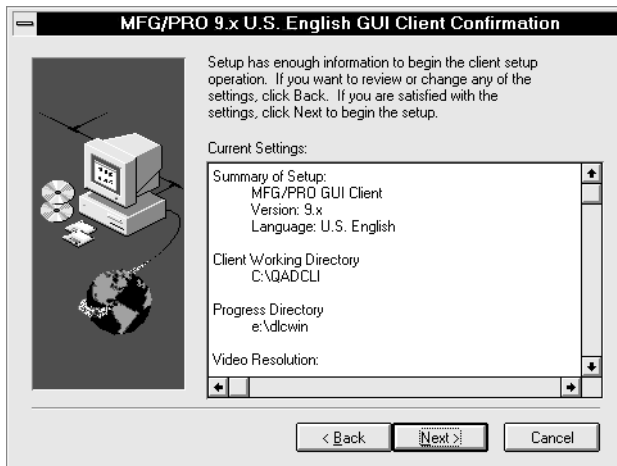
- 5 Specify the PROGRESS client directory for either Windows or character clients. Accept the default or use the Browse button to select alternate directories. Choose Next to continue.



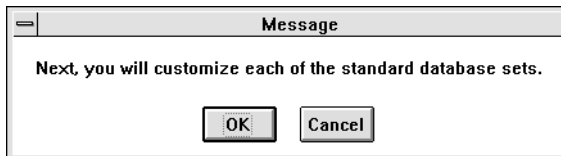
- 6 Select the display resolution of the PC and choose Next.



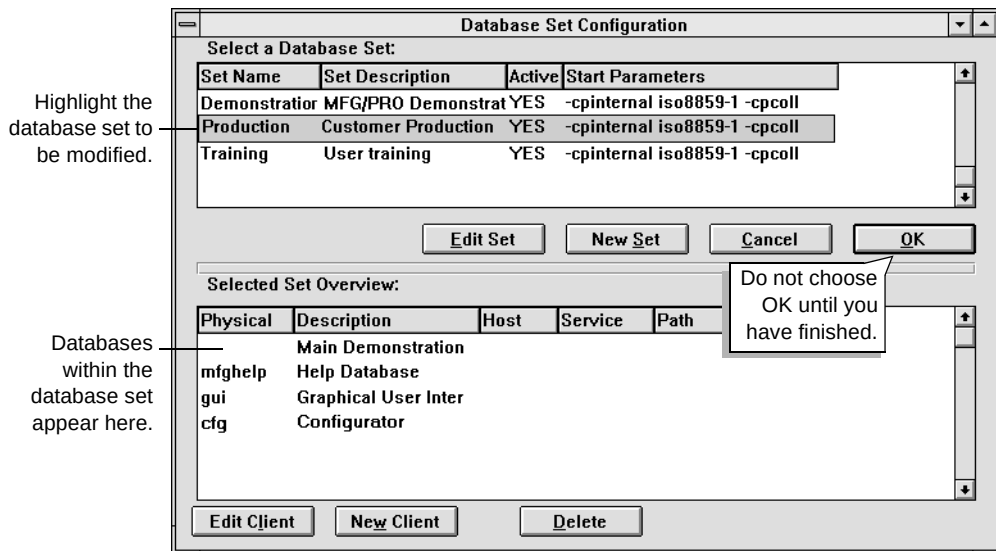
- 7 At the confirmation window, verify that the installation information is correct. Choose Next to begin installing or Back to make changes.



- 8 Choose OK when the following message appears.



- 9 When the Database Set Configuration window appears, review the following notes to become familiar with this window.

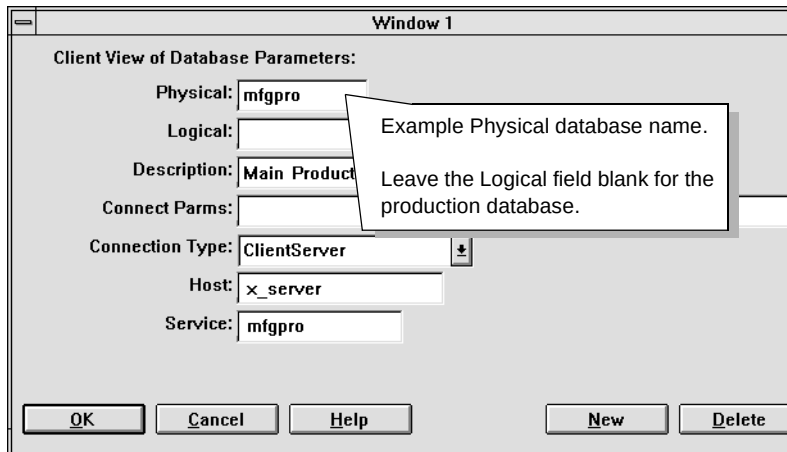


- 10 If the Active flag in the Select a Database Set portion of the Database Set Configuration window is set to Yes, MFG/UTIL will build a start-up icon for that database set. To change the setting of the Active flag, double-click on the database set name. When the Database Sets window displays, click on the Active field to select Yes or No.
- 11 Highlight the Production database set.
- The global parameters for this set appear to the right. Normally, you do not need to change them, but you can by choosing Edit Set.

- 12 Configure the Production database** by selecting the first database (the name will be blank) from the Selected Set Overview list and choosing Edit Client.

- a** When the Client View of Database Parameters window appears, complete the fields using the table and the example picture that follow.

Field	Enter
Physical	Enter the physical name of your database; accept the default if there is one. If you are performing an update or incremental conversion, enter the name of your existing production database.
Logical	Do <i>not</i> change the logical name for any database. It should be blank for the production database, as well as the training and demonstration databases.
Description	Enter a different description if you want.
Connect Params	Enter any PROGRESS connection parameters you want that apply specifically to client connections to this database.
Connection Type	Choose the Client/Server option.
Host	Enter the host name of the database server.
Service	Enter the service parameter to correspond to an entry in your services files. For entries in your client service file, you must make the entries with a text editor; MFG/UTIL does not change this file.



Window 1

Client View of Database Parameters:

Physical: mfgpro

Logical:

Description: Main Product

Connect Params:

Connection Type: ClientServer

Host: x_server

Service: mfgpro

OK Cancel Help New Delete

Example Physical database name.
Leave the Logical field blank for the production database.

- b** Choose OK in the Client View of Database Parameters window.

13 Configure the Help database by selecting mfghelp in the Database Set Configuration window and choosing Edit Client.

- a** In the Client View of Database Parameters window, complete the Host and Service fields. The Service name must correspond to an entry in your services file. A sample window of a completed help database entry follows.

Window 1

Client View of Database Parameters:

Physical: mfghelp

Logical: qadhelp

Description: Help Database

Connect Params:

Connection Type: ClientServer

Host: x_server

Service: mfghelp

OK Cancel Help New Delete

- b** Choose OK.

- 14 Configure the gui database** by selecting gui in the Database Set Configuration window and choosing Edit Client.
- a** In the Client View of Database Parameters window, complete the Host and Service fields. The Service field must correspond to an entry in your services file. A sample window of a completed help database entry follows.

Window 1

Client View of Database Parameters:

Physical:

Logical:

Description:

Connect Params:

Connection Type:

Host:

Service:

OK Cancel Help New Delete

- b** Choose OK.

15 Set up the Configurator database by selecting `cfg` in the Database Set Configuration window and choosing Edit Client.

- a** In the Client View of Database Parameters window, complete the Host and Service fields. The Service field must correspond to an entry in your `services` file. A sample window of a completed Configurator database entry follows.

16 Choose OK.

17 You can also add other database connections to the set by choosing the New Client button.

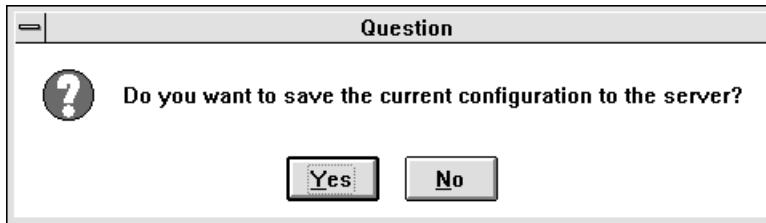
The following table shows an example of a completed database set.

Database	Physical Name	Logical Name	Service Name
Production	mfgpro	<i>leave this field empty</i>	mfgpro
Help	mfghelp	qadhelp	mfghelp
GUI	gui	qadgui	gui
Configurator	cfg	qadcf	conf9

18 If you want to configure a Demonstration or Training database set, highlight the set name in the Database Set Configuration window and complete the parameters as described in the preceding steps.

- 19 When you have entered information for all the database sets you are installing, choose OK in the Database Set Configuration window.

The following message window appears.

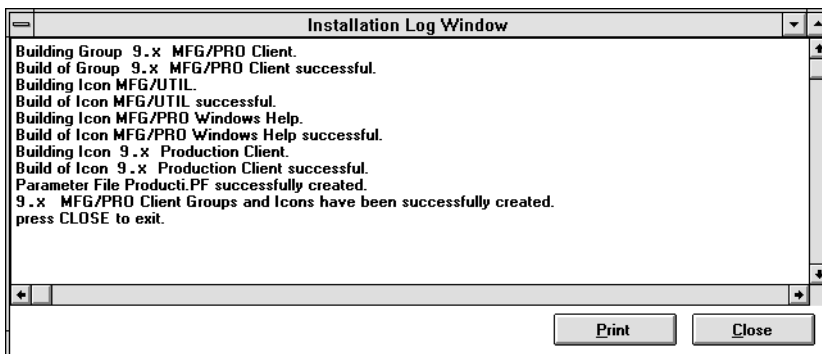


- 20 Choose Yes to save the current configuration to the file server. This enables you to use express setup on subsequent clients.

If you choose No, the installation ends without the current configuration being saved to the file server; however, it will be saved to the client working directory of this PC.

The Installation Log Window appends messages indicating steps completed by the installation program.

For details, see “Using Express Setup for Client PCs” on page 70.

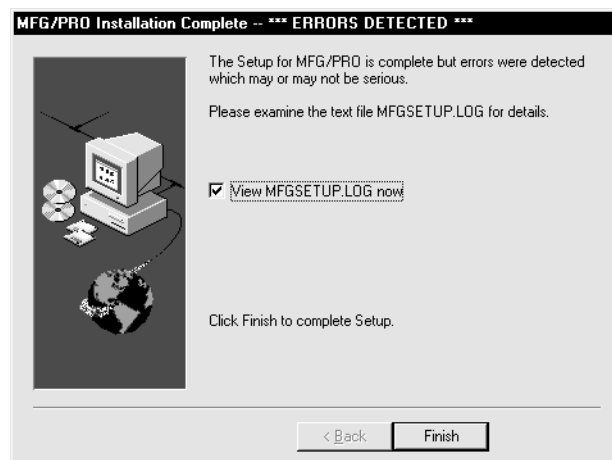


- 21 Choose Close. When the following window appears, choose Finish.



If Files Are Missing

- 1 If the installation program encounters errors, the following window appears. You may, for example, have a permissions problem.



- 2 In this case, choose Finish. The `mfgsetup.log` file displays in the Windows Notepad. Examine the log file, correct the problem, and rerun the setup program.

Testing the Client PC Setup

Before you test the client PC installation, ensure that the database servers are started for the chosen database set.

- 1 Click on the MFG Production, Demo, or Training icon in the MFG/PRO program group.

The MFG/PRO Sign On window appears.



- 2 Choose OK or Exit.

Using Express Setup for Client PCs

The subsequent client installations can use an express setup, based on the settings of the first client installation. This feature is enabled if you answered Yes to the following prompt, just after completing the database set:

Do you want to save the current configuration to the server?

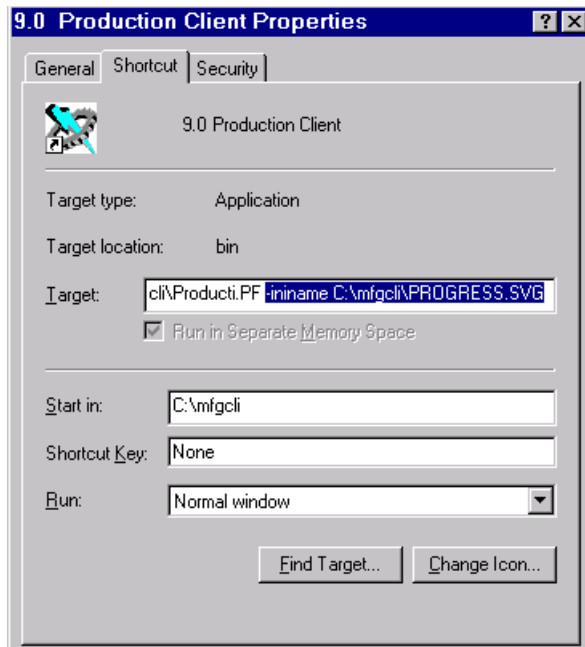
If you answered Yes, the first client settings are stored on the file server so that the other clients can copy them. If necessary, however, you can change the settings on the file server to set up some client PCs differently.

- 1** Repeat steps 1 through 8, starting on page 59, for each subsequent client PC you want to set up. MFG/UTIL completes the rest of the client setup automatically.
- 2** To use different settings than the first Windows client, complete the following:
 - a** Start MFG/UTIL from any client PC by clicking the MFG/UTIL icon.
 - b** Select the Configure menu and choose Any Database Set to open the Database Set Configuration window.
 - c** In the Database Set Configuration window, make your changes.
 - d** Select the File menu and choose Save Default mfgutil.ini. MFG/UTIL stores your changes in the client administration directory on the file server, as well as on the current machine. Subsequent clients you set up will use these same settings.

Changing a Client's PROPATH After Setup

If you want to modify the PROPATH setting for MFG/PRO clients after installation, complete the following instructions.

- 1** Right-click the client icon and choose Properties.
- 2** From the Properties window, choose the Shortcut tab.



- 3 In the Target field, use the -ininame parameter to locate the client's initialization file; for example, PROGRESS.SVG.
- 4 Open the initialization file in a text editor.
- 5 Modify the PROPATH setting in the [Startup] section of this file.

Multiple Language Setup

This chapter explains the tasks needed to set up an additional language for MFG/PRO. Repeat all the tasks in this chapter for each additional language. For an overview of the multiple language environment, see “Multiple Language Installation Overview” on page 8.

Multiple Language Assumptions **74**

Loading an Additional Language on the Database Server **74**

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Creating an Updated GUI Database **78**

Creating Language Databases **80**

Adding a Compile Database Set **82**

Setting Up Users and Testing the Language Installation **83**

Cleaning Up the System **83**

Multiple Language Assumptions

It is assumed that:

- The installed languages all share the same codepage family.
- There is one production, help, gui, and cfg database shared by all language sessions.
- You have completed all MFG/PRO installation tasks for the first language.

Loading an Additional Language on the Database Server

Complete these steps to load the language-specific programs onto the server.

- 1 Verify that you have adequate disk space on the database server.
- 2 Create a temporary installation directory where you will load the additional language.
- 3 Back up the existing MFG/PRO installation directory.
- 4 Load the media into a temporary installation directory according to instructions given in Chapter 3, “Database Server Setup,” on page 27. However, note the following:
 - Specify the temporary installation directory, not your existing MFG/PRO installation directory.
 - Choose Cancel when the MFG/UTIL Company Information window appears. Also cancel all subsequent windows. This part of the installation creates databases and start-up icons, which were already created when you installed the first language.
- 5 Change to the temporary installation directory.

- 6** Copy the two-letter language code directory (*LanguageDir*) to your existing MFG/PRO installation directory (*InstallDir*).

```
cp -R ./LanguageDir /InstallDir/LanguageDir
```

For example, if the language directory is *fr* and the MFG/PRO installation directory is *9qad*, type:

```
cp -R ./fr /9qad/fr
```

- 7** Determine which language installation has the most up-to-date data by comparing the date of the *mnt_det.d* file in the *mfg* sub-directory of the temporary installation with the date of the same file in your existing installation directory.
- 8** If the data from the temporary installation directory is the most up-to-date, you must copy the *mfg* and *gui* sub-directories to overwrite the data in the existing installation directory. However, if the data from the *existing* installation is more up-to-date, you can skip this step.
- a** Before you copy the *mfg* and *gui* sub-directories, create copies of the following data files in your existing installation directory by renaming the file extension to *.old*. If you need to recover these files later, you can rename them to the *.d* extension.

Files in <i>InstallDir/mfg</i> :
<i>lng_mstr.d</i>
<i>lngd_det.d</i>
<i>mnt_det.d</i>
<i>msg_mstr.d</i>

Files in <i>InstallDir/gui</i> :
<i>pwc_mstr.d</i>
<i>pwcd_det.d</i>
<i>mmts_det.d</i>

For example:

```
mv ./mfg/lng_mstr.d ./mfg/lng_mstr.old
```

- b** Copy the *gui* and *mfg* sub-directories using the following commands.

```
cp -R ./gui /InstallDir
```

```
cp -R ./mfg /InstallDir
```

Loading an Additional Language for Windows Clients

To load language-specific programs for Windows (GUI) clients onto the file server, repeat the instructions given in Chapter 4, “Loading Client Media,” on page 51.

However, note the following differences.

- Specify a different installation directory; for example, `qadfrgui` (where `fr` is the French language code).
- Once the second language is loaded, open File Manager or Windows Explorer and find the two-letter language code directory under the new installation directory; for example, `qadfrgui\fr`.
- Copy the language code sub-directory into the first installation directory. The language directories must be on the same directory level; for example, `InstallDir\qadgui` and `InstallDir\qadfrgui`.

Windows Client Setup

You do not need to run the `setup.exe` program for additional languages because the start-up icon for the first language will work for all other languages, assuming they share the same codepage family.

Updating Translated Default Data

To complete the installation of an additional language, you must update the system data—including online help—with translated data.

If you have custom changes to menu and message settings, be aware that this process overwrites these changes. If you want these changes available in your updated system, you must reenter them. To identify the number customizations that will be affected, you may want to run the update program, `mgdload`, in report mode first.

Loading Menus and Messages

- 1 On the database server, stop the database set that includes your production database.

`./stop.DBSetName`

- 2 Start a *single-user* MFG/PRO 9.0 session for the first language.

`./single.DBSetName`

Note The following step is successful *only* if you are running a single-user session.

- 3 At the Main Menu, enter:

`mgdload.p`

Warning `mgdload.p` overwrites custom changes to menu and message settings. You must reenter these changes after the program is run.

- 4 When `mgdload` opens, complete the fields according to the following table.

Note To run `mgdload` in report mode, enter Yes in the Count Only field.

