Update Installation:
QAD Enterprise Applications 2014
Standard Edition

June 2014

Contents

Overview

Before any install, visit the QAD Online Support Center at http://support.qad.com/ to make sure that you have the latest installation information.

This document provides steps for installing QAD Enterprise Applications 2014 - Standard Edition (QAD 2014 Standard Edition). The product was initially called MFG/PRO eB2.1. As of Service Pack 5, it was renamed QAD Enterprise Applications 2007 (QAD 2007), with a subsequent release in September of 2007 called QAD 2007.1.

Now, the product name is QAD Enterprise Applications 2014 - Standard Edition. The term Update replaces the term Service Pack because interim releases of the QAD product may include additional modules, features, and schema.

Only sites that have already installed one of this series of application releases should use these instructions to install QAD Enterprise Applications 2014 - Standard Edition.

If you are currently on an earlier version and plan to do a full reinstallation rather than a release update, refer to latest version of the *QAD Standard Edition Installation Guide* for the Progress or Oracle database.

Important For the proper schema and data updates to take place in your production database, complete a release update as documented in this guide, and not a reinstallation of the new release.

Progress Requirements

Install the new Progress version before starting the installation update.

Progress 10.1C03, 10.2A02, and 10.2B01 through 10.2B06 are supported for QAD 2014 Standard Edition. If you are updating from an eB2.1 release before SP4 and are running Progress 9.*x*, complete the steps to migrate from Progress 9.1*x* to Progress OpenEdge 10 following the install of QAD Standard Edition. The steps are listed in “Migrating Progress Versions” on page 31.

Multiple Languages

If you are installing this update for multiple languages, the only difference is that you complete all of the media installs before loading data. The update data load lets you select the languages you want to load.

Release Information

The *Update Release Notes* describe the changes introduced in each update since the initial release. This cumulative document is available in HTML and PDF formats in the `spinfo/web/relnotes` directory on the client CDs. Review the release notes in the `index.html` or `index.pdf` file to understand how changes may affect your current implementation.

Additional detailed release information is contained in HTML and ASCII text files located in subdirectories under the `/spinfo` directory on the client CDs. The HTML files are located in the `/web` directory and the ASCII text files are located in the `/text` directory.

Release information contains the following elements:

Module. Provides cumulative information on each module and the files in that module that changed in each update

Menu. Provides cumulative information on each menu and the files in that menu that changed in each update

ECOs. Provides cumulative information on each Engineering Change Order (ECO) included in each update. This information includes a brief description of the ECO and cross-references to the modified files, affected menus and modules, and the compiled files for that ECO.

Modified Files. Provides cumulative information on each file modified in each update. This information includes the changes made to the file and cross-references to the ECO that caused the file modification, the affected menus and modules, and the entire file, to enable review of all changes in context.

File Difference. Provides cumulative information on each file modified by each update. This information includes the entire file with all of the changes in context and a list of the changes made to the file for specific ECOs.

Compile List. Provides a list of all the files to recompile after each update is installed. Additionally, the list provides cross-references to the modified file information for each file changed in the release. This file is located in the `/modlist` directory.

During QAD Standard Edition installation, you can copy the update information to any directory you specify. When prompted whether to copy the update information, enter Yes, and indicate the destination directory for the information.

Object IDs and Enhanced Controls

If you are updating from an eB2.1 release before SP2, enter an Object ID (OID) generator code and create an empty audit database for compiles only.

Beginning with SP2, the optional Enhanced Controls module is available. This module requires additional installation steps. See the *QAD Standard Edition Installation Guide: Progress Database* for complete steps to follow. Enhanced Controls is not currently available for the Oracle release.

Creating an OID Generator Code

During a QAD Standard Edition installation, you 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. 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 that you want. The software uses the code as the registration ID of the full OID value. The full OID value is written to database records as they are created. The generator code is stored and displayed in Database Control (36.24) and can be modified later, if necessary.

Once the OID generator code is specified, OID fields in the database are populated using an algorithm that ensures uniqueness across all records, tables, and QAD Enterprise Application 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 a Progress database sequence.

<registration_id> identifies the origin of the OID value.

Note The registration ID is derived from the OID generator code by reversing the digits of the generator code value and placing the decimal point in front of the result.

Install Sequence

The QAD Standard Edition update requires the following CDs:

- Database Server
- Language Files
- Character Client, UNIX and Windows
- GUI Client, Windows

Workflows are provided to complete the install. Tables in this document show, for each starting eB2.1 and QAD Standard Edition version—initial release (IR) through the latest release—what workflows to use and which `.df` files to reference in the workflow.

The update installation for Progress or Oracle requires the following steps:

- Install database server and language media to the update install directory.
- Install client media (character or GUI) to the update install directory.
- Modify database structures to accommodate new storage areas.
- Update the empty databases and add an empty audit database for compiles (not required for Service Pack 2 and later).
- Update the main production database.
- Compile update files.

eB2.1 did not support Oracle until Service Pack 3. Therefore, the tables and file names for the delta schema changes for Oracle do not reference the initial release (IR), or Service Packs 1 or 2.

Note If you are installing the Enhanced Controls module, follow the installation instructions in *QAD Standard Edition Installation Guide: Progress Database*; then perform a complete compile as directed in that guide. The Enhanced Controls module is currently available only for Progress implementations.

Restoring the Prior Install

If you need to restore your original environment, remove the update directory, *QADInstallDir**UpdateDir*, from the PROPATH and restore the original databases from the backup.

Before Installation

This document assumes the person completing this installation has QAD application installation and database administration experience. In addition, the installation must meet all product and system requirements from the base product installation guide and any additional requirements from this update guide.

Installing an update creates files in the destination directories. When installing updates, read and write permissions are required in all affected directories. Always install an update to a separate directory; applying the update directly to your production environment may cause third-party products, customizations, localizations, and bolt-on applications to no longer function as expected.

If you have integrated third-party products, contact the product suppliers regarding compatibility issues with this update.

The `version.mfg` file in the `mfgpro` directory on each update CD contains the cut-off date for a given release.

Enhanced Controls Users (Progress Only)

If you are using the auditing feature of the optional Enhanced Controls module (available beginning with eB2.1 SP2), make sure that the temporary table (`attmp_mstr`) that stores audit transactions in the original `qaddb` database is empty before starting an update install. If not, there is a chance an error (“Records exist in attmp_mstr. Run the audit trail creation process to make sure it is empty.”) is raised when you apply schema changes.

If this occurs, make sure that after you run the creation process, you shut it down using Ctrl+C (or Ctrl+Break) or kill the process from the operating system. Shutting down the process from Audit Trail Control (36.12.13.24) risks leaving records behind in the `attmp_mstr`, and the message may display again.

Preliminary Setup

Before starting an update installation, back up your databases. QAD recommends that you complete the QAD 2014 Standard Edition update installation against a test environment first. By default, the update installs to a separate update directory under your original *QADInstallDir*. Data deleted from the existing release during the update install are preserved in dump files in the *QADInstallDir*/db directory.

Before install, review the following cautions and requirements:

- Set your `$TERM` variable to a standard terminal type such as vt100 or vt200 while installing the update. You can switch to a language-specific terminal, if necessary, when you launch the installed clients.
- Determine the following information:

  - The directory where you are going to install QAD Standard Edition, referred to in this document as *QADInstallDir*
  - The Progress directory for the database server
- For UNIX environments, ensure that the `mfg` user exists as defined in your original installation guide.

