

Industry-specific

QAD SOLUTIONS

Manufacturing Applications

Installation Guide
MFG/PRO eB2.1 Service Pack 5



MFG/PRO eB2.1
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Overview

This document provides steps for installing Service Pack 5 (SP5) on MFG/PRO eB2.1. A base eB2.1 installation includes the latest service pack. Therefore, only those sites that have already installed eB2.1 should use these instructions to install the service pack.

If you are currently on a prior eB2.1 service pack and plan to do a full reinstallation rather than just a service pack upgrade, refer to *MFG/PRO eB2.1 Installation Guide: Progress Database* or *MFG/PRO eB2.1 Installation Guide: Oracle Database*.

Prior to any install, visit the QAD support Web site and download the latest errata and service pack installation guide to make sure you have the latest installation information.

Progress Versions for eB2.1

As of Service Pack 4, Progress OpenEdge 10B03 is required for MFG/PRO eB2.1. Complete the steps to migrate from Progress 9.1x to Progress OpenEdge 10 following the service pack install. The steps are listed in “Migrating Progress Versions” on page 30.

Multiple Languages

If you are installing this service pack for multiple languages, the only difference is that you should complete all the media installs prior to loading data. The service pack data load lets you select the languages you want to load.

Service Pack Information

The *Service Pack Release Notes* describe the changes to MFG/PRO eB2.1 introduced in each service pack since the initial MFG/PRO eB2.1 release. This cumulative document is available in HTML and PDF formats in the `spinfo/web/relnotes` directory on the client service pack CDs. Review the release notes in the `index.html` or `index.pdf` file to understand how changes may affect your current implementation.

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

Service pack information contains the following elements:

Module. Provides information on each module and the files in that module that changed in the service pack.

Menu. Provides information on each menu and the files in that menu that changed in the service pack.

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

Modified Files. Provides information on each file modified by the service pack. This information includes the changes that were made to the file plus cross-references to the ECO that caused the file to be modified, the affected menus and modules, and the entire file, to enable review of all changes in context.

File Difference. Provides information on each file modified by the service pack. 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 that must be recompiled after the service pack has been installed. Additionally, provides cross-references to the modified file information for each file changed in the service pack. This file is located in the `/modlist` directory.

During the service pack installation, you can copy the service pack information to any directory you specify. When prompted whether to copy the service pack information, enter Yes, and indicate the destination directory for the information.

Object IDs and Enhanced Controls

Several steps have been added to each standard eB2.1 install beginning with Service Pack 2. All installs must enter an Object ID (OID) generator code and create an empty audit database for compiles only.

Beginning with Service Pack 2, the optional Enhanced Controls module is also available. This module requires additional installation steps. See *MFG/PRO eB2.1 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 standard MFG/PRO 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. 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 OID generator code you enter is used by MFG/PRO 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 MFG/PRO 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 MFG/PRO 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 service pack installation requires the following service pack CDs:

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

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

The service pack installation for Progress or Oracle requires the following steps:

- Install database server and language media to the SP install directory.
- Install client media (character or GUI) to the SP 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 service pack files.

Oracle was not supported for eB2.1 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 *MFG/PRO eB2.1 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 for any reason, remove the service pack directory from the PROPATH and restore the databases from the backup.

Prior to Installation

This document assumes the person completing this installation has MFG/PRO installation experience and is proficient in the respective database for which the installation is being completed. In addition, you must meet all product and system requirements from the base MFG/PRO installation guide.

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

Important If you have integrated third-party products, you should contact the product suppliers for compatibility issues with this service pack.

The cut-off date for a service pack can be found in the `version.mfg` file in the `mfgpro` directory on each service pack CD.

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 `qadddb` database is empty before starting a service pack install. If not, there is a chance an error will be raised when you apply schema changes: “Records exist in `attmp_mstr`. Run the audit trail creation process to make sure it is empty.”

If this does occur, 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

Prior to starting a service pack installation, back up your databases. QAD recommends you complete the service pack installation against a test environment first. By default, the eB2.1 service pack installs to a separate service pack directory beneath your original `MFGPROInstallDir`. Data deleted from MFG/PRO during the service pack install are preserved in dump files in the `MFGPROInstallDir/db` directory.

Prior to install, review the following cautions and requirements:

- Set your `$TERM` variable to a standard terminal type such as `vt100` or `vt200` while installing the service pack. You can switch to a language-specific terminal if necessary when you launch the installed clients.
- Determine the following information:
 - The MFG/PRO installation directory where eB2.1 is installed, referred to in this document as `MFGPROInstallDir`
 - The Progress directory for the database server
- For UNIX environments, ensure the `mfg` user exists as defined in your MFG/PRO eB2.1 installation guide.

