QAD 2007 Conversion Guide
Progress Database

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QAD Enterprise Applications 2007
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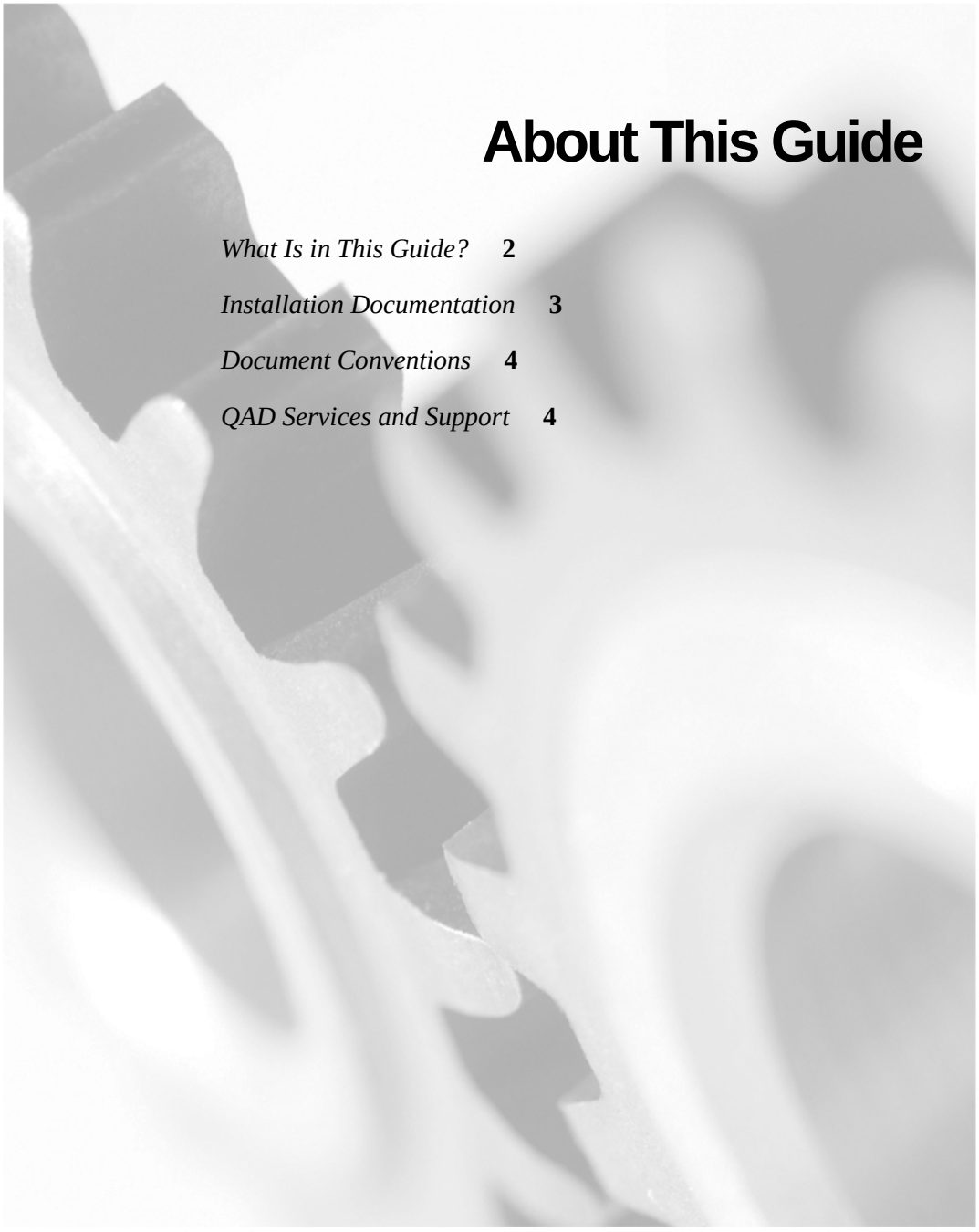
Contents



About This Guide

What Is in This Guide?

The instructions in this guide convert MFG/PRO versions 8.5 through eB2 to the MFG/PRO eB2.1, Service Pack 3 release. This guide covers UNIX and Windows conversions for Progress databases. The process requires partially installing MFG/PRO eB2.1. This installation is documented in:

- *MFG/PRO eB2.1 Installation Guide: Progress Database*

If you have already installed the initial release of eB2.1, use only *Installation Guide: MFG/PRO eB2.1 Service Pack X*, where *X* is the latest service pack level. The guide ships with the service pack CD.

Conversion Checklists

See “Conversion Checklists” on page 187.

For advanced users, or for less experienced users who want to track their progress on the conversion, this guide includes an appendix that contains checklists for:

- Buffer-copy conversion
- In-place conversion

These checklists provide the sequence, the default or recommended values if applicable, and the page reference for the more detailed description of the steps in the guide.

Audience

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

Installation Documentation

This document is available on the QAD ServiceLinQ Web site:

http://support.qad.com/

Make sure you have the most recent version of this document.

Related MFG/PRO Installation Documentation

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

- For information about planning for Enhanced Controls, see *Deployment Guide: Audit Trails*.
- To install Enhanced Controls on eB2.1 SP3 or later, see *MFG/PRO eB2.1 Installation Guide: Progress Database.*
- To install QAD Desktop, see *Installation Guide: QAD Desktop*.
- To install QXtend Inbound, see *Technical Reference: QXtend Inbound.*
- To install QXtend Outbound, see *Technical Reference: QXtend Outbound*.

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

Additional Web Resources

For Progress problems, use the Progress Knowledge Center accessed from their support Web site:

http://www.progress.com/support/index.ssp

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

Document Conventions

This guide uses the conventions listed in the following table.

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

QAD Services and Support

During your implementation of QAD products, you should be aware of available service and support offerings.

QAD Consulting and Technical Services

MFG/PRO installations have a wide variety of configuration possibilities, are highly scalable, and are easily customized. While this guide provides basic installation information, it cannot consider every possible computing environment or configuration.

To take full advantage of MFG/PRO's flexibility and potential in your specific environment, QAD offers Consulting and Technical Services specializing in installations and customizations. These offerings include performance enhancements as well as technical and administration training. For more information, contact your nearest QAD office or go to:

http://www.qad.com/services/

QAD Support

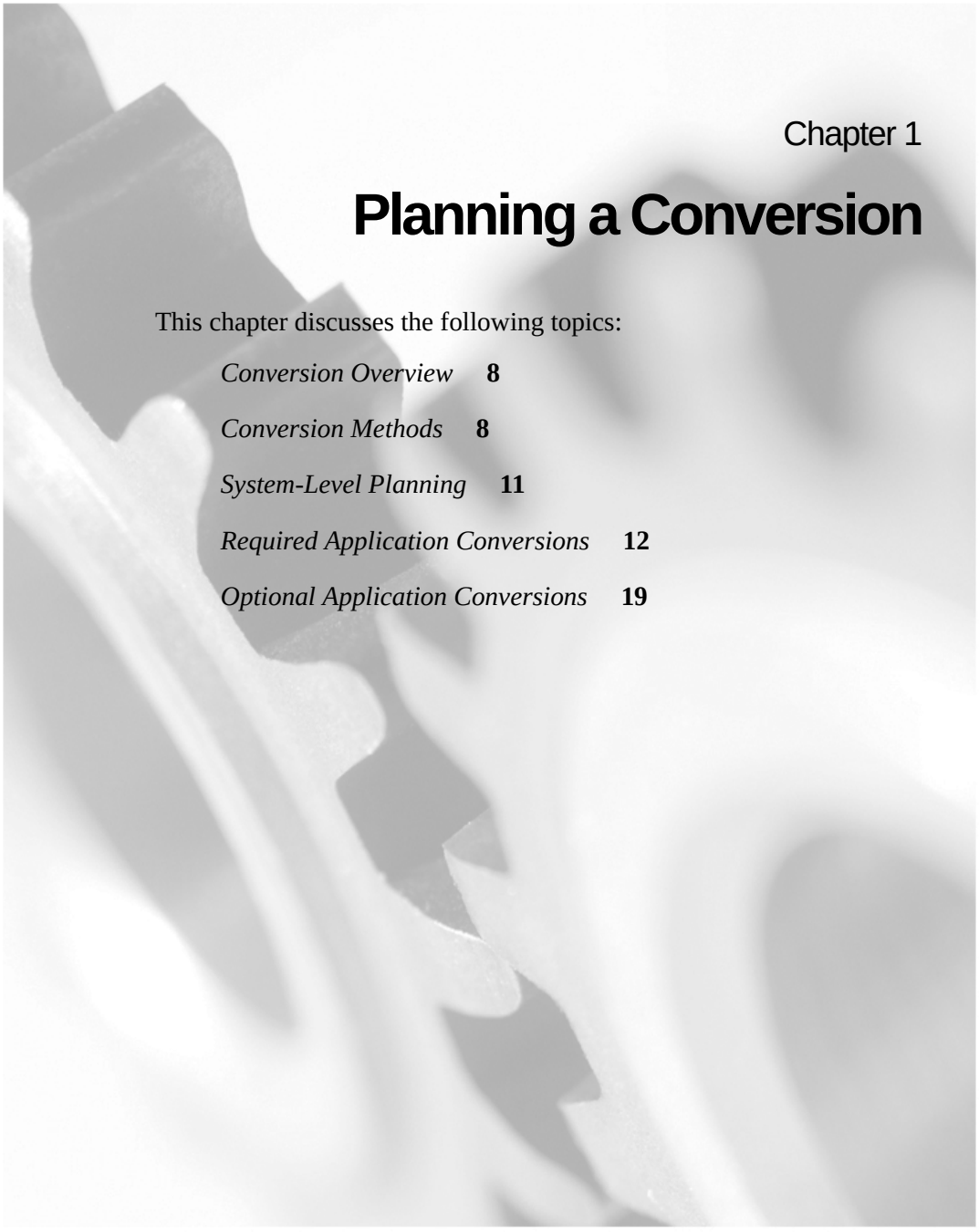
Before beginning an installation, it is recommended that you contact QAD Support to notify them of your plans, schedule, and if you will have a consultant onsite to assist in the process. Be sure to identify who the

consultant is, and how they can be reached. QAD Support provides a number of online resources to help you find answers to your questions and avoid problems beforehand. These include, but are not limited to, the following:

- QAD Knowledgebase
- QAD Learning Portal
- Customer Advisories
- Platform Availability Guide
- QVillage Discussion Forums

Go to QAD ServiceLinQ to access the full array of online Support resources at:

http://support.qad.com/



Chapter 1

Planning a Conversion

This chapter discusses the following topics:

Conversion Overview

Important The conversion process to MFG/PRO eB2.1 has changed dramatically from prior releases. The following differences apply:

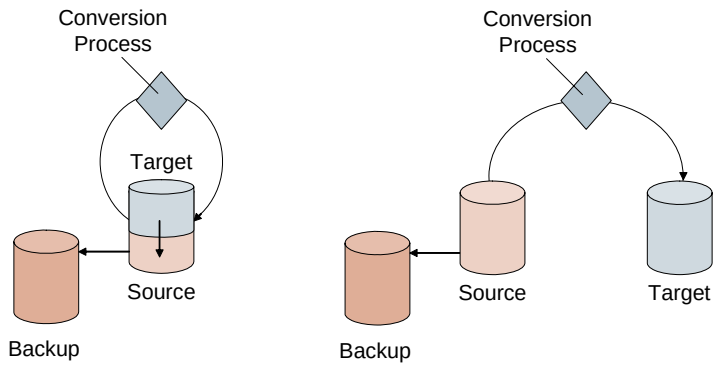
- All conversion operations are now completed from the Convert Database workflow or from the Conversions menu in MFG/UTIL. MFG/CONV has been retired.
- All conversion programs have been rewritten to automate and streamline the conversion process.
- You must complete several new conversion steps, such as assigning database domains and entering the object ID (OID) generator code.
- Two conversion methods are available: buffer copy and in-place.

As a result of these changes, the software you use and the steps you follow are different than prior conversions. Follow the instructions in this guide to complete a successful conversion.

Conversion Methods

The largest change to the conversion process is the introduction of two conversion methods: buffer copy and in-place. A simple comparison of the two methods is shown in Figure 1.1.

Fig. 1.1
Buffer Copy and In-Place Conversions



In Place Conversion

Standard (Buffer Copy) Conversion

Buffer Copy Conversion

The buffer copy closely follows the protocol of prior conversions, but uses the faster, more efficient buffer copy method to transfer existing production data from the source to the target databases. The prior method used a dump and load technique.

The buffer copy method has the following advantages over in-place:

- You can retain—and continue to run production on—your source database. This may be beneficial if your conversion is planned in stages over an extended period.
- You create new target production databases, and, therefore, can edit the database structure files to take full advantage of the Progress 9.1 database deployment technology. This typically results in a more efficient, more easily managed database.

  Note If your source database is MFG/PRO eB or later, you may already have taken advantage of database structure files, making this rationale for using the buffer copy method less important.

In-Place Conversion

The in-place conversion was developed to support companies with large databases, limited disk space, and limited conversion time. This method updates the source database with target data and schema changes, avoiding the copy of production data from the source to the target database.

The advantages of the in-place method include:

- A faster conversion. Depending on database size, the in-place conversion can eliminate many hours of processing time since the production data is never copied from the source database to the target.
- Reduced disk space. Any sensible conversion protocol requires a full backup of the source database. The buffer copy creates an additional target database resulting in three, full-sized production databases. The in-place option, by updating the source database with target data and schema changes, results in only two full-sized production databases.

Note In-place conversions do not allow you to retain existing system data unless you have created a backup of your production databases.

Conversion Stages

Both the buffer copy and in-place conversions require similar conversion stages. The differences between the two methods are noted in each section:

Prepare the source database. This includes archiving and deleting as many records as possible in the source database. This reduces the amount of data to be copied during a buffer copy. You then run reports for which you will run equivalent reports in the target database after the conversion in order to check the data. You should also preserve system-level custom data, such as user help and menus.

Create the target database. For a buffer copy conversion, you create the target databases, but do not load the default system data. For in-place conversions, you create new administration and help databases, but not the production database. In addition, you need to migrate any Progress databases that are not already on Progress 9.1 to the Progress 9.1 schema.

In this guide, the directory where you install the target MFG/PRO version is referred to as the `TVInstallDir`.

Run the MFG/UTIL Conversion. MFG/UTIL workflows are available for both conversion methods. In general, the workflows connect you to the appropriate databases, allow you to select the optional conversion programs, then dump or load data as required.

The OID value is then entered and the database is converted.

For more information on OID values, see the following section.

Install the clients. You can now install and configure your various clients as described in the installation guide for your database. In general, you must install client software, configure the database sets, compile the code, and generate new startup and shutdown scripts.

Additional manual setup is required for some programs, such as control settings or generalized codes. You then restore the custom default data, such as menus and user help.

OID Generator Code

One important step required of all eB2.1 conversions is the entry of an OID generator code. This code is used to create the OID values that uniquely identify each record in the database.

You can choose any numeric code 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 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.

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

System-Level Planning

At the system level, depending on which conversion method you use, you will have two or three full production databases—backup, source, and for buffer copy, target—as well as disk space and memory requirements for processing. The schedule for your conversion will also depend on a number of variables.

Note For purposes of this planning discussion, the backup of the source database is assumed to reside on a separate network disk; all recommendations are for production databases only and exclude the backup.