Updating the Progress Version Before Updating the Existing Environment

If you are updating Progress 10 to 11.3.2, you must back up the existing environment and databases (these include the Tomcat webapps, QAD installation directories, databases, and so on).

After you back up the system, do the following:

1. For Progress databases, truncate the bi file for the production databases using the current Progress version for which the environment was initially created (such as OE10). Follow the same process to truncate all of the databases in the empty database set. Execute the following command for each database in each set to be updated:

   ```
   proutil db-name -C truncate bi
   ```

2. Set the OS-level variables (including the `DLC` and `PATH` environment variables) to OE11. Ensure that there is not a mix of OE10 and OE11 environment variables.

3. For Progress databases, convert the OE10 databases to OE11 using the following command:

   ```
   proutil db-name -C conv1011
   ```

   See the Progress documentation and release notes for further information.

4. For Oracle databases, re-create the oaudempty schema holder as well as oraempty. The oraempty schema holder is re-created in the update service pack instructions using MFG/UTIL. Manually re-create oaudempty using OE11 using the following commands:

   a. `$DLC/bin/procopy $DLC/empty /installdir/db/oaudempty2`

   b. `$DLC/bin/_progres -1 oaudempty2`

   c. Load the `oaudempty.df` in `/installdir/db` using the data dictionary. Then exit the schema holder and truncate the bi.

   d. `$DLC/bin/proutil oaudempty2  -C truncate bi`

   e. In the existing `mfgutil` and `mfgutil.ini` scripts, change the installation location specified in all of the existing `DLC` environment variables from OE 10 to OE 11.3.2.

5. Install the Service Pack media using the new OE 11 Progress version.

Following the remaining update steps in the following sections.

Installing the Update from Delivery Media

Complete this set of steps for both Progress and Oracle database environments.

In this set of steps, you install the QAD Standard Edition database server and language files:

1. Log in as an administrative user with read, write, and execute permissions for your production environment. On UNIX systems, this user is typically `mfg`.
2. Mount the QAD Standard Edition database server installation 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. The welcome screen displays showing you the product you are installing and the platform.
5. Press Enter to start the install. The license agreement displays. Press Ctrl-C to skip reading the agreement, or page down through the agreement. The system prompts you to accept the agreement. Choose `y` and press Enter to accept the license agreement.
6. Select the location for the update installation log. You typically use the default directory, which is also the default for your original QAD installation. This ensures subsequent installations can locate the log directory with all relevant QAD Standard Edition install information.
7. The system prompts you if you want to view the installation instructions on-screen. Choose y and press Enter to open the display window.
8. A Service Pack warning displays. Review the warning and press Enter to continue.
9. Accept or update the following information when prompted:
   - Progress installation directory
   - Original QAD installation directory (*`QADInstallDir`*)
   - Update installation directory (*`QADInstallDir`*`/`*`UpdateDir`*). QAD recommends you enter a subdirectory name for the update such as *`QADInstallDir`*`/sp<`*`nn`*`>`, where `sp<`*`nn`*`>` represents the Service Pack version.
10. For Windows installs only, accept or enter a name for the MFG/UTIL icons. After installing the media to your hard disk, you will launch MFG/UTIL to complete the configuration of this update.
11. Review the summary screen, Figure 1, and enter `y` to begin copying the update files. Enter `n` to re-enter installation information.
12. The copy progress displays in the command window. When the copying of database server media to the server finishes, check the `mfgdbsvsp.log` file in your log directory for errors.
13. Remove the database server media, insert your language file media, and repeat steps 3 through 12 to complete the language files installation for each language you are installing.

During the language files install, you are warned that files in the update directory may be overwritten. This is OK; no files are overwritten. Enter Y to continue.

Installing 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 Release Notes*.

Installing Host Clients or Client File Servers

Complete this set of steps for both Progress and Oracle database environments.

On UNIX systems, a host character client is required. All other UNIX clients connect to the host via telnet to run the client scripts.

On Windows, the first client installed—character or GUI—is called the file server because it contains the QAD Standard Edition or eB2.1 source code. The code is compiled on this client or file server. Additional clients that connect to Windows file servers are called remote clients. The remote clients require no modifications for QAD Standard Edition.

1. Mount your character or GUI client installation media.
2. On the CD, change to the directory containing the client.
3. Change to the `install` directory:

   ```
   cd install
   ```
4. Launch the installation script in that directory:

   ```
   ./install.ksh
   ```

   For Windows, run `install.exe` from Run on the Start menu.
5. Accept the license agreement and follow the prompts:
   - Installation log location
   - Progress installation directory
   - Original QAD client installation directory (by default, the same as the *`QADInstallDir`*)
   - Update directory (a */`UpdateDir`* subdirectory within the original client directory)

   You are warned that files in the client directory may be overwritten. This is OK. Enter Y to continue.
6. Review the installation summary and press Enter to begin copying the files.
7. Following UNIX and Windows character installs, check `mfgchrclsp.log` for errors. For Windows GUI installs, check `mfgguiclsp.log`.

Preparing MFG/UTIL

The remaining instructions are divided into Progress and Oracle database sections. In both, you first update the empty database (Progress) or schema holder (Oracle), and then update your existing QAD databases. Workflows are available for both scenarios.

The workflows are text files that contain the steps, paths, database names, and file names. MFG/UTIL reads in the text files; the user follows on-screen prompts.

Because the workflows support all prior eB2.1 and QAD Standard Edition releases, you must edit the workflows to enter the correct delta file names for your implementation. In addition, some steps may not be necessary, depending on the release level that your existing implementation uses. Comment out unnecessary steps before running the workflow.

Oracle Workflow Changes

The Oracle update workflow is titled Create Oracle Schema Holders, and uses the workflow `wk0120.ini` located in *`QADInstallDir\UpdateDir`*. Because Oracle was initially released on eB2.1 SP3, no changes are required to the workflow.

Progress Workflow Changes

Different edits are required for the Progress workflows, depending on which update you are currently using. The workflows are located in *`QADInstallDir`*.

Initial Release and Service Pack 1

You must run both workflows and not skip any steps. In the Update Empty Databases workflow (`wk0100.ini`), you must:

- Uncomment the last line of the second [LoadSchema] section.
- Modify the path to reflect the current update directory level.
- Enter the correct delta schema file (`.df`) name.

The default section looks like:

```
[LoadSchema]
Status=Not Run
Program=raploddf.p
DBName=./db/mfgempty.db
LDBName=qaddb
;DFName=./sp2/progrs/db/dltmfgSP1.df
```

Assuming you are updating from the initial release, you would change it to:

```
[LoadSchema]
Status=Not Run
Program=raploddf.p
DBName=./db/mfgempty.db
LDBName=qaddb
DFName=./progrs/db/dltmfgIR.df
```

Use Table 1 to set the DFName file to reflect your update level.

In the Update Production Database workflow (`wk0110.ini`), you must:

- Uncomment the last line of the [LoadSchema] section.
- Modify the path to reflect the current update directory level.
- Enter the correct delta schema file (`.df`) name.
- Alter the name of the database throughout if your database is not `mfgprod`.

The default LoadSchema section looks like:

```
[LoadSchema]
Status=Not Run
Program=raploddf.p
DBName=./db/mfgprod.db
DFName=./progrs/db/dltmfgIR.df
LDBName=qaddb
```

Use Table 1 to set the DFName file to reflect your current update level.