Field	Enter
Input Directory	Enter your Version 9.0 installation directory followed by the mfg sub-directory.
Load mnd_det.d	Type Yes in these fields.
Load msg_mstr.d	
Load lng_mstr.d	
Load lngd_det.d	
All other Load fields	Type No.
Count Only	Type Yes to run the <code>mgdload</code> program in report mode. The program reads and counts the records to be loaded without actually loading them. Use this feature to review the results of the load in the <code>mgdload.log</code> file before executing the load. If you are ready to make the database changes, type No.
Allow Errors	Type Yes.

- 5 Press F1 to start the load.

- 6 At the prompt Enter a password, userid, or group name, you can specify your security information.
- 7 In another window, open the `mgdload.log` file from the working directory of the MFG/PRO session. Make sure no errors occurred from the `mgdload` process. The log file notes the number of records read for each data file, the messages changed in `msg_mstr`, and the menus added or removed in `mnd_det`.
- 8 Return to MFG/PRO and exit from `mgdload`.

Loading Translated Online Help

- 1 Open Field Help Load (36.4.19).
- 2 In the Language field, enter the two-letter language code of the *additional* language installation, such as `fr`.
- 3 Leaving other fields blank, skip to the Load File field and enter the explicit path to the `fieldhlp.fhd` file within the language directory for the additional language; for example:

```
g:/InstallDir/LanguageCode/fieldhlp.fhd
```
- 4 Press F1 to begin the load.

Loading for Other Databases

Repeat steps 1 through 7 in “Loading Menus and Messages” on page 77 for the `mfg` database, as well as training and demonstration databases, if you have them.

Creating an Updated GUI Database

Follow these steps to create a new gui database containing translated data for your additional language.

If you have custom additions in the User Interface module (`gui`), you can incorporate them into the new gui database through the following tasks.

- Use the PROGRESS Data Dictionary to dump the data from your existing gui database into a temporary directory.

- Load the dumped data files into the new gui database.
- If you loaded custom browses, open and resave each of them in Browse Maintenance (36.20.1) and then compile the resulting source code.

For detailed instructions, refer to the following sections in the conversion chapter.

- “4: Preserving Custom Default Data” on page 95
- “12: Restoring Custom Default Data” on page 136

1 On the database server, stop all database processes.

```
./stop.DBSetName
```

2 As a backup, rename the gui database.

```
mv gui.db guiold.db
```

3 From the MFG/PRO 9.0 installation directory, start MFG/UTIL.

```
./mfgutil
```

4 Select the Database menu and choose Load Data from Directory to create a new gui database with the translated data.

5 Complete the fields according to the following table.

Field	Enter
From this Directory:	/InstallDir/gui
From this empty Database:	guiempty
To this Database Name:	gui

6 Choose OK to begin the database creation.

7 When prompted to create the database, choose Yes.

8 Exit MFG/UTIL when finished.

Creating Language Databases

In order to compile any part of MFG/PRO for a non-English language, you must connect to a set of databases with translated schema labels. Follow these instructions to create databases with translated schema labels for the language you are installing.

Note You should use the language databases only for performing compilation. They are not needed for running MFG/PRO.

Copy Standard Databases

- 1 Change to the MFG/PRO installation directory, top level.
`cd installDir`
- 2 Copy the following database files to new names under your language sub-directory.

```
cp mfgempty.db ./LanguageDir/mfgLanguageCode.db
cp guiempty.db ./LanguageDir/guiLanguageCode.db
cp cfempty.db ./LanguageDir/cfLanguageCode.db
cp hlpempty.db ./LanguageDir/hlpLanguageCode.db
```

- 3 Copy the following before image files to new names under your language sub-directory.

```
cp mfgempty.bi ./LanguageDir/mfgLanguageCode.bi
cp guiempty.bi ./LanguageDir/guiLanguageCode.bi
cp cfempty.bi ./LanguageDir/cfLanguageCode.bi
cp hlpempty.bi ./LanguageDir/hlpLanguageCode.bi
```

Load Translated Labels

- 1 From the installation directory (*InstallDir*), start MFG/UTIL.
`./mfgutil`
- 2 In MFG/UTIL, select the Database menu and choose Load Translated Labels.
- 3 When the database connect window appears, complete the fields as follows.

Field	Description
Physical Database Name:	Type <i>mfgLanguageCode</i> .
Local Host Connection:	Select this option.
Single-User Connection:	Select this option.
Database Path:	Type the explicit path to <i>mfgLanguageCode</i> .
Additional Parameters:	Type the parameters: - ld qaddb

- 4 Choose OK.
- 5 After a connection is made, complete the following field with the path and name of the xdc_mstr table.

Update This Database File: *InstallDir*
/LanguageDir/xdc_mstr.d

Note Choose the button < Browse .db File > to search for this file.

- 6 Choose OK, and the load process begins.
- 7 Run Load Translated Labels for the remaining databases, using the preceding steps as a guide. Change the database name as appropriate.
 - guiLanguageCode.db
 - cfLanguageCode.db
 - hlpLanguageCode.db
- 8 In the Additional Parameters field, use the appropriate - ld parameter for each database.
 - Gui database — qadgui
 - Help database — qadhelp
 - Configurator database — qadcf

Adding a Compile Database Set

Once you create databases for compiling in a given language, you should set up a compile database set in MFG/UTIL so you can compile with MFG/UTIL's compile option.

- 1 From the installation directory (InstallDir), start MFG/UTIL.
`./mfgutil`
- 2 Select the Configure menu and choose Any Database Set.
- 3 In the Database Set Configuration window, choose New Set.
- 4 In the Database Sets window, type a descriptive name in the Set Name field. For example, if you installed French, type FrCompile. Accept the default in all other fields and choose OK.
- 5 Add the following databases to this database set by choosing New Client and completing the Database Parameters window for each database.

Physical	Logical	Connect Parms	Connect Type	Path
<i>mfgLanguageCode</i>	qaddb	-RO	Local	Explicit path to the language database.
<i>guiLanguageCode</i>	qadgui	-RO	Local	Explicit path to the language database.
<i>hlpLanguageCode</i>	qadhelp	-RO	Local	Explicit path to the language database.
<i>cfLanguageCode</i>	qadcf	-RO	Local	Explicit path to the language database.

- 6 Add server parameters for each database by selecting the database and choosing Edit Server. Use the following table as a guide.

Physical	Path
<i>mfgLanguageCode</i>	Explicit path to the language database.
<i>guiLanguageCode</i>	Explicit path to the language database.
<i>hlpLanguageCode</i>	Explicit path to the language database.
<i>cfLanguageCode</i>	Explicit path to the language database.

- 7 Once the database set is complete, choose OK in the Database Set Configuration window to save your changes.

- 8 When you compile MFG/PRO for the language, specify this language database set.

Setting Up Users and Testing the Language Installation

In MFG/PRO, you must assign languages to each user. Open User Maintenance (36.3.18) and modify the Language field to the appropriate two-letter language code.

For Windows clients using a non-English language, you must also deactivate the Microsoft WinHelp viewer help display. This way, the help displays from the help database, which contains the translated help. To deactivate WinHelp, open User Interface Profile, 36.20.4, select each non-English user, and deselect the WinHelp check-box. (It should be blank.)

Language Test

To test your language installation, start an MFG/PRO session and log on as a user who is set up with the language code you want to test.

Open menu item 1.4.1 (in English, Item Master Maintenance), and verify that the fields are translated.

Cleaning Up the System

Once you have completed your language test and verified that your MFG/PRO fields have been translated, delete the temporary language directories you created in “Loading an Additional Language on the Database Server” on page 74 and “Loading an Additional Language for Windows Clients” on page 76.

These directories were created to temporarily hold your additional language information until it was copied into your main installation directory. The temporary language directories are now duplicate directories and are no longer needed. Delete them to provide additional disk space.

Convert an Existing Database

This chapter provides instructions for converting an MFG/PRO Version 7.3, 7.4, 8.5, or 8.6 database to Version 9.0. A conversion refers to the transition from one numbered release to the next.

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Conversion Overview

Before beginning a conversion, use the instructions in Chapters 3 through 5 to install your new MFG/PRO 9.0 server and to create one client. These instructions refer to this new MFG/PRO 9.0 installation as your *target version*.

Below is an explanation of how the MFG/PRO data becomes converted.

Note Before you execute a conversion, you must have the MFG/PRO 9.0 server installed and one client set up.

- **Production Database:** You convert the production database using the program MFG/CONV. This database conversion is the primary focus of this chapter.
- **Default System Data:** MFG/CONV loads the new system data when it converts your production database. This process overwrites custom menu, message, and other system data, but you can obtain reports showing the conflicts and then reenter the custom settings.
- **Help, Gui, and Component Configurator Databases:** MFG/CONV does not convert these databases from the source version. Instead, you install new Version 9.0 help, gui, and configurator databases and use these. Instructions are provided for dumping and loading custom help and Windows data from your source version.
- **GL Report Writer and Intrastat Databases:** Beginning with Version 8.5, there are no longer separate GL Report Writer or Intrastat databases. If you had the GL Report Writer or Intrastat module implemented, you must follow some additional steps to dump and load the data into your Version 9.0 environment. These steps require that you use PROGRESS 4GL.

Source and Target Database Conversions

The conversion has two main parts. First, you run source version programs while connected to the source version database. Second, you run target version programs while connected to the target version database.

The goal of the source version conversion is to dump existing data in either a full or incremental conversion.

► For details, see “Choose a Full or Incremental Conversion” on page 88.

After your source version conversion, if you need to prepare target version data, exit MFG/CONV temporarily to prepare your data. Then restart MFG/CONV to continue with the target version conversion. If you do not need to prepare target version data, remain in MFG/CONV and continue with the target version conversion. For more information, see “9: Preparing Data in the Target Version” on page 121.

The goal of the target version conversion is to modify your data so that it conforms to the new database schema and new application functions. Many of these conversion programs are optional, depending on which modules you plan to implement. Before beginning the conversion, determine which MFG/PRO feature conversions you need to run from the list below.

► For details, see Chapter 8, “Conversion Program Reference,” on page 143.

Features Introduced in Version 8.5

You may need to run these conversions if you are converting from a Version 7.3 or 7.4 database.

- Compliance
- Co-products/By-products
- Sales Order Pricing
- Service/Support Management
- Currency Dependent Rounding
- Evaluated Receipts Settlement

Features Introduced in Version 8.6

You may need to run these conversions if you are converting from a Version 8.5 database.

- Global Shipping
- Global Tax Management
- Product Change Control (PCC)
- Euro Data Conversion
- Corporate Commodity Codes

Features Introduced in Version 9.0

You may need to run these conversions if you are converting from a Version 8.6 database.

- Supplier Performance Conversion
- Logistics Data Conversion
- ECommerce Data Conversion

Choose a Full or Incremental Conversion

During the source version conversion, you must choose between running full or incremental conversion programs.

As shown in Figure 7.1 on page 89, the full conversion programs involve a full dump and load from your original database into a new, empty database. The incremental conversion programs instead convert your source database directly—you do not dump and load the data, except for a small number of files. For this reason, the incremental conversion is faster than a full conversion.

When you choose a conversion method, adhere to these guidelines:

- If you are converting a custom split schema database, use a full conversion.
- If you are converting from a PROGRESS 6.x database using a client/server connection, use a full conversion.
- A full conversion is recommended to eliminate database fragmentation caused by deleting and archiving records.

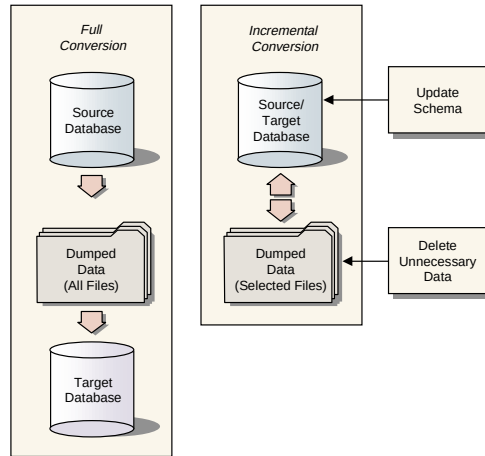


Fig. 7.1
Conversion Types

Conversion Prerequisites

- If you are converting from a PROGRESS 7.x source database, you must first convert it to PROGRESS Version 8.3. For details, see “Converting a Database’s PROGRESS Version” on page 172.
- If you are converting from a PROGRESS 6.x source database, you can either convert it to PROGRESS Version 8.3 or perform the conversion in a client/server mode, which is faster. If you cannot connect in client/server mode, follow the instructions in “Converting a Database’s PROGRESS Version” on page 172.
- Install the database server and one client, following the standard instructions in Chapters 3 through 5.

The installation process automatically creates a new production database, which you do not need if you run an incremental conversion against your prior production database. In this case, you can complete the production database creation using a “dummy” name, and then delete it after the installation.

Additionally, for incremental conversions, when you install clients, make sure to reference your source version production database in the database set information.

- Schedule a time to perform the conversion when no other users are on the system. The amount of time required to complete a conversion largely depends on the size of your system. A typical conversion might span one to four days.
- Make a complete backup of your source version production database.
- Perform a test conversion against a copy of your production database.

1: Preparing Source Version Data

This section explains some preliminary steps to perform against the source version database.

- 1 Archive and delete as much data as possible from your source version production database, using the various delete/archive programs throughout MFG/PRO. The more data you archive and delete before starting, the shorter the conversion time.

- 2 Archive and delete records as of a recent fiscal year-end to maintain the accuracy of historical, year-to-date balances.

If you archive and delete records from a mid-year cut-off date, the recalculated year-to-date balances will be understated because they would not include the records you archived and deleted.

Note If you want to restore any archived data, you will have to restore it to the former version and convert it before you can use it.

- 3 Back up your source version databases and MFG/PRO directory. This will enable you to easily recover should there be a problem during the conversion.

To Prepare for Service/Support Management (SSM)

Follow these steps if you plan to implement SSM. The SSM conversion is not required when converting from MFG/PRO 8.5 or higher.

- 1 Close as many calls as possible and delete/archive them.
- 2 Close as many RMAs as possible.

- 3 Perform a delete/archive for fully billed, expired contracts and contract quotes.
- 4 Print and post all open invoices for contracts and RMAs.
This action is especially critical for RMAs, because in SSM, RMAs do not include labor and expenses. Printing and posting the invoices will clear any existing labor and expense items you have already recorded.

To Prepare for Global Shipping

Follow these steps if you plan to implement Global Shipping features. The Global Shipping conversion is not required when converting from MFG/PRO 8.6.

- 1 Convert as many pre-shippers to shippers as possible.
- 2 Confirm as many SO shippers as possible.
- 3 Delete as many master bills of lading as possible.
- 4 Archive and delete as many SO shippers as possible.
- 5 Determine which of the remaining pre-shippers, shippers, and master bills of lading are allowed to be renumbered and which are required to retain their current ID number; for example, due to legal requirements, usage of shipper number as invoice number.
- 6 Use the Pre-Shipper/Shipper Inquiry (7.9.3) and Print (7.9.4) and Master Bill Inquiry (7.9.12.3) and Print (7.9.12.4) options to review existing records.
- 7 Check the system for an existing *carrier* list type using Address List Type Browse (2.10). If one exists, ensure the addresses assigned the existing carrier list type in the source database are addresses you want the system to convert to the new carrier list type in the target database. If you do not want the addresses converted, change the existing carrier list type in the MFG/CONV prompts.

▶ For MFG/CONV prompts, see “Answering Prompts” on page 101.

To Prepare for Product Change Control (PCC)

Complete this section if you plan to implement Product Change Control (PCC). The PCC conversion is not required when converting from MFG/PRO 8.6.

As much as possible, close the ECNs that have been routed for approval. To ensure that the approval process is correct, it is best to complete the approval processes before converting the records.

To Prepare for Euro Data Conversion

Complete this section if you plan to perform the Euro Data Conversion. If you are converting from MFG/PRO 8.6E, you do not have to perform conversion.

Before running the Euro Data Conversion, post all transactions involving foreign currencies.

To Prepare for Specialized Conversions

Complete the sections appropriate to your source version MFG/PRO system.

Corporate Commodity Codes

Follow these steps if you are converting from MFG/PRO Version 7.4 or Version 8.5 with the Corporate Commodity Code patch implemented.

Run Commodity Code Maintenance (in Version 7.4, 1.4.19; in Version 8.5, 1.11), and note a sample of commodity codes and parts. After converting, use this sample to verify your target version data.

Supplier Performance

Follow these steps if you are converting from MFG/PRO Version 8.6D.

- 1 Run the Supplier Performance Data Report (5.15.14). Make sure to include Inventory Items, Subcontract Items, and Memo Items. Note the number of detail records for each master record. After converting, compare the relationship of detail records to master records to ensure data accuracy.
- 2 Run the Summary Data Report (5.15.20). Make sure to select reporting option 2 to display Category and Event data. Note the number of detail records for each master record. After converting, compare the relationship of detail records to master records to ensure data accuracy.

2: Preparing Reports for Data Verification

QAD recommends you print the following reports to use as an audit of the conversion. Print them from your source version database. When you have finished the conversion, print these same reports from your target version database and compare the two sets.

Note Some of the reports have moved to a different menu location.

Report or Browse Name	Source Version 7.3/7.4 Menu Number	Source Version 8.5/8.6 Menu Number	Target Version 9.0 Menu Number
Site Report	1.1.15	1.1.14	1.1.14
Item Planning	1.5.4	1.5.4	1.5.4
Item-Site Planning	1.5.16	1.5.16	1.5.16
Stock Status	1.5.8	1.5.8	1.5.8
Inventory Valuation	1.5.21	1.5.21	1.5.21
ECN Status Inquiry	1.9.6	1.9.6	1.9.6
Price List	1.10.3	1.10.1.3 and 1.10.2.3	1.10.1.3 and 1.10.2.3
Customer Master	2.1.4	2.1.4	2.1.4
Customer Ship-to Address	2.1.15	2.1.15	2.1.15
Supplier Master	2.3.4	2.3.4	2.3.4
Employee Master	2.7.4	2.7.2	2.7.2

Report or Browse Name	Source Version 7.3/7.4 Menu Number	Source Version 8.5/8.6 Menu Number	Target Version 9.0 Menu Number
Bank Address	2.4.3	2.21.3	2.21.3
Salesperson Commission	2.5.13	2.5.13	2.5.13
US Sales Tax	2.14.3	2.15.1.3	2.15.1.3
VAT-AR by Transaction	2.5.13	2.15.2.13	2.15.2.13
VAT-AP by Transaction	2.5.16	2.15.2.16	2.15.2.16
GST-AR by Transaction	2.16.13	2.15.3.13	2.15.3.13
GST-AP by Transaction	2.16.16	2.15.3.16	2.15.3.16
Purchase Order Transactions	5.9.14	5.9.14	5.9.14
Blanket Order by Order	5.3.3	5.3.3	5.3.3
Sales Quote by Quote	6.13	6.13	6.13
Sales Orders by Customer	7.3.2	7.3.2	7.3.2
Req. Ship Schedule Summary	7.6.5.1	7.6.5.1	7.6.5.1
Orders in Transit	12.15.14	12.15.14	12.15.14
Distribution Order	12.17.16	12.17.16	12.17.16

3: Creating Conversion Dump Files

During conversions, dump files hold the dumped and converted data used to populate the new database. These ASCII files have the same name as the database files, with a .d extension.