Disk Space

QAD recommends starting out with disk space for the equivalent of two to three full production databases. If you have a 20 GB source version production database, ensure a minimum of 50 to 60 GB before starting the conversion.

Memory Requirements

The larger conversion programs that run against the target database have been tested by QAD to ensure they scope transactions to avoid filling standard memory buffers. However, memory is crucial to the performance of these programs. A minimum of 2 GB is recommended.

Scheduling

Always run a test conversion. This ensures you have encountered any operating system (OS), application, or documentation problems you might have, asked all the required application questions of the appropriate experts, and can determine a full production conversion schedule.

If you are converting a large database (10 GB +) and your schedule is going to run longer than a weekend, consider the in-place conversion.

For any conversion, QAD recommends that you contact Support to discuss your plans and expectations with a qualified Support representative.

Required Application Conversions

The following conversions are run automatically from MFG/UTIL. Where additional application information is available, a reference appears in the margins. If a conversion does not apply to your database—for example, you do not have commodity codes—the program runs quickly, updates nothing, and ends.

Domain Conversion (8.5 – eB2)

Domain capabilities in MFG/PRO enable you to maintain multiple, unique logical databases in a single physical database. You can do this if you are starting with a new MFG/PRO installation. However, the current implementation of domains does not enable you to convert multiple source databases into a single physical target database with multiple domains.

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

MFG/PRO conversions enable you to convert each of your source production databases to new physical databases with a primary domain defined for the target database and connection domain designations for connected databases. Primary domains reference the current database; connection domains point to domains located in other databases.

The addition of domains to the database affects most database tables and indexes. Conversion is required. The conversion:

- Creates a system domain named QAD during conversion data loads.
- Creates a primary domain with a name you supply for the database being converted.
- Updates the domain field in all converted tables with the primary domain.
- Creates a connection record for the current database.
- Creates connection domain records in the target database for any databases with connection master records in the source database.
- Gives each user access to the primary domain created during conversion. Any security group information currently associated with the user is also associated with the domain.
- Moves accounts associated with currencies to the account defaults table in the database.
- Moves the server time zone data from Domain/Account Control (36.1) to the new Database Control table (36.24).
- Creates the value of the new Multi Domain field maintained with Program Information Maintenance (36.3.21.1) for QAD-supplied programs.

Additional References

- Buffer Copy steps: “Domain Conversions (8.5 – eB2)” on page 50
- In-Place steps: “Domain Conversions (8.5 – eB2)” on page 73

Security Conversion (8.5 – eB2)

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

Beginning with MFG/PRO eB2.1, new security features have been added that increase the access-control options available to system administrators—particularly when they are tasked with meeting the security requirements of external regulatory agencies.

New fields and tables have been added to MFG/PRO to support the security enhancements. Highlights of the conversion process include the following:

- User Maintenance (36.3.1) no longer lets you define a blank user ID. If a blank user ID is detected during the conversion, it is retained in the database for historical purposes. However, you cannot update the record in User Maintenance after the conversion, and the conversion routine sets the Active field to No.
- User Maintenance has a new mandatory field, Active Reason, for identifying the reason for changing the user’s active status. The conversion populates this field with the default reason code QAD_DEF, which is associated with the reason type User_Act used by security functions.

See also “User Group Length Conversion (8.5 – eB2)” on page 92.

- To support the new user group feature, the conversion searches for user groups previously entered in comma-separated lists in User Maintenance and creates a record for each in the user group master table. It then adds the associated user as a member of the group for the production domain specified during the domain conversion.
- For additional security, the password associated with each telnet log-in script in User Option Telnet Maintenance (36.20.10.3) is now encrypted. The conversion encrypts any existing passwords.

Extended Account Structure (8.5 – 9.0)

See *User Guide Volume 4A: Financials.*

Using the sub-account length setting in Domain/Account Control (the `gl_sub_len` field in the `gl_ctrl` table), this post-processing conversion moves sub-account information to a new sub-account field.

This conversion also saves elements of the source version account structure for use by the Global Tax Management (GTM) conversion programs.

Euro Data Conversions (8.5 - 8.6D)

The euro data conversions require that you post foreign currency transactions in the source database and enter accounts for multicurrency transactions in the conversion function prompts. Two programs are then run during the target database conversion step to populate the database with euro data to comply with European Monetary Union requirements and the introduction of additional multicurrency functionality. If the Euro Toolkit is implemented in your source version, the conversion transfers the toolkit data to the euro tables in the target version.

See *User Guide Volume 4A: Financials.*

Additional References

- Source preparation: “Euro Data Conversion (8.5 – 8.6D)” on page 25
- Buffer Copy steps: “Euro Data Conversion (8.5 – 8.6D)” on page 55
- In-Place steps: “Euro Data Conversion (8.5 – 8.6D)” on page 78

MRP to Repetitive Approval Conversion (8.5 – 9.0)

This conversion consists of a post-processing conversion program that moves fields from the QAD work table (`qad_wkfl`) to the new line allocation detail table to enable the MRP to Repetitive Approval Phase 2 functionality. It also requires several post-processing steps in the target database and launching a post-processing utility.

See *User Guide Volume 3: Manufacturing.*

Voucher History Conversion (8.5 – eB)

This post-processing conversion program converts PO receipt history into pending vouchers, loads voucher receipt history, and updates the indexes and key values.

Service/Support Management Conversions (8.5 – eB)

See *User Guide Volume 8A: Service/Support Management.*

The Service/Support Management (SSM) module has major changes to service contracts offering options for designing contracts, generating contract billing, and managing the general ledger (GL) effects of contracts. Implementing this requires a set of three post-processing conversion programs. Do not rerun these conversion programs.

Multi-Entity Accounting Conversion (8.5 – eB)

This post-processing conversion program converts intercompany accounts defined in the Inventory, Accounts Receivable, Accounts Payable and Fixed Assets Control tables to intercompany accounts defined for each entity master record.

MRP Detail Conversion (8.5 – eB)

This post-processing conversion program initializes the `mrp_keyid` field in the `mrp_det` table and assigns one `mrp_det` record with a keyid value. The conversion allows the MRP detail records to be indexed. A test using a line of Progress code is required to test whether the conversion was successful:

```
if not can-find(first mrp_det where mrp_keyid = 0)
```

The conversion was successful if the code returns TRUE.

Linked-Site Costing Conversion (8.5 – eB)

This post-processing conversion program updates the inventory site in the `in_mstr` table from the inventory General Ledger cost site in the same table: `in_gl_cost_site` = `in_site`.

User Master Conversion (8.5 – eB)

This post-processing conversion program initializes the User Type and Access Location fields in the user master table (`usr_mstr.usr_type` and `usr_mstr.usr_access_loc`). This update is required to enable new User Maintenance (36.3.1) features such as time zones, country codes, and locations. The Location field is then initialized to Primary.

Sales Order Master Conversion (8.5 – eB)

This post-processing conversion program populates the `so_consignment` field in the sales order master table (`so_mstr`). Initial data values are obtained from the `so_conrep` field.

EDI ECommerce Conversions (8.6E – eB)

This is a set of three post-processing conversion programs. Only the first of these is required for version 8.6E. All three programs are required for versions 9.0 and eB.

- The ECommerce Turnaround Data Conversion populates the access and creation dates in the `edtar_mstr` table.
- The ECommerce Transformation Conversion creates `edtrv_mstr` entries for the `edtrv_var_name` field.
- The ECommerce Cross-Reference Conversion enables a logical field that records whether `edtmx_ref` records have been exported.

Additional References

- Buffer Copy steps: “EDI ECommerce Conversions (8.6E – eB)” on page 54
- In-Place steps: “EDI ECommerce Conversions (8.6E – eB)” on page 77

Kanban 2 Conversion (eB)

This post-processing conversion program realigns the Kanban master and detail records, moving data from the master to the detail tables and converting data from integer to decimal values for greater precision.

Lean Manufacturing Conversion (eB – eB2)

Lean manufacturing upgrades the Kanban module to Lean Manufacturing. Any existing Kanban data is dumped to a dump directory and is reloaded into the new lean manufacturing tables during automated post-processing.

Cumulative Shipping Reset (8.5 – 9.0)

This post-processing conversion program updates the `sod_cum_time` in the sales order detail table.

E-Mail Master Conversion (8.6E – eB2)

This post-processing conversion program moves e-mail master data from the QAD work table, `qad_wkfl`, and properly updates the e-mail master table (`em_mstr`).

Corporate Commodity Codes (8.5)

The commodity code conversion programs move commodity code data from your source version item master table (`pt_mstr`) and QAD work table (`qad_wkfl`) to the new target version corporate commodity code table (`comd_det`). These programs run during post-processing on the target database.

Additional References

- Source preparation: “Corporate Commodity Codes Conversion (8.5)” on page 26

User Group Length Conversion (8.5 – eB2)

User groups in eB2.1 are limited to 8 characters in length. Use the User Group Conversion utility to convert existing group name lengths to the correct length and to update security features in MFG/PRO that use groups, such as menus and sites. Run this program only after all other conversions have been run.

Additional References

- Post-processing steps: “User Group Length Conversion (8.5 – eB2)” on page 92

Optional Application Conversions

The following programs are optional. You can select which of these programs to run during the automated conversion steps.

Add All OIDs (eB2)

This conversion generates a correct OID value for all existing database records. This only needs to be done if you are implementing Enhanced Controls and can also be run as a separate operation at the time that Enhanced Controls is implemented.

Fixed Assets Conversion (8.5 – 8.6)

Complete this conversion if you have implemented Fixed Assets in an earlier version. The fixed-assets conversion starts with answering MFG/UTIL prompts during the source version dump setup. Then, during post-processing, you run the Fixed Assets Migration Utility (32.25.2) to migrate legacy data to the enhanced Fixed Assets module and to resolve discrepancies between legacy and new data.

See Chapter 8, “Fixed Assets Conversion,” on page 167.

Additional References

- Chapter 8, “Fixed Assets Conversion,” on page 167

Supplier Performance Conversion (8.6)

This post-processing conversion program is required only if you installed the PRO/PLUS Supplier Performance module in version 8.6. PRO/PLUS is a package of automotive industry functionality.

See *User Guide Volume 11: PRO/PLUS.*

The conversion program includes site in the primary indexes of the performance data master (`vep_mstr`) and summary data master (`ves_mstr`) as well as in the linked detail records, performance data detail (`vepd_det`) and summary data detail (`vesd_det`).

Additional References

- Source preparation: “Supplier Performance Conversion (8.6)” on page 25

EDI ECommerce Data Conversion (8.5 – 9.0)

See *User Guide Volume 7: Release Management*.

This post-processing conversion program is required only if you plan to use the EDI ECommerce capabilities. This conversion sets the MFG/PRO sales order invoice and advance ship notice (ASN) export fields so that legacy records are marked as exported documents and will not be considered when creating new export documents. Additionally, it populates the necessary fields and sets trading partner parameters in the appropriate database tables to enable EDI ECommerce functionality.

Additional References

- Post-processing steps: “EDI ECommerce Data Conversion (9.0)” on page 93

Globalization Conversion (8.5 – eB)

See *User Guide Volume 4A: Financials*.

This post-processing conversion program is required to use financial enhancements in MFG/PRO. The program converts the setting of Summarized Journal field (`arc_gl_sum` and `apc_gl_sum`) in the accounts receivable (`arc_ctrl`) and accounts payable (`apc_ctrl`) control tables to the new Summarization Level (`arc_sum_lvl` and `apc_sum_lvl`) fields in `arc_ctrl` and `apc_ctrl`.

Global Tax Management Conversion (8.5 – eB)

See *User Guide Volume 6: Master Data*.

A post-processing conversion program is required for the Tax Compliance feature if Global Tax Management (GTM) was used prior to conversion. This conversion moves fields in tables `txc_ctrl`, `tx2_mstr`, and `tx2d_det` so that future maintenance is easier.

Additional References

- See Chapter 7, “GTM Conversions,” on page 99

Important If you are not using any tax method in your source database, some data must be updated in the source version prior to the conversion. See:

- Source preparation: “Global Tax Management Conversion (8.5 – eB)” on page 24

European Accounting Conversion (8.5 – eB)

For Progress databases, the EA database is implemented as a separate database and two runs through the MFG/UTIL conversion workflow are required: the first to dump the EA data, the second to dump the standard `qaddb` data.

A special source version dump routine is required following this.

Additional References

- Post-processing steps: “European Accounting Conversion (8.5 – eB)” on page 95

Flow Scheduling (9.0 – eB)

Flow scheduling generates time-phased, sequenced statements of production requirements for production lines in a flow manufacturing environment. Conversion requires a modification of target data.

Additional References

- Post-processing steps: “Flow Scheduling (9.0 – eB)” on page 95

Intrastat Conversion (8.5 – eB2)

This post-processing utility converts existing sales-related intrastat history records to modified data rules. This utility is run during the automated post-processing.

Global Shipping Conversion (8.5)

This post-processing conversion program is required only if you implement Global Shipping. This conversion creates and assigns Number Range Management (NRM) sequences and document formats for new and existing shipping documents, and company address records for existing shipping site records, among other changes.

Additional References

- Source preparation: “Global Shipping Conversion (8.5)” on page 25
- Buffer Copy steps: “Global Shipping Conversion (8.5)” on page 49
- In-Place steps: “Global Shipping Conversion (8.5)” on page 72
- Post-processing steps: “Global Shipping Conversion (8.5)” on page 94

Product Change Control Conversion (8.5)

This post-processing conversion program is required if you implement the Product Change Control module. The PCC conversion moves Engineering Change Order (ECO) data to new locations within the database. The data itself remains the same; only the location changes.

Additional References

- Source preparation: “Product Change Control Conversion (8.5)” on page 26

Chapter 2

Preparing Source Data

Use this chapter to prepare your MFG/PRO 8.5 through eB2 source version databases for conversion.

Preparing the Source Version Database

The steps in this section determine the duration and effectiveness of your database conversion. Each task is aimed at reducing conversion time, saving crucial data, or providing validation references of your pre-conversion environment.

General Preparations

Use this section to perform preliminary data preparation in your source version environment.

1. Post and close as many financial transactions as possible.
2. Archive and delete as much data as possible from your source version environment, using the various delete/archive programs throughout MFG/PRO. Archive and delete records as of a recent fiscal year-end in order to maintain the accuracy of historical, year-to-date balances. The more data you archive and delete before starting, the shorter the conversion time.

   Note If you want to restore any archived data, you must restore it to the former version and convert it before you can use it. This is made difficult if you upgrade your operating system during the conversion.
3. Back up your source version databases and MFG/PRO directory. This helps you recover should there be a problem during the conversion.

Version-Specific Preparations

Each category in the following section includes the MFG/PRO versions to which it applies. Lettered releases are listed where necessary.

Global Tax Management Conversion (8.5 – eB)

This step is required only if you have no taxes implemented in your source version and are converting to GTM in the target database. Make sure the Country field is not blank in the source database in the following programs:

- Customer Maintenance (2.1.1)

- Supplier Maintenance (2.3.1)
- Company Address Maintenance (2.12)

Euro Data Conversion (8.5 – 8.6D)

Post all foreign currency transactions.

Supplier Performance Conversion (8.6)

Follow these steps if you are converting the PRO/PLUS Supplier Performance module.