Table 1
Schema Files by Service Pack and Update

Release	Schema File
eB 2.1 Initial release	`dltmfgIR.df`
eB 2.1 Service Pack 1	`dltmfgSP1.df`
eB 2.1 Service Pack 2	`dltmfgSP2.df`
eB 2.1 Service Pack 3	`dltmfgSP3.df`
eB 2.1 Service Pack 4	`dltmfgSP4.df`
eB 2.1 Service Pack 5 / QAD 2007 SE	`dltmfgSP5.df`
QAD 2007.1 SE	`dltmfgSP6.df`
QAD 2008 SE	`dltmfgSP7.df`
QAD 2008.1 SE	`dltmfgSP8.df`
QAD 2009 SE	`dltmfgSP9.df`
QAD 2010 SE	`dltmfgSP10.df`
QAD 2011 SE	`dltmfgSP11.df`
QAD 2012 SE	`dltmfgSP12.df`

Note There is no schema change for 2013 SE to 2014 SE.

Service Packs 2 and Above

You must run both workflows, but you can skip the steps to create the empty audit database. In addition, you need the correct delta `.df` file. Make sure the [Load Schema] section is uncommented, and the path and file name are correct in the last line of the excerpt. The following excerpt from `wk0100.ini` shows the sections commented out using a semicolon at the beginning of each line. This is required if you have already created the empty audit database.

```
WorkFlowDesc=Update Empty Databases
;
;[CreateMSDB]
;Status=Not Run
;Program=crtpdbsa.w
;STName=./db/audempty.st
;
;[LoadSchema]
;Status=Not Run
;Program=raploddf.p
;DBName=./db/audempty.db
;DFName=./db/audempty.df
;LDBName=qadaud
;
;[TruncBI]
;Status=Not Run
;Program=truncbi.w
;DBName=./db/audempty.db
;Delay=0
;
[LoadSchema]
Status=Not Run
```

```
Program=raploddf.p
DBName=./db/mfgempty.db
LDBName=qaddb
DFName=./progrs/db/dltmfgSP2.df
;
```

Use Table 1 to set the DFName file to reflect your current update level.

In the Update Production Database workflow (`wk0110.ini`), you must:

- Uncomment the last line of the [LoadSchema] section.
- Modify the path to reflect the current update directory level.
- Enter the correct delta schema file (`.df`) name.
- Alter the name of the database throughout if your database is not `mfgprod`.

The default LoadSchema section looks like:

```
[LoadSchema]
Status=Not Run
Program=raploddf.p
DBName=./db/mfgprod.db
DFName=./progrs/db/dltmfgSP2.df
LDBName=qaddb
```

Use Table 1 to set the DFName file to reflect your current update level.

Updating Progress Databases

In the following steps, those tasks that are required only for the earlier update levels are noted in the headings.

Modify Database Storage Areas (IR, SP1 Only)

For the initial release and Service Pack 1, new storage areas were added to the main production and empty databases. If these are not added to your empty and production databases before performing the data definition loads in later steps, the loads will fail. First, modify the delta structure that was shipped with your update. Then run a Progress utility to make the changes to the databases.

Modify the Delta Structure Files

Complete this set of steps if you are updating from the initial release or SP1. No storage area changes were made in SP2; if you are on SP2, you can skip this set of steps.

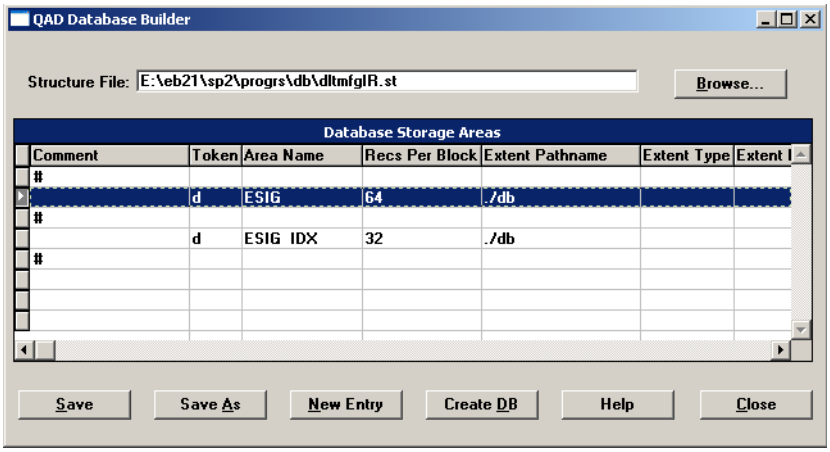
1. Launch MFG/UTIL on your QAD Standard Edition database server.
2. Select Edit Structure File/Create Database from the Database menu. The Edit Structure File screen displays.
3. Use the Browse button to locate the appropriate delta structure file for your update. By default, the files are located in *`QADInstallDir/UpdateDir/`* `progrs/db`. Select OK to open the file.

   Note Files after `dltmfgSP1.st` are not included because there have been no storage area changes since SP1.

Table 2
Delta `.st` Files By Source Version

Installed Version	Delta .st File
eB2.1 Initial Release	`dltmfgIR.st`
eB2.1 Service Pack 1	`dltmfgSP1.st`

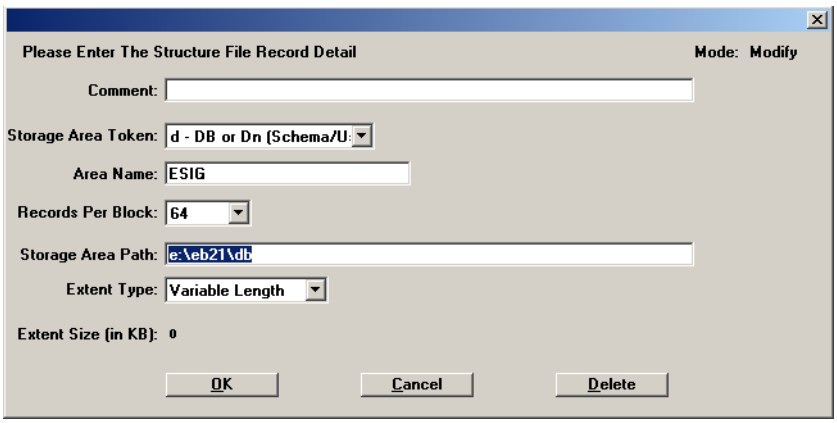
Fig. 1
Delta `.st` File Opened for Editing



4 Tab to or select the first storage area listed. In Figure 1, the first area is selected and is named ESIG. Double-click or press Enter to open the storage area definition.

5 In the storage area definition, modify the Storage Area Path value to point to the location of the storage area. This is typically *`QADInstallDir`*`/db`. Choose OK to save the change and return to the editor screen.

Fig. 2
Storage Area Definition Editor



6 Repeat steps 4 and 5 for each storage area in the `.st` file.

7 When you have modified all storage area paths, choose Save to save the file, and then OK to exit the editor.

Update the Database Structures

Complete this set of steps if you are updating from the initial release or SP1. SP2 has no storage area changes; if you are updating from SP2, you can skip this set of steps.

