Industry-specific

QAD SOLUTIONS

Manufacturing Applications

Installation Guide

Advanced Pricing Management (APM) Medical

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MFG/PRO eB2.1 SP2
APM Medical 2.7
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Content

About This Guide

Use this guide to install APM Medical on a UNIX, Linux, or Windows server. Windows installations support character clients only. For graphical interfaces, run QAD Desktop.

These instructions are for the system administrator who manages the database and is familiar with the installation operating system, networking, and Progress.

Installation Errata

See "QAD Web Site" on page 3 for information.

In addition to these instructions, you may receive a supplementary errata sheet with changes and additional instructions. Check your product package. In addition, when you begin the installation, always check the QAD Web site to verify that you have the latest version.

Other APM Medical Documentation

For information on using APM Medical, refer to *User Guide: Advanced Pricing Management* and *User Guide Supplement: APM Medical*. The supplement includes information about the latest changes and enhancements to the application.

For technical details, refer to *APM Entity Diagrams* and *APM Database Definitions.*

To view documents online in PDF format, see the *Supplemental Documents on CD*.

Note The APM Medical installation guide is not included on a CD. Printed copies are packaged with your software. Electronic copies of the latest versions are available on the QAD Web site.

Online Help

APM Medical has an extensive online help system. Help is available for most fields found on a screen. Procedure help is available for most programs that update the database. Most inquiries, reports, and browses do not have procedure help.

For information on using the help system, refer to *User Guide: Advanced Pricing Management*.

QAD Web Site

The QAD Web site provides a wide variety of information about the company and its products. You can access the Web site at:

http://www.qad.com

For MFG/PRO users with a QAD Web account, product documentation is available for viewing or downloading at:

http://support.qad.com/

You can register for a QAD Web account by accessing the Web site and clicking the Accounts link at the top of the screen. Your customer ID number is required. Access to certain areas is dependent on the type of agreement you have with QAD.

Most user documentation is available in two formats:

- Portable document format (PDF). PDF files can be downloaded from the QAD Web site to your computer. You can view them with the free Adobe Acrobat Reader. A link for downloading this program is also available on the QAD Web site.
- HTML. You can view user documentation through your Web browser. The documents include search tools for easily locating topics of interest.

Features also include an online solution database to help QAD customers answer questions about setting up and using the product. Additionally, the QAD Web site has information about training classes and other services that can help you learn about QAD products.

Conventions

Typographic Conventions

This document uses the text or typographic conventions listed in the following table.

If you see:	It means:
`monospaced text`	A command or file name.
`italicized monospaced text`	A variable name for a value you enter as part of an operating system command; for example, *`YourCDROMDir`*.
`indented command line`	A long command that you enter as one line, although it appears in the text as two lines.
Note	Alerts the reader to exceptions or special conditions.
Important	Alerts the reader to critical information.
Warning	Used in situations where you can overwrite or corrupt data, unless you follow the instructions.

UNIX and Windows Conventions

This document supports the installation of APM Medical for both UNIX and Windows platforms. Some steps are unique to a particular platform and are documented in separate sections and marked as UNIX or Windows only. In steps that are common to UNIX and Windows, UNIX file and path conventions are used when needed. If you are installing on the Windows platform, substitute the drive letter and path conventions for your operating system.

Chapter 1

Planning an APM Medical Installation

This chapter presents basic topics that you should understand before beginning an APM Medical installation.

Planning an Installation

APM Medical runs in conjunction with MFG/PRO on Progress. APM Medical is typically deployed on the same server as your production MFG/PRO instance. This guide supports UNIX or Windows server installs and character clients.

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, both for the server and Windows clients.

After installation, you can access MFG/UTIL to perform maintenance, such as compilation and editing startup scripts or Windows client icons.

Keyboard Commands

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.

Log Files

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

Utility	Log File Name	Directory Location
Installation script	`install.log` and `mfgpro.log`	Subdirectory `/log` under the installation target directory
MFG/UTIL	`mfgutil.log`	MFG/PRO installation directory

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

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

Preparing to Install

Complete these tasks before an APM Medical 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 MFG/PRO.
- Install the latest Progress patches. These can be obtained from:

  http://www.progress.com/support

Installing APM Medical on Database Server

Install APM Medical on the database server:

- Create the empty APM Medical database.
- Create the APM Medical production database from the empty database and structure file.

- Load system data into the database.
- Configure new database sets—groups of databases started or stopped together with a single script.
- Generate server startup and shutdown scripts.
- Compile the application code.
- Load modified MFG/PRO schema.
- Complete several activities to load data and define settings that manage the integration of MFG/PRO and APM Medical.

Converting APM Medical

- Launch the conversion program.
- Connect to existing MFG/PRO database.
- Convert existing APM Medical databases.

Chapter 2

System Requirements

The APM Medical installation requires adequate system resources. This chapter provides system requirements and software prerequisites for the APM Medical server and the network.

An APM Medical installation consists of a database server and APM Medical clients. It operates under MFG/PRO with the QAD Desktop.

General Requirements

The system administrator must be an experienced Progress database administrator with a minimum of 1-2 years experience and must know how to manage Progress client processes.

Database Server

The database server is a UNIX or Windows server that contains APM Medical source code and the APM Medical database.

Hardware Requirements

- 1 GB of free disk space
- High-speed 100 mbps network card
- ISO9660 CD-ROM or tape drive
- 2 disk controller channels (minimum)

Software Prerequisites

- Operating system patches
- Progress 9.1E, Enterprise DB Server, licensed for the appropriate number of users
- Progress 9.1E, ProVision Plus
- MFG/PRO eB2.1 Service Pack 2

Network

Set up your network to support Progress networking specifications. Minimum requirements from the APM Medical standpoint are:

- 10 Megabit (Mb) Ethernet or faster network

Chapter 3

Installing on Server

This chapter describes the installation of APM Medical on the MFG/PRO database server.

Preparing for Installation

Prior to installation, review the following cautions and requirements:

- Set your `$TERM` variable to a standard terminal type such as vt100 or vt200 while installing APM Medical.
- Create services on your servers for the APM Medical databases, `trmempty`, `trmprod`, and optionally `trmdemo`.
- Determine the following information:
  - The APM Medical installation directory where you want to install the APM Medical server files, referred to as *`APMInstallDir`*
  - The Progress directory
  - The host name for the database server

Installing APM Medical on Server

In this set of steps, you mount the installation media for the database server and copy the files to the server. Choose the steps for the media you received.

Mount the CD-ROM (UNIX only)

1. Log on as `mfg`.
2. Mount the CD-ROM. Example commands are listed in Table 3.1.

Table 3.1 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`
AIX	`smitty mountfs` Then select file system, directory, and file system type (`cdrfs`).
Linux	`mount /dev/hdb /mnt/cdrom` Where `/hdb` could be `hdc` or `hdd` 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 `man mount` to determine the correct command.

3 Continue with “Install Database Server Files” on page 14.

Load Tape Media (UNIX Only)

Load the tape media into a temporary directory, then extract the APM Medical files from there into a permanent installation directory. All QAD 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 3.2.

Table 3.2 UNIX Tape Extract Commands

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

6 Remove the tape and store it.

Select Installation Directory

Your selection of an installation directory for APM Medical can be important. If this is a new install, QAD recommends installing beneath your MFG/PRO installation directory (*MFGPROInstallDir*/apm).

Note On Windows, do not install to a directory with spaces such as `c:\Program Files\apm`. Some installation utilities or logs may not recognize the full path.

Install Database Server Files

Complete this section to install the APM Medical database server files on your server.