1. Run Supplier Performance Data Report (5.15.14). Include inventory, subcontract, and memo items. Note the number of detail records for each master record. After converting, compare the relationship of detail records to master records to ensure data accuracy.
2. Run Summary Data Report (5.15.20). Select reporting option 2 to display category and event data. Note the number of detail records for each master record. After converting, compare the relationship of detail records to master records to ensure data accuracy.

Global Shipping Conversion (8.5)

Follow these steps if you plan to implement global shipping features.

1. Convert as many pre-shippers to shippers as possible.
2. Confirm as many sales order (SO) shippers as possible.
3. Delete as many master bills of lading as possible.
4. Archive and delete as many SO shippers as possible.
5. Use Pre-Shipper/Shipper Inquiry (7.11.7) and Master Bill of Lading Inquiry (7.11.14) to review existing records. Determine which of the remaining pre-shippers, shippers, and master bills of lading can be renumbered and which must retain current ID numbers due to legal requirements or the usage of shipper numbers as invoice numbers.

6 Run Address List Type Browse (2.10) for an existing *carrier* list type. If one exists, verify that the addresses assigned the existing carrier list type are addresses you want to retain in the target database. If you do not want the carrier addresses converted, change the existing carrier list type in the conversion program prompts for Global Shipping.

Product Change Control Conversion (8.5)

Complete this section if you plan to implement Product Change Control (PCC). Close as many Engineering Change Notices (ECNs) that have been routed for approval as possible. Complete the approval processes before converting the records if possible.

Corporate Commodity Codes Conversion (8.5)

If you implemented Corporate Commodity Codes, run Commodity Code Maintenance (1.11 in Version 8.5) and review the commodity codes and parts. After conversion, use the source version data to verify target version data (1.4.19 in eB2).

Running Data Verification Programs

Print the reports or review the data from the programs in Table 2.1 as an audit of the conversion. Print or run them first from your source version instance. When you finish the conversion, print or run these same reports and programs from your target version instance and compare the two sets.

Note Some of the programs have different menu locations in the source and target environments. The programs can also be run by entering the program name on the MFG/PRO command line.

Table 2.1
Data Verification Programs

Program Name	Source Version Menu Numbers	eB2.1 Menu Number
Site Report (icsirp.p)	1.1.15	1.1.15
Item Planning Report (ppptrp12.p)	1.5.4	1.5.4

Table 2.1 — *Data Verification Programs* — (Page 1 of 3)

Program Name	Source Version Menu Numbers	eB2.1 Menu Number
Item-Site Planning Report (pppsrp12.p)	1.5.16	1.5.16
Stock Status Report (ppptrp01.p)	1.5.8	1.5.8
Inventory Valuation Report (ppptrp03.p)	1.5.21	1.5.21
Print PCR/PCO (ececrp.p)	1.9.9.1	1.9.9.1
SO Price List Report (pppcrp.p)	1.10.1.3	1.10.1.3
PO Price List Report (pppirp01.p)	1.10.2.3	1.10.2.3
Customer Master Report (adcsrp01.p)	2.1.4	2.1.4
Customer Ship-to Address (adstrp.p)	2.1.15	2.1.15
Supplier Master Report (advnrp01.p)	2.3.4	2.3.4
Employee Master Report (ademrp.p)	2.7.4	2.7.4
Customer/Supplier Bank Report (adcsbkrp.p)	2.21.3	2.21.3
Salesperson Commission Report (adsprp01.p)	2.5.13	2.5.13
US Sales Tax (sotaxcrp.p)	8.6E – 9.0: 2.15.1.3	2.13.15.3 (txtx2drp.p) **Note:** US Sales Tax Report is not in eB2.1. Convert to Global Tax Management (GTM). Tax Detail by Transaction Report (2.13.15.3) provides similar information in the target version.

Table 2.1 — *Data Verification Programs* — (Page 2 of 3)

Program Name	Source Version Menu Numbers	eB2.1 Menu Number
VAT-AR by Transaction (vtarrp.p)	8.6E – 9.0: 2.15.2.13	2.13.15.13 (txarrp.p) **Note:** VAT-AR by Transaction Report is not in eB2.1. Convert to GTM. The AR Tax by Transaction Report (2.13.15.13) provides similar information in the target version.
VAT-AP by Transaction (vtaprp.p)	8.6E – 9.0: 2.15.2.16	2.13.15.16 (txaprp.p) **Note:** VAT-AP by Transaction Report is not in eB2.1. Convert to GTM. AP Tax by Transaction Report (2.13.15.16) provides similar information in the target version.
GST-AR by Transaction (ctarrp.p)	8.6E – 9.0: 2.15.3.13	2.13.15.13 (txarrp.p) See VAT-AR by Transaction.
GST-AP by Transaction (ctaprp.p)	8.6E – 9.0: 2.15.3.16	2.13.15.16 (txaprp.p) See VAT-AP by Transaction
Receipt Transactions Report (poporp04.p)	5.9.14	5.9.14
Blanket Order by Order (poblrp.p)	5.3.3	5.3.3
Sales Quote by Quote (sqqorp.p)	8.6E – 9.0: 6.13	7.12.13
Sales Orders by Customer (sosorp01.p)	7.15.2	7.15.2
Req. Ship Schedule Summary (rcrp07.p)	7.5.13	7.5.13
Orders in Transit (dsdmrp03.p)	12.15.14	12.15.14
Distribution Order (dsdorp.p)	12.17.16	12.17.16
Commodity Code Maintenance (ppcommt.p)	8.5: 1.11	1.4.19

Table 2.1 — *Data Verification Programs* — (Page 3 of 3)

Preserving Custom System Data

Complete this section if you have made any customizations to the following MFG/PRO default data:

- Online help
- Custom menus and messages
- Custom labels (eB and prior conversions only)

If you have not made customizations, skip this section.

Note You must complete this step for both in-place and buffer copy conversion methods.

After dumping your custom data and completing your conversion, use the instructions in “Restoring Custom Default Data” on page 95 to incorporate your customizations in your target version environment.

Menus, Messages, and Labels

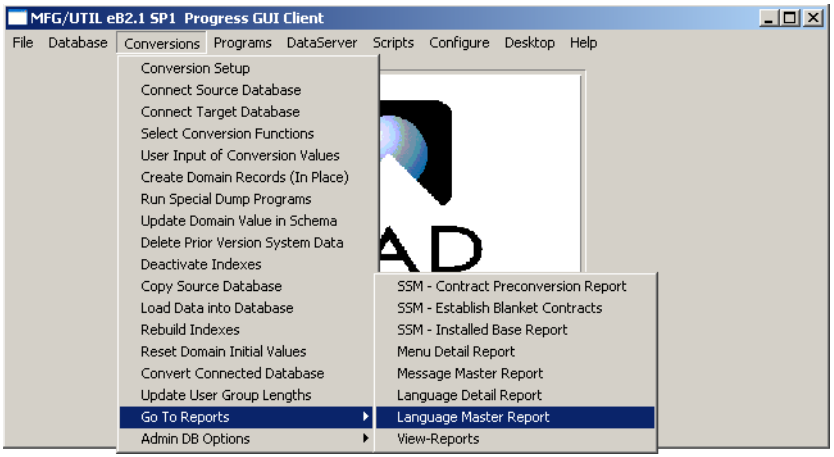
The MFG/UTIL conversion does not convert custom changes to this data. However, you can generate reports that display all the custom changes you have made so that you can reenter them.

Several reports are available to assist with conversions for custom menus and messages. All of the reports are located on the MFG/UTIL Conversions menu.

Custom Menus and Messages Reports

1. In MFG/UTIL, choose Connect to Source Database on the Conversions menu.
2. Connect to the source database and choose OK.
3. Then open the Conversions|Reports menu.

Fig. 2.1
Conversion Reports Menu



4 Select the desired report. The report is generated in the background. The Log Window displays to inform you of the report completion.

5 Close the Log Window.

Viewing Reports

1 Choose Reports from the MFG/UTIL Conversions menu, and choose View Reports. The report viewer displays.

2 Select the report you want to view and press View. Table 2.2 lists program file names and report names.

Table 2.2
Conversion Reports

Programs	Report Names
svmndrep	Menu Detail Report
svmsgrep	Message Master Report
svlngrep	Language Master Report
svlndrep	Language Detail Report

3 The report displays in the Conversion Report Window.

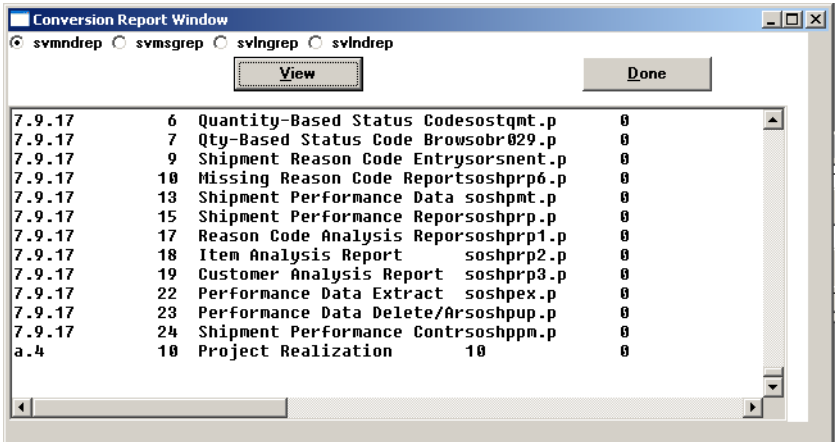


Fig. 2.2
Conversion Report Window Showing the Menu Detail Report (svmndrep)

4 To view other reports, choose a new report and press View. Otherwise, press Done to exit.

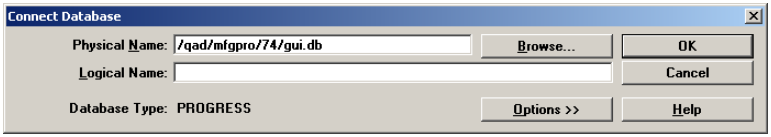
Dump GUI Database

In MFG/PRO 9.0 and earlier releases, some administrative data was stored in the `gui` database. This data is currently stored in the `admin` database and the `gui` database no longer exists. The following dump extracts the required data from this side database.

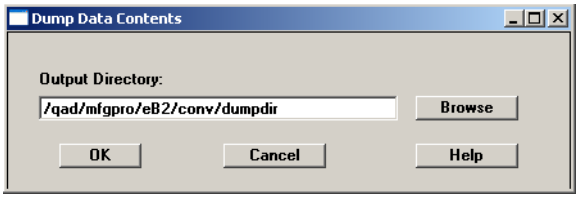
Note If your environment does not use a `gui` database you can skip this section.

1 From MFG/UTIL, select Database|Dump Data From Database.

2 When the Connect Database screen displays, specify the path and name of your source version `gui` database in the Physical Name field. Choose OK to continue.



3 Specify the conversion dump directory in the Output Directory field. You can use the Browse button to select this directory.



4 The Table Selection for Dump screen displays with all of the tables in the source version database selected. Accept this default and choose OK to begin dumping data.

5 When the dump completes, press spacebar to continue.

Dump Custom Help

If you have written custom field help in your source system, complete this set of steps:

1 Start a single-user source version MFG/PRO session.

2 Select Field Help Dump (36.4.18).

3 Enter user as the start and end range in the Text Type and To fields.

4 The field help dump file name defaults to `fieldhlp.fhd`. You can change this default.

5 Press Go to begin the dump. The dump file is created in your current working directory.

6 Move the file to your conversion dump directory (`./dumpdir`).

7 Check the log file for any errors. Resolve errors before proceeding.

Dump Custom MFG/PRO Settings

This set of steps records additional custom settings.

1 Review the custom records created for browses, views, drill-downs, and the user tool bar.

2 Record all the menu substitutions you made; you will need to reenter them in the target version environment.

3 Record custom modifications, as opposed to additions, you made to the default records. Your additions to the default data can be dumped and loaded, but your modifications must be reentered.

4 Keep a copy of your custom modifications because they may be overwritten in future releases.

Chapter 3

Creating the Target Version Database

This chapter provides an overview of the process required to create the Progress target version database.

Creating Target Version Databases

This section provides guidelines on creating the target environment you will need for either a buffer copy or in-place conversion. Use these guidelines in conjunction with the instructions in the *MFG/PRO eB2.1 Installation Guide*: *Progress Database* to install and configure the target MFG/PRO environment.

1 Install the target version Progress software.

Important Install your new version of MFG/PRO to a new directory location. This is especially important if you are converting from a previous version of eB2 to eB2.1 because the default installation locations are the same. If you installed eB2 to `\mfgsvr`, install eB2.1 to a directory such as `\mfgeB21`. The instructions in this document refer to this directory as the target version installation directory (*`TVInstallDir`*). The installation guide refers to the same directory as *`MFGPROInstallDir`*.

2 Install and configure the database server and at least one character client using the instructions in the installation guide. However, note the following differences between configuring an initial installation and configuring a target version environment for a conversion:

- For buffer copy conversions, when assigning extent sizes for the MFG/PRO databases, be sure to consider the size of the tables in your source version databases.
- For buffer copy conversions, build production, admin, and help databases, but *do not* load any default system data or run the OID seed program.
- For in-place conversions, the same rules apply, but you also *do not* build a production database.
- For the help database, you can load the data files in the `mfghelp` subdirectory to implement the system source code cross-reference feature.

See “Loading Online Help” on page 97.

Note These help data files are for system cross-reference only and do not contain the MFG/PRO field and procedure help. The field and procedure help records are loaded in the post-conversion steps.

3 Configure a database set containing the empty target version production, admin, help, and audit databases for the compile.

4 Compile your target version application code.

5 Record the locations of your target version databases and the directory where you installed the target version database server files.

Converting the Source Version Databases

To convert the source version database, you first migrate your source version database to the target Progress version if necessary.

Preliminary Requirements

Before beginning the source version conversion, you must migrate your source version databases to Progress 9.1. The following section contains instructions on migrating your databases.

The following steps assume that:

- You have installed Progress Version 9.1D+ including at least one Progress 4GL license.
- You have Progress software that corresponds to your source version database.
- No other users are logged onto the source version databases and you have shut down the database servers. All of the migration tasks must be performed in single-user mode.

  Be sure all users are off the system and kept off. For example, you can block access to the startup scripts using the `chmod 700` command.
- Your DLC environment variable is set to the target version Progress directory.

Progress 8 Source Version Databases

If you are converting Progress Version 8 databases:

1. Change directories to the `/bin` subdirectory below the Progress Version 8 installation directory.

2. Use the following command to run the `convert` utility. This utility converts a single-volume database to the multi-volume structure used in Progress Version 9.1:

   ```
   prostrct convert PathToDatabase/DatabaseName
   ```

   Example To convert single-volume production, `gui`, and `cfg` source version databases, run the `convert` utility for each database:

   ```
   prostrct convert SVInstallDir/db/mfgprod.db
   prostrct convert SVInstallDir/db/gui.db
   prostrct convert SVInstallDir/db/cfg.db
   ```

3. Run the `83truncatebi` utility to truncate the before-image file:

   ```
   proutil PathToDatabase/DatabaseName 83truncatebi
   ```

   Example To truncate the before-image file for production, `gui`, and `cfg` source databases, run `83truncatebi` for each database:

   ```
   proutil SVInstallDir/db/mfgprod.db 83truncatebi
   proutil SVInstallDir/db/gui.db 83truncatebi
   proutil SVInstallDir/db/cfg.db 83truncatebi
   ```

4. Change to the `/bin` directory below the Progress 9.1 install directory:

   ```
   cd Progress9InstallDir/bin
   ```

5. Run the `conv89` utility. This utility migrates a Progress Version 8 multi-volume database to Progress Version 9.1. This migration combines all formerly separate databases into a single volume, a requirement for the current MFG/PRO implementations:

   ```
   proutil PathToDatabase/DatabaseName -C conv89
   ```

Example To migrate production, `gui`, and `cfg` source version databases to Progress Version 9, run the `conv89` utility for each database:

```
proutil mfgprod.db -C conv89
proutil gui.db -C conv89
proutil cfg.db -C conv89
```

Next Steps

The next two chapters of the guide provide instructions for the two conversion methods available following the MFG/UTIL workflows.

