

Industry-specific

QAD SOLUTIONS

Manufacturing Applications

MFG/PRO eB2 Installation Guide Progress Database



78-0570B
MFG/PRO eB2
January 2003

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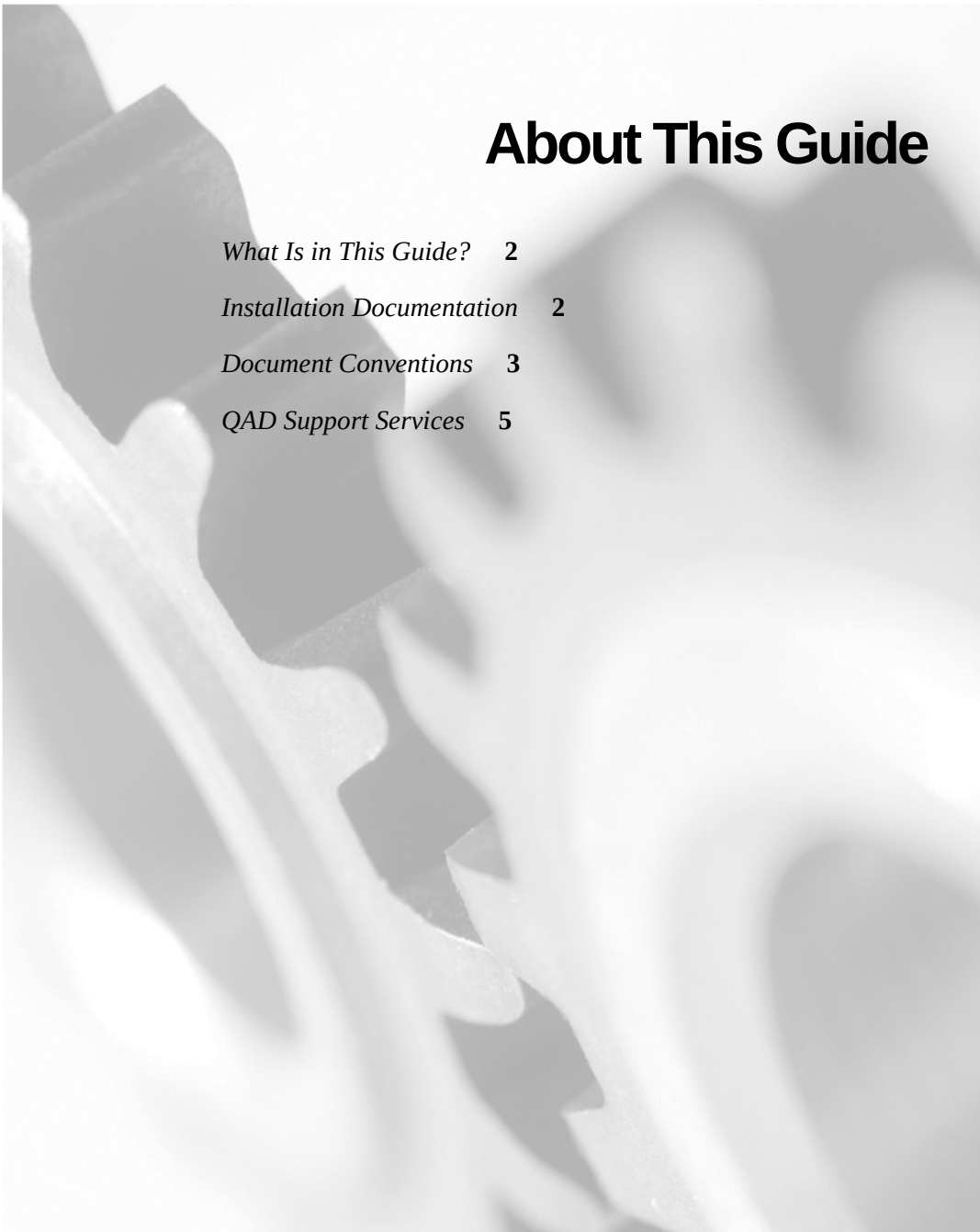
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What Is in This Guide?

The instructions in this guide cover how to:

- Install the MFG/PRO server on either a UNIX or Windows server.
- Install the MFG/PRO character client software.
- Install the MFG/PRO Windows client software.
- Configure a standard MFG/PRO environment including character and GUI clients.

This installation covers the current service pack level of eB2. If you are installing only the service pack to upgrade an existing eB2 environment, use only the service pack installation instructions that ship with the service pack CD.

Use this guide to install production databases, as well as training and demonstration databases. Install these databases with one or more user languages. In addition, this guide provides instructions for setting up training environments.

Audience

These instructions are for the MFG/PRO system administrator who is installing the MFG/PRO database and is familiar with the UNIX operating system, the Microsoft Windows operating system, Progress software, and networking as necessary.

Installation Documentation

This document is available on the QAD Global Support Web site:

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

Before you start the installation, make sure you have the most recent version of this document (item 78-0570B). This document supports the installation of the following CDs:

- Database server
- Database server language files
- Character client

- GUI client

Note CD item numbers are dependent on your purchased configuration.

If you are doing this install as part of a conversion, you should also have:

78-0571A, MFG/PRO eB2 Conversion Guide

Related MFG/PRO Installation Documentation

The MFG/PRO installation creates your production and support databases, and any training, development, or pilot databases you need.

- If you are installing a new version of MFG/PRO and converting from a previous version, see the *MFG/PRO eB2 Conversion Guide*.
- To install QAD Desktop, see *Installation Guide: QAD Desktop*.
- To install Q/LinQ, see *External Interface Guide: Q/LinQ*.

For a full list of other documentation, see the QAD Web site.

Document Conventions

This guide uses the conventions listed in the following table.

If you see:	It means:
monospaced text	A command, file name, or path.
<i>italicized</i> <i>monospaced text</i>	A variable name for a value you enter as part of an operating system command; for example, <i>cdrom</i> .
indented command line	A long command that you enter as one line although it appears in the text as two lines.
Note	Exceptions or special conditions.
Important	Critical information.
Warning	Situations where you can overwrite or corrupt data, unless you follow the instructions.

UNIX and Windows Installations

This document supports the installation of MFG/PRO on both UNIX and Windows platforms. The instructions use character screens and UNIX file and path conventions. In the few places where the two sets of instructions diverge, the headings and text state explicitly which operating system is the focus of the current set of instructions.

Time Convention

🕒 TIME 00:02:30

Approximate time values based on test installations appear in the margins where processing takes place. A sample in the margin by this paragraph shows 2 minutes and 30 seconds. All time values of less than 5 minutes are rounded up to the next 30 seconds. Longer than 5 minutes, the values are rounded up to the next minute. The times offer you a comparative estimate of the time you can expect each process to take.

The time values for the Windows installation often rounded to the same time value. Where there was a significant difference, the UNIX and Windows times are shown separately.

UNIX installation times were taken from a Solaris Enterprise 4000 with:

- A5000 Sun storage array of 15 disks totalling 153.7 GB
- 2 GB of RAM
- Internal boot disk of 6 GB
- Ten 266 MHz Ultra Sparc processors
- Average load during installation test of 170 concurrent users

Windows installation times were taken from a Dell Latitude CPx HP450GT laptop:

- Intel 448 MHz processor
- 384 MB RAM, 384 MB
- 11.2 GB disk space

QAD Support Services

MFG/PRO installations have a wide variety of configuration possibilities, are highly scalable, and are easily customized. While this guide provides basic installation information, it cannot consider every possible 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. These offerings include performance enhancements as well as technical and administration training.

Support During an Installation

There are resources in addition to this guide to help you if you run into problems.

Contact QAD Support Prior to Installation

Inform QAD Support that you are planning to install MFG/PRO. Identify an individual who can be called if you run into problems. Discuss your hardware, disk space, and deployment plans with that individual.

Use the QAD Knowledgebase

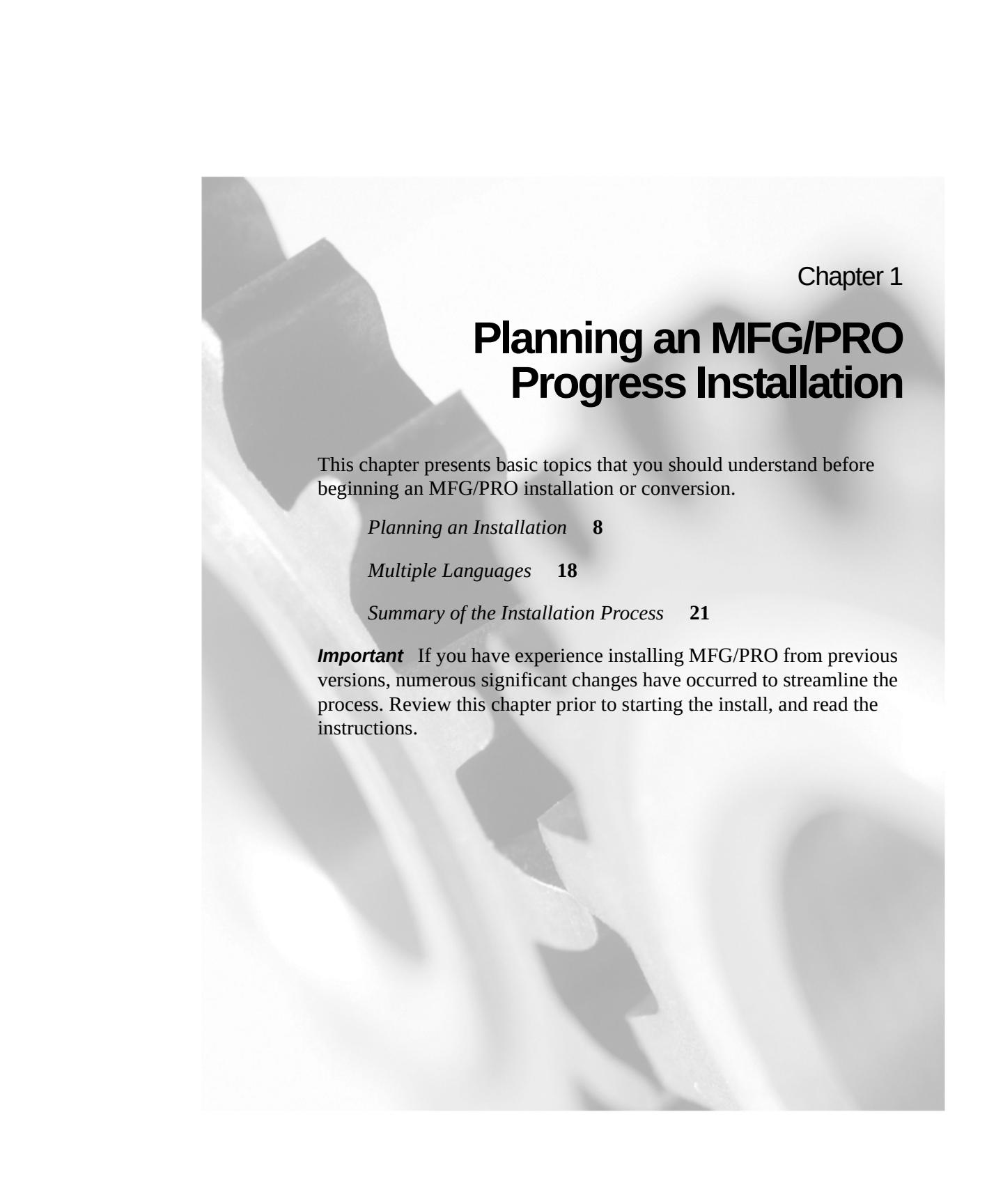
On the QAD Web site, you can access QAD's extensive knowledgebase. Ask your questions in two or three ways to see if you get an answer closer to the problem you are experiencing.

Use Additional Web Resources

For Progress problems, use the Progress knowledgebase at their Web site:

<http://www.progress.com/support/kb/index.htm>

For OS-related problems, use standard vendor support, or use other search engines on the Web.



Chapter 1

Planning an MFG/PRO Progress Installation

This chapter presents basic topics that you should understand before beginning an MFG/PRO installation or conversion.

Planning an Installation **8**

Multiple Languages **18**

Summary of the Installation Process **21**

Important If you have experience installing MFG/PRO from previous versions, numerous significant changes have occurred to streamline the process. Review this chapter prior to starting the install, and read the instructions.

Planning an Installation

There are three types of installation:

- A new installation
- A new installation including a service pack
- An installation to support a conversion from an earlier MFG/PRO version to the current release

If you are migrating from an earlier version of MFG/PRO, start your planning with the MFG/PRO eB2 *Conversion Guide* (item 78-0571A). The installation steps covered in this guide are treated as a step within the larger conversion process.

Tip

As you encounter new terms, or terms that QAD may use differently, check the definition in the Glossary on page 105.

For the installation component of both new installs and conversions, you must plan for the following:

- An installation addressing:
 - Pilot and production databases
 - Training databases
 - A development database
- The languages you are implementing
- Configuration of side databases including MFG/PRO administration and help databases, as well as custom and other side databases
- The resulting network, disk, and client layouts

Service Pack Installs

If you are installing or converting to eB2 with a service pack, this guide covers all required steps. If you are installing just a service pack to support an existing eB2 installation, follow the instructions that shipped with the service pack media.

Deployment

You can install MFG/PRO eB2 on UNIX or Windows servers with character or GUI clients, or a mix of these. MFG/PRO consists of three distinct components:

- A database server

- A file server
- Remote clients

Database Server

The database server consists of the MFG/PRO databases. You build these databases as part of the installation. All clients connect to these databases through a file server.

File Server

The file server is the location of the MFG/PRO source code, compiled specifically for this machine. The resulting .r code is run by the connected clients.

If the file server is a UNIX machine as in Figure 1.1, then remote character clients can connect to this machine using telnet. The remote clients run MFG/PRO using startup scripts generated for the host clients. No remote client setup is required.

If the file server is a Windows machine using character or GUI clients as in Figure 1.2, or if you want to run GUI clients against a UNIX file server as in Figure 1.1, a remote client setup is required for each client PC.

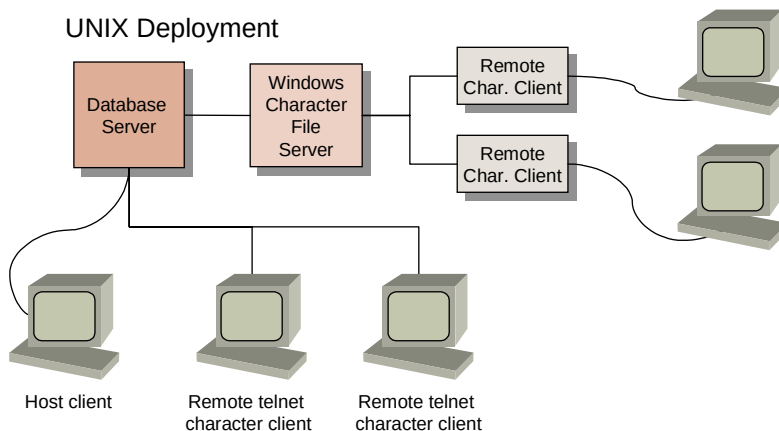


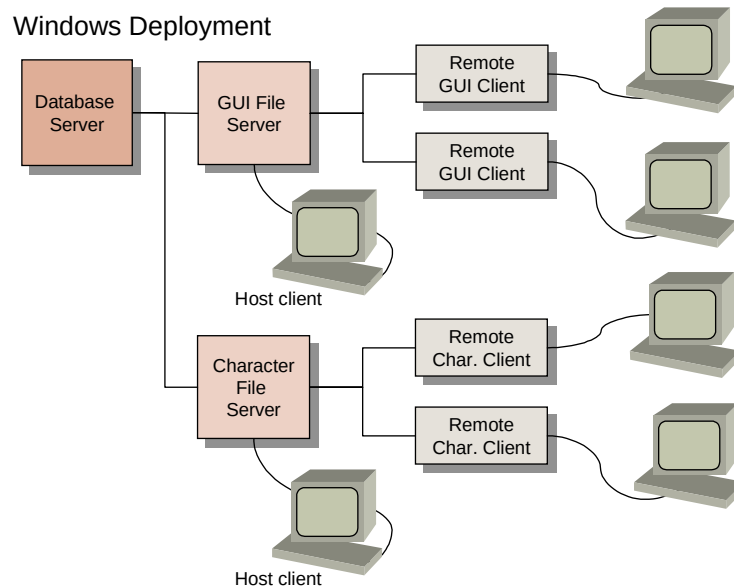
Fig. 1.1
UNIX Deployment

Remote Clients

For information on MFG/UTIL, see “Installation Utilities” on page 16.

A remote client setup is required for all GUI clients and for all character clients connecting to a Windows file server. The remote client setup creates a copy of MFG/UTIL on the client PC. You then run MFG/UTIL on the client, connected to the file server, to generate local startup scripts. The resulting client runs source code on the file server and accesses the databases on the database server.

Fig. 1.2
Windows
Deployment



Database Server Installation

Working MFG/PRO databases are created in two stages. You first create empty databases, then use the empty databases as a template to build production, training, development, and other databases.

Creating the Empty Databases

You create three empty databases during an installation. The primary empty database is `mfgempty`; it is the template for your training, pilot, development, and production databases.

The other two empty databases are the support databases:

- An administration database, `admempty`
- A help database, `hlpempty`

Each empty database is created in two steps. First, a structure file for the database—for example, `mfgempty.st`—is used by the installation script to create a void database. The structure file defines disk locations and the size of database storage areas. A default structure file is shipped for each MFG/PRO database that requires one.

Once you have created the void database, load data definitions into it that define each table, field, and index in the database. The data definitions file—for example, `mfgempty.df`—also places each table and index into a specific storage area as defined in the structure file.

In Figure 1.3, the database is created using the `mfgempty.st` structure file, which adds the storage area TRANSACTION to the disk. The storage area shown consists of two extents. One is a fixed-length extent of 256 MB (f 256000). The other is a variable-length extent that grows as needed during database use.