Installing the Service Pack from Delivery Media

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

In this set of steps, you install the service pack database server and language files:

- 1 Log in as an administrative user with read, write, and execute permissions for your MFG/PRO environment. On UNIX systems, this is typically `mfg`.
- 2 Mount the service pack 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.
- 5 Accept the license agreement.
- 6 Select the location for the service pack installation log. You should typically use the default directory, which is also the default for the original eB2.1 installation. This ensures subsequent installations can locate the log directory with all relevant eB2.1 install information.
- 7 A warning displays about third-party products and customizations. After the warning, you are then asked if you want to view the service pack install instructions during the install.

```

C:\WINNT\System32\cmd.exe - install
Please enter location where the log file should be written.
Default is c:\instlog
-
Installing this service pack will replace existing files in the destination
directories. If you have 3rd party products, customizations, or bolt-ons
installed, you should view the documentation in order to understand the
ramifications of installing this service pack.

Service Packs are cumulative. That is, each Service Pack contains all the
MFG/PRO files contained on any previous Service Packs. Further, each
Service Pack also contains any files that have been added or modified by
patches since the previous Service Pack. Therefore, a user who wants to
update their version of MFG/PRO only needs to install the most recent Service
Pack in order to have all of the changes to their version. The cut-off date
for patches contained on a given Service Pack is located in the version.mfg
file in the mfgpro directory on the Service Pack CD.

As always, you should back up any system before performing
modifications. Backing up will make it possible to restore
the system to its prior state should anything go wrong.

Do you wish to view the installation instructions while
installing?
(y/n):

```

Fig. 1
Service Pack
Installation
Warning

- 8 If you choose Yes to view the service pack installation instructions online, your default browser launches and displays service pack and Q/LinQ warnings. Follow the links to the installation instructions.

If you choose No, the warnings regarding the service pack CD and Q/LinQ display as text. Review each warning, enter Y, and press Enter to continue.

- 9 Provide the following information when prompted:
 - Progress installation directory
 - Original MFG/PRO eB2.1 installation directory (*MFGPROInstallDir*)
 - Service pack installation directory (*MFGPROInstallDir/spx*)
- 10 Review the summary screen, Figure 2, and enter *y* to begin copying the service pack files. Enter *n* to re-enter installation information.

```

C:\WINNT\System32\cmd.exe - install
Platform is MSWin32.
Product is MFGPRO eB2.1 Database Server Service Pack.
Database type is Progress.
Progress directory is C:\dlc91d.
Language directory is us
Installing from U:\mfgpro\92B\dbpak.cdrom.
MFG/PRO Database Server is located in e:\eb21.
Destination location is e:\eb21\sp2.

Proceed using these values? <y/n>
Default is y
->_

```

Fig. 2
Database Server
Install Summary for
a Service Pack

- 11 The copy progress displays in the command window. When the copy of the service pack to the server is complete, check *mfgdbsvsp.log* in your log directory.
- 12 Remove the database server media, insert your language file media, and repeat steps 3 through 11 to complete the language files installation for each language you are installing.

During the language files install, you are warned that files in the service pack directory may be overwritten. This is OK. Enter *Y* to continue.

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 MFG/PRO eB2.1 source code. It is this client or file server where the code is compiled. Additional clients that connect to Windows file servers are called remote clients. The remote clients require no modifications for SP5.

- 1 Mount your service pack 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 database server 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 MFG/PRO eB2.1 client installation directory (by default, the same as the `MFGPROInstallDir`)
- Service pack directory (an `/spx` 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), then update your existing eB2.1 databases. Workflows are available for both scenarios.

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

Because the workflows support all prior eB2.1 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 service pack level your existing implementation uses. These should be commented out prior to running the workflow.

Oracle Workflow Changes

The Oracle service pack workflow is titled Create Oracle Schema Holders, and uses the workflow `wk0120.ini` located in `MFGPROInstallDir`. 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 service pack you are currently using. The workflows are located in *MFGPROInstallDir*.

Initial Release and Service Pack 1

Both workflows must be run with no steps skipped. 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 service pack directory level.
- Enter the correct delta schema file (.df) name.

The default section looks like:

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

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

```
[LoadSchema]
Status=Not Run
Program=raplodd.p
DBName=./db/mfgempty.db
LDBName=qaddb
DFName=./sp5/progrs/db/dltmfgIR.df
```

Use Table 1 to set the DFName file to reflect your current service pack 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 service pack 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=raplodd.p
DBName=./db/mfgprod.db
DFName=./sp5/progrs/db/dltmfgIR.df
LDBName=qaddb
```

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

Current eB2.1 Level	File Name
Initial release	dltmfgIR.df
Service Pack 1	dltmfgSP1.df
Service Pack 2	dltmfgSP2.df
Service Pack 3	dltmfgSP3.df
Service Pack 4	dltmfgSP4.df

Table 1
Schema Files by
Service Pack

Service Packs 2 and 3

Both workflows must be run, 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.