- To complete a buffer copy conversion, go to Chapter 4, “Buffer Copy Conversion Method,” on page 41.
- To complete an in-place conversion, go to Chapter 5, “In-Place Conversion Method,” on page 63.

Chapter 4

Buffer Copy Conversion Method

This chapter covers the steps to complete the conversion of your production database using the buffer copy method.

Overview

In this section, you launch MFG/UTIL and run through the required conversion steps for each database you are converting. This could include the following main databases in a Progress environment:

- Production
- Training
- Demo
- European Accounting

Note These steps assume you are creating new target administration and help databases.

Set Environment Variables

Prior to running the conversion steps, make sure the PATH variable contains the Progress 9.1 installation and `\bin` directories, not the source Progress directories.

Running the Conversion

To begin the conversion, follow these steps:

1. (UNIX only) Log on as `mfg`.
2. Change directories to *`TVInstallDir`* and start MFG/UTIL:

   ```
   cd TVInstallDir
   ./mfgutil
   ```

   In Windows, launch MFG/UTIL from the Start|Programs menu.
3. In MFG/UTIL, select Configure and choose MFG/PRO Guided Setup. The Operation Sets screen displays.

4 Choose Convert Progress Database (Copy) from the Operation Set drop-down.

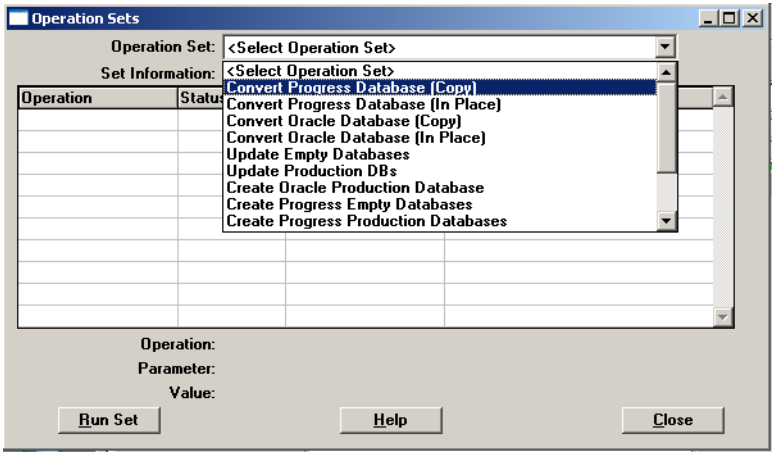


Fig. 4.1 Conversion Operation Set Selections

5 The conversion workflow displays.

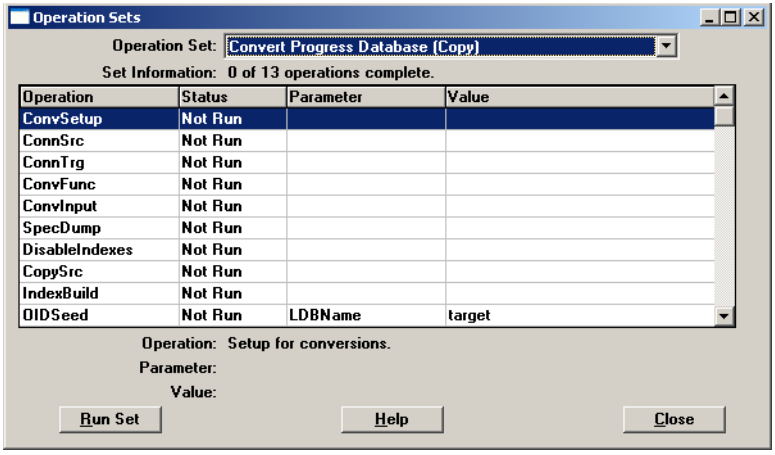


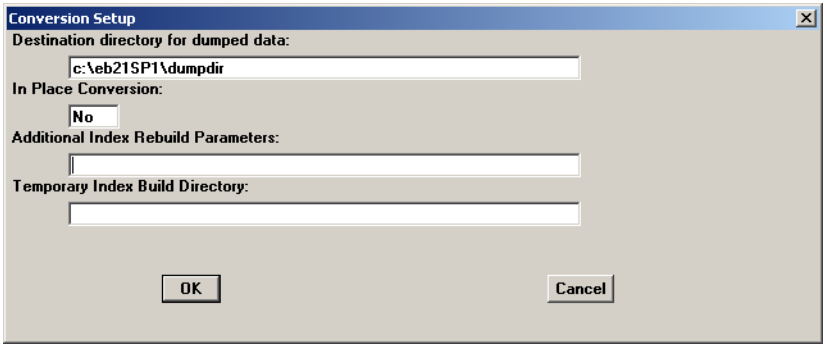
Fig. 4.2 Convert Progress Database (Copy) Operation Set

6 Choose Run Set to launch the conversion.

Conversion Setup

1 The Conversion Setup screen displays. Use the screen example and field descriptions below to complete the data.

Fig. 4.3
Conversion Setup



Destination directory for dumped data. Specify the location where you want the source version data files to be dumped during the special dumps.

In Place Conversion. Set this to No.

Additional Index Rebuild Parameters. Check your Progress documentation for possible index rebuild options.

Temporary Index Build Directory. If you set certain index rebuild parameters, a temporary index build directory is required. Refer to your Progress documentation, such as the *Progress Database Administration Guide and Reference*.

2 Choose OK. If the directory does not exist, you are asked to confirm the creation of the directory. Choose Yes.

3 The Connect Database screen displays with `source` as the Logical Database Name.

Connect Source Database

1 Complete the Connect Database screen using the screen example and field descriptions below.

Fig. 4.4
Connecting the Source Database

Physical Name. Enter the name of your source production or other database; for example, `mfgprod`.

Accept all other defaults.

2 Choose OK. The source database is connected and the MFG/UTIL Log Window displays showing a successful database connection.

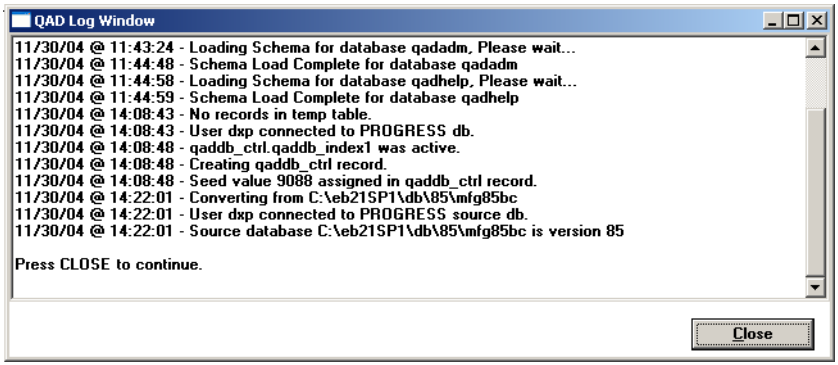


Fig. 4.5
QAD Log Window after Source Connection

3 Choose Close.

Connect Target Database

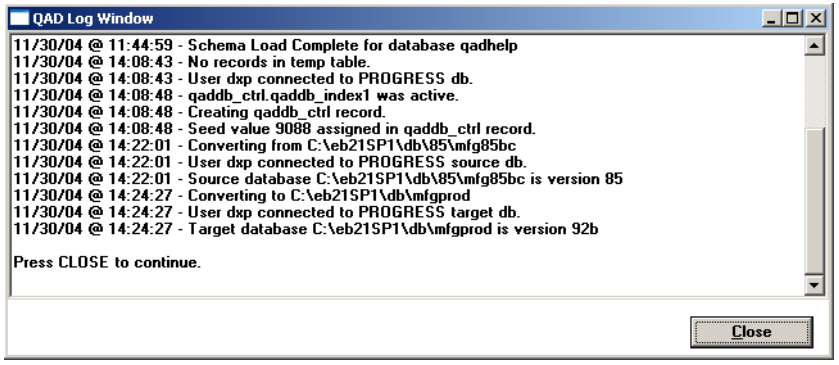
1 The Connect Database screen displays for the `target` database. Use the screen and field descriptions to complete this dialog.

Fig. 4.6
Connecting the Target Database

Physical Name. Enter the name of your target production or other database; for example, `mfgprod`. Accept all other defaults.

2 Choose OK. The MFG/UTIL Log Window displays. Note that the MFG/PRO version of both the source and target databases are displayed. Verify that they are correct.

Fig. 4.7
QAD Log Window after Target Connection.



3 Choose Close.

Select Conversion Functions

This step displays all required and optional conversions depending on the source database version. You can select the optional conversions you want to run. Following this selection, data screens appear for each of the conversions as needed for your specific environment.

Important This screen shows only the conversions available for the source version you are starting with. The sample screens in Figure 4.8 and Figure 4.9 show conversions for a source MFG/PRO 8.5 database. The screen in Figure 4.10 shows the conversions for an eB2 source database.

1 Complete the Select Conversion Functions screen.

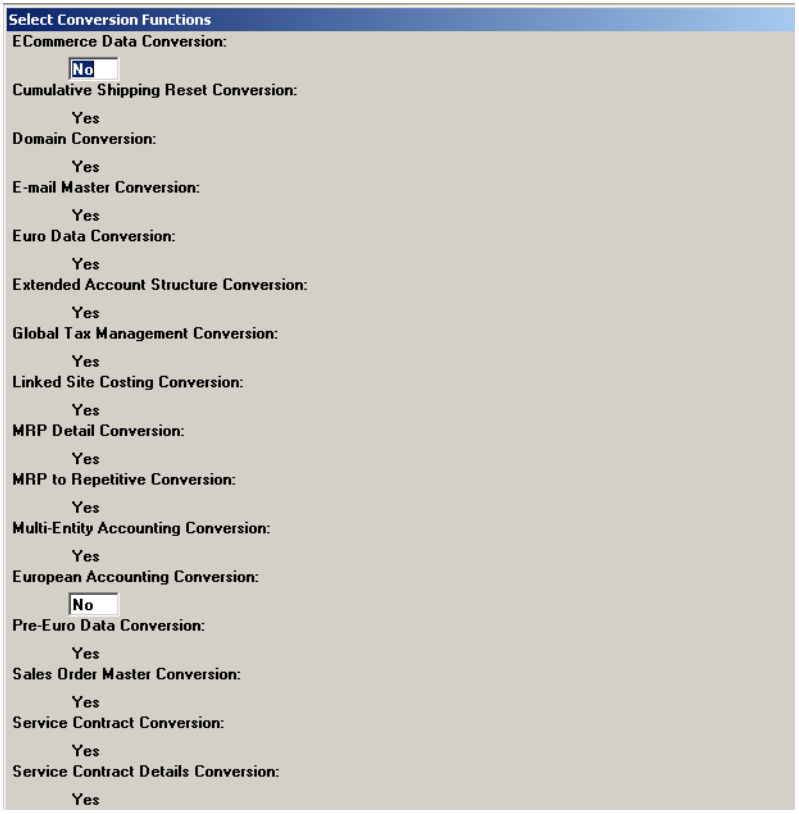


Fig. 4.8 Top Portion of Conversion Functions Screen

2 Scroll down to view all options. Set optional conversions you want to run against your database to Yes.

Fig. 4.9
Bottom Portion of Conversion Functions Screen

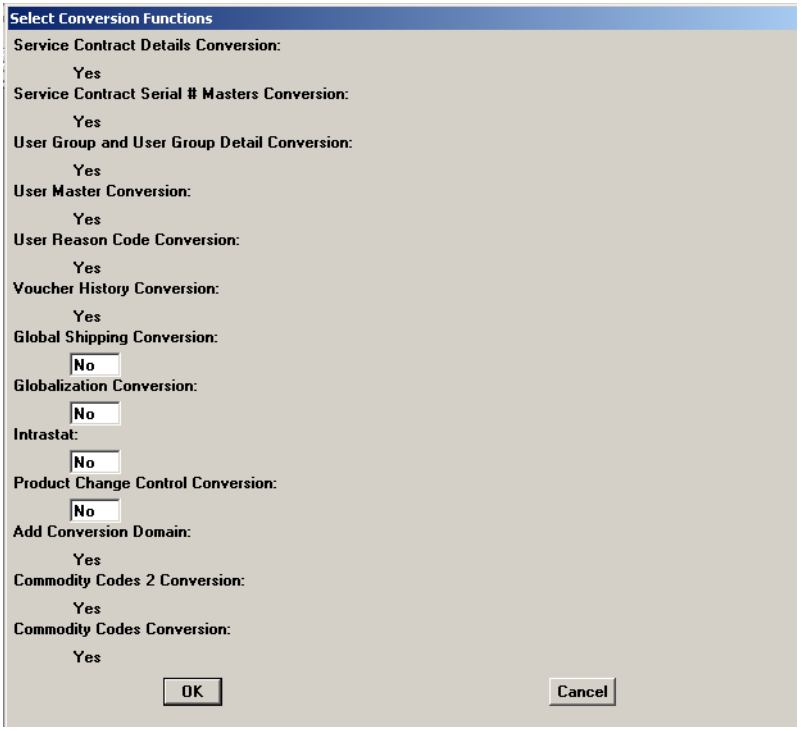
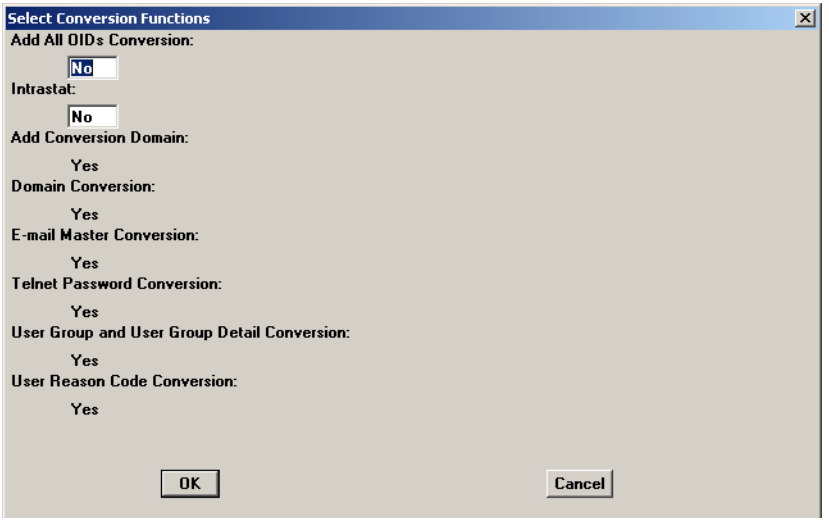


Fig. 4.10
eB2 Source Database Conversions



3 Choose OK.

Add All OIDs Conversion (eB2)

This conversion generates a correct OID value for all existing database records. This only needs to be done if you are implementing Enhanced Controls and can also be run as a separate operation at the time that Enhanced Controls is implemented.