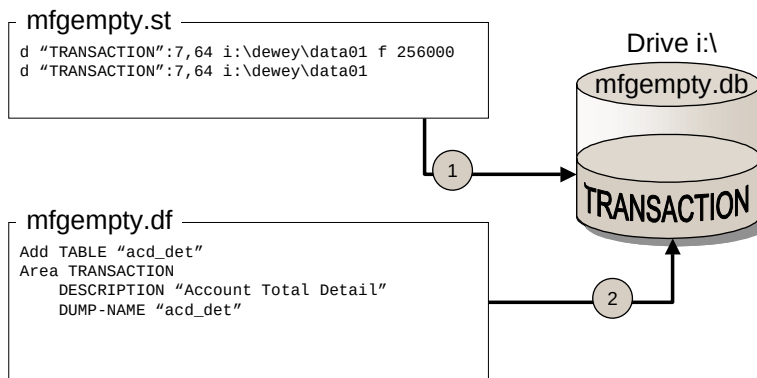


Fig. 1.3
Creating an Empty Database

Next, the tables, fields, and indexes are created in those extents by the data definition file (`mfgempty.df`). Note the Area line directly below the Add Table instruction in Figure 1.3.

The empty databases you created are now available to create the main and support databases.

Creating the Full Databases

The main databases—production, pilot, training, and development—are created by copying the empty database into a structure you edit during the installation. The development database, for example, contains the data structures (tables, fields, and indexes) from the empty database, but is mapped to specific, separate disk locations.

Files on Disk

When you create a database structure in Progress 9.1, your single logical database includes several physical files. The file components of an MFG/PRO database are:

Structure description files (.st). This is the structure file. It is a text file used during the creation of a database to define the number, location, and size of the database extents. Use the default (QAD) structure files for mfgempty, mfgtrain, tritrain, mfgdemo, admempty, hlpempty, mfgprod, admprod, and hlpprod.

Storage area extent (.db). This is the main database extent. It contains the location of all of the extents that make up the database. During system administration activities, such as data dumps and loads, the database accesses database files by referring to this file.

Database extents (.dn). These extents contain database records. The n is a sequential number; for example, .d1 and .d2.

Before-image (.bn). These extents contain before-image (BI) records. The before-image extents should be stored on a separate disk drive with a different input/output (I/O) channel than the storage area and database extents. This guards against a single point of failure and improves system performance. The n is a sequential number.

The database can also include after-image (AI) and two-phase commit extents. The storage areas for these are controlled much like that of the BI file. These features are optional. For more information on implementing these features, see the *Progress Database Administration Guide and Reference*.

Loading Default Data

Once your databases are created, load default data into them. The data is separated into language-independent and language-dependent data. Perform the load of the language-dependent data for each language you plan to implement.

The main databases you load data into are:

mfgprod. This is your production database. This database is a multi-volume database with the files and extents optimized across multiple disks to enhance performance and security and to take advantage of your existing contiguous disk space. The production database is grouped with its own administration database (admprod) and its own help database (hlpprod). This database is also typically used as the basis for a development database.

mfgdemo. Optional. This is your conference-room pilot database. QAD supplies working data for mfgdemo that you can use to support a pilot or for development testing.

mfgtrain. Typically, you create one mfgtrain database and use the Progress PROCOPY tool to create copies of it for each user in individual training environments. QAD supplies data for this database specifically designed to support MFG/PRO training materials and scenarios. Each of these copies can share access to a single help database (hlpprod). As of MFG/PRO eB2, each database must have its own administration database (admprod).

tritrain. The tritrain database supports training for Triangulation (multi-currency, Euro functionality). It also has its own data and requires help and administration databases as described under mfgtrain. Make one copy for each student, as with mfgtrain.

seattle, chicago, newyork. These databases are used for multi site implementation training. Like mfgtrain and tritrain, they have their own data, they require separate help and administration databases, and you need as many copies as you have students in the training sessions.

Training and Demo Database Limitations

Training and demonstration data for MFG/PRO eB2-specific functionality is not immediately available after the initial release. Prior functionality is supported with relevant data. Check the QAD Global Support Web site for updates:

<http://support.qad.com>

Tip

You can modify your startup scripts after you complete your installation to launch additional side databases such as custom, shop floor, warehousing, or taxes.

MFG/PRO requires that at least two support databases be connected with any main database at startup. QAD ships the two required support databases (administration and help). These are also built from empty databases during the installation.

admprod. The administration database contains system data used by MFG/PRO to manage displays, connections, and databases. Each database you implement must have its own administration database.

hlpprod. The help database can be shared by all your databases depending on server mounts and access.

Online Help Options

Help is available in two formats: Windows and a help database.

- WinHelp is a compiled file that cannot be updated, is not translated, and is available only on GUI clients.
- The help database is loaded after the client install. You can add custom help to the database using Field Help Maintenance (36.4.13). Data is shipped translated when you order additional languages. Help is accessible on GUI, character, and Desktop clients.

File Server Installation

The file server is often installed on the same machine as the database server, though this is not required. The creation of a file server consists of the following steps:

- Install MFG/PRO source code.
- Install host client code.
- Configure database sets.
- Compile the source code.

- Generate startup scripts for the host client (and for remote UNIX clients).

The file server will be either a character server or a GUI server or both. You install the character file server from the character client CD and the GUI file server from the GUI client CD. If you plan to use both types of clients, both file servers are required.

Database Sets

Database sets are the group of databases launched by a startup script or stopped by a shutdown script. The main database, the support databases, and any other side databases are all included in database sets, and startup and shutdown scripts are generated for each. Each set consists of a full database and two or more support databases. The installation process from empty database to completed startup scripts (or shortcuts for Windows) is shown in Figure 1.4 on page 16.

You define database sets as part of the installation. The typical sets are:

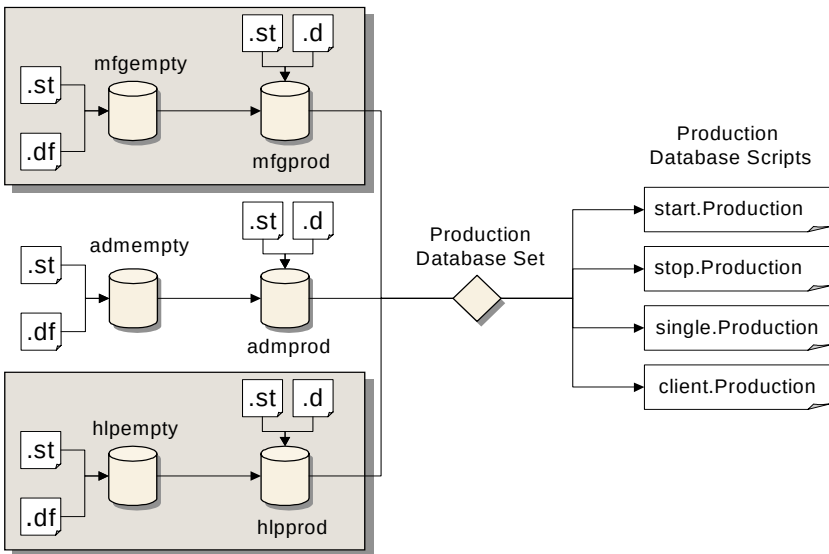
- Demo
- TrainN (one for each student)
- Development
- Production
- Compile

Once you have created the database sets, you generate the startup and shutdown scripts that launch or stop the databases within each set.

Installation Summary

Figure 1.4 summarizes the entire database creation process for one set of databases. Empty databases are created for the main and support databases. The schema is then loaded into the empty databases (.df files). The empty databases are combined with edited structure files to create the databases. Data is loaded into the databases (.d files). They are combined as database sets and scripts are generated to start and stop the servers and to start client sessions.

Fig. 1.4
Database Creation
Work Flow



Installation Utilities

A large portion of the installation is managed by a QAD utility called MFG/UTIL. This product can be used for numerous database management tasks. For the installation, several of these tasks are scripted together to guide you through the installation steps. Keyboard commands for MFG/UTIL are listed in Table 1.1.

Table 1.1
MFG/UTIL
Character Interface
Commands

Keyboard Entry	Command Name	Description
F1	Go	Moves to next frame or runs a program
F2	Help	Displays context-sensitive help (may not be available for all functions)
F3	Menu Bar	Accesses the menu bar
F4	End	Exits a frame, program, or menu
Spacebar	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, buttons appear within angle brackets: <OK>. To choose a button, Tab to the button and press Enter.

Guided Setup

The entire installation process is semi-automated by a Guided Setup within MFG/UTIL. Guided Setup steps you through the creation of the empty databases, the creation of the main and support databases, the creation of database sets, and the generation of scripts. This installation guide follows the installation method defined by the Guided Setup initialization files:

- Database server—`wkdbsrv.ini`
- Character client—`wkprcc.ini`
- Windows clients—`wkprgc.ini`

MFG/UTIL keeps track of where you are in the steps so that you can leave the installation and restart later. Text tokens for each group of steps are written to the initialization files to create this status: Not Run, Started, Error, and Done.

Important If you need to rerun the last set of steps from the beginning, the Guided Setup may not let you return to the initial entry screen to re-enter setup data. In this case, use a text editor to change the token back to Not Run for that set of steps in the initialization file.

Editing `wkdbsrv.ini` for U.S. English Installs

You will probably need to revise the Guided Setup. For each installation, review the server initialization file (`wkdbsrv.ini`) and determine which databases you are implementing. The default `wkdbsrv.ini` creates only the production database and the support databases it requires. To create other databases such as `mfgtrain` or `mfgdemo`, you must uncomment the relevant sections in the `wkdbsrv.ini` file. The comment symbol is a semicolon (;). Delete the semicolon at the start of each line you want uncommented.

Also, comment out any help databases you do not want. Typically, one is needed in the production environment and one in the training environment. You can set up your database sets for other databases, such as `mfgdemo`, to access the production help database.

Important You do not need to edit the Guided Setup initialization files specifically for Windows installations. MFG/UTIL translates the UNIX path statements (. /db) to Windows paths (c : \mfgsvr\db). This is true for both .ini files and structure files (.st).

Multiple Languages

MFG/PRO supports multiple languages per database. Installing more than one language requires a base language installation CD and a separate language CD for each additional language.

Tip
Not all languages are available for every MFG/PRO release.

Table 1.2 lists the top thirteen MFG/PRO language codes. The language code also appears on the label of your product media. The non-Western European languages require a few additional steps prior to building MFG/PRO databases for those languages.

Table 1.2
Primary MFG/PRO
Language Codes

Language	Code	Language	Code
Chinese, Simplified*	CH	Italian	IT
Chinese, Traditional*	TW	Japanese*	JP
Czech*	CZ	Polish*	PL
Dutch	DU	Portugese	PO
English	US	Spanish, Latin American	LS
French	FR	Spanish, Castilian	CS
German	GE		

* Non-Western language

The MFG/PRO database is language-independent, so that in general, you can install multiple languages to a single database. Each user is then assigned a default language and all menus, messages, and labels appear in that language when the user logs in to the database. If users want to change languages, they can select a new language in User Maintenance (36.3.18) —or more likely, request the change from the System administrator—exit MFG/PRO, and restart work in the new language.

Base Language Limitations

The base language is the first language you install on the MFG/PRO server. If you are using a double-byte language, install this language first because you cannot install and use a double-byte language such as Chinese in a database with a base language that is single-byte. If your base language is a double-byte language, you *can* install and use single-byte languages in the same database.

Multiple Languages

To implement more than one language in a single production database, you complete additional loads and modify the code page of the empty database. Also compile your multi-language programs against an undefined code page to avoid code page conflicts between languages later on. Instructions are included in this guide.

▶ See “Install Multiple Languages” on page 23 for an overview of the process.

Editing MFG/UTIL for Multiple Language Installs

To add languages to `wkdbsrv.ini`, search for all instances of the base language—for example, `/us`—and copy the section where it is found. Paste the section below the copied section and modify the base language abbreviation to reflect the correct language abbreviation for the additional language. The first instance of this is loading data into the production database. Figure 1.5 shows the addition of a French data load to a U. S. English base.

Fig. 1.5

Language-Specific Load

```
;CREATE PRODUCTION DATABASES
[CreateMSDB]
Status=Not Run
Program=crtpdbsa.w
STName=c:\mfgsvr\db\mfgprod.st
FromDB=c:\mfgsvr\db\mfgempty.db
```

```
[LoadData]
Status=Not Run
Program=raploadd.p
DataDir=c:\mfgsvr\us\mfg
DBName=c:\mfgsvr\db\mfgprod.db
LDBName=qaddb
```

```
[LoadData]
Status=Not Run
Program=raploadd.p
DataDir=c:\mfgsvr\fr\mfg
DBName=c:\mfgsvr\db\mfgprod.db
LDBName=qaddb
```

Added section for French data load.

```
[LoadData]
Status=Not Run
Program=raploadd.p
DataDir=c:\mfgsvr\mfg
DBName=c:\mfgsvr\db\mfgprod.db
LDBName=qaddb
```

The only change to the copied section is the change from /us to /fr.

► For an overview of the multi-language install process, see “Install Multiple Languages” on page 23.

Add a section for each language you are implementing for the production database, the administration database, and for all other databases such as mfgtrain, mfgdemo you are implementing.

Loading Translated Labels

Two specific types of labels are translated: validation messages and logical field values. Validation messages appear when a user enters invalid data into a validated field (a field with schema-controlled formats). Logical data values are the Yes/No that appear in logical fields such as Active or Key Item.

When you implement multiple languages in a single database, you must load translated labels into the empty database and compile sequentially for each language. For example, to implement U.S. English, French, and Latin Spanish in a single database, the process flow would be:

- 1 Compile English code.
- 2 Load French translated labels.

- 3 Compile French code.
- 4 Load Spanish translated labels.
- 5 Compile Spanish code.

The section in `wkprcc.ini` or `wkprgc.ini` for a French load would follow the base compile section and would look like:

```
[LoadXlat]
Status=Not Run
Program=rapldlbl.p
DBName=./db/mfgprod.db
Language=fr
```

Network, Disk, and Client Layout

At the machine level, QAD recommends deployment of MFG/PRO on a single database server with the character client installed on the main server for administration and batch processes. On UNIX, this character client supports additional terminal connections to the database.

If you are planning to use Windows clients—GUI or character—QAD recommends that you install the appropriate client files on a file server separate from the database server.

▶ See “Installing Windows File Servers” on page 56.

Summary of the Installation Process

Review this section before beginning the installation process to minimize errors and clarify the process.

Client CD Contents

Each customer receives a printed Release Media Report as part of the product shipment. This is an important document. It is not available on the release media, so locate this and store it in a safe location.

The Release Media Report lists the modules that you are licensed to run in MFG/PRO. If you ordered source code for a module, an X appears in the Src column of the report.

On the release media are files with an `.lst` extension under the `mfgpro/dist.lst` directory. These list the individual programs that are licensed within each module. For example, valid Purchase Order module programs are listed in `po.lst`. The installation process places these lists on your disk under *MFGPROInstallDir/dist.lst*.

The `.rp` files contain a list of reports and inquiries for each module. The `iv.lst` file is a listing of shared include files.

If you attempt to run a program and get a message that says you are not licensed to run it, first check your Release Media Report to make sure the module is licensed. Then check the module list to make sure the program is in the module you expect it to be in.

Prior to Installation

Complete these tasks before an MFG/PRO install:

- Set up the network.
- Set up `services` files for client/server connections if you have multiple hosts.
- Install any patches for your operating system.
- Install Progress software for the MFG/PRO server.
- Install Progress software for the MFG/PRO clients.
- Install the latest Progress patches. These can be obtained from:

<http://www.progress.com/support>

Install the Database Server

- Install the MFG/PRO database server and language media.
- Create empty MFG/PRO databases.
- Create production databases from empty databases and structure files.
- Load system data into the databases.

Install File Servers or Host Clients

- Install MFG/PRO character-client media on the database server.
- Configure database sets—groups of databases started or stopped together with a single script.
- Generate server and client startup and shutdown scripts.
- Start and register each main MFG/PRO database.
- Create a system administration user.
- Load MFG/PRO field and procedure help.
- Set up additional character clients.

Install Remote Clients

- Install MFG/PRO client media on a file server.
- Set up the first client (file server) with the client setup program.
- Configure initial client database sets.
- Generate initial client shortcuts.
- Set up additional clients using express setup.

Install Multiple Languages

- Install the MFG/PRO database server and language media.
- Create empty MFG/PRO databases.
- Create production databases from empty databases and structure files.
- Load system data into the production databases.
- Load language-specific data for each language into the production databases.
- Modify the empty databases to use an undefined code page.
- Compile U.S. language against the empty databases.
- Load translated labels into the empty database for one additional language (updates logical data values and validation messages).
- Compile that language against the empty databases.
- Repeat the last two steps for all additional languages.

Install a Single, Non-U.S. English Language

The following are the steps to create a single-language installation that is not a U.S. English installation:

- Install the MFG/PRO database server and language media.
- Create empty MFG/PRO databases.
- Load translated labels into the empty databases for translated validation messages and logical values.
- Create production databases from empty databases and structure files.
- Load system data into the production databases.
- Load language-specific data into the production databases.
- Modify the empty databases to use the correct language code page.
- Compile each language against the empty databases.

System Requirements

An MFG/PRO installation requires planning for adequate system resources. This chapter provides system requirements and software prerequisites for database server, file server, clients, and the network.

Database Server **26**

File Server **27**

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Network **28**

An MFG/PRO system consists of a database server, optionally a file server (for remote clients), and remote clients with an adequate network. For requirements for QAD Desktop, see *Installation Guide: QAD Desktop*.

Database Server

The database server contains MFG/PRO and Progress server software, as well as your production data. You should estimate the eventual size of your production database and the demands placed on different components of the database prior to starting an installation so that you can lay out your disks appropriately.

Hardware Requirements

- 1.5 GB of free disk space (includes Progress and MFG/PRO).
 - 700 MB for each additional language
 - 100 MB of temporary space if installing from tape
- Approximately 10 GB disk space spread across three or more disks for data structures. This is an estimate based on a 5 to 7 GB production database.
- High-speed 100 mbps network card.
- ISO9660 CD-ROM or tape drive.
- 2 disk controller channels (minimum).
- 200 system file handles per simultaneous MFG/PRO process.