1. Open a command window and navigate to *QADInstallDir*.
2. Use the following syntax to add the new storage areas to the required databases:

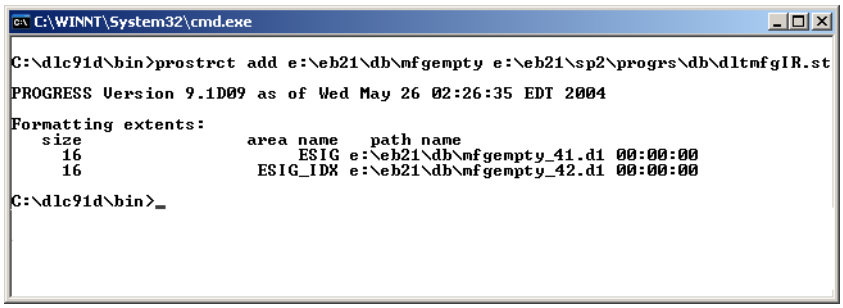
   ```
   prostrct add dbname delta-st-file-name
   ```

   For example:

   ```
   dlc101b/bin/prostrct add ./db/mfgempty     /progrs/db/dltmfgIR.st
   ```

   If the update is successful, the result displays.

Fig. 3
Successful `prostrct` Update for `mfgempty`



3. Repeat step 2 for your main production database, `mfgprod`, and any other main databases you are updating. These may include `mfgdemo`, `mfgtrain`, `chicago`, and so forth.

Add the adm_lob Storage Area to the admin Database

If you are on eB2.1 SP1 through QAD 2007.1, you must add the ADM_LOB storage area to the admin database.

On the command line in the *QADInstallDir*, run the command:

```
$DLC/bin/prostrct add ./db/<qadadm database>
QADInstallDir/UpdateDir/progrs/db/dltaadmIR.st
```

Table 3
Structure `.st` Files By Source Version

Installed Version	Structure File
eB2.1 Initial Release	`dltadmIR.st`
eB2.1 Service Pack 1	`dltadmSP1.st`
eB2.1 Service Pack 2	`dltadmSP2.st`
eB2.1 Service Pack 3	`dltadmSP3.st`
eB2.1 Service Pack 4	`dltadmSP4.st`
eB 2.1 Service Pack 5 / QAD 2007 SE	`dltadmSP5.st`
QAD 2007.1 SE	`dltadmSP6.st`
QAD 2008 SE	Not applicable
QAD 2008.1 SE	Not applicable

Installed Version	Structure File
QAD 2009 SE	Not applicable
QAD 2010 SE	Not applicable
QAD 2011 SE	Not applicable
QAD 2012 SE	Not applicable
QAD 2013 SE	Not applicable

Database 64-bit Sequences

New databases created in 2014 SE using Progress 10.2B have 64-bit sequences enabled by default.

When upgrading to 2014 SE, MFG/UTIL checks if 64-bit sequences are enabled for the database. If they are not, MFG/UTIL calls `proutil` to enable them.

Updating the Empty Databases (All)

Using the Update Empty Databases workflow (`wk0100.ini`), the following steps create an empty audit database and update the schema in the main empty databases, `mfgempty` and `admempty`. The empty audit database is required for all implementations for compiles even if you do not implement the Enhanced Controls module.

If you have modified your workflow based on the information in “Progress Workflow Changes” on page 10, you may skip some of these steps.

Important Before starting the empty database updates, copy `audempty.st` and `audempty.df` from *`QADInstallDir`*`/`*`UpdateDir`*`/progrs/db` to *`QADInstallDir`*`/db`. This ensures the database is created in the correct location.

1. Launch MFG/UTIL on your QAD Standard Edition database server.
2. Select Guided Setup from the Configure menu. The Operation Sets screen displays.
3. In the Operation Set field, select Update Empty Databases. The set steps display. Choose Run Set.

Create the Empty Audit Database (IR, SP1 Only)

This step is required only if you are moving from the initial release or SP1.

1. The QAD Database Builder screen displays showing a default QAD empty structure file, `audempty.st`. The default path is not correct. Choose Browse and select `audempty.st` from *`QADInstallDir`*`/db`.

   Generally, you do not need to edit this file for the empty databases. Choose Create DB.
2. In the Create/Copy Database screen, verify that Progress Empty is selected and accept the defaults in the New Database and DB Block Size fields.
3. Choose OK to build `audempty`.
4. When `audempty` is built, a log of the database build process displays. You can verify that the database was created successfully by checking:

- *QADInstallDir*/audempty.log
- The storage area extents created in *QADInstallDir*/db

5 Choose Close to exit the log window.

6 The QAD Database Builder for audempty displays again, this time with the Close button selected. Choose Close to complete the creation of audempty.

7 After you close the QAD Database Builder screen, the Connect Database screen displays for audempty. Accept the defaults and choose OK to connect to audempty. Use Table 4 as a guide.

Table 4
Connect Database Values for audempty

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

8 The default data definition file, audempty.df, displays. The default path is not correct. Choose Browse and select audempty.df from *QADInstallDir*/db. Choose OK to begin loading the database schema.

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

9 The QAD Log displays. When the load completes, close the log window.

10 The Truncate BI File screen displays. Accept the default path to audempty and choose Truncate.

11 Close the QAD Database Monitor window that displays on completion.

Update mfgempty (All)

1 After you close the QAD database monitor, the Connect Database screen displays for mfgempty. Accept the defaults and choose OK to connect.

2 The Data Definitions File load screen displays. If you have not updated your workflow with the correct .df file name and location, choose Browse. Navigate to *QADInstallDir*/*UpdateDir*/progrs/db and select the appropriate delta .df file for your update installation. It is not necessary to copy the .df files to your *QADInstallDir*/db directory.

Table 5
Delta .df Files By Source Version

Installed Version	Delta .df File
eB2.1 Initial Release	dltmfgIR.df
eB2.1 Service Pack 1	dltmfgSP1.df
eB2.1 Service Pack 2	dltmfgSP2.df
eB2.1 Service Pack 3	dltmfgSP3.df
eB2.1 Service Pack 4	dltmfgSP4.df

Installed Version	Delta .df File
eB 2.1 Service Pack 5 / QAD 2007 SE	dltmfgSP5.df
QAD 2007.1 SE	dltmfgSP6.df
QAD 2008 SE	dltmfgSP7.df
QAD 2008.1 SE	dltmfgSP8.df
QAD 2009 SE	dltmfgSP9.df
QAD 2010 SE	dltmfgSP10.df
QAD 2011 SE	dltmfgSP11.df
QAD 2012 SE	dltmfgSP12.df

Note There is no schema change for 2013 SE to 2014 SE.

3 Choose OK to start the load.

4 The QAD Log Window displays. When the load completes, choose Close.

5 The Truncate BI File screen displays. Accept the default path to `mfgempty` and choose Truncate.

6 Close the QAD Database Monitor window that displays on completion.

7 The `admempty` database is updated following steps 2 through 6, above. Use Table 5 to select the correct delta `.df` file for the `admempty` database. Substitute `adm` for `mfg` in the table.

Updating the Main Production Database (All)

Use the Update Production Database workflow (`wk0110.ini`) to update the schema and data for the main production database.

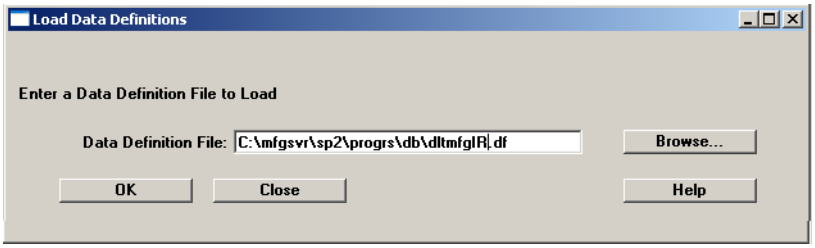
1 In the Guided Setup Operation Sets screen, select Update Production DBs. The set steps display. Choose Run Set.

