QAD Enterprise Applications
Standard Edition

Installation Guide
Oracle Database

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QAD Inc.
100 Innovation Place
Santa Barbara, California 93108
Phone (805) 566-6000
http://www.qad.com

Contents

Chapter 1

Planning a QAD Standard Edition Oracle Installation

This chapter presents basic topics that you should understand before beginning a QAD Standard Edition on Oracle installation or conversion.

Important If you have experience installing QAD Standard Edition 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 version to the current release

If you are migrating from an earlier version, start your planning with the *Conversion Guide: Oracle Database - Standard Edition*. The installation steps covered in this guide are treated as a step within the larger conversion process. There are several changes to the conversions, including the introduction of an in-place conversion option. The steps you complete in this guide to install your new QAD Standard Edition version depend on which conversion method you choose.

This guide provides instructions for installing the core databases on the server, the UNIX host client, and remote Windows clients.

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 tables including QAD Standard Edition administration and help databases, as well as custom and other side databases
- The resulting network, disk, and client layouts

Note The Enhanced Controls module, available for QAD Standard Edition on Progress implementations, is not yet available for QAD Standard Edition on Oracle implementations. However, an audit schema holder is required to support compiles.

Note For new terms see “Glossary” on page 153.

Security Plan

A successful QAD Standard Edition installation includes a complete security plan. During an installation or conversion, full permissions are required for system and application tools that can be used to load, edit, or delete data. In addition, an installation results in at least one user, `mfg`, with full administrative access. For these reasons, a security plan is essential. The basic components of a security plan are:

- Operating-system-level security for intrusive tools such as:
  - Oracle tools
  - Progress tools
  - QAD MFG/UTIL
- Operating-system log-in security
- Operating-system permissions and ownership set appropriately for:

    - Database files
    - Before-image and after-image files
    - Log files
    - Application source and compiled source files
    - Application startup and shutdown scripts
- Log-in security
- Domain security
- Specific security features such as menus, fields, and sites

See the “Users and Security” chapter in *User Guide: Manager Functions*.

A security plan should address the tasks of the initial administrative user in setting up valid users and securing QAD Standard Edition by user and group prior to giving users access to the application.

Service Pack Installs

If you are installing or converting from a previous release of MFG/PRO to QAD Standard Edition with a service pack, this guide covers all steps. If you are installing a service pack for an existing QAD Standard Edition installation, use the instructions shipped with the service pack.

DataSynchronization Users

Beginning with QAD 2008 Standard Edition, DataSync no longer required a separate installation; the DataSync database was merged with the main database.

Deployment

You can install QAD Standard Edition on UNIX or Windows servers with character or GUI clients, or a mix of these. QAD Standard Edition consists of three distinct components:

- A database server
- A file server
- Remote clients

Database Server

The database server consists of the QAD Standard Edition databases. You build these databases as part of the installation. Clients connect to these databases directly or through a file server.

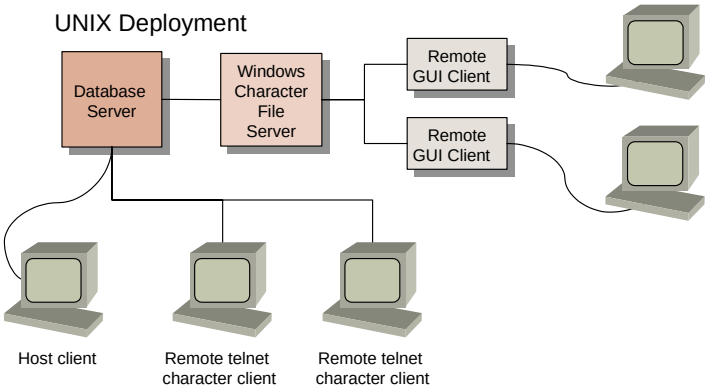
File Server

The file server is the location of the QAD Standard Edition 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, shown as the host client connecting to the database server in Figure 1.1, then additional UNIX character clients can connect to QAD Standard Edition on this machine using telnet startup scripts generated for the host client.

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

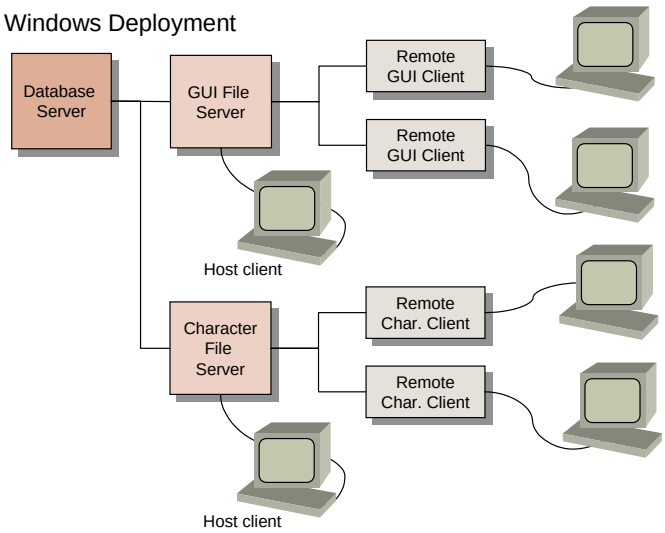


Remote Clients

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.

For more information, see “Installation Utilities” on page 7.

Fig. 1.2
Windows Deployment



Database Server Installation

Working QAD Standard Edition databases on Oracle are created in two stages. First, create a Progress schema holder database. Then create the Oracle database and use the schema holder to load data into the Oracle database.

Create the Schema Holder

The schema holder is a Progress database that consists only of a metaschema. The metaschema is the data structure—a description of tables and fields, indexes, triggers, and database-level validations—that QAD Standard Edition uses to connect with an Oracle database.

The installation process creates empty Progress schema holder databases, and then loads the QAD Standard Edition schema into them. In Progress installations, four separate databases are created and connected simultaneously: the main or production database, the admin database, the audit database, and the help database. On Oracle, the main, admin, and help databases are combined into a single instance. For this database, you perform three separate schema loads to load all three database schemas into a single schema holder. The audit database schema is only required for compiles.

Create the Oracle Database

The Oracle database is created using QAD-provided templates. These templates are used in conjunction with the Oracle Database Configuration Assistant (DBCA), which lets you tailor tablespaces and other parameters prior to the creation step.

One of the most important requirements of a QAD Standard Edition on Oracle installation is the laying out of the database on multiple disks on the server. If you are doing a conversion, this process is easier since you have the existing database for comparison. However, if this is a first-time install of QAD Standard Edition on Oracle, you will need to make some educated guesses about laying out your tablespaces across disks and setting the sizes of those tablespaces.

Oracle installations can install multiple database instances to support demo, development, training, and production requirements. However, additional databases such as demonstration, development and training, require less overhead if they share the Oracle instance created for your QAD Standard Edition production database.

Load Default Data

Once your databases are created, you load default data into them. The data is separated into language-independent and language-dependent data, as well as into standard manufacturing data and administration 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 Oracle database. The database name can be anything. In this guide the name of the database is `qadora`.

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. QAD supplies data for this database specifically designed to support QAD Standard Edition training materials and scenarios.

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

See “Installing Additional Databases” on page 79 for additional information.

Copy the Schema Holder

For each empty schema holder you create, once the data is loaded, you create a new schema holder that references the new Oracle database. This leaves the empty schema holders for compiles and as backups to create future copies of the schema holders if needed.

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 QAD Standard Edition 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 is a character server, 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 from a client machine. On Oracle, database sets consist of the Oracle database and the Progress schema holders. These databases are included in database sets, and startup and shutdown scripts are generated for each. You define database sets as part of the installation. The typical sets are:

- Train*N* (one for each student)
- Development or Demo
- Production
- Compile

Important One connected empty audit schema holder is required during compiles for all installations, even though Enhanced Controls is not being used. QAD Standard Edition code references tables in the audit schema.

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

Remote Client Installation

Installing remote clients for Windows character or GUI clients requires that you have first installed a file server for the specific interface—character or GUI. You then install remote clients by connecting to that file server and running the client installation routine on the remote machine.

Online Help

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 .NET UI clients.

Network, Disk, and Client Layout

At the machine level, QAD recommends deployment of QAD Standard Edition on Oracle 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.

Additional databases—training, development, and demonstration—require less overhead if they share the Oracle instance created for your production of QAD Standard Edition on Oracle database.

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.

Guided Setup

The entire installation process is semi-automated by a Guided Setup within MFG/UTIL. Guided Setup uses initialization files to control which install steps are followed in what order. The files step you through the creation of the schema holder, the creation and running of the SQL scripts, the data loads, and the compile.

This installation guide follows the installation method defined by the Guided Setup initialization files:

- Database server—`wk0200.ini`
- Character client—`wk0400.ini`
- Windows clients—`wk0410.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 reenter setup data. In this case, use a text editor to change the Status token back to Not Run for that set of steps in the initialization file.

Editing Workflow .ini Files for US English Installs

You will probably need to edit the Guided Setup production database workflow, `wk0200.ini`. For each installation, review the workflow file and determine which databases you are implementing. The default `wk0200.ini` creates the empty and production schema holders.

For example, if you are converting an existing QAD Standard Edition database using the buffer-copy method, you must comment out the two data loads and the OID generator code load program for the production database in `wk0200.ini` as shown in the example. Use the semicolon (;) to comment lines out.

```
;Enter OID Seed Value
[GetOID]
Status=Not Run
Program=menuoid.p
;
;[OIDSeed]
;Status=Not Run
;Program=oidseed.p
;DBName=./db/oraempty.db
;LDBName=mfgprod
;
;[SysLoadDataOID]
;Status=Not Run
;Program=oidloadd.p
;DataDir=./us/mfg
;DBName=./db/oraempty.db
;LDBName=mfgprod
;
;[SysLoadDataOID]
;Status=Not Run
;Program=oidloadd.p
;LDBName=mfgprod
;DataDir=./mfg
;DBName=./db/oraempty.db
;
[SysLoadDataOID]
Status=Not Run
Program=oidloadd.p
LDBName=mfgprod
DataDir=./us/admin
DBName=./db/oraempty.db
```

See the *Conversion Guide: Oracle Database* for details.

Note 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`).

MFG/UTIL 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.

OID Generator Codes

During a standard QAD Standard Edition installation, you must specify an OID generator code for each database. This code is used to create values that uniquely identify database records. If you are performing a conversion, the OID code is specified during the conversion process.

Note Currently, only some records take advantage of this new feature. However, it will be used more extensively in future QAD development.

You can choose any numeric code you want. The OID generator code you enter is used by QAD Standard Edition as the registration ID of the full OID value written to database records as they are created. The generator code is stored and displayed in Database Control (36.24) in QAD Standard Edition and can be modified later, if necessary.

Once the OID generator code has been specified, OID fields in the database are populated using an algorithm that ensures uniqueness across all records, tables, and databases within the company. The value stored in the OID field for each record has the following decimal format:

```
<date><seq_value>.<registration_id>
```

Where:

`<date>` is the server date with format yyyymmdd.

`<seq_value>` is obtained from an Oracle database sequence.

`<registration_id>` identifies the origin of the OID value.

The registration ID is derived from the OID generator code by reversing the digits of the generator code.

Installing Multiple Languages

All installs, including English-only installs, are language specific. You receive media for your database server and client installs, as well as separate media for each language you are implementing.

To create a US English-only install, no special steps are required. To create a single-language install that is not US English, you load your base language data, as well as a set of translated schema definitions. You then set your compile destination and client scripts to point to the language-specific directories.

To support multiple languages, you create a schema holder for each language, loading each with translated schema definitions. You then compile each language separately against these schema holders, setting the compile destination to point to the language-specific directory. You create one set of production schema holders from the empty ones and load the language-specific data files for each language you are implementing into them.

The steps you follow are documented in this guide.

Installing Shared and Compatible Code Page Languages

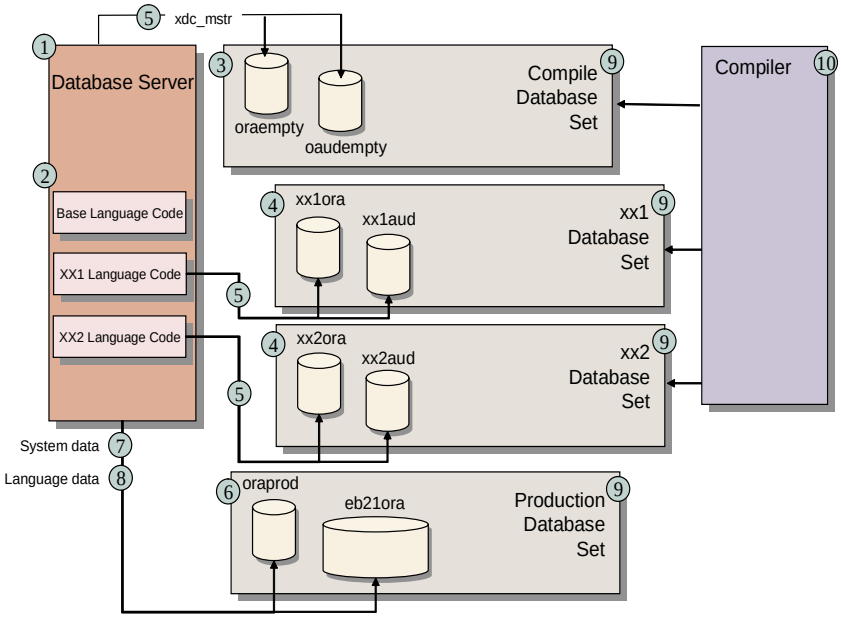
If all the languages you are implementing share the same code page—for example, English, French, German, Spanish that share the ISO-8859-1 code page, or Russian, Ukranian, and Romanian that share the ISO-1251-1 code page—no special install steps are required.

If you are installing multiple languages with a compatible code page, such as non-Western European languages like Japanese or Chinese and US English, you must first follow the instructions in the Progress documentation for setting up Progress for a non-Western European language. Then the steps in this guide apply.

If you are installing a double-byte language such as Korean or Chinese, always install the double-byte language media before installing any other languages.

Figure 1.3 provides a graphic overview of a multi-language install. The numbered steps are described following the graphic.

Fig. 1.3
Multiple Language Installation Stages



Note The header record for `oraempty.df` uses the ISO8859-1 codepage. If this is not the correct codepage for the target install language, edit the `oraempty.df` codepage before loading the file.

A general overview of the required steps is as follows:

1. Install the QAD Standard Edition database server.
2. Install language media for each language.
3. Create empty schema holders (`oraempty` and `oaudempty`).
4. Copy the empty schema holders for each language-specific schema holder (*`XX1`*`ora`, *`XX1`*`aud`, *`XX2`*`ora`, *`XX2`*`aud`, and so forth, where *`XX1`* is the language code).
5. Load translated labels (`xdc_mstr.d`) into each language-specific schema holder. If you are not implementing US English, load the base language `xdc_mstr`.
6. Create the production schema holder and database (`oraprod` and `qad1ora`).
7. Load system data into the production database.
8. Load language-specific data for each language into the production database.
9. Create database sets and generate scripts.You will need a compile database set pointing to the language-specific empty schema holders for each language.
10. Compile each language against a language-specific empty database set.
11. Install clients.
12. Generate client scripts and edit for language specifics.

    Note Each user can have a separate client script that sets language-specific components such as date format. Then each user's default language for menus, messages, and labels is set in User Maintenance (36.3.1).

Install a Single, Non-US English Language

The following are the steps to create a single-language installation that is not a US English installation. This scenario assumes that you have installed a version of Progress in the same language. A general overview of the required steps is as follows:

1. Install the QAD Standard Edition database server.
2. Install the language media.
3. Create the empty QAD Standard Edition schema holder.
4. Load translated schema labels (`xdc_mstr.d`) into the empty schema holder.
5. Create the production schema holder and database.
6. Load system data into the production database.
7. Load language-specific data into the production database.
8. Create database sets and generate scripts. You will need a compile database set pointing to the language-specific empty database for this non-US language.

9 Compile against the empty compile database set.

10 Install clients.

11 Generate client scripts and edit for language specifics.

Edit MFG/UTIL for Multiple Languages

Not all steps in a multiple-language installation can be added to a workflow. The copy of empty databases and the subsequent load of translated schema labels is best accomplished using Progress and MFG/UTIL tools. You can, however, incorporate the language-specific data loads to the `qadora` database.

To add languages to `wk0200.ini,` which loads the language-specific data into the production database, search for all instances of the base language (`/us`) and copy the section where it is found. There will be two in the original: one for `/us/mfg`, and one for `/us/admin`.

Paste the section below the copied section and modify the base language abbreviation to reflect the correct language abbreviation for the additional language. Figure 1.4 shows the addition of a French data load to a US English base.