Software Prerequisites

- Operating system patches
- Progress 9.1D+ Enterprise Database Server, licensed for the appropriate number of users
- Progress 9.1D+ 4GL, one license required
- In a multi-language installation, Progress language-specific releases for each language
- Optionally, a Web browser (Netscape or Internet Explorer) to view MFG/UTIL help files in HTML format and access online support

File Server

The file server requirements cover shared remote client requirements, implemented on a separate server.

Hardware Requirements

- 1 GB of free disk space (includes Progress and MFG/PRO)
- 700 MB for each additional language

Software Prerequisites

- Operating system patches
- Progress 9.1D+ Client Networking
- Progress 9.1D+ Query/Results
- Progress patches

Remote Clients

The requirements for remote client PCs assume that all shared files are on a file server.

Hardware Requirements

- 10 MB of disk space
- 600 MHz or faster Intel Pentium (or compatible) processor
- 128 MB of RAM
- Super VGA video
- 1 GB or larger hard drive for future data storage
- 100 Mbps network card

Software Prerequisites

- Microsoft Windows 95, 98, 2000, NT Workstation, or XP
- MFG/PRO GUI or Character client media
- Progress 9.1D+ software:
 - Query/Results (one Query license per client required)
 - Client Networking
- Optionally, a Web browser (Netscape or Internet Explorer) to view MFG/UTIL help files in HTML format and to access online support

Network

▶ See the *Progress Networking Guide*.

Set up your network to support the Progress specifications. Minimum requirements from the MFG/PRO standpoint are:

- 10 Megabit (Mb) Ethernet or faster network

Chapter 3

Database Server Install

Use this chapter to load the MFG/PRO database server and language media and build the MFG/PRO databases. This chapter supports both new and existing (conversion) installations

♦ See Chapter 4, “Installing Windows File Servers,” on page 56 for instructions.

Note While setting up the database server, you can simultaneously load the MFG/PRO remote GUI or character client media onto the file server—provided it is a separate machine.

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Creating Working Databases **43**

Creating Remaining Databases **49**

Preliminary Steps

Prior to install, review the following cautions and requirements:

- For multi-language installations on Windows and SunOS, load any OS-specific language files to support multi-language character displays. Other operating systems may have similar requirements; check with your operating system vendor.
- Set your \$TERM variable to a standard terminal type such as vt100 or vt200 while installing MFG/PRO. You can switch to a language-specific terminal if necessary when you launch the clients.
- Determine the following information:
 - The MFG/PRO installation directory where you want to install the MFG/PRO database server files, referred to as *MFGPROInstallDir*
 - The Progress directory for the database server
 - The host name for the database server

Setup for Non-Western European Languages

If you are installing non-Western European languages:

- Back up the Progress `startup.pf` and Progress `empty.db` in the database server Progress directory.
- From the appropriate Progress language-code directory, copy the following files to the top level of the database server Progress directory:
 - The parameter file (extension `.pf`) corresponding to the language you are installing
 - The empty database file (`empty.db`) and associated files
- Edit the following `startup.pf` values to reflect your base language:
 - `-cpinternal ISO8859-1`
 - `-cpstream ISO8859-1`
 - `-d mdy`
 - `-numsep 44`
 - `-numdec 46`

Note See the *Progress Internationalization Guide* for details.

- After installing the MFG/PRO files to the server, modify the copy of `mfgutil.ini` in the *MFGPROInstallDir*:

```
Startparms=-d mdy
```

Create the Installation User and Group (UNIX Only)

MFG/PRO installations on UNIX require a group called `qad` and a user called `mfg` on the database server. All MFG/PRO installation and maintenance programs store pertinent information under the `mfg` user home directory. This enables QAD scripts to find data about installed products automatically and reliably and lets you maintain your system without logging on as `root`.

- Create a group called `qad` with a group ID (gid) of 65535 with your UNIX system administration utility. (65535 is the user ID of the files on MFG/PRO media.)
- Create a user called `mfg`, with a user ID of 65535.
 - Assign the Korn shell to this user. All of the scripts delivered on QAD media use Korn shell (ksh) syntax.
 - For the `mfg` user, set the `$HOME` environment to a user directory where working and temporary files can be written.
 - Assign the standard umask of 022 to set permissions and security.
 - Update the `mfg` user `.profile` to include the `PROPATH`, `DLC`, and `PATH` variables.
 - Create directory `cfg` under the home directory of user `mfg`. This directory is mandatory for storing installation and configuration information. The `cfg` directory must have read, write, and access permissions (755) for the owner group and others.

Permissions

The MFG/PRO installation uses or creates several directories. If you choose to use the default directories and they do not exist at the time of the install, they are created automatically. This applies the ownership and appropriate permissions for the installation user (`mfg`). However, if you choose to create or use other directories outside of the installation process, make sure these are owned by `mfg` and have read and write permissions for `mfg` assigned.

Modify the Services File

If you are implementing a client/server environment, tailor your services files. If you add any new service names after installation, you must modify your services file. All service names, host names, and port numbers must match in the services files of each client and each database server on the network. The location of the UNIX services file on the server is typically the /etc directory. On Windows it is located in:

c:\winnt\system32\drivers\etc

Tip
The more users you expect to have, the more numbers you should leave open between port numbers.

Add the names of your database services to your services file. Add one for each main database and support database you plan to connect to. Limit the service name to 16 characters. You can use any unused port numbers. Table 3.1 shows example service names and port numbers for a production database set.

Table 3.1
Service File
Example

Service Name	Port #/Protocol	Comment
prod-srv	5500/tcp	# Production Database
admin-srv	5510/tcp	# Admin Database
help-srv	5520/tcp	# Help Database

Installing Server Files

In this set of steps, you mount the Database Server media and copy the files to the server. Choose the steps for the media you received. For Windows servers, insert the CD and go to “Installing Database Server Files” on page 34.

Mount the CD-ROM (UNIX Only)

- 1 Log on as mfg.
- 2 Mount the CD-ROM. Example commands are listed in Table 3.2.

Table 3.2
UNIX CD Drive
Mount Commands

Hardware	Mount Command
Sun	volcheck cdrom
HP	/etc/mount -F cdfs /dev/dsk/YourCDDevice /cdrom
Digital	mount -r -o noversion -t cdfs /dev/YourCDDevice /cdrom

Hardware	Mount Command
AIX	<code>smitty mountfs</code> Then select file system, directory, and file system type (<code>cd rfs</code>).
Linux	<code>mount /dev/hdb /mnt/cdrom</code> Where <code>/hdb</code> could be <code>hdc</code> or <code>hdd</code> among other possibilities.
All others	Refer to your operating 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.

3 Continue with “Installing Database Server Files” on page 34.

Load Tape Media (UNIX Only)

Load the tape media into a temporary directory, then extract the MFG/PRO files from the temporary directory into a permanent installation directory. All MFG/PRO tapes are written using a block size of 5120 bytes.

- 1 Log on as `mfg`.
- 2 Create a temporary directory.
- 3 Load your tape into the appropriate server drive.
- 4 Change to the temporary installation directory:
`cd TemporaryTapeDir`
- 5 Enter the applicable load command from Table 3.3.

On this type of hardware...	Enter this load command...
HP 9000/800 Series, 1/4" cartridge	<code>tcio -i /dev/rct/YourTapeDevice cpio -iumvdBc</code>
All others	<code>cpio -iumvdBc < /dev/YourTapeDevice</code>

Table 3.3
UNIX Tape Extract
Commands

- 6 Remove the tape and store it.

Installing Database Server Files

Complete this section to install the MFG/PRO database server files on your UNIX server.

- 1 In UNIX, log on as user `mfg` under the group `qad`. For Windows, log in as a user with Administrator privileges.
- 2 On the CD, change to the directory containing the database server media. This is the temporary tape directory for tape installs.

- 3 Change to the `install` directory:

```
cd install
```

- 4 Launch the database server installation script in that directory:

```
./install.ksh
```

For Windows, run `install.exe` from Run on the Start menu.

A welcome screen displays. Press Enter.

```
Welcome to QAD's MFG/PRO eB2 Database Server installation.
We are installing MFG/PRO eB2 Database Server for solaris.
Press <Enter> to view license agreement.
```

- 5 Accept the MFG/PRO software license agreement.

```
Do you accept all the terms of the preceding License Agreement?
If you choose no, the install will stop.
```

```
To install MFG/PRO eB2 Database Server, you must accept this
agreement. (y/n)?
Default is n
->y
```

- 6 Accept the default or enter the installation log files location. Later installs (language files, host client, and others) look in this location for installation information. If you enter a different log file location, make note of it for later installations.

```
Please enter the location where the log file should be written.
Default is /users/mfg/instlog
```

```
->/users/mfg/instlog
```

The log directory will be used to record some information about this installation. That information will be used during the installation of subsequent media. If you choose not to use the default location, please remember the location that you choose so you can use the same location during installation of subsequent media.

- 7 Enter the Progress installation directory path or accept the default. The script verifies the location and version. Specify Yes to confirm.
- 8 Enter the path and directory where you want to install the MFG/PRO database server files (*MFGPROInstallDir*). If this directory does not exist, it is created.

Important Do not select a directory path that has spaces in it such as C:\Program Files\mfgpro. Database scripts generated by MFG/UTIL cannot locate a database in a path with spaces.

- 9 Review the summary and confirm by entering y and pressing Enter.
- 10 Select the Finish button and press Enter to begin copying the files.

▶ TIME:
UNIX 00:03:00
WIN 00:07:00

Installing Language Files

Complete these steps to install the MFG/PRO language files, which include the language-specific menu and message data files. This is a required step even if you are installing only one language.

The first language you install becomes the base language. This cannot be changed without a re-installation. If you are installing an MFG/PRO environment with multiple languages, you must repeat these language file installation steps for each language. Always install a double-byte language first if you are installing any double-byte languages at all.

The language files for each language you purchased are installed in subdirectories below *MFGPROInstallDir*. The language subdirectories are identified by the two-letter MFG/PRO language code. For example, for US-English the subdirectory is /us.

▶ For a list of primary MFG/PRO language codes, see “Primary MFG/PRO Language Codes” on page 18.

- 1 For Windows, insert the language CD. For UNIX, load the language media on your system using the instructions appropriate to the type of media you have:
 - For tape media, use “Load Tape Media (UNIX Only)” on page 33.
 - For CD-ROMs, use “Mount the CD-ROM (UNIX Only)” on page 32.
- 2 In UNIX, log on as user mfg under the group qad. For Windows, log in as a user with Administrator privileges.

- 3 On the CD, change to the directory containing the language media.
For tape installs, this is the temporary tape directory.
- 4 Change to the `install` directory:
`cd install`
- 5 Launch the database server installation script in that directory:
`./install.ksh`
For Windows, run `install.exe` from Run on the Start menu.
A welcome screen displays. Press Enter.
- 6 Accept the MFG/PRO software license agreement.
- 7 Enter the log file location from step 6 in “Installing Database Server Files” on page 34.
- 8 Enter the *MFGPROInstallDir* from step 8 in “Installing Database Server Files” on page 34.
- 9 Review the summary and confirm by entering `y` and pressing Enter.

▶ TIME: 00:00:30

If you are installing multiple MFG/PRO languages, repeat steps 1 to 9 for each language.

Modify the `wkdbsrv.ini` File

▶ For more information, see “Guided Setup” on page 17.

The `wkdbsrv.ini` file controls the MFG/PRO Guided Setup. Use a text editor to edit this file. The primary tasks are:

- Remove all tasks for databases you do not intend to create and uncomment all tasks for databases you do intend to create.
- Modify all paths to reflect the correct language. For example, if you are installing French as the base language, you would change all instances of `/us` to `/fr`.
- Add language-specific data loads for each additional language you are implementing.

Setting Up MFG/UTIL Clients (Windows Only)

Installations on a Windows server or remote Windows clients require some temporary settings to enable the tools and DOS windows to work correctly.

- The graphical interface does not perform some functions, such as compiling, at high screen resolutions. Reset your screen resolution to 800 x 600 prior to starting the graphical MFG/UTIL.
- The character interface requires resetting your DOS window layout. The symptoms of incorrect settings are deceptive; the screens do not refresh properly after tabbing through menu and button selections.

To reset the DOS window for MFG/UTIL, complete the following steps:

- 1 Launch the character MFG/UTIL from the Start menu icon.
- 2 Right-click the DOS window title bar and select Properties.
- 3 Select the Layout tab.
- 4 Set Screen Buffer Size Width to 80 and Height to 25 and choose OK.
- 5 When you are prompted, select Modify Shortcut.
- 6 Restart MFG/UTIL to enable the change.

Reset the window to the defaults (Width 80, Height 300) after you have completed the Windows client installations to ensure adequate buffers for other applications.

Creating Empty Databases

In the following section, you create the empty MFG/PRO production, administration, and help databases from the default QAD structure files. You then use the empty databases as a template to build your production, training, demonstration, and other main databases, as well as their administration and help support databases.

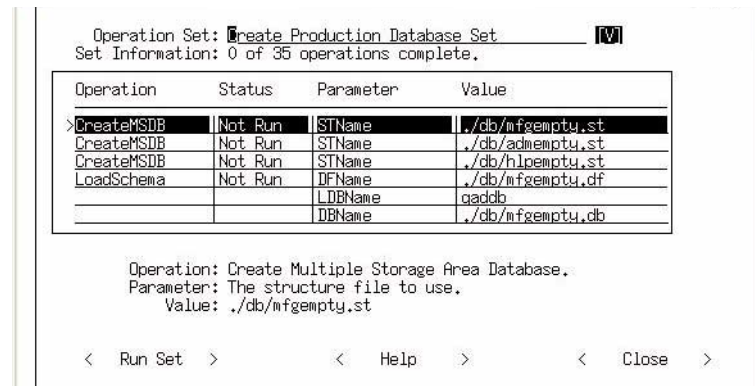
For information on MFG/UTIL keyboard commands, see “MFG/UTIL Character Interface Commands” on page 16.

- 1 Launch MFG/UTIL from the *MFGPROInstalldir* using the following command: `./mfgutil`.
For Windows, launch MFG/UTIL from the icon on the Start menu.
- 2 Select MFG/PRO Guided Setup from the Configure menu.



The MFG/PRO Guided Setup program provides an outline of the operations involved in setting up your MFG/PRO environment. You can use this program to access the different configuration utilities in MFG/UTIL. Review the following figure to become familiar with the Guided Setup screen.

Note The number of operations is determined by the number of uncommented sections in `wkdbsrv.ini`. See “Guided Setup” on page 17 for information on configuring this file.



Operation sets are groups of installation activities. The operations in a set display in the Operation frame. On completion, the status changes to Done. If errors occur or if you cancel processing prior to completing a step, the status is Error. Below the Operation frame, the operation, the key variable required, and default value for that variable display.

- 3 Select Create Production Database Set in the Operation Set field.
- 4 Tab to select Run Set and press Enter.
- 5 The Edit Structure File/Create Database screen displays with the default QAD empty structure file, `mfgempty.st`. You do not need to edit this file for the empty databases. Choose Create DB.

Structure File: `./db/mfgempty.st` <Browse...>

Database Storage Areas					
Comment	Token	Area Name	Recs Per	Block Extent	Pathname
*>#					
*#	b				./db
*#					
*#	d	Schema Area	32		./db
*#					
*#	d	TRANSACTION	64		./db

< Save > < Save As > < New Entry > < Create DB > < Help > < Close >

- 6 In the Create/Copy Database screen, verify that Progress Empty is selected and accept the defaults in the New Database and DB Block Size fields.

Connect Database

Physical Name: `./db/mfgempty.db` < Files... >

Logical Name: `gadcb`

Database Type: `PROGRESS` [] Multiple Users

User ID: _____

Password: _____

Trigger Location: _____ < Files... >

Parameter File: _____ < Files... >

Other CONNECT Statement Parameters:

<OK> <Cancel>

- 7 Choose OK to build the main empty database, `mfgempty`.
- 8 When `mfgempty` is built, a log of the database build process displays. You can verify that the database was created successfully by checking:
 - `MFGPROInstallDir/mfgempty.log`
 - Storage area extents were created in `MFGPROInstallDir/db`

TIME: 00:00:30

Create Empty Support Databases

The Guided Setup returns you to the Edit Structure File/Create Database screen with the Close button selected.

- 9 Press Enter to close the screen. The screen redisplay with the admempty.st structure file identified.
- 10 Repeat steps 5 through 9 above for the administration database, then do the same for the help database. The file names and directories are listed in Table 3.4.

Table 3.4
Edit Structure
Values for Help and
Administration
Databases

DB	Structure File	DB Type	New Database	Block Size	Log
Admin	admempty.st	Progress	./db/admempty	8192(8K)	admempty.log
Help	hlpempty.st	Progress	./db/hlpempty	8192(8K)	hlpempty.log

- 11 When the Edit Structure File/Create Database screen displays after the last empty help database has been created, choose Close.

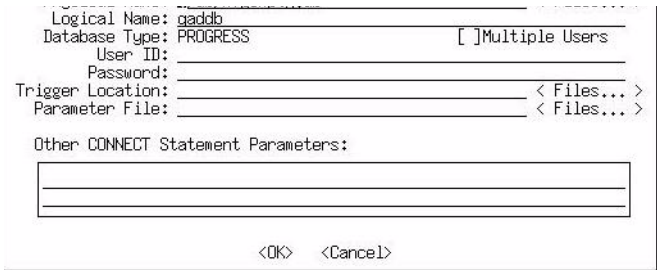
Load Schema in Empty Databases

The database schema consists of the sequences, tables, fields, and indexes in the database. In this task, you load the schema into the empty main, administration, and help databases using data definition files: mfgempty.df, admempty.df, and hlpempty.df. These three empty databases are used to build all your main and support databases such as mfgprod, mfgtrain, and mfgdemo.

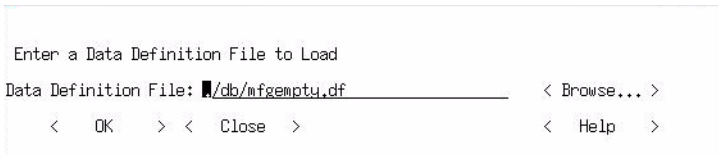
- 1 After you close the Edit Structure File/Create Database screen, the Connect Database screen displays. Accept the defaults and choose OK to connect to mfgempty. Use Table 3.5 and the screen as guides.