The .d files are copies of the data in the database, plus any conversions required to use the data in your target version. After the dump process, the data will exist in both the dump files and in the old database itself. You need adequate disk space for the dump directory—at least 80% of the size of its corresponding database.

You must create a dump directory for your source version data. The conversion program executes the actual dump programs and prompts you for the dump directory name.

Warning You should not try to dump the data using the PROGRESS Data Dictionary or custom export programs, because MFG/CONV must run special dumps to convert certain MFG/PRO data.

4: Preserving Custom Default Data

Follow these steps if you have any customizations to the following MFG/PRO default data. Otherwise, skip these steps.

- Online help
- MFG/PRO for Windows (gui) settings

After dumping your custom data, and completing your conversion, follow the steps in “12: Restoring Custom Default Data” on page 136.

Menus and Messages

MFG/CONV does not convert custom changes to these files; however, there are reports provided that display all the custom changes you have made so that you can reenter them.

Dump Custom Online Help

- 1 Start a single-user session of your source version database. Select Field Help Dump (36.4.18).
- 2 Enter user as the beginning and ending range in the Text Type and To fields.
- 3 The field help dump file name defaults to `fieldhlp.fhd`. You can overwrite this default.
- 4 Press Go to begin the dump.
- 5 Exit MFG/PRO and locate the dump file you just created, which should be located in your current working directory. Move this file into your source version dump file directory for safekeeping.
- 6 Check the log file for any errors. Resolve errors before proceeding.

Dump Custom MFG/PRO for Windows Settings

- 1 From a Windows session, review the custom records created for browses, views, drill-downs, and the user tool bar.
 - a Record all the menu substitutions you made; you will later reenter them in your target version database.
 - b Record custom modifications, as opposed to additions, you made to the default records. Your additions to the default data can be dumped and loaded, but your modifications must be reentered.
 - c Keep a copy of these modifications because they may be overwritten in future releases.
- 2 While no one is connected to the source version gui database, open Database Dump/Load (36.16.3). One at a time, dump the following table files to your source version dump directory.

File Name	Description
drl_mstr	Drill down records
utd_det	User tool bar records
brw_mstr brwf_det brwt_det	Browse records
vue_mstr vuf_det vwj_det	View records
mnts_det	GUI-related data for translated releases of MFG/PRO
uss_mstr	Users' personal MFG/PRO for Windows settings

5: Starting MFG/CONV and Answering Prompts

Starting MFG/CONV

The following steps assume that:

- You have installed your target version MFG/PRO on your UNIX server.
- You have a source version MFG/PRO 7.3, 7.4, 8.5, or 8.6 database.
- You have at least one license of PROGRESS 4GL.
- You have archived and deleted data from your source version database and have made a backup copy.
- You have created a dump file for your source version data and have full permissions for this directory.
- No other users are logged onto the source version database.

1 Verify that your terminal type is set correctly.

2 If you are converting from a PROGRESS 6.x database, obtain the following information so that you can connect in client/server mode.

- Service name of source version database.
- Host name of the machine running the source version database.

Note If you cannot run in client/server mode, you must instead convert the database to PROGRESS 8.x; however, this process is time-consuming.

▶ For information on conversion dump files, see “3: Creating Conversion Dump Files” on page 94.

▶ For details, see “Converting a Database’s PROGRESS Version” on page 172.

- 3 Copy, move, and edit a multiuser start-up script from your MFG/PRO source version.

- If you have an existing custom split schema of the MFG/PRO database, the script must connect to all of the split schema databases.
- If you plan to perform an incremental conversion, you can use a single-user connection script instead of a multiuser script.

Use the following commands to edit your start-up script. The variable *SVClient* refers to the original script, *TVInstallDir* refers to your target version installation directory, and *connect* refers to your new start-up script.

```
cp /SVInstallDir/SVClient /TVInstallDir/conv
mv SVClient connect
vi connect
```

- 4 In the new start-up script, make the following changes.
 - a Make sure the DLC environment variable specifies the directory containing PROGRESS 4GL.
 - b Replace the PROPATH with the following statement.
PROPATH=. :us:us/xrc:us/src:triggers; export PROPATH
 - c Remove the lines that prompt for the TERM type. Any interactive prompts interfere with the MFG/CONV background dump if you choose to run it.
 - d Remove the line that changes to the home directory (cd \$HOME).
 - e Keep the connection to the production database, but delete *all* other database connections such as gui, help, and custom side databases (look for the -db parameter).

Note If you are converting a split schema database, do not delete your split schema databases.

- f** Make sure the `-p` parameter is the last item in the script, because the MFG/CONV background dump program looks for it at the end.
- g** At the `-p` start-up parameter, enter
`pro -p conv.p -param "$1"`

Warning Do not use the Date Format (`-d`), European Numeric Format (`-E`), or Century (`-yy`) start-up options when running the database conversion programs. Doing so may result in the loss or corruption of data. Make sure you remove the `-k` keyword forget list parameter from the start-up script or `.pf` file, if applicable.

- h** If you are converting from a PROGRESS Version 6.x database, add client/server connection parameters in the execute statement, replacing the service and host names applicable to your PROGRESS 6.x database.

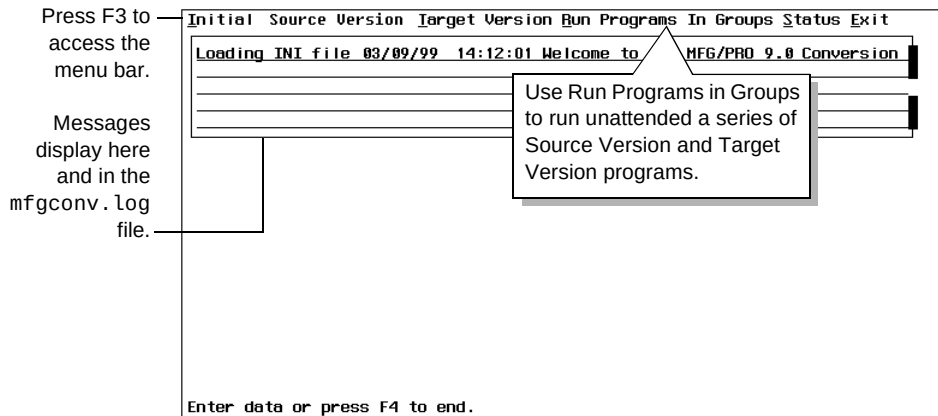
`-N TCP -S SVServiceName -H SVHostName`

Note If you cannot run in client/server mode, you must instead convert the database to PROGRESS 8.x; however, this process is time-consuming.

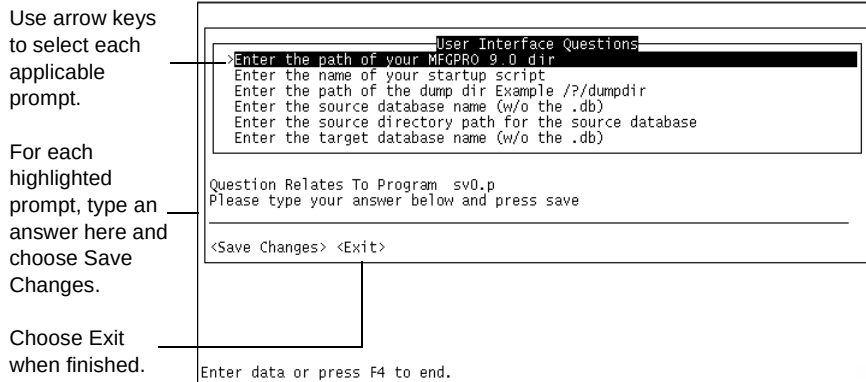
▶ For details, see “Converting a Database’s PROGRESS Version” on page 172.

- 5** Save your changes and quit from the text editor.
- 6** Ensure that you have proper permissions for the script. If needed, type the following command:
`chmod 777 Connect`
- 7** Start the source version production database with a database start-up script. Skip this step if you are using a single-user start-up script.
- 8** From your `TVInstallDir/conv` directory, start the new script.
`./connect "SVInstallDir/SVDatabaseName"`

- 9 When the MFG/CONV conversion program appears, note the following.



- 10 Press F3 and use arrow keys to select the Initial menu. Choose Set Up Environment. A dialog box lists all environment-related prompts that the conversion programs need answered.



Answering Prompts

Use the following tables as a guide to help you complete the prompts. Some prompts may not appear, depending on what source version you are converting, which is detected automatically.

Table 7.1 lists general environment-related prompts; most are required for all conversions. All the other tables in this section list optional prompts related to specific MFG/PRO functionality.

When you have completed the prompts, choose Exit to close the User Interface Questions screen.

For more information, see “Conversion Program Reference” on page 143.

Table 7.1
General Prompts

General Prompts	
Prompt	Description
Path of 90	This prompt is required. Enter the path to your target version installation directory; for example, <code>InstallDir</code> .
Start up script	This prompt is required. Enter the name of the start-up script used to begin MFG/CONV against the source version database; for example, <code>connect</code> .
Path of dump dir	This prompt is required. Enter the path to your conversion dump directory; for example, <code>/mfg74/dump</code> .
Source database name	This prompt is required. Enter the name of your source version database; for example, <code>mfg74</code> .
Source database directory path	This prompt is required. Enter the path to your source version database; for example, <code>/74InstallDir</code> .
Target database name	This prompt is required. Enter the name of your target version database; for example, <code>mfgprod</code> . Note: For incremental conversions, the source and target database will have the same name. For more information, see “Choose a Full or Incremental Conversion” on page 88.
Target database directory path	This prompt is required. Enter the path to your target version database; for example, <code>/InstallDir</code> .

General Prompts	
Prompt	Description
If split schema, enter the Dfname to get the extra 9.0 files	This prompt is optional; answer it if you have a split schema source version database. Enter the name of one of your current split schema databases. Be sure to include the <code>.df</code> extension in your response. The conversion utility, specifically the <code>svp5.p</code> program, can create <code>.df</code> files for your target version database that correspond to the split schema in your source database. The program patterns the <code>.df</code> files on the databases you are connected to, and on the target version <code>mfgempty.df</code> file. The “extra 9.0 files” referred to by this prompt include additional database files required by the target version. You must specify which <code>.df</code> file should include the extra target version files.
Enter the name and path of the 9.0 mfgempty DF file <code>/?.mfgempty.df</code>	This prompt is optional; answer it if you have a split schema for your source version database. Enter the path to your target version installation directory, followed by the <code>mfgempty.df</code> file name.

Table 7.2
Global Shipping
Prompts

Global Shipping Prompts	
Prompt	Description
Enter prefix for new <i>Pre-Shipper</i> NRM sequence IDs	The value entered at this prompt represents the NRM Sequence the system will create and assign to all new pre-shippers, if a default Pre-Shipper Sequence ID is not defined in the Shipper/Container Control File.
Enter prefix for new <i>Shipper</i> NRM sequence IDs	The value entered at this prompt represents the NRM Sequence the system will create and assign to all new shippers, if a default Shipper Sequence ID is not defined in the Shipper/Container Control File.
Enter prefix for new <i>Master Bill of Lading</i> NRM sequence IDs	The value entered at this prompt represents the NRM Sequence the system will create and assign to all new master bills of lading, if a default Master Bill Sequence ID is not defined in the Shipper/Container Control File.

Global Shipping Prompts	
Prompt	Description
Enter prefix for new document format codes	The value entered at this prompt represents the Document Format the system will create for all existing standard and custom shipper print procedures.
Enter new List Type for existing “carrier” addresses	Global Shipping provides a new reserved <i>carrier</i> list type. In the case that a user-defined list type called “carrier” was created prior to installing Version 9.0, the conversion utility enables you to redefine the existing <i>carrier</i> list type to something other than “carrier.” The value entered at this prompt represents the new list type. Do one of the following: • If you do not want to redefine the existing <i>carrier</i> list type, leave the response blank or enter “carrier.” The addresses in the <i>carrier</i> list type will be designated as carrier addresses. • If you want to redefine the existing <i>carrier</i> list type, enter a new list type name at the prompt. The addresses in the new list type will not be designated carrier addresses. • If you want to merge the existing <i>carrier</i> list type with another existing list type, enter the non-carrier list type. The addresses in the non-carrier list type will not be designated carrier addresses.

Currency Dependent Rounding (CDR) Prompts	
Prompt	Description
Balance Sheet CR Variance Accounts Balance Sheet DR Variance Accounts	In these prompts, you can specify where the CDR conversion program (<code>tvcd1.p</code>) records rounding variances generated during the conversion. You can use new account numbers or existing ones, such as those set up for Method Variances. If you use new account numbers, you must set up these accounts in the target version MFG/PRO database before you actually run the conversion. You can specify the same account/cost center for any or all of the questions. If you leave an account blank, the conversion program uses the Method Variance account as the default.

Table 7.3
CDR Prompts

Currency Dependent Rounding (CDR) Prompts	
Prompt	Description
Profit/Loss CR Variance Accounts Profit/Loss DR Variance Accounts	For these prompts, follow the same guidelines as the Balance Sheet prompts, described above.
Update While Reporting?	This prompt gives you the choice of whether you want to update the database in addition to printing a report. To update the database, type Yes. If you type No, or leave this prompt blank, the program only generates a report (9cdr .prn) of the proposed rounding changes without actually implementing any of them. If you respond No and want to commit the changes later, you have to run tvcdr1.p again, this time answering Yes to this same prompt. The conversion program will perform the same rounding processes and will run as long as it did the first time.

Table 7.4
ERS Prompt

Evaluated Receipts Settlement (ERS) Prompt	
Prompt	Description
Enable ERS for PO's?	This prompt relates to the Evaluated Receipts Settlement (ERS) conversion. If you answer Yes, the conversion for ERS modifies existing purchase order records to be enabled for the ERS feature. If you answer No, purchase orders are not enabled.

Table 7.5
Field Service
Prompts

Field Service Prompts	
Prompt	Description
Do you want Service Charges converted to Coverage limits (Yes/No)	The Field Service conversion can map your service charge types to their new Version 9.0 definitions. If you want the conversion to do this, answer Yes to this prompt and complete the following questions. If you want to redefine your coverage levels manually, answer No and skip the following questions.
Primary Invoice Sort for... ...Expense Item Coverage ...Labor Coverage ...Misc. Coverage ...Item Coverage ...Travel Coverage	Invoice sort codes are SSM codes that you must set up in order for the conversion to convert your service charge types. Refer to <i>User Guide Volumes 8A and 8B: Service/Support Management</i> for more information and to page 122 of this installation guide when you are ready to set up the codes. In these prompts, enter the invoice sort codes you want to use. Note the following: Expense Item Coverage relates to E Service Charge Type Labor Coverage relates to L Service Charge Type Item Coverage relates to P Service Charge Type Travel Coverage relates to T Service Charge Type Misc. Coverage relates to M Service Charge Type

Table 7.6
Euro Data
Conversion
Prompts

Euro Data Conversion Prompts	
Prompt	Description
Enter Currency Exchange Unrealized Gain ...Account ...Cost Center	These prompts let you enter default account and cost center information for posting unrealized gains in currency exchanges. The account number can contain both account and sub-account elements. If you leave this prompt blank, the Unrealized Exch Rate Gain/Loss Acct defined in the General Ledger (Company) Control File is used as a default. No default cost center is used.
Enter Currency Exchange Unrealized Loss ...Account ...Cost Center	These prompts let you enter default account and cost center information for posting unrealized losses in currency exchanges. The account number can contain both account and sub-account elements. If you leave this prompt blank, the Unrealized Exch Rate Gain/Loss Acct defined in the General Ledger (Company) Control File is used as a default. No default cost center is used.
Enter Currency Exchange Realized Gain ...Account ...Cost Center	These prompts let you enter default account and cost center information for posting realized gains in currency exchanges. The account number can contain both account and sub-account elements. If you leave this prompt blank, the Exchange Gain Account and Cost Center defined in the first Bank Master record matching the currency in question are used.
Enter Currency Exchange Realized Loss ...Account ...Cost Center	These prompts let you enter default account and cost center information for posting realized losses in currency exchanges. The account number can contain both account and sub-account elements. If you leave this prompt blank, the Exchange Loss Account and Cost Center defined in the first Bank Master record matching the currency in question are used.
Enter Currency Exchange Rounding ...Account ...Cost Center	These prompts let you enter default account and cost center information for posting rounding amounts in currency exchanges. The account number can contain both account and sub-account elements. If you leave this prompt blank, no default account or cost center is assumed. Note: This field is not used in MFG/PRO 9.0, but is intended for future releases.

6: Running Source Version Reports

Several reports are available to assist with conversions for:

- Custom Menus and Messages
- Field Service

Follow the steps below and allow time in case you need to correct your source version data.

- 1 Select the Source Version menu from within MFG/CONV.
- 2 Choose the first option, svp0, Compile sv Conversion Programs. This option also compiles the report programs.
- 3 When the compile is complete, select the Reports option and press the right arrow key to display the reports.

Custom Menus and Messages Reports

- 1 If you have custom changes to menus, messages, or other system data, print the following reports, chosen from the Source Version menu.

These reports print comparisons between the system data in the source version and in the target version. Later, you can use these reports to look for any custom changes you made that you want to reenter.

- svmndrep (custom menu data)
 - svmsgrep (custom message data)
 - svlndrep (custom language detail)
 - svlngrep (custom language master data)
- 2 To view the reports, choose View Reports from the Reports menu option. In the Choose a Report to View screen, select the needed report and choose the View Report button.

Field Service Reports

Complete the following steps only if you are converting Field Service data.

- 1 Run `svfscon1` to obtain a report showing potential error conditions. Enter a range of contract numbers in the Number and To fields.

Note Do not run `svfscon2` yet because it updates data in the source version database.