Fig. 1.4
Language-Specific Load

```
[LoadData]
Status=Not Run
Program=raploadd.p
DataDir=./us/mfg
DBName=./db/oraempty.db
LDBName=
;
```

```
[LoadData]
Status=Not Run
Program=raploadd.p
DataDir=./fr/mfg
DBName=./db/oraempty.db
LDBName=
;
```

Example of a French data load section.

```
[LoadData]
Status=Not Run
Program=raploadd.p
DataDir=./mfg
DBName=./db/oraempty.db
LDBName=
;
```

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

Add a section for each language you are implementing for the production database and the administration database.

Loading Translated Labels Using a Workflow

If you want to load translated labels (`xdc_mstr`) in the database creation workflow, you can add the following step into `wk0200.ini` for the `mfgempty` and `oaudempty` schema holders. A French load would look like the following:

```
[LoadXlat]
Status=Not Run
Program=rapldlbl.p
```

```
DBName=./db/mfgempty.db
Language=fr

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

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 QAD Standard Edition modules you are licensed to run. If you ordered source code for a module, an X appears under Src.

On the release media are files with an `.lst` extension under the `qad/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 *`QADInstallDir`*`/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 expected module.

Chapter 2

System Requirements

A QAD Standard Edition installation requires planning for adequate system resources. This chapter provides system requirements and software prerequisites for database server, file server, clients, and the network.

A QAD Standard Edition on Oracle system consists of a database server, a character client, optionally a file server (for remote Windows clients), and remote clients with an adequate network. For requirements for QAD .NET UI, see *Installation Guide: QAD .NET UI*.

General Requirements

The system administrator must be a certified Oracle database administrator with at least 1 to 2 years of experience, and must know how to manage Progress client processes.

Before installing QAD Standard Edition, both Oracle and Progress must be installed following the installation guides for both products. Oracle has an install guide for each platform that may include UNIX kernel changes and patches.

QAD Product Installs and MFG/UTIL

When you install any QAD product that contains MFG/UTIL—QAD Standard Edition, .NET UI, JIT/S, AIM, TrM—to the *`QADInstallDir`*, the existing MFG/UTIL is overwritten. Some MFG/UTIL functions, including conversion routines, are specific to certain versions of MFG/UTIL. As a result, some functions may not work correctly if you overwrite the existing MFG/UTIL version.

To correct this, back up your existing MFG/UTIL version before the new install. Once you have installed the new product containing MFG/UTIL, back up that version of MFG/UTIL as well. If you need the previous version of MFG/UTIL (for example if you are running a QAD Standard Edition conversion after installing .NET UI) restore the previous version.

To create a backup, include the following directories:

- *`QADInstallDir`*
- *`QADInstallDir`*`/xmfgusrc`

Database Server

The database server contains QAD Standard Edition and Progress server software, as well as your production data in the Oracle database. 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

- 6 GB of free disk space (includes Oracle, Progress, QAD Standard Edition, and Web server software). This may be lower or higher depending on the Oracle installation type selected. Refer to the Oracle installation guides for additional memory and system requirements.
- 900 MB for each additional language.
- Approximately 15 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.
- 100 Mbps network card.
- ISO9660 CD-ROM.
- 2 disk controller channels (minimum).

- 300 system file handles per simultaneous QAD Standard Edition process.

Operating Systems

- HPUX 11i 32- and 64-bit
- AIX 5.2
- Solaris 9 and 10
- Red Hat Linux 2.1 (32-bit) and Red Hat AS/ES 3.0, 4.0, and 5.0 (32- and 64-bit)
- SuSe Linux Enterprise Server 8, 9, and 10
- Microsoft Windows 2000, 2003, and XP

Software Prerequisites

- Operating system patches. Check the *Oracle Installation Guide* and the *Progress Product Availability Guide* for required OS patches.
- Oracle Version 9iR2 (9.2.0.1.0 and higher), 10gR2 (10.2.0.4.0 and higher). Complete a full installation.
- For your Oracle installation, use the Cost Based Optimizer and turn Statistics on. See your Oracle documentation or refer to http://docs.oracle.com/ for further information.
- Progress OE10.1B03 DataServer for Oracle

  Note Progress OE10.2B01 is recommended when using .NET clients.

  Important On the required Progress products, select a Complete installation, not Typical or Custom.
- In a multi-language installation, Progress language-specific releases for each language
- Optionally, a Web browser to view MFG/UTIL help files in HTML format and to access online support

File Server

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

Hardware Requirements

- 2 GB of free disk space (includes Progress and QAD Standard Edition)
- 900 MB for each additional language

Software Prerequisites

- Operating system patches
- Progress OE10.1B03 Query Results
- Progress patches
- Progress OE10.1B03 DataServer license on Windows, depending upon configuration
- Oracle Client Software (requires about 600 MB) to connect via Oracle NetServices

Remote Clients

The minimum 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 2003, 2000, XP, and/or current UNIX server software
- QAD Standard Edition client media
- Progress OE10.1B03 software:
  - Query/Results (one Query license per client required)
  - Client Networking
- Optionally, a Web browse to view MFG/UTIL help files in HTML format and to access online support resources

Network

Set up your network to support Progress specifications. The minimum requirement from a QAD Standard Edition standpoint is a 10 Mbps Ethernet or faster network.

See the *Progress Networking Guide*.

Chapter 3

Database Server Install

Use this chapter to load the QAD Standard Edition database server media, create the QAD Standard Edition and audit database schema holders and SQL scripts, generate the Oracle databases, and load system data. The audit database schema holder is required for all customers in order to compile the code. If you are not using the optional Enhanced Controls module, you do not need to create the Oracle audit database.

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

See “Installing Windows File Servers” on page 48 for instructions.

Preliminary Steps

Prior to install, review the following cautions and requirements:

- Install the latest operating system patches.
- 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 QAD Standard Edition. You can switch to a language-specific terminal if necessary when you launch the clients.
- Make sure Progress and the latest Progress patches are installed.
- Change to the Korn shell.
- Determine the following information:
  - The directory where you want to install the QAD Standard Edition database server files, referred to as *`QADInstallDir`*
  - The Progress directory
  - The host name for the database server

Oracle Installation

During your Oracle installation, make sure you complete the following:

- Install the Enterprise Edition.
- Do not create a starter database.
- Select the Use Database Control for Database Management option.
- Use the File System storage option.
- Use the Cost Based Optimizer and turn Statistics on.

Rebuild the Progress Executable on UNIX

Some UNIX and Linux platforms require a rebuild of the Progress executable to run under Oracle. For example, HP and AIX platforms require rebuilds. If you get Progress errors—typically error numbers 47, 48, or 49—when you attempt to connect to Oracle using `_progres`, you will need to rebuild the executable.

If your platform does require a rebuild, refer to the “Building DataServer Executables” in the *Progress OpenEdge Data Management: DataServer for Oracle Guide*.

Setup for Non-Western European Languages

If you are installing non-Western European languages:

- Back up the `startup.pf` and `empty.db` files in the Progress directory.
- From the appropriate Progress language-code directory, copy the following files to the top-level 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
```

  See the *Progress Internationalization Guide* for details.

Windows Installation Setup (Windows Only)

If you are installing on Windows clients, you will need to set up the Windows server as an application server.

1. Choose Start|Settings|Control Panel.
2. Double-click Network and Dial-Up Connections.
3. Right-click Local Area Connection and click Properties.
4. Click File and Print Sharing for Microsoft Networks, then click Properties.
5. Click Maximize Throughput for Network Applications and click OK.

Create the Installation User and Group (UNIX Only)

QAD Standard Edition installations on UNIX require a group called `qad` and a user called `mfg` on the database server. All QAD Standard Edition 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 QAD Standard Edition 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 `ORACLE_HOME`, `ORACLE_SID`, `DLC`, and `PATH` variables. For example:

```
ORACLE_HOME=/dr01/oracle/OraHome1;export ORACLE_HOME
ORACLE_SID=eb21ora;export eb21ora
DLC=/dr01/progress/dlcOE10;export DLC
PATH=$PATH:$DLC/bin:$ORACLE_HOME/bin;export PATH
```

  - 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.

Important You will need to switch to an Oracle system admin user such as `oracle` for Oracle-specific tasks such as running SQL scripts.

Permissions

The QAD Standard Edition 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 (Optional)

If you are implementing a client/server environment, you may want to tailor your `services` files. This is not a required step for Oracle since database service connections are maintained by Oracle without the `services` file. 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
```

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.

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

Table 3.1
Services File Example

Service Name	Port #/Protocol	Comment
`prod-srv`	`5500/tcp`	`# Production Database`

Installing Server Files

In this set of steps, you mount the Database Server media and copy the files to the server. For Windows servers, insert the CD and go to “Install Database Server Files” on page 23.

Mount the CD-ROM

For Windows installs, just insert the CD in the CD-ROM drive. For UNIX installations, use the following instructions:

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`
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 23.

Installation Directory

Your selection of an installation directory for QAD Standard Edition can be important. If this is a new install, the easiest and simplest method to support is to accept the default. If this is a conversion from a previous QAD product, install to a separate directory structure.

In addition, do not select a directory path that has spaces in it such as `C:\Program Files\qad`. Database scripts generated by MFG/UTIL cannot locate a database in a path with spaces.

Install Database Server Files

Complete this section to install the QAD Standard Edition database server files on the 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.

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 QAD 2010 - Standard Database Server installation.
We are installing QAD 2010 - Standard Database Server for hpux.
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 QAD 2010 - Standard Database Server, you must accept this agreement.
(y/n)?
```

```
Default is n
->y
```

6 Accept the default or enter a different installation log files location. Later installs (language files, host client, and others) look in this location for installation information. If you enter a different location, make a 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
```

On Windows the default location is `c:\instlog`.

The log directory is used to record information about this installation. That information is used during the installation of subsequent media. If you choose not to use the default location, 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 QAD Standard Edition database server files (*`QADInstallDir`*). If this directory does not exist, it is created.

9 Respond Yes to the prompt, “Is this install for an Oracle dataserver?”

10 On Windows, you are prompted to enter the folder name for the MFG/UTIL program icons. The default is QAD <*yyyy*> Standard Database Server. Modify or accept the default, and press Enter.

11 Review the summary and confirm by entering `y` and pressing Enter. By default, the installation log is written to `c:\instlog` on Windows and `/users/mfg/instlog` on UNIX.

12 Choose the Finish button and press Enter to begin copying the files. The log is written to `/instlog/mfgdbsv.log`.

Install Language Files

Complete these steps to install the QAD Standard Edition 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 a QAD Standard Edition 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.

The US language media is required for all installations, even if you are not implementing US English.

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

1. For Windows, insert the language CD. For UNIX, load the language media on your system using the instructions in “Mount the CD-ROM” on page 22.
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.
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.

   The welcome screen displays. Press Enter to continue.
6. Accept the software license agreement.
7. Enter the log file location from step 6 in “Install Database Server Files” on page 23. If you used the default, accept the default here.
8. Enter the Progress installation directory.
9. Enter the *QADInstallDir* from step 8 in “Install Database Server Files” on page 23.
10. Review the summary and confirm by entering y and pressing Enter. The log is written to /instlog/mfglang.log.

If you are installing multiple QAD Standard Edition languages, repeat steps 1 to 10 for each language. If you are installing a single non-US English version, you must load the base language media and the US English language media.

Install QAD Assist

QAD .NET UI includes QAD Assist. For information on installing this feature, refer to “Installing QAD Assist” in the *QAD .NET User Interface 2.9.1 Release Notes*.

Modify mfgutpro.ini File (Single Non-US English Only)

To use MFG/UTIL in a language other than English, open mfgutpro.ini from the *QADInstallDir* and alter all instances of /us with the two-letter code for the installed language.

Modify the Workflow .ini File

The wk0200.ini file controls the Guided Setup creation of the QAD Standard Edition schema holders. Use a text editor to edit these files.

For more information, see “Guided Setup” on page 7.

Note For conversions, the workflow should need no additional adjustments if you installed the new version of QAD Standard Edition into a separate directory structure.

- Change any path or database name references that do not match your intended installation.
- Add language-specific loads of schema labels as necessary for multi-language installs.
- 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 additional language loads. For example, if you are installing French, you would add data loads for both `/fr/mfg` and `/fr/admin`.
- For buffer copy conversions, comment out the following sections:
  - [OIDSeed]
  - [SysLoadDataOID] where DataDir=`./us/mfg` and `./mfg` (two instances)
  - [TruncBI] where LBName=`mfgprod.db`
- For in-place conversions, comment out the same sections as for buffer copy conversions above, and in addition, comment out the [CreateOraSH] section.

See *Conversion Guide: Oracle Database* for additional information.

Set Up MFG/UTIL Clients (Windows Only)

If you are installing on a Windows machine, you must make 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 on 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 select OK.
5. When you are prompted, select Modify Shortcut.
6. Restart MFG/UTIL to enable the change.

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

Creating the Oracle Database

The first stage of database creation requires several steps outside of MFG/UTIL. You copy QAD Standard Edition source files into Oracle directories, and then run the Oracle Database Configuration Assistant (DBCA) to create the databases.

Copy QAD Standard Edition Files to Oracle

1 Depending on your operating system, copy `QAD_UNIX`*`x`*`.dbt` or `QAD_WIN`*`x`*`.dbt`, where *`x`* is the version of Oracle you are using, from:

`QADInstallDir``/db`

To:

`$ORACLE_HOME/assistants/dbca/templates`

Create the Oracle Databases

The following sequence of screens will be different depending on which version of Oracle, 9i or 10g, you are running.

Important For UNIX and Linux implementations, the display value must be set before running the Database Configuration Assistant (DBCA). See the Oracle documentation for information on the DBCA.

1 Start the Oracle DBCA.

- On UNIX:

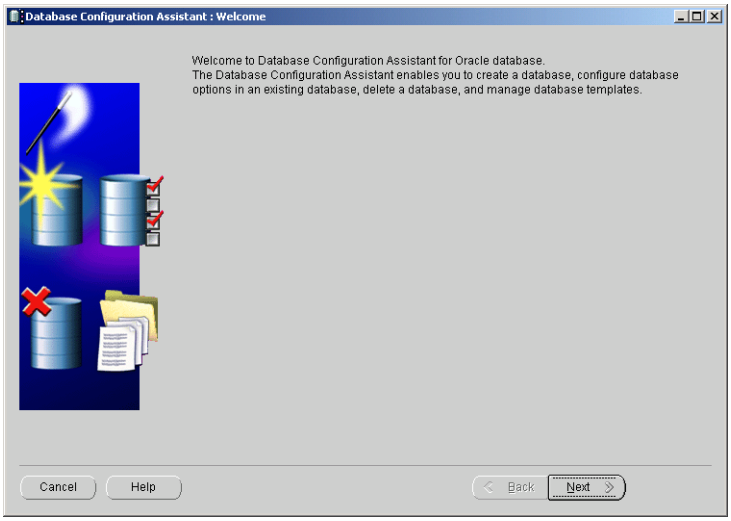
  ```
  cd $ORACLE_HOME/bin
  dbca
  ```

- On Windows:

  Start|All Programs|Oracle|Configuration and Migration Tools|Database Configuration Assistant

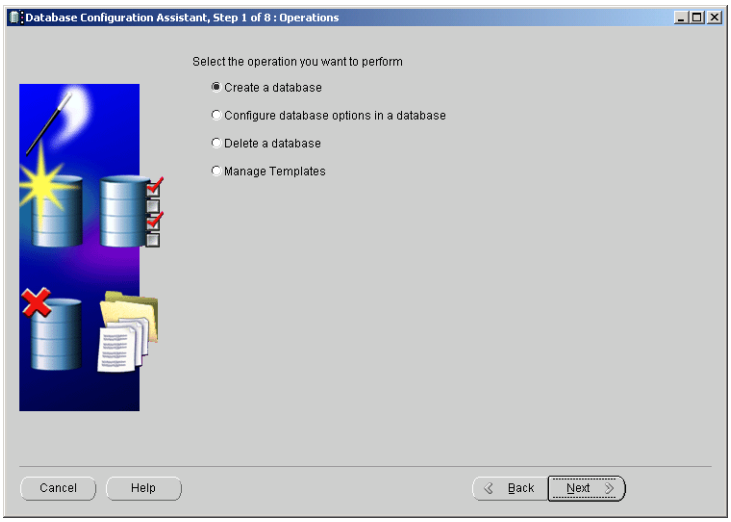
The Database Configuration Assistant welcome screen displays. Click Next to continue.

Fig. 3.1
Oracle Database Configuration Assistant



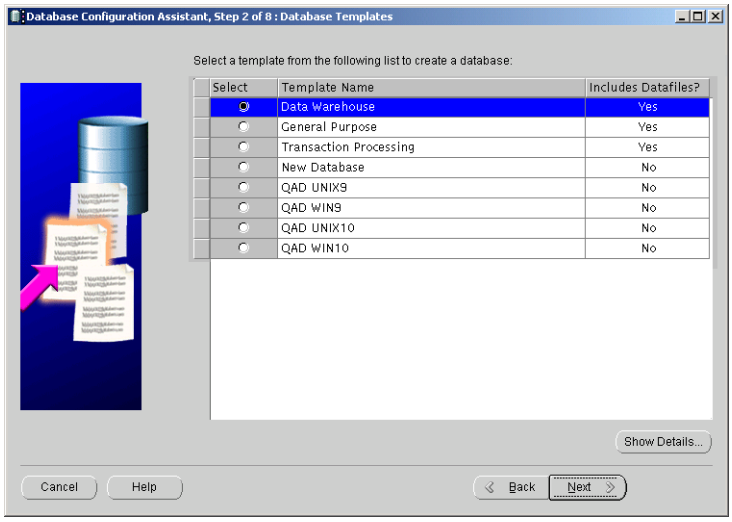
2 In the Operations screen, select Create a Database and click Next.

Fig. 3.2
Oracle DBCA Operations Screen



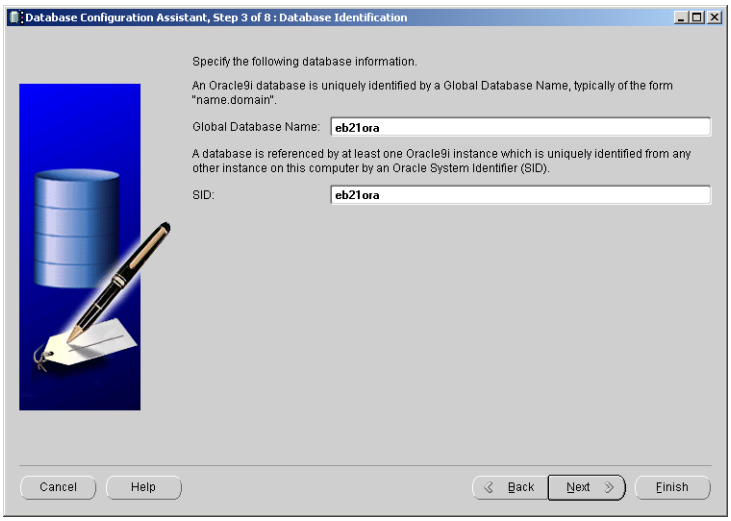
3 In the Database Templates screen, select the QAD WINx or QAD UNIXx template, where *x* is the version of Oracle you are using, depending on your operating system.

Fig. 3.3
Oracle DBCA Database Templates Screen



4 In the Database Identification screen, update the Global Database Name and/or SID prefix to the values you want.

Fig. 3.4
Oracle DBCA Database Identification Screen



Oracle Database software identifies a database by its global database name. A global database name consists of the database name and database domain. Usually, the database domain is the same as the network domain. The global database name uniquely distinguishes a database from any other database in the same network. The database name portion is a string of no more than 30 characters that can contain alphanumeric, underscore (_), dollar ($), and pound (#) characters. The domain portion is a string of no more than 128 characters that can contain alphanumeric, underscore (_), and pound (#) characters. For example:

```
eB21ora.mycompany.com
```

where

`eB21ora` is the database name.

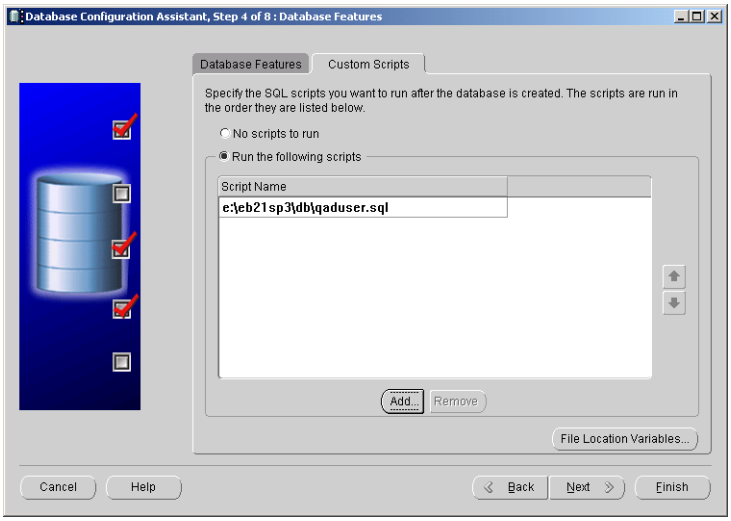
`mycompany.com` is the database (network) domain in which the database resides.

The Oracle System Identifier (SID) identifies a specific database instance. The SID uniquely distinguishes the instance from any other instance on the same computer. Each database instance requires a unique SID and database name. In most cases, the SID is the same as the database name portion of the global database name.

5 Click Next to continue.

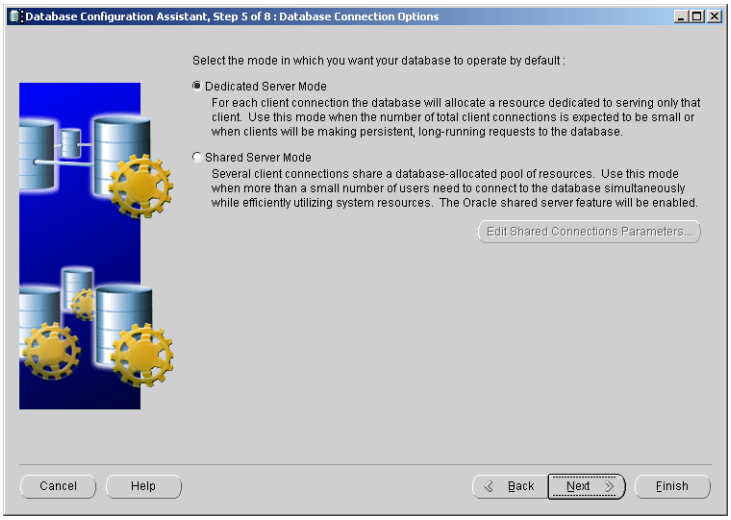
6 In Database Features, select the Custom Scripts tab and choose Add to enter the location of `qaduser.sql`; for example `/QADInstallDir/db/qaduser.sql`. Select Run the following scripts and click Next.

Fig. 3.5
Oracle DBCA Database Features Screen



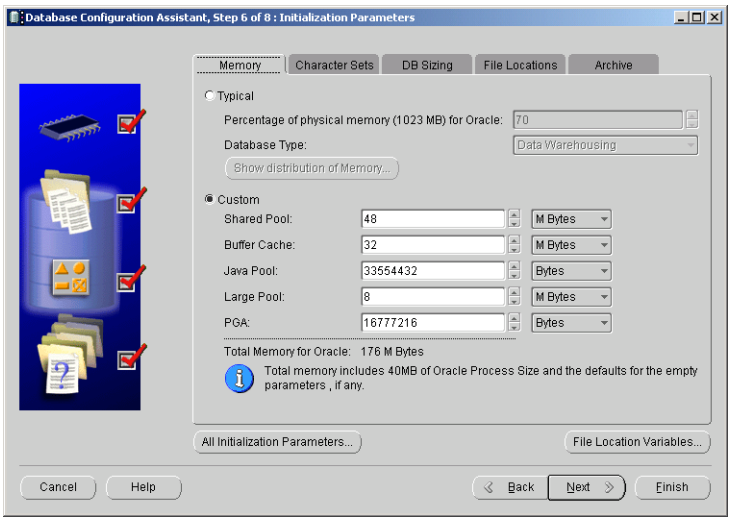
7 In the Database Connection Options screen, select the mode you want to use for your Oracle database, dedicated or shared, and click Next.

Fig. 3.6
Oracle DBCA Database Connection Options Screen



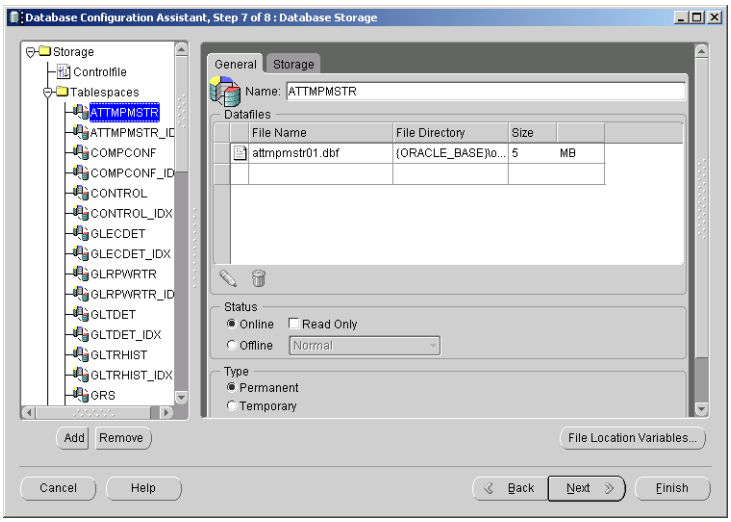
8 In the Initialization Parameters screen, modify the initialization parameters, character sets, file locations, and archive mode as required. Then click Next to continue.

Fig. 3.7
Oracle DBCA Initialization Parameters Screen



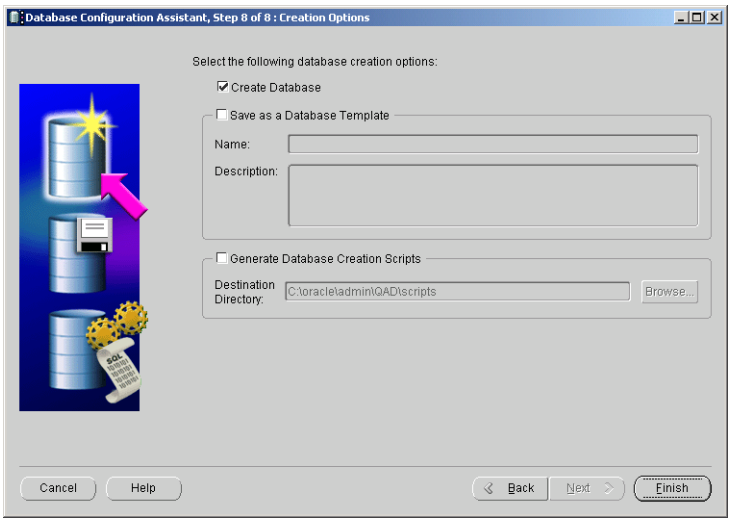
9 In the Database Storage screen, expand the Tablespaces tab in the navigation pane, and select any tablespace to modify tablespace datafile names, locations, or sizes as required. Do not replace any of the QAD-provided tablespaces or the QAD Standard Edition SQL scripts will fail. Click Next to continue.

Fig. 3.8
Oracle DBCA Database Storage Screen



10 In the Creation Options screen, choose Create Database to create the database now. If you plan to create the database at a later time, choose one or both of the other options. All options can be selected simultaneously if you want. Click Next to create the database, template, and/or script.

Fig. 3.9
Oracle DBCA Creation Options Screen



11 This ends the database creation step for the Oracle database.

If the `qaduser.sql` script was not run for some reason during database creation, then the `sysdba` user must run the script in the Oracle database. The `qaduser.sql` file is located in *`QADInstallDir`*`/db`.

Run SQL Scripts to Load Schema

Several scripts are supplied by QAD to create the Oracle database schema. These are run from a command line interface in SQL*Plus.

1 Run a command window and log in as the `qad` user.

2 Change directories to *`QADInstallDir`*`/db`.

3 Use the following syntax to run the first script to build the oraempty tablespaces.