Global Shipping Conversion (8.5)

The next conversion screen prompts you for Global Shipping conversion-specific information.

Note This selection screen does not appear if you have not selected the Global Shipping Conversion in the Conversion Functions screen.

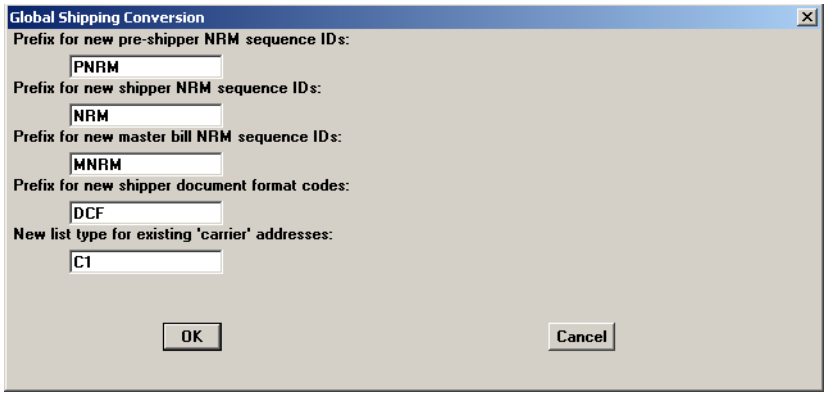


Fig. 4.11 Global Shipping Conversion

1 Enter record prefixes and the carrier list type information as shown, using the field descriptions that follow:

Prefix for new pre-shipper NRM sequence IDs. Specify the Number Range Management (NRM) sequence the system creates and assigns to all new pre-shippers if a default is not defined in Container/Shipper Control (7.9.24).

Prefix for new shipper NRM sequence IDs. Specify the NRM sequence the system creates and assigns to all new shippers if a default is not defined in Container/Shipper Control.

Prefix for new master bill of lading NRM sequence IDs. Specify the NRM sequence the system creates and assigns to all new master bills of lading if a default is not defined in Container/Shipper Control.

Prefix for new shipper document format codes. Specify the document format the system creates for standard and custom shipper print procedures.

New list type for existing "carrier" addresses. Global Shipping creates a reserved *carrier* list type. If you created a user-defined list type called carrier prior to installing the target version, the conversion utility lets you redefine the existing *carrier* list type.

- To preserve the existing carrier list type, leave this blank or enter `carrier`. The addresses are designated as carrier addresses.
- To redefine the existing carrier list type, enter a new list type name at the prompt.
- To merge the existing carrier list type with another existing list type, enter the non-carrier list type.

2 Press OK to continue.

Domain Conversions (8.5 – eB2)

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

All MFG/PRO eB2.1 databases require a minimum of two domains. One—the system domain—is created when you install the MFG/PRO target version. For converted databases, a production or primary domain is created during the conversion process.

In this process, the conversion routines make assumptions based on information in the source database. If there are no connection records (`dc_mstr`) entries for other databases in the source database, a new connection master is created and the production domain assigned to this database.

If `dc_mstr` entries for other databases exist, you are first asked to choose the current database from the list. You then assign a primary domain for this database. After the primary domain has been assigned, you must assign a domain to each of the other databases that have `dc_mstr` records. These domains are then required to support future connections to these other databases.

Important When you convert the other databases, all the domain names must be identical. For example, if you assign domain names of sales, production, and distribution to databases named db1, db2, and db3 respectively in the first database you convert, the same domains for the same databases must be used in converting subsequent databases.

Multiple Databases – More than One dc_mstr

1 If the source database contains more than one database connection master, the first screen to display is the Select Conversion Database screen. Select the database you are converting and press OK.

Fig. 4.12
Select Conversion Database Screen

2 You are then prompted to create a domain for each database with a connection record in alphanumeric order.

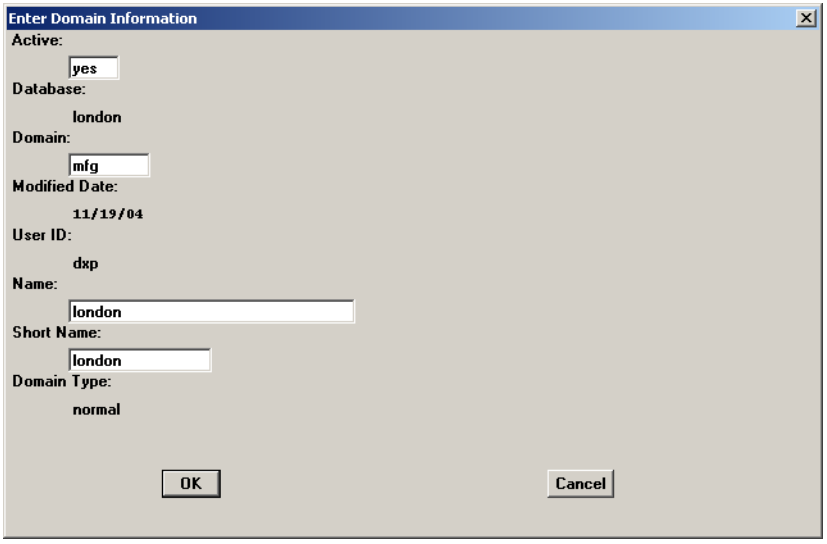


Fig. 4.13
Master Domain Entry

3 The master domain screen shown in Figure 4.13 displays for each database identified with a `dc_mstr` in the conversion database. Enter values based on the following field descriptions.

Active. Indicate whether this domain is currently active.

Yes (the default): This domain can be associated with users in User Maintenance (36.3.1) and specified at log-in.

No: This domain is not active in the current database.

Database. The logical name of the database displays but cannot be modified.

Domain (Code). Enter a unique code for each database identifying a specific domain.

(Domain) Name. Enter a descriptive name to associate with this domain (up to 28 characters). This name must be unique within a database and across connected databases.

This name displays in the lookup associated with domain fields and on various reports and inquiries, as space permits.

(Domain) Short Name. Enter a brief name (up to 14 characters) to associate with this domain. This name must be unique within a database and across connected databases.

The domain short name displays in the program title bar in character and Windows interfaces based on the setting of Header Display Mode in Security Control (36.3.24). It always displays in the program title in Desktop screens.

Domain Type. This displays the default value.

4 Choose OK when you finish.

Single Database – No dc_mstr

1 If this database has no `dc_mstr` records, the Select Conversion Database screen displays with the logical database name displayed. Use the domain entry screen to create the required `dc_mstr` for the conversion (target) database.

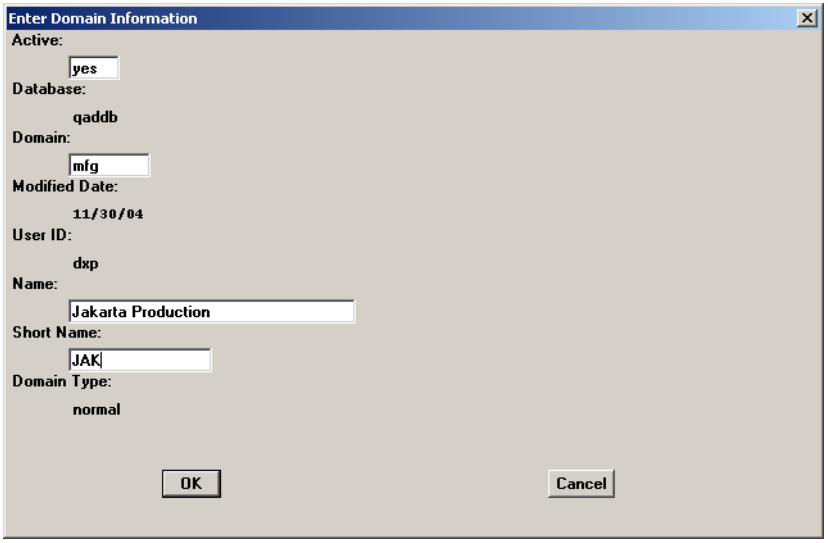


Fig. 4.14 Database Connection Master for a New Domain

2 Accept the defaults, or enter additional information if you know it. The critical fields are:

Active. Indicate whether this domain is currently active.

Yes (the default): This domain can be associated with users in User Maintenance (36.3.1) and specified at log-in.

No: This domain is not active in the current database.

Database. The logical name of the database displays but cannot be modified.

Domain (Code). Enter a unique code for each database identifying a specific domain.

(Domain) Name. Enter a descriptive name to associate with this domain (up to 28 characters). This name must be unique within a database and across connected databases.

This name displays in the lookup associated with domain fields and on various reports and inquiries, as space permits.

(Domain) Short Name. Enter a brief name (up to 14 characters) to associate with this domain. This name must be unique within a database and across connected databases.

The domain short name displays in the program title bar in character and Windows interfaces based on the setting of Header Display Mode in Security Control (36.3.24). It always displays in the program title in Desktop screens.

Domain Type. This displays the default value.

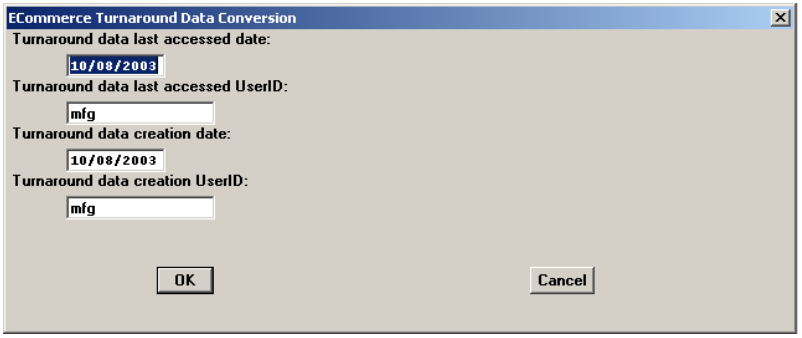
3 Choose OK when you finish.

EDI ECommerce Conversions (8.6E – eB)

The conversion prompts for ECommerce turnaround data if this is a conversion required for your source version (8.6E – eB). Use the screen and field descriptions to complete this dialog.

Note This selection screen does not appear if you have not selected the ECommerce Data Conversion in the Conversion Functions screen.

Fig. 4.15
ECommerce Turnaround Values



ECommerce turnaround data is any data in an ECommerce document imported to MFG/PRO that is not used by MFG/PRO. The data is, instead, stored in a side table and then placed in the related export document when it is sent.

If you are using earlier versions of the ECommerce functionality and you have turnaround data in the side tables, you need to enter a date and user ID for when the data was created and when it was last accessed. Four new fields were added that require default starting values. The values are probably unimportant for past data and should simply be a valid user ID such as `mfg` and valid dates.

Turnaround data last accessed date. Enter the last date on which turnaround data was accessed.

Turnaround data last accessed user ID. Enter ID of the last user who accessed the turnaround data.

Turnaround data creation date. Enter the date on which turnaround data was created.

Turnaround data creation user ID. Enter ID of the user who created the turnaround data.

Press OK.

Euro Data Conversion (8.5 – 8.6D)

Note This selection screen always appears since the Euro Data Conversion is required.

1 Enter accounts, sub-accounts, and cost centers as shown, using the field descriptions that follow:

Unrealized Gain Account, Sub-account, Cost Center. These prompts create a default account, sub-account, and cost center for posting unrealized gains in currency exchanges. If you leave the account blank, the Unrealized Exch Rate Gain/Loss account defined in General Ledger Control (25.24) is used as a default. No default cost center is used.

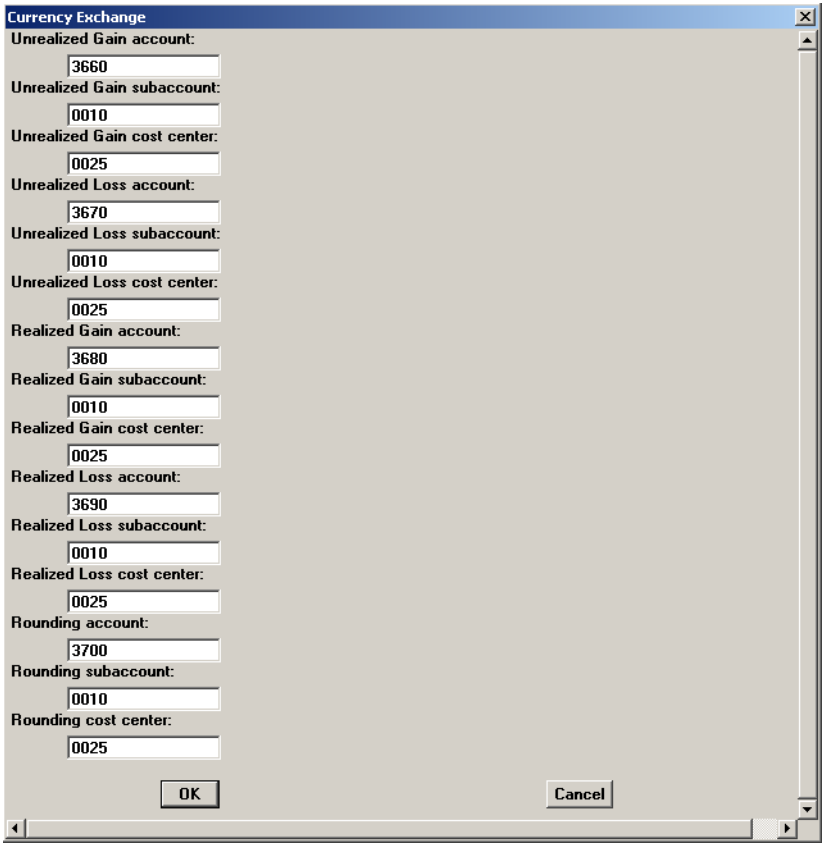
Unrealized Loss Account, Sub-account, Cost Center. Specify the default account, sub-account, and cost center for posting unrealized losses in currency exchanges. (See notes from previous entry.)

Realized Gain Account, Sub-account, Cost Center. Specify the default account, sub-account, and cost center for posting realized gains in currency exchanges. If you leave this prompt blank, the Exchange Gain account, sub-account, and cost center defined in the first bank master record matching the currency in question are used.

Realized Loss Account, Sub-account, Cost Center. Specify the default account, sub-account, and cost center for posting realized losses in currency exchanges. (See notes from previous entry.)

Rounding Account, Sub-account, Cost Center. Specify the default account, sub-account, and cost center for posting rounding amounts in currency exchanges. If you leave this prompt blank, no values are assumed.

Fig. 4.16
Currency Exchange Accounts Conversion Screen



2 Press OK to continue. The Log Window displays your connection status.

3 The Connect Database dialog displays for Logical `easource`. The European Accounting database is called `qadepm` or `largo` by default. Locate your European Accounting database, and choose OK to continue.