Table 3.5
Connect Database
Values for
mfgempty

Field	Value
Physical Name	Path to mfgempty (/db/mfgempty.db)
Logical Name	Logical database name (qaddb)
All other fields	Leave blank

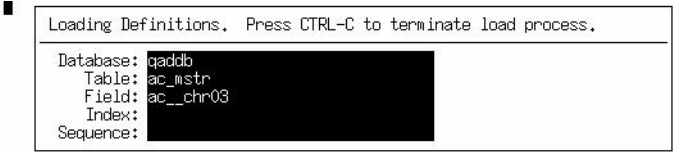


- 2 The default data definition file displays. Choose OK to begin loading the database schema.



The program first writes the schema to a buffer, then loads it into the database. The write displays a progress screen; the load process does not. Almost half the load time you see the message, “Processing schema load. Please wait...”

TIME
UNIX: 00:40:00
WIN: 00:57:00



- 3 When the load completes, close the log window.
- 4 The Enter a Data Definition File to Load screen displays with the Close button selected. Press Enter to close the screen.
- 5 The Connect Database screen displays with the correct data to connect to admempty.db. Repeat steps 1 through 4 in this section for the administration database, then do the same for the help database. The database names and directories are listed in Table 3.6.

	Physical name	Logical	Data definition file	TIME: UNIX	WIN
Admin	./db/admempty.db	qadadm	./db/admempty.df	00:02:00	00:04:00
Help	./db/hlpempty.db	qadhlp	./db/hlpempty.df	00:00:30	00:00:30

Table 3.6
Schema Load
Values for Help and
Administration
Databases

- 6 When the help schema load is complete, choose Close.
- 7 The Enter a Data Definition File to Load screen displays. Choose Close. Unless you are loading translated labels, the Truncate Database Before Image File screen displays. If you are loading translated labels, go to the next section.

Load Translated Labels (Multi-Language Only)

See “Install Multiple Languages” on page 23 to determine if you need this step.

If you are doing a multi-language installation and have correctly modified the `wkdbsrv.ini` file to include this step, the Load Translated Labels screen appears. (If you need to complete this step and have not set up the `wkdbsrv.ini` file, exit the Guided Setup and start the process from the MFG/UTIL Database menu.)

- 1 In the Connect Database screen, accept the language-specific empty database name from `wkdbsrv.ini`, or enter the correct one. Choose OK.
- 2 Accept the location of the `xdc_mstr` from the `wkdbsrv.ini` file or enter it here. It is located in the language directory of each language except U.S. English. Choose OK to start the load.

Specify an `xdc_mstr.d` file to load

C:\mfgsrv\fr\xdc_mstr.d <Browse...>

< OK > < Cancel > < Help >

TIME 00:02:00

- 3 The load completes. Choose OK to close the load window.

```
08/28/02 @ 11:31:25 - Unfreezing Database. Please Wait...
08/28/02 @ 11:31:32 - Check in xdc.err for errors.
08/28/02 @ 11:33:01 - Freezing Database. Please Wait...
Press CLOSE to exit.
-
```

< Close >

Copying:

File-Name: `xp_mstr`
Field-Name: `xp_type`

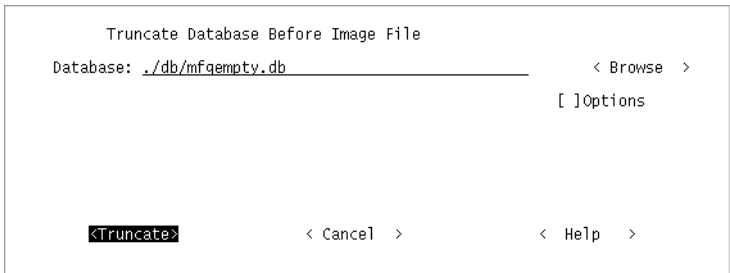
- 4 The Truncate Database Before Image File screen displays.

Truncate Before-Image Files

You now truncate the empty database before-image (BI) files. These files contain data awaiting writes to the database. Truncation updates the file so that the database is fully synchronized and then deletes the data, bringing the files back to their minimum size. Little has occurred to increase the size of your BI file at this point, but the synchronization is required prior to creating copies of these databases.

- 1 In the Truncate Database Before Image File screen, accept the default path to `mfgempty` and choose Truncate.

◆ TIME:
Mfg 00:01:30
Admin 00:01:30
Help 00:01:30



- 2 Close the log window that displays on completion.
- 3 Repeat steps 1 and 2 for the administration and help databases.
- 4 When the `hlpempty.db` BI file is truncated, choose Close.
- 5 If you have additional language-specific empty databases, these are truncated here.

This completes the work to create the empty databases.

Creating Working Databases

In this task, use the empty databases and the default structure files to create your working databases. Cycle through the entire process for each database. For example, you create `mfgprod` then load language-dependent and language-independent data. Then the Guided Setup returns to the beginning to create `admprod`.

Edit the Structure Files

Tip

You can change the database names if you choose.

The Guided Setup starts with the production database, `mfgprod`. The first step is editing the structure file. The Structure File Record Detail screen lets you edit the Storage Area Path and the Extent Size for fixed-length extents.

- Use the Storage Area Path to distribute your database onto drives to maximize performance and access.
- Use the Extent Size on fixed-length extents to control the size of each storage area. (This field does not appear for variable-length extents.)

Note Most storage areas consist of two extents—one fixed length, the other variable to allow for growth.

Warning Do not edit the Comment line in a storage area. This converts the storage area definition to a comment and nullifies the storage area. To add a comment to the file, select a comment line (#) from the Database Storage Area's selection list and press Enter.

Warning Do not change the storage Area Name. This name matches the Area definition in the Data Definition files (`.df`) for the database. When Progress encounters data files without defined storage areas, it creates them in the system storage area, which is also used to maintain the structure of the database.

- 1 In the Edit Structure File/Create Database screen, a structure file for the production database, `mfgprod.st`, defaults in the Structure File field. The MFG/UTIL screen that displays lets you assign disk locations and sizes to your storage areas.
- 2 Modify any storage area by tabbing to the row and pressing Enter.

Structure File: `./db/mfgprod.st` <Browse...>

Database Storage Areas				
Comment	Token	Area Name	Recs Per Block	Extent Pathname
*	d	Schema Area	32	./db
* #				
*	d	TRANSACTION	64	./db
* #	d	TRANSACTION	64	./db
* #				
*	d	TRANSACTION IDX	32	./db

< Save > < Save As > <New Entry> <Create DB> < Help > < Close >

- 3 Edit the storage area definition. Typically you would edit only the Storage Area Path and Extent Size.

Please Enter The Structure File Record Detail Mode: Modify

Comment: _____

Storage Area Token: d - DB on In (Schema/Us ☒

Area Name: TRANSACTION

Records Per Block: 64 ☒

Storage Area Path: ./db

Extent Type: Fixed Length ☒ Extent Size (in KB): 5,120

- 4 Choose OK to save the edits.
- 5 Choose the Save button in the Edit Structure File/Create Database screen to save the file without changes.
- 6 Choose Create DB to save your entries and close the screen.

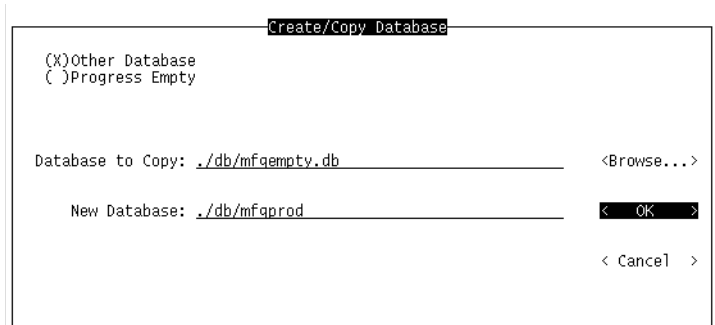
Build the Main Databases

In these next steps, you use the structure files you configured in the last set of steps and the empty databases you created earlier to create the working databases.

- 1 The Create/Copy Database screen displays. Select Other Database and verify the path to `mfgempty.db`. Choose OK.

The New Database name defaults from the `.st` file name. In some instances, this default name is controlled by the `wkdbsrv.ini` file (where the database name does not match the `.st` file name). In either case, you can enter a different database name here if you choose.

▶ TIME
 Prod 00:02:00
 Admin 00:00:30
 Help 00:00:30
 Train 00:02:00
 Demo 00:01:30
 N. York 00:01:30
 Seattle 00:01:30
 Chicago 00:01:30



- 2 When mfgprod is built, a log of the database build process displays. Scroll through the log and verify that mfgprod was created successfully. This information is also recorded in an mfgprod.log file in the *MFGPROInstallDir*. When ready, choose Close to continue.
- 3 The Database Storage Areas screen displays with the Close button selected. Press Enter to close the screen. You now load the data for this database.

Loading System Data

In this task, you load the default system data supplied by QAD into each database. You first load language-specific data such as menu and message files into a database. You then load language-independent control data. After completing both loads into a database, you go on to the next database and complete the loads for that database.

Important If you are building a target version database for an MFG/PRO conversion, skip the remainder of this chapter.

- 1 After the Database Storage Areas screen closes, the Connect Database screen displays. Accept the defaults to connect to the production database, mfgprod. Choose OK.

Connect Database

Physical Name: ./db/mfgprod.db < Files... >

Logical Name: qaddb

Database Type: PROGRESS []Multiple Users

User ID:

Password:

Trigger Location: < Files... >

Parameter File: < Files... >

Other CONNECT Statement Parameters:

OK

<Cancel>

- 2 In the Input Directory screen, specify the language-specific mfg subdirectory from which you want to load menus and messages, such as U.S. English, ./us/mfg, or French, ./fr/mfg. Choose OK.

Input Directory:

./us/mfg < Browse >

OK

< Cancel > < Help >

- 3 The Table Selection for Load screen displays the data files in the mfgprod database in the language-specific mfg subdirectory. This screen may take a minute or more to load the data file list for larger directories. Select OK to start the load.

Table Selection for Load

<Select Tables> <Deselect Tables>

✓ cd_det

✓ lngd_det

✓ mnt_det

✓ msg_mstr

">" Indicates Selected Table

< OK > <Cancel> < Help >

- ◆ TIME 00:00:30 4 When the load completes, press Spacebar to continue.

Loading Data. Press CTRL-BREAK to terminate the load process.		Records		Expected Records
Table	Load file	Loaded	Total Errors	
cd_det	.\us\mfg\cd_det.d	345	0	345
lngd_det	.\us\mfg\lngd_det.d	1062	0	1062
mnt_det	.\us\mfg\mnt_det.d	2992	0	2992
msg_mstr	.\us\mfg\msg_mstr.d	6822	0	6822

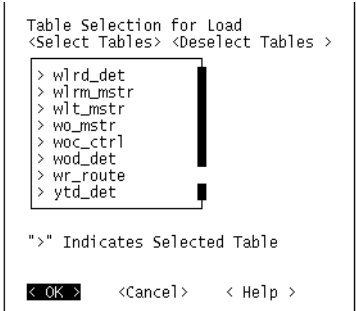
Load of database contents completed.
Press space bar to continue.

- 5 The Guided Setup overview screen may display showing your progress. It closes automatically.
- 6 If you have edited the Guided Setup wkdbsrv.ini initialization file to load data for additional languages, those loads should take place at this point. See “Editing MFG/UTIL for Multiple Language Installs” on page 19 for more information on modifying this file.

Load Language-Independent System Data

You now load the language-independent system data.

- ◆ TIME
UNIX 00:02:00
WIN 00:03:00
- 1 The Connect Database screen displays with mfgprod.db entered by default. Accept the defaults by selecting OK.
- 2 The subdirectory ./mfg defaults in the Input Directory screen. Choose OK to select the tables.
- 3 When the Table Selection for Load screen displays, the tables to be updated with language-independent data files are listed. All are selected by default. Choose OK to load the data.



- 4
- When the load completes, press Spacebar to continue.
- 5
- You return to the Edit Structure File screen to begin the process for the next database.

Creating Remaining Databases

Which remaining databases you create is controlled by the `wkdbsrv.ini` file. Table 3.7 shows the default order set up in this file and whether the databases are created and loaded or copied from an existing database.

	Step	Database	Structure File	Logical DB Name	From (db/dir)	Time
Production Support Databases	Create	admprod	admprod.st		admempty.db	
	Load	admprod		admprod	./us/admin	00:01:00
	Load	admprod		admprod	./admin	00:02:30
	Create	hlpprod	hlpprod.st		hlpempty.db	
	Truncate	mfgprod				
	Truncate	admprod				
	Truncate	hlpprod				

Table 3.7
Databases in
wkdbsrv.ini

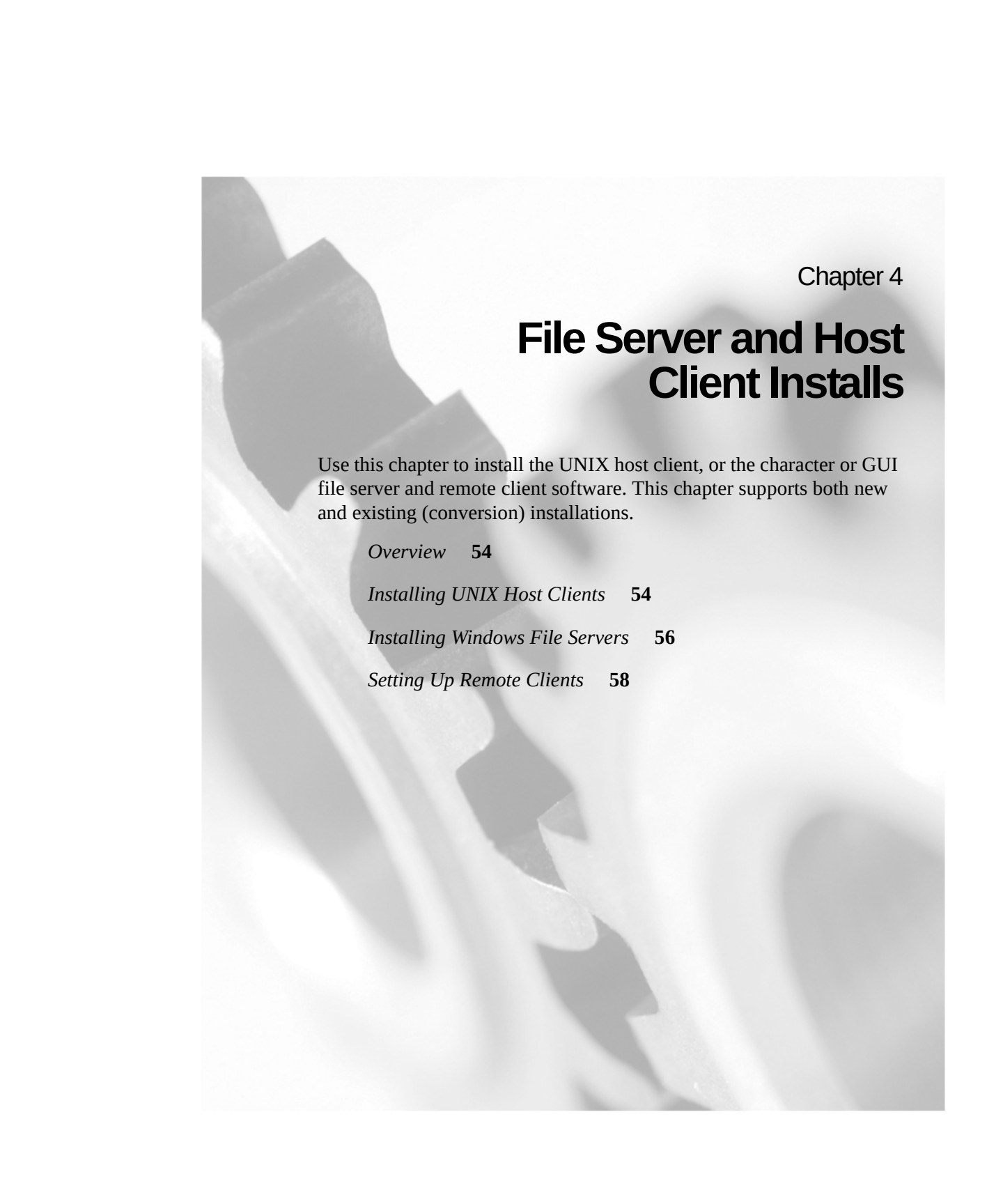
	Step	Database	Structure File	Logical DB Name	From (db/dir)	Time
Training Databases	Create	mfgtrain	mfgtrain.st		mfgempty.db	
	Load	mfgtrain		qaddb	./us/mfg	00:00:30
	Load	mfgtrain		qaddb	./mfgtrain	00:03:00
	Copy	admtrain	admprod.st		admprod.db	
	Copy	hlptrain	hlpprod.st		hlpprod.db	
	Truncate	mfgtrain				
	Truncate	admtrain				
	Truncate	hlptrain				
Demonstration Databases	Create	mfgdemo	mfgdemo.st		mfgempty.db	
	Load	mfgdemo		qaddb	./us/mfg	00:00:30
	Load	mfgdemo		qaddb	./mfgdemo	00:04:00
	Copy	admdemo	admprod.st		admprod.db	
	Copy	hlpdemo	hlpprod.st		hlpprod.db	
	Truncate	mfgdemo				
	Truncate	admdemo				
	Truncate	hlpdemo				
Triangulation Training Databases	Create	tritrain	tritrain.st		mfgempty.db	
	Load	tritrain		qaddb	./us/mfg	00:00:30
	Load	tritrain		qaddb	./tritrain	00:03:00
	Copy	admtri	admprod.st		admprod.db	
	Copy	hlptri	hlpprod.st		hlpprod.db	
	Truncate	tritrain				
	Truncate	admtri				
	Truncate	hlptri				

	Step	Database	Structure File	Logical DB Name	From (db/dir)	Time
Multi-Site Training Databases	Create	chicago	chicago.st		mfgempty.db	
	Load	chicago		qaddb	./us/mfg	00:00:30
	Load	chicago		qaddb	./chicago	00:03:00
	Create	newyork	newyork.st		mfgempty.db	
	Load	newyork		qaddb	./us/mfg	00:00:30
	Load	newyork		qaddb	./newyork	00:03:00
	Create	seattle	seattle.st		mfgempty.db	
	Load	seattle		qaddb	./us/mfg	00:00:30
	Load	seattle		qaddb	./seattle	00:03:00
	Copy	admmulti	admprod.st		admprod.db	
	Copy	hlpmulti	hlpprod.st		hlpprod.db	
	Truncate	chicago				
	Truncate	newyork				
	Truncate	seattle				
	Truncate	admmulti				
	Truncate	hlpmulti				

After each load, errors are written to .e files in the directory you loaded from. If an error occurs loading from the co_ctlr.d file in ./mfg, a co_ctlr.e file with the errors is created in ./mfg.