```

WorkflowDesc=Update Empty Databases
;
;[CreateMSDB]
;Status=Not Run
;Program=crtpdbsa.w
;STName=./db/audempty.st
;
;[LoadSchema]
;Status=Not Run
;Program=raplodd.f.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=raplodd.f.p
DBName=./db/mfgempty.db
LDBName=qaddb
DFName=./sp5/progrs/db/dltmfgSP2.df
;

```

Use Table 1 to set the DFName file to reflect your current service pack 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 service pack 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=raplodd.p
DBName=./db/mfgprod.db
DFName=./sp5/progrs/db/dltnfgSP2.df
LDBName=qaddb
```

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

Updating Progress Databases

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

Modify Database Storage Areas (IR, SP1 Only)

For the initial release and Service Pack 1, new storage areas have been added to the main production and empty databases. If these are not added to your empty and production databases prior to performing the data definition loads in later steps, the loads will fail. You first modify the delta structure that was shipped with your service pack. You 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 upgrading from the initial release or SP1. No storage area changes were made in SP2; if you are on SP2, this set of steps can be skipped.

- 1 Launch MFG/UTIL on your MFG/PRO 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 release. By default, the files are located in *MFGPROInstallDir/spx/progrs/db* where *x* is the service pack number. Select OK to open the file.

Note Files after *dltnfgSP1.st* are not included because storage area changes have not been made since SP1.

Installed Version and Service Pack	Delta .st File to Open
eB2.1 Initial Release	dltnfgIR.st
eB2.1 Service Pack 1	dltnfgSP1.st

Table 2
Delta .st Files By
Source Version

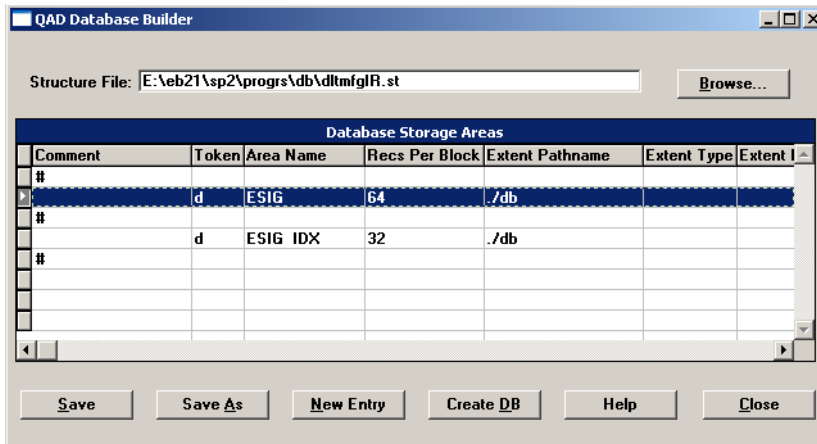


Fig. 3
Delta .st File
Opened for Editing

- 4 Tab to or select the first storage area listed. In Figure 3, 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 *MFGPROInstallDir/db*. Choose OK to save the change and return to the editor screen.

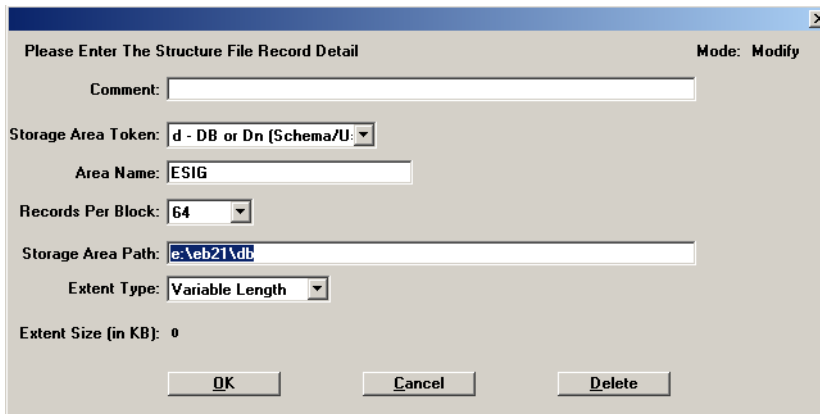


Fig. 4
Storage Area
Definition Editor

- 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 upgrading from the initial release or SP1. No storage area changes were made in SP2; if you are upgrading from SP2, this set of steps can be skipped.

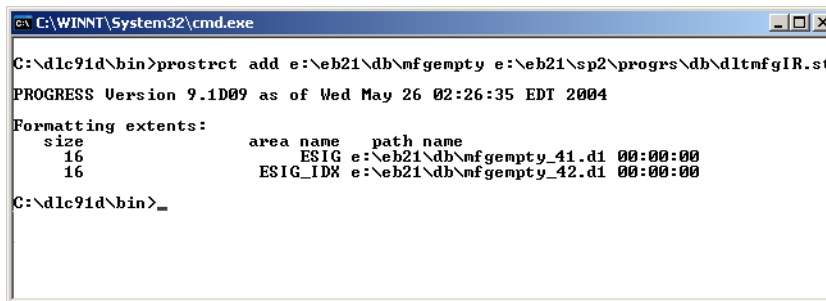
- 1 Open a command window and navigate to *MFGPROInstallDir*.
- 2 Use the following syntax to add the new storage areas to the required databases:

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

For example:

```
d1c91e\bin\prostrct add ./db/mfgempty
/eb21/sp5/progrs/db/dltmfgIR.st
```