1. In UNIX, log on as user `mfg` under the group `qad`. On Windows, log on as an Administrator.

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
   ```

   In Windows, launch `install.exe` from the Windows Explorer.

   A welcome screen displays. Press Enter.

   ```
   Welcome to QAD's APM Medical 2.7 installation.
   We are installing APM Medical 2.7 for MSWin32.
   Press <Enter> to view license agreement.
   ```

5. Accept the software license agreement. Press Ctrl+C to jump to the end of the agreement.

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

   To install APM Medical 2.7, you must accept this agreement.
   (y/n)?
   Default is n
   ->y
   ```

6. You are prompted for a location for the log files. Accept the default or enter the installation log file location. 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 c:\instlog
   ```

   On UNIX systems, the default is `/home/mfg/instlog`.

   This log directory is used to record information about this installation.

   Note If you identify the location used for your MFG/PRO installation logs here, the APM Medical install uses the information recorded there.

7 Enter the Progress installation directory path or accept the default. The script verifies the location and version. Specify Yes to confirm. The message “Installing APM Medical” displays.

8 Enter the MFG/PRO installation directory (*MFGPROInstallDir*).

9 Enter the path and directory where you want to install the APM Medical server files (*APMInstallDir*). By default the installation is placed under *MFGPROInstallDir*; for example, `/qad/mfgsvr/apm`. On Windows, this is `c:\mfgsvr\apm`. If this directory does not exist, it is created.

   The following message displays:

   ```
   The character client is normally installed under the
   database server directory.
   ```

   You are then asked to confirm the APM Medical installation directory.

10 On Windows system, enter the name for the folder to contain MFG/UTIL icons. By default, this is APM Medical 2.7.

11 Review the summary and confirm by entering `y` and pressing Enter. Depending on processor speed, this process can take 90 minutes or more.

12 When the files finish copying, press Enter to end the script.

Modify the Workflow .ini Files

Table 3.3 lists workflows shipped with APM Medical.

Table 3.3 APM Medical Workflows

Workflow File	Title	Use
`wk0605.ini`	Create APM Medical Database Set	All installs
`wk0610.ini`	APM Medical Module Setup	All installs
`wk0615.ini`	Convert APM Medical (2.4 and up)	Conversions only

The `.ini` files are text files that set the sequence and default values for the MFG/UTIL installation process.

This document covers the create and convert workflows. The APM Medical Module Setup steps are documented without reference to the workflow since multiple user paths are possible within each step of the workflow.

By default, the APM Medical demo database creation steps are commented out. If you want to create the APM Medical demo database, you can edit `wk0605.ini` in a text editor to uncomment these steps. Remove the semicolon (;) at the start of each required line.

Creating the APM Medical Databases

In the following section, you create the empty APM Medical production database from the default QAD structure files. You will then use the empty database as a template to build your production and demonstration databases.

1. Launch MFG/UTIL from *`MFGPROInstallDir`* using the following command: `./mfgutil`.
2. Choose MFG/PRO Guided Setup from the Configure menu.
3. In the Operation Set list box, select Create APM Medical Database Set.

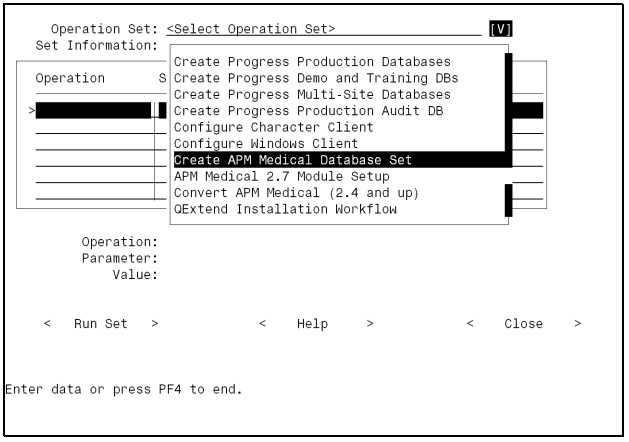


Fig. 3.1 Operation Sets Drop-Down

The MFG/PRO Guided Setup program provides a workflow of the operations required to set up your APM Medical environment. You can use this program to access the different configuration utilities in MFG/UTIL with proper default information and in proper sequence. Review Figure 3.2 to become familiar with the Guided Setup screen.

Note The number of operations is determined by the number of uncommented sections in `wk0605.ini`. See “Modify the Workflow .ini Files” on page 15 for information on configuring this file.

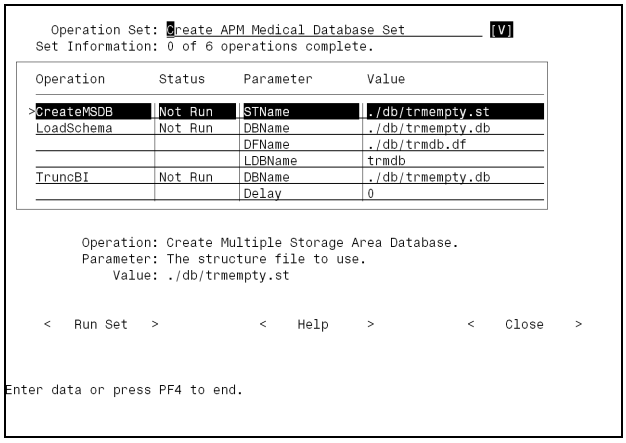


Fig. 3.2
Create APM Medical Database Workflow Steps

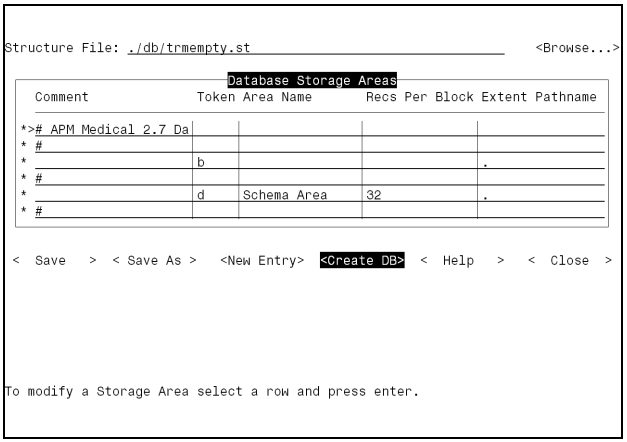
Operation sets are groups of installation activities. On completion, the status changes to Done. If errors occur or if you cancel processing prior to completing a step, the status is Error. Below the Operation frame, the operation, the key variable required, and default value for that variable display.