```
sqlplus qad/qad < oraempty-tbl.sql
```

4 Once the script is complete, run the scripts listed in Table 3.3 using the same syntax.

Table 3.3
Oracle Database Tablespace Scripts

Script Name	Purpose
`oraempty-idx.sql`	oraempty index tablespaces
`oraempty-seq.sql`	oraempty sequences
`oadmempty-tbl.sql`	admin tablespaces
`oadmempty-idx.sql`	admin index tablespaces
`oadmempty-seq.sql`	admin sequences

Script Name	Purpose
`ohpempty-tbl.sql`	help tablespaces
`ohpempty-idx.sql`	help index tablespaces

Creating the Schema Holders

Complete these steps to build the Progress schema holder databases for your empty databases, and load the QAD Standard Edition schema. After the schema holders have been created, the OID value is loaded in the Oracle database and the production schema holder is created.

Build the Schema Holders

1 Launch MFG/UTIL from the *`QADInstallDir`* using the command:

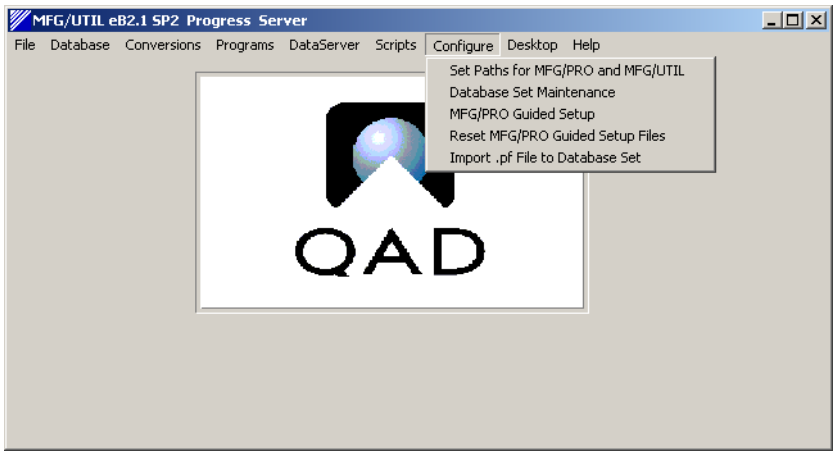
`./mfgutil`

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

For information on MFG/UTIL keyboard commands, see “MFG/UTIL Keyboard Commands” on page 8.

2 Choose Guided Setup from the Configure menu.

Fig. 3.10
MFG/UTIL Configure Menu

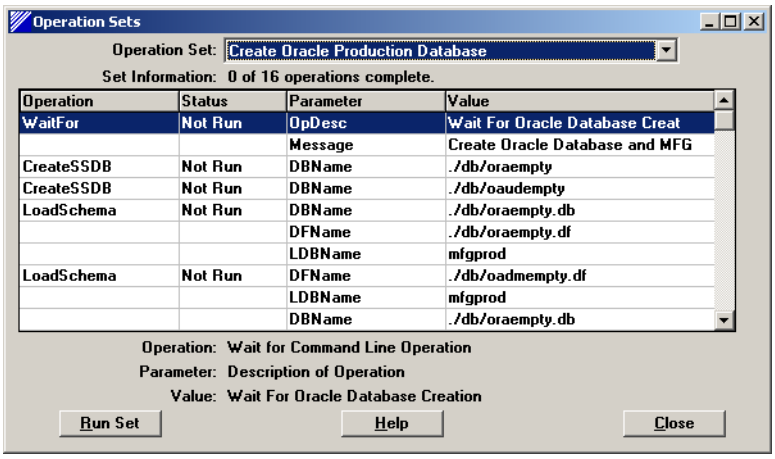


3 Select Create Oracle Production Database in the Operation Set drop-down list.

The Guided Setup program provides a workflow of the operations involved in setting up your QAD Standard Edition environment. You can use this program to access the different configuration utilities in MFG/UTIL with proper default information and in the proper sequence. Review the following figure to become familiar with Guided Setup.

Note The number of operations is determined by the number of uncommented sections in `wk0200.ini`. See “Guided Setup” on page 7 for information on configuring this file.

Fig. 3.11
Create Oracle Databases Workflow



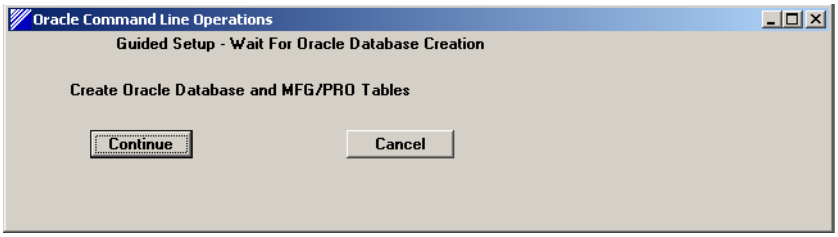
Operation sets are groups of installation activities. The operations in a set display in the Operation frame. On completion, the status changes to Done. If errors occur or if you cancel processing prior to completing a step, the status is Error. Below the Operation frame are the operation, the key variable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

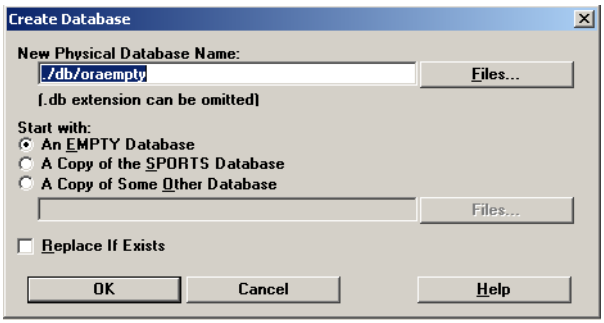
5 A wait-for screen displays. This is a reminder to complete “Creating the Oracle Database” on page 27 before continuing. If you have finished the Oracle database creation, choose Continue.

Fig. 3.12
Oracle Database Creation Wait Screen



6 The Create Database screen displays. In the New Physical Database Name field, accept the default empty schema holder name or enter the name you want to use. This guide refers to the empty schema holder using the default `oraempty`.

Fig. 3.13
Creating oraempty



7 Accept the default Start with option, choose OK, and press Enter. The empty schema holder is created.

8 The Create Database screen displays again to create the empty audit schema holder. This schema holder is required for all implementations in order to compile. In the New Physical Database Name field, accept the default or enter the name you want to use for the empty audit schema holder. This guide refers to the empty audit schema holder using the default `oaudempty`.

Load QAD Standard Edition Schema

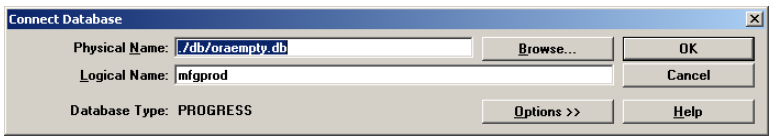
Note The header record for `oraempty.df` uses the ISO8859-1 codepage. If this is not the correct codepage for the target install language, edit the `oraempty.df` codepage before loading the file.

When the schema holders are built, the Connect Database screen displays for the `oraempty` schema holder in preparation to complete the schema loads. Three different schema files are loaded into the `oraempty` schema holder—`oraempty.df`, `oadmempty.df`, and `ohpempty.df`—then a single schema file, `oaudempty.df`, is loaded in the empty audit schema holder.

1 Verify that the Physical Name field contains the path to and name of the `oraempty` schema holder. Accept `mfgprod` as the Logical Name and choose OK to connect to the schema holder.

Note The MFG/UTIL schema load requires a Logical Name of `mfgprod`. Using a different Logical Name will cause the schema load to fail.

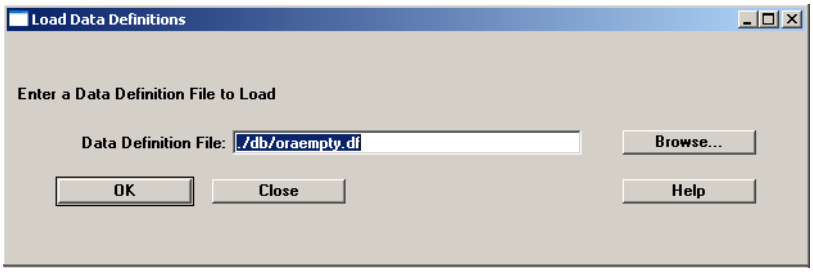
Fig. 3.14
Connecting to oraempty Schema Holder



2 In the Load Data Definitions screen, verify that the `oraempty.df` file is specified in the Data Definition File field.

When ready, choose OK to load the main QAD Standard Edition schema contained in the `oraempty.df` data definition file.

Fig. 3.15
Loading oraempty Data Definitions



When the Load Completed prompt displays, choose Close.

The data definition load screen reappears with the Close button selected. Press Enter to close the screen.

3 Repeat steps 1 and 2 for the schema holders and data definition files listed in Table 3.4.

Table 3.4
Schema Loads

Schema Holder	Data Definition File (.df)
oraempty.db	oadmempty.df
oraempty.db	ohpempty.df
oaudempty.db	oaudempty.df

4 When the data definition load screen reappears following the final load, choose Close.

Truncate Before-Image Files

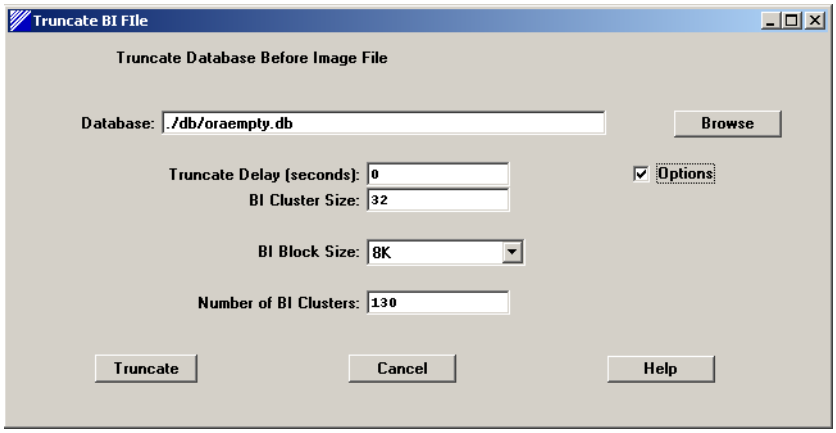
You now truncate the empty database before-image (BI) files. These files contain data awaiting writes to the database. Truncation updates the file so that the database is fully synchronized and then deletes the temporary data, bringing the files back to their minimum size. Little has occurred to increase 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 BI File screen, accept the default path to `oraempty` and choose Truncate.

The default Progress delay is 60 seconds prior to starting the truncate. This protects databases in current use from missing writes from the before-image file. Since the databases in the installation are all new, you accept the workflow setting of 0.

2 If you choose Options, MFG/UTIL connects to the database and retrieves information about the BI clusters. For more information on changing these settings, see the Progress *Database Administration Guide and Reference*. For installations, changes to these are not necessary.

Fig. 3.16
Truncating the oraempty Schema Holder



3 Choose Close in the progress screen.

4 Repeat these steps for `oaudempty`.

Specify the Database OID Values

Important You should skip steps 2 and 3 for the production database if this installation is creating the target database for a conversion. All implementations must complete step 1.

After truncating the empty schema holders, the Enter OID Generator Code screen displays. This code is used to update the Oracle database created in “Creating the Oracle Database” on page 27.

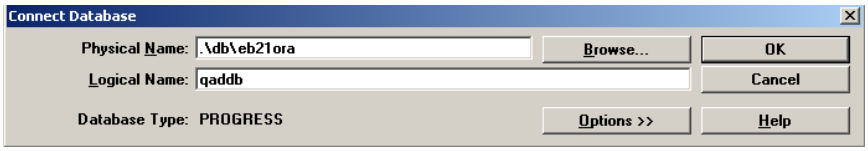
Enter an OID generator code value as described in “OID Generator Codes” on page 9.

1 The Enter OID Generator Code screen displays. This value is reversed and used as the registration ID portion of all OID values in the database.

Fig. 3.17
Entering the OID Generator Code

2 The Connect Database screen displays. Make sure the database is the Oracle database you created. The following examples use the name `qadora`. Choose OK.

Fig. 3.18
Connect Database for qadora



3 The Log Window displays showing the creation of the `qaddb_ctrl` record. Choose Close to continue.

Load System Data

The QAD system data includes data to support production and administrative programs for all languages you are implementing. The system data load takes place in several steps. The language-dependent data to support production programs is loaded for your base language. You then load the same data for each additional language you are implementing. The same model is then followed for administration data.

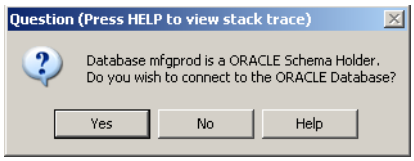
The following instructions describe the first data load—language-dependent data to support production programs. You can then use the same instructions for the remaining loads using Table 3.5, “Data Load Values,” on page 39.

1 When the Connect Database screen displays, accept the defaults and choose OK to connect to the Progress schema holder.

Fig. 3.19
Connecting to qadora Schema Holder

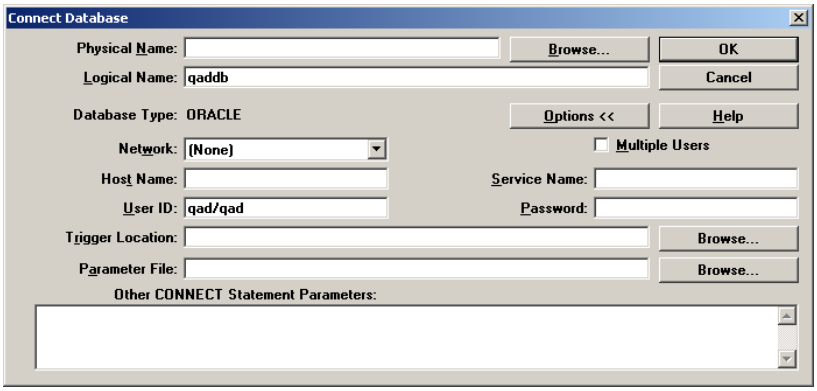
2 When prompted to connect to the Oracle database, choose Yes.

Fig. 3.20
Connecting to the Oracle Database



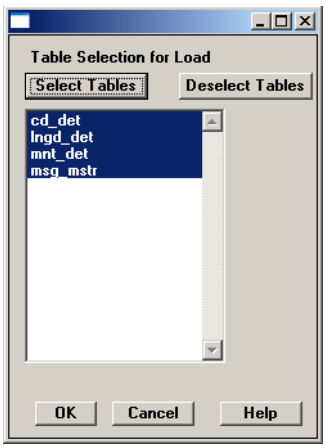
3 In the Connect Database screen, enter `qad/qad` in the User ID field. Choose OK to continue. On client/server installations, enter `qad/qad@`*`ORACLE_SID`* for the User ID.

Fig. 3.21
Connect Screen for the Oracle Database



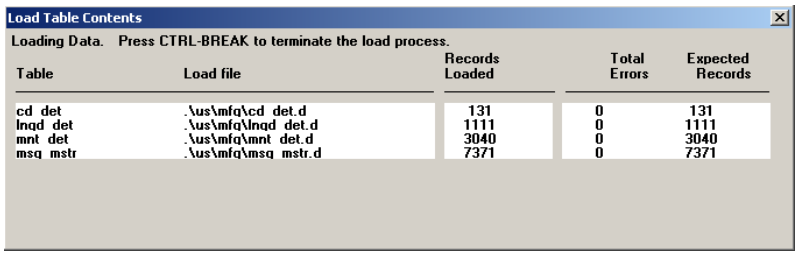
4 The Table Selection for Load screen displays the data files for the `qadora` database in the language-specific `mfg` subdirectory; for example `/us/mfg`. This screen may take a minute or more to load the data file list for larger directories. Choose OK to start the load.

Fig. 3.22
Table Selection for Load Screen



5 When the load completes, press the spacebar to continue.

Fig. 3.23
Table Load Processing



Repeat this section for each of the data sets listed in Table 3.5. The Guided Setup steps you through with the correct input directories entered. To load the additional languages referenced in the table, edit `wk0200.ini`.

See “Installation Utilities” on page 7.

Table 3.5
Data Load Values

Data	Physical	User ID	Input Dir.
Production, additional languages	`eb21ora.db`	qad/qad[a]	`./XX/mfg`[b]
Production, general data	`eb21ora.db`	qad/qad	`./mfg`
Administration, base language	`eb21ora.db`	qad/qad	`./us/admin`[c]
Administration, additional languages	`eb21ora.db`	qad/qad	`./XX/admin`
Administration, general data	`eb21ora.db`	qad/qad	`./admin`

a. For client/server installs, enter `qad/qad@ORACLE_SID`.
b. Replace instances of *XX* with the language code you are implementing.
c. Base language shows `/us` as an example only.

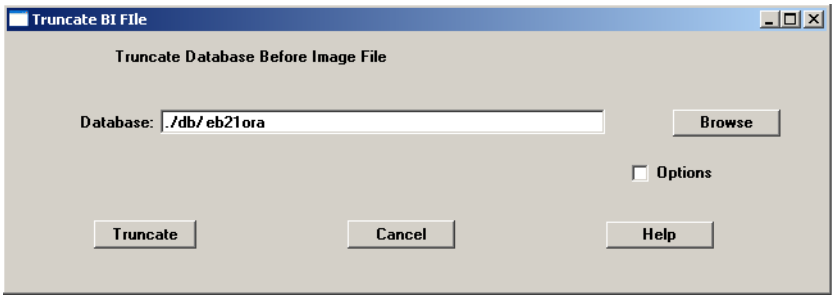
After each load, errors are written to `.e` files in the directory you loaded from. For example, if an error occurs loading from the `co_ctlr.d` file in `./mfg`, a `co_ctrl.e` file with the errors is created in `./mfg`.

Truncate Before-Image Files

You now truncate the new empty schema holder before-image (BI) files. Little has occurred to increase the size of your BI file at this point, but the synchronization is required prior to loading data and to avoid error messages.

1 Select Database|Truncate Database. In the Truncate BI File screen, accept the default path to `oraempty` and choose Truncate.

Fig. 3.24
Truncating the Oracle Database



2 Close the log window that displays on completion.

3 Repeat the process for your new audit schema holder.

4 This finishes the server installation. Exit from the log window and MFG/UTIL.

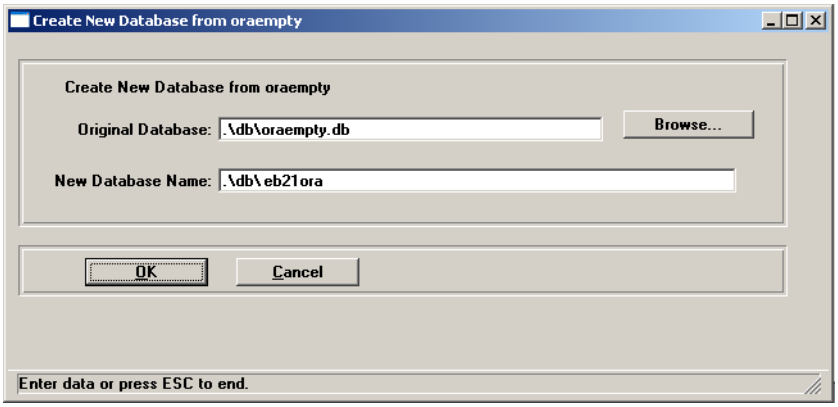
Copy the Schema Holders

The original schema holders were created with the default names of `oraempty` and `oaudempty`. You now create a copy of these databases for production use with a new name and update the foreign database references (the schema holder reference to the Oracle database) from the defaults—`qaddb` and `qadaud`—to the actual Oracle database names. In the following illustrations, the database names are `qadora` and `audora`.

1 Return to the MFG/UTIL Create New Database from oraempty screen. The empty schema holder, `./db/oraempty`, displays by default. Enter the name you want to use for your production schema holder under New Database Name. Choose OK.

Note You do not need to enter the path for the new schema holder. It is created in the same directory as the current schema holder by default.

Fig. 3.25
Create New Database from oraempty Screen



2 When the copy completes, choose Close.

3 Confirm the names at the verification prompt.

The foreign database reference in the schema holder is changed from `qaddb` to the Oracle database name (`eb21ora` in the example).

Important If you are completing a conversion, go to the conversion process now. You are finished with the installation process.

Copy Empty Schema Holders (Multi-Language Only)

Each language requires a database set of empty schema holders to compile against in order to read in the correct schema labels. The simplest means of creating additional empty schema holders is to use Progress tools. You will need two schema holders for each language. The recommended naming convention is:

- `oraempty` = *XX*`ora`
- `oaudempty` = *XX*`aud`

Where XX is the two-letter language code.

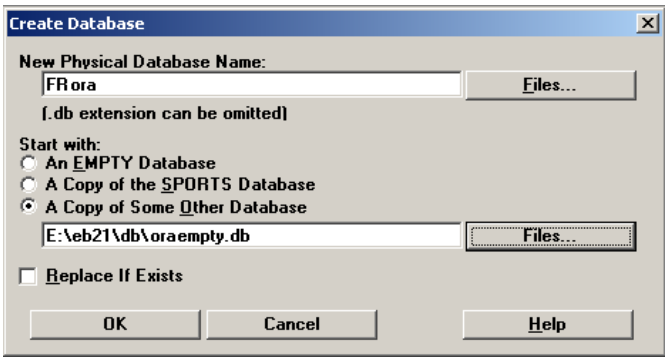
1 In MFG/UTIL, select Progress Editor from the File menu.

2 In the Progress Editor, select Data Administration from the Tools menu (this is called Data Dictionary in the character interface).

3 In the Data Administration tool, select Create from the Database menu.

4 Enter the database name and path you want to create, set Copy of Some Other Database, and locate the empty database to copy.

Fig. 3.26
Creating FRora from oraempty



5 Choose OK.

6 The Connect Database screen displays. Connect to the database to verify it was created correctly.

7 Select Disconnect Database from the Database menu.

8 Repeat steps 3 through 7 to create a copy of `oraempty` for each additional language you installed.

9 Repeat steps 3 through 7 to create a copy of `oaudempty` for each language you are implementing.

Load Translated Labels (Multi-Language Only)

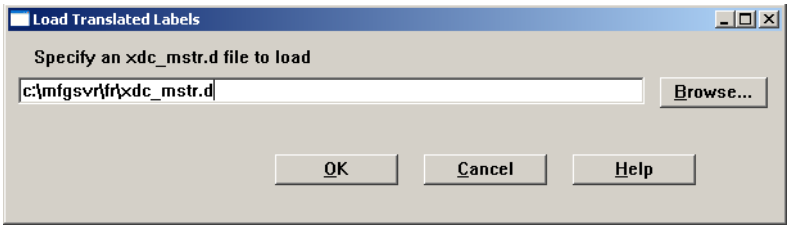
These steps are required for any multi-language or non-US English installation. See “Loading Translated Labels Using a Workflow” on page 12 for information on automating this process.

Note No `xdc_mstr` load is required in your base empty databases if these will be used for the US English compile. If you are implementing a single non-US English version, you can load that language’s `xdc_mstr` into the base empty databases.

1 In the Connect Database screen, accept the language-specific empty database name from `wk0200.ini`, or enter the correct one. Choose OK.

2 Accept the location of the `xdc_mstr` from the `wk0200.ini` file or enter it here. It is located in the language directory of each language except US English, which is loaded by default. Choose OK to start the load.

Fig. 3.27
Loading French Translated Labels



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

Load Source Code System Cross-Reference (Optional)

Once you have loaded the help schema, you can load the source code cross-reference data into the main database. Loading source code cross-reference data into the main database is optional. This data supports the functions on the System Cross-Reference menu (36.18), which identify how and where fields and files are used within QAD Standard Edition.

Loading the source code cross-reference data increases the size of the database by approximately 300 MB and must be taken into account when defining the size of the database extents.

Note Load the cross-reference data only once for all languages.

1. From MFG/UTIL, select Database|Load Data into Database.
2. In the Connect Database window, connect to the main database, `eb21ora`.
3. The QAD Log Window displays showing the database connection. Choose Close.
4. In the Load Data Contents window, specify the path to the `mfghelp` subdirectory below the *`QADInstallDir`* and click OK.
5. When the Table Selection for Load window displays, all of the tables in the `eb21ora` database with corresponding data files (extension `.d`) in the `mfghelp` subdirectory are selected. Click OK to begin loading data.
6. When the load completes, choose Close to exit the log window.

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

In this chapter you install one or all of the configurations listed in Table 4.1.

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, 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.

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. Character deployment fully supports a QAD .NET UI implementation.

For additional information on .NET UI requirements and deployment, see *Installation Guide: QAD .NET UI*.

Preliminary Steps

Prior to install, a few cautions and requirements:

- Change to the Korn shell.
- Log on as user `mfg` under the group `qad`. You should have created this group and user during the installation of the database server files.
- Use a standard terminal type such as vt100 while installing.
- Verify there is adequate disk space.
- The client PC that you use must have read, write, and execute permissions for the directory on the Windows file server where you want to create the GUI client.
- If applicable, ensure that you have performed a Probuild to create the Progress character client executable (`_progres`).

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. See “Mount the CD-ROM” on page 22.
2. Log on as user `mfg`.
3. On the CD, change to the directory containing the client media.
4. Change to the `install` directory:

   ```
   cd install
   ```
5. Launch the install script:

   ```
   ./install.ksh
   ```

   A welcome screen displays. Press Enter to continue.
6. Review and accept the software license agreement. Press Ctrl+C to jump to the end.
7. Accept the default installation log file location, or enter the correct location if you did not use the default during the database server install.
8. Enter the Progress installation directory.
9. Enter the *`QADInstallDir`*. This is the database server directory. It defaults in if your log files are correctly identified in the previous step.
10. Enter or accept the destination for this client installation. The default is *`QADInstallDir`*.

    Note In previous releases, the character client code was installed under `mfgsvr/us` by default. The character client is now installed to `/mfgsvr` by default.

    Important Do not select a directory path that has spaces in it such as `C:\Program Files\qad`. Database scripts generated by MFG/UTIL cannot locate a database in a path with spaces.
11. Review the installation summary and enter `y` to install.

    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.
12. You are asked if you would like additional information on the SV product. Select Yes to view this information, No to continue.

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

    At the MFGx.net home page, mouse over the QAD Supply Chain Portal heading and click Learn About QAD SCP to request a call or additional information about SV.

This ends the install script. The installation log is written to the log directory as `mfgchrcli.log`. To complete the host client install, go to “Configuring Database Sets” on page 56.

Additional UNIX Clients

To connect additional UNIX clients to your QAD Standard Edition server, make startup scripts such as `client.Production` available to those clients.

See “Generating Scripts and Shortcuts” on page 66.

Installing Windows File Servers

In the following steps, you install a character or GUI file server on a Windows system. The instructions for each install are 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

For Windows, if you have not done so, reset your DOS command window buffers. See “Set Up MFG/UTIL Clients (Windows Only)” on page 26.

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

A summary of the remote client install appears on page 7.

Installation Steps

1. Starting with your base language, load either the language-specific character client or GUI client media. See “Mount the CD-ROM” on page 22.
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 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 *`QADInstallDir`*. 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 *`QADInstallDir`*. The default directories for the different possible installations are:

Windows Character Default	Windows GUI Default
`c:\mfgsvr`	`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\qad`. 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.

10 Respond to the prompt:

```
Would you like to view more information about SV?
```

Supply Visualization (SV) is a Web-based service for managing inventory by inventory visibility, schedules, or Kanban, offered through MFGx.net, the QAD Web portal.

At the MFGx.net home page, mouse over the QAD Supply Chain Portal heading and click the Learn About QAD SCP link to request a call or additional information about SV.

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

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.

Building the Progress Schema Holder

For QAD Standard Edition Windows clients to connect to the Oracle database, they must have access to the Progress schema holders. You can provide access to the schema holders using one of the following methods:

- On each Windows client PC, map a network drive to the directory containing the schema holders on your server. On UNIX installations, this requires networking software that lets Windows PCs access UNIX directories.

  If you cannot implement this option in your environment, skip this section and continue with “Configuring Database Sets” on page 56.
- If you cannot access the existing schema holders on the UNIX server, you can create schema holders on the Windows client file server. Then, map a network drive on each client PC to provide access to the schema holder.

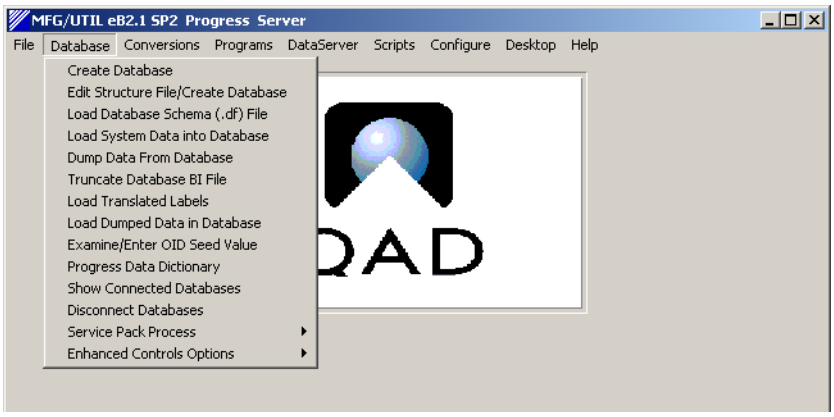
Build the Schema Holder

Use these steps to build schema holders on the Windows file server. These steps assume that:

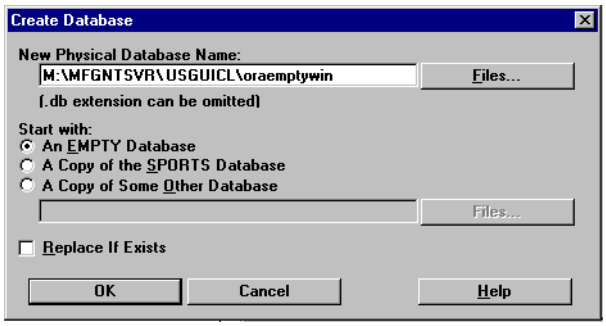
- The schema holders are being built on the file server.
- All of the Windows clients can map a drive to access it.
- The QAD Standard Edition data definition files have been copied to a `db` subdirectory below the Windows client administration directory on the file server.

1 Launch MFG/UTIL.

2 Choose Create Database from the Database menu.



3 The Create Database screen displays.



a In the New Physical Database Name field, enter the name you want to use for the schema holder. This guide refers to the production schema holder as `oraemptywin`.

   If you want to create the schema holders on the file server, specify the path to the directory on the file server on which you want to create the schema holders. You can use a network drive letter or the Universal Naming Convention (UNC). This example uses a network drive:

   ```
   M:\mfgsvr\guicli\oraemptywin
   ```

Note If you are creating a Windows client for a training, development, or other database, make sure you enter the name of that database in this step.

b Select An EMPTY Database from the Start with list.

c Click OK to create the schema holder.

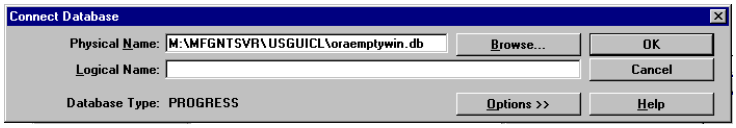
4 Verify that the following database files were created:

   SchemaHolderName`.b1`
   SchemaHolderName`.d1`
   SchemaHolderName`.db`
   SchemaHolderName`.st`

Note Using the previous examples, the schema holder files are located in the `M:\mfgsvr\guicli` directory.

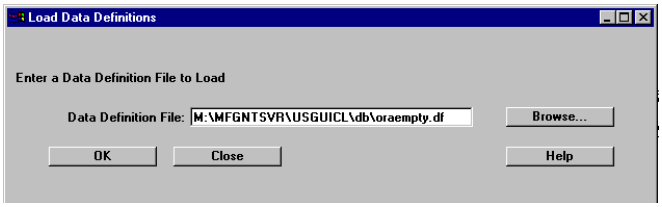
5 Select Load Database Schema (.df) File from the Database menu.

6 In the Connect Database window, specify the path and name of the correct schema holder database. You can use the Browse button to select the database. When ready, click OK.

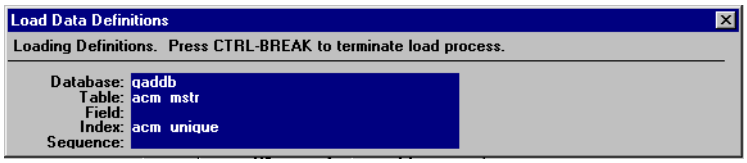


7 In the Data Definition File field, specify the path to the `oraempty.df` file and click OK.

Note For these steps, this file is located in a `db` subdirectory below the GUI client install directory.



As the data definition file loads, a progress window displays.



8 When the Load Complete dialog box displays, click OK.

9 Repeat steps 6 through 10 to load the three other data definition files:

Directory	Data Definition File
`guicli/us`	`oadmempty.df`
`guicli/us`	`ohpempty.df`
`guicli/us`	`oaudempty.df`

10 Repeat steps 6 through 9 for additional languages.

Once you finish loading the QAD Standard Edition schema, the schema holders are ready for use. All QAD Standard Edition Windows clients must be able to access the schema holders to connect to the Oracle database.

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 “Set Up MFG/UTIL Clients (Windows Only)” on page 26.

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. On the remote machine, use Start|Run to launch a DOS session:

   `cmd`

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

   `cd CD-ROMDrive:\install`

3. Run the following command:

   `install -remote FileServerInstallDir`

   This should point to the same directory you identified in step 7 on page 69. For GUI clients, the *`FileServerInstallDir`* is typically something like `c:\mfgsvr\guicli`. For Windows character clients, the *`FileServerInstallDir`* is typically something like `c:\mfgsvr`. The file server directory must contain the file `version.mfg` and a directory named `client`. The command launches either the GUI client or character client install—depending on the directory it is referencing—on the remote machine.

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 “Install Database Server Files” on page 23.

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

Windows Character Default	Windows GUI Default
`c:\mfgsvr`	`c:\mfgsvr\guicli`

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

Windows Character Default	Windows GUI Default
`c:\qadchrcli`	`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.

11. Respond to the prompt:

    `Subscribe to QAD Supply Visualization?`

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

At the MFGx.net home page, mouse over the QAD Supply Chain Portal heading and click Learn About QAD SCP to request a call or additional information about SV.

12 Exit the log window.

Create Locales

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 QAD Standard Edition is translated. For example, the French entry is:

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

The entry consists of the QAD Standard Edition 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 QAD Standard Edition in a country not represented in the `locale.dat` file, open the file in an editor and add any missing countries. The file is in the root *`QADInstallDir`*.

Chapter 5

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

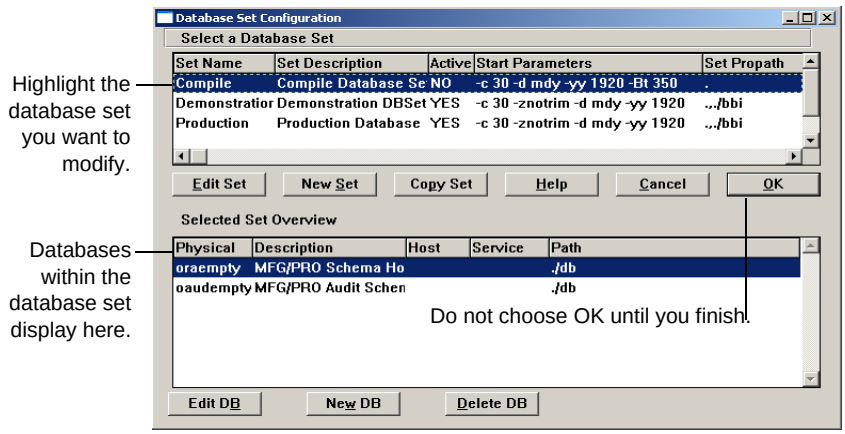
MFG/UTIL uses the concept of database sets to generate server and client startup scripts. The standard QAD Standard Edition database set consists of a Progress schema holder and an Oracle database. This section provides instructions for configuring the production, audit, and compile database sets.

The production database set contains the production Progress schema holder (`mfghold`) and the Oracle production database (`qadora`). The compile database set contains the empty Progress schema holders (`oraempty` and `oaudempty`).

Database Set Configuration Screen

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

Fig. 5.1
Database Set Configuration Overview



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: Edit DB, New DB, or Delete DB.

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 in the following sections.

Set Up Database Sets

1 Launch the Character Client MFG/UTIL:

```
cd /QADInstallDir
./mfgutil
```

On Windows, double-click the MFG/UTIL icon from the Start menu.

Important You must use the Character Client MFG/UTIL to ensure correct compile environments; and that the correct executables and paths are generated in the scripts. GUI screens are used to better display the screen contents.

2 Select Configure|Database Set Maintenance. The Database Set editor opens.

3 Select the database set you want to edit. The following screens show the Production database set.

4 Select Edit Set and verify that the Active value is set to Yes in the Database Sets screen. (The Compile database set does not require scripts or shortcuts and does not need to be Active.)

When the Database Sets screen displays, complete the fields using the following figure and Table 5.2 as guides.

Fig. 5.2
Edit Set for Production Database Set

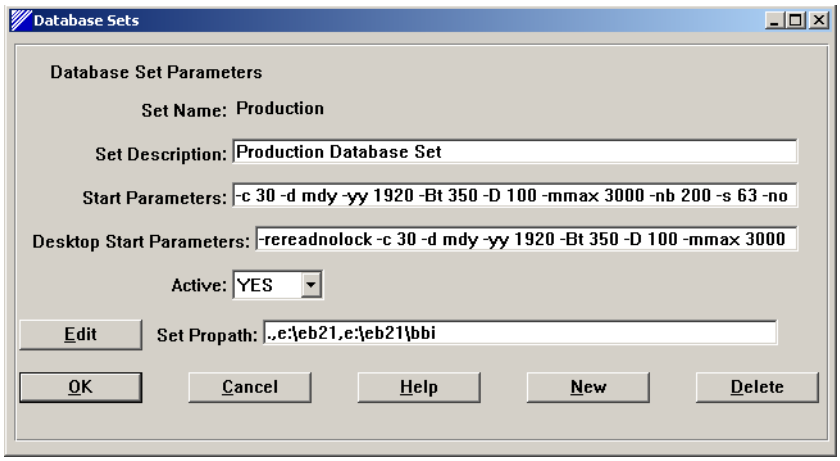


Table 5.1
Client Database Parameter Values

Field	Description
Set Description	Specify an optional description of the database.
Start Parameters	This field contains the default start parameters for the Progress database servers. For more information, refer to the Progress *Database Administration Guide and Reference*.
Desktop Start Parameters	This field contains the default start parameters for the database set under QAD .NET UI. For more information, refer to *Installation Guide: QAD .NET UI*.
Active	Indicate whether scripts are created for this database set when using the Generate Scripts option on the Scripts menu. Set this to No for the Compile set; Yes for all others you are using.
Set Propath	Specify the Progress search path (PROPATH) the databases in the set use to access programs during a QAD Standard Edition session.

5 Choose OK to save your changes.

6 Configure the `oraprod` schema holder by selecting it in the Selected Set Overview list and choosing Edit Database.

a When the Database Parameters screen displays, complete the fields using the following figure and Table 5.2 as guides.

Fig. 5.3
Configuring a Schema Holder in a Database Set

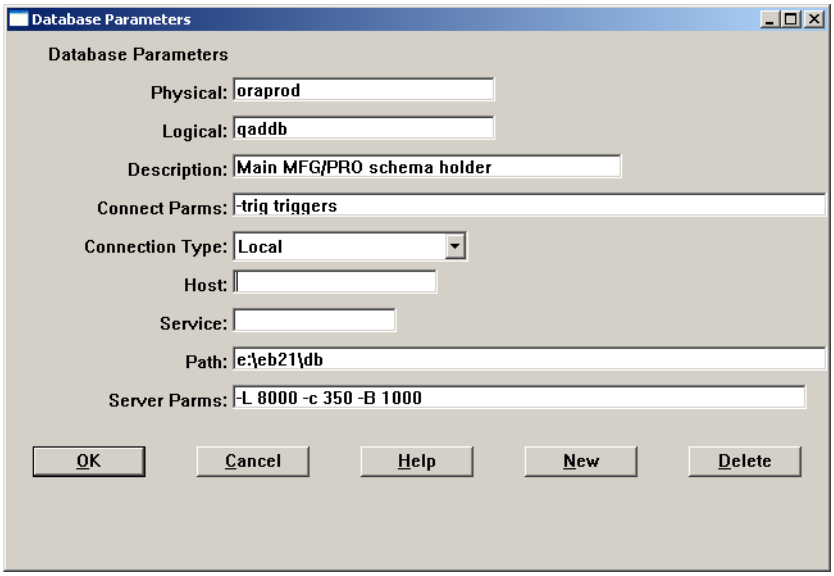


Table 5.2
Database Parameters

Field	Enter
Physical	Enter the name of the schema holder database.
Logical	Leave this document blank (for compile database sets, specify `qad`).
Description	Specify an optional description of the database.
Connect Parms	`-trig triggers` enables the standard QAD Standard Edition triggers through the schema holder.
Connection Type	Local.
Path	Set to *`QADInstallDir`*`/db`.
Server Parms	Accept the default values in this field for a standard connection. You can modify these parameters later in the startup scripts. For more information, refer to the Progress *Database Administration Guide and Reference*.

7 Choose OK.

8 The remaining steps are different for Compile and Production sets:

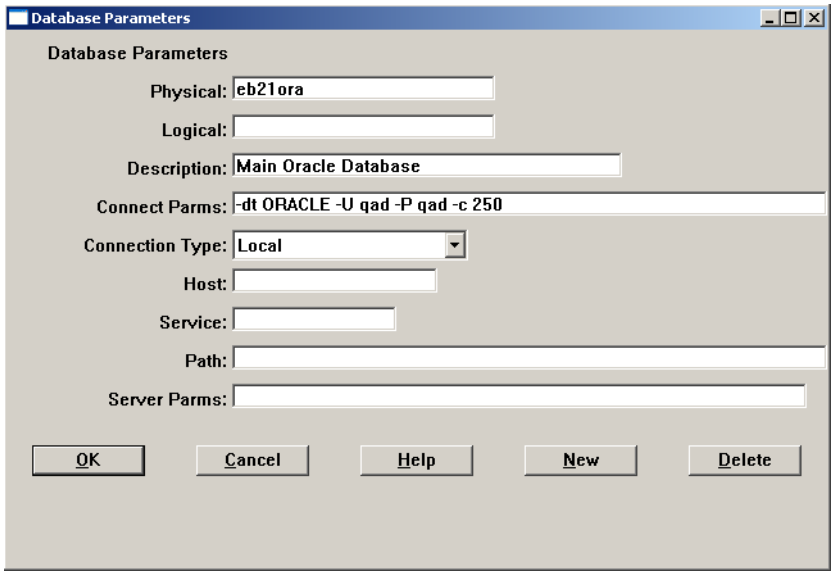
a For the Production database set, and other sets that contain an Oracle database, do not specify a Logical name value for the schema holder or Oracle database.

b The Compile database set schema holder requires the Logical name of `qad`.

c For the Compile database set, repeat steps Sel through Choose OK. to add the empty audit schema holder (`oaudempty`).

d For the Production database set, and other sets that contain an Oracle database, choose New DB to add the `qadora` database. Choose OK on completion.

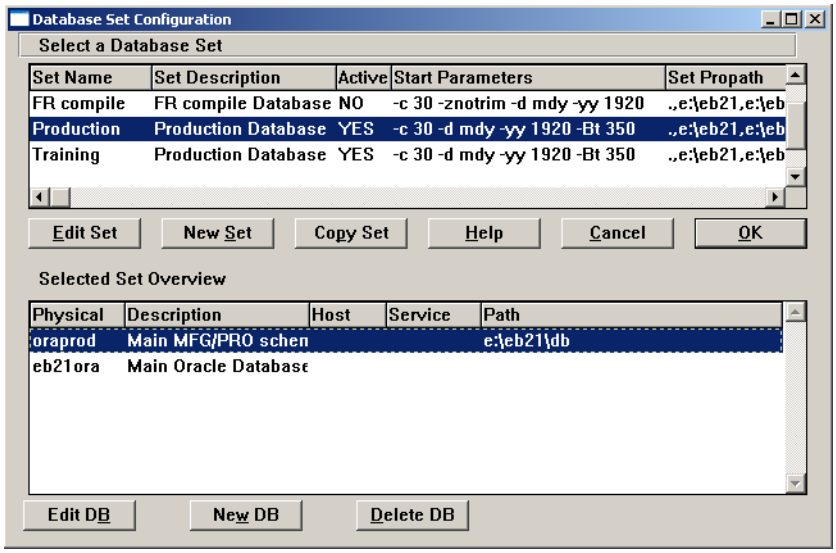
Fig. 5.4
oraempty Database Parameters



Field	Enter
Physical	Enter the name of your Oracle database.
Logical	Leave this field blank.
Description	Specify an optional description of the database.
Connect Parms	Set database type (`-dt`) to Oracle. The `–U` and `–P` parameters must contain the Oracle schema owner's userid and password, respectively. Append `@ORACLE_SID` to the `-U` parameter value for client/server implementations. For example `-U qad@`*`ORACLE_SID`* for client/server implementations. Enter the `-c` argument with a value of 500.
Connection Type	Local
Path	Delete the contents of this field and leave it blank.
Server Parms	Leave blank.

9 On completion, the Production database set should look like the screen in Figure 5.5.

Fig. 5.5
Production Database Set



Note Each language you are implementing requires a separate database set that mirrors the Compile database set. Each set should include a language-specific *XX*`ora` database with the correct schema and data loaded in.

Compiling Application Code

A full compile of the server code is required after installation. This was a recommended step in prior releases to ensure your QAD Standard Edition environment was synchronized and compatible across all programs and with the Progress code. It is a requirement in QAD Standard Edition 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 *`QADInstallDir`*. For example, `sosomt.p` compiled for US English is placed in *`QADInstallDir`*`/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 QAD Standard Edition 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.

Non-US English Base Language Compiles

If your base language is not US English, compile this language against the Compile database set. You should have loaded translated schema labels for the language in “Load Translated Labels (Multi-Language Only)” on page 42. For the compile, you will select the appropriate language code in the Compiler Options screen, the Compile database set, and then compile.

Multiple Language Compiles

For multiple language compiles, you must have:

- Loaded the language media (page 24)
- Created empty databases for each language (page 41)
- Loaded translated schema labels in the language-specific empty databases (page 42)
- Loaded language-specific data in the production databases (page 38)
- Created a language-specific compile database set

For each language you are implementing, including US English, set the Compiler Options screen to point to the correct language code and the correct database set. Compile each language in this way.

Set the Correct PROPATH

When configuring database sets using MFG/UTIL, a value defaults to the PROPATH field. Depending on the specific system configuration, the default value may not be correct. Continuing an MFG/UTIL operation without updating an incorrect value will cause unforeseen errors. Typically, the PROPATH value defaults from the value defined in the Paths for QAD Standard Edition and MFG/UTIL screen.

Note the following points when working with MFG/UTIL:

- In MFG/UTIL, select Configure|Set Paths for QAD Standard Edition and MFG/UTIL. Review and update the values as needed.
- When using MFG/UTIL to generate any script or complete any task, always carefully review the PROPATH values displayed for each screen you access.
- When working with database sets, verify the PROPATH for each database in the Database Set Parameters screen. Access this screen by selecting Edit in the Select a Database Set screen.
- The typical PROPATH for a new QAD Standard Edition installation includes these directories in this order:

  a. The current directory (.)

  b. The directory where the client code was installed (`c:\mfgsvr`)

  c. The `xrc` directory

  Example `.,c:\mfgsvr,c:\mfgsvr\xrc`

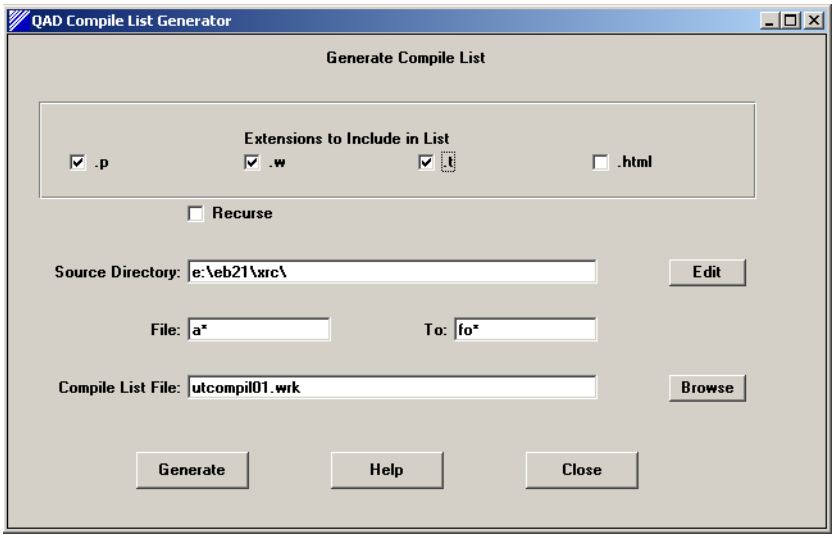
Multithreaded Compiles

Depending on your system, compiles can take as much as two 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 are compiling every program (8752 files) you could include all programs from A to F in `utcomp01.wrk` (2654 files), G to H in `utcomp02.wrk` (1369 files), I to R in `utcomp03.wrk` (1045 files), and S to Z in `utcomp04.wrk` (987 files).

Fig. 5.6
Generating a Multi-Threaded Compile List



3 You then launch separate, concurrent MFG/UTIL sessions for each compile process. Launch them all concurrently. Four sessions can save from 50% to 75% of the processing time.

Important Errors display in each compile session stating that the process cannot open `mfgulog.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 QAD Standard Edition

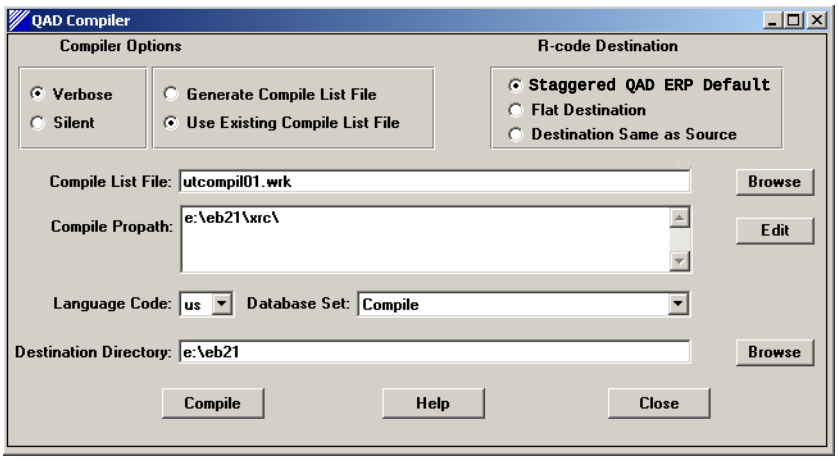
The files MFG/UTIL compiles are those listed in the file `utcompil.wrk`. By default, this file lists the files shipped with QAD Standard Edition. You can change the file listing in `utcompil.wrk` during the process of setting up for the compile, but this is usually done only for subsequent compiles for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

Important To compile for a character client, run the character version of MFG/UTIL.

1 In MFG/UTIL, choose Compile Procedures from the Programs menu.

2 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. 5.7
Compiler Options



Verbose. MFG/UTIL displays compile information on the screen and writes it to the MFG/UTIL log file (`mfgulog.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 `mfgulog.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 QAD Standard Edition and contains the full list of files.

Staggered QAD ERP Default. Saves compiled code in the default structure of language directories underneath *`QADInstallDir`*. See “Compiling Application Code” on page 60.

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

Destination Same as Source. Select this option to save the compiled code in the same directory where the uncompiled source resides. No files are overwritten; the source is `.p`, `.i`, `.w`, and `.t` files; the compile creates `.r` files.

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 *`QADInstallDir`*
- The `xrc` subdirectory in *`QADInstallDir`*
- 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

Use the Edit button to open the Directory List Editor. See “Using the Directory List Editor” on page 65 for additional information.

Language Code. If you selected Staggered QAD ERP Default option, enter the language code where you want the code saved.

Database Set. Specify the database set against which to compile.

Destination Directory. Specify the directory where you want compiled code saved. This is typically the *QADInstallDir*. If Staggered QAD ERP 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 US English `sosomt.p` is compiled to:

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

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

a Select the file extensions to include in the compile. For QAD Standard Edition compiles, these are `.p`, `.w`, and `.t`.

b Select Recurse if there are multiple source directories with subdirectories. The recurse option compiles down through each source directory, then returns to the next top-level directory specified, and compiles it. This is not required for QAD Standard Edition compiles.

c In the Source Directory field, specify the path to the directory containing the source programs you want to compile. By default, this is *QADInstallDir*`/xrc`. To build a source directory list, select Edit.

d To compile a subset of the programs, specify the subset using the File and To fields (limited to alphanumeric sorts).

e Specify the file name to use 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. If you do not specify a path, the file is generated in the directory from which MFG/UTIL was launched (usually *QADInstallDir*).

f Choose Generate to create the compile list file.

g You are asked to confirm the overwrite of the *QADInstallDir* and *QADInstallDir*`\us` directories. No files are overwritten during the compile; it is safe to respond Yes.

h The Compiler Options screen displays with the Use Existing Compile List option selected. Enter the correct compile list name.

4 When ready, choose Compile.

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

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.

6 If you selected Verbose, an Installation Log screen displays. When the compile ends, choose Print or Close.

7 Once the compile completes, check the MFG/UTIL log file for errors. If errors occur, correct them and rerun the compile.

If you encounter compile errors, the most prevalent reasons are:

- PROPATH is missing the `/src` or `/xrc` directories.
- The Progress database version does not match the code version.

Note MFG/UTIL saves the settings entered in the QAD Compiler screen so that you can reuse or modify them for the next compile.

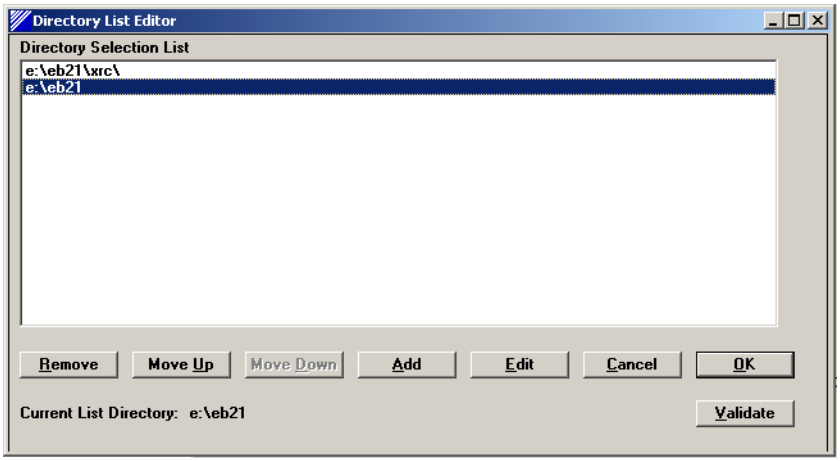
8 Repeat the compile for each language you purchased. Each language-specific compile requires:

- A language-specific database set containing two empty language-specific schema holders
- The language-specific directory in the PROPATH; for example `c:\mfgsvr\fr`
- The correct language code selected in Compiler Options

Using the Directory List Editor

You can manually enter a comma-delimited path in Set Propath; however, you cannot easily edit, browse for, or validate paths. Choose Edit to open the Directory List Editor. The Directory List Editor lets you enter and maintain a sequential list of directories.

Fig. 5.8
MFG/UTIL Directory List Editor



1 Select a directory and choose Remove to delete a directory; choose Move Up or Move Down to change the directory order.

2 Choose Edit to modify a directory; choose Add to insert a new directory. The path editor displays. Choose Browse to search for the directory on networked drives.

3 Select any directory and choose Validate. A message displays confirming the directory, or informing you that it is not accessible on the currently networked drives.

4 Choose OK to save and exit the editor.

Generating Scripts and Shortcuts

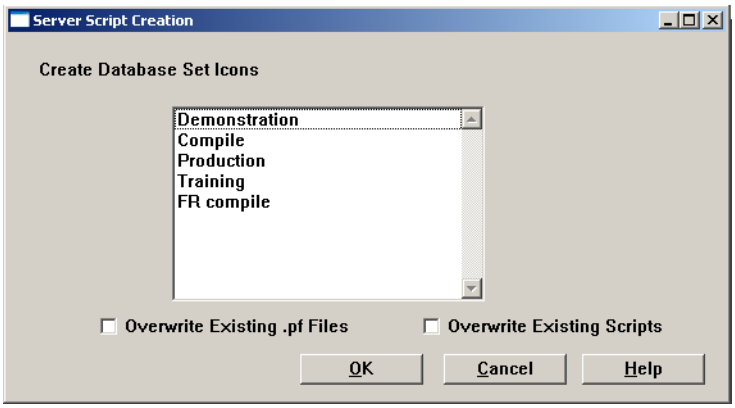
The next steps create startup and shutdown scripts or shortcuts for each active database set. You can edit these scripts and icons after you generate them if you choose. There are three different types of scripts or icons:

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

The following instructions cover all three types:

1 If you are using Guided Setup, the Create Server Scripts screen displays by default when you choose OK in the Database Sets screen.

Fig. 5.9
Generating Scripts in MFG/UTIL



2 Press the spacebar or click in Windows to select all database sets for which you want to generate server scripts and choose OK or Next.

Note You do not need to create Compile scripts, since these databases are only connected to during compiles, not launched with scripts.

3 When prompted, choose Yes to confirm the generation.

4 For Windows shortcuts, select the program folder where you want the shortcuts stored.

5 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 *`QADInstallDir`* by default.

6 For UNIX systems, MFG/UTIL creates the scripts listed in Table 5.3 for each database set. Use these scripts, or copies of them, for all startup and shutdown processes. The scripts are created in the *`QADInstallDir`*.

Table 5.3
Scripts Generated by MFG/UTIL

Script	Description
start.*DBsetName*	This script starts servers for the databases in the set. `start.Production` starts servers for the Oracle database and the schema holder.
stop.*DBsetName*	This script shuts down servers for all databases in the set.
client.*DBSetName*	This script launches the Progress schema holder, connects you to the correct Oracle instance, and starts QAD Standard Edition. This script functions only after installing character clients.

Windows shortcuts are Start and Shutdown for each database set and a client script to launch the QAD Standard Edition character client.

7 After the scripts or shortcuts are generated, choose Close in the Installation Log Window.

8 Review the log file, `mfgulog.log`, for any errors.

Edit 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/fre/promsgs.fre; export PROMSGS
```