If the update is successful, the result displays.



```
C:\WINNT\System32\cmd.exe
C:\d1c91d\bin>prostrct add e:\eb21\db\mfgempty e:\eb21\sp2\progrs\db\dltmfgIR.st
PROGRESS Version 9.1D09 as of Wed May 26 02:26:35 EDT 2004
Formatting extents:
size      area name  path name
16        ESIG      e:\eb21\db\mfgempty_41.d1 00:00:00
16        ESIG_IDX  e:\eb21\db\mfgempty_42.d1 00:00:00
C:\d1c91d\bin>_
```

Fig. 5
Successful
prostrct Update
for mfgempty

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

Updating the Empty Databases (All)

Using an the Update Empty Databases workflow (*wk0100.ini*), the following steps create an empty audit database and update the schema in the main empty database, *mfgempty*. 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 Prior to starting the empty database updates, copy `audempty.st` and `audempty.df` from `MFGPROInstallDir/spx/progrs/db` to `MFGPROInstallDir/db`. This ensures the database is created in the correct location.

- 1 Launch MFG/UTIL on your MFG/PRO database server.
- 2 Select MFG/PRO 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 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 `MFGPROInstallDir/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:
 - `MFGPROInstallDir/audempty.log`
 - The storage area extents created in `MFGPROInstallDir/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 3 as a guide.

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

Table 3
Connect Database
Values for
`audempty`

- 8 The default data definition file, `audempty.df`, displays. The default path is not correct. Choose Browse and select `audempty.df` from `MFGPROInstallDir/db`. Choose OK to begin loading the database schema. The program first writes the schema to a buffer, then loads it into the database. The write displays a progress screen; the load process does not.
- 9 The QAD Log Window 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 `MFGPROInstallDir/spx/progrs/db` and select the appropriate delta `.df` file for your installation. The `.df` files do not need to be copied to your `MFGPROInstallDir/db` directory.

Installed Version and Service Pack	Delta .df File to Load
eB2.1 Initial Release	<code>dltmfgIR.df</code>
eB2.1 Service Pack 1	<code>dltmfgSP1.df</code>
eB2.1 Service Pack 2	<code>dltmfgSP2.df</code>
eB2.1 Service Pack 3	<code>dltmfgSP3.df</code>
eB2.1 Service Pack 4	<code>dltmfgSP4.df</code>

Table 4
Delta .df Files By
Source Version

- 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.

Updating the Main Production Database (All)

Using the Update Production Database workflow (*wk0110.ini*), the following steps update schema and data for the main production database.

- 1 In the MFG/PRO 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*.

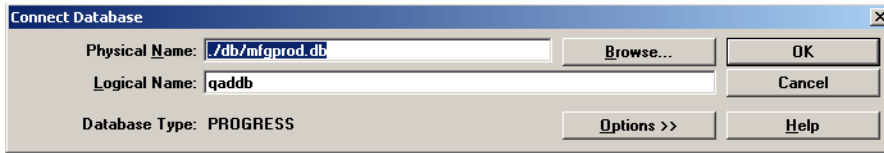


Fig. 6
Connecting to *mfgprod*

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

Installed Version and Service Pack	Delta <i>.df</i> File to Load
eB2.1 Initial Release	<i>dltmfgIR.df</i>
eB2.1 Service Pack 1	<i>dltmfgSP1.df</i>
eB2.1 Service Pack 2	<i>dltmfgSP2.df</i>
eB2.1 Service Pack 3	<i>dltmfgSP3.df</i>
eB2.1 Service Pack 4	<i>dltmfgSP4.df</i>

Table 5
Delta *.df* Files By Source Version

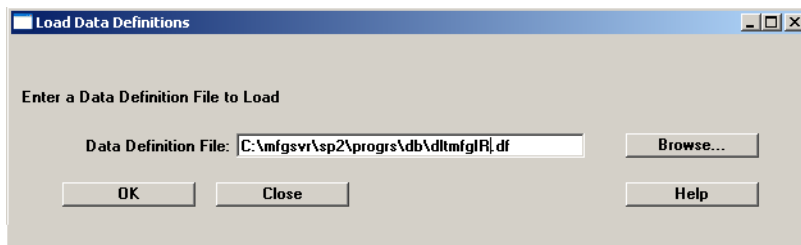


Fig. 7
Loading Data Definitions for *mfgprod*

- 4 Choose OK to begin loading the database schema. The QAD Log Window displays and a progress screen. When the load completes, choose Close in the Log Window.
- 5 The Service Pack Data screen displays. Enter the QAD domain. Select the databases you want to load the data into, and press OK.