After you create the final working database, choose Close in the Edit Structure File/Create Database screen.

This completes the server installation.

The background of the page is a grayscale image of several interlocking gears. The gears are of different sizes and are positioned in a way that they appear to be meshing together. The lighting creates highlights and shadows on the teeth of the gears, giving them a three-dimensional appearance. The overall tone is technical and industrial.

Chapter 4

File Server and Host Client Installs

Use this chapter to install the UNIX host client, or the character or GUI file server and remote client software. This chapter supports both new and existing (conversion) installations.

Overview **54**

Installing UNIX Host Clients **54**

Installing Windows File Servers **56**

Setting Up Remote Clients **58**

Overview

In this chapter you install one or all of the following configurations:

Table 4.1
UNIX and
Windows Client
Configurations

	Host machine	Remote clients
UNIX	Character client	telnet to host
Windows Character	Character file server	Character client
Windows GUI	GUI file server	GUI client

On UNIX, you install a host client and then telnet in from other UNIX terminals to connect with the host client session.

If you are running Windows clients (character or GUI) in addition to the UNIX host clients, then you first install a character or GUI file server, and then install remote clients on each additional machine. Remote character clients connect with a character file server; GUI remote clients connect with a GUI file server.

Installing on a Windows database server is exactly parallel except there is no host client. If you want to install a client on the host machine, it is the same as installing a character or GUI file server.

▶ For additional information on Desktop 2 requirements and deployment, see *Installation Guide: QAD Desktop*.

While the choice of database server is largely dependent on company policy, most companies install the Windows character file server and remote clients rather than the GUI for performance reasons. The character deployment fully supports a Desktop 2 implementation.

Installing UNIX Host Clients

This installation assumes you are installing the host client on the database server machine.

- 1 Starting with your base language, load the language-specific UNIX character client media. For tape media, see “Load Tape Media (UNIX Only)” on page 33. For CDs, see “Mount the CD-ROM (UNIX Only)” on page 32.
- 2 Log on as user mfg.
- 3 On the CD, change to the directory containing the client media. For tape installs this is the temporary tape directory.

- 4 Launch the install script:
`./install.ksh`
 A welcome screen displays. Press Enter to continue.
- 5 Review and accept the MFG/PRO software license agreement.
- 6 Accept the default installation log file location, or enter the correct location if you did not use the default during the database server install.
- 7 Enter the *MFGPROInstallDir*. This is the database server directory. It defaults in if your log files are correctly identified in the previous step.
- 8 Enter or accept the destination for the client installation. The default is `/home/mfg/qadchrc.li`. The directory is created if it does not exist.

Important Do not select a directory path that has spaces in it such as `C:\Program Files\mfgpro`. Database scripts generated by MFG/UTIL cannot locate a database in a path with spaces.

- 9 Review the installation summary and enter `y` to install. ▶ TIME 00:10:00
- 10 If you are installing more than one language, repeat these client install steps for each client language. Make sure each language subdirectory is at the same level under *MFGPROInstallDir*, such as `/mfgsrv/us` and `/mfgsrv/fr`.
 - a When prompted for each additional language to overwrite the previous character client installation, choose No.
 - b When prompted to install the language component, choose Yes.
- 11 To complete the host client install, go to “Configuring Database Sets” on page 62.

Additional UNIX Clients

To connect additional UNIX clients to your MFG/PRO server, make startup scripts such as `client.Production` available to those clients.

▶ See “Generating Scripts and Shortcuts” on page 72.

Installing Windows File Servers

In the following steps, you install either a character or GUI file server on a Windows system. The instructions for each install is nearly identical; you use different media and the default directories are different. The media is labeled Character Client for the character file server or GUI Client for the GUI file server.

Preliminary Steps

◆ A summary of the character client install appears on page 23.

For Windows, if you have not done so, reset your DOS command window buffers. See “Setting Up MFG/UTIL Clients (Windows Only)” on page 37.

If you are installing the file server on a different drive than the database server, you must have either mapped the drive from the intended file server drive or created a TCP/IP network connection.

Installation Steps

- 1 Starting with your base language, load either the language-specific character client or GUI client media. For tape media, see “Load Tape Media (UNIX Only)” on page 33. For CDs, see “Mount the CD-ROM (UNIX Only)” on page 32.
- 2 On the CD, change to the directory containing the client media.
- 3 Launch the install script `install.exe`.
A welcome screen displays. Press Enter to continue.
- 4 Review and accept the MFG/PRO software license agreement.
- 5 Accept the default installation log file location, or enter the correct location if you did not use the default during the database server install.
- 6 Enter the *MFGPROInstallDir*. This is the database server directory. It defaults in if your log files are correctly identified in the previous step.

- 7 Enter the destination for this file server installation. By default the directory is *MFGPROInstallDir*. The default directories for the different possible installations are:

Windows Character Default

c:\mfgsvr

Windows GUI Default

c:\mfgsvr\guicli

Note In previous releases, character server code was installed under mfgsvr\us by default. It is now installed to \mfgsvr by default.

Important Do not select a directory path that has spaces in it such as C:\Program Files\mfgpro. Database scripts generated by MFG/UTIL cannot locate a database in a path with spaces.

- 8 You are prompted for the folder name for MFG/UTIL icons. Accept the defaults or enter new ones.

- 9 Review the installation summary and enter y to install.

▶ TIME 00:10:00

- 10 Respond to the prompt:

Subscribe to QAD Supply Visualization?

Supply Visualization (SV) is a Web-based service for vendor-managed inventory offered through MFGx.net, the QAD Web portal.

At the MFGx.net home page, click the Services tab, then the SV button to display the SV home page. Select the trial or subscription link to launch the subscription process.

Note If you are installing more than one language, you do not need to repeat these client install steps for additional languages. You compile for each language later on.

- 11 Repeat these steps to complete an install of the other file server type if you require it.

Setting Up Remote Clients

If you installed a character or GUI file server in the preceding steps, you need to complete the following steps on each additional client you want to use to connect to the file server. In other words, use the following steps to install a remote character or GUI client on a Windows machine.

Preliminary Steps

For Windows, if you have not done so, reset your DOS command window buffers. See “Setting Up MFG/UTIL Clients (Windows Only)” on page 37.

If you are installing the file server on a different drive than the database server, you must have either mapped the drive from the intended file server drive or created a TCP/IP network connection.

Installation Steps

- 1 From the Run program on the Start menu, launch a DOS session:

```
cmd
```

- 2 Change to the `install` directory on either the character client or GUI client CD-ROM:

```
cd CD-ROMDrive:\install
```

- 3 Run the appropriate command for the client type you want.

For GUI clients:

```
install -remote x:\mfgsvr\guicli
```

For character clients:

```
install -remote x:\mfgsvr
```

Where `x` is the drive where the file server code is installed. The file server directory must contain the file `version.mfg` and a directory named `client`. The command launches a client install on the current machine that points back to the original installation directory.

- 4 Click Next when the Welcome window displays.
- 5 To continue with the installation, read the license agreement and enter `y` to accept it.

- 6** Enter or accept the installation log location. This should match the location used for the file server installation. If it does not match, you are asked to reenter path information about the previous install.

▶ See “Installing Database Server Files” on page 34.

- 7** Enter or accept the directory where the file server was installed. The defaults are:

Windows Character Default

c:\mfgsvr

Windows GUI Default

c:\mfgsvr\guicli

- 8** Enter or accept the destination for the client installation. The defaults for the different installations are:

Windows Character Default

c:\qadchrcli

Windows GUI Default

c:\qadguicli

This directory is created if it does not exist.

- 9** Enter or accept the name of the MFG/UTIL icon directory. This directory is created if it does not exist.

- 10** A summary screen displays. Review the information and confirm by entering y. The file copy starts.

▶ TIME 00:15:00

```
Platform is MSWin32.
Product is MFGPRO eB2 GUI Client Setup.
Database type is Progress.
Progress directory is c:\Program Files\Progress.
Language directory is us
Installing from c:\mfgsvr\guicli\guicli\client.
MFG/PRO Database Server is located in c:\mfgsvr.
Destination location is c:\qadguicli.
MFGUtil icons will be in MFGPRO eB2 GUI Client Setup

Proceed using these values? (y/n)
Default is y
->_
```

- 11** Respond to the prompt:

Subscribe to QAD Supply Visualization?

Supply Visualization (SV) is a Web-based service for vendor-managed inventory offered through MFGx.net, the QAD Web portal.

At the MFGx.net home page, click the Services tab then the SV button to display the SV home page. Select the trial or subscription link to launch the subscription process.

- 12** Exit the log window.

Creating Locales

Starting in eB2, each user is defined with a locale that sets their date and number formats. The `locale.dat` file contains the available locales. The default file contains the languages and countries for which MFG/PRO is translated. For example, the French entry is:

```
FR, fr, FR, , dmy, European
```

The entry consists of the MFG/PRO language code, the ISO language code, the ISO country code, an optional variant (not currently used), the date format, and the Progress number format.

An entry must exist for each country where you are setting up users. If you are implementing MFG/PRO in a country that is not represented in the `locale.dat` file, open the file in an editor and add any countries that are missing. The file is in the root *MFGPROInstallDir*.

Database Setup and Application Compile

Use this chapter to configure database sets, generate client startup scripts and shortcuts, and compile application code.

Configuring Database Sets **62**

Compiling Application Code **67**

Generating Scripts and Shortcuts **72**

Backing Up the Database **76**

Express Setup for Remote Clients **76**

Progress Initialization File **79**

Configuring Database Sets

MFG/PRO is a multi-database application that requires a minimum of three databases connected to a single session concurrently. Each MFG/PRO client session connects to at least a main MFG/PRO database, the help database, and the administration database. You can also connect to QAD bolt-ons, third party databases, and custom side databases in the same session.

MFG/UTIL uses the concept of database sets to link your various databases together. Each database set you create in MFG/UTIL is then used to generate startup and shutdown scripts (UNIX) or shortcuts and initialization and parameter files (Windows) that allow client sessions to correctly launch and close all the related databases together.

You create database sets for:

- Each working database
- Compiles

Each database in a set must be configured for the server and clients. Additional languages require additional preparation steps.

Multiple Language Compile Set Preparation

If you are implementing multiple languages that reference different default code pages (especially mixed single- and double-byte languages), create a compile database set that does not reference a code page. When you compile code against it, the code becomes language independent. When you run your production, training, or pilot databases, they reference this code and can apply the code page of the user.

- 1 Create a directory under the *MFGPROInstallDir*; for example `compile`.
- 2 In that directory, create copies of your empty databases:
`$DLC/bin/procopy $MFG/db/mfgempty $MFG/compile/mfgundef`
 Where `$DLC` is your Progress directory and `$MFG` is the *MFGPROInstallDir*.

Do this for each of your empty databases:

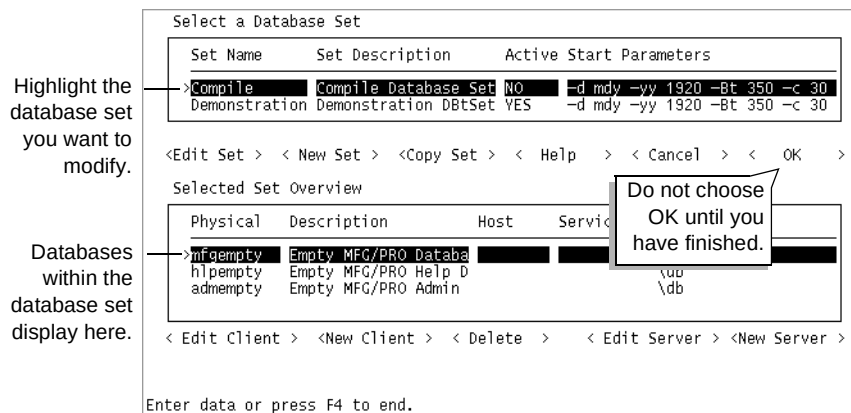
- Copy mfgempty to mfgundef.
- Copy admempty to admundef.
- Copy hlpempty to hlpundef.

- 3 Use the Progress PROUTIL command to convert each of the empty databases to an undefined code page:

`$DLC/bin/proutil mfgundef -C convchar convert undefined`
Again, repeat for each empty database: admundef, hlpundef.

Database Set Configuration Screen

Review the following figure to become familiar with the Database Set Configuration screen.



Once you launch the Guided Setup and the Database Set editor opens, you can scroll up and down in the list of database sets. Potential database sets display by default. When the set you want to edit is highlighted, you can Tab to the Set buttons such as Edit Set or New Set. If you continue to Tab, the cursor jumps to the list of databases at the bottom of the screen under the heading Selected Set Overview. Another tab takes you to the database buttons, such as Edit Client, New Client, Edit Server, or New Server.

After verifying and modifying all the database sets you want to generate scripts for, tab to the OK button below the Database Set list. This button saves your work. The process is described in greater detail below.

- 1 Launch MFG/UTIL on the database server.

```
./mfgutil
```

In Windows, double-click the GUI or character MFG/UTIL icon.
- 2 Select Configure|MFG/PRO Guided Setup. The Database Set editor opens.
- 3 Select the database set you want to edit.
- 4 Select Edit Set and verify that the Active value is set to Yes in the Database Set screen. (The Compile database set does not require scripts or shortcuts and does not need to be Active.) Choose OK.

Tip

When Active is set to Yes, MFG/UTIL generates scripts or shortcuts for this set.

Guided Setup - Select a Database Set

Set Name	Set Description	Active	Start Parameters
Demonstration	Demonstration DBSet	YES	-d mdy -yy 1920 -Bt 350 -c 30
>Production	Production Database	YES	-d mdy -yy 1920 -Bt 350 -c 30

< Edit Set > < New Set > < Copy Set > < Help > < Cancel > < OK >

Selected Set Overview

Physical	Description	Host	Service	Path
>mfgprod	Main MFG/PRO Databas			/users/mfg/db060702/
hlpprod	MFG/PRO Help DB			/users/mfg/db060702/
admprod	MFG/PRO Admin Databa			/users/mfg/db060702/

< Edit Client > < New Client > < Delete > < Edit Server > < New Server >

- 5 Highlight the desired main database and tab to the Selected Set Overview frame. The default databases in the database set are listed. See Table 5.1 for what databases should appear for each database set. Select the main database in the set.

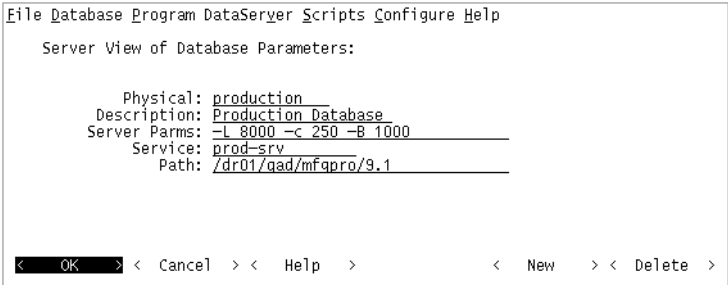
Table 5.1
Database Sets

Set Name	Main DB	Help DB	Admin DB
Compile ^a	mfgempty	hlpeempty	admempty
Production	mfgprod	hlpprod	admprod
Training	mfgtrain	hlpprod	admprod
Tritrain	tritrain	hlpprod	admprod

Set Name	Main DB	Help DB	Admin DB
Multi-Site	seattle	hlpprod	admprod
	newyork		
	chicago		
Demonstration	mfgdemo	hlpprod	admprod
Custom Language	mfgfr	hlpfr	admfr

a. The Compile database set is mfgundef, admundef, and hlpundef for multi-language installs.

- 6
- With the main database selected, choose the Edit Server button to configure the server side of the database. For most sets, the defaults should be fine. Use the following figure and Table 5.2 as guides.



Field	Description
Physical	Physical name of the database; accept the default if there is one.
Description	Optional description of the database.
Server Params	Typical Progress server startup parameters are included by default. Change these as needed. Refer to the <i>Progress System Administration Guide</i> . They can also be changed later in the startup scripts for the database.
Service	For remote clients or other client/server connections, enter the service name that corresponds to the entry for this database in your <code>/etc/services</code> file. (You must use the same name when you configure the client view of the database.)
Path	The full path to the directory containing the <code>.db</code> database file.

Table 5.2
Server Database
Parameter Values

- 7 Configure the client view of the production database by selecting it and choosing Edit Client.
 - a When the Client Database Parameters screen displays, complete the fields using the following figure and Table 5.3 as guides.

Client Database Parameters

Physical: mfgprod

Logical: qaddb

Description: Main MFG/PRO Database

Connect Params: -znotrim -trig triggers

Connection Type: Local ☒

Path: \db

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

Table 5.3
Client Database
Parameter Values

Field	Description
Physical	Physical name of the database; accept the default if there is one.
Logical	Do <i>not</i> change the logical name for any database.
Description	Optional description of the database.
Connect Params	Leave this field as is for default connections, or enter additional Progress startup parameters as required. For more information, refer to the <i>Progress System Administration Guide</i> .
Connection Type	In most cases, choose the default, Local, so that the UNIX startup scripts use a local host connection to access the database server. The client/server option is only needed if the client is going to connect 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 database file (extension .db). By default, this is the <i>MFGPROInstalldir/db</i> .
Host	If you choose a client/server connection, enter the host name of the machine where the database is located.
Service	For client/server connections, enter a service name for the database that corresponds to an entry in your <i>/etc/services</i> file. You must make the entries in the <i>services</i> file separately; the installation does not change this file. For more information, see “Setting Up MFG/UTIL Clients (Windows Only)” on page 37.