- 2 Run `svfscon3` to obtain a report showing any lot/serial controlled items that exist in the installed base with blank lot/serial numbers. When you run `svfscon3`, enter as much report criteria as you want in the End User, Item Number, and Serial field ranges.
- 3 Review the output of `svfscon1` and `svfscon3` using the View Reports option. The output files are `fscon1.log` and `fscon3.log`. If any items appear on either report, exit MFG/CONV and print them out for further review.
- 4 When you review the first report, `fscon1.log`, determine which of these error conditions applies to each contract line:
 - The coverage overlaps coverage provided by another contract line.
 - The contract line is for a lot/serial-controlled item but lacks a lot/serial number.
- 5 If an overlap condition is found and reported by this utility, log into your source version database and either alter contract line coverage dates or delete one of the line items to eliminate the overlap.

Note In Version 9.0, overlapping coverage is prevented to ensure clarity regarding the contract terms and conditions related to a call line item. If two contracts overlap, the second—the one with the higher contract number—will not be found in the coverage search routine executed as part of Call Maintenance.

6 If `fscon1.log` shows contract lines with missing lot/serial numbers, choose one of these resolutions:

- If the contract line should provide coverage for specific items, the appropriate lot/serial number or numbers should be entered in Contract Maintenance on the source version database.
- If the contract line is really intended to cover every item for the associated end user, it is considered a blanket contract. When you restart MFG/CONV, you can run the report utility `svfscon2.p` to set this field to Yes for those contracts providing blanket coverage.

Note If the blanket contract condition does not apply to all lines on a contract, you should close the line items for specific item/serial numbers by adjusting contract line end dates. Once you have done this, you can create new contracts for those specific items.

7 Fixing discrepancies reported on `fscon3.log` may require several steps:

- Use Installed Base Item Maintenance (`fsisbmt.p`) to specify the appropriate lot/serial number for the item in the source version. The lot/serial number should be specified in the New Serial field.
- If the item is referred to by one or more calls, use Call Maintenance (`fscamt.p`) to modify the lot/serial number.
- If the item is referred to by one or more service quotes/contracts, not intended to be blanket contracts, use Service Quote/Contract Maintenance (`fsqomt.p` or `fssamt.p`) to modify the lot/serial number.

- 8 If you have identified blanket contract lines from the `fscon1.log` report, restart MFG/CONV, select the Source Version menu, choose the Reports option and run `svfscon2`. This utility sets the blanket flag (`sa_blanket`) on selected contracts to Yes.
Enter in the Contract/Quote field the contract number that has a missing lot/serial number, as reported on `fscon1.log`.
- 9 When you have finished running Source Version reports, continue with either:
 - “7: Performing a Full Conversion Dump and Load” on page 110.
 - “8: Performing an Incremental Conversion Dump and Load” on page 114.

7: Performing a Full Conversion Dump and Load

Follow either these instructions or the instructions under “8: Performing an Incremental Conversion Dump and Load” on page 114. For general information on full and incremental conversions, refer to “Choose a Full or Incremental Conversion” on page 88.

The tasks involved with a full conversion are:

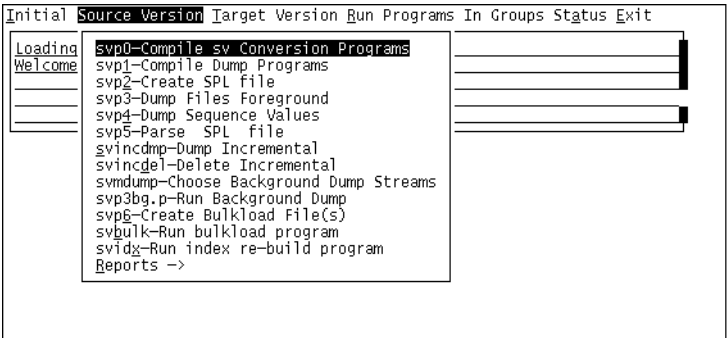
- “Preparation for Full Conversion” on page 110.
- “Data Dump” on page 112.
- “Bulkload and Index Rebuild for Full Conversion” on page 112.

Preparation for Full Conversion

- 1 If you are not currently in MFG/CONV, start it using the connection script you created.

```
./connect "SVInstallDir/SVDatabaseName"
```

- 2 If you have not yet compiled the source version programs, select the MFG/CONV Source Version menu and choose svp0, Compile sv Conversion Programs.



Note You must perform this step first; otherwise, you will receive a fatal error later in the conversion.

- 3 When the compile is complete, run the required programs listed below, either one at a time from the Source Version menu or in groups using the Run Programs In Groups menu.

If you choose Run Programs In Groups, select the programs by moving to each program name and pressing Space Bar. Choose Run Programs when ready.

Program	Description
svp1	Compile Dump Programs. Compiles the source version dump programs against the source version database. These dump programs are provided in the <i>TVInstallDir/conv</i> sub-directory.
svp2	Create SPL file. Creates the <i>9slpts.spl</i> file used during the bulkload portion of the conversion.
svp3	Do not run this program yet. It will be run later.
svp4	Dump Sequence Values. Dumps transaction history and other values from the source version database to be used when assigning sequences in the Version 9.0 database.

- 4 If your source version database has custom split schemas, you have the option to run the program `svp5`, Parse SPL File.

The `svp5` program creates separate database definition files (extension `.df`) for each split schema. Later, when you prepare for the bulkload, you will use these separate database definition files to create a split schema target version database.

♦ See “Answering Prompts” on page 101.

Before running `svp5`, you should have answered the appropriate prompts in the User Interface Questions screen.

Data Dump

- 1 Be sure all users are off the system and kept off. For example, you can block access to the startup scripts using the `chmod 700` command.
- 2 Run `svp3`, Dump Files Foreground.
- 3 After the dump is complete, choose `svp6`, Create Bulkload File(s). This option creates a bulkload descriptor file (extension `.fd`) for use during the bulkload.

Note You *must* run `svp6` for the bulkload to work correctly.

Bulkload and Index Rebuild for Full Conversion

A bulkload and index rebuild can be performed from either MFG/CONV or from the system command line. If you want to perform a bulkload and index rebuild from the command line, see “Command Line Bulkload and Index Rebuild” on page 176. To perform a bulkload and index rebuild using MFG/CONV, complete the following steps.

- 1 Select the Source Version menu and choose `svbulk`, Run bulkload program.

When prompted to disconnect from the source version database, choose Yes.

- 2 A second prompt displays the following environment variables. Make sure that the information is correct before proceeding.

```
./svbulk /TVDBDir/TVDBName
         /TVInstallDir/conv/DumpDir/SVDBName.fid
```

TVDBDir and *TVDBName* refer to your target version database directory and name, *TVInstallDir* refers to your target version installation directory, *DumpDir* refers to your conversion dump directory, and *SVDBName.fid* refers to your source version database name.

If any of the information is incorrect, choose No at the prompt. Select the Initial menu from the MFG/CONV screen, choose `svp0` (Set Up Environment), and enter the correct information at the appropriate prompt.

◆ For prompt details, see “Answering Prompts” on page 101.

- 3 After the load is complete, choose `svidx`, Run index re-build program.
- 4 When the following prompt displays, make sure the information is correct before proceeding.

```
./svidx /TVDBDir/TVDBName
```

TVDBDir and *TVDBName* refer to your target version database directory and name.

If the information is incorrect, choose No at the prompt. Select the Initial menu from the MFG/CONV screen, choose `svp0` (Set Up Environment), and enter the correct information at the appropriate prompt.

- 5 Check that the bulkload and index rebuild programs have completed and check their respective log files for errors.
 - Bulkload — *TVInstallDir/conv/svbulk.log*
 - Index Rebuild — *TVInstallDir/conv/svidx.log*

- 6 If you need to prepare target version data, choose Yes at the prompt to exit MFG/CONV. Continue with “9: Preparing Data in the Target Version” on page 121.
- 7 If you do not need to prepare target version data, choose No at the prompt and continue with “10: Running Target Version Conversions” on page 124.

8: Performing an Incremental Conversion Dump and Load

Follow either these instructions or the instructions under “7: Performing a Full Conversion Dump and Load” on page 110. For general information on full and incremental conversions, refer to “Choose a Full or Incremental Conversion” on page 88.

Note In the following situations, you must perform a full conversion instead.

- Converting a custom split schema database.
- Converting from a PROGRESS 6.x database using a Client/Server connection.

The tasks involved with an incremental conversion are:

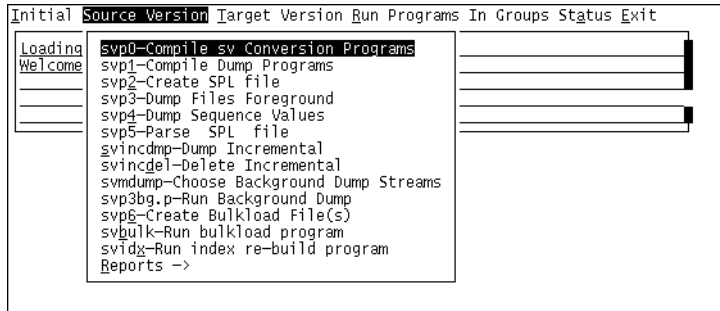
- “Preparation for Incremental Conversion” on page 114.
- “Update Production Database Schema” on page 116.
- “Bulkload and Index Rebuild for Incremental Conversion” on page 120.

Preparation for Incremental Conversion

- 1 If you are not currently in MFG/CONV, start it using the connection script you created.

```
.connect "SVInstallDir/SVDatabaseName"
```

- 2 If you have not yet compiled the source version programs, select the MFG/CONV Source Version menu and choose svp0, Compile sv Conversion Programs.



Note You must compile the conversion programs first; otherwise, you may receive a fatal error later in the conversion.

- 3 When the compile is complete, run the required programs listed below either one at a time from the Source Version menu or in groups using the Run Programs In Groups menu.

If you choose Run Programs In Groups, select the programs by moving to each program name and pressing the Space Bar. Choose Run Programs when ready.

Program	Description
svp1	Compile Dump Programs. Compiles the source version dump programs against the source version database. These dump programs are provided in the <i>TVInstallDir/conv</i> sub-directory.
svp2	Create SPL file. Creates the <i>9slpts.spl</i> file to be used later during the bulkload portion of the conversion.
svp4	Dump Sequence Values. Dumps transaction history and other values from the source version database to be used when assigning sequences in the Version 9.0 database.

- 4 Run the following set of source version programs *one at a time* in the following order. Do not use Run Programs In Groups.

Program	Description
svincdmp	Incremental Dump. Although most of the data remains in your existing database during an incremental conversion, MFG/CONV must dump a small number of tables to make conversion-related changes to the data structure.
svincdel	Incremental Delete. This option removes unnecessary data, including what was dumped by the svincdmp program. At the confirmation prompt, choose Yes.
svp6	Create Bulkload File(s). This option creates a bulkload description file, extension <code>.fd</code> for use during the bulkload. The bulkload will fail if you do not run this program. Note: Do <i>not</i> run this option if you convert from Version 8.5, because a bulkload description file is provided for you.
svincdmp	Incremental Dump. Although most of the data remains in your existing database during an incremental conversion, MFG/CONV must dump a small number of tables to make conversion-related changes to the data structure.

- 5 When the appropriate source version programs are finished, exit MFG/CONV.

Update Production Database Schema

If you are performing an incremental conversion from MFG/PRO versions 8.5 or 8.6 to MFG/PRO 9.0, additional steps are required to update your database schema. If you are converting from any other MFG/PRO version, continue with “Database Schema Update” on page 119.

A database schema update error can occur when converting a large database if the before-image file (extension `.bi`) exceeds the operating system size. To resolve this error, complete the instructions in “Editing Data Definitions for Schema Update” on page 175.

Additional Set-Up Instructions for MFG/PRO Version 8.5 and 8.6

If you are performing an incremental conversion from MFG/PRO versions 8.5 or 8.6, complete the steps in this section before updating your database schema.

The `df.ini` file contains a list of the `.df` (data definition) files required to build or update an MFG/PRO database schema. A small number of these `.df` files may not be required to update your database schema. To update your schema correctly, you must edit the `df.ini` file to reflect your source version database.

Note Back up the `df.ini` file located in your MFG/PRO target version directory before beginning.

- 1 In any text editor, open your target version `df.ini` file located at:
`TVInstallDir/df.ini`
- 2 In the `df.ini` file, locate the comment line that corresponds to your source version database. Only the line that corresponds to your source version database will have to be edited.
A comment line is indicated by a pound sign, for example:

```
# Build 9 from 8.5 db
```

or

```
# Build 9 from 8.6 db
```
- 3 Leave the text editor running and open the PROGRESS Data Dictionary.
- 4 Using the PROGRESS Data Dictionary, connect to your source version database.

- 5 If your source version database has any of the tables or the sequence listed in Table 7.7, use your text editor to remove the corresponding .df from your target version df.ini file.

Table 7.7
Editing the
df.ini File

Source Version Database Contents	Remove From Your df.ini File
em_mstr Table	grscrc.df
qp1n Table	uc1crc.df
sprf_mstr Table	webcrc.df
comd_det Table	adgcrc.df
cnt_mstr Table	uccrc.df
mf_sq01 Sequence	86seq.df

- 6 To remove a .df from your df.ini file, remove the comma proceeding the .df name, the .df name, and the .df extension from the line.

For example, the following df.ini file contains a comment line for converting MFG/PRO 8.5 to 9.0. The MFG/PRO 8.5 source version database contains the em_mstr table. Therefore, the grscrc.df needs to be removed from the df.ini file.

Original df.ini File

```
# Build 9 from 8.5 db
8.5,9,85up.df,86crc.df,86up.df,grscrc.df,uc1crc.df,
webcrc.df,uccrc.df,dfadgcrc.df,86seq.df,newup.df,
86epre.df,86ecrc.df
```

Edited df.ini File

```
# Build 9 from 8.5 db
8.5,9,85up.df,86crc.df,86up.df,uc1crc.df,webcrc.df,
uccrc.df,dfadgcrc.df,86seq.df,newup.df,86epre.df,
86ecrc.df
```

- 7 Save your changes and continue with the instructions in “Database Schema Update” on page 119.

Database Schema Update

- 1 Shut down the database server if it is running. To shut down your database server, use the following commands.

```
cd /TVInstallDir
./stop.DBSetName
```

Note The shut-down script terminates all user sessions and all database servers. For this reason, other database sets you have running, such as demo and training, may also shut down if they use common database servers, such as mfghelp and gui.

- 2 Change to your target version installation directory and start MFG/UTIL.

```
cd /TVInstallDir
./mfgutil
```

- 3 When MFG/UTIL opens, select the Database menu and choose Update Schema.
- 4 In the Update Schema window, enter the following information and choose OK.

Field	Description
Update this Database File	Enter the path and physical database name of your source version production database.
Using this Data Definition File	Enter the path to your target version installation directory and the <code>mfgempty.df</code> file.
Allow CRC Changes	Make sure to select this option.

Warning If your source version database is larger than three gigabytes, you may receive an error when updating the database schema. Specifically, the database `.bi` file could exceed the UNIX two-gigabyte size limit. If so, the solution is to edit your target version database definitions and rerun the MFG/UTIL schema update option.

See “Editing Data Definitions for Schema Update” on page 175 for instructions.

- 5 Exit from MFG/UTIL. Your source version database is ready to load the incremental dump files.

Bulkload and Index Rebuild for Incremental Conversion

A bulkload and index rebuild can be performed from either MFG/CONV or from the system command line. If you do not want to reconnect to MFG/CONV and want to perform a bulkload and index rebuild from the command line, see “Command Line Bulkload and Index Rebuild” on page 176. To perform a bulkload and index rebuild using MFG/CONV, complete the following steps.

- 1 From within your `TVInstallDir/conv` directory, connect to the source version database.
- 2 A second prompt displays the following environment variables. Make sure that the information is correct before proceeding.

```
./connect "SVInstallDir/SVDatabaseName"
```

```
./svbulk /TVDBDir/TVDBName
        /TVInstallDir/conv/DumpDir/SVDBName.fd
```

TVDBDir and *TVDBName* refer to your target version database directory and name, *TVInstallDir* refers to your target version installation directory, *DumpDir* refers to your conversion dump directory, and *SVDBName.fd* refers to your source version database name.

▶ For information on prompts, see “Answering Prompts” on page 101.

If any of the information is incorrect, choose No at the prompt. Select the Initial menu from the MFG/CONV screen, choose `svp0` (Set Up Environment), and enter the correct information at the appropriate prompt.

- 3 After the load is complete, choose `svidx`, Run index re-build program.
- 4 When the following prompt displays, make sure the information is correct before proceeding.

```
./svidx /TVDBDir/TVDBName
```

TVDBDir and *TVDBName* refer to your target version database directory and name.

If the information is incorrect, choose No at the prompt. Select the Initial menu from the MFG/CONV screen, choose `svp0` (Set Up Environment), and enter the correct information at the appropriate prompt.

- 5 Check that the bulkload and index rebuild programs have completed and check their respective log files for errors.
 - Bulkload — *TVInstallDir/conv/svbulk.log*
 - Index Rebuild — *TVInstallDir/conv/svidx.log*
- 6 If you need to prepare target version data, choose Yes at the prompt to exit MFG/CONV. Continue with “9: Preparing Data in the Target Version” on page 121.
- 7 If you do not need to prepare target version data, choose No at the prompt, and continue with “10: Running Target Version Conversions” on page 124.

9: Preparing Data in the Target Version

Depending on which MFG/PRO features you want to implement, complete the appropriate steps in this section. You must make these preparations in order for the target version programs to run correctly.

Note Perform all data preparation in a target version session.

Co-products/By-products Preparation

Follow these steps if you plan to implement Co-products/By-products.

- 1 Create the mix variance accounts used by the Co-products/By-products function. Create the appropriate accounting information using the standard General Ledger setup functions.
- 2 Update the System/Account Control File (36.1) with the new mix variance account information.
- 3 If a product line requires a mix variance account different from the one set in the System/Account Control File, update the product lines where the mix variance account differs from the system default.

Note You must run the Co-products/By-products conversion before processing any work orders.

Service/Support Management (SSM) Preparation

Follow these steps if you plan to implement SSM.

- 1 In MFG/PRO Versions 7.3, 7.4, and 8.5, coverage levels were set by service charge types. This method is obsolete in SSM. Instead, you have two alternatives:

- Redefine your coverage levels after conversion using the new features of SSM.
- Set up codes in your target version that map your service charge types to the new SSM definitions.

You will need to set up at least three invoice sort codes using Invoice Sort Code Maintenance (11.21.5). You must have at least one code of each type: Labor, Expenses, and Items. You can set up more codes if you want.

Service Charge Type	Invoice Sort Name	Invoice Sort Type
Items	Items	I
Labor	Labor	L
Expenses	Expenses	E
Travel	Travel Expenses	E
Miscellaneous Items	Miscellaneous Items	I

Note Travel expenses may be included in the Expenses invoice sort, and Miscellaneous Items may be included in the Items invoice sort.