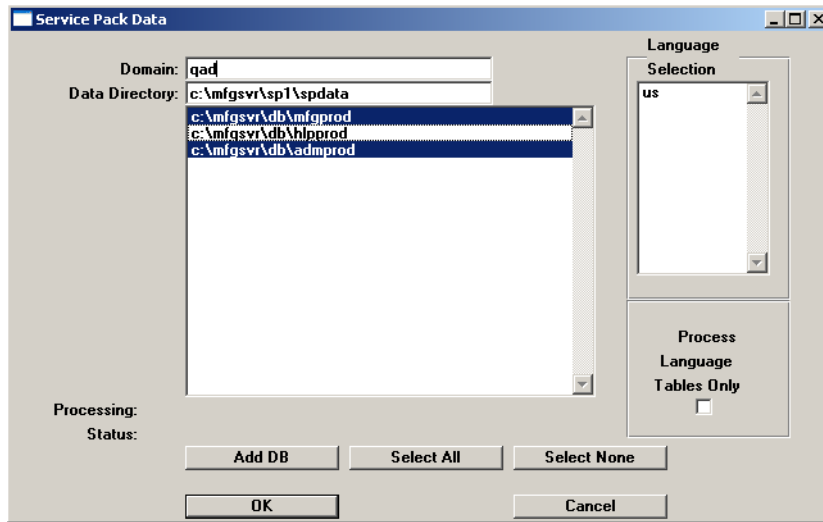


Fig. 8
Service Pack Data Load Selection Screen

Most, if not all, system data shipped with an MFG/PRO 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 service pack, check Process Language Tables Only.

Choose OK to start the load process.

- 6 You are prompted to connect to the admprod database. Choose OK.



Fig. 9
Connecting to admprod

- 7 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 in order 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.

- Choose Browse to locate the production database that contains the valid domain value you entered in step 5. Choose OK to continue the load.

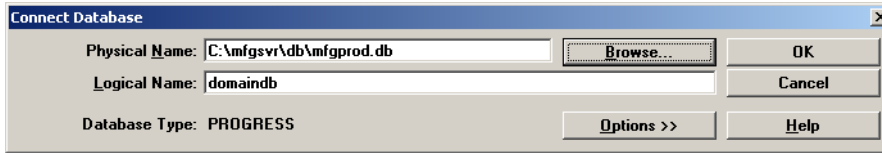


Fig. 10
Domain Database
Connection for
Admin Database
Loads

- You are asked to confirm the creation of a file named *dbnamesave* for deleted records. Choose Yes to continue.
- The Connect Database screen then displays for the first main database selected. Accept the defaults to connect to the production database again. Choose OK.
- You are asked to confirm the creation of a file named *dbnamesave* for deleted records. Choose Yes to continue.

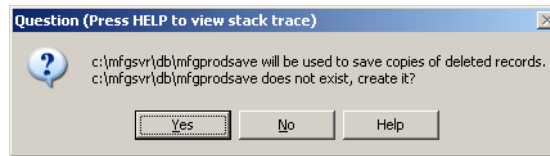


Fig. 11
File Create
Confirmation

- The QAD Log Window displays. Obsolete records are deleted and new records are added. When the load completes, choose Close to continue.
- The QAD Log Window displays. Obsolete records are deleted and new records are added. When the load completes, choose Close to continue.
- The Truncate BI File screen now displays. Accept the default path to *mfgprod* and choose Truncate.

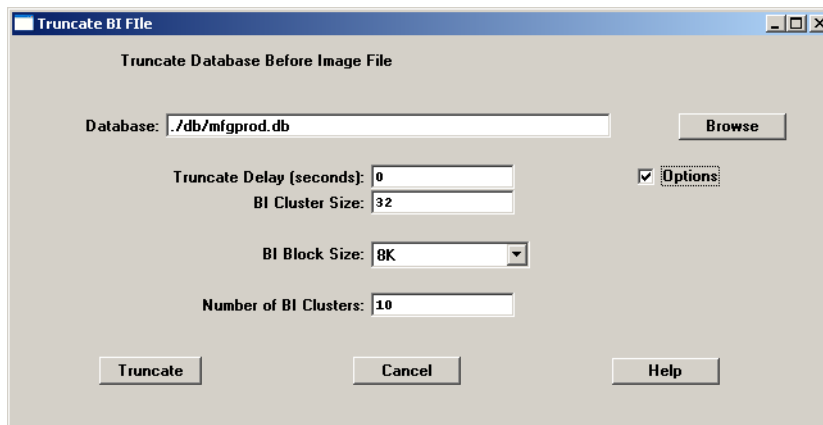


Fig. 12
Truncating
mfgprod

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

Additional Domain Updates (All)

The previous set of steps loads service pack schema changes into your production databases and loads service pack 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 service pack updates, reset the MFG/UTIL workflow and repeat the workflow for those databases. To do this:

- 1 Select Reset MFG/PRO 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 5 through 13 from “Updating the Main Production Database (All)” on page 17. Enter the additional domain in step 5.
- 3 Repeat these steps for each additional domain.

Updating Oracle Databases

The creation of the Oracle empty schema holder for existing eB2.1 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

For Oracle databases, 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 here refers to the master or source schema holders used for creating production schema holder copies and for compiling against. All Progress schema holders are, by definition, empty.

Create Empty Schema Holder

- 1 In MFG/UTIL, select MFG/PRO 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. This guide refers to the schema holder using the default `oraempty`.
Accept the default Start with option; choose OK. The schema holder is created.

Load the MFG/PRO Schema

After the schema holder is created, the Connect Database screen displays.

Data definitions are required for the schema holder. The scripts for the possible scenarios are listed in Table 6.