2 The Connect Database screen displays for `mfgprod`. Accept the defaults and choose OK to connect to `mfgprod`.

Fig. 4
Connecting to `mfgprod`

3 The Load Data Definitions screen displays. Select Browse and locate `.df` files in *`QADInstallDir/UpdateDir`*`/progrs/db`. Use Table 5 to choose the correct `.df` file.

Fig. 5
Loading Data Definitions for `mfgprod`



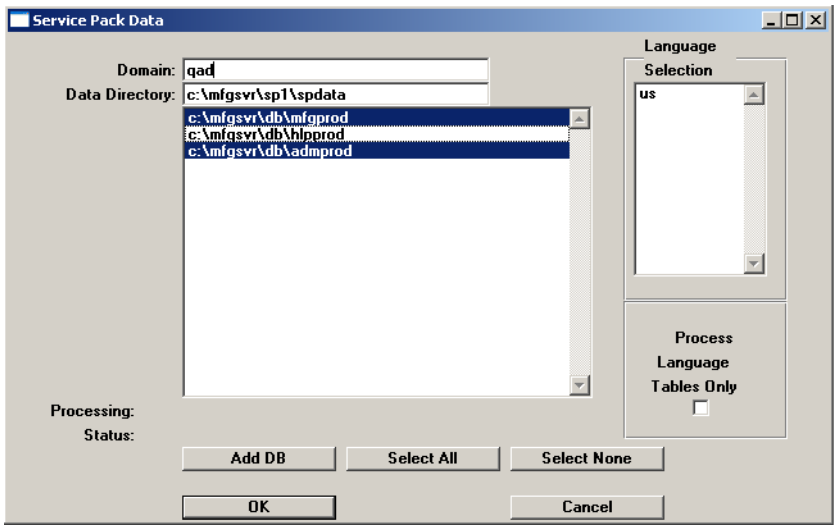
4 Choose OK to begin loading the database schema. The QAD Log Window displays a progress screen. When the load completes, choose Close in the Log Window.

5 The `admprod` schema update starts. Use Table 5 to load the correct schema file for the `admprod` database. Substitute `adm` for `mfg` to determine the correct delta `.df` file to load. When it completes, choose OK to continue.

6 The Service Pack Data screen displays. Enter the QAD domain.

Select the databases you want to load the data into and press OK.

Fig. 6
Service Pack Data Load Selection Screen



Most, if not all, system data shipped with a QAD Standard Edition release is system data and contains the qad domain. This is loaded to the system domain. The domain field in the Service Pack Data screen is used to load any non-system (for example, application) data where the domain is blank in the shipped data files into the appropriate production domains. Therefore, if your production database contains multiple domains, repeat this step for each domain.

If you enter an invalid domain code, the QAD Log Window displays with the following error:

```
Skipping database mfgsvr/db/mfgprod, invalid domain code.
```

If you are loading only a language update because you ordered it later than the base language for the new release, check Process Language Tables Only.

Choose OK to start the load process.

7 You are prompted to connect to the `admprod` database. Change the database Logical Name to `updatedb` (the default) and choose OK.

Fig. 7
Connecting to admprod

8 The admin databases do not contain a domain master (`dom_mstr`) record. You must specify the associated production database that does contain a domain record for MFG/UTIL to validate it.

The QAD Log Window displays to inform you that:

```
updatedb does not have a dom_mstr table.
Please connect database with the dom_mstr table for updatedb
```

Choose Close to continue. The Connect Database screen displays with no physical name and a logical name of `domaindb`.

9 Choose Browse to locate the production database that contains the valid domain value you entered in step 6. Choose OK to select the database.

10 Choose OK to continue the load.

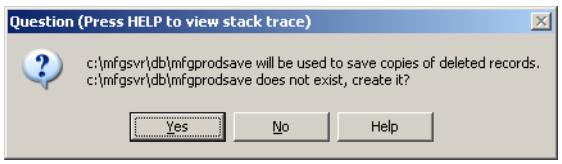
Fig. 8
Domain Database Connection for Admin Database Loads

11 The system prompts you to confirm the creation of a file named *dbname*`save` for deleted records. Choose Yes to continue.

12 The Connect Database screen displays for the first main database selected. Accept the defaults to connect to the production database again. Choose OK.

13 The system prompts you to confirm the creation of a file named *dbname*`save` for deleted records. Choose Yes to continue.

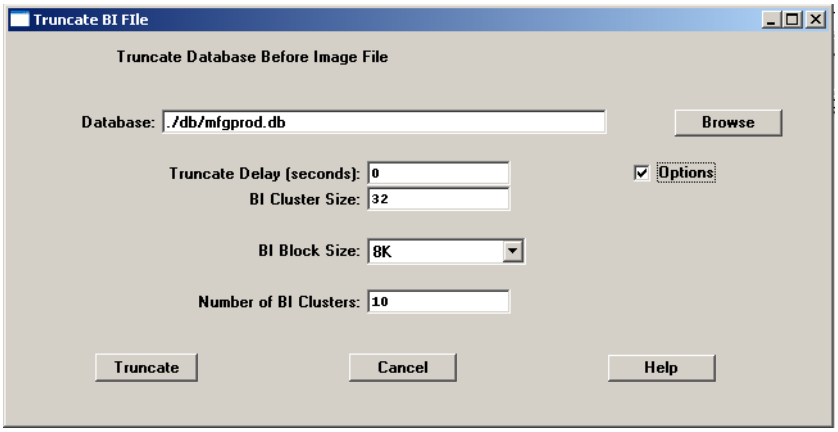
Fig. 9
File Create Confirmation



14 The QAD Log Window displays. Obsolete records are deleted and new records are added. When the load completes, choose Close to continue.

15 The Truncate BI File screen displays. Accept the default path to `mfgprod` and choose Truncate.

Fig. 10
Truncating mfgprod



16 Close the QAD Database Monitor window that displays on completion.

Additional Domain Updates (All)

The previous set of steps loads additional schema from the update into your production databases and loads new data into all databases that share the identified domain. If you have other main databases—such as additional departmental or divisional production databases—that require updates, reset the MFG/UTIL workflow and repeat the workflow for those databases. To do this:

1 Select Reset Guided Setup Files from the Configure menu in MFG/UTIL.

2 Return to step 1 on page 17 and repeat the steps. This time, make sure the other databases are correctly identified in each connection screen.

If you have additional domains in the production database you just finished with, do the following:

1 Select Database|Service Pack Process|Process Service Pack Data in MFG/UTIL.

2 Repeat steps 6 through 13 from “Updating the Main Production Database (All)” on page 17. Enter the domain in step 6.

3 Repeat these steps for each additional domain.

Updating Oracle Databases

The creation of the Oracle empty schema holder for existing eB2.1 and QAD Standard Edition databases is completed in MFG/UTIL using the workflow:

- `wk0120.ini` — Create Oracle Schema Holders

The remaining updates to Oracle production, test, and training databases occur first outside of MFG/UTIL using SQL files, then using additional MFG/UTIL steps.

Creating an Oracle Empty Compile Schema Holder

To apply an update to an Oracle implementation, you must create a new empty schema holder for compiling the updated code base due to modified schemas. The process consists of creating the new empty schema holder, performing schema loads into the new schema holder database, and truncating the before-image (BI) file. The tasks are run from the appropriate MFG/UTIL operation set, Create Oracle Schema Holders.