- b When ready, choose OK to continue.

- 8 Once you have configured each database in a set—including help and administration—verify the database set in the Selected Set Overview frame.
- 9 Repeat steps 1 through 8 for each database set.
- 10 When you have configured the client view of database sets you are implementing, click OK in the Database Set Configuration window.
- 11 Select File|Save default mfgutil.ini in the MFG/UTIL Main Window. This enables you to use express setup for additional client installations.
- 12 Click Yes in the confirmation dialog box.

Tip

To add a database set, copy an existing, fully configured database set using the Copy Set button, then edit the set values.

Compiling Application Code

Beginning with MFG/PRO eB2, a full compile of the server code is required after installation. This was a recommended step in prior releases to ensure your MFG/PRO environment was synchronized and compatible across all programs and with the Progress code. It is a requirement in MFG/PRO eB2 because compiled programs (the .r code) are no longer shipped with the product.

Compiling a source file creates an object file with the same name and the .r extension. Compiled programs are saved into a subdirectory using the first two letters of the program name. This subdirectory is located below the two-letter language code directory below *MFGPROInstallDir*. For example, *sosomt.p* compiled for U.S. English is placed in *MFGPROInstallDir/us/so*.

Important If you are compiling for a non-English language, you must first create a language-specific compile database set.

Use the following instructions to compile MFG/PRO code on a UNIX database server with MFG/UTIL. You can also use these instructions as a guide when compiling Windows client code on a Windows machine; the user interface is different.

Multithreaded Compiles

Compiles take several hours. You can set up the compile to multithread using multiple compile listings and by initiating multiple compile sessions. The following steps summarize details in the next section:

- 1 In the Generate Compile Listing screen, use the From and To fields to limit the scope of the file you are generating. Enter a unique file name.
- 2 Run Generate Compile Listing again for the next set of files.
For example, assuming you compile every program (7746 files), you could include programs from A to FO in `utcomp01.wrk` (1736 files), FS to H in `utcomp02.wrk` (1882 files), I to RC in `utcomp03.wrk` (2007 files), and RE to Z in `utcomp04.wrk` (2120 files).
- 3 You then launch separate, concurrent MFG/UTIL sessions for each compile process. Launch them all concurrently. Four sessions save from 50% to 75% of the processing time.

Important Errors display in each compile session stating that the process cannot open `mfgutil.log`. This occurs when another process is writing to the file. The file is eventually updated and the errors do not harm the compiles.

Compile

The files MFG/UTIL compiles are those listed in the file `utcompil.wrk`. By default, this file lists the files shipped with MFG/PRO. You can change the file listing in `utcompil.wrk` during the process of setting up for the compile, but this is usually done only for subsequent compiles for custom development.

- 1 From the *MFGPROInstallDir*, launch MFG/UTIL:
`./mfgutil`
On Windows, launch MFG/UTIL from the Start menu icon.
- 2 In MFG/UTIL, choose Compile Procedures from the Programs menu.

- 3 Use the screen example and field descriptions to select compile options. The Compiler Options in the upper left of the screen let you set feedback levels and select a compile list.

Verbose. MFG/UTIL displays compile information on the screen and writes it to the MFG/UTIL log file (`mfgutil.log`). During the compile, the following information displays:

- Date and time
- Percentage of the compile completed
- Path and name of the program currently compiling
- Number of compile errors that occur

The log file is in the directory from which MFG/UTIL was launched.

Silent. MFG/UTIL writes to `mfgutil.log` only.

Generate Compile List File. Generates or regenerates a file listing the programs to compile. When you select this option, the Generate Compile List screen displays.

Use Existing Compile List File. By default, this is `utcompil.wrk`, which is shipped with MFG/PRO and contains the full list of files.

Staggered MFG/PRO Default. Saves compiled code in the default structure.

Flat Destination. Select this option to save the compiled code in a single destination directory.

See “Compiling Application Code” on page 67.

Compile List File. Specify the name of the compile list file, by default `utcompil.wrk`. If the file is located in a directory other than the one from which MFG/UTIL was launched, include the directory path and the file name.

Compile Propath. The compile PROPATH must contain:

- The *MFGPROInstallDir*.
- The `bbi` subdirectory below the language-code directory of the language for which you are compiling the program. The language-code directory is located in the *MFGPROInstallDir*.
- The language-specific directory containing the source code for the programs you are compiling.
- The language-specific directory containing any include files for the source code you are compiling.

Language Code. If you selected Staggered MFG/PRO Default option, enter the language code where you want the code saved.

Database Set. The database set against which to compile.

Destination Directory. Specify the directory where you want compiled code saved. This is typically the *MFGPROInstallDir*. If Staggered MFG/PRO Default is selected, the compile places compiled code in the appropriate language directory beneath this directory and within two-letter directories beneath that. For example, a U.S. English `sosomt.p` is compiled to:

`./MFGPROInstallDir/us/so/sosomt.r.`

- 4 If you selected the Generate Compile List option, complete the following instructions. If you selected Use Existing Compile List File, skip to step 5.

Generate Compile List

[] Generate Service Pack Compile List

Source Directory: <Browse>

File: To:

Compile List File: <Browse>

<Generate > < Help > < Close >

- a In the Source Directory field, specify the path to the directory containing the source programs you want to compile. By default, this is *MFGPROInstallDir/xrc*.
 - b To compile a subset of the programs, specify the subset using the File and To fields. (Limited to alphanumeric sorts.)
 - c Specify the name you want to use for the compile list file in the Compile List File field. The default file name is *utcompil.wrk*.
If you want the list file created in a specific directory, include the path to that directory before the compile list file name. If you do not specify a path, the file is generated in the directory from which MFG/UTIL was launched (usually *MFGPROInstallDir*).
 - d Choose Generate to create the compile list file.
 - e The Compiler Options screen displays with the Use Existing Compile List option selected. Enter the correct compile list name.
- 5 When ready, choose Compile.
- 6 In the compile verification screen, check the compile information. If the compile settings are correct, choose Continue to begin the compile. If the settings are incorrect, choose Back to make changes.

See
“Multithreaded
Compiles” on
page 68.

Please Verify the Following Information.

Compiler Option: Verbose
R-code Destination: Staggered MFG/PRO Default

Destination Directory: /users/mfg/db060702/us
Compile List File: utcompil.wrk

Compile Propath:

Database Set: Compile

Code Page Values

CPINTERNAL: ISO8859-1	CPCOLL: Basic
CPRCODEOUT: ISO8859-1	CPSTREAM: ISO8859-1

<Continue> < Back >

Note If you are compiling code for a non-Western European language, you may have to modify the code page values for the compile. The compile code page values default from the *startup.pf* file located in the Progress directory.

▶ TIME 02:10:00

- 7 If you selected the Verbose compile option, an Installation Log screen displays during the compile. When the compile ends, choose Print or Close.
- 8 Once the compile completes, check the MFG/UTIL log file for errors. In the event of errors, correct the errors and rerun the compile.
If you encounter compile errors, the most prevalent errors are:
 - Incorrect PROPATH is used.
 - PROPATH is missing the /src or /xrc directories.
 - Progress database version does not match the code version.

▶ See “Loading Translated Labels” on page 20.

Compiling Additional Languages

If you are implementing additional languages, you can now load the translated labels for the first of these languages and recompile. The sequence to follow is:

- 1 Compile in the base language.
- 2 Load translated labels for next language.
- 3 Compile code for next language.
- 4 Repeat steps 2 and 3 for additional languages.

Generating Scripts and Shortcuts

The next steps create startup and shutdown scripts or shortcuts for each active database set. You can edit these scripts and icons after you generate them if you choose.

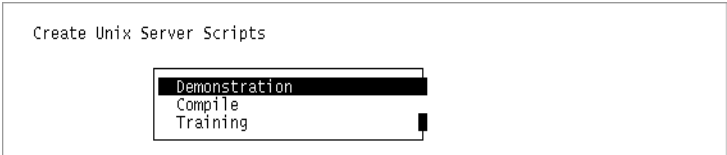
There are three different types of scripts or icons:

- UNIX scripts
- Windows character session icons
- Windows GUI session icons

The following instructions cover all three methods:

- 1 If you are using the Guided Setup, the Create Scripts/Shortcuts screen displays by default when you select OK in the Database Sets screen.

Tip
The screens in this section are from the UNIX script creation sequence.



- 2 Press spacebar or click in Windows to select all database sets you want to generate server scripts for and choose OK or Next.
- 3 For Windows shortcuts, select the program folder where you want the shortcuts stored.
- 4 In Windows, you view a confirmation screen. Click Next to generate the shortcuts.

Note The Windows icon build is completed by the `makeicon.exe` program. This program must be in your `PROPATH`. It is located in `MFGPROInstallDir` by default.

- 5 For UNIX systems, MFG/UTIL creates the scripts listed in Table 5.4 for each database set. Use these scripts, or copies of them, for all startup and shutdown processes. The scripts are created in the `MFGPROInstallDir`.

Script	Description
<code>start.DBsetName</code>	This script starts servers for the databases in the set. <code>start.Production</code> starts servers for <code>mfgprod.db</code> , <code>admprod.db</code> , and <code>hlpprod.db</code> .
<code>stop.DBsetName</code>	This script shuts down servers for all databases in the set. If database sets share a help database and you shut down one set, the servers are shut down for all sets. You can avoid this by removing the help database from the stop scripts and creating a standalone shutdown script for it.

Table 5.4
UNIX Scripts
Generated by
MFG/UTIL

Script	Description
<code>client.DBSetName</code>	This script starts an MFG/PRO character client session in multiuser mode. This script functions only after you install the MFG/PRO character clients.
<code>qma.DBSetName</code>	This script is created only for UNIX servers and is used by MFG/PRO QAD Desktop clients. In the Desktop, some MFG/PRO maintenance programs function in a telnet environment. This script specifies the connection parameters for the database set and launches the MFG/PRO telnet program. See <i>Installation Guide: QAD Desktop</i> .

Windows shortcuts are Start and Shutdown for each database set.

- 6 After the scripts or shortcuts are generated, choose Close in the Installation Log Window.
- 7 Review the log file, `mfgutil.log`, for any errors.

Editing UNIX Scripts

- 1 To edit scripts to start sessions in other languages, copy the scripts you just created to a new file name. For example, copy `client.Production` to `frclient.Production`. Make the following modifications:
 - a Modify the `PROMSGS=` setting to use a language-specific Progress messages file (`promsgs.LanguageCode`). This file is located in a three-letter Progress language code subdirectory below the `prolang` directory in the Progress directory. The following example is for a French startup script:

```
PROMSGS=$DLC/prolang/fr/promsgs.fre; export PROMSGS
```

- b Modify the `PROPATH=` setting to use the language-specific `bbi` subdirectory. This subdirectory is located below the two-letter MFG/PRO language code directory where you installed the MFG/PRO character client. Typically, the character client is installed in the `MFGPROInstallDir`. The following example is for a French startup script:

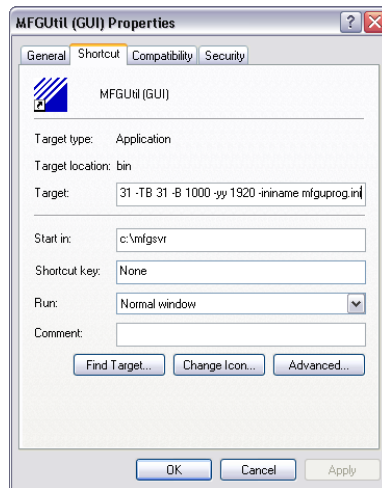
```
PROPATH=${PROPATH:-./MFGPROInstallDir,  
/MFGPROInstallDir/fr};export PROPATH
```

Note Progress and MFG/PRO language codes are not always the same.

Create Language-Specific Windows Shortcuts

After you run client setup and generate a client startup shortcut, make the following modifications to create a language-specific startup shortcut. For directions on running the client setup program and generating the initial client startup shortcut, see “Generating Scripts and Shortcuts” on page 72.

- 1 Copy your initialization file to one with a new name.
The remote client initialization file is named after the database set with an .svg or .vga extension; for example, `production.svg`. You can determine the initialization file the client is using by checking the `-iname` parameter in the Target field of the Shortcut Properties dialog window.
- 2 Right-click the shortcut icon to verify Shortcut Properties entries.



Modify Windows Startup Parameters

Once you have modified the initialization file, you must change the shortcut icon parameters to reference it.

- 1 Right-click the MFG/PRO shortcut icon and select Properties.
- 2 Scroll down the Target field to the `-ininame` parameter. This references a path and file with an `.svg` extension.
- 3 Enter the new file name and click OK.

Test the Client Installation

Before you test the remote client installation, make sure the database servers are started for the chosen database set.

- 1 To start the database servers for a set, access the *MFGPROInstallDir* on the database server, then launch the *DBSetName.start* script from that directory.
- 2 On an MFG/PRO remote client, open Start|Programs|MFG/PRO GUI Client. Click the remote client shortcut for the appropriate database set.
- 3 When the MFG/PRO Sign-On window displays, click OK or Exit.

Backing Up the Database

At this point you should do a complete backup of the entire database and directory structure.

Express Setup for Remote Clients

▶ See “Compiling Application Code” on page 67 for detailed instructions.

Prior to installing additional remote clients with the express setup method, compile the application code.

After installing the client files on the file server, you must configure each client machine. The goal of configuration is to copy needed files onto the client machine and generate client startup shortcuts. Generating the startup shortcuts requires that you configure database sets.

Once you configure the database sets on the first client, MFG/UTIL gives you the option of storing your settings on the file server so that subsequent client installations can reuse them. This feature is called *express setup*.

Note These steps assume you have loaded the correct (GUI or character) client files onto a file server—not on each client machine.

Setup Prerequisites for Remote Clients

Before setting up remote clients, verify that you have met the following prerequisites:

- You have met the system requirements for remote clients. ▶ See page 27.
- You have configured your database servers to use client/server connections or are installing this client on the Windows server machine. ▶ See page 62.
- You have set up the `services` files on the database server and client machines. ▶ See page 32.
- Your network is operating.
- Progress client software is installed on each client PC or is accessible from a network file server.
- You have mapped network drives on each remote client for any components installed on a file server, including MFG/PRO client files and Progress software.
- The first client PC has write access to the Windows file server installation directory. Write access is needed to use the express setup feature.

Using Express Setup

Express setup implements Windows clients without configuring database sets on each client. You can save the configuration settings from the first client setup to the file server, then download these settings to additional Windows clients.

- 1 After you set up the first client, select File|Save default mfgutil.ini in the MFG/UTIL Main Window.
- 2 Click Yes in the confirmation dialog box.
- 3 Repeat the steps in “Setting Up Remote Clients” on page 58 on each Windows client.
- 4 At the end of the client setup process, launch MFG/UTIL.
- 5 From the MFG/UTIL Main Window, select File|Load default mfgutil.ini.
- 6 Click Yes in the confirmation dialog box.
- 7 When the database settings are loaded, access Scripts|Generate Scripts. Generate the client startup shortcuts using the instructions in “Generating Scripts and Shortcuts” on page 72.

Changing Express Setup Settings

You can change the express setup settings if you choose.

- 1 Start MFG/UTIL from any Windows client by double-clicking the MFG/UTIL shortcut.
- 2 Open Configure|Database Set Maintenance.
- 3 Make your changes in Database Set Configuration and click OK.
- 4 In the MFG/UTIL Main Window, select File|Save Default mfgutil.ini. MFG/UTIL stores your changes in the Windows client administration directory on the file server, as well as on the current machine. You can now use these settings to set up additional clients.

Progress Initialization File

The Progress initialization file is created during the installation of MFG/PRO remote clients. When you start MFG/PRO, the system uses this file to determine values for variables during initialization.

The file has an extension of .vga or .svg—progress.vga or progress.svg—depending on the display resolution of the computer. You can edit this file as required with a text editor such as Notepad or Wordpad. The following is an excerpt from a Progress initialization file.

```
;mfgprod.svg

[Startup]
;SCCS: @(#)progress.svg 1.2 05/17/02 16:21:31>
v6Display=no
;ImmediateDisplay=yes
;MultitaskingInterval=100

;SVGA - low-resolution (800 x 600)
CharWidth=8
DefaultFont=MS Sans Serif, size 8 bold
DefaultFixedFont=Courier New, bold, size=8

;* New frame spacing parameter from Progress -
;* required for legacy code
FrameSpacing=1
Use3D-Size=no

DLC=p:/dlc91d
CONVMAP=v:\dlc91a
PROMSGS=v:\dlc91a\promsgs
PROBUILD=p:/dlc91d/PROBUILD
PROPATH=.,c:/QADGUICL/images.pl,r:/MFGNTSVR/QADGUICL,r:/
MFGNTSVR/QADGUICL/US

[Applications]
;* Enable Spinning MFG/PRO Globe
spin=no

;* Enable Graphs with the Browse
graph=yes
GRAFPATH=\stageobj\grafsman

;* Specifies executable to run when you select edit image
paint=pbrush.exe
```

Initialization File Entries

The following entries in the Progress initialization file have a direct bearing on MFG/PRO:

CharWidth. You can change these font settings, but you must use only fonts with the same metrics.

Frame Spacing. Leave this setting as it is; it is required to support legacy code in MFG/PRO.

Use-3D-Size. This setting determines the three-dimensionality of fields in MFG/PRO. Leave this setting as it is.

PROBUILD and PROPATH. Leave the settings as they are.

Spin. This setting determines whether or not you can spin the globe on the MFG/PRO Sign-On screen.

Set to Yes, the globe spins when you click it. Double-click to stop.

Graph. This setting allows graphing and points to the Graftman directory. Graftman is distributed with MFG/PRO.

Paint. This setting determines which imaging program you use when you edit graphics associated with a field. The default setting is Microsoft Paintbrush. The images you create and edit are stored in the working directory.

Note Some versions of Windows include Microsoft Paint rather than Paintbrush. If this is true of your computer, use a text editor to change this setting to `paint=mspaint.exe`.