- 2 Five new service accounts have been added to the accounts associated with product lines. If you want the conversion utility to supply account numbers and cost centers for these accounts for existing product lines, define default service accounts in the System/Account Control File (36.1).

- 3 Consider the setting you want for the new PO Required flag.

If you want the SSM conversion program to set this value to something other than No for end users, modify the value for their customer in Customer Address Maintenance (2.1.1).

This feature is associated with customers and end users. The PO Required flag indicates that this customer or end user must supply a purchase order number. End users will inherit the value of this flag from the customer they are related to.

For more information on codes and service limits, see *User Guide Volume 8: Service/Support Management*.

Currency Dependent Rounding (CDR) Preparation

Follow these steps if you are converting from MFG/PRO 7.3 or 7.4. If you are converting from MFG/PRO 8.5 or higher, you do not have to complete these steps.

- 1 Set up new rounding methods in Rounding Method Maintenance (36.2.9). The conversion applies the new rounding methods to existing transactions, GL balances, and history files.
- 2 The conversion records rounding variances generated during the conversion to the accounts you specified in the MFG/CONV user interface prompts. If you want to establish new rounding accounts or cost centers to record these variances, set them up in MFG/PRO.

▶ See *User Guide Volume 11: Manager Functions* for details on setting up rounding methods.

Global Shipping Preparation

Follow these steps if you plan to implement Global Shipping.

- 1 Each pre-shipper, shipper, and master bill of lading that cannot be renumbered must have a valid NRM sequence. To be considered valid, a shipping document number must match the format of an NRM sequence of the appropriate dataset, as though the NRM sequence was used initially to issue the number. Create as many NRM sequences as necessary to account for all existing pre-shipper, shipper, and master bill of lading numbers that are not permitted to be renumbered.

Note Shipping documents with numbers that do not match a valid NRM sequence are renumbered by the conversion utility.

- 2 The conversion utility creates company address records for all shipping sites without corresponding address records. All fields in the new address records are copied from the default company address specified in the Sales Order Control File (7.1.24). To use different information than the default company address, either create new address records prior to running the conversion or edit the address records after the conversion.

10: Running Target Version Conversions

The data conversion includes many programs that you can run independently of each other. For details on the operations of these programs refer to Chapter 8, “Conversion Program Reference,” on page 143.

- 1 Change to your target version installation directory.

```
cd TVInstallDir/conv
```

- 2 In the target version directory, copy your target version single-user start-up script or create a new one. You can create start-up scripts in MFG/UTIL using the Scripts menu.

- 3 Edit the copy of the start-up script with a text editor.

```
vi connect
```

- a Add the following line to the front of the PROPATH statement, maintaining the rest of the statement.

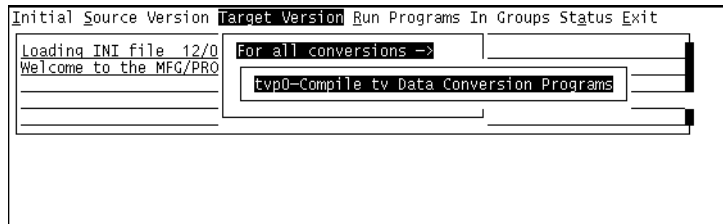
```
PROPATH=.:us:us/xrc:us/src:TVInstallDir/conv/triggers
```

- b Make sure your PROPATH contains your target version environment. Program `tv6` causes triggers to fire at run time; these triggers are located in your target version directories.
 - c Remove the line that changes to the home directory, `cd $HOME`.
 - d Make sure the script connects to not only your target version production database, but also to your target version gui, cfg, and mfghelp databases. If you are not connected to these three databases, program `tv8` will not compile.
 - e In the new start-up script, at the `-p` start-up parameter, change the program name from `mf.p` to **mfgconv.p**.
 - f Save your changes and quit from the text editor.

- 4 From within the *TVInstallDir/conv* sub-directory, start the new script.

```
./connect
```

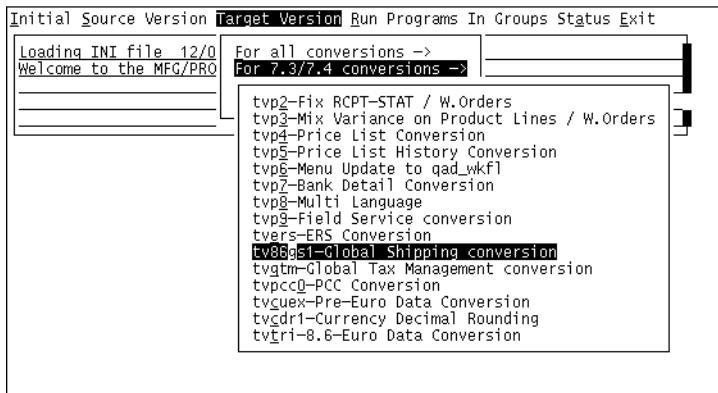
- 5 At the following screen, select Target Version from the menu bar and choose the For all conversions menu option.



- 6 From the For all conversions menu, run tvp0.p, Compile tv Data Conversion Programs.

- 7 When tv0.p is finished, choose the Target Version menu option appropriate to your source version database.

For example, to run target version conversion programs for a 7.3 or 7.4 source version database, choose the For 7.3/7.4 conversions menu option.



♦ For program details, see Chapter 8, “Conversion Program Reference,” on page 143.

- 8 The programs you need to run for your conversion depend upon your target version and the features you plan to implement.

You can run the conversion programs one at a time from the appropriate Target Version menu option or in groups using the Run Programs In Groups menu.

For a list of target version conversion programs, use the following section that corresponds to your source version.

Note Some programs may not appear, depending on what source version you are converting, which is detected automatically.

Conversions from Versions 7.3 or 7.4

- Run the following required programs.

Program	Title
tvp6.p	Menu Update to qad_wkfl
tvp8.p	Multi-Language
tvceex.p	Pre-Euro Data Conversion
tvcd1.p	Currency Dependent Rounding Note: Read Chapter 8, “Conversion Program Reference,” before running this conversion.
tvtri.p	Euro Data Conversion Note: You must run tvceex.p and tvcd1.p before running the Euro Data Conversion.

- Run the following programs to implement the applicable feature for the first time.

Program	Title	Feature
tvp2.p	Fix RCPT STAT /W. Orders Note: Some errors may be generated by this program if you have qad_wkfl records that have already been converted to the Advanced Repetitive format. You can safely ignore these errors.	Compliance
tvp3.p	Mix Variance on Product Lines/W. Orders	Co-products/By-products
tvp4.p	Price List Conversion	Sales Order Pricing
tvp5.p	Price List History Conversion	Sales Order Pricing

Program	Title	Feature
typ7.p	Bank Detail Conversion	
typ9.p	Field Service Conversion Note: Read Chapter 8, "Conversion Program Reference," before running this conversion.	Service/Support Management
tvers.p	ERS Conversion	Evaluated Receipts Settlement
tv86gs1.p	Global Shipping Conversion	Global Shipping
tvgtm.p	Global Tax Management Conversion	Global Tax Management
tvpsc0.p	PCC Conversion	Product Change Control

Conversions from Versions 8.5

- Run the following required programs.

Program	Title
tvcuex.p	Pre-Euro Data Conversion
tvtri.p	Euro Data Conversion Note: You must run tvcuex.p (Pre-Euro Data Conversion) before running the Euro Data Conversion.

- Run the following programs to implement the applicable feature for the first time.

Program	Title	Feature
tv86gs1.p	Global Shipping Conversion	Global Shipping
tvgtm.p	Global Tax Management Conversion	Global Tax Management
tvpsc0.p	PCC Conversion	Product Change Control

Conversions from Versions 8.6

- Run the required `tvecg.p`, ECommerce Data Conversion program.
- If you are converting from 8.6B, C, or D, run the following required programs.

Warning If you are converting from 8.6E, *do not run* these programs. The euro functionality implemented by these conversions is already present in your 8.6E database; the conversions will eliminate any data associated with this functionality.

Program	Title
tvcuex.p	Pre-Euro Data Conversion
tvtri.p	Euro Data Conversion Note: You must run tvcuex.p (Pre-Euro Data Conversion) before running the Euro Data Conversion.

- If you are converting from 8.6C and have the Logistics API implemented, run `tvpl10.p`, Logistics Data Conversion program.
- If you are converting from 8.6D, run `tvsite.p`, Supplier Performance Conversion program.

9 Exit MFG/CONV by choosing Exit from the Exit menu.

11: Performing Post-Conversion Steps

◆ For a list of data verification reports, see “2: Preparing Reports for Data Verification” on page 93.

- 1 Start a target version session.
- 2 Run the database sequence initialization program, `utsequ.p`. This program initializes any sequences that have been introduced in the current release. At any menu level prompt, type `utsequ.p` and press Go.
- 3 Run the same reports you ran against the source version database and compare them. There should be no data conflicts.
- 4 Refer to the *MFG/PRO 9.0 Release Bulletin* for additional conversion utilities required for the modules you use. These additional conversion utilities, which are related to a particular programming patch (ECO), correct possible corruptions in your data.
- 5 Perform a full system backup.

Loading Service Pack Media

QAD Service Packs provide MFG/PRO product updates between releases. If you are converting to a release of MFG/PRO that has a Service Pack, use the information in the following section to implement these updates. If your target version MFG/PRO does not have a Service Pack, skip this section.

▶ See “Loading Service Pack Media” on page 7.

- 1 If you performed a full conversion, load the Service Pack media during the installation of your target version database server and client.
- 2 If you are performing an incremental conversion, your gui, help, and configurator databases were updated with the Service Pack files during the installation of your target version database server and client. Because your target version production database was generated from your source version database, it was never updated with the Service Pack files. To update it, use the installation instructions that accompany the Service Pack Server media.

▶ See “Conversion Overview” on page 86.

MRP to Repetitive Approval

To implement the MRP to Repetitive Approval functionality introduced in MFG/PRO 9.0, complete the following steps. For more information on this functionality, see the Features and Changes in Version 9.0 chapter of the *MFG/PRO 9.0 Release Bulletin*.

- 1 To implement MRP to Repetitive functionality, run the Production Line Update utility (18.25.4 or 18.22.25.4) after completing your conversion or upgrade. Run this utility for all sites and items that were defined using Production Line Maintenance (18.1.1 or 18.22.1.1).
- 2 If you have set up generalized codes for the Pur/Mfg field, you must add L (line manufactured) as a valid item code for that field using Generalized Code Maintenance (36.2.13).

- 3** There are two options for converting existing item Pur/Mfg codes to L (line manufacture). An existing item's code can be changed individually from manufactured, purchased, or any other valid value to the new line manufactured code using Item Master Maintenance (1.4.1). Optionally, you can use the following instructions to create a CIM file to change any or all of your existing item codes automatically.

- a** Create a list of items and their corresponding item numbers that you want to designate with the line manufacture (L) code.
- b** For each item number, use a text editor to create a CIM file. To update item codes, use either Item Planning Maintenance (1.4.1—ppptmt.p) or, for site-specific items, Item-Site Maintenance (1.4.17—pppsmt.p).

In the following example, the Item Planning Maintenance program (ppptmt.p) is called, item number 10-10000 is entered, hyphens are used to navigate to the Pur/Mfg field, and an L is entered for that item.

```
@@batchload ppptmt.p
"10-10000"
----- "L"
@@end
```

- c** When you have completed your CIM file, save it to your MFG/PRO client working directory.
- d** Perform a CIM data load using this file.

► For more information, see the CIM interface chapter in *MFG/PRO 9.0 User Guide Volume 11: Manager Functions*.

ISO 8601 Utilities

If you are converting from MFG/PRO Version 8.6D or higher, you can skip this section.

The International Standards Organization (ISO) defines the first week of a new calendar year as the first Thursday in January (ISO 8501, paragraph 3.17). Prior to MFG/PRO 8.6D, MFG/PRO considered the first Wednesday in January as defining the first week of the year. Consequently, you must run the ISO 8601 Forecast Conversion (22.26) utility (utfc8601.p) and the ISO 8601 Ops Planning Conversion (33.26) utility (utop8601.p) to comply with ISO 8601.

Complete the following steps to realign the quantities within the Forecasting/Master Scheduling and Operations Planning modules. As a result of running the utility, the following years will have different start dates: 1981, 1987, 1998, 2004, 2009, 2015, 2026, 2032, 2037, and 2043.

Note These utilities can only be run once. If your data has already been converted, the utilities will not reconvert it.

- 1 Run the utfc8601.p utility. At any menu level prompt, enter utfc8601.p and press Go.

This utility will remap all existing quantities in the Forecasting/Master Scheduling Module to correlate with the week for which they were calculated prior to the conversion.

This utility enables you to apply a percentage of the forecast for the last week in a year previous to an affected year to the first week of the new year. For example, you can apply 50% of the forecast for the last week of 2003 to the first week of 2004.

- 2 Run the utop8601.p utility. At any menu level prompt, enter utop8601.p and press Go.

This utility will remap all existing quantities in the Operations Planning Module to correlate with the week for which they were calculated prior to the conversion.

This utility enables you to apply a percentage of the forecast for the last week in a year previous to an affected year to the first week of the new year. For example, you can apply 50% of the forecast for the last week of 2003 to the first week of 2004.

If You Performed Global Shipping Conversion

- 1 Determine if any custom shipper print programs are in use. Custom shipper programs are of the form *rcrp13NN.p*, where *NN* is any two-character form code string, except “01” (*rcrp1301.p* is the pre-MFG/PRO Version 8.6 standard print program for form code “01”). A document format for each custom shipper print program is created during the conversion.
- 2 If any custom shipper print programs exist, determine which of the existing shippers and pre-shippers would normally be printed with a custom program. Using the Shipper Document Format Mass Change Utility (2.18.25), assign document formats to existing shippers as necessary. The document format associated with the standard form code “01” is assigned to all shippers during the conversion; the mass change utility is only needed for those shippers requiring a custom print program.
- 3 The conversion utility created company address records for all shipping sites without corresponding address records. All fields in the new address records were copied from the default company address specified in the Sales Order Control File (7.1.24). If you want to use information other than the default company address and you did not create new address records prior to running the conversion, edit the address records after the conversion.

If You Performed SSM Conversion

- 1 Review and correct any error messages displayed in the conversion log.
- 2 If you chose to convert service charge types, review the resulting service type coverage.
- 3 If you use engineer scheduling, execute the Rebuild Engineer Schedule utility (11.25.6) to recalculate engineer schedules.
- 4 If you maintain an installed base, execute the Installed Config File Rebuild utility (11.3.23) to rebuild installed base parent/child relationship information correctly.

- 5 From the following table, determine which utilities you need to run and execute them by choosing the menu number or typing the program name at any menu prompt. Also, refer to *MFG/PRO 9.0 User Guide Volume 8: Service/Support Management* for information on the conversion utilities used to implement the time zone feature.

Utility	Menu	Description
uxengad.p	11.13.25	Initialize Engineer Addresses
uxsadprl.p	11.5.13.25.3	Initialize List Prices
uxeusort.p	11.25.11	Update End User Sort Name
uxfsrts1.p	11.25.12	Update Ship Type for RTS
uxrmafix.p	11.25.13	RMA Service Contract Utility
uxrmdat.p	11.25.10	RMA Ship Date Correction

- 6 If converting SSM from MFG/PRO 8.5, run these utilities as well.

Utility	Menu	Description
uxfs8601.p	36.27.3	Service GTM Conversion: This utility moves variables in the Billing Detail and Billing History files used to support Global Tax Management and Canadian taxes into their proper new database position. If this utility is run more than once, the user's data will not be jeopardized; however, you should run it in update mode no more than once.
uxfsusr.p	11.25.14	Load User Preferences: Run only if you previously defined service user preferences in Service/Support User Preferences (11.21.23) or User Maintenance (36.3.18). In Version 8.5, service preferences were stored in the usr_mstr. In Version 9.0, they are stored in a new file reserved for SSM (fusr_mstr). This utility moves preferences from one file to the other.

Utility	Menu	Description
uxusertz.p	11.21.22.25	Initialize User TZ from Engineer: Only required if you used the MTZ option in Version 8.5. In 8.5, users had to be set up as engineers to define a time preference. In Version 9.0, time zone has been added to Service/Support User Preferences (11.21.23). This utility searches engineer records and defines corresponding user preferences for them.
uxj1b6.p	11.25.16	J1B6 Utility: This utility must be run after installing a release containing J1B6 regardless of whether you are going to activate MTZ. It initializes two new date/time fields for every call record, deletes engineer schedules with an unavailable status, and deletes engineer call tracking records, which are no longer used for calculating availability.

Additional SSM Post-Conversion Notes

On-call scheduling did not work correctly prior to Version 8.5, so there is no way to correctly convert any engineer schedules that were marked as on call before. To use the new on-call scheduling feature in SSM, refer to the *MFG/PRO 9.0 User Guide Volume 8: Service/Support Management*.

As of Version 8.5, RMA issue lines are priced exactly like sales order issue lines. The sales order pricing conversion will convert price lists from the old price list structure file to the new sales order pricing format. Pricing on existing RMA lines should be unaffected unless you specify Yes to the Reprice flag in RMA Maintenance.

If You Performed Sales Order Pricing Conversion

If you ran the conversion program `tv4 . p` (Price List Conversion), you must run the Analysis Code Detail Build (1.8.19) to process the analysis codes created by `tv4 . p`.

The Analysis Code Detail Build generates the link between the analysis codes and the actual customers.

If You Performed Product Change Control (PCC) Conversion

After running the PCC conversion utility, open the following PCC programs to verify that the enable field is set to Yes.

- Enable PCC Routing Maintenance (14.22)
- Enable PCC Item Spec Maintenance (19.1.22)
- Enable PCC Structure Maintenance (13.13.22)
- Enable PCC Formula Maintenance (15.22)

If You Performed Euro Data Conversion

- 1 Because the default account and cost center information may not be applicable to all currencies, run Currency Maintenance (26.1) to customize exchange gain, loss, and rounding accounts and cost centers.
- 2 If your MFG/PRO source version is 7.3 or 7.4, check to ensure the proper rounding method is used for each currency.
For MFG/PRO Version 7.3 and 7.4 conversions to Version 9.0, the default currency rounding method rounds two digits to the right of the decimal point for all currencies.
- 3 To implement euro functionality, use EMU Currency Maintenance (26.19) to define the relationship between the union currency, the euro, and each member currency.

Note If the Euro Toolkit was implemented in your source version, complete step 3 to verify your data.