Note The term empty refers to the master or source schema holders used to create production schema holder copies and used to compile against. All Progress schema holders are, by definition, empty.

Create Empty Schema Holder

1. In MFG/UTIL, select Guided Setup from the Configure menu.
2. Select the Create Oracle Schema Holders workflow in Operation Set.
3. Tab to select Run Set and press Enter.
4. The Create Database screen displays. In the New Physical Database Name field, accept the default or enter the name you want to use for the schema holder. If you opt to use the original name (`oraempty`) and the schema holder still exists, check the Replace if Exists check box.
5. In the Enter a Data Definition File to Load prompt, browse to the correct directory or enter the appropriate directory and data definition file (Table 6) for your current environment (as the default entered here is `./spx/ora/db/oraSPX.df`) and press OK.

Table 6
Data Definition File by Release Level

Installed Version	Data Definition File
eB 2.1 Service Pack 3	`oraSP3.df`
eB 2.1 Service Pack 4	`oraSP4.df`
eB 2.1 Service Pack 5 / QAD 2007 SE	`oraSP5.df`
QAD 2007.1 SE	`oraSP6.df`
QAD 2008 SE	`oraSP7.df`
QAD 2008.1 SE	`oraSP8.df`
QAD 2009 SE	`oraSP9.df`
QAD 2010 SE	`oraSP10.df`
QAD 2011 SE	`oraSP11.df`
QAD 2012 SE	`oraSP12.df`
QAD 2013 SE	`oraSP13.df`

When the schema load completes, press Close.

6. Truncate the BI to the schema holder. Then close to complete schema holder creation.

Create New Production Schema Holders

The empty schema holder was created with the default name `oraempty`. Create a copy of this database with a new name and update the foreign database reference (the schema holder reference to the Oracle database) from the default, `qaddb`, to the actual Oracle database name.

1. Log on as `mfg`.
2. Launch MFG/UTIL.

   ```
   ./mfgutil
   ```

   For Windows, launch MFG/UTIL from the icon on the Start menu.
3. Select Create New Database from the DataServer|Oracle menu. The current schema holder, `./db/oraempty`, displays by default. Check to overwrite the existing `oraempty`, but ensure that you have a backup of the original `oraempty` before re-creating.

   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.
4. When the copy completes, choose Close.
5. In the Oracle Database Name field, verify that the Oracle database name matches your Oracle SID. When ready, choose OK.
6. 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`, for example).
7. The server install finishes.
8. Create a new production schema holder by running MFG/UTIL DataServer|Oracle|Copy New Schema Holder from Existing SH option.

Modify Schema Before Load

There is a tablespace in Standard Edition named ADM_LOB. To add this tablespace to existing databases, modify the `adm_lobtablespace.sql` provided with the release to create the tablespace. You must change the DATAFILE_LOC reference. You can change size or setting values as required for your environment. The default file content is:

```
spool adm_loctablespace.lst;

create tablespace ADM_LOB datafile '/DATAFILE_LOC/adm_lob01.dbf'
size 5m autoextend on extent management local segment space management auto;

spool off;
```

Schema Changes for Oracle Databases

Schema changes are required for the Oracle database. Table 7 lists the scripts for the possible scenarios.

Table 7
Delta SQL Files by Release

Installed Version	SQL Update Script
eB 2.1 Service Pack 3	`dltSP3.sql`
eB 2.1 Service Pack 4	`dltSP4.sql`
eB 2.1 Service Pack 5 / QAD 2007 SE	`dltSP5.sql`
QAD 2007.1 SE	`dltSP6.sql`
QAD 2008 SE	`dltSP7.sql`
QAD 2008.1 SE	`dltSP8.sql`
QAD 2009 SE	`dltSP9.sql`
QAD 2010 SE	`dltSP10.sql`
QAD 2011 SE	`dltSP11.sql`
QAD 2012 SE	`dltSP12.sql`

Note There is no schema change for 2013 SE to 2014 SE.

Update the Oracle Database Schema

Follow these steps to run the new release level SQL script to update the Oracle database schema:

1. Connect to the Oracle database as the database owner, typically `qad`.
2. Run the appropriate script using the list in Table 7.
   Example `sqlplus qad/qad < dltSP4.sql`

Load Update Data

These steps load the update data. Use these steps for your production, test, training, and other existing databases.

1. In MFG/UTIL, select Database|Service Pack Process|Process Service Pack Data.
2. The Service Pack Data load screen displays. The data directory points to your update installation directory. The schema holders built in MFG/UTIL and referenced in your `mfgutil.ini` file appear in the available database window. You can Ctrl+click to select the schema holders you want to update. You can also choose Add Database to select a database not referenced in `mfgutil.ini`. Choose OK to initiate the loads. The first schema holder connection occurs.
3. The system prompts you to connect to the Oracle database represented by the connected schema holder. Choose Yes.
4. In the Connect Database screen that appears, enter `qad/qad` in the User ID field. On client/server installations, enter `qad/qad@`*`ORACLE_SID`* for the User ID.

5 The system prompts you to create a dump directory for obsolete data. Choose Yes to create the directory.

6 The processing starts by removing conflicting data from the tables. The update data is then loaded.

7 The process repeats for language updates—connect, remove conflicting data, and load update data—this time from the *QADInstallDir /UpdateDir*/spdata/*xx* directory, where *x* is the target release level, and *xx* is the language code.

8 When the update data loads are complete for the first database you selected, the next database is connected and the loads repeat (steps 6 and 7) until all selected databases are updated.

9 When all databases are updated, close the load screen.

Truncate Database BI Files

1 In MFG/UTIL again, select Database|Truncate Database. The Truncate BI File screen displays. Enter the path to a schema holder you just modified and choose Truncate.

2 Close the log window that displays on completion.

3 The Truncate BI File screen displays again. Repeat steps 1 and 2 for each modified schema holder.

4 Close the log window that displays on completion.

This completes the work to update your main schema holders.

To complete the update for your Oracle environment, continue with the next section.

Modifying Database Sets and Scripts

The following set of steps applies to both Progress and Oracle databases, and to all source update levels.

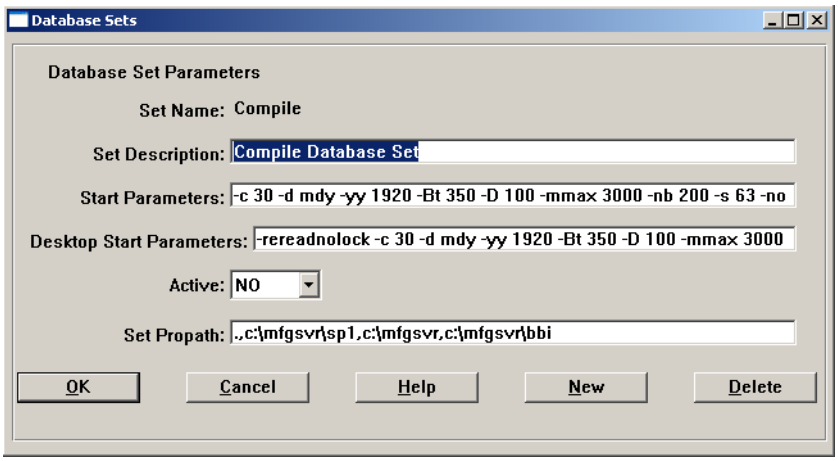
Use these steps to update your database sets to support compiles and to run the update code with your production QAD Standard Edition databases.