Current eB2.1 on Oracle Status	SQL Update Script to Use
Service Pack 3	<code>oraSP3.df</code>
Service Pack 4	<code>oraSP4.df</code>

Table 6
Service Pack Data
Definition File by
Release

- 1 Verify that the Physical Database Name field contains the path to and name of the schema holder. Leave the other fields blank and choose OK to connect to the schema holder.
- 2 In the Load Data Definitions screen, verify that the correct `.df` file, `oraSP3.df`, is specified in the Data Definition File field. Choose OK to load the main MFG/PRO schema contained in the data definition file.
When the Load Completed prompt displays, choose Close.
The Load Data Definitions screen reappears with the Close button selected. Press Enter to close the screen.
- 3 The Connect Database screen displays. Accept the defaults and choose OK to reconnect to the schema holder.
- 4 The Load Data Definitions screen displays. Verify that the correct `.df` file, `oadmempty.df`, is specified in the Data Definition File field. Choose OK to load the MFG/PRO administration data definition file.
- 5 When the Load Completed prompt displays, choose Close. The Load Data Definitions screen reappears with the Close button selected. Press Enter to close the screen.
- 6 The Connect Database screen displays. Accept the defaults and choose OK to reconnect to the schema holder.

- 7 The Load Data Definitions screen displays. Verify that the correct `.df` file, `ohpempty.df`, is specified in the Data Definition File field. Choose OK to load the MFG/PRO help schema contained in help data definition file.
- 8 The Load Data Definitions screen reappears. Choose Close.

Truncate the Before-Image File

You now truncate the empty database before-image (BI) file.

- 1 The Truncate Database Before Image File screen displays. Accept the default path to `oraempty` and choose Truncate.
- 2 Choose Close in the progress screen when the process is complete.
- 3 Exit the Operation Sets. The remainder of the Oracle update process occurs outside of the workflows.

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. Enter the name you want to use for your production schema holder under New Database Name, usually your Oracle SID. 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.
- 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 (`eb2ora`, for example).
- 7 The server install finishes.

Schema Changes for Oracle Databases

Schema changes are required for the Oracle database. The scripts for the possible scenarios are listed in Table 7.

Current eB2.1 on Oracle Status	SQL Update Script to Use
Service Pack 3	dltSP3.sql
Service Pack 4	dltSP4.sql

Table 7
Service Pack Delta
SQL by Release

Update the Oracle Database Schema

Follow these steps to run the service pack 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 < dltSP3.sql`

Load Service Pack Data

These steps load service pack data. Use these steps for your production, test, training, and other eB2.1 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 service pack 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 You are asked whether 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 You are asked whether to create a dump directory for the service pack data that is obsolete. Choose Yes to create the directory.
- 6 The processing starts by removing conflicting data from the tables. The new service pack data is then loaded.

- 7 The process then repeats for language updates—connect, remove conflicting data, and load new data—this time from the *MFGPROInstallDir* /*spx/spdata/xx* directory, where *x* is the target service pack level, and *xx* is the language code.
- 8 When the service pack data loads are complete for the first database you selected, the next database is then connected and the loads repeat (steps 6 and 7) until all selected databases are updated.
- 9 When all databases are updated, close the Service Pack Data 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 database 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 database.
- 4 Close the log window that displays on completion.

This completes the work to update your main databases.

To complete the service pack updates 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 service pack levels.

Use these steps to update your database sets to support compiles and to run the new service pack code with your production MFG/PRO 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 new service pack directory appears first, Figure 13.

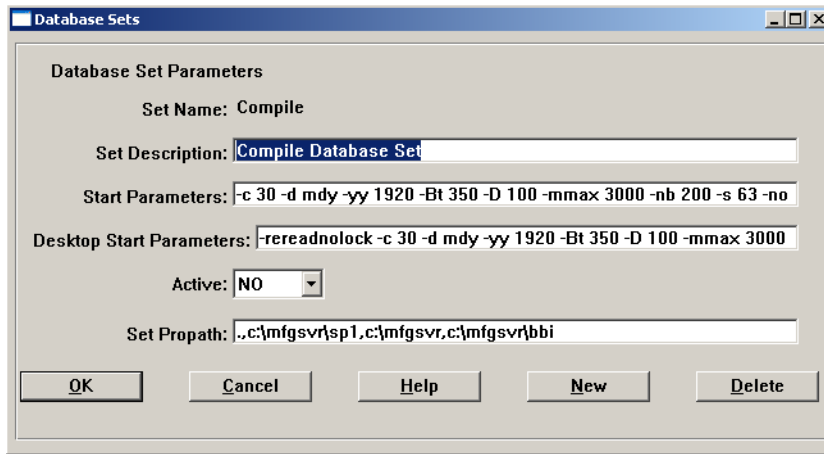


Fig. 13 Database Set with Updated PROPATH

- 4 Repeat steps 2 and 3 for each database set.
- 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 is a required step 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.