If You Performed Corporate Commodity Codes Conversion

Run Commodity Code Maintenance (1.4.19) and verify your corporate commodity codes and part numbers using your source version commodity code sample.

If You Performed Supplier Performance Conversion

- 1 Run the Supplier Performance Data Report (5.15.14) and verify your target version data against your source version report.
- 2 Run the Summary Data Report (5.15.20) and verify your target version data against your source version report.

If You Converted from MFG/PRO 7.3

Run Populate Vpo_det Utility for 7.4 (28.25.4 or uxvpodet . p). This utility populates the vpo_det file so that purchase orders appear correctly on Voucher Inquiry (28.2).

If You Converted from an 8.5D Database

Run the following utilities related to Distribution and Manufacturing programming patches (ECOs).

ECO	Menu	Label	Program
G2G2	36.25.64	Fix commission from qad_wkfl	uxarcomm.p
G2G1	16.25.15	WO Routing Actual Setup Utility	uxwooput.p

12: Restoring Custom Default Data

After you have completed the conversion, follow these steps to return your custom changes to the MFG/PRO default data.

Custom Menus and Messages

You must reenter your custom menu and message information into Version 9.0. To help identify what your custom changes were, you should have printed the following reports from MFG/CONV:

- svmndrep (Menu data)
- svmsgrep (Message data)
- svlndrep (Language detail)
- svlngrep (Language master)

Custom Online Help

- 1 *Prerequisite:* You should have already loaded the MFG/PRO Version 9.0 field help data according to the instructions in Chapter 3, “Database Server Setup,” on page 27.
- 2 Start a single-user session of your Version 9.0 database. Select Field Help Load (36.4.19).
- 3 In the Language field, make sure to enter a language code. For English, the standard language code is us.
- 4 Enter user as the beginning and ending range in the Text Type and To fields.
- 5 The field help dump filename will default to `fieldhlp.fhd`. You can overwrite this default.
- 6 Press Go to begin the load.

MFG/PRO for Windows Custom Data

Complete these steps if you preserved your custom interface data according to the instructions in “4: Preserving Custom Default Data” on page 95.

- 1 Use Database Dump/Load (36.16.3) to load the source version GUI data files. Complete the fields as follows.

Field	Description
Database Name:	Type the database name of the MFG/PRO 9.0 gui database.
Dumpfile Directory:	Type the full path to the source version dumpfile directory.
Dump/Load:	Load
File Name:, To:	Load the following data files: drl_mstr.d brw_mstr.d vue_mstr.d utd_det.d brwf_det.d vuf_det.d mnts_det.d brwt_det.d vwj_det.d uss_mstr.d
Allow Errors:	Yes

- 2 When the load is complete, open Browse Maintenance (36.20.12) from either a character or Windows client session. For each of your custom browses, do the following
 - a Select a custom browse name in the Name field. Press Go to open the Browse Data frame.
 - b Select the Power Browse or Look-up Browse option. A Power Browse includes all of the browse features, and a Look-up Browse includes a subset of the browse features.
 - c Choose the OK button to store your changes. For each custom browse, MFG/PRO creates a source code program, which you must compile in a later step. The naming convention for the source code program is:


```
xxbr001.p -or- xxlu001.p
```

xx = first two characters of the browse name
br = br indicates a Power Browse
lu = lu indicates a Look-up Browse
001 = system-assigned number
 - d Exit Browse Maintenance.
- 3 Open Drill Down Maintenance (36.20.1). For each custom drill down record that connects to a browse (check the Procedure to Execute field), change the old browse program name to the new browse name, as indicated in the *MFG/PRO 9.0 System Administration Reference Guide*.
- 4 If the drill down links to a program that has been rewritten in the objects programming style, you must also use the program name in the Calling Procedure field.
- 5 Exit Drill Down Maintenance.
- 6 Open Menu Substitution Maintenance (36.20.3). Reenter your source version custom menu substitutions.
- 7 If you have any other modifications, as opposed to additions, you must reenter them. Keep a copy of these modifications because they may be overwritten in future releases.

- 8 Exit the MFG/PRO session.
- 9 Compile each browse program using MFG/UTIL.
 - a Change to the Version 9.0 installation directory and start MFG/UTIL.


```
cd /InstallDir
./mfgutil
```
 - b In MFG/UTIL, select the Programs menu and choose Compile Procedures.
 - c Complete the dialog box and choose Compile.

13: Converting GL Report Writer and Intrastat

In Version 9.0, there are no longer separate GL Report Writer or Intrastat databases. If you had the GL Report Writer or Intrastat module implemented, you must follow some additional steps to dump and load the data into the Version 9.0 production database. These steps require that you use PROGRESS 4GL.

GL Report Writer Files

Table 7.8 lists the database files that need to be dumped from the GL Report Writer database and loaded into the target version production database.

grad_det	grc_mstr	grr_mstr
gral_det	grhd_det	grtx_det
gras_det	grqd_det	grx_mstr
gra_mstr	grrd_det	gr_ctrl
grcd_det		

Table 7.8
GL Report Writer
Files

Intrastat Files

Table 7.9 lists the database files that need to be dumped from the Intrastat database and loaded into the MFG/PRO target version production database.

Table 7.9
Intrastat Files

iec_ctrl	ieh_hist	csid_det
ied_det	ie_mstr	csim_mstr

To Dump and Load Data:

- 1** Create a dump directory for the source version data.
- 2** Use a PROGRESS dump procedure to unload data from the source version GL Report Writer or Intrastat database.
 - a** Start a PROGRESS client session, connecting to either the GL Report Writer or Intrastat database.
 - b** Invoke the PROGRESS Data Dictionary function from the PROGRESS editor.
 - c** Select the Admin menu.
 - d** Select the Dump Data and Definitions menu.
 - e** Select the Table Contents (.d files) menu.
 - f** Select all the files listed.
 - g** Press Go.
 - h** Specify the dump directory.
 - i** Press Go.
 - j** Exit PROGRESS through the Database menu.

- 3 Use a PROGRESS load procedure to load the data into the target version production database. Perform this step after you have successfully completed the conversion.
 - a Start a PROGRESS client session, connecting to target version production database.
 - b Invoke the PROGRESS dictionary function from the PROGRESS editor.
 - c Select the Admin menu.
 - d Select the Load Data and Definitions menu.
 - e Select the Table Contents (.d files) menu.
 - f Select the GL Report Writer or Instrastat data files; refer to Table 7.8 and Table 7.9.
 - g Press Go.
 - h Specify the directory where the dump files reside.
 - i Leave the Acceptable error percentage set to 0 (zero). No errors are expected at this setting.
 - j Press Go.
 - k Exit PROGRESS through the Database section.

To Synchronize GL Report Writer:

- 4 If you have dumped and loaded a GL Report Writer database, start MFG/PRO, and choose Synchronize G/L Data (25.21.21).
 - a Enter the first G/L calendar year/period in the system in the Begin with Period field.
 - b Enter the current G/L Calendar year/period in the Calculate Balances Through field, unless some other ending date is appropriate for your implementation.

14: Converting Operations Planning

If you are converting data from an earlier version of the Operations Planning feature, you must run the programs listed below.

- Recalculate Summary Records (33.25.1)
- Production Line Update (33.25.3)

Conversion Program Reference

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Conversion Program Overview

This chapter describes many of the conversion programs you run against the target version database. Some of these programs are optional, depending on which target version features you plan to implement. Table 8.1 lists the programs included in this chapter.

Table 8.1
Conversion
Programs

For Features Introduced with Version 8.5:		
tv2.p	Fix RCPT STAT /W. Orders	Compliance feature
tv3.p	Mix Variance on Product Lines/ W. Orders	Co-products/By-products feature
tv4.p	Price List Conversion	Sales Order Pricing feature
tv5.p	Price List History Conversion	Sales Order Pricing feature
tv9.p	Field Service Conversion	Service/Support Management feature
tvdr1.p	Currency Dependent Rounding	Currency Dependent Rounding
tvrs.p	ERS Conversion	Evaluated Receipts Settlement
For Features Introduced with Version 8.6:		
tv86gs1.p	Global Shipping Conversion	Version 8.6 Shipping feature
tvgtm.p	Global Tax Management Conversion	Global Tax Management feature
tvpc0.p	PCC Conversion	Product Change Control feature
tvtri.p	Euro Data Conversion	Euro and Multi-Currency Exchange feature
tvcomcd.p	Corporate Commodity Codes	Corporate Commodity Code feature
For Features Introduced with Version 9.0:		
tvsite.p	Supplier Performance Conversion	Supplier Performance feature
tv10.p	Logistics Data Conversion	Universal Logistics API
tvcecg.p	ECommerce Data Conversion	ECommerce Gateway feature

Compliance

Conversion Procedure: tvp2.p, Fix RCPT-STAT, WO.

Requirement: Required only if you implement Compliance. Not required if you are converting from MFG/PRO Version 8.5 or higher.

Compliance Documentation: *MFG/PRO User Guide Volume 9: Compliance.*

Purpose

This conversion moves various fields from the work file to new locations in the database schema in order to comply with the new Compliance programs.

Outcome

The conversion mainly affects where records are stored in the database. However, it also creates the Compliance control file (clc_ctrl) if it does not exist and sets both the Modify Co-products/By-products Receipt flag and Modify Component Issue flag to Yes.

Finally, the conversion sets the Lot Control Level flag to zero, which indicates that the lot/serial numbers allow for duplication. If you later change this setting to either one or two (indicating a level of uniqueness), you must run Lot Master File Build (1.22.22) to update the Lot Master file.

New Database Elements

- Various work order fields in wo_mstr
- Various work order rounding fields in wr_route
- Various standard routing fields in ro_det
- pt_rctpo_status, pt_rctpo_active, pt_rctwo_status, and pt_rctwo_active
- in_rctpo_status, in_rctpo_active, in_rctwo_status, and in_rctwo_active

Co-products/By-products

Conversion Procedure: `tv3.p`, Mix Variance on Product Lines/W. Orders.

Requirement: Required only if you implement Co-products/By-products. Not required if you are converting from MFG/PRO Version 8.5 or higher.

Documentation: *MFG/PRO User Guide Volume 3: Manufacturing.*

Purpose

This conversion updates the Mix Variance Account values for product lines and work orders.

Outcome

For every product line where the Mix Variance Account is blank, the conversion updates the product line using the default Mix Variance Account from the System/Account Control File.

For every work order where the Mix Variance Account is blank, the conversion locates its product line based upon the item number of the work order and updates the work order's Mix Variance Account from the product line's mix variance account.

New Database Elements

- `gl_xvar_acct`
- `gl_xvar_cc`
- `pl_xvar_acct`
- `pl_xvar_cc`
- `wo_xvar_acct`
- `wo_xvar_cc`

Sales Order Pricing: Price List Conversion

Conversion Procedure: tvp4.p, Price List Conversion.

Requirement: Optional. Not required if you are converting from Version 8.5 or higher.

Sales Order Price Documentation: *MFG/PRO User Guide Volume 6: Master Files.*

Purpose

The purpose of the price list conversion is to provide a bridge to support the pricing requirements of the new release until the new price lists are developed.

The use of this conversion utility is to be considered short term in its benefit. The greater, long-term benefit will be to develop price lists based on the categorization of customers and items using the new analysis code functionality.

Note Conversion of price lists is not required if you instead develop new price lists after implementing Version 9.0.

Outcome

In order to minimize the number of new price lists to be created (in most cases, for every source version price list a Version 9.0 price list will be created), analysis codes for customers are created based on their relationship to source version price lists. Only price lists that are currently linked to customers or price lists without association to any customer or supplier are converted.

If a converted price list utilized a product line, the item code is set to the product line, or the item number is used. Be aware that any future use of this price list based on a product line item code will require the execution of Analysis Code Detail Build (1.8.19) in order to establish product line-to-item relationships that the new pricing functionality tests for.

If the converted price list is not associated to any customer, customer code will represent *all* (effectively blank); then the price list will be set to a status of *manual* or it will be considered *automatic*.

New Database Elements

- an_mstr
- ans_det
- pid_det
- pih_hist
- pi_mstr

Sales Order Pricing: Price List History Conversion

Conversion Procedure: tvp5.p, Price List History Conversion.

Requirement: Required only if you implement Sales Order Pricing. Not required if you are converting from MFG/PRO Version 8.5 or higher.

Sales Order Price Documentation: *MFG/PRO User Guide Volume 6: Master Files.*

Purpose

The second Sales Order conversion utility creates price list history.

Outcome

For each sales order line and sales quote line, the utility creates a discount type price list record based on the difference between list price and net price.

Note As of Version 8.5, sales discount is now posted to the General Ledger from price list history when the source of the order is from the Sales Order module.

Additionally, the conversion sets the new database elements in sales orders, and sales quotes regarding pricing dates are set to order date or due date based on the current control file settings for pricing by line item date.

Service/Support Management (SSM)

Conversion Procedure: tvp9.p, Field Service Conversion.

Requirement: Required only if you implement SSM. Not required if you are converting from MFG/PRO Version 8.5 or higher.

SSM Documentation: *MFG/PRO User Guide Volume 8A and 8B: Service/Support Management.*

Purpose

The conversion program adjusts the format of existing data from Field Service (prior to Version 8.5) to SSM (Version 8.5 and higher).

Outcome

The Field Service conversion can convert the service charge types in your source version into the new way they are defined in SSM (Version 8.5 and higher). As prerequisites, you should have:

- Set up codes in MFG/PRO 9.0 that the conversion program can use to map your service charge types into the new way they are defined in SSM.
- Completed the appropriate prompts in MFG/CONV regarding service charge types.

The conversion can also update existing product lines with account numbers for the new service accounts and cost centers. As a prerequisite, you should have defined default service accounts in the System Account Control File (36.1) for the Version 9.0 database.

Currency Dependent Rounding (CDR)

Conversion Procedure: `tvcd1.p`, Currency Dependent Rounding.

Requirement:

- Required if you implement CDR.
- Required if you are converting from Version 7.4 to 9.0.
- Not required for conversions from versions 8.5 or higher.

CDR Documentation: *MFG/PRO User Guide Volume 6: Master Files.*

Purpose

If you are implementing new rounding methods through the Currency Dependent Rounding (CDR) feature, you can use this conversion program to apply the new rounding methods to existing transactions, GL balances, and history files. Examples of new rounding methods include:

- One or zero decimals, rather than the default two decimals forced by earlier versions of MFG/PRO.
- Two decimals with a nonstandard rounding threshold. For example, a threshold of .000 would mean amounts with any fractional currency unit are rounded up.

By running this conversion, existing transactions that appear on financial and other statements will follow the same rounding method as new transactions. There are, however, some exceptions; see “Externally Reported Records” on page 151 for details.

Program Operations Summary

The CDR conversion program rounds existing records in the following files:

- Posted and unposted transaction files
- Various history files

Note Transaction and history records comprise the largest file sets in MFG/PRO. Be prepared for this utility to run a very long time, depending on the amount of data and history you have on your system.

The conversion program rounds these records according to the new rounding method you have created for the base currency. (For more information regarding non-base currencies, see “Non-Base Currency Accounts” on page 153.) Rounding method records are created in Rounding Method Maintenance (36.3.9). If you do not have any rounding methods when you run this conversion, it will create three default rounding methods by running the program `uxcnvrnd.p`.

In addition, the conversion program does the following:

- It posts GL adjustments to balance the rounding to posted GL transaction records. You can specify the accounts used for these adjustments in MFG/CONV. To review the resulting transactions, run Transaction Register (25.13.21) after running the CDR Conversion program.
- It moves any existing rounding method records into the new tables set up for CDR. Existing rounding method records include the Rounding Factor from the System/Account Control File, which was set up for Global Tax Management or GL Report Writer or both. These other modules now use the rounding methods set up in Rounding Method Maintenance (36.3.9).
- It creates a report on the changes it makes. You can also specify whether to only generate the report or to update the database as well.

Externally Reported Records

The CDR conversion program does not round the amounts for *externally reported* records, such as the records for invoices, purchase orders, drafts, vouchers, and checks. The affiliated tax records are also not rounded. These records are not rounded because they appear on documents presented to outside third parties. These are legal documents that must be honored as they were originally recorded and distributed.

However, the CDR conversion program does round the posted and unposted GL transactions created for these externally reported records. After the GL transaction records are rounded, discrepancies may exist between currently open transactions and the GL transaction records. Examples of cases where such discrepancies will become apparent include:

- A bank statement dated prior to the MFG/PRO conversion is received after conversion, and the user wants to reconcile it against the MFG/PRO bank transactions.
- An invoice is received after conversion for purchases made prior to conversion, and the user wants to issue a payment against that invoice.
- A payment is received after conversion for sales invoiced prior to conversion, and the user wants to mark the invoice as fully paid.

Note Such situations will diminish over time as all transactions straddling the conversion date are completed, posted, and closed out.

MFG/PRO will correct these discrepancies by posting an adjustment to a Price Variance account, unless you override the default account at the time of posting. The Price Variance account is what MFG/PRO typically uses for price discrepancies introduced by a third party.

If you want to override the default adjustment to the Price Variance account, you must enter a manual adjustment in Standard Transaction Maintenance (25.13.1). Be aware that all of the GL transaction maintenance procedures will force you to adhere to the decimal precision of the base currency. For example, if your base currency has a decimal precision of zero decimals, you will not be able to enter an adjusting entry of \$0.17. You must first go into System/Account Control File (36.1) and set the base currency decimal precision (Rounding Method) to 2 before you can enter two-decimal amounts in any GL transaction maintenance procedure.

Externally Reported Records and History Files

For MFG/PRO history files, the CDR conversion will round all history amounts, including amounts for externally reported records. It does this so that history reports correspond more closely to the rounded amounts on GL reports. Because history amounts are used internally, rounding the externally reported records will not impact your company's legal obligations to outside third parties.

Non-Base Currency Accounts

MFG/PRO typically tracks non-base currency accounts in both the non-base and base currencies. It also stores the transaction exchange rate initially used to calculate one value from the other.

However, this exchange rate is more for historical interest and is not updated to reflect current conditions. Because currency exchange rates constantly fluctuate, the two amounts, once calculated and stored, cease to bear any real relationship to each other. This condition is aggravated with CDR rounding because the rounding of the amounts causes a further deviation from the actual exchange rate used in these calculations.

For these reasons, the CDR conversion program will simply round the base and non-base amounts separately without attempting to reconcile the amounts per any exchange rate.

Be aware that rounding *variances* on non-base currency accounts will be taken only against the base currency amount. Non-base currency variances are not tracked by MFG/PRO in the General Ledger and will be ignored.

In the cases where non-base accounts are revalued to base currency, the CDR conversion program will round the non-base currency amount, multiply it by the current exchange rate to produce an unrounded base currency amount, and round this base amount. This rounded base amount is then used to calculate any revaluation variances.