1 In MFG/UTIL, select Configure|Database Set Maintenance.

2 Select a database set and choose Edit Set.

3 Modify the PROPATH for the set so that the update directory appears first (Figure 11).

Fig. 11
Database Set with Updated PROPATH



4 Repeat steps 2 and 3 for each database set.

Note For Oracle implementations with schema holder locations and names that differ from the originals, alter the database set to reflect the new Compile and Production schema holder created during the Service Pack upgrade.

5 For the Compile database set, add the `audempty` database. Make sure to enter connection parameters for the new database in the Edit Client screen. The correct parameters are:

```
-RO -trig triggers
```

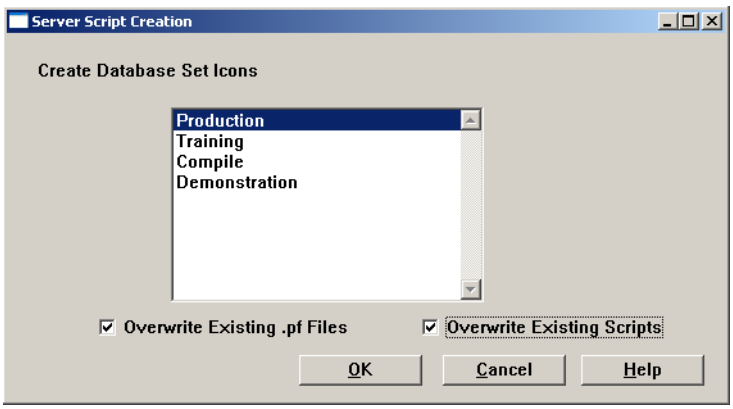
Important This step is required for all installations in order to compile, regardless of whether you are implementing Enhanced Controls.

6 Choose OK to save the changes and exit from Database Set Maintenance.

7 Select Scripts|Generate Scripts.

8 Select all database sets for which you need new scripts and choose OK. Overwrite the existing files.

Fig. 12
Server Script Creation



Note The Compile set does not require scripts since it never starts. The compile set is connected to during compiles only.

9 Choose OK to generate the update scripts.

10 On Windows systems, you are prompted for the folder location. Verify or modify the folder location and choose OK to continue.

11 The Log Window displays progress. When the scripts are complete, choose Close.

Compiling the New Release Level Code

The following set of steps apply to Progress and Oracle databases and all source update levels.

Important For sites implementing Enhanced Controls in conjunction with the current update level, skip these compile steps. Complete the Enhanced Controls install as detailed in *QAD Standard Edition Installation Guide: Progress Database*. Complete a full compile as detailed in that guide.

It is necessary to compile the update code before launching QAD Standard Edition.

1 In MFG/UTIL, select Programs|Compile Procedures.

2 Select the compile list, `utcompil.wrk`, from the following directory:

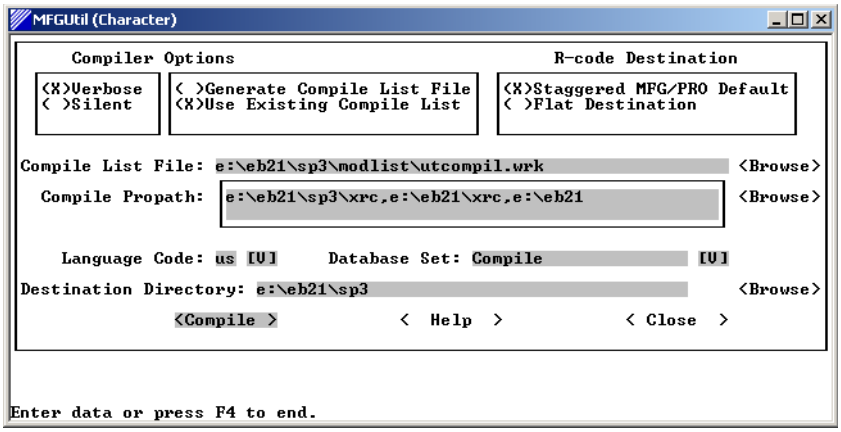
QADInstallDir/*UpdateDir*/modlist

3 The Compile Propath should include *QADInstallDir**UpdateDir*\xrc and *QADInstallDir*/xrc.

4 Set the compile destination to the update directory; *QADInstallDir*/*UpdateDir*.

Figure 13 shows the completed screen.

Fig. 13
Compile Parameters for an Update



5 Choose Compile. You are warned that the destination directory exists. Choose Yes to continue. The system prompts you to overwrite the `/us` directory. Choose Yes.

6 A summary screen displays where you can modify the `PROPATH` if necessary. Choose Continue to start the compile. A progress screen displays.

7 When the compile is complete, check `mfgulog.log` for errors.

You can now launch QAD Standard Edition using the new scripts. When the welcome screen displays, verify that it shows your update level.

Nothing is required to connect and use existing remote clients against the update environments.

Loading Language Master Files

For Progress databases using multiple languages and coming from the initial release or Service Packs 1 or 2, an additional load and compile is required. The multi-language files did not change after Service Pack 2.

Note These customizations may be overwritten if you customized any labels in your schema, or in `xdc_mstr` before `xdc_mstr` was previously loaded.

1. In MFG/UTIL, select Load Translated Labels from the Database menu.
2. The system prompts you to connect to a database. Select the `mfgempty` database.
3. The system prompts you to locate an `xdc_mstr` file to load. By default, these are located in *`QADInstallDir/UpdateDir/xx`* where *`xx`* is the two-letter language code. There are two `xdc_` files in each *`UpdateDir/xx`* directory: an incremental update since the initial release and a complete `xdc_mstr` for the language. Select the appropriate file, or the full `xdc_mstr` if you are uncertain, and choose OK.
4. After the load into `mfgempty`, repeat steps 1 through 3 for `admempty`, and again for `audempty`.

New Release Compile

1. Open Compile Programs from the Programs menu in MFG/UTIL.
2. Browse to locate the `utcompil.wrk` file located in *`QADInstallDir/UpdateDir/xx`* where *`xx`* is the two-letter language code.
3. Connect to the compile database set.
4. The `PROPATH` should be as follows:

   `QADInstallDir``/`*`UpdateDir`*`/xrc,`*`QADInstallDir`*`/xrc,`*`QADInstallDir`*
5. Choose Compile. You are warned that the destination directory exists. Choose Yes to continue.
6. A summary screen displays where you can modify the `PROPATH` if necessary. Choose Continue to start the compile. A progress screen displays.
7. When the compile is complete, choose Close in the log window, and check `mfgulog.log` for errors.
8. Repeat steps 2 through 7 for each installed language.

You can now launch QAD Standard Edition using the new scripts. When the welcome screen displays, verify that it shows your update level.

Updating the Help Database

This release provides an updated field help data (`.fhd`) file that includes a small number of new and modified online help records throughout the system. To include help updates, load `fieldhlp.fhd`.

1. Launch QAD Standard Edition.
2. Go to Field Help Load (36.4.19).
3. In the Language field, enter the QAD language code of the language for which you are loading help and press Enter.
4. 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. For example, for U.S. English, enter *`UpdateDir`*`/us/fieldhlp.fhd`.
5. Accept the default values in all other fields.
6. Press Go to begin the load process.

   As the load proceeds, the number of records that were read and loaded displays at the bottom of the screen.
7. Load help for any other languages in your environment using the appropriate language code and help file.