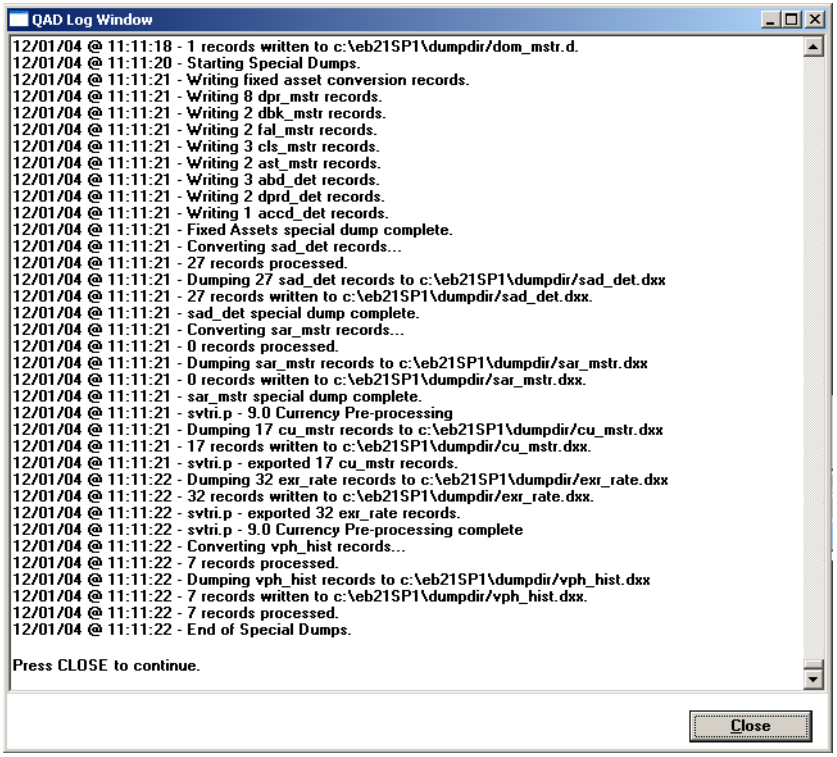
4 The Log Window displays progress. Choose Close on completion.

Run Special Dump Programs

1 At this point, the special dump programs run automatically. The Log Window displays and each dump is logged. A message displays at completion.

2 If you are converting from version 9.1 or later and are converting EDI ECommerce, you are prompted to connect to an `admsource` database. The special dump for EDI ECommerce must connect to the `admin` database to do the dumps. Prior to 9.1 the EDI ECommerce tables are in the main database and, therefore, are dumped from there without the need to connect to the additional database.

Fig. 4.17
Special Dumps Log Window



3 Choose Close.

Deactivate Indexes

The indexes in the target database are disabled to reduce the update time required during the data loads.

1 The Connect Database screen displays with the target database entered by default. Choose OK to continue.

2 The QAD Log Window displays, showing progress of the deactivate indexes step.

3 When the process is complete, choose Close to continue.

Buffer Copy Source Data

1. The copy of your source production data to the target database starts after you close the disable indexes Log Window. The time requirement for this step is highly dependent on the amount of production data in the source database.
2. Choose Close when the data copy is complete.

Rebuild Indexes

The index rebuild now starts. This step reindexes all the copied data and may take some time to complete.

1. The QAD Log Window displays, showing progress of the index build step.
2. Choose Close when the rebuild is complete.

Important If you cancel out of the index rebuild by closing the Log Window and then restart the index rebuild, you will encounter errors and cannot complete the rebuild. To correct this, run Delete Prior Version System Data from the Conversion menu; then restart the index rebuild.

Update Database OID Generator Value

Once the indexes are rebuilt, the OID generator value you entered during the installation is updated as described in “OID Generator Code” on page 10.

1. The Connect Database screen displays with the target database entered by default. Choose OK to continue.
2. The Log Window displays to confirm your connection. Choose Close.
3. The OID value entered during the installation is embedded in the `qad_ctrl` file. The Log Window displays. Choose Close to start the data loads.

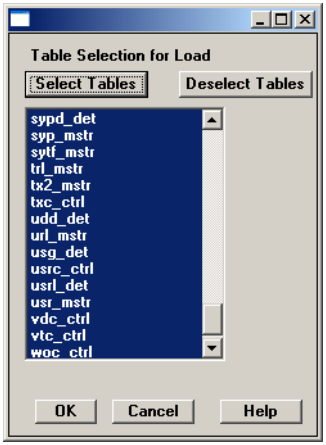
Load Production Data

In this task, you load the default system data supplied by QAD into each database. You load both language-independent control data and language-specific data such as menus and messages.

1. After the Log Window closes, the Connect Database screen displays for the `target` database. Choose OK to continue.

2. The Table Selection for Load screen displays, showing the language-independent data files for tables in the `mfg` subdirectory. This screen may take a minute or more to load the data file list. By default, all the tables are selected. This is correct. Choose OK to start the load.

Fig. 4.18
Table Selection for Load Screen



3. The Connect Database screen displays for the `source` database. Choose OK to continue.

4. The Log Window displays your connection status. Choose Close to continue.

5. The Log Window displays the load progress. When the load completes, choose Close to continue.

Load Language-Specific System Data

You now load the language-specific system data.

1 The Table Selection for Load screen displays again, showing the tables to be updated with language-specific data files. All are selected by default.

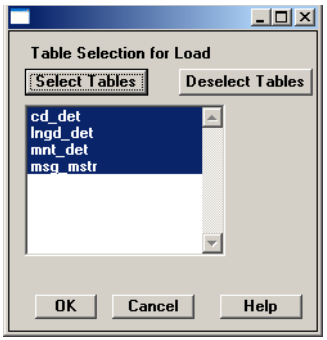


Fig. 4.19
Second Table Selection for Load Screen

2 Choose OK to load the data.The Log Window displays the load progress.

3 When the load completes, choose Close to continue.

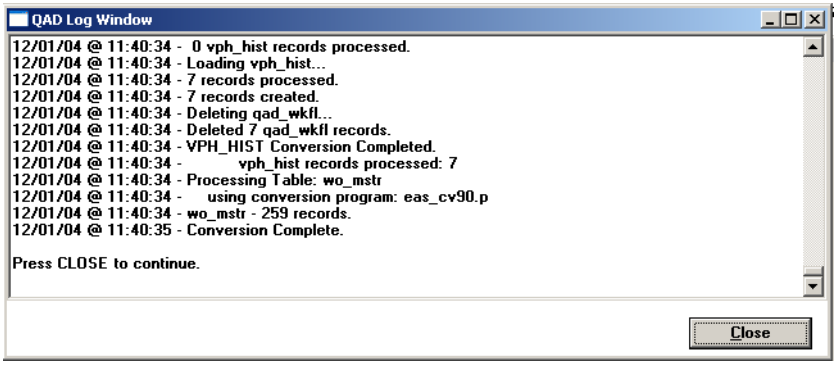
4 Repeat steps 1 through 3 for each installed language.

Convert the Database

MFG/UTIL now calls the various conversion programs required to convert your specific source version.

1 The conversion starts, showing progress in the Log Window. The amount of time this process requires depends on the quantity of data in your database that requires conversion.

Fig. 4.20
Conversion
Complete Log



2 When the conversion is complete, review the log for errors. Then choose Close to complete the conversion.

Convert Additional Databases

Repeat these steps starting with “Running the Conversion” on page 42 for additional production databases in Progress environments.

Chapter 5

In-Place Conversion Method

This chapter covers the steps to complete the conversion of your production database using the in-place method.

Overview

In this section, you launch MFG/UTIL and run through the required conversion steps for each database you are converting. This could include the following main databases in a Progress environment:

- Production
- Training
- Demo
- European Accounting

Note These steps assume you are creating new target administration and help databases.

Set Environment Variables

Prior to running the conversion steps, make sure the PATH variable contains the Progress 9.1 installation and `\bin` directories.

Modifying Database Structures

All eB2 databases, and any prior databases that have been converted to the use of storage areas, require preliminary steps to add new storage areas 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 file shipped with your eB2.1 release. You then run a Progress utility to make the changes to the databases.

Modify the Delta Structure Files

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`*`\inplace\progress`. Select OK to open the file.

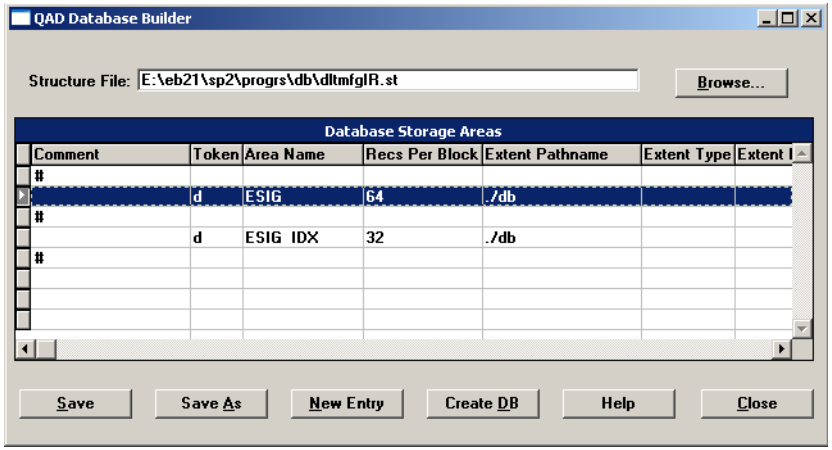


Fig. 5.1
Delta .st File Opened for Editing

4 Tab to or select the first storage area listed. In Figure 5.1, 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 target databases. This is typically *MFGPROInstallDir*\db. Choose OK to save the change and return to the editor screen.

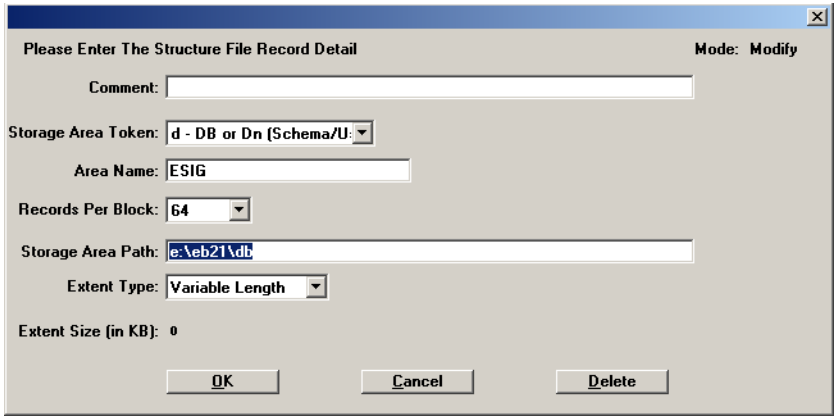


Fig. 5.2
Storage Area Definition Editor

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

1 Open a command window and navigate to *MFGPROInstallDir*.

2 Use the following syntax to add the new storage areas to the required databases.

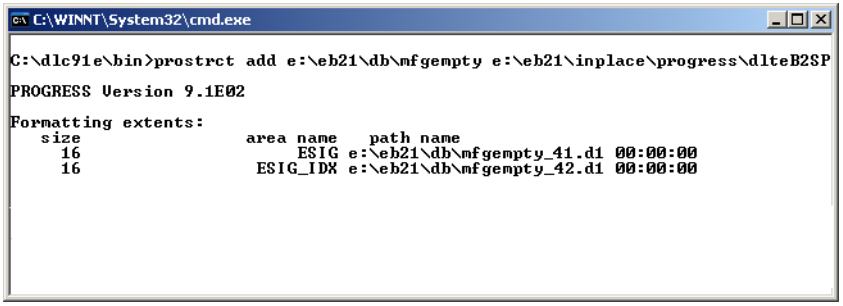
```
prostrct add dbname delta-st-file-name
```

For example, coming from eB2, Service Pack 8:

```
e:\dlc91e\bin\prostrct add .\db\mfgempty
e:\eb21\inplace\progress\dlteB2SP8-eb21.st
```

If the update is successful, the result displays.

Fig. 5.3 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.

Running the Conversion

To begin the conversion, follow these steps:

1 (UNIX only) Log on as `mfg`.

2 Change directories to *TVInstallDir* and start MFG/UTIL:

```
cd TVInstallDir
./mfgutil
```

In Windows, launch MFG/UTIL from the Start|Programs menu.

3 In MFG/UTIL, select Configure and choose MFG/PRO Guided Setup. The Operation Sets screen displays.

4 Choose Convert Progress Database (In Place) from the Operation Set drop-down.

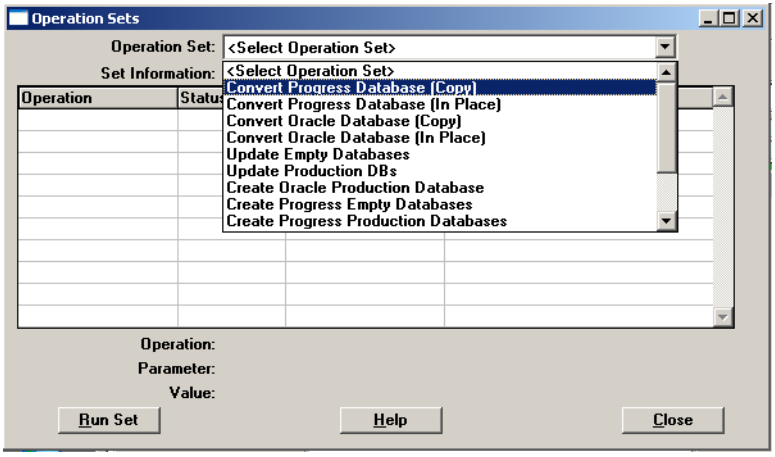


Fig. 5.4 Conversion Operation Set Selections

5 The conversion workflow displays.

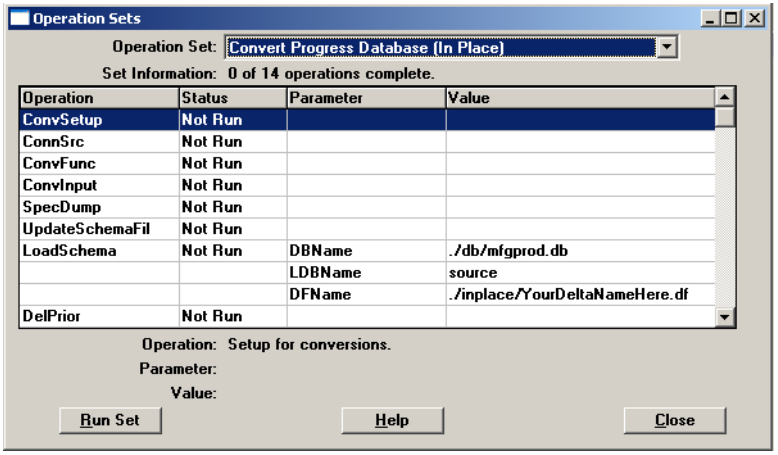


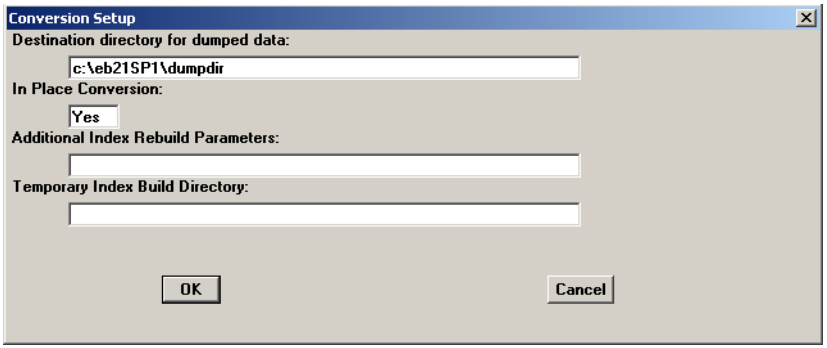
Fig. 5.5 Convert Progress Database (In-Place) Operation Set

6 Choose Run Set to launch the conversion.

Conversion Setup

1 The Conversion Setup screen displays. Use the screen example and field descriptions below to complete the data.

Fig. 5.6
Conversion Setup



Destination directory for dumped data. Specify the location where you want the source version data files to be dumped during the special dumps.