Update of History Files

Many of the *h_hist files (such as sah_hist [Sales Analysis]) track history by accumulating balances in monthly or weekly “bucket” fields. As transactions are completed, individual transaction amounts are added to the appropriate balance based on the date of the transaction.

The CDR conversion program recalculates these balances once the underlying transactions have been rounded. Balances of transactions that have been deleted from the system will be left untouched in their pre-CDR-rounded state; they will not be rounded by the CDR conversion program.

To run the CDR conversion program (tvcd1.p), you must answer various questions in the Set Up Environment option, under the Initial menu.

Evaluated Receipts Settlement (ERS) Conversion

Conversion Procedure: `tvers.p`, ERS Conversion.

Requirement: Required only if you implement ERS. Not required if you are converting from Version 8.5 or higher.

ERS Documentation: *MFG/PRO User Guide Volume 4: Financials*.

Purpose

These conversion programs create and modify records to enable you to use the Evaluated Receipts Settlement (ERS) feature.

Program Operations

The `tvers.p` program creates records for every site and supplier in the current database. The conversion program sets the ERS option on all purchase orders to 1, signifying that ERS processing is not allowed.

Conversion Prompt

Before you run the conversion, you must answer the following prompt under the MFG/CONV Initial menu:

ERS, enable POS?

If you answer Yes, the conversion for ERS will modify existing purchase order records to be enabled for the ERS feature. If you answer No, purchase orders will not be enabled.

Global Shipping

Conversion Procedure: tv86gs1.p, Global Shipping Conversion.

Requirement: Required if you implement the Global Shipping. Not required if you are converting from Version 8.6.

Shipping Documentation: *MFG/PRO User Guide Volume 2: Distribution.*

Purpose

This conversion updates the database to comply with MFG/PRO shipping requirements. This includes creating and assigning NRM sequences and document formats for new and existing shipping documents, and creating and assigning company address records for existing shipping site records. There are various other specific changes to the database, as described in the “Outcome” section.

Outcome

The Global Shipping conversion utility makes the following updates to the database in compliance with MFG/PRO requirements:

- Creates default NRM sequences for pre-shipper, shipper, and master bill of lading numbers, based on the Next Pre-Shipper, Next Shipper, and Next Master Bill fields in the Container/Shipper Control File (7.11.24). These default sequences will be used for all subsequent pre-shippers, shippers, and master bills of lading created without an inventory movement code or an available shipping group.

- Assigns NRM sequences to all existing pre-shippers, shippers, and master bills of lading. If no NRM sequence exists matching the format of an assigned sequence number, the sequence number is reassigned using a new NRM sequence created specifically to track reassigned pre-shippers, shippers, or master bills. NRM sequences are also assigned for pre-shipper numbers stored for converted shippers.
- Creates document formats for existing shipper print procedures. The system searches for procedure names that follow the form rcrp13xx.p, where xx is any non-blank two-character string.
- Assigns document formats to existing shippers and pre-shippers. The system assigns the first existing document format using the default form code of 01. You can reassign document formats using the Shipper Document Format Mass Change Utility (2.18.25) following the conversion.
- Creates company address records for all sites without corresponding address records that are in use by existing shippers. All fields in the new address records are copied from the default company address specified in the Sales Order Control File (7.1.24). For sites with a corresponding address record other than a company address, the system flags the address as a company address by adding a company type record to the ls_mstr table.
- Assigns language codes to existing shippers and pre-shippers, based on the language code specified in the ship-to address record of the shipper.
- Copies the originating pre-shipper number embedded in the abs_qad01 field to the abs_preship_id field for all existing shipper records.
- Creates a carrier address list type that is reserved by the system for identification of carrier addresses. First, the system checks if such a list type exists; if so, you can change the type to any string. If you do not change the type, all addresses associated with it become usable as carrier addresses.

Global Tax Management Conversion

Conversion Procedure: tvgtm.p, Global Tax Management Conversion.

Requirement: Required for the Tax Compliance feature if Global Tax Management (GTM) was used prior to conversion. Not required if you are converting from Version 8.6.

Tax Compliance Documentation: *MFG/PRO User Guide Volume 11: Manager Functions.*

Purpose

Changes introduced by the MFG/PRO Version 8.6 Tax Compliance feature require some data conversion, but only if you have been using GTM. This conversion moves various fields in tables txc_ctrl, tx2_mstr, and tx2d_det so that future maintenance is easier.

Outcome

The conversion only affects the location of the data within the database and not the data itself. The following tables explain how the data is moved.

In tx2_mstr, Tax Rate Master:

New Field:	Data Moved From:
tx2_ar_acct	tx2_acct[1]
tx2_ar_cc	tx2_cc[1]
tx2_ap_acct	tx2_acct[2]
tx2_ap_cc	tx2_cc[2]
tx2_ara_acct	substring(tx2__qad02,1,8)
tx2_ara_cc	substring(tx2__qad02,9,4)
tx2_ara_use	substring(tx2__qad02,14,1) = "y"
tx2_apr_acct	substring(tx2__qad01,1,8)
tx2_apr_cc	substring(tx2__qad01,9,4)
tx2_apr_use	substring(tx2__qad02,15,1) = "y"
tx2_tax_in	tx2__qad03
tx2_exp_date	tx2__qad05

In txc_ctrl, Tax Management Control File:

New Field:	Data Moved From:
txc_tax_zone	substring(txc__chr02,1,16)
txc_tax_env	substring(txc__chr02,17,16)
txc_detrp	txc__qad03

In tx2d_det, Tax Detail:

New Field:	Data Moved From:
tx2d_tax_env	substring(tx2d__qad01,1,16)
tx2d_zone_from	substring(tx2d__qad01,17,16)
tx2d_zone_to	substring(tx2d__qad01,33,16)
tx2d_tax_type	substring(tx2d__qad01,49,16)
tx2d_trans_ent	substring(tx2d__qad02,1,4)
tx2d_line_site_ent	substring(tx2d__qad02,9,4)
tx2d_taxc	substring(tx2d__qad02,17,3)
tx2d_tax_usage	substring(tx2d__qad02,25,8)
tx2d_tax_in	substring(tx2d__qad02,33,1) = “y”
tx2d_by_line	substring(tx2d__qad02,34,1) = “y”
tx2d_edited	tx2d__qad03
tx2d_posted_date	tx2d__qad05
tx2d_cur_tax_amt	tx2d_taxamt[1]
tx2d_tax_amt	tx2d_taxamt[2]
tx2d_ent_tax_amt	tx2d_taxamt[3]
tx2d_cur_nontax_amt	tx2d_ntaxamt[1]
tx2d_nontax_amt	tx2d_ntaxamt[2]
tx2d_ent_nontax_amt	tx2d_ntaxamt[3]
tx2d_taxable_amt	tx2d_ntaxamt[4]
tx2d_cur_recov_amt	tx2d_ntaxamt[5]
tx2d_recov_amt	tx2d_ntaxamt[6]
tx2d_ent_recov_amt	tx2d_ntaxamt[7]
tx2d_cur_abs_ret_amt	tx2d_ntaxamt[8]
tx2d_abs_ret_amt	tx2d_ntaxamt[9]
tx2d_ent_abs_ret_amt	tx2d_ntaxamt[10]

Product Change Control (PCC) Conversion

Conversion Procedure: tvpcc0.p, PCC Conversion.

Requirement: Required only if you implement the Product Change Control module.

PCC Documentation: *MFG/PRO User Guide Volume 6: Master Files.*

Purpose

The PCC conversion moves Engineering Change data to new locations within the database. The data itself remains the same; only the location changes.

Outcome

The conversion performs a variety of data movements.

- Moves the records that are stored in the Engineering Change—Master Lists (ecl_list) table to the new Product Change List—Master and Detail Tables (pcl_mstr and pcl_det).
- Moves various fields in the Engineering Change Master table to new fields in the same table. The following list maps the new storage fields to old ones.

New Field Name	Data Moved From:
ecm_doc_type	ecm__qad03
ecm_appr_date	ecm__qad04
ecm_selected_eff	ecm__qad05
ecm_batched	ecm__qad06
ecm_reprocess	ecm__qad07

- Moves the records from the Engineering Change Approval Master (eca_mstr) to the new Routing Slip Template Master (rst_mstr) and Detail (rstd_det) tables.

- Moves all existing approvals stored in the Engineering Change Detail—Approvals table (ecd9_det) into the new Routing Slip Used Master (rsu_mstr) and Routing Slip Used Detail (rsud_det) tables. The following list maps the new storage fields to old ones.

New Field Name	Data Moved From:
rsu_doc_nbr	ecd9_nbr
rsu_doc_type	
rsu_index	
rsud_index	
rsu_appr_date	
rsud_svrty_lvl	ecd9__qad03
rsud_canreroute	ecd9__qad04
rsud_approved	ecd9_approved
rsud_appr_date	ecd9_appr_date
rsud_cmtindx	ecd9_cmtindx
rsud_group	ecd9_group
rsud_user1	ecd9_user1
rsud_user2	ecd9_user2
rsud_sequence	ecd9_seq
rsud_approverid	ecd9__qad05

- Moves records from the ECN Type table (ect_mstr) to the new Product Change Type master table (pct_mstr). The pct_mstr table also includes new fields that will not be populated by this conversion. The mapping of the fields from the ect_mstr table to the pct_mstr table are identical except in the condition specified by this PROGRESS 4GL statement:

```
pct_doc_type = (if ect_qad01 = yes then "PCR" else "PCO").
```

- Moves the control file settings from the work file (qad_wkfl) and ECN Control File (mfc_ctrl) tables into the new PCC Control Table (pcc_ctrl). Some of the settings in mfc_ctrl are still maintained there, but they are replicated in pcc_ctrl for easier reference by the PCC programs. The following table maps the new storage fields to old ones in qad_wkfl. The conversion affects records where qad_key1 = “ECN-CTRL”.

New Field Name	Data Moved From:
pcc_auto_nbr	qad_key3
pcc_cmnt_type	qad_key4
pcc_security_on	qad_key5
pcc_max_wkfl	qad_decfld[15]
pcc_initial_date	qad_datefld[1]
pcc_ecooff_date	qad_datefld[2]
pcc_pco_pre[1..12]	qad_charfld[1..12]
pcc_next_pco[1..12]	qad_decfld[1..12]
pcc_struct_ok	
pcc_routing_ok	
pcc_quality_ok	

Euro Data Conversion

Conversion Procedure: tvtri.p, Euro Data Conversion.

Requirement: This conversion is not required if you are converting from 8.6E. It is required for all other conversions to Version 9.0.

Warning Do not perform this conversion if you are converting an MFG/PRO 8.6E database to 9.0. This conversion will eliminate existing data.

Euro Currency Documentation: *MFG/PRO User Guide Volume 4: Financials.*

Purpose

The conversion populates the target version database with data pertinent to the euro functionality introduced in MFG/PRO Version 8.6E. This includes procedures to comply with new European Monetary Union requirements and the introduction of additional multicurrency functionality. If the Euro Toolkit is implemented in your source version, the conversion transfers the toolkit data to the euro functionality in the target version.

Outcome

The conversion makes the following updates to the target database.

- Defines default accounts and cost centers in the target version System/Account Control File for storing currency exchange gain, loss, and rounding information.
- Converts the source version Currency Master (ex_mstr) and Exchange Rate Detail (exd_det) records. The following table maps the new record to the old.

New Record Name	Data Moved from:
Currency Master (cu_master)	Currency Master (ex_mstr)
Exchange Rate (exr_rate)	Exchange Rate Detail (exd_det)

- If a base currency was not defined in the source version Currency Master (ex_mstr), the program creates a Currency Master (cu_mstr) record for the base currency using the System/Account Control file (gl_ctrl).
- Converts non-base currency amounts from the following tables into base currency amounts and stores them in newly added data fields.

Converted Tables

Accounts Payable Master (ap_mstr)

Accounts Receivable Master (ar_mstr)

Voucher Master (vo_mstr)

Voucher Detail (vod_det)

- If the Euro Toolkit was implemented in your source version, the conversion transfers data from the Control file (mfc_ctrl) and the QAD Work file (qad_wkfl) to the following.

Euro Functionality Control (et_ctrl)

Currency Master (cu_mstr)

Exchange Rate (exr_rate)

New Database Elements

The following files were added to support euro and multicurrency functionality.

All cu_mstr Files		
cu_desc	cu_rgain_cc	cu_user1
cu_rnd_mthd	cu_rloss_acct	cu_user2
cu_active	cu_rloss_cc	cu_qadt01
cu_ugain_acct	cu_ex_rnd_acct	cu_qadt02
cu_ugain_cc	cu_ex_rnd_cc	cu_qadd01
cu_uloss_acct	cu_mod_userid	cu_qadc01
cu_uloss_cc	cu_mod_date	cu_qadl01
cu_rgain_acct		

All et_ctrl Files		
et_base_curr	et_locked	et_qadi03
et_conv_acct	et_rate_active	et_qadl01
et_conv_cc	et_index1	et_qadl02
et_second_curr	et_user1	et_qadl03
et_gl_eff_dt	et_user2	et_qadc01
et_intro_dt	et_qadd01	et_qadc02
et_tk_active	et_qadd02	et_qadc03
et_print_dc	et_qadd03	et_qadt01
et_show_diff	et_qadi01	et_qadt02
et_start_conv	et_qadi02	et_qadt03

All exr_rate Files		
exr_curr1	exr_rate2	exr_user2
exr_curr2	exr_ratetype	ex_qadt01

All exr_rate Files		
exr_start_date	exr_mod_userid	ex_qadd01
exr_end_date	exr_mod_date	ex_qadc01
exr_rate	exr_user1	ex_qadl01

New ap_mstr Files		
ap_ex_rate2	ap_ex_ratetype	ap_base_amt
ap_exru_seq		

New ar_mstr Files		
ar_ex_rate2	ar_base_comm_amt[2]	ar_dd_curr
ar_ex_ratetype	ar_base_comm_amt[3]	ar_dd_ex_rate
ar_base_amt_chg	ar_base_comm_amt[4]	ar_dd_ex_rate2
ar_base_applied	ar_exru_seq	ar_dd_ex_exru_seq
ar_base_comm_amt[1]		

New gl_ctrl Files		
gl_ugain_acct	gl_rgain_acct	gl_rloss_cc
gl_ugain_cc	gl_rgain_cc	gl_ex_rnd_acct
gl_uloss_acct	gl_rloss_acct	gl_ex_rnd_cc
gl_uloss_cc		

New vo_mstr Files		
vo_ex_rate2	vo_base_applied	vo_base_hold_amt
vo_ex_ratetype	vo_base_disc_chg	vo_base_exru_seq
vo_base_amt_chg	vo_base_ndisc	

New vod_det File		
vod_base_amt		

Corporate Commodity Codes

Conversion Procedure: tvcomcd.p, Move Corporate Commodity Code and Part.

Requirement: Runs automatically when required.

Purpose

The conversion program moves commodity code data from the source version Part Master (pt_mstr) table and QAD work file (qad.wkfl) to the target version Corporate Commodity Code (comd_det) table.

Outcome

The conversion populates the Corporate Commodity Code (comd_det) table with information from Part Master (pt_master) and QAD work file (qad.wkfl). If the Part Master table and QAD work file do not exist in the source version, the Corporate Commodity Code (comd_det) table is created and left empty.

New Database Elements

- Table: comd_det
- Fields: comd_comm_code, comd_part

Supplier Performance Conversion

Conversion Procedure: `tvpsite.p`, Copy Site to Supplier Performance Detail Records.

Requirement: Required if you converting from 8.6D.

Purpose

To include Site in the primary indexes of the Performance Data Master (`vep_mstr`) and Summary Data Master (`ves_mstr`), Site must be defined in the detail records. The conversion program copies Site from the Performance Data Master (`vep_mstr`) and the Summary Data Master (`ves_mstr`) to the appropriate detail record: Performance Data Detail (`vepd_det`) and Summary Data Detail (`vesd_det`).

Outcome

The conversion performs the following steps.

- 1 Reads the Performance Data Master file (`vep_mstr`) for Site.
- 2 Reads every Performance Data Detail file (`vepd_det`) related to the master file and populates the Site field with the value from the master file.
- 3 Repeats steps 1 and 2 until the Performance Data Master file is complete.
- 4 Reads the Summary Data Master file (`ves_mstr`) for Site.
- 5 Reads every Summary Data Detail file (`vesd_det`) related to the master file and populates the Site field with the value from the master file.
- 6 Repeats steps 4 and 5 until the Summary Data Master file is complete.

New Database Elements

- Field: `vepd_site`
- Field: `vesd_site`

Logistics Data Conversion

Conversion Procedure: `tvpr10.p`, Logistic Data Conversion.

Requirement: Required if you converting from 8.6C with the Universal Logistics API implemented.

Logistics Documentation: *MFG/PRO User Guide Volume 10B: External Interfaces.*

Purpose

This conversion moves various fields from the QAD work file (`qad.wkfl`) to new locations in the database schema to comply with the MFG/PRO 9.0 Logistics programs.

Outcome

The conversion only affects the storage location of records in the MFG/PRO 9.0 database.

New Database Elements

- various logistics fields in `lgs_mstr`
- various logistics site fields in `lgsi_det`
- various logistics charge fields in `lgc_mstr`
- `ar_app_owner`
- `ls_app_owner`
- `pt_app_owner`
- `so_app_owner`
- `sod_qty_invc`

ECommerce Data Conversion

Conversion Procedure: `tvecg.p`, ECommerce Data Conversion.

Requirement: Required to avoid processing legacy data when using the ECommerce Gateway functionality in MFG/PRO 9.0 for the first time.

ECommerce Documentation: *MFG/PRO User Guide Volume 7: Release Management.*

Purpose

This conversion sets the MFG/PRO 9.0 sales order and abs master export flag fields so that legacy records are marked as exported documents and will not be considered when creating new export documents.

Outcome

The conversion only affects the storage location of records in the MFG/PRO 9.0 database. The following fields are affected when the `tvecg.p` program is run.