Fonts. This section lists the fonts available to MFG/PRO, including the name of each font and the code number associated with it. Do not change any of the fonts on this list.

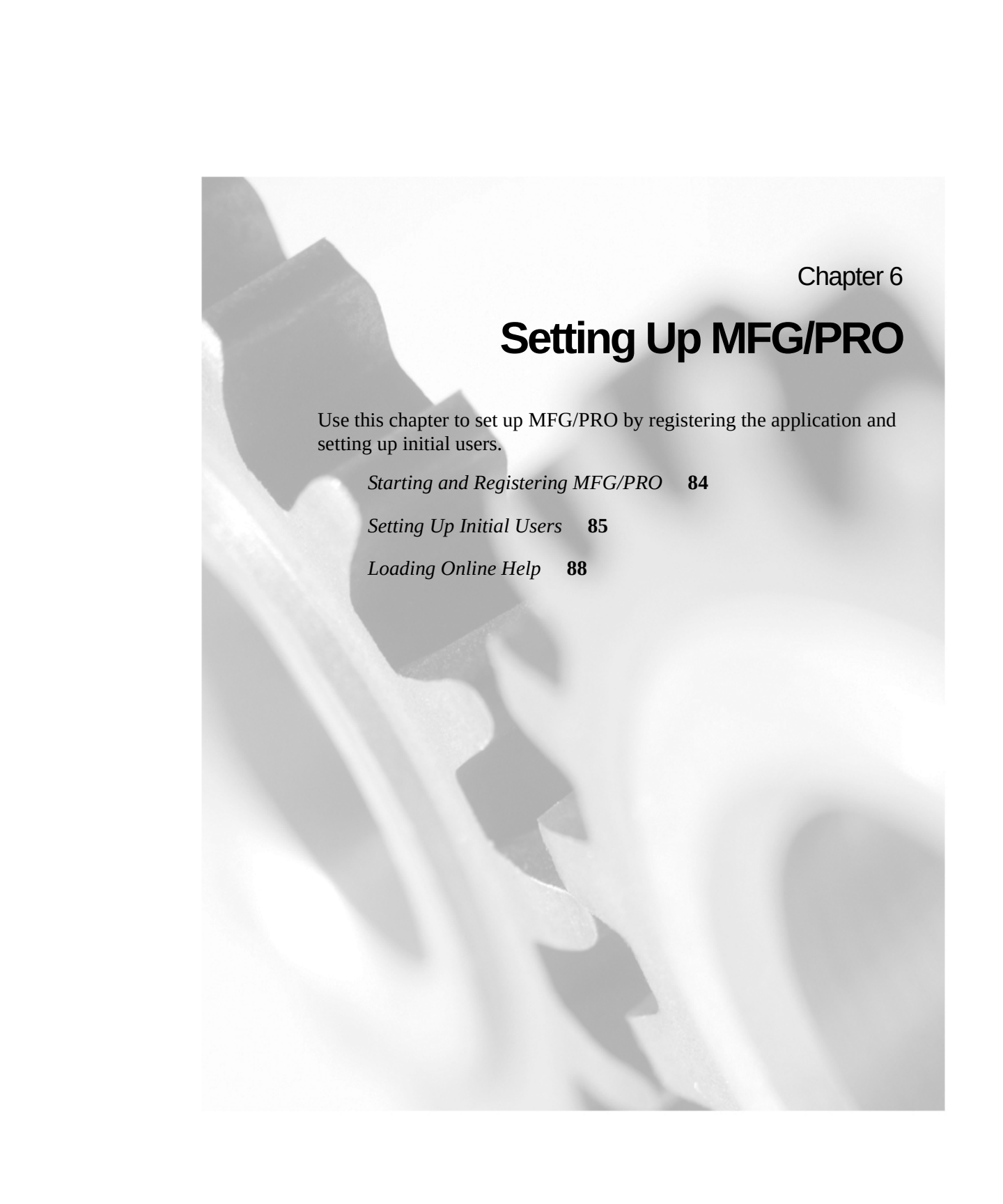
The end of the fonts section includes the code numbers of the fonts used by Windows print devices for 80-column (portrait orientation) and 132-column (landscape orientation) reports:

```
80ColumnReportFont=21
132ColumnReportFont=22
```

The default values for these variables are font codes 21 and 22. To reassign fonts, change these codes to the corresponding values from the font list.

▶ For details on using this feature, see *User Guide Volume 1: Introduction*.

For information on making fonts available to the Progress initialization file, see the *Progress System Administration Guide* chapter on maintaining user environments.

The background of the page is a grayscale photograph of several interlocking mechanical gears. The gears are of different sizes and are positioned in a way that creates a sense of depth and movement. The lighting is soft, highlighting the metallic texture and the sharp edges of the gear teeth.

Chapter 6

Setting Up MFG/PRO

Use this chapter to set up MFG/PRO by registering the application and setting up initial users.

Starting and Registering MFG/PRO **84**

Setting Up Initial Users **85**

Loading Online Help **88**

Starting and Registering MFG/PRO

Test your startup scripts with the following steps. You can use these same steps on a regular basis to start MFG/PRO servers and character clients.

- 1 **UNIX only:** Change to the *MFGPROInstallDir* and launch the server script:

```
./start.DBSetName
```

- 2 Then start a multiuser session:

```
./client.DBSetName
```

For Windows, launch MFG/PRO from the Start menu icon.

MFG/PRO starts.

For details on User Licensing, see *User Guide Volume 9: Manager Functions*.

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

- 1 At the MFG/PRO Sign On screen, press Enter.
- 2 In 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 In 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.

Tip

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

Setting Up Initial Users

The initial user ID you log in with, `mfg`, is the only valid ID in the system when you start out. To set up additional users, you must:

- Set up country codes.
- Load time zones.
- Depending on your license types, create generalized codes for access locations.
- Set up a system administration user.

Set Up Country Codes

Country codes and alternate country codes are required for all defined users.

Tip

Keyboard commands in a character client are:

Go = F1

Help = F2

End = F4

- 1 Go to Country Code Maintenance (2.14.1) and set up the countries where your users are located.
- 2 For each country code in the system, select a valid ISO alternate code. Press Help to view a list of available alternates. If the country you are entering does not appear in generalized codes, add the country to the field `ctry_code1` in Generalized Codes Maintenance (36.2.13) or select an alternate.

- 3 Press Go to save the record.
- 4 Press End to leave the program.

Load Time Zones

Time zones are required for all defined users.

- 1 Go to Multiple Time Zones Load Utility (36.16.22.13) and set both fields to Yes. Press Go to run the utility.

- 2 When the load is complete, press End.

Set Up Access Location Codes

A default access location that covers most license requirements is in the database. If you have modules that are licensed by location, however, access locations are required. You set them up in Generalized Codes Maintenance and then enter them for the affected users in User Maintenance.

▶ See *User Guide Volume 9: Manager Functions*.

- 1 Go to Generalized Codes Maintenance (36.2.13), enter the Access Location field name (usr_access_loc), and press Enter.
- 2 Enter a valid value. Press Enter.
- 3 Enter any comments. Press Enter to save the record.

- 4 Repeat for each location.
- 5 Press End to exit when all valid locations are entered.

Define Users

The only valid user the first time you log in is mfg. Set up an administration user immediately, and log back in as this user for this work. Then set up accounts for additional users as needed.

- 1 Go to User Maintenance (36.3.18) and enter a user ID and name.

- 2 Enter a language code for this user.

See “Loading Online Help” on page 88.

- 3 Enter a valid country code from Country Code Maintenance, and a valid time zone. If this user will be working in a GUI client, you can set WinHelp to Yes to enable the Windows help database.
- 4 Enter an access location. This is a mandatory field and the value must exist in generalized codes.
- 5 Press Go to save the record. The Application List frame displays the QAD products for which this user is licensed.

The screenshot shows a window titled "Character Client for Production". It contains a form with the following fields:

- mgurmt.p 2+ 36.3.18 User Maintenance 07/12/02
- User ID: acc User Name: Andrew Claridge

Below the form is a table titled "Application List":

Application	Description	Application List	Active	Date
MFG/PRO		yes		07/11/02

- 6 Press End to exit the screen. Confirm that all information is correct.
- 7 Repeat for each user.
- 8 Press End again to exit User Maintenance.

Loading Online Help

You can load online help data at any time after you create your databases.

- 1 From the MFG/PRO Main Menu, open Field Help Load (36.4.19).
- 2 In the Language field, enter the MFG/PRO language code of the language that you are loading help for, and press Enter.
- 3 Skip to Field Help Load File, leaving all other fields blank, and enter the two-letter language code directory followed by the name of the help file, which is always `fieldhlp.fhd`. For example, for U.S. English, enter `us/fieldhlp.fhd`.

The screenshot shows a window titled "mgflld.p e+" with the subtitle "36.4.19 Field Help Load" and the date "04/04/00". The form contains the following fields:

- Language: us english (U.S.)
- Field:
- To:
- Procedure:
- Status:
- Text Type:
- To:
- To:
- To:
- Field Help
- Load File: us/fieldhlp.fhd
- Skip loading help with lower status: yes

4 Accept the default values in all other fields.

5 Press Go to begin the load process.

▶ TIME 00:55:00

As the load proceeds, the number of records that have been read and loaded displays at the bottom of the screen.

mgflld.p e+ 36.4.19 Field Help Load 04/04/00	
Language: us english (U.S.)	
Field:	
To:	
Procedure:	To:
Status:	To:
Text Type:	To:
Field Help	
Load File: us/fieldhlp.fhd	
Skip loading help with lower status: yes	
Loaded flhm_mst : 40	Loaded flhd_det : 2,400
Read flhm_mst : 40	Read flhd_det : 2,400
Expected flhm_mst: 0	Expected flhd_det : 0

6 Load help for any other languages in your environment, using the appropriate language code and help file.

Test the Language Installation

Once you associate MFG/PRO users with particular languages, use the following instructions to test each of the languages you set up:

- 1 Using your language-specific script or shortcut, launch an MFG/PRO session.
- 2 At the MFG/PRO log-in screen, specify an MFG/PRO user ID associated with the language you want to test.
- 3 Open menu item 1.4.1 (Item Master Maintenance) and verify that the field labels are translated.
- 4 Press Help to access the browse associated with the first field (Item Number) and verify that the labels in the browse are translated.
- 5 Press Help again to access the field help for the first field (Item Number) and verify that the help is translated.
- 6 Enter a numeric value in the first field and press Go. A translated message that a new record is being added to the database should display (in English, Adding new record).

- 7 Press Go to access the second field in 1.4.1 (in English, UM). Press Delete on the test item and return to the first field. A translated prompt asking you to verify that you want to delete the item should display (in English, Please confirm delete). Select No to cancel, Yes to delete.

If the language you are testing does not display correctly during these tests, review the following list of typical errors. If correcting these does not eliminate the problem, then visit the Support area of the QAD Web site or contact QAD Support.

- In User Maintenance (36.3.18), verify that the MFG/PRO user ID you are trying to log in with exists and is associated with the appropriate language.
- Check the setcodepage script (see “Code Page Script” on page 97).
- Verify that Translate Frames is set to Yes in Label Control (36.4.17.24).
- Make sure you have loaded the language-specific system data—translated menus, messages, administration data, and help—into the main and administration databases.
- Verify the two-letter language subdirectory and the two-letter compiled code subdirectories were created below *MFGPROInstallDir*.
- Determine if the directories in the client PROPATH contain multiple copies of the compiled code. Depending on the type of client you are using for your test, the PROPATH is located in different places:
 - For character clients, the PROPATH is listed in the client startup script; for example, *client.Production*.
 - For GUI clients, the PROPATH is listed in the GUI client initialization file located in the GUI client directory. The initialization file has the name of the database set with an *.svg* or *.vga* extension; for example, *production.svg*.
- Verify that the correct language-specific *bbi* subdirectory is in the client PROPATH. The *bbi* subdirectory is located below the two-letter language subdirectory.

▶ See “Loading System Data” on page 46.

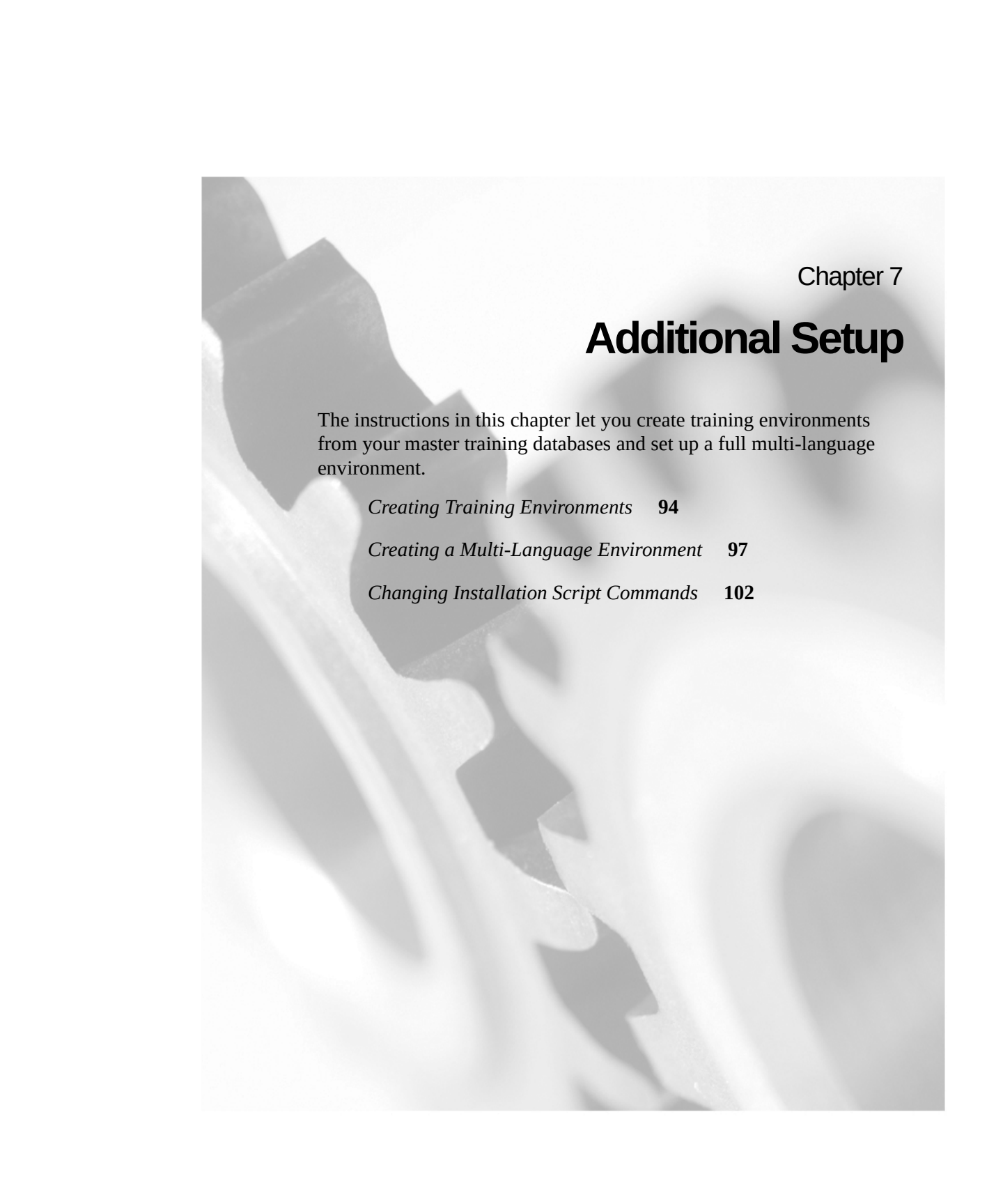
- MFG/PRO uses the Progress promsgs file for simple message components such as the Yes and No delete confirmation messages. For programs that use this file, prompts do not display correctly unless the appropriate promsgs file is referenced in the client startup script or shortcut.

Exit MFG/PRO

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

`./stop.DBSetName`

In Windows, select Shut Down *DBSetName* from the Start menu.

The background of the page is a grayscale image of several interlocking gears. The gears are of different sizes and are positioned in a way that they appear to be meshing together. The lighting creates highlights and shadows on the teeth of the gears, giving them a three-dimensional appearance. The overall tone is technical and industrial.

Chapter 7

Additional Setup

The instructions in this chapter let you create training environments from your master training databases and set up a full multi-language environment.

Creating Training Environments **94**

Creating a Multi-Language Environment **97**

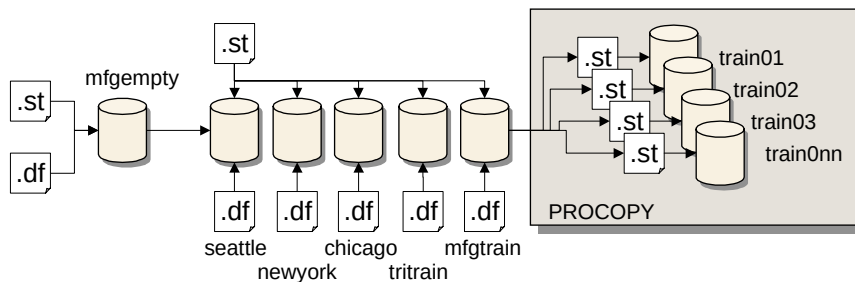
Changing Installation Script Commands **102**

Creating Training Environments

Once you have created the `mfgtrain`, `tritrain`, `seattle`, `chicago`, and/or `newyork` databases, you must create training environments for each person being trained and each instructor. This provides a database for each user that cannot be changed by other users and eliminates file contention during course exercises.

Progress offers several methods for creating database copies. This guide covers the most straightforward method using the PROCOPY command. In this method, you create home directories for each user and then run PROCOPY to create a structure file and database in the user's directory.

Fig. 7.1
Training Database
Creation



The following methods assume you are creating training environments for each student for each training. After a training is complete, all databases are deleted and new databases created for subsequent sessions.