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

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

Note Progress and QAD Standard Edition language codes are not always the same.

c Modify the schema holder connection to be Read-Only (-RO) instead of single-user (-1). The schema holder is never written to by QAD Standard Edition sessions and making a read-only connection uses fewer system resources.

d Delete the start `.DBSetName` and stop `.DBSetName` scripts because QAD Standard Edition on Oracle does not need them. Server processes are not necessary for the Progress schema holders. Therefore, the server start and stop scripts are unnecessary.

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 66.

1. Copy your initialization file, `progress.svg` or `progress.vga`, to one with a new name, for example, `progress`*`XX`*`.svg`, where *XX* is the two-letter language code.

   Check the `-ininame` parameter in the Target field of the Shortcut Properties dialog window, or check the `-ininame` parameter in your `client`*`DBSetname`*`.bat` file, to determine the initialization file the client is using.

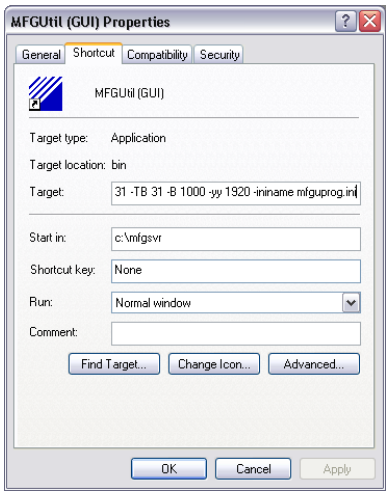
   For possible edits to the initialization file, see “Initialization File Entries” on page 71.

2. Modify the `PROPATH` setting in the file to reflect the specific language this file will be used for. For example, changing it to read:

   `PROPATH=.,c:/MFGSVR/images.pl,C:/MFGSVR,C:/MFGSVR/`*`XX`*

   Where *XX* is the two-letter language code.

3. 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 QAD Standard Edition 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 *QADInstallDir* on the database server; then launch `start.`*DBSetName* (UNIX) or `start`*DBSetName*`.bat` (Windows) from that directory.
2. Start the client:
   a. To start a QAD Standard Edition GUI client on Windows, open Start|All Programs|QAD <*yyyy*> - Standard Client. Click the GUI Client shortcut for the appropriate database set.
   b. To start a character client, launch `client.`*DBSetName* (UNIX) or `client`*DBSetName*`.bat` (Windows) from *QADInstallDir*.
3. When the QAD Standard Edition Sign-On window displays, click OK or Exit.

Express Setup for Remote Clients

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

See “Compiling Application Code” on page 60 for detailed instructions.

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 18.
- You have configured your database servers to use client/server connections or are installing this client on the Windows server machine. See page 3.
- 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 QAD Standard Edition 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.

Use 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 51 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 66.

Change 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 QAD Standard Edition remote clients. When you start QAD Standard Edition, the system uses this file to determine values for variables during initialization.

Important Depending on your drive relationships, the `progress.svg` or `.vga` file may not get properly updated to reflect your Progress or QAD Standard Edition paths. Always verify all paths in these files before launching a client.

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

******
;* UTDEVCMP.P parameter
workdir=h:\pdt91
******

;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 QAD 2010 - Standard 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 QAD Standard Edition:

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.

Use-3D-Size. This setting determines the three-dimensionality of fields in QAD Standard Edition. 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 Sign-On screen.

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

Graph. This setting supports browse graphing and points to the Grafsman directory. Grafsman is distributed with QAD Standard Edition.

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

Chapter 6

Setting Up

Use this chapter to set up QAD Standard Edition by registering the application and setting up initial users.

Important If you are completing a conversion, the steps in this chapter are not required.

Starting and Registering QAD Standard Edition

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

Sart a multiuser session:

`./client.`*`DBSetName`*

For Windows, launch QAD Standard Edition from the Start menu icons.

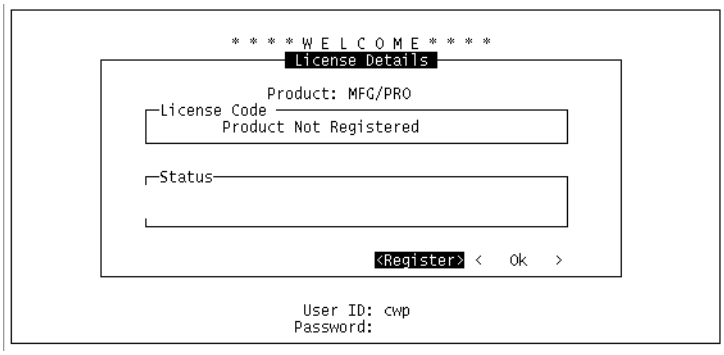
QAD Standard Edition starts.

Register Standard Edition

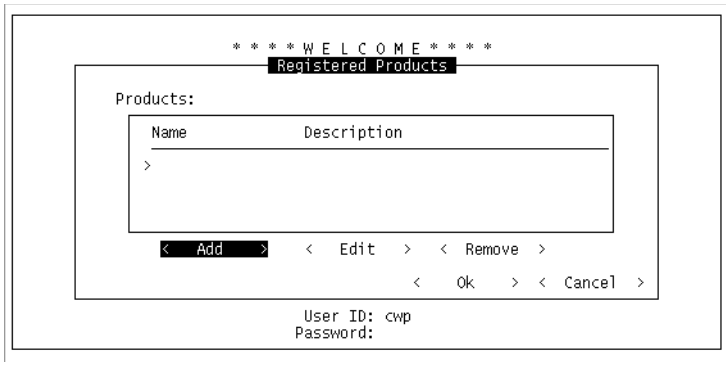
You must register your QAD Standard Edition license the first time you log in. These steps require that you have the license code sheet included with your release media.

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

1. At the QAD Standard Edition Sign On screen, press Enter. You are automatically logged in to the system domain.
2. In the License Details screen, choose Register.



3. In the Registered Products screen, choose Add.



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.

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

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 QAD Standard Edition and log in.

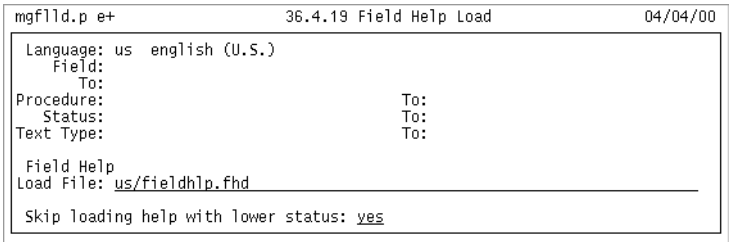
Load Online Help

You can load online help data at any time after you create the Oracle database. You need to load help data in each Oracle database.

1 From the QAD Standard Edition Main Menu, open Field Help Load (36.4.19).

2 In the Language field, enter the QAD Standard Edition language code of the language for which you are loading help, and press Enter.

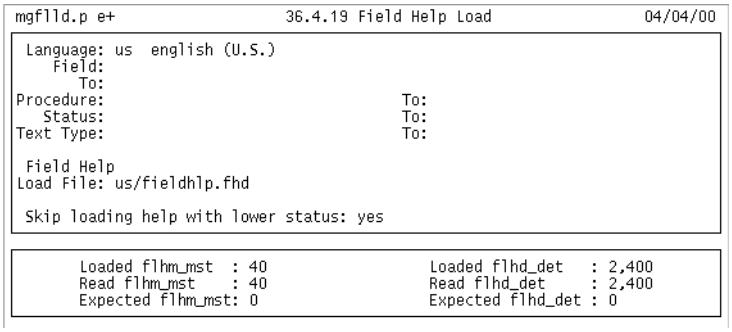
3 Skip to Field Help Load File, leaving all other fields blank, and enter the two-letter language code directory followed by the name of the help file, which is always `fieldhlp.fhd`. For example, for US English, enter `us/fieldhlp.fhd`.



4 Accept the default values in all other fields.

5 Press Go to begin the load process.

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



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 QAD Standard Edition 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 QAD Standard Edition session.
2. At the QAD Standard Edition log-in screen, specify a QAD Standard Edition 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 (36.3.1), verify that the QAD Standard Edition user ID you are trying to log in with exists and is associated with the appropriate language.
- 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 *`QADInstallDir`*.
- 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 file has an extension of `.vga` or `.svg`—`progress.vga` or `progress.svg`—depending on the display resolution of the computer. See “Progress Initialization File” on page 70.
- Verify that the correct language-specific `bbi` subdirectory is in the client PROPATH. The `bbi` subdirectory is located below the two-letter language subdirectory.

- QAD Standard Edition 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 QAD Standard Edition

Exit QAD Standard Edition by pressing End at the Main Menu.

Backing Up the Database

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

Next Steps

This completes your installation. Use information in the following guides to set up your base data:

- *User Guide: Master Data*
- *User Guide: Manager Functions*

QAD recommends that as a first step, you create a new system admin user account, and make the `mfg` user account inactive. The `mfg` user is familiar to anyone who has installed or worked on a technical level with QAD Standard Edition, and is an obvious security risk. See the “Users and Security” chapter in *User Guide: Manager Functions* to complete these steps.

Chapter 7

Installing Additional Databases

Use this chapter to set up additional QAD Standard Edition Oracle databases for use in training, demonstration, and test environments.

Summary

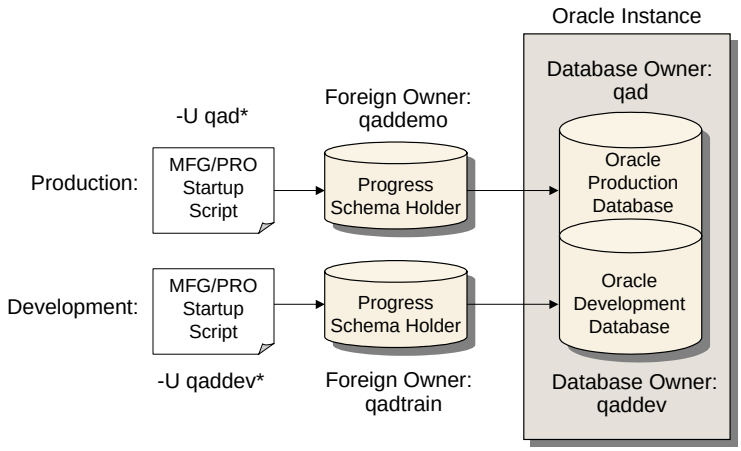
Up to this point in the installation, you set up an Oracle production database and an Oracle audit database (for compiles) in new Oracle instances. In addition to the production and audit databases, you may create databases for specific activities. For example, each person in a training class may require an individual database. You can also set up demonstration and test databases to experiment with QAD Standard Edition and custom functionality before implementing it in your production environment.

This section describes how to add a QAD Standard Edition training database to an instance that already contains a QAD Standard Edition production database. Repeat these steps for each training database required, and for databases such as test and demonstration.

Recommended Configuration

The recommended configuration for multiple databases is one instance with multiple database owners—one for each QAD Standard Edition database. As shown in Figure 7.1, each QAD Standard Edition database requires its own schema holder, Oracle database owner, and QAD Standard Edition startup script or shortcut.

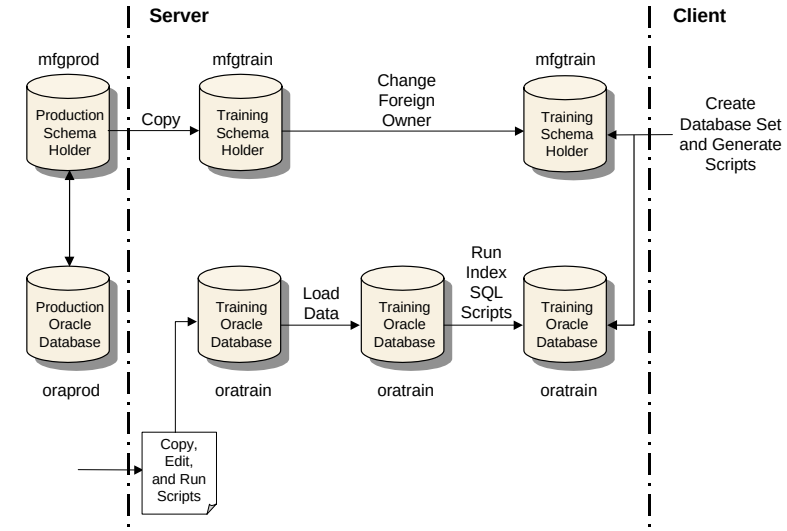
Fig. 7.1
Multiple Database Overview



*For simplicity, the user and owner are identical.

The schema holder and the startup script must reference the correct database owner. In the startup script, the `-U` (user) parameter specifies the user with access privileges to the database owner. For simplicity, the examples in this section assume the user is the same name as the database owner. In the schema holder, the database owner is assigned by the FOREIGN_OWNER schema element.

Fig. 7.2
New Database Creation Process



Additional Configuration

While QAD recommends, and this guide assumes, that you will create separate, independent databases for different business activities, it is possible to configure a multiple-database environment where databases with different production schema share the same administration and help schema. Schema refers to the tablespaces, indexes, and sequences in each of the logical areas of QAD Standard Edition.

For example, instead of creating separate databases for offices in Chicago and New York, each with its own production, administration, and help schema, you can create two sets of production schema, and then share one set of administration and help schema.

This configuration is not fully documented in this guide. However, in general this configuration would require the following tasks:

- Use the Create Database function in MFG/UTIL to create a schema holder.
- Modify the default QAD Standard Edition data definition files (`.df`) by changing the foreign owner references to the owner of the Oracle schema you are creating. For example, if you want to create a new production schema owned by `chicago`, modify the foreign owner references in `oraempty.df` to `chicago`.
- Modify and run the SQL scripts to create the new Oracle schema you want. For example, modify the SQL scripts to create new production schema owned by `chicago` in the Oracle instance.
- Load all of the QAD Standard Edition `.df` files into the schema holder.

  For example, to share the existing administration and help schema and use the new Chicago production schema, load the modified `oraempty.df` and the default `oadmempty.df` and `ohpempty.df` into the schema holder.
- Create a QAD Standard Edition database set that references the new schema holder and the Oracle instance.
- Generate client startup scripts and shortcuts.