Post-installation Steps

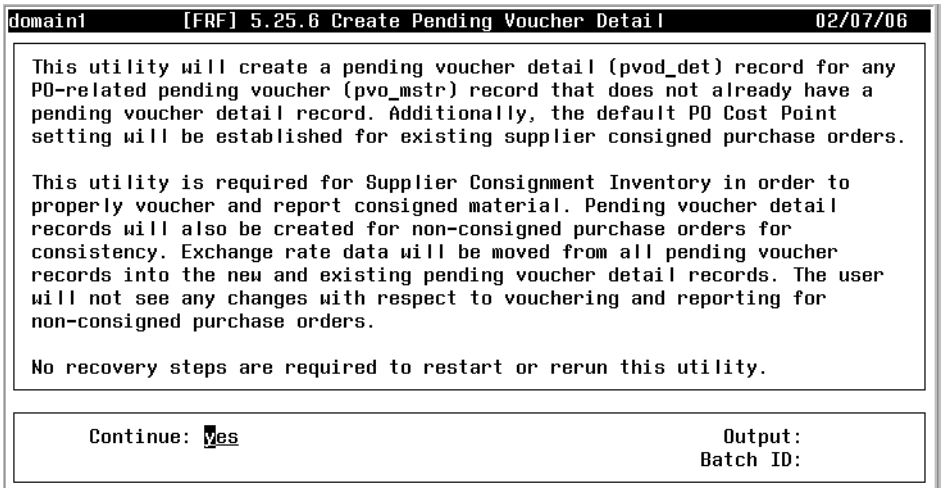
You must run utilities following installation of the update. Read each utility's instructions to determine if you need it and how to use it.

Note Beginning with QAD 2010 SE, the QAD Reference Architecture library (`qra.pl`) is automatically added to your configuration during QAD SE upgrade. If you are upgrading to QAD 2014 SE from a version prior to 2010 SE, have .NET UI installed, and use Kanban workbench, you must reconfigure and rebuild the .NET UI following the upgrade.

Creating Pending Voucher Detail

SP4 introduced a new utility to correct pending voucher details required for Supplier Consignment. If you are updating to QAD Standard Edition from any update before SP4, you must run the Create Pending Voucher Detail (5.25.6) utility immediately after loading the help. Otherwise, receipts created before the update installation do not display in reports and inquiries.

Fig. 14
Create Pending Voucher Detail



EDI ECommerce

Corrected Naming Conventions

Naming inconsistencies in QAD-provided records defined in Trading Partner Parameter Maintenance (35.13.10) have caused processing issues with some types of documents up through SP4. If you are updating to QAD Standard Edition from any update before QAD 2007 (SP5), run the utility Trading Partner Para Desc Update (36.17.21, `utrplpd.p`) after completing the update install to correct these inconsistencies.

Important The update modifies program code throughout the EDI ECommerce module to use the corrected values. If you install this update, you must run the utility.

When you run this program, the system updates all character and integer parameter records with abbreviations. This makes the naming consistent and allows more room for text strings in the 25-character field. The abbreviations are:

- `Document` is changed to `Doc`.
- `Change` is changed to `Chg`.
- `Ver` is changed to `Vers`.

Variables Update Utility

If you use EDI ECommerce, you must run Update Transformation Variables (35.17.22, `uxedtrv.p`) after installing the release update to avoid errors during document processing.

The new utility supports performance enhancements that are included in the release.

VAT Registration Format Utility

This release includes a new table-based method of adding and updating VAT tax registration formats required in European Union (EU) countries. It is no longer necessary to update the source code when formats change or when new countries join the EU.

After installation, run VAT Registration Format Init (2.13.3.25, `utvatreg.p`) to load valid format definitions for current EU member countries.

Specification Functionality Change and Update Utility

Master Specification Maintenance (19.1.1) and Item Specification Maintenance (19.1.13) were modified to prevent you from defining a specification that includes test steps with the Number field (`mpd_type`, `ipd_test`) blank. A blank creates problems when recording test results in some user interfaces, so the Number field is now a required value.

After installing the release update, run the utility Update Blank Master Specification (19.25.1, `utmpnbr.p`) to populate blank `mpd_type` and `ipd_test` fields in existing records.

1. Run the program in simulation mode first and review the resulting report.
2. Set Update Master Specification and/or Update Item Specification to Yes. The system sets each instance of a blank field to *****.
3. Use the browses and reports on the Item Specification Menu (19.1) to identify updated records.
4. Manually modify the Number field in the appropriate maintenance program as needed.

Kanban Update Utilities

Functionality enhancements introduced in QAD 2009 Standard Edition require you to run two post-installation utilities if you use the Kanban module.

For more information about the functionality changes, see the *Update Release Notes*.

Recording Skipped Inventory Transactions

Kanban Ship (17.22.19.4) and Kanban Fill/Receive (17.22.19.5) were modified to record backflush and subcontract inventory transactions closer to where they occur in the workflow.

After installing the update, run Reset Cards with SHIP Status (17.22.25.3, `uxkbcrds.p`). This utility finds cards in ship or in-fifo status, and records the inventory transactions that were skipped because the new functionality that moves backflush and subcontract transactions to Kanban Ship was not in place.

Populating New Quantity Accepted Field

New fields were added to Kanban Ship and Kanban Fill/Receive to let you record the actual quantity, rather than the kanban quantity. Previously, the system always used the kanban quantity, even when some of the items were unacceptable for use.

After installing the update, run Reset Card Quantity Accepted (17.22.25.5, `utkbcrd1.p`). This utility initializes the new Quantity Accepted field on existing card records and sets it to equal the kanban quantity.

Migrating Progress Versions

Progress 10.1C03, 10.2A02, and 10.2B01 through 10.2B06 are supported for QAD 2014 Standard Edition. If you are running on Progress 9.1x, complete the following steps to migrate to Progress OpenEdge 10.

Warning The possibility exists that your schema could be corrupted during the conversion and the database cannot be recovered. Therefore, you must back up the database before attempting the conversion. If your schema is corrupted during the conversion, you must restore the backup copy of the database and attempt the conversion again.

1. Back up the databases using Progress Version 9.
2. Disable after-imaging and two-phase commit if these are activated on the databases before starting the conversion. However, if you forget to do so, PROUTIL will disable after-imaging and two-phase commit for you. PROUTIL issues an informational message when it disables after-imaging or two-phase commit.
3. Truncate your before-image files. PROUTIL will not convert your Version 9 database schema if you do not truncate the before-image file before you start the conversion.
4. Disable replication, if applicable. PROUTIL cannot convert a Version 9 database if replication is enabled.
5. Install Progress OpenEdge 10.
6. Install any applicable OE10 service packs.
7. Modify the operating system environment variables:

   `DLC`

   `PATH`

   `PROPATH`
8. Modify the `PROPATH` in the following files to point to the new `DLC`:

   `mfguprog.ini`

   `mfgutil.ini`
9. Use Progress OpenEdge 10 PROUTIL CONV910 to migrate all empty and production databases to the correct version of Progress. This is run from the `DLC/bin` directory and uses the syntax:

   `proutil` *`QADInstallDir`*`/db/dbname -C conv910`
10. Modify the `PROPATH` in MFG/UTIL under Configure|Set Paths for MFG/PRO and MFG/UTIL.
11. Regenerate scripts in MFG/UTIL for the Production database set using Scripts|Generate Scripts. Make sure you select Overwrite Existing .pf Files and Overwrite Existing Scripts.
12. Recompile the base and update application code using Programs|Compile Procedures in MFG/UTIL.
13. Complete the update to the latest QAD Standard Edition release.