If you stop the workflow and an Error status is written to a step, this is the first step run when you restart the operation set.

4 Choose Run Set and press Enter.

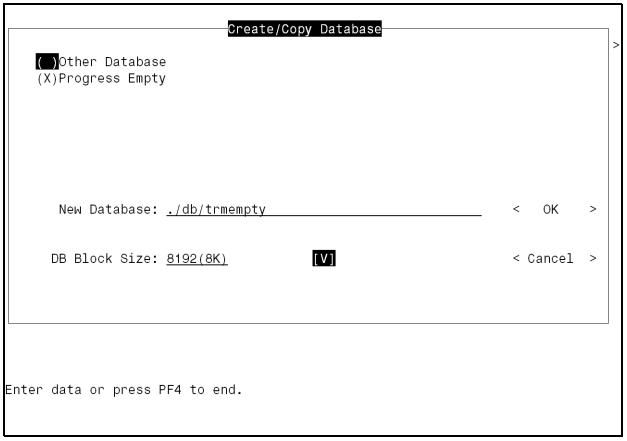
5 The QAD Database Builder screen displays with the default QAD empty structure file, `trmempty.st`. Generally, you do not need to edit this file for the empty databases. Choose Create DB.

Fig. 3.3
QAD Database Builder For `trmempty.st`



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.

Fig. 3.4
Create/Copy Database For `trmempty.db`



7 Choose OK to build the main empty database, `trmempty`.

8 When `trmempty` is built, a log of the database build process displays. Choose Close to exit the Log Window.

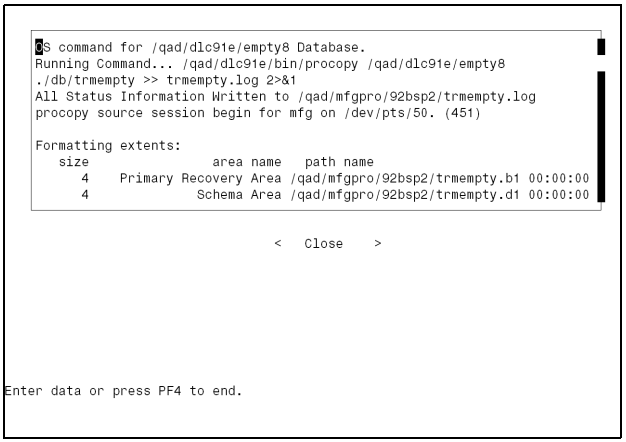


Fig. 3.5
Log Window Showing trmempty Creation

Load Schema in Empty Databases

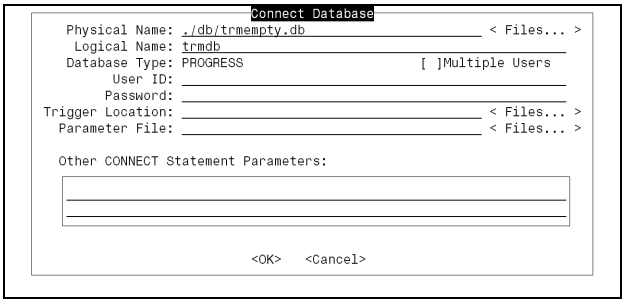
The database schema consists of the sequences, tables, fields, and indexes in the database. In this task, you load the schema into the empty APM Medical database using a data definition file `trmdb.df`. The resulting database is used to build your main databases such as `trmprod` and `trmdemo`.

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 `trmempty`. Use Table 3.4 and the screen as guides.

Table 3.4
Connect Database Values for `trmempty.db`

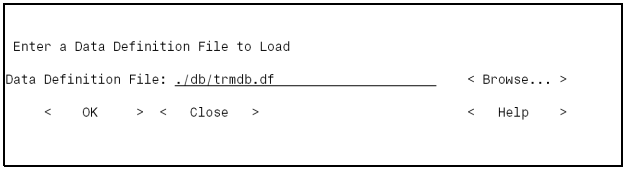
Field	Value
Physical Name	Path to `trmempty` (`/db/trmempty.db`)
Logical Name	Logical database name (`trmdb`)
All other fields	Leave blank

Fig. 3.6
Connecting to
`trmempty.db`



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

Fig. 3.7
Loading Data
Definitions into
`trmempty.db`

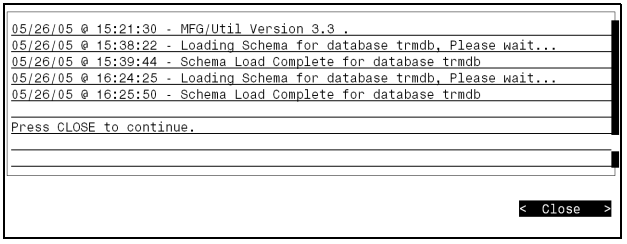


The program first writes the schema to a buffer, then loads it into the database. The write displays a progress screen; the load process does not.

Important Due to Progress limitations in the character interface, almost half the load time you see the message, “Processing schema load. Please wait...”

3 When the load completes, close the Log Window.

Fig. 3.8
Log Window
Following Schema
Load



4 The Enter a Data Definition File to Load screen displays with the OK button selected. Press Enter to close the screen. An error stating you must be connected may appear. Choose OK in this error. The workflow continues correctly following the error.

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 temporary 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 `trmempty` and choose Truncate.

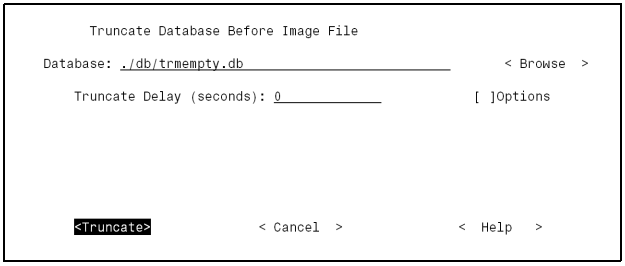


Fig. 3.9
Truncating `trmempty.db`

2 Close the Log Window that displays on completion.

3 The workflow displays the Structure File Edit screen.

Create the Production and Demo Databases

In the next set of tasks, the empty databases and the default structure files are used to create your working databases. Cycle through the entire process for `trmprod` and `trmdemo`, if it remains in the workflow.

Edit the Structure Files

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

- Use the Extent Pathname to distribute your database onto drives to maximize performance and optimize disk 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 Comment lines. This nullifies the storage area. To add a comment to the file, select a comment line (`#`) from the Database Storage Area 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 Structure File Edit screen, a structure file for the production database, `trmprod.st`, defaults in the Structure File field. The MFG/UTIL screen that displays lets you assign disk locations and sizes to your storage areas.

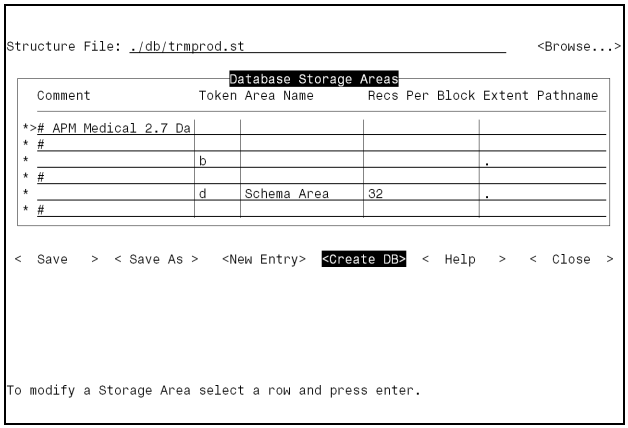


Fig. 3.10
Structure File Edit for `trmprod.st`

2 Modify any storage area by tabbing to the row and pressing Enter.

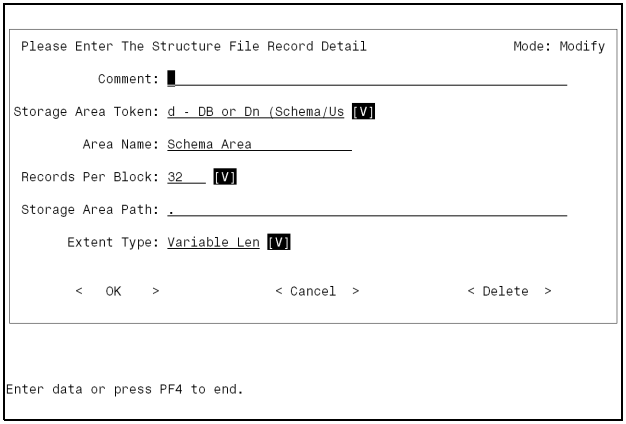


Fig. 3.11
Structure File Line Edit Screen

3 Edit the storage area definition. Typically you would edit only the Storage Area Path and Extent Size (on fixed-length extents).

4 Choose OK to save the edits.

5 Choose Create DB to save your entries and close the screen.

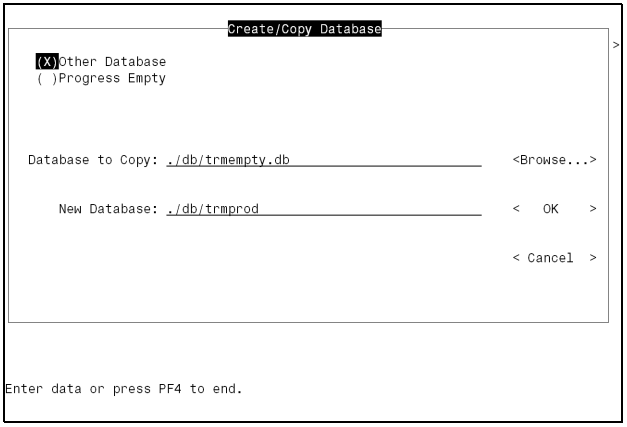
Build the Main Databases

In these next steps, you use the new `trmprod` structure file you configured and the empty databases to create the working databases.

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

   The New Database name defaults from the `.st` file name. You can enter a different database name here if you choose.

Fig. 3.12 Creating `trmprod.db`