In Place Conversion. Set this to Yes.

Additional Index Rebuild Parameters. Check your Progress documentation for possible index rebuild options.

Temporary Index Build Directory. If you set certain index rebuild parameters, a temporary index build directory is required. Refer to your Progress documentation, such as the *Progress Database Administration Guide and Reference*.

2 Choose OK. If the directory does not exist, you are asked to confirm the creation of the directory. Choose Yes.

3 The Connect Database screen displays.

Connect Source Database

Remember that for an in-place conversion, the source and target databases are the same. During this conversion process, MFG/UTIL requires different logical names for the conversion database at different times. In addition, MFG/UTIL disconnects the database after each step to ensure the changes are written to the database and all lock files are successfully

closed. Therefore, you will be asked to connect to the conversion database using different logical names at multiple times through the conversion process.

1 Complete the Connect Database screen using the screen example and field descriptions below.

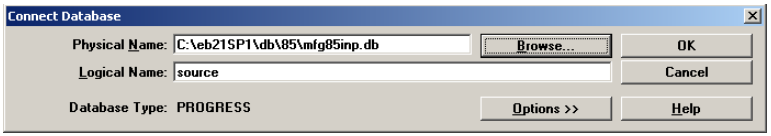


Fig. 5.7 Connecting the Source Database

Physical Name. Enter the name of your source production or other database; for example, `mfg85prd`. The European Accounting database is called `qadepm` or `largo` by default.

Logical Name. This should be `source`.

2 Choose OK. The source database is connected and the MFG/UTIL Log Window displays showing a successful database connection.

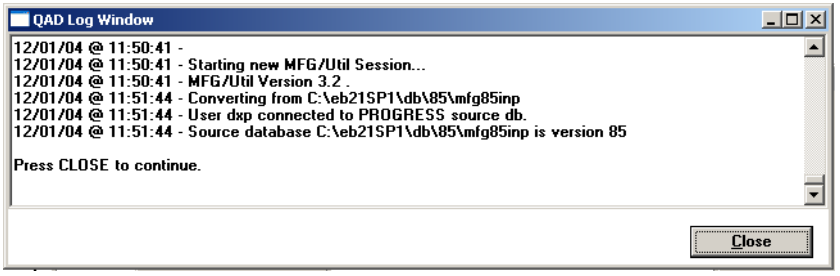


Fig. 5.8 QAD Log Window after Source Connection

3 Choose Close.

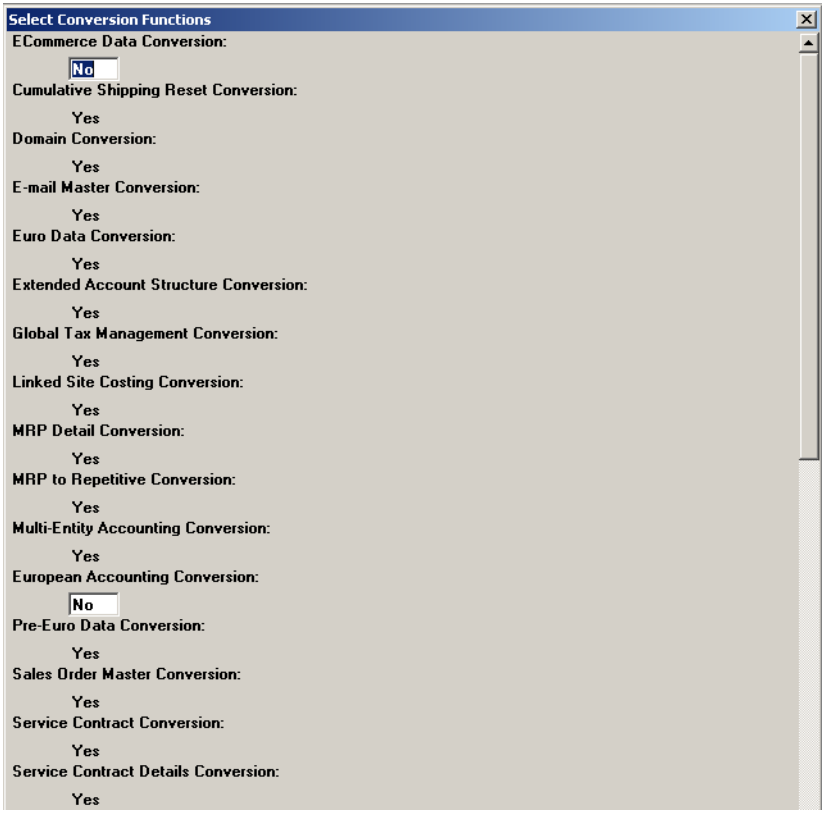
Select Conversion Functions

This step displays all required and optional conversions depending on the source database version. You can select the optional conversions you want to run. Following this selection, data screens appear for each of the conversions as needed for your specific environment.

Important This screen shows only the conversions available for the source version you are starting with. The sample screens in Figure 5.9 and Figure 5.10 show conversions for a source MFG/PRO 8.5 database. The screen in Figure 5.11 shows the conversions for an eB2 source database.

1 Complete the Select Conversion Functions screen.

Fig. 5.9
Top Portion of Conversion Functions Screen



2 Scroll down to view all options. Set optional conversions you want to run against your database to Yes.

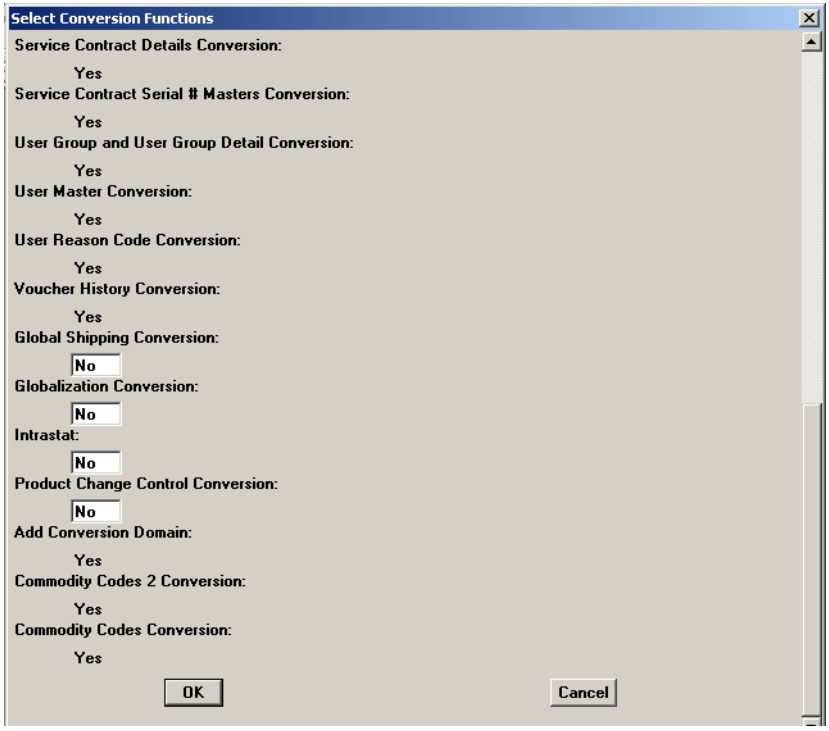


Fig. 5.10
Bottom Portion of Conversion Functions Screen

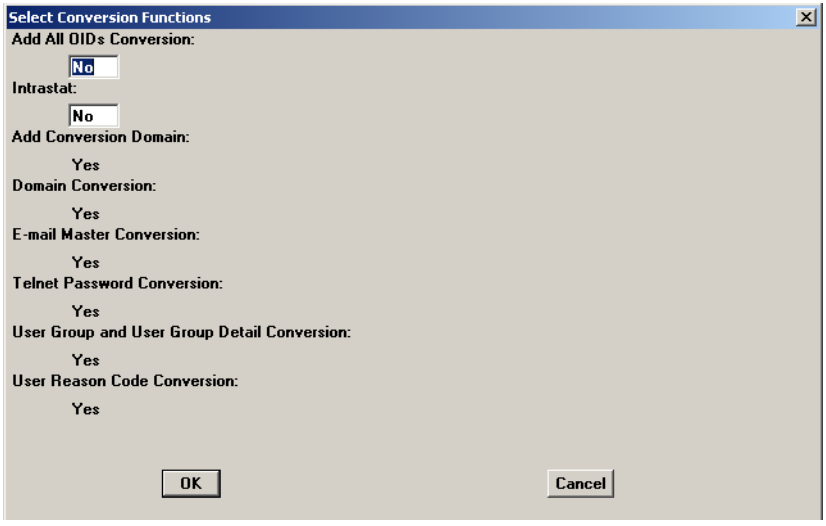


Fig. 5.11
eB2 Source Database Conversions

3 Choose OK.

Add All OIDs Conversion (eB2)

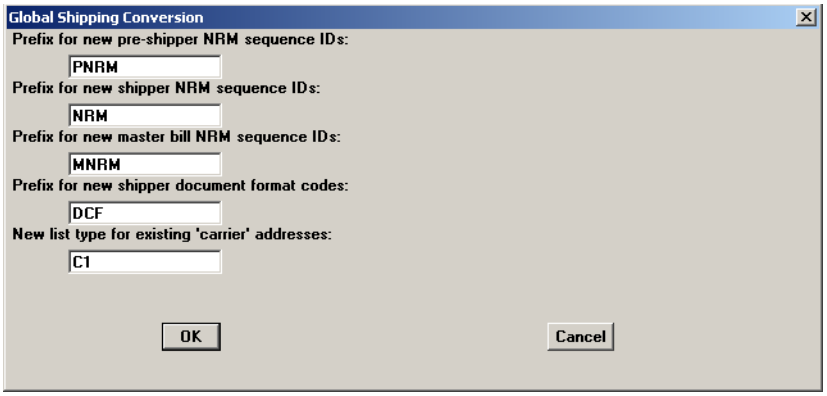
This conversion generates a correct OID value for all existing database records. This only needs to be done if you are implementing Enhanced Controls and can also be run as a separate operation at the time that Enhanced Controls is implemented.

Global Shipping Conversion (8.5)

The next conversion screen prompts you for Global Shipping conversion-specific information.

Note This selection screen does not appear if you have not selected the Global Shipping Conversion in the Select Conversion Functions screen.

Fig. 5.12
Global Shipping Conversion



1 Enter record prefixes and the carrier list type information as shown, using the field descriptions that follow:

Prefix for new pre-shipper NRM sequence IDs. Specify the Number Range Management (NRM) sequence the system creates and assigns to all new pre-shippers if a default is not defined in Container/Shipper Control (7.9.24).

Prefix for new shipper NRM sequence IDs. Specify the NRM sequence the system creates and assigns to all new shippers if a default is not defined in Container/Shipper Control.

Prefix for new master bill of lading NRM sequence IDs. Specify the NRM sequence the system creates and assigns to all new master bills of lading if a default is not defined in Container/Shipper Control.

Prefix for new shipper document format codes. Specify the document format the system creates for standard and custom shipper print procedures.

New list type for existing "carrier" addresses. Global Shipping creates a reserved *carrier* list type. If you created a user-defined list type called carrier prior to installing the target version, the conversion utility lets you redefine the existing *carrier* list type.

- To preserve the existing carrier list type, leave this blank or enter `carrier`. The addresses are designated as carrier addresses.
- To redefine the existing carrier list type, enter a new list type name at the prompt.
- To merge the existing carrier list type with another existing list type, enter the non-carrier list type.

2 Press OK to continue.

Domain Conversions (8.5 – eB2)

All MFG/PRO eB2.1 databases require a minimum of two domains. One—the system domain—is created when you install the MFG/PRO target version. For converted databases, a production or primary domain is created during the conversion process.

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

In this process, the conversion routines make assumptions based on information in the source database. If there are no connection records (`dc_mstr`) entries for other databases in the source database, a new connection master is created and the production domain assigned to this database.

If `dc_mstr` entries for other databases exist, you are first asked to choose the current database from the list. You then assign a primary domain for this database. After the primary domain has been assigned, you must assign a domain to each of the other databases that have `dc_mstr` records. These domains are then required to support future connections to these other databases.

Important When you convert the other databases, all the domain names must be identical. For example, if you assign domain names of sales, production, and distribution to databases named db1, db2, and db3 respectively in the first database you convert, the same domains for the same databases must be used in converting subsequent databases.

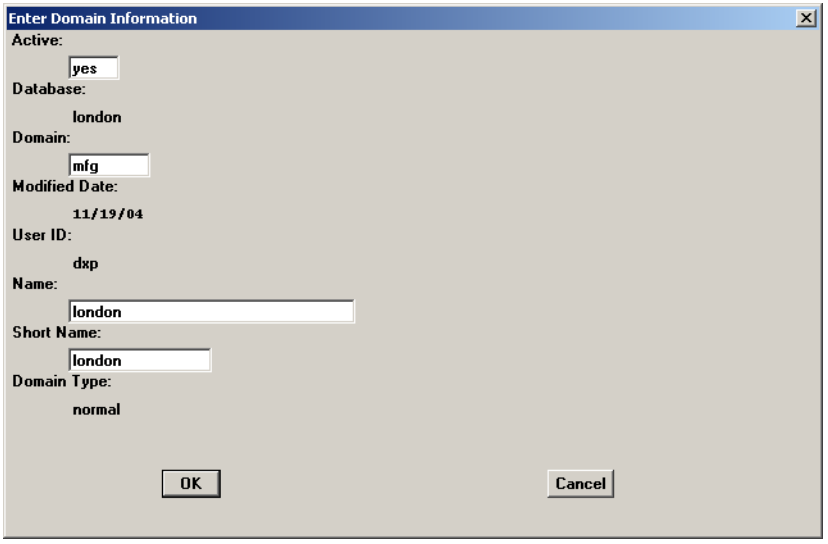
Multiple Databases – More than One dc_mstr

1 If the source database contains more than one database connection master, the first screen to display is the Select Conversion Database screen. Select the database you are converting and press OK.

Fig. 5.13
Select Conversion Name Screen

2 You are then prompted to create a domain for each database with a connection record in alphanumeric order.

Fig. 5.14
Master Domain Entry



3 The master domain screen shown in Figure 5.14 displays for each database identified with a `dc_mstr` in the conversion database. Enter values based on the following field descriptions.

Active. Indicate whether this domain is currently active.

Yes (the default): This domain can be associated with users in User Maintenance (36.3.1) and specified at log-in.

No: This domain is not active in the current database.

Database. The logical name of the database displays but cannot be modified.

Domain (Code). Enter a unique code for each database identifying a specific domain.

(Domain) Name. Enter a descriptive name to associate with this domain (up to 28 characters). This name must be unique within a database and across connected databases.

This name displays in the lookup associated with domain fields and on various reports and inquiries, as space permits.

(Domain) Short Name. Enter a brief name (up to 14 characters) to associate with this domain. This name must be unique within a database and across connected databases.