- To let multiple sets of production schema share the same administration schema, you must run the `oraseqsyn.sql` script in *`QADInstallDir`*. For more information on this script, see “Using the Sequence Synonym Script” on page 90.

Creating Schema Holders

Follow these steps to create a schema holder that references your new Oracle database owner.

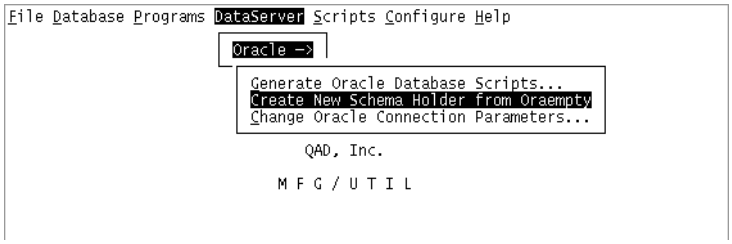
Copy the Empty Schema Holder

Note These steps assume you have Progress 4GL or ProVISION.

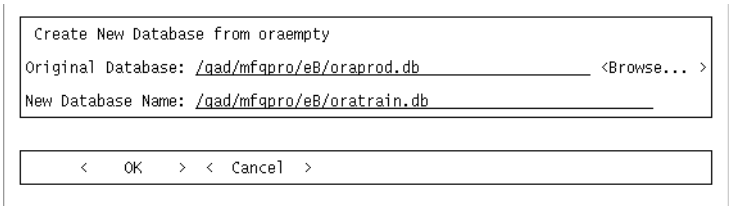
1. From the QAD Standard Edition database server administration directory, launch MFG/UTIL:

   ```
   cd /DBAdminDir
   ./mfgutil
   ```

2. From the DataServer menu in MFG/UTIL, select Oracle and choose Create New Schema Holder from Oraempty.

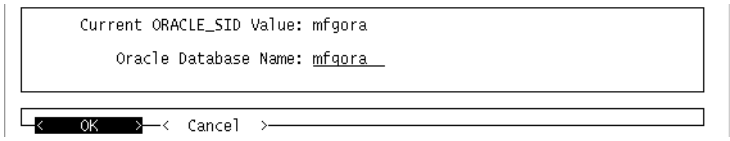


3. In the Original Database field, specify the path to and name of your production schema holder. In the New Database Name field, specify the directory location and name you want to use for the new schema holder.

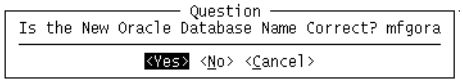


4. Choose OK to create the new schema holder. When the process is complete, choose Close in the copy progress screen.

5. In the following screen, accept the default ORACLE_SID and database values.



6. When prompted to confirm the Oracle database name, choose Yes.



7 From the MFG/UTIL File menu, choose Exit.

Changing the Database Owner

1 From the command line, run the following command to launch the Progress Procedure Editor and connect to the new schema holder:

```
pro SchemaHolder.db
```

For example:

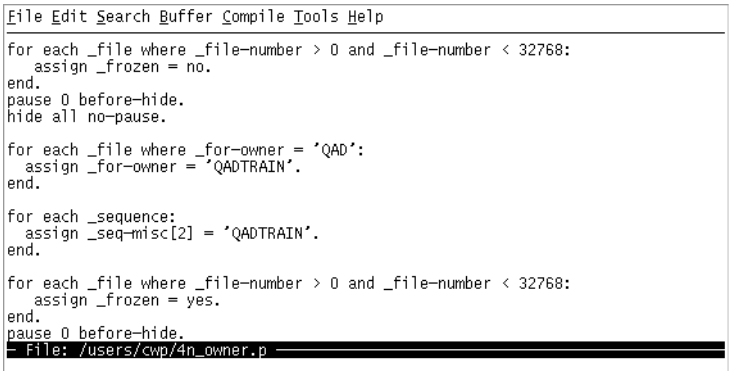
```
pro oratrain.db
```

2 In the Progress Procedure Editor enter the following program to change the FOREIGN_OWNER references in the schema holder from qad to the new database owner name:

```
for each _file
    where _file-number > 0 and _file-number < 32768:
    assign _frozen = no.
end.
pause 0 before-hide.
hide all no-pause.

for each _file
    where _for-owner = 'QAD':
    assign _for-owner = 'NewDatabaseOwner'.
end.

for each _sequence:
    assign _seq-misc[2] = 'NewDatabaseOwner'.
end.

for each _file
    where _file-number > 0 and _file-number < 32768:
    assign _frozen = yes.
end.
pause 0 before-hide.
hide all no-pause.
```

Example Figure 7.3 is an example program that changes the FOREIGN_OWNER reference to QADTRAIN.

Fig. 7.3
Schema Holder Reference Change



3 Run the code by selecting Run from the Compile menu.

4 Select File|Exit to close the Progress Editor.

Modifying SQL Scripts

Modifying SQL scripts requires you to create a subdirectory, copy files from the database server, and modify the table and index scripts.

Modify the QAD Standard Edition Schema Scripts

Use the following steps to modify the QAD Standard Edition database schema SQL scripts:

1 Create a subdirectory containing the SQL scripts.

   a Create a subdirectory to store SQL files for your new database:

   ```
   mkdir traindb
   ```

   b Copy the following SQL files from the database server administration directory to your new subdirectory:

   - `oadmempty-idx.sql`
   - `oadempty-seq.sql`
   - `oadmempty-tbl.sql`
   - `ohpempty-idx.sql`
   - `lvorasp.plb`
   - `ohpempty-tbl.sql`
   - `oraempty-idx.sql`
   - `oraempty-seq.sql`
   - `oraempty-tbl.sql`

   c Change the names of the SQL files; for example, `troradmempty-idx.sql` for the training database.

2 Modify the SQL files:

   a In the subdirectory, open the admin tables SQL script.

   ```
   cd traindb
   vi troadmempty-tbl.sql
   ```

   b In the text editor, modify all of the create tablespace statements to specify unique tablespaces for your new database. The tablespace names cannot be longer than 30 characters.

   Identify the create tablespace statements by looking for `TABLESPACE` in the SQL file. The value following `TABLESPACE` is the tablespace name. Make the value unique for your database.

   The following example is a command that performs this search and replace in the vi text editor:

   ```
   :g/ TABLESPACE /s// TABLESPACE tr/
   ```

   Your command may differ depending on the text editor you use. After running this command, each tablespace in the file is prefixed with `tr` to indicate the training database.

   c In the text editor, modify the spool file name to match the new script name. For example, change spool `oadmempty-tbl.lst` to spool `troadmempty-tbl.lst`.

d Save your changes and close the file.

e Open the SQL script for the help tables in a text editor and repeat the same command to change the tablespace names:

```
vi trohpempty-tbl.sql
:g/ TABLESPACE /s// TABLESPACE tr/
```

f In the text editor, modify the spool file name to match the new script name. For example, change spool `ohpempty-tbl.lst` to spool `trohpempty-tbl.lst`.

g Save your changes and close the file.

h Open the SQL script for the main tables in a text editor and repeat the same command to change the tablespace names:

```
vi troraempty-tbl.sql
:g/ TABLESPACE /s// TABLESPACE tr/
```

i In the text editor, modify the spool file name to match the new script name. For example, change spool `oraempty-tbl.lst` to spool `troraempty-tbl.lst`.

j Save your changes and close the file.

3 Repeat step 2 to modify the SQL for the index and sequence database objects:

- `troadmempty-idx.sql`
- `trohpempty-idx.sql`
- `troraempty-idx.sql`
- `troadmempty-seq.sql`
- `troraempty-seq.sql`

Running SQL Scripts

This set of steps is identical to the steps you completed on the original database except that you will change the file names.

Loading QAD Standard Edition Data

The data load process is identical with one exception to the process completed for the original database.

The exception: QAD Standard Edition ships data for training and demonstration environments. Instead of loading the data from the `/mfg` directory, load from the directories in Table 7.1 depending on the database you are creating.

Database-Specific Data

Table 7.1
Database-Specific Data

Subdirectory	Description
`./mfgtrain`	Contains QAD Standard Edition training data
`./mfgdemo`	Contains QAD Standard Edition demonstration data
`./mfg`	Contains the standard QAD Standard Edition default data. You may want to load the data from this directory to create a test database that duplicates your production environment.

`./seattle`
`./newyork`
`./chicago`
	Contain multisite training data. Load each of these to separate database owners.

Running Index SQL Scripts

This set of steps is identical to the steps you completed on the original database except that you will change the file names.

Configuring Database Sets

Configuring the database set has one difference from the standard steps: The connection parameters on the Oracle database Edit Client screen take the form of:

`-U` *`NewDBName@ORACLE_SID`*

`-P` *`NewDBPassword`*

See “Configuring Database Sets” on page 56.

Generating Startup Scripts

Generate the startup scripts using the same procedures as for the original database.

See “Generating Scripts and Shortcuts” on page 66.

Setting Up Windows Clients

Set up your Windows clients for additional databases using the same procedures as for the original clients.

See Chapter 4, “Installing Windows File Servers,” on page 48.

Chapter 8

Additional Setup

Use this chapter to perform post-installation and ongoing maintenance tasks.

Modifying the Oracle Database

When creating a new custom program, you may need to add tables or tablespaces to the Oracle database. However, you should *not* modify the standard QAD Standard Edition tables.

If you make changes to the Oracle database, you must also change the Progress schema holder using the DataServer utility, Update/Add Oracle Table Definitions. This utility uses the objects in the Oracle schema to create the schema holder. You can then compile your custom code against the new schema holder.

Migrating a Custom Progress Database to Oracle

If you need to migrate a side Progress database to an Oracle database, use the DataServer utility `protoora.p`. Using this utility is the first of several steps required to convert the database correctly.

Some of the conventions used by Protoora (Progress-to-Oracle) may not be appropriate for your Oracle database. The first time it runs, Protoora creates a database with only one data tablespace and one index tablespace for all schema objects and data. Also, some of the character columns will probably be undersized because Protoora uses the format value from the data dictionary as the base size value.

To correct these problems, make adjustments to the SQL script and rerun it to create a corrected Oracle database.

Warning *Do not* use these instructions to convert a QAD Standard Edition on Progress environment to QAD Standard Edition on Oracle. See the *QAD Standard Edition Conversion Guide* to perform this conversion.

1. Run `protoora.p`.
2. The Protoora utility sets up the Oracle database and a Progress schema holder to match it.

   The first half of the utility examines your side Progress database and produces SQL scripts that in turn create the Oracle database. These database objects are incorrect and must be replaced.

   The second half pulls across schema information from the Oracle database to create the Progress schema holder database.
3. You may need to modify the following aspects of the SQL script Protoora created:
   a. Create tablespaces and size them to match the number of records in your custom side database. Use the standard Oracle tablespace sizing algorithm.
   b. Change the tablespace parameters to match the new tablespaces you created.
   c. Adjust the column sizes to match the application requirements for which your custom side database was developed.

For details, see the *Progress DataServer Guide*.

Note Labels for columns (also called fields) are stored in the Progress schema holder and not in the Oracle database.

4 Use the modified SQL script to create corrected Oracle database objects (tablespaces, tables, and so on):

```
sqlplus user/password@ORACLE_SID
SQL> @YourSQLScriptName
```

5 Remove the incorrect Oracle database objects originally created by Protoora.

6 While connected to the new schema holder, open the Data Dictionary, select the Admin menu, and choose the Dump Data Definitions option. The system creates a data definition file (`.df` extension).

7 Using a text editor, open the data definition file. For each ADD TABLE command, make sure the FOREIGN-OWNER statement is blank; for example:

```
FOREIGN-OWNER " "
```

Note If you are adding sequences to the data definitions, you must define a foreign owner.

8 Append the new data definition statements to the main QAD Standard Edition database definitions file.

9 Compile your custom programs against the updated QAD Standard Edition schema.

10 Once the Oracle database is set up, dump the Progress data into data files (extension `.d`) and load them into the Oracle database. See the *Progress DataServer Guide*.

11 Test your custom software.

Changing Installation Script Commands

The QAD Standard Edition 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 QAD Standard Edition 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, 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 QAD Standard Edition 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, use one or both of the following parameters in the command statement.

Parameter	Description
`-s`	Use this parameter to specify the directory containing the QAD Standard Edition 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
```

Using the Sequence Synonym Script

To share the same administration schema between multiple owners, run the `oraseqsyn.sql` script located in the database server administration directory.

1 If the administration schema you want to share is owned by QAD, go to step 3 and run `oraseqsyn.sql`.

2 If the administration schema you want to share has any other owner, use the following instructions to edit `oraseqsyn.sql`.

a For the QAD Standard Edition database server administration directory, open `oraseqsyn.sql` in a text editor:

```
vi oraseqsyn.sql
```

b In the script, change the `QAD` value to the name of the owner of the administration schema.

For example, if you want to share administration schema owned by Chicago, replace QAD in the `oraseqsyn.sql` script with Chicago. The script is not case sensitive.

```
CREATE SYNONYM edc_sq01 FOR Chicago.edc_sq01
CREATE SYNONYM edc_sq02 FOR Chicago.edc_sq02
CREATE SYNONYM edmfs_sq01 FOR Chicago.edmfs_sq01
CREATE SYNONYM edxfs_sq01 FOR Chicago.edxfs_sq01
```

3 For each owner sharing the administration schema, run the `oraseqsyn.sql` script. In the following example, the script is run twice, once by the New York owner and once by the Seattle owner.

In this command, *`Password`* refers to the password for the production tablespace owner. *`ORACLE_SID`* refers to the Oracle system identifier.

```
sqlplus newyork/Password@ORACLE_SID < oraseqsyn.sql
sqlplus seattle/Password@ORACLE_SID < oraseqsyn.sql
```

Changing the Client PROPATH

To modify the PROPATH setting for QAD Standard Edition Windows clients after installation, access the Windows client initialization file and change the PROPATH entry.

1. Right-click the client shortcut and choose Properties.
2. From the Properties window, choose the Shortcut tab.
3. In the Target field, use the `-ininame` parameter to locate the client's initialization file; for example, `progress.svg`.
4. Open the initialization file in a text editor.
5. Modify the `PROPATH` setting in the `[Startup]` section of this file.

You can also control other aspects of the Windows client environment using this file.

See "Progress Initialization File" on page 70.

Verifying SQL Scripts

To create the QAD Standard Edition Oracle database, you run several SQL scripts. As these scripts run, they create log files containing process information such as each statement run, whether it completed, and any errors that occurred when the statement was executed. These log files have the name of the SQL file with a `.lst` extension; for example, `oraempty-tbl.lst`.

You can expect some errors to occur when running the SQL scripts. Most relate to drop statements in the script for Oracle database objects that do not exist when the script is run and can be safely ignored. Other errors must be resolved before you continue with the installation process.

Use the following sections to determine if unexpected errors occurred, and in some cases resolve them.

Identifying Unexpected Errors

Use the following instructions to determine if unexpected errors occurred when a script ran:

1. Open the log file for the script in a text editor. SQL log files have the same name as the SQL file with a `.lst` extension; for example, `oraempty-tbl.lst.`

   ```
   vi oraempty-tbl.lst
   ```

2. In a text editor, search for lines beginning with `^ORA`, but exclude lines containing the following error numbers: 2289, 942, 143, 4043. These numbers identify expected errors related to drop statements in the SQL file.

   The following example is a command that performs this search in the vi text editor. Your command may differ depending on the text editor you use. In the following command, *`FileName`*`.lst` refers to the log file created when you ran the SQL script:

   ```
   grep "^ORA" FileName.lst | egrep -v "2289|942|143|4043"
   ```

3. The output of this command should identify any unexpected errors that occurred and the statement that produced them.

Resolving Oracle Error ORA-12805

Description

The Oracle database index scripts (`oraempty-idx.sql`, `oradmempty-idx.sql`, and `ohpempty-idx.sql`) contain a parallel option that allows more than one processor to complete the statements in the script. On some operating systems, this option causes the ORA-12805 error. Oracle provides the following information for this error:

```
A parallel server query died unexpectedly.
```

Solution

Use the following instructions to remove the parallel option from each create index statement that failed with the ORA-12805 error:

1. Identify each create index statement that failed with the ORA-12805 error. The statement is listed above the error in the SQL log file (*`FileName`*`.lst`).
2. Copy each statement into a new SQL file; for example, `new-idx.sql`.
3. As the first line of the `new-idx.sql` file, add the `spool` command and specify an output file; for example, `new-idx.lst`:

   ```
   spool new-idx.lst
   ```
4. Add the `spool off` command as the last line of the file:

   ```
   spool off
   ```
5. Edit each of the create index statements in the `new-idx.sql` file, removing the `parallel` keyword.
6. Save the `new-idx.sql` file.
7. Run `new-idx.sql` using the following command:

   ```
   sqlplus qad/qad < new-idx.sql
   ```
8. Check the SQL log file you designated in the spool command (`new-idx.lst`) for errors.

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