2. When `trmprod` is built, a log of the database build process displays. Scroll through the log and verify that `trmprod` was created successfully. This information is also recorded in `trmprod.log` in the *`MFGPROInstallDir`*. When ready, choose Close to continue.

3. The QAD Database Builder screen displays again with the Close button selected. Press Enter to close the screen.

4. If the demo database is in the workflow, that database is created here, following steps 1 through 3 in this section.

You now load the data for the production and demo databases.

Load System Data

In this task, you load the default system data, such as menu and message files supplied by QAD, into each database.

See “Modify the Workflow .ini Files” on page 15.

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

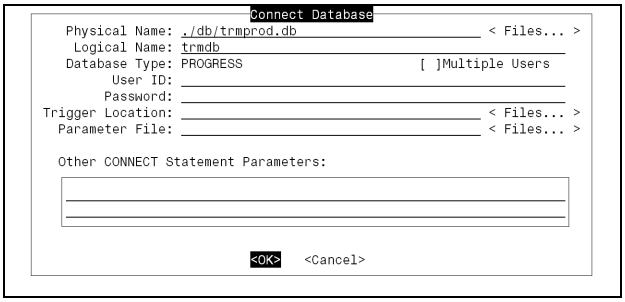


Fig. 3.13 Connecting to `trmprod.db`

2 The Log Window displays the database connection. Choose Close to continue.

3 Verify the correct load directory in the Load Data Contents screen. The correct directory is *`APMInstallDir`*`/trmprod`. Use the Browse button to assure you have the correct directory. Select any file within the directory and choose OK to select that directory.

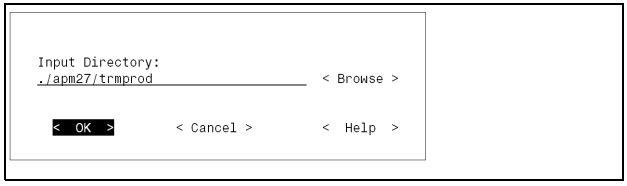
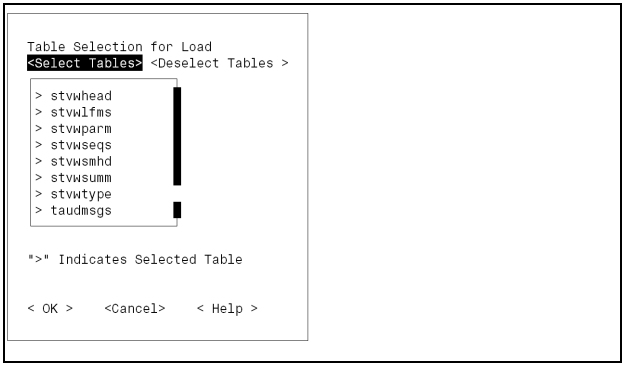


Fig. 3.14 Data Files Load Directory

4 The Table Selection for Load screen displays the data files in the `/trmprod` directory. Choose OK to start the load.

Fig. 3.15
Table Selection for `trmprod.db`



5 The Log Window displays load progress. There are a large number of files to load; the process takes approximately 45 minutes depending on processor speed, network bandwidth, and so forth.

6 When the load completes, press spacebar to continue.

7 If the demo database is in the workflow, those data loads occur here, following steps 1 through 6, from the directory *`APMInstallDir`*`/trmdemo`.

Preparing Database Sets and Scripts

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 start and stop servers and client sessions correctly, launching and closing all the related databases together.

You create database sets for each working database and for compiles.

The following steps add the APM Medical database to the appropriate MFG/PRO database sets, and then generate server start and stop scripts for the production or demo database sets.

Configure Database Sets

1 In MFG/UTIL, choose Database Set Maintenance from the Configure menu.

2 Select the Compile database set in the top frame. Then Tab to the Selected Set Overview window. If an APM Medical database is displayed there, select it and choose Edit Server. Otherwise, choose New Server.

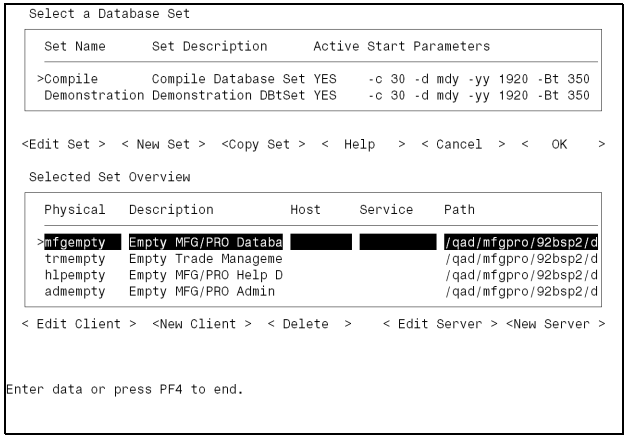


Fig. 3.16 Database Set Maintenance Screen

3 The Server Database Parameters screen displays. Verify the entries using the screen and field descriptions.

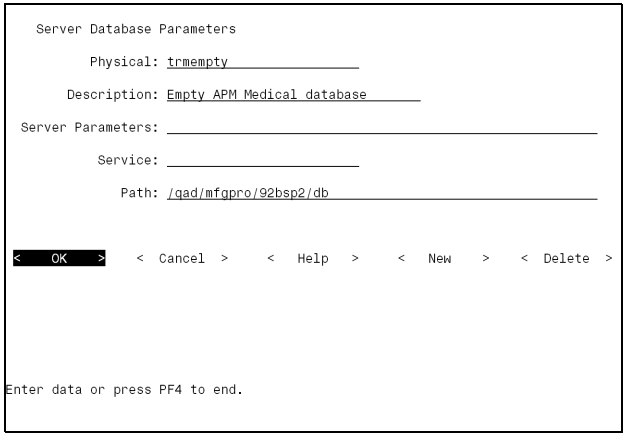


Fig. 3.17 Database Server Parameters for `trmempty.db`

Physical. Enter the physical database name. For the Compile database set, this is `trmempty`.

Logical. Enter the logical database name for `trmempty`.

Service. Leave blank for `trmempty` except in the rare case where you are installing the APM Medical databases on a client machine.

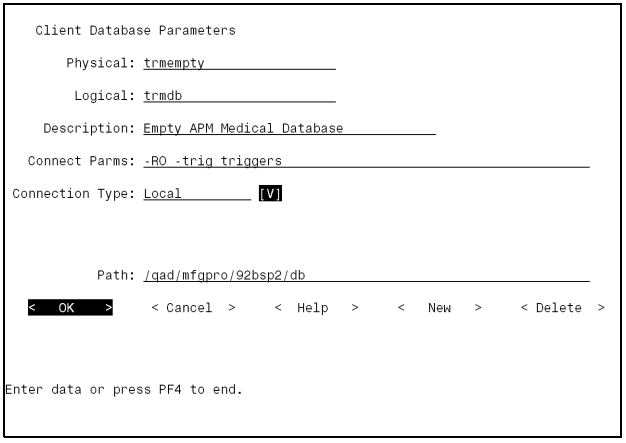
Path. Enter the full path to the database.

When you finish, choose OK.

4 Select the new entry for `trmempty.db` in the lower frame of Database Set Maintenance. Choose Edit Client.

5 The Client Database Parameters screen displays. Add Connect Parameters and make sure the connection type and values are correct.

Fig. 3.18
Client Parameters Screen for `trmempty.db`



6 Choose OK to save your changes and return to Database Set Maintenance.

7 Tab or click in the top frame again. With the Production database set selected, choose Edit Set. Add the *APMInstallDir* to the beginning of the PROPATH as shown and choose OK.

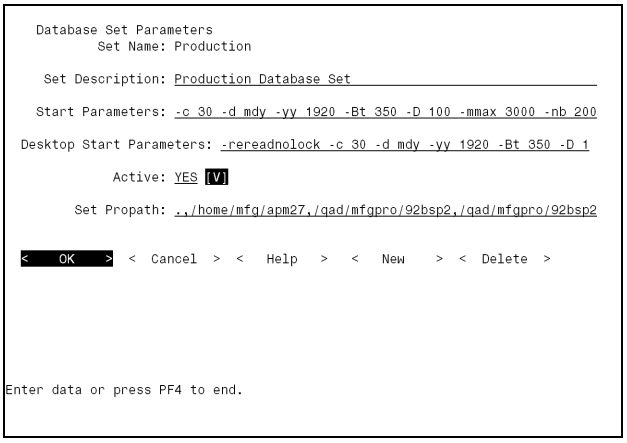


Fig. 3.19 Production Database Set Parameters

8 You return to Database Set Maintenance. In the Selected Set Overview, choose New Server. The Server Database Parameters screen displays. Verify the entries using the screen and field descriptions.

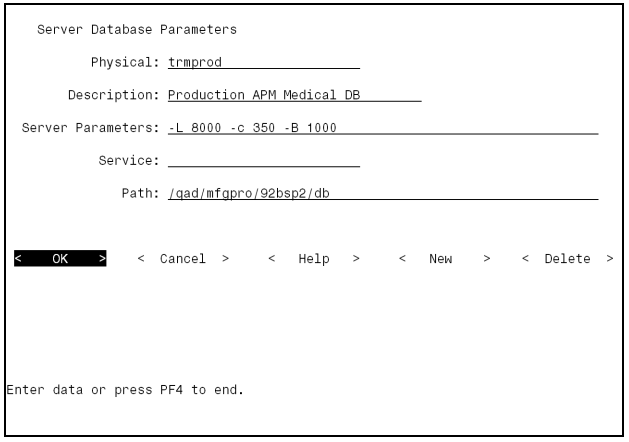


Fig. 3.20 Database Server Parameters for `trmprod.db`

Physical. Enter the physical database name. For the Production database set, this is `trmprod` by default.

Service. Leave blank or enter the service name for the database as set up in your `services` file.

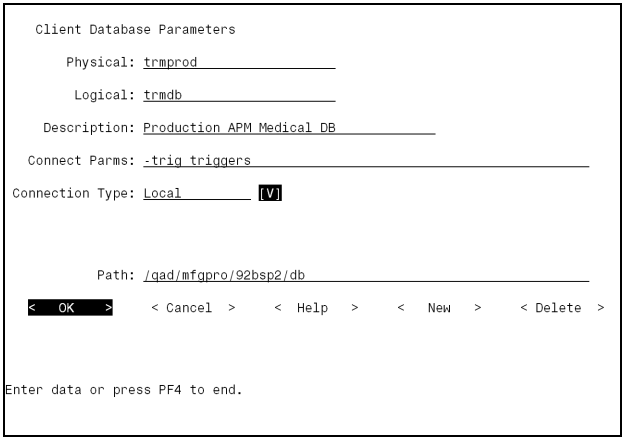