Training Prerequisites

Requirements for a complete training environment are:

- Full Progress installation including patches and the Enterprise Database Server software
- Exceed or another terminal server
- Training user IDs (`train01` through `trainNN`)
- User initialization files (`.profile`)

Creating Training Databases

The default structure file, `mfgtrain.st`, uses a relative path to define where database files are created. For each database extent created, the file includes the following path statement to describe where the files are written:

```
./db
```

During PROCOPY this places the tables associated with these extents in the location where PROCOPY is run, in the subdirectory `/db`.

The following instructions step through the process in greater detail. These steps assume you have created the `mfgtrain` database in the `MFGPROInstallDir/db` directory.

- 1 Create the student directories, one for each student in the course. Create an additional directory for your instructor. From the `<root>:/home` directory, this command sequence would be as follows for each student and instructor account:

```
mkdir student01
cd student01
mkdir db
cd ..
```

Create each student directory with a sequential number such as `student01`, `student02`, `student03`.

- 2 Each user requires an individual administration database. Create a copy of `admprod.st` in the `/db` directory:

```
cd /MFGPROInstallDir/db
cp admprod.st admtrain.st
```

- 3 Edit `admtrain.st` in a text editor. Change each instance of a period (`.`) for a path declaration to a relative path (`./db`).

- 4 Copy `admtrain.st` to each student directory:

```
cd /home/student01
cp /MFGPROInstallDir/db/admtrain.st
```

- 5 You can now create the databases in the student and instructor directories. Move to each home directory and enter the Progress PROCOPY command:

```
cd /home/student01
```

```
procopY MFGPROInstallDir/db/mfgtrain train01
```

```
procopY MFGPROInstallDir/db/admprod admtrain.st
```

This last command copies the database and identifies which structure file to apply during the copy.

The files are created in the /db subdirectory.

▶ See “Loading System Data” on page 46.

Most QAD trainings for MFG/PRO are supported by the data you have already loaded into mfgtrain. This is also true for the tritrain database and the seattle, new york, and chicago databases.

- 6 Create the help database in the base /home directory. Change to the base /home directory and PROCOPY the databases:

```
cd /home
```

```
procopY MFGPROInstallDir/db/hlpprod trhelp.st
```

This last command copies the database and identifies which structure file to apply during the copy.

The help database uses absolute paths, and thus is placed in the directory where the PROCOPY command is issued.

▶ See “Generating Scripts and Shortcuts” on page 72.

- 7 Create startup and shutdown scripts for each training database. The easiest method for this is to copy the mfgtrain scripts generated by MFG/UTIL.

The scripts each user needs are copies of start.mfgtrain, stop.mfgtrain, and either single.mfgtrain or client.mfgtrain. In each of these scripts, modify the database name and path as required. If you want to modify startup parameters, refer to the *Progress Database Administration Guide and Reference*.

- 8 After the training is complete, use Progress tools to remove the databases:

```
PRODEL /home/student01/db/train01
```

Repeat this step for each training database.

This leaves the administration databases, the help database, the user directories, .profile files, and all the scripts. The next time you create training environments, you can just do the PROCOPY of mfgtrain into the same directory structure and environment.

Creating a Multi-Language Environment

A multi-language environment in MFG/PRO eB2 consists of the following components:

- Base MFG/PRO server code
- MFG/PRO language data
- Scripts to:
 - Set the correct code page for a user session.
 - Start and stop databases in a specific language

Code Page Script

The following script is an example of how you could set a Progress environment variable, CPSET, that would contain the -cpinternal and -cpstream values for each language installed in the database.

Note Lines beginning with a pound sign (#) are comments.

```
# Usage: . setcodepage <dbver#>
#
# The dbver# is the language database identifier.
# Sets the Progress Code Page (CPSET) Environmental Variable.
# The first if-then construct allows for direct or indirect
# calls from other scripts with or without parameters.
# If no parameter is passed, the default is used.

if [ $# = 1 ]; then
    DBVER=$1
else
    DBVER=undefined
fi

CPSET="-cpinternal undefined -cpstream undefined"

# the $DBVER = value in the following blocks are the
# language database identifiers.

# Latin Spanish (LS)
if [ $DBVER = 21 ]; then
    CPSET="-cpinternal 1252 -cpstream 1252"
fi
```

```

# Castilian Spanish (CS)
if [ $DBVER = 22 ]; then
    CPSET="-cpinternal 1252 -cpstream 1252"
fi

# Korean (KO)
if [ $DBVER = 24 ]; then
    CPSET="-cpinternal cp949 -cpstream cp949"
fi

# Simplified Chinese (CH)
if [ $DBVER = 27 ]; then
    CPSET="-cpinternal GB2312 -cpstream GB2312"
fi

# Japanese (JP)
if [ $DBVER = 25 ]; then
    CPSET="-cpinternal SHIFT-JIS -cpstream SHIFT-JIS"
fi

# Traditional Chinese (TW)
if [ $DBVER = 26 ]; then
    CPSET="-cpinternal big-5 -cpstream big-5"
fi

# German (GE)
if [ $DBVER = 28 ]; then
    CPSET="-cpinternal 1252 -cpstream 1252"
#    CPSET="-cpinternal german9 -cpstream german9"
fi

export CPSET

#echo "CODEPAGE:      $CPSET"

```

Create your own script in your home directory and then launch it from there using the command:

```
.setcodepage <db#>
```

<db#> is the value in the script file (\$DBVER =) for the language you want.

Server Startup Scripts

You then need to modify your database server startup scripts to use the CPSET variable value. A sample script appears below:

```
#!/bin/ksh
#
# Starts the database servers for a MFG/PRO database set.
# QADDB/QADADM/QADHELP/TIPMLP
#
# Usage: startdb <database number>
#

usage="Usage: $0 <db num>"

if [ $# -lt 1 ]; then
    echo $usage
    exit 1
fi

. /dr03/scripts/setall $1
. /dr03/scripts/setcodepage $1

# Override standard settings for Latin Spanish.
if [ $1 = 21 ]; then
    . /dr02/scripts/setdlc $1
fi

# Override standard settings for Castilian Spanish.
if [ $1 = 22 ]; then
    . /dr02/scripts/setdlc $1
fi

# Override standard setting for Korean.
if [ $1 = 24 ]; then
    . /dr02/scripts/setdlc $1
fi

# Override standard settings for Japanese.
if [ $1 = 25 ]; then
    . /dr02/scripts/setdlc $1
fi

# Override standard settings for Japanese.
if [ $1 = 26 ]; then
    . /dr02/scripts/setdlc $1
fi

# Override standard settings for Simplified Chinese
if [ $1 = 27 ]; then
    . /dr02/scripts/setdlc $1
fi

# TAKE CARE OF STANDARD DATABASE SET.
echo
echo "Starting database set: qad$1"
```

```

# WRITE TO LOG FILE. Optional
echo "Starting database set: qad$1" `date` >>
/dr01/logs/databases.log

echo
echo "Starting qad$1adm (QADADM) Database..."
$DLC/bin/_mprosrv $DBDIR/qad$1/qad$1adm $CPSET -n 80 -L 8000 -c 250
-B 1000

echo
echo "Starting qad$help (QADHELP) Database..."
$DLC/bin/_mprosrv $DBDIR/qadhelp/us/qadhelp $CPSET -n 80 -L 8000 -c
250 -B 1000

# TAKE CARE OF ANY HELP DATABASES.
if [ -f "$DBDIR/qad$1/qad$1help.db" ]; then
    echo
    echo "Starting qad$1help (QADHELP) Database..."
    $DLC/bin/_mprosrv $DBDIR/qad$1/qad$1help $CPSET -n 80 -L 8000 -c
    250 -B 1000
fi

# TAKE CARE OF ANY DATA SYNC DATABASES.
if [ -f "$DBDIR/qad$1/qad$1dsy.db" ]; then
    echo
    echo "Starting qad$1dsy (Data Synchronization) Database..."
    $DLC/bin/_mprosrv $DBDIR/qad$1/qad$1dsy $CPSET -n 80 -L 8000 -c
    250 -B 1000
fi

# TAKE CARE OF ANY DECISION SUPPORT DATABASES.
if [ -f "$DBDIR/qad$1/qad$1ds.db" ]; then
    echo
    echo "Starting qad$1ds (Decision Support) Database..."
    $DLC/bin/_mprosrv $DBDIR/qad$1/qad$1ds $CPSET -H exsu01 -S ds-srv
    -N TCP -n 80 -L 8000 -c 250 -B 1000
fi

# TAKE CARE OF ANY (BRAZILIAN) LOCALIZATION DATABASES.
if [ -f "$DBDIR/qad$1/qad$1loc.db" ]; then
    echo
    echo "Starting qad${1}loc (Localizations) Database..."
    $DLC/bin/_mprosrv $DBDIR/qad$1/qad${1}loc $CPSET -n 80 -L 8000 -
    c 250 -B 1000
fi

# TAKE CARE OF ANY TIPAC / MLP DATABASES.
if [ -f "$DBDIR/qad$1/qad$1tm.db" ]; then
    echo
    echo "Starting qad${1}tm (MLP / TIPAC) Database..."
    $DLC/bin/_mprosrv $DBDIR/qad$1/qad${1}tm $CPSET -n 80 -L 8000 -c
    250 -B 1000
fi

echo
echo "Process '$0 $1' Complete."

```

Client Startup Scripts

Then edit your telnet run scripts:

```
#!/bin/ksh
#
# Runs a Progress Database
#
# Usage: rundb <database number> [program] [multi]
#

usage="Usage: $0 <database number> [program/multi]"

if [ $# -lt 1 ]; then
    echo $usage
    exit 1
fi

#
# Let's make sure the user has write access to the current directory
# (required
# for on-the-fly browse generation)
#
if [ ! -w . ] ; then
    echo
    echo "You do not have write access to the current directory."
    echo "Please switch to a directory which you have write access
    before \c"
    echo "using \"rundb\"."

    echo "Current directory: ->`/bin/pwd`<-"

    cleanup 1
fi

RUNDB=$1
RUNPROG=$2

#
# Setup Environmental Variables. Just in case they haven't been set.
#
. /dr03/scripts/setall $RUNDB
. /dr03/scripts/setcodepage $RUNDB

echo

if [ -f "$DBDIR/qad$RUNDB/qad${RUNDB}db.lk" ]; then
    echo "Database servers running."
    echo
else
    echo "Database ({ $RUNDB }) Server(s) Not Running..."
    start $RUNDB
    echo
fi
```

```

if [ -f "$DBDIR/qad$RUNDB/qad${RUNDB}.pf" ]; then
    echo "Running Database: " $DBDIR/qad$RUNDB/qad${RUNDB}.pf
    exec $DLC/bin/_progres -pf $DBDIR/qad$RUNDB/qad${RUNDB}.pf
    $CPSET -Bt 350 -c 30 -D 100 -mmax 3000 -nb 200 -s 63 -p mf.p
else
    echo "ERROR: Database Startup File: $DBDIR/qad$RUNDB/
    qad${RUNDB}.pf Does Not Exist."
    echo
fi

echo "Process '$0 $RUNDB' Complete."

exit 0

```

Changing Installation Script Commands

The MFG/PRO installation scripts were designed for the following UNIX systems:

- HP-UX 11.0
- Sun Solaris SPARC 2.6 and 2.7
- IBM AIX 4.2.1 and 4.3

While you can install MFG/PRO on UNIX systems other than those listed, the operating system-dependent commands the scripts use may not function correctly in all environments.

If an installation script does not function correctly, you can use the following instructions to copy the installation script to a temporary directory, modify the commands it uses for your system, and complete the installation.

- 1 Access the directory containing the MFG/PRO media. This directory depends on whether you are copying from tape media or a CD-ROM.
 - For tape media:


```
cd /TemporaryTapeDir
```
 - For CD-ROM media:


```
cd /cdrom
```

- 2 Copy the `install` script as well as the `lib` and `bin` directories to a directory on your system. These instructions refer to this directory as *tempinstall*:

```
cp install /tempinstall
```

```
cp -r bin /tempinstall
```

```
cp -r lib /tempinstall
```

- 3 Modify the commands in the `install` script and `lib` directory to conform to your operating system.
- 4 To launch the script from a directory on your system, you can use one or both of the following parameters in the command statement.

Parameter	Description
-s	Use this parameter to specify the directory containing the MFG/PRO media. This is the source directory from which the installation script will copy files into your target installation directory. Be sure to use the full path to the directory.
-w	Use this parameter to specify the directory containing the installation script. Be sure to use the full path to the directory.

Example Using the directories in these instructions as an example, the following command would launch the `install` script from the *tempinstall* directory.

```
./install -s /cdrom
```


Glossary

Before-Image (BI) File. A Progress database file containing roll-backward recovery information. Progress employs a mandatory recovery technique called roll-backward recovery. Any time a transaction is called against a database, a snapshot of the data is recorded prior to alteration. The snapshot is held in the before-image file. If a transaction is aborted, Progress returns the database record to the before-image snapshot.

Client Directory. The target directory specified during the installation of the MFG/PRO clients. This directory contains all of the compiled MFG/PRO code (r-code), as well as master copies of all configuration files. For remote clients, this directory is typically located on a file server. For character clients, this directory is typically located on the database server.

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 remote Windows clients require a client/server configuration.

Client/Server Connection. A connection in which a client session runs on a separate machine from the database server process. When using a client/server connection, the database host and service name parameters must be defined in MFG/UTIL for both the client and server views of a database. Additionally, these parameters must also be defined in the **Services** files on the server and client machines. MFG/PRO remote Windows clients require a client/server connection.

Code Page. A character set used to map data represented in one code page to another. Since a code page is specific to your hardware or operating system, Progress converts data from one code page to another. If the client code page is different than the database code page, Progress handles the conversion between them.

Conversion. Refers to the transition from one numbered release to the next, such as MFG/PRO 8.6 to MFG/PRO eB2. Conversions involve program fixes and, in some cases, major schema changes.

Data Definition File. A file containing the database table, field, and index definitions that make up the schema of a specific MFG/PRO database. Has a `.df` extension.

Database Definitions. Characteristics of the database schema, including field names, table names, validation expressions, labels, initial values, and others.

Database Server. Can refer to either the Progress software task that supports multi-user access to a database or the machine on which the database is located.

Database Set. A set of databases that form a logical group. MFG/UTIL uses the concept of database sets to generate server and client startup and shutdown scripts and icons. The standard MFG/PRO database set consists of a main database and two support databases.

Database Structure File. A file that defines the structure of a Progress database. A database structure file contains the definition of each storage area and the extents within those storage areas that make up the database. A database structure file has a `.st` extension.

Default System Data. The data that initially populates the menu, messages, printers, language code, and other default data files.

Empty Database. The initial Progress database defined by the database structure file, but without data.

Extent. Physical units of a database that provide the ability to split the database across multiple physical disks or logical volumes. Extents contain blocks of database objects. There are two types of extents: fixed- and variable-length.

Fixed-Length Extent. An extent with a fixed size. Fixed-length extents let you control the size of the extents within a storage area and to plan and manage hardware resources such as disk space.

GUI. Graphical user interface.

Help Database. A database that contains all of the field and procedure help as well as the source code cross-reference data. You can use a single help database in multiple database sets.

Host Name. The name of the machine where a database is located.

Local Client. A client process running on the same machine as the database process.

This allows the client session to communicate directly with the database rather than over the network. This type of connection greatly increases system performance. By default, MFG/PRO character clients are local clients.

Log File. A file created each time MFG/UTIL completes a series of tasks. You can view log files in any text editor.

Logical Database Name. The database name used to compile programs. When the program executes, the logical database name must correspond to the logical database name of a connected database. The MFG/PRO logical database names are: `qaddb` for main databases, `qadhelp` for help databases, and `qadadm` for administration databases. The logical database name remains the same even when the physical database name changes. For example, you could make a copy of your production database for training purposes. In this case, while the physical name of the database changes, say from `prod.db` to `train.db`, the logical name of `qaddb` remains the same.

Main Database. The MFG/PRO on Progress database containing the transaction data for a given environment. Typically, the main database defines its database set and is not shared with other sets. You can create a new main databases by copying the empty database `mfgempty`.

MFG/PRO Installation Directory. The target directory specified during the installation of the MFG/PRO database server media. This directory is located on the database server machine and contains all of the database-related files for an MFG/PRO environment.

Network File System (NFS). A client/server application that lets a user view and optionally store and update files on a remote computer as though the files were on the user's own computer.

Parameter File. A file that contains the startup parameters for an MFG/PRO remote Windows client session. These parameters include both Progress and MFG/PRO database details. This file is located in the client directory on each client machine and uses the following naming convention: *DatabaseSetName.pf*.

Physical Database Name. The name you have given the database schema area file (extension `.db`).

R-code. A term used to describe MFG/PRO compiled code, derived from the `.r` file extension.

Schema. The definition of a database including the tables it contains, the fields within the tables, indexes, and views. In addition to database definitions, MFG/PRO schema contain items such as validation expressions and messages.

Server. This term identifies both a software process and hardware. The definition depends on the context. The most common uses are: 1) to designate the Progress process spawned by `_mprosrv` to control multi-user access to a database; 2) a machine that enables client connections to a shared resource.

Single-User Mode. A client connection mode that allows only a single user to connect to a database. Single-user mode is invoked by using the `-1` startup parameter in the client startup script or parameter file.

Startup Parameter. A Progress parameter used when a database server is started or when a client connection is made to a database.

Storage Area. The largest physical unit of a Progress database. Storage areas provide control over the location of database objects such as tables and indexes within a database. Each storage area includes one or more extents.

Support Database. An MFG/PRO on Progress database that contains system or user data. The default support databases provided with MFG/PRO are help and administration. Help databases can be shared among database sets. You can create new support databases by copying the empty databases `hlpempty` and `admempty`.

Two-Phase Commit. A Progress feature that ensures transactions that update two or more databases occur consistently. During the first phase, Progress verifies that the databases are available for update. During the second phase, Progress commits the transaction and updates the databases. For more information, see the *Progress System Administration Guide*.

Variable-Length Extent. An extent without a pre-defined length. Variable-length extents continue to grow until they use all of the free space on the disk or reach a maximum size of two gigabytes (2 GB).

Windows File Server. A server that enables multiple client machines to share common files and directories. QAD recommends storing MFG/PRO remote Windows client code on a file server to enable centralized administration of the code and client configurations.

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