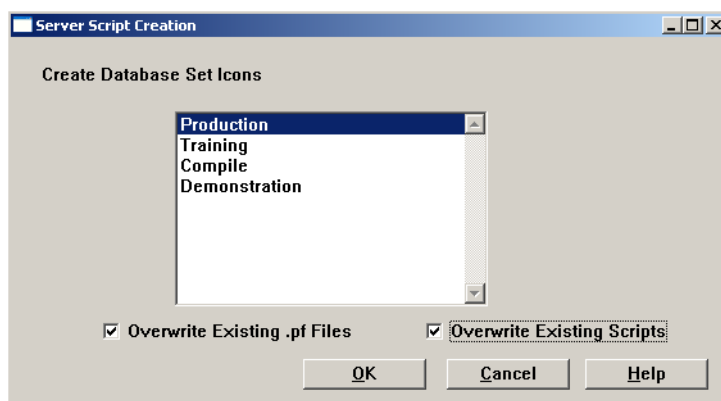


Fig. 14 Server Script Creation

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

- 9 Choose OK to generate the new 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 Service Pack Code

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

Important For sites implementing Enhanced Controls in conjunction with the current service pack level, skip these compile steps. Complete the Enhanced Controls install as detailed in *MFG/PRO eB2.1 Installation Guide: Progress Database*. Complete a full compile as detailed in that guide.

The service pack must be compiled prior to launching MFG/PRO eB2.1.

- 1 In MFG/UTIL, select Programs|Compile Procedures.
- 2 Select the compile list, `utcompil.wrk`, from the following directory:
MFGPROInstallDir\spx\modlist
- 3 The Compile Propath should include *MFGPROInstallDir\spx\xrc* and *MFGPROInstallDir\xrc*.
- 4 Set the compile destination to the service pack directory; for example:
MFGPROInstallDir/sp5.

The completed Compile screen is shown in Figure 15.

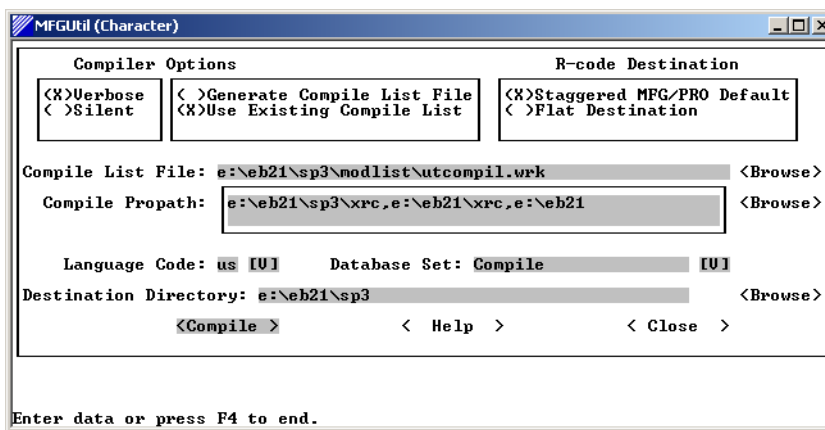


Fig. 15
Compile
Parameters for a
Service Pack

- 5 Choose Compile. You are warned that the destination directory exists. Choose Yes to continue. You are also asked if you want 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, Figure 16.

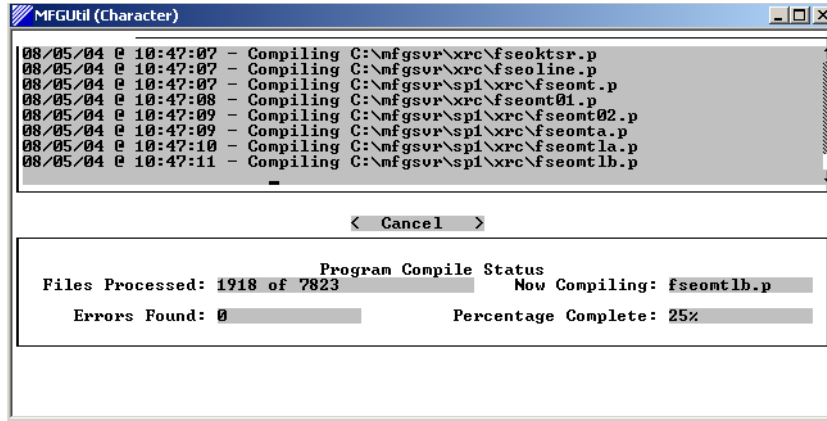


Fig. 16
Compile Progress

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

You can now launch MFG/PRO using the new scripts. When the welcome screen displays, verify that your new service pack level is shown.

Nothing is required to connect and use existing remote clients against the revised service pack 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. No changes were made to the multi-language files after Service Pack 2.

Note If you have customized any labels in your schema, or in `xdc_mstr` prior to loading it previously, these customizations may be overwritten.

- 1 In MFG/UTIL, select Load Translated Labels from the Database menu.
- 2 You are asked to connect to a database. Select the `mfgempty` database.
- 3 You are then asked to locate an `xdc_mstr` file to load. By default, these are located in `MFGPROInstallDir/sp5/xx` where `xx` is the two-letter language code. There are two `xdc_` files in each `sp5/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 then again for `audempty`.