Path. Enter the full path to the database.

When you finish, choose OK.

9 Select the new entry for `trmprod.db` in the lower frame of Database Set Maintenance. Choose Edit Client.

10 The Client Database Parameters screen displays. Add Connect Parameters and make sure the connection type and values are correct.

Fig. 3.21
Client Parameters Screen for `trmprod.db`



11 Choose OK to save the changes and return to Database Set Maintenance.

12 Update the Demonstration database set in the same way if you created the APM Medical demo database.

13 When you complete the configuration of all applicable database sets, return to Database Set Maintenance and choose OK to save your work and exit to the main menu.

Generate Scripts

Run your MFG/UTIL character client to generate scripts and compile. This supports running APM Medical on a character client.

1 Launch MFG/UTIL from the *MFGPROInstallDir* using the following command: `./mfgutil`.

In Windows, click the character MFG/UTIL icon.

2 In MFG/UTIL, choose Generate Scripts from the Scripts menu.

3 Select the Production database set and Demonstration if required, and choose OK. The Compile database set does not require a start script since it is only used during compiles.

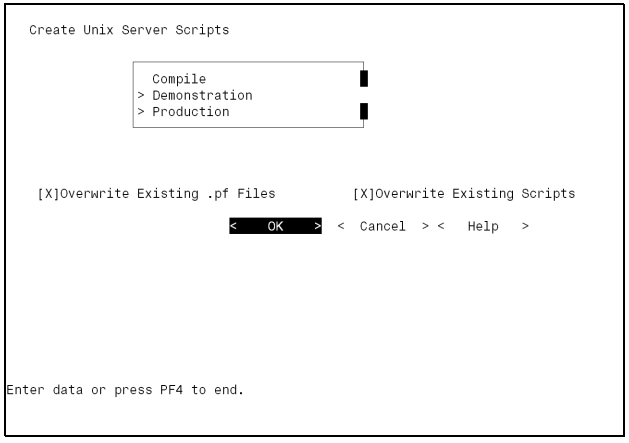
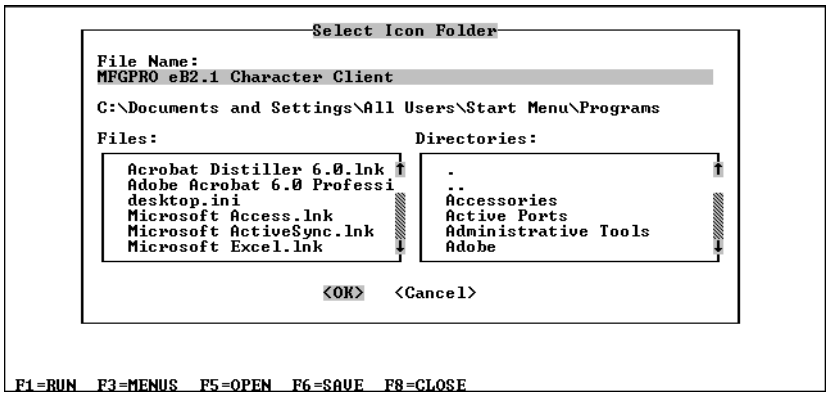


Fig. 3.22 Generating Scripts for the Production Database

4 You are asked to confirm the script generation. Choose Yes.

5 For Windows installs, select the folder where the program icons should be created.

Fig. 3.23
Folder for APM Medical Production Database Icons



6 The Log Window displays progress. When the process completes, choose Close.

Compiling APM Medical Code

A full compile of APM Medical code is required. 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 *`APMInstallDir`*. For example, `aiapprov.p` compiled for U.S. English is placed in *`APMInstallDir`*`/us/ai`.

Multithreaded Compiles

APM Medical has nearly 17,000 programs to compile. If time is a factor, you can split the compile list file, `utcompil.wrk`, into multiple files and then launch separate complies for each of the files.

For example, you could create `utcomp01.wrk` through `utcomp04.wrk` having approximately 3,000 files apiece. You would then launch an MFG/UTIL session and start the first compile. Then launch a second session, a third, and a fourth. Depending on processor speed, this can cut compile time by as much as 70%.

Compile APM Medical

APM Medical is compiled in two passes, each pass controlled by a compile list file. The first pass uses `utuscomp.wrk`, the second, `utcompil.wrk`. Both passes through the compile program are controlled with a second APM Medical workflow in MFG/UTIL.

1. Launch MFG/UTIL from the *`MFGPROInstallDir`* using the following command: `./mfgutil`.

   In Windows, click the character MFG/UTIL icon.

2. Select Guided Setup from the Config menu.

3. In the Operation Sets field, select APM Medical Module Setup.

4. Choose Run Set to start the process. The Compiler Options screen displays.

First Pass—Compile MFG/PRO Programs Modified for APM Medical

1. At the Compiler Options screen, 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.

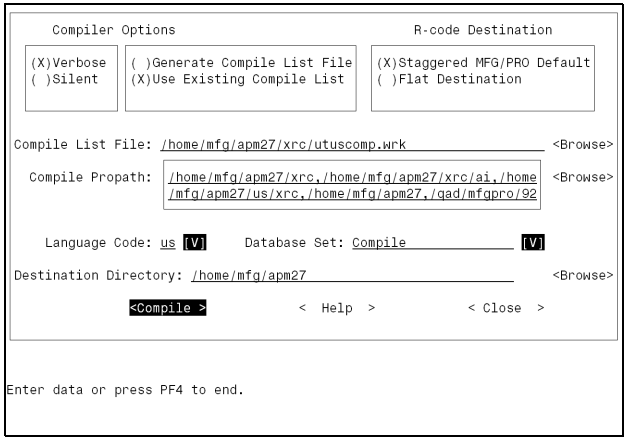


Fig. 3.24
Compiler Options
`utuscomp.wrk`

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. Use this option for most cases. This uses the compile list shipped with the product.

Staggered MFG/PRO Default. Saves compiled code in the default structure of language directories underneath *`APMInstallDir`*.

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

Compile List File. Specify the name of the compile list file, by default `utuscomp.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 for this compile must contain:

- The `xrc` subdirectory in *`APMInstallDir`*`/us`
- The `xrc/ai` subdirectory in *`APMInstallDir`*
- The `xrc` subdirectory in *`APMInstallDir`*
- The `xrc` subdirectory in *`MFGPROInstallDir`*

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 *APMInstallDir*. 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 `aiapprov.p` is compiled to:

`./APMInstallDir/us/ai/aiapprov.r`

2 When ready, choose Compile.

3 You are asked to confirm writing to the destination directories, *APMInstallDir* and *APMInstallDir*`\us`. Reply Yes to both prompts.

4 In the compile verification screen, verify the compile information. If the compile settings are correct, choose Continue. If the settings are incorrect, choose Back to make changes.

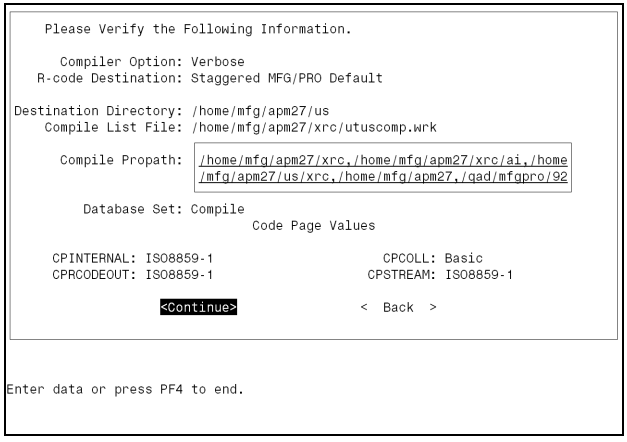
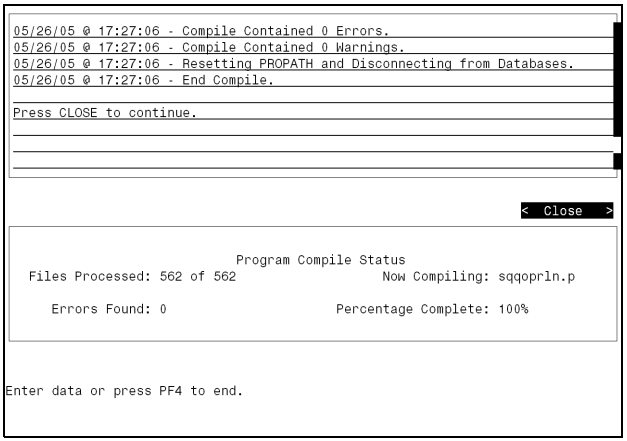