Modified Fields

- `so_export_batch`
- `so_export_date`
- `so_export_time`
- `abs_export_batch`
- `abs_export_date`
- `abs_export_time`

Installation Reference

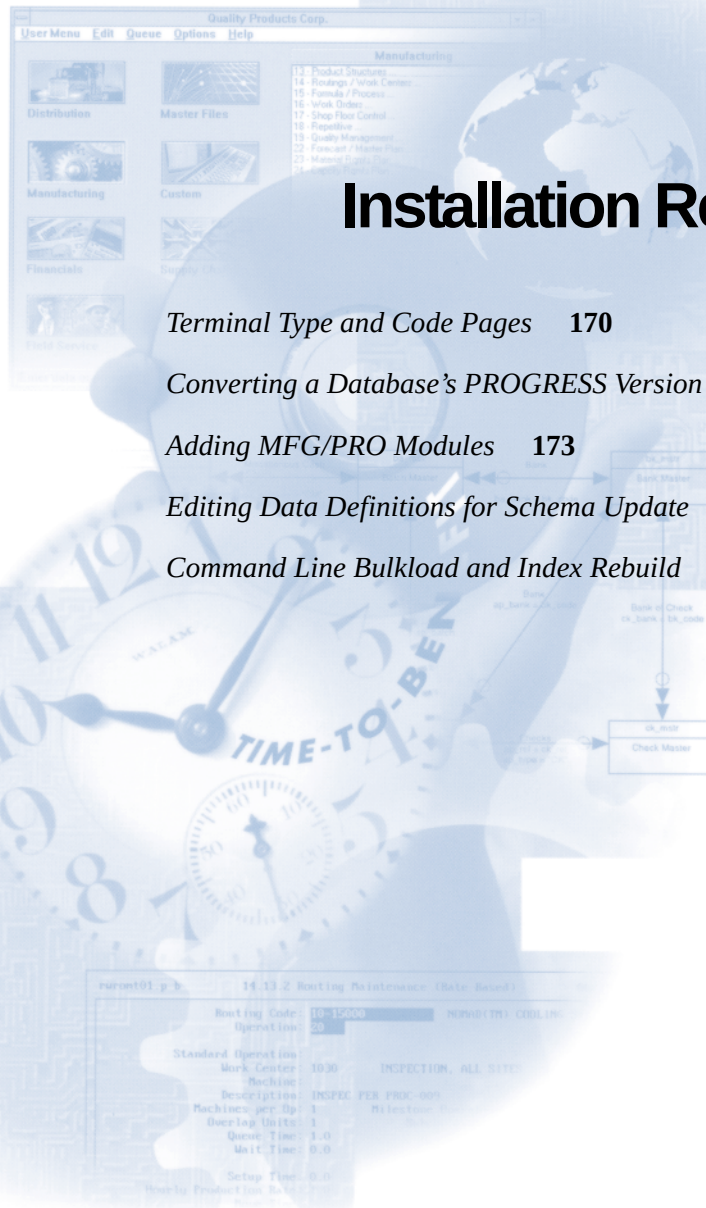
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Terminal Type and Code Pages

Since PROGRESS uses a terminal type to format data on your screen and to interpret certain keystrokes, you need to set the terminal type whenever you install MFG/PRO or start a new session. It must be set at the start of every installation or conversion process.

In most cases, the terminal type you normally use is compatible with MFG/PRO and with PROGRESS.

To ascertain your current TERM variable, type:

```
echo $TERM
```

To set the TERM variable, type:

```
TERM=terminaltype ; export TERM
```

Refer to the appendix of your PROGRESS installation document for a list of valid terminal types.

The terminal type you choose must be supported by both the TERMCAP variable of your UNIX environment and the PROTERMCAP setting in your PROGRESS environment. Otherwise, you will receive an error when installing and running MFG/PRO.

Multi-Language Terminal Types

In a multi-language version of MFG/PRO, your terminal type determines the character set used when transmitting and displaying language-specific characters. Since each terminal type can represent characters differently, a single character such as the u-umlaut can be stored with different values by different terminals.

Note This section does *not* apply to releases in Chinese, Japanese, or Korean.

Some terminal types are language-independent; that is, they can be used with all languages. Some examples include:

```
hp700/92
vt220
```

If you are using one of these language-independent terminals, the terminal type remains the same no matter what language the terminal is configured for.

Other terminals are language-dependent. These terminals require that a different terminal type be used depending on the language. Some examples include:

```
wy60
vt100
```

For these language-dependent terminals, the actual terminal type is constructed by appending the appropriate language code to the standard terminal type. For example, a vt100 configured for French should be defined as vt100fr.

During Installation

Use the standard terminal types while installing MFG/PRO. For example, for a vt100, set your TERM variable to vt100 during the installation. Once the MFG/PRO software has been installed, you can use one of the language-dependent versions of vt100, such as vt100fr, vt100ge, or vt100du.

Multiple Languages and Code Pages

You may have a terminal code page that does not match the code page used for data storage and retrieval. During installation, the `mfgtailor` script sets up the correct code page used for data storage and retrieval. In cases where the code pages do not match, PROGRESS requires you to set up a map between them so that it can convert the data. This mapping is often necessary for languages that utilize extended characters, such as German. (Its extended characters are ä, ö, ü, Ä, Ö, Ü, ß.)

◆ For more information on code page conversions, see the *PROGRESS System Administration Guide*.

Converting a Database's PROGRESS Version

Follow the instructions in this section if you are converting from a PROGRESS 7.x, 8.1, or 8.2 source database. Before running MFG/CONV, convert the source database to PROGRESS 8.3.

If you have a PROGRESS 6.x source database, you can connect to it in client/server mode instead of converting it to PROGRESS 8.3. However, if you cannot connect in client/server mode, follow these instructions to convert the database to PROGRESS 8.3.

The conversion from Version 7.x or 8.x to 8.3 should take only a few minutes, because it only affects the database master block. The conversion from Version 6.x to 8.3, however, can take several hours.

Prerequisite: You should have already installed PROGRESS Version 8.3 using instructions provided with the PROGRESS software. QAD recommends that you keep both versions of PROGRESS, at least during an interim period.

- 1 Shut down the database server.

All conversion tasks must be performed in single-user mode. If a database server is running for the database, it must be shut down and all users logged out of the database before the conversion is started.

- 2 Back up the databases to be converted.

- 3 Change to the bin sub-directory of your former PROGRESS version's directory. For example:

```
cd /dlc7/bin
```

- 4 For all your databases, truncate the before-image (.bi) file. Use the following command:

```
proutil YourDbName -C truncate bi
```

- 5 Set the DLC variable to PROGRESS Version 8.3.

6 Convert the database using one of the following commands.

- Converting from Version 8.x to 8.3. Start your PROGRESS databases using PROGRESS 8.3; they are converted automatically as long as their .bi files are truncated.
- Converting from Version 7.x to 8.x:
proutil YourDbName -C conv78
- Converting from Version 6.x to 8.x:
proutil YourDbName -C conv68

▶ See step 4.

7 Respond Yes when asked if you have backed up the database.

Adding MFG/PRO Modules

If you purchased add-on modules, QAD typically sends you a complete release including the new modules. Installing the add-on modules involves integrating the programs from the new modules with your existing MFG/PRO installation directory. You do not need to change your production database; it already has the default data for all modules.

Important You should only add modules of the same MFG/PRO version.

- 1 Load the MFG/PRO add-on server media into a separate, temporary directory. Use the load instructions in Chapter 3, “Database Server Setup,” on page 27. However, note the following:
 - Specify the temporary installation directory—not your existing MFG/PRO installation directory.
 - Choose Cancel when the MFG/UTIL Company Information window appears. Also cancel all subsequent windows. This portion of the installation creates databases and start-up icons, which were already created.
- 2 If you have Windows clients, load the Windows client add-on media into a temporary directory. Refer to Chapter 4, “Loading Client Media,” on page 51. You do not need to set up the client PCs—this function is performed by the `setup.exe` program.
- 3 Back up your existing MFG/PRO system.

- 4 For the database server and Windows client file server, integrate the programs from the add-on media with your existing production system. Use one of the following methods.
 - If you have not made any code modifications, you can copy the language code directory (for example, us) from the add-on release into your existing installation directory. This option overwrites your existing programs, both source and compiled.
 - If you have modified MFG/PRO code, copy only the new program sub-directories from the add-on module into your existing installation directory. All program directories appear under the two-letter language code directory. For example, if you purchased Advanced Repetitive and your language is English, the additional directory is: *TempInstallDir/us/er*.

To determine the appropriate program directories, you can use the following UNIX diff command. In the following example, *AddOnDir* refers to the directory for the add-on media.

```
diff /InstallDir/LanguageDir /AddOnDir/LanguageDir
```

- 5 Recompile MFG/PRO only if you made customizations.
- 6 Start MFG/PRO to test the installation. You do not need to modify the start-up scripts.
- 7 If you have multiple languages, repeat the previous steps for each language.
- 8 Remove the temporary installation directories for the database server and Windows client media.
- 9 Refer to the MFG/PRO user guides for instructions on implementing the modules you added.

Editing Data Definitions for Schema Update

Follow these instructions if you receive an error while updating the database schema during an incremental conversion. This error condition can occur for large databases if the database before-image file (extension .bi) exceeds the UNIX two-gigabyte size limit.

The solution is to edit the MFG/PRO 9.0 database definitions and rerun the MFG/UTIL schema update option. The MFG/PRO 9.0 database definitions are structured into separate database definition files, extension .df, which you can further divide as needed. The .df files are listed in the df.ini file, which the MFG/UTIL schema update option references.

Use a text editor to edit the MFG/PRO .df files into more manageable update sections. Then, modify the df.ini file to reference the new files. For example, if your transaction history table (tr_hist) is large, locate in the .df files where tr_hist is updated, cut out those portions, and combine them into one file.

Note When you edit the .df files, be careful to maintain the logical order of the schema updates.

The format of the df.ini is:

7.3,	9.0,	74crc.df, 74x00.df, 85crc.df, 85d02.df, 86crc.df
Version of Source Database	Version of Target Database	Listing of Applicable .df Files

When you have edited the .df files, find the line in the df.ini file that applies to your source and target versions. Then, input the new .df file names on that line, using commas to separate the file names.

Do not edit the lines that apply to building from an empty database, indicated by a zero in the source version number section.

Command Line Bulkload and Index Rebuild

This section describes an optional method for bulkloading source files and building the database index when performing conversions. If you were required to disconnect from MFG/CONV during your conversion process, a bulkload and index rebuild can be performed from the system command line. For example, during an incremental conversion you must exit MFG/CONV in order to update your database schema. In this case, it can be more convenient to bulkload your source files and build your index without reconnecting to MFG/CONV.

To perform a bulkload and index rebuild from the command line, follow the instructions appropriate to your conversion: full or incremental. For more information on conversion types, see “Choose a Full or Incremental Conversion” on page 88.

Bulkload for Full Conversion

- 1** If your source version MFG/PRO database has custom split schemas, complete the sub-steps below; if it has a single schema, skip to step 2. In the following sub-steps, you must create databases from the .df files created by the 9.0 conversion program (Parse SPL file option). You can use MFG/UTIL to create the databases.
 - a** Change to the Version 9.0 installation directory and start MFG/UTIL.

```
cd /InstallDir
./mfgutil
```
 - b** In MFG/UTIL, select the Database menu and choose Create Database.
 - c** In the Data Definition File field, specify the path and file name for the .df file created by the 9.0 conversion program.
 - d** Choose OK when finished; MFG/UTIL will create the database.
 - e** Create other databases as needed.

- 2 If you do not have a custom split schema, prepare a *copy* of the Version 9.0 mfgempty database. Do not use the original mfgempty.db; only a copy will work correctly.
- 3 If you want a multi-volume database, set it up now according to the standard PROGRESS directions.
- 4 You may want to create a backup copy of your .d files, in case any data becomes corrupted during the conversion. Restoring from a backup is faster than performing another dump.
- 5 Copy the following files from Version 9.0 directory, under the ./mfg sub-directory, to your source version dump directory.

```

flh_mstr.d          mnd_det.d
hlp_mstr.d          mnt_det.d
lng_mstr.d          msg_mstr.d
lngd_det.d

```

- 6 Copy the bulkload file to your dump directory. The bulkload file is named after your source version database, but with a .fd extension.
`cp /InstallDir/conv/SVDBName.fd /SVDumpDir`
- 7 Copy the bulkload and index rebuild scripts to your dump directory.
`cp /InstallDir/conv/svbulk /SVDumpDir`
`cp /InstallDir/conv/svidx /SVDumpDir`
- 8 Change to your dump directory.
`cd /SVDumpDir`
- 9 Determine the following values to be used as bulkload parameters.

- Version 9.0 Installation Directory (*InstallDir*)
- Version 9.0 database name (*DBName*)
- Source Version dump directory (*SVDumpDir*)
- Bulkload file name (*bulkfile.fd*)

This file is created in the *InstallDir/conv* sub-directory by MFG/CONV (svp6.p option) and named after your source version database.

- 10 Run the bulkload script `svbulk`. Specify the parameters as shown and type them as one command:

```
./svbulk /InstallDir/DbName /SVDumpDir
      bulkfile.fd
```

Note When the bulkload runs, ignore the warning: Unable to read .d trailer.

- 11 You can check for any bulkload errors in the `Database.lg` file.

Index Rebuild for Full Conversion

- 1 Remove the .d data files from the dump directory in order to free the space needed for the index rebuild. If you have not done so, you may want to back up the .d files first.
- 2 From the source version dump directory, run the index rebuild script `svidx`.

```
./svidx /InstallDir/DBName
```

- 3 Answer the following prompts as shown:

```
Enter your selection: all
```

```
Do you have enough disk space for index sorting?: y
```

Note If you choose Yes to index sorting and your source version database is greater than three gigabytes, you may encounter system errors. For instructions on how to avoid these errors, see the section “Rebuilding Indexes” in the *PROGRESS System Administration Guide*. Specifically, see the topic “Overcoming SRT Size Limitations.”

Bulkload for Incremental Conversion

- 1 Copy the following files from the Version 9.0 directory, under the `./mfg` sub-directory, to your source version dump directory.

<code>flh_mstr.d</code>	<code>mnd_det.d</code>
<code>hlp_mstr.d</code>	<code>mnt_det.d</code>
<code>lng_mstr.d</code>	<code>msg_mstr.d</code>
<code>lngd_det.d</code>	

- 2 Determine the following values, to be used as bulkload parameters:

- Version 9.0 Installation Directory (*InstallDir*)
- Source version database name (*SVDBName*)
- Source version directory (*SVInstallDir*)
- Source version dump directory (*SVDumpDir*)
- Bulkload file name (*bulkfile.fd*)

This file is created in the *InstallDir/conv* sub-directory by MFG/CONV (svp6.p option) and named after your source version database.

- 3 Copy the bulkload definition file to your dump directory.

```
cp /InstallDir/conv/*.fd /SVDumpDir
```

- 4 Copy the bulkload and index rebuild scripts to your dump directory.

```
cp /InstallDir/conv/svbulk /SVDumpDir
cp /InstallDir/conv/svidx /SVDumpDir
```

- 5 Change to your dump directory.

```
cd /SVDumpDir
```

- 6 Run the bulkload script `svbulk`. Specify the parameters as shown and type them as one command:

```
./svbulk /InstallDir/DbName /SVDumpDir
bulkfile.fd
```

Note When the bulkload runs, ignore the warning: Unable to read `.d trailer`.

- 7 You can check for any bulkload errors in the *Database.lg* file.

Index Rebuild for Incremental Conversion

- 1 From your dump directory, run the index rebuild script `svidx`.

```
./svidx /SVInstallDir/SVDBName
```

- 2 Answer the following prompts as shown:

```
Enter your selection: all
```

```
Do you have enough disk space for index sorting?: y
```

Note If you choose Yes to index sorting and your source version database is greater than three gigabytes, you may encounter system errors. For instructions on how to avoid these errors, see the section “Rebuilding Indexes” in the *PROGRESS System Administration Guide*. Specifically, see the topic “Overcoming SRT Size Limitations.”

Glossary

bulkfile.fd. Name of the bulkload file created by MFG/CONV during conversion; it is named after your source version database.

CDROMDir. Name of the directory to which you will mount the CD-ROM.

Client Machine or Client PC. The machine in a client/server configuration, often a PC, that runs the client session.

Client Session. An executable running an application that accesses a server running a database. PROGRESS, regardless of the hardware platform, uses a client process and a server process.

Client/Server. The configuration in which a client session runs on a separate machine from the database server process. MFG/PRO for Windows requires a client/server configuration.

Configurator Database. The database used with the Component Configurator module. This module enables you to create or modify MFG/PRO object-based programs.

Connect. Name of your MFG/CONV start-up script, started against the source or target version database during an MFG/PRO conversion.

Conversion. Refers to the transition from one numbered release to the next, such as MFG/PRO 7.3 to 8.5. Conversions involve program fixes and, in some cases, major schema changes. (Transitions between lettered releases, which preclude major schema changes, are called updates.)

Database Definitions. Characteristics of the database schema, including field names, table names, validation expressions, labels, initial values, and others.

DBSetName. Name you chose for your database set, used as a suffix to your start-up scripts.

Default Data (System Data). The data that initially populates the menu, messages, printers, language code, and other default data files.

Database Set. A method used by MFG/UTIL to define the connection parameters of a group of databases.

General Release. A new release of MFG/PRO that has completed additional testing as a limited release.

Gui database. Database that contains system data related to the operation of the object programs and programs that run in Windows. Gui stands for graphical user interface.

InstallDir. The directory name where you are installing MFG/PRO. To distinguish between the installation directory of one version and another, this variable is sometimes set, for example, to *ver73dir* and *ver90dir*. Note that the installation directory should be different than the directory where you create your production databases.

LanguageCode. Identifies the language code(s) in a multi-language release.

LanguageDir. A directory containing language-specific files such as programs and help. The directory is named after the language code.

Limited Release. A new release of MFG/PRO that is available only as a standard version, which has undergone beta testing.

Multi-Language Release. A release that supports multiple languages, which may include US English. The US English version in a multi-language release is distinct from the standard release. When you install a multi-language release, you must specify a language code for every language, including English.

Standard Release. A release that does not support multiple languages. The files *cannot* be translated from U.S. English.

SVClient. Name of your client start-up script for the source version.

SVConnect. Name of your MFG/CONV start-up script against the source version.

SVDumpDir. Path to the dump directory that holds dumped data files from the source version. (You must create this directory.)

SVInstallDir. Main directory containing your source version of MFG/PRO.

TerminalType. The terminal type of the workstation or PC where you are performing the installation steps.

WinInstallDir. Directory where you install the MFG/PRO for Windows files, usually on the file server.

Update. Refers to the transition from one lettered release to the next, such as MFG/PRO 8.5D to 8.5E. Updates involve program fixes and some minor schema changes. (Transitions between numbered releases, which can involve major schema changes, are called conversions.)

YourTapeDevice. The tape drive from which you load the MFG/PRO files. For example, it might be */dev/rmt/0*.

YourCDDDevice. CD from which you load the MFG/PRO files. For example, it might be */dev/sr0*.

YourCDROMDir. The directory where you mount the CD-ROM.

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