Service Pack Compile

- 1 Open Compile Programs from the Programs menu in MFG/UTIL.
- 2 Browse to locate the `utcompil.wrk` file located in `MFGPROInstallDir/sp5/xx` where `xx` is the two-letter language code.
- 3 Connect to the compile database set.
- 4 The PROPATH should be as follows:
`MFGPROInstallDir/sp5/xrc,MFGPROInstallDir/xrc,MFGPROInstallDir`
- 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 MFG/PRO using the new scripts. When the welcome screen displays, verify that your new service pack level is shown.

Updating the Help Database

To include help updates, load `sp_help.fhd`.

Note Service Pack 4 included enhancements to the Kanban module. If you use Kanban and are upgrading from prior to SP4, you should follow these steps to update associated help records.

- 1 Launch MFG/PRO.
- 2 Go to Field Help Load (36.4.19).
- 3 In the Language field, enter the MFG/PRO language code of the language that you are loading help for 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 `sp5/us/sp_help.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 have been 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

There are utilities that must be run following the service pack installation for pending vouchers and EDI ECommerce. Read the instructions carefully for each utility to determine whether you need to run it and how it must be run.

Creating Pending Voucher Detail

A new utility was introduced in SP4 to correct pending voucher details required for Supplier Consignment. If you are upgrading to SP5 from any service pack prior to SP4, you must run the Create Pending Voucher Detail (5.25.6) utility immediately after loading the help. Otherwise, receipts created prior to the service pack installation do not display in reports and inquiries.

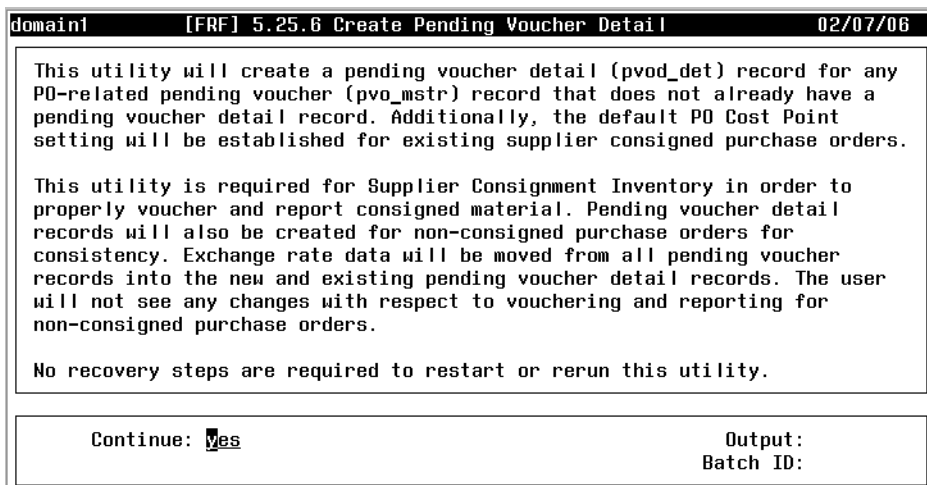


Fig. 17
Create Pending
Voucher Detail

EDI ECommerce

Naming inconsistencies in QAD-provided records defined in Trading Partner Parameter Maintenance (35.13.10) have led to processing issues with some types of documents.

After installing the service pack, use a new utility, Trading Partner Para Desc Update (36.13.25.2, utrplpd.p), to correct these inconsistencies.

Important Program code throughout the EDI ECommerce module is updated by the service pack to use the corrected values. If you install this service pack, you must run the utility.

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

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

Migrating Progress Versions

As of Service Pack 4, Progress OpenEdge 10, Service Pack 3, is required for MFG/PRO eB2.1. Complete the following steps to migrate from Progress 9.1x to Progress OpenEdge 10 following the service pack install:

- 1 Complete the upgrade to the latest eB2.1 service pack.
- 2 Back up the databases using Progress Version 9.

Warning There is always a chance that your schema could become corrupt during conversion. If the conversion fails, your database cannot be recovered. If this happens, you must revert to the backup copy of your database and begin the conversion again.

- 3 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.
- 4 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.
- 5 Disable replication, if applicable. PROUTIL cannot convert a Version 9 database if replication is enabled.
- 6 Install Progress OpenEdge 10.
- 7 Install the OE10 Service Pack 3.
- 8 Modify operating system environment variables:
 - DLC
 - PATH
 - PROPATH
- 9 Modify the PROPATH in eB2.1 .ini files to point to the new DLC:
 - mfguprog.ini
 - mfgutil.ini

- 10 Use Progress OpenEdge 10 PROUTIL CONV910 to migrate all eB2.1 empty and production databases. This is run from the *DLC/bin* directory, and uses the following syntax:

```
proutil MFGPROInstallDir/db/dbname -C conv910
```

- 11 Modify the PROPATH in MFG/UTIL under Configure|Set Paths for MFG/PRO and MFG/UTIL.
- 12 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.
- 13 Recompile base and service pack application code using Programs|Compile Procedures in MFG/UTIL.