Fig. 3.25 Compile Verification for `utuscomp.wrk`

5 A Log Window displays progress.

Fig. 3.26
Completed Compile



6 When the compile is complete, check for errors in the Log Window, and choose Close.

Second Pass—Compile Remaining APM Medical Programs

1 When the first pass is completed, the Compile Options screen displays once again for `utcompil.wrk`. To reduce compile time, set up a multithreaded compile as described in “Multithreaded Compiles” on page 32.

2 Choose Compile Procedures from the Programs menu.

3 The Compiler Options screen displays. 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.

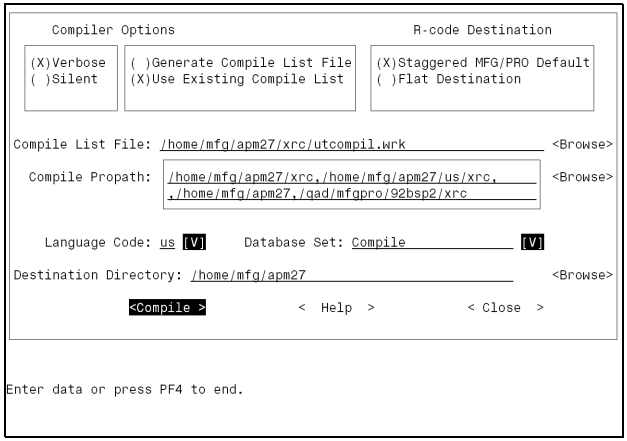


Fig. 3.27
Complier Options
`utcompil.wrk`

Compile List File. This should be `utcompil.wrk` (or `utcomp01.wrk`, and so forth) located in the `xrc` subdirectory in *`APMInstallDir`*.

Compile Propath. The compile PROPATH for this compile contains:

- The `xrc` subdirectory in *`APMInstallDir`*
- The *`APMInstallDir`* directory
- The `us/xrc` subdirectory in *`APMInstallDir`*
- The `xrc` subdirectory in *`MFGPROInstallDir`*
- The *`MFGPROInstallDir`* directory

4 Choose Compile to start the compile.

5 Verify the destination directories in the prompts.

6 In the compile verification screen, verify the compile information and choose Continue.

7 When the compile is complete, check for errors in the Log Window, and choose Close.

8 The `mfgutil.ini` file is saved again and the workflow ends. Choose Close to exit the Log Window. Choose Close again to exit the Guided Setup program.

This completes the APM Medical compile.

Recompile MFG/PRO

Because several MFG/PRO programs are modified by APM Medical, you must recompile your MFG/PRO code. Follow the instructions in the installation guide for the specific MFG/PRO release you are running.

Chapter 4

Completing the Installation

Use the instructions in this chapter to complete the installation and integrate APM Medical with MFG/PRO so that users can run APM Medical from the MFG/PRO menu. These steps must be completed for both `trmprod` and `trmdemo`.

Setting Up MFG/PRO

You must complete the following steps to prepare MFG/PRO for use with APM Medical:

- Run a utility to load data into the MFG/PRO administration database.
- If you did not convert from a previous version of APM Medical, update each domain with default APM Medical data.
- Modify Sales Order Control.
- Modify Pricing Control.

Load MFG/PRO System Data

1 To load APM Medical menu data into MFG/PRO, launch MFG/UTIL and select Load System Data into Database from the Database menu.

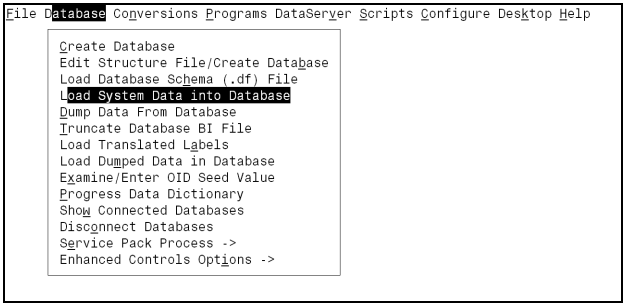


Fig. 4.1
Loading System Data into Database

2 At the Connect Database screen, accept the defaults to connect to the MFG/PRO production database, `mfgprod`. Choose OK.

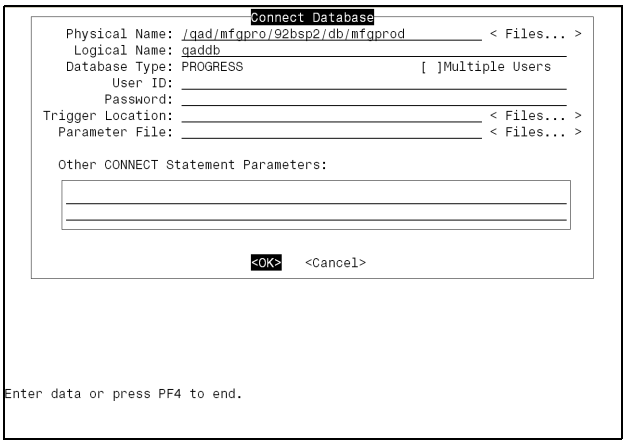


Fig. 4.2
Connecting to `mfgprod.db`

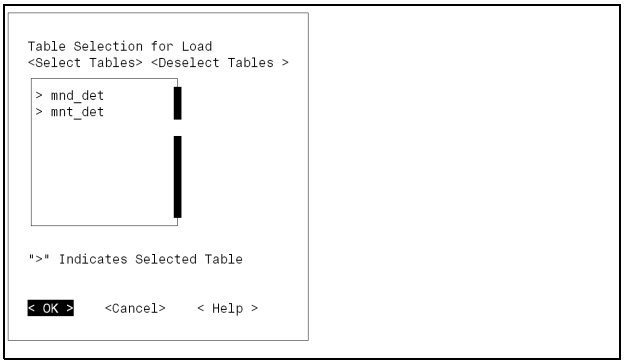
3 The Log Window displays the database connection. Choose Close to continue.

4 Verify the correct load directory in the Load Data Contents screen. The correct directory is *`APMInstallDir`*`/us/mfg`. Use the Browse button to assure you have the correct directory. Select any file within the directory and choose OK to select that directory.

Fig. 4.3
MFG/PRO Data Files Load Directory

5 The Table Selection for Load screen displays the data files in the `/trmprod` directory. Choose OK to start the load.

Fig. 4.4
Table Selection for `mfgprod.db`



6 The Log Window displays load progress. There are a large number of files to load; the process takes several minutes depending on processor speed, network bandwidth, and so forth.

7 When the load completes, press spacebar to continue.

Define Default Domain Data

See *User Guide: MFG/PRO eB2.1 New Features* for details on domains.

With the introduction of domains in MFG/PRO eB2.1, every database has one system domain named QAD indicated by a domain type of SYSTEM. The initial system domain is created when the database is created, for both a new installation of MFG/PRO or a conversion.

The system domain includes the default data you need to begin implementing MFG/PRO, such as control program settings, rounding methods, default accounts, and generalized codes. Default APM Medical data is also loaded into the system domain during installation of APM Medical.

The system domain is used as a template for new domains. When you create a new domain using Domain Maintenance (36.10.1), default MFG/PRO data is automatically copied from the system domain to the new domain. However, to include APM Medical data in the new domain, you must run a separate Domain Initialization (7.20.24.15) utility. This copies default APM Medical data from the system domain to the new domain.

Note Since the system domain is used as a template, you may want to add data to it or tailor defaults before creating new domains based on it.

You must complete the following steps if:

- You converted to MFG/PRO eB2.1 from an earlier MFG/PRO release and are now installing APM Medical for the first time; you did not use it with your previous release.
- You are starting a new MFG/PRO eB2.1 with APM Medical implementation.

You must also run this program in either situation if you later create additional domains in your database.

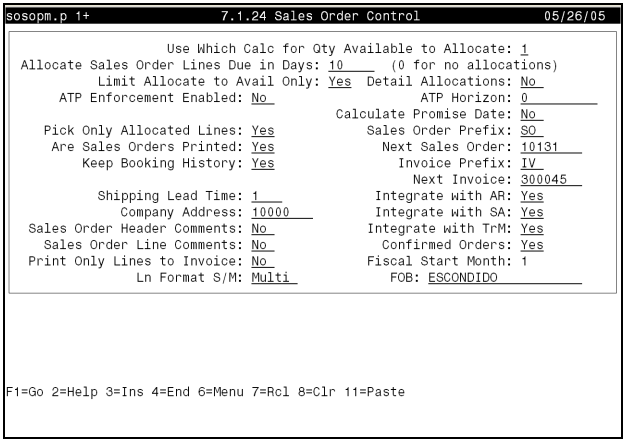
1. Start an MFG/PRO client session in character mode.
2. Choose 7.20.24.15 from the menu and press Go.
3. Respond Yes when prompted to continue.
4. Specify the code that identifies a domain in your database and press Go to load the APM Medical default data.
5. Press End when the function completes.

Update MFG/PRO Sales Order Control

1. In MFG/PRO Sales Order Control (7.1.24), set the Integrate with TrM field to Yes.

   Note The same field that is used to integrate Trade Management (TrM) is also used for APM Medical.

2. Press Go to save this change. Then press End until you have exited Sales Order Control.



This will enable you to access APM Medical from an MFG/PRO character session. Further initial setup instructions are provided in Chapter 4 of *User Guide: Advanced Pricing Management*.

Update MFG/PRO Pricing Control

In MFG/PRO Pricing Control (1.10.1.24), enter an APM Medical price list prefix and set the QO and SO Price by Line fields to Yes.

Setting Up APM Medical

You must complete two setup steps in APM Medical:

- Use Price List Parameters (7.20.18.1) to define default settings required for APM Medical pricing.
- Specify the integration with MFG/PRO in Control File Maintenance (7.20.19.1).

Set Up Price List Parameters

If pricing parameters are not initialized, errors may be encountered using MFG/PRO programs such as Item Master Maintenance (1.4.1), Customer Maintenance (2.1.1), and Sales Order Maintenance (7.1.1).

1. In MFG/PRO, choose Price List Parameters (7.20.18.1).
2. Specify values for the following fields:
   - Division
   - Multiple Divs
   - SO Line Entry
   - P/List Prefix
   - P/List Sequence

For additional details on this program, see the discussion on the Price List module in *User Guide Supplement: APM Medical.*

Set Up APM Medical Control

APM Medical must be integrated with MFG/PRO prior to adding or updating any records.

1. In MFG/PRO, go to Control File Maintenance (7.20.19.1).
2. The Control ID defaults to 1. Press Go once to enter the program.
3. Press Page Down to access page 10.
4. Change MFG/PRO? to Yes to integrate with MFG/PRO.
5. Press F1 to save; press F4 to exit.

Restarting Applications

Restart both APM Medical and MFG/PRO so that the MFG/PRO startup routine can run the APM Medical interface program.

Chapter 5

Converting from APM Medical 2.4 Databases

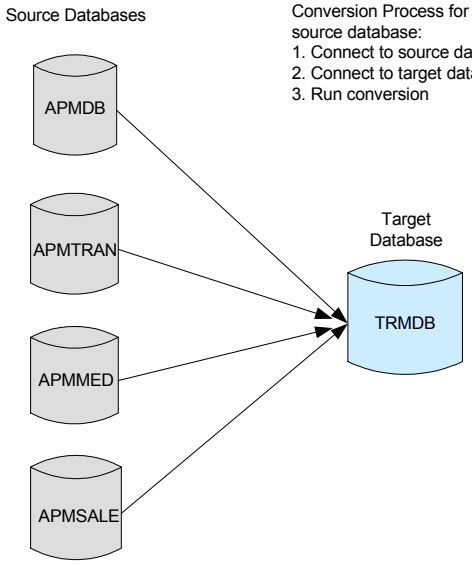
Conversion is supported from any APM Medical 2.4 release to version 2.7.

Overview

APM Medical 2.4 was provided with four separate databases. In APM Medical 2.7, these existing databases are combined into one database called TRMDB. The conversion process migrates data from the four databases to the TRMDB database.

Converting the four existing APM Medical databases to the APM Medical 2.7 database is a three-step process for each existing database.

Fig. 5.1
Converting Source Databases



The conversion process is performed for each of the APM Medical source databases in the order shown below:

- APMDB
- APMTRAN
- APMMED
- APMSALE

Conversion Process Overview

The conversion process involves:

1. Launching the conversion program
2. Connecting to the existing MFG/PRO database
3. For each source database:
   a. Connecting to the source database
   b. Connecting to the target database
   c. Running the conversion
4. Exiting the conversion program

Preparing to Convert Source Databases

As a prerequisite to the conversion into your production environment, it is recommended that you perform the following tasks:

1. Back up your existing target TRMDB database.
2. Perform a test conversion of the APM Medical source databases into a test target `TESTAPM27` database. Then validate that the source version data converted correctly into the test environment.

   Once the test conversion data has been validated, proceed with the conversion process for your target TRMDB database in the production environment.

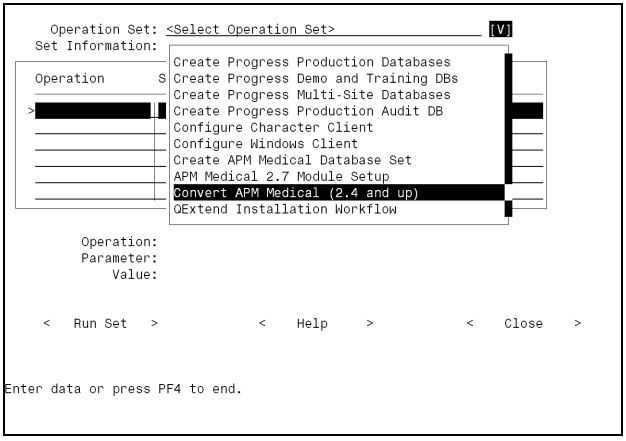
Launching the Conversion Program

1 Launch MFG/UTIL from *MFGPROInstallDir* using the following command: `./mfgutil`.

2 Choose MFG/PRO Guided Setup from the Configure menu.

3 From the Operation Set list box, select Convert APM Medical (2.4 and up).

Fig. 5.2 Conversion Operation Sets Drop-Down



Note The number of operations is determined by the number of uncommented sections in `wk0615.ini`. See “Modify the Workflow .ini Files” on page 17 for information on configuring this file.

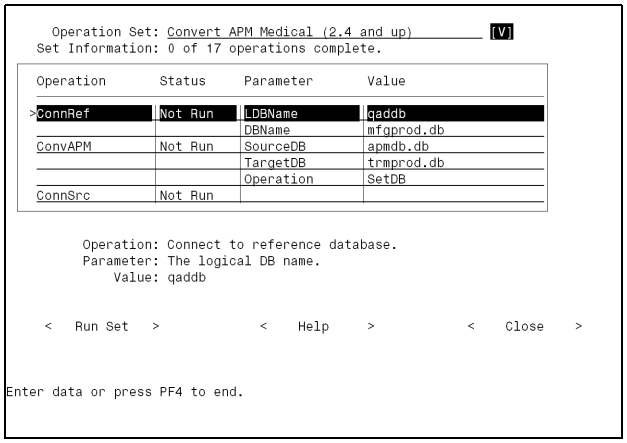


Fig. 5.3
Convert APM Medical Database Workflow Steps

Operation sets are groups of conversion activities. 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.

If you stop the workflow and an Error status is written to a step, this is the first step run when you restart the operation set.

4 Choose Run Set and choose Enter.

Connecting to Existing MFG/PRO Database

The system requires a value for the MFG/PRO domain required in APM Medical 2.7. Connecting to your existing MFG/PRO enables the system to obtain a value for the first active MFG/PRO domain.

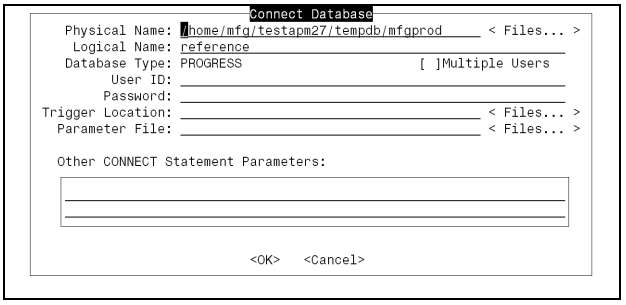
1 After you select Run Set from the screen shown at Figure 5.3, the Connect Database screen displays. Accept the default Logical Name of reference, and choose OK to connect to your existing MFG/PRO database as the reference database.

Use Table 5.1 and the screen as guides.

Table 5.1 Connect Database Values for MFG/PRO database

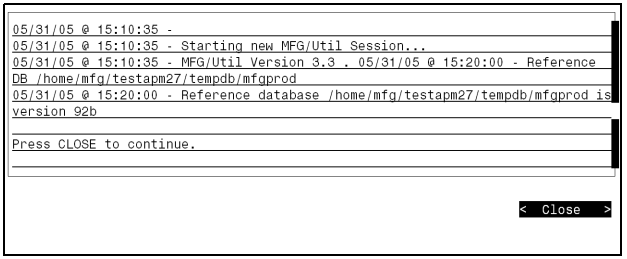
Field	Value
Physical Name	(Path to your MFG/PRO database)
Logical Name	reference
All other fields	(Settings as needed for your environment)

Fig. 5.4 Connect to MFG/PRO Database



2 When the connection has completed, choose Close to close the Log Window.

Fig. 5.5 Log Window Following MFG/PRO Database Connect



Converting Existing APM Medical Databases

Converting the Source APMDB Database

Connecting to Source APMDB

1 To connect to the APMDB source database, at the Connect Database screen accept the default Logical Name of source, and choose OK to connect. Use Table 5.2 and the screen as guides.

Table 5.2 Connect Database Values for APMDB

Field	Value
Physical Name	(Path to your APMDB database)
Logical Name	source
All other fields	(Settings as needed for your environment)

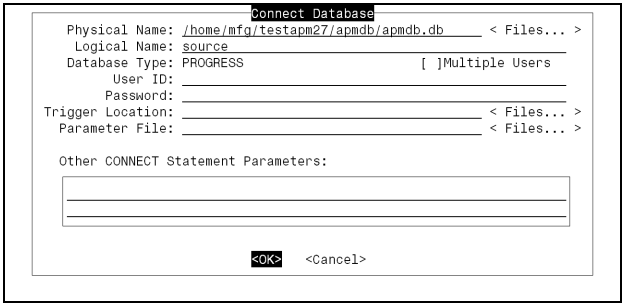


Fig. 5.6 Connecting APMDB

2 When the connection has completed, choose Close to close the Log Window.

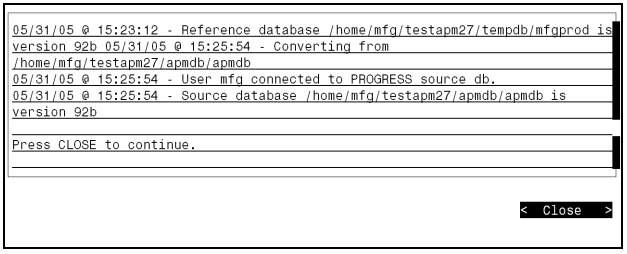


Fig. 5.7 Log Window Following APMDB Database Connect

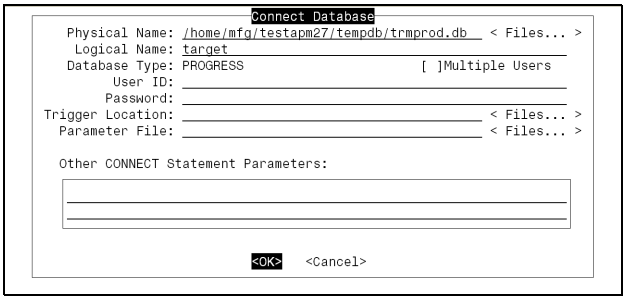
Connecting to Target TRMDB

1 To connect to the TRMDB target database, at the Connect Database screen accept the default Logical Name of target, and choose OK. Use Table 5.3 and the screen as guides.

Table 5.3 Connect Database Values for TRMDB

Field	Value
Physical Name	(Path to your TRMDB database)
Logical Name	target
All other fields	(Settings as needed for your environment)

Fig. 5.8 Connecting TRMDB



2 When the connection has completed, choose Close to close the Log Window.

Running the Conversion

When the connection to TRMDB is completed and the Log Window is closed, this starts the conversion process.

Converting Remaining Source Databases

To convert the remaining source databases to the TRMDB target database, follow the same process as described in Converting the Source APMDB Database on page 53.

Note the specific values applicable when connecting to each source database as indicated in the following tables.

Table 5.4 Connect Database Values for APMTRAN

Field	Value
Physical Name	(Path to your APMTRAN database)
Logical Name	source
All other fields	(Settings as needed for your environment)

Table 5.5 Connect Database Values for APMMED

Field	Value
Physical Name	(Path to your APMMED database)
Logical Name	source
All other fields	(Settings as needed for your environment)

Table 5.6 Connect Database Values for APMSALE

Field	Value
Physical Name	(Path to your APMSALE database)
Logical Name	source
All other fields	(Settings as needed for your environment)

When the conversion process has completed for the last source database, the screen in Figure 5.9 is displayed showing the operations set for the Convert APM Medical (2.4 and up) workflow.

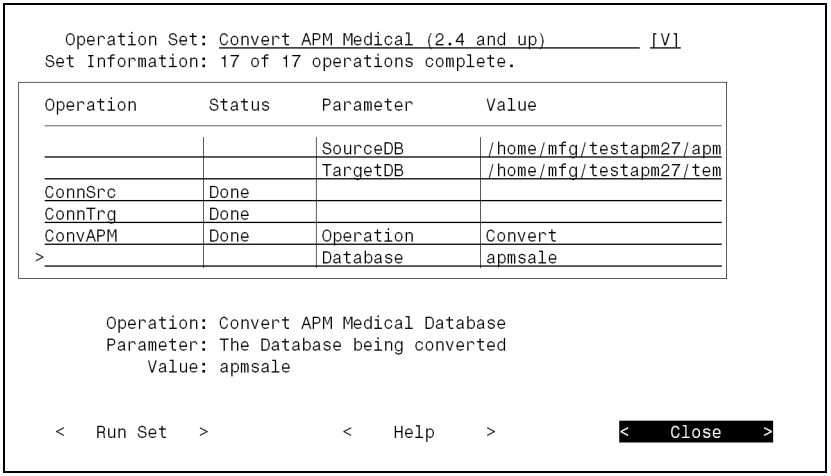


Fig. 5.9 Convert APM Medical Workflow Steps

Choose close to complete the process and exit MFG/UTIL.

You now have a converted database available.

Index