The domain short name displays in the program title bar in character and Windows interfaces based on the setting of Header Display Mode in Security Control (36.3.24). It always displays in the program title in Desktop screens.

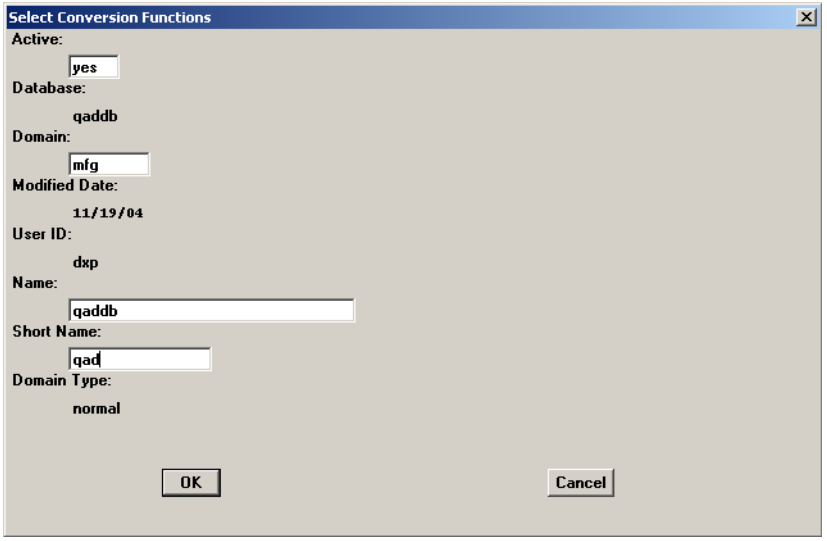
Domain Type. This displays the default value.

4 Choose OK when you finish.

Single Database – No dc_mstr

1 If this database has no `dc_mstr` records, the Select Conversion Functions screen displays with the logical database name displayed. Use the domain entry screen to create the required `dc_mstr` for the conversion (target) database.

Fig. 5.15
Database Connection Master for a New Domain



2 Accept the defaults, or enter additional information if you know it. The critical fields are:

Active. Indicate whether this domain is currently active.

Yes (the default): This domain can be associated with users in User Maintenance (36.3.1) and specified at log-in.

No: This domain is not active in the current database.

Database. The logical name of the database displays but cannot be modified.

Domain (Code). Enter a unique code for each database identifying a specific domain.

(Domain) Name. Enter a descriptive name to associate with this domain (up to 28 characters). This name must be unique within a database and across connected databases.

This name displays in the lookup associated with domain fields and on various reports and inquiries, as space permits.

(Domain) Short Name. Enter a brief name (up to 14 characters) to associate with this domain. This name must be unique within a database and across connected databases.

The domain short name displays in the program title bar in character and Windows interfaces based on the setting of Header Display Mode in Security Control (36.3.24). It always displays in the program title in Desktop screens.

Domain Type. This displays the default value.

3 Choose OK when you finish.

EDI ECommerce Conversions (8.6E – eB)

The conversion prompts for ECommerce turnaround data if this is a conversion required for your source version (8.6E – eB). Use the screen and field descriptions to complete this dialog.

Note This selection screen does not appear if you have not selected the ECommerce Data Conversion in the Conversion Functions screen.

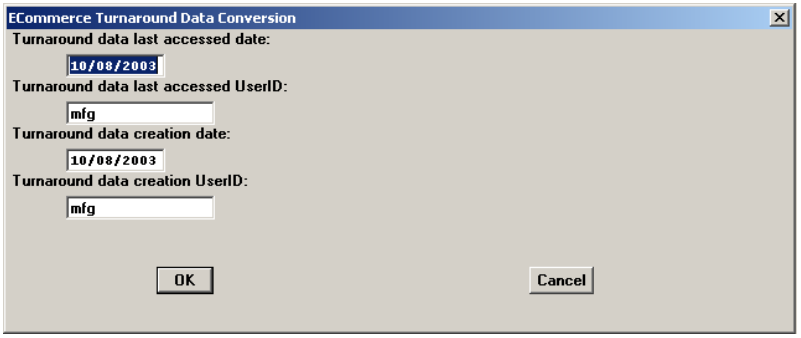


Fig. 5.16
ECommerce Turnaround Values

ECommerce turnaround data is any data in an ECommerce document imported to MFG/PRO that is not used by MFG/PRO. The data is, instead, stored in a side table and then placed in the related export document when it is sent.

If you are using earlier versions of the ECommerce functionality and you have turnaround data in the side tables, you need to enter a date and user ID for when the data was created and when it was last accessed. Four new fields were added that require default starting values. The values are probably unimportant for past data and should simply be a valid user ID such as `mfg` and valid dates.

1 Enter turnaround information as shown, using the field descriptions that follow:

Turnaround data last accessed date. Enter the last date on which turnaround data was accessed.

Turnaround data last accessed user ID. Enter ID of the last user who accessed the turnaround data.

Turnaround data creation date. Enter the date on which turnaround data was created.

Turnaround data creation user ID. Enter ID of the user who created the turnaround data.

2 Press OK to continue.

Euro Data Conversion (8.5 – 8.6D)

Note This selection screen always appears since the Euro Data Conversion is required.

1 Enter accounts, sub-accounts, and cost centers as shown, using the field descriptions that follow:

Unrealized Gain Account, Sub-account, Cost Center. These prompts create a default account, sub-account, and cost center for posting unrealized gains in currency exchanges. If you leave the account blank, the Unrealized Exch Rate Gain/Loss account defined in General Ledger Control (25.1) is used as a default. No default cost center is used.

Unrealized Loss Account, Sub-account, Cost Center. Specify the default account, sub-account, and cost center for posting unrealized losses in currency exchanges. (See notes from previous entry.)

Realized Gain Account, Sub-account, Cost Center. Specify the default account, sub-account, and cost center for posting realized gains in currency exchanges. If you leave this prompt blank, the Exchange Gain account, sub-account, and cost center defined in the first bank master record matching the currency in question are used.

Realized Loss Account, Sub-account, Cost Center. Specify the default account, sub-account, and cost center for posting realized losses in currency exchanges. (See notes from previous entry.)

Rounding Account, Sub-account, Cost Center. Specify the default account, sub-account, and cost center for posting rounding amounts in currency exchanges. If you leave this prompt blank, no default values are assumed.

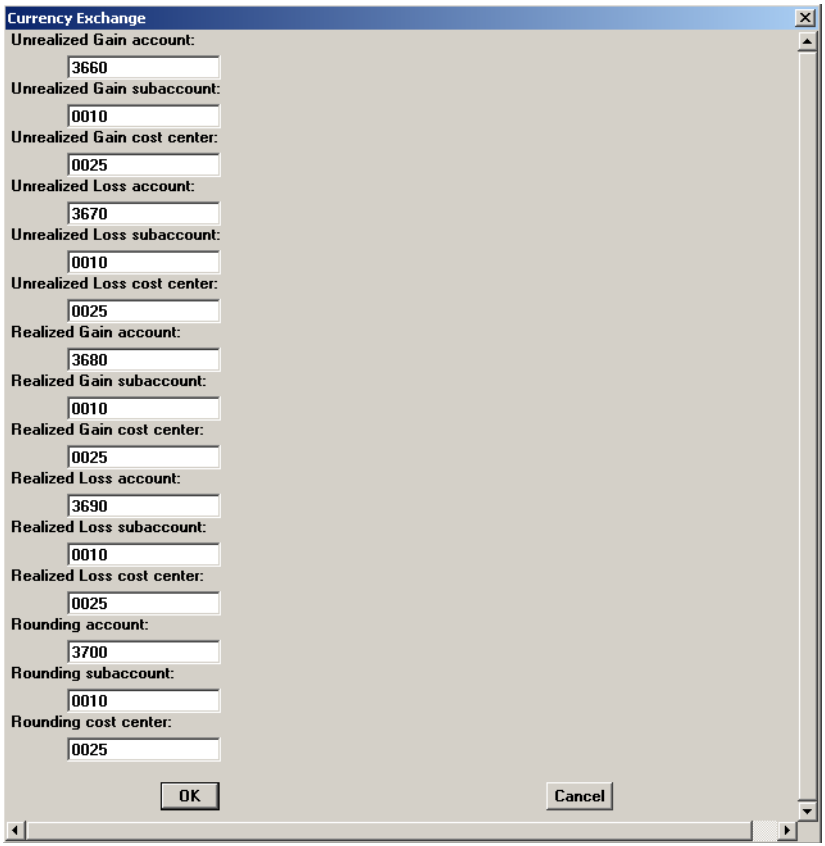


Fig. 5.17
Currency Exchange Accounts Conversion Screen

2 Press OK to continue. The Log Window displays your connection status.

3 The Connect Database dialog displays for Logical `easource`. The European Accounting database is called `qadepm` or `largo` by default. Locate your European Accounting database, and choose OK to continue.

4 The Log Window displays progress. Choose Close on completion.

Run Special Dump Programs

1 At this point, the special dump programs run automatically. The Log Window displays and each dump is logged. A message displays on completion.

2 If you are converting from version 9.1 or later and are converting EDI ECommerce, you are prompted to connect to an `admsource` database. The special dump for EDI ECommerce must connect to the `admin` database to do the dumps. Prior to 9.1 the EDI ECommerce tables are in the main database and therefore are dumped from there without the need to connect to the additional database.

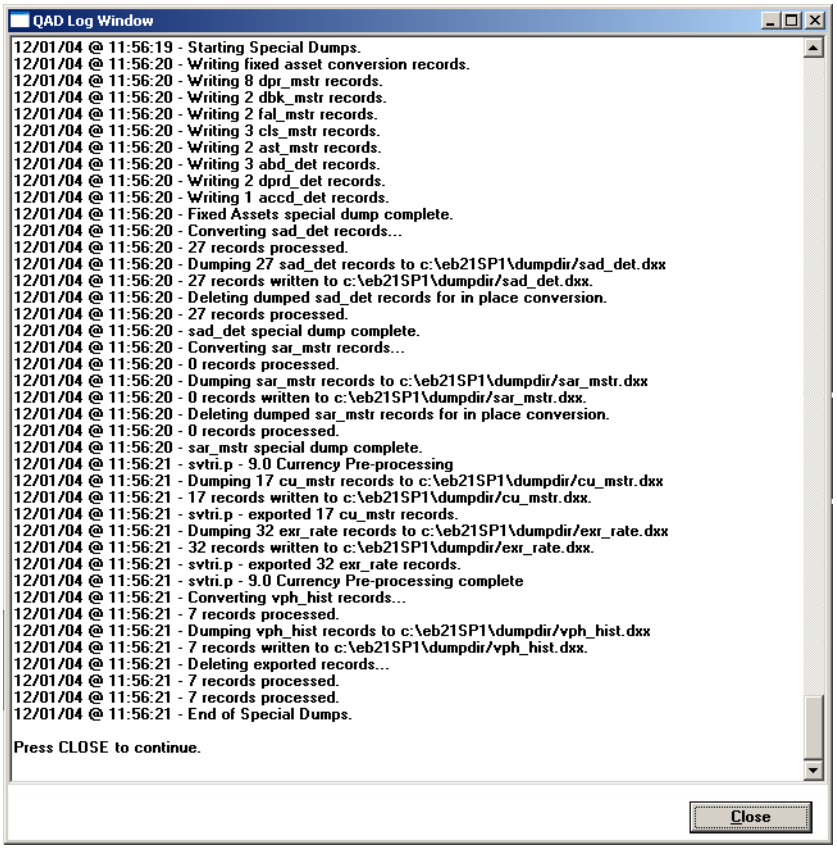


Fig. 5.18
Special Dumps Log Window

3 Choose Close.

Update the Source Schema

In the next section, your source database is updated with a delta schema file that results in an eB2.1 schema updated to the current service pack level. First an existing schema file is selected, copied, and modified to include your domain.

Depending on your source version and whether you have taken advantage of structure files to optimize your data files on disk with later Progress versions, you have two choices of delta file for your source version. Both types of delta `.df` file are located in *`TVInstallDir`*`\inplace\progress`.

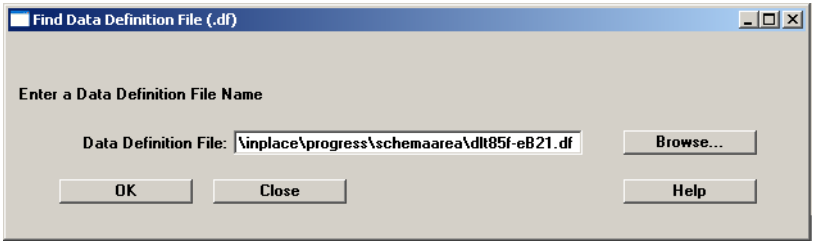
Storage Areas. In the `\storagearea` subdirectory are delta `.df` files that you can edit to optimize you new schema to specific-sized locations on your disks.

Schema Area. In the `\schemaarea` subdirectory are delta `.df` files that place the new schema into the default schema area used for non-structured database files.

Warning Make sure you know the correct version and release for your source database. Using the wrong `.df` file will result in errors.

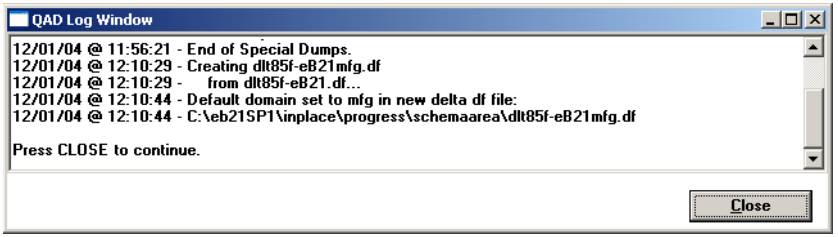
1 After you close the Log Window following the special dumps, you select the appropriate delta file for your source version from either the `\storagearea` or `\schemaarea` directories and choose Open. The file path displays in the Find Data Definition File screen. Choose OK to create the new delta file for your environment.

Fig. 5.19
Find Data Definition File Screen



2 The Log Window displays, showing file creation progress.

Fig. 5.20
Delta .df Creation Log



3 When it completes, choose OK to continue. The Load Data Definition File screen now displays. It looks just like the Find Data Definition File screen in Figure 5.19.

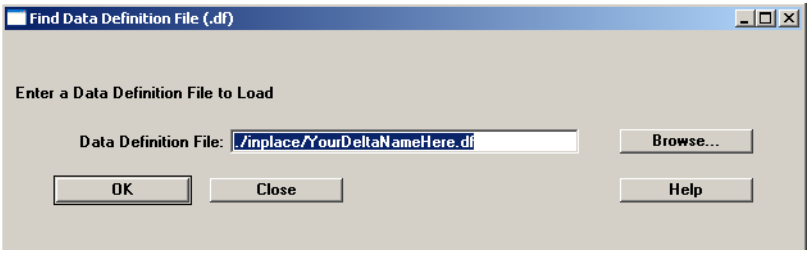


Fig. 5.21 Delta .df Load Screen

4 Select Browse to locate the new delta `.df` file, named *`Original_df_nameDomain_name`*`.df`. The correct file name and location is displayed in the Log Window, as shown in Figure 5.20. For example, if you selected `dlt90-eB21.df` for a domain named qad, the resulting `.df` file is `dlt90-eB21qad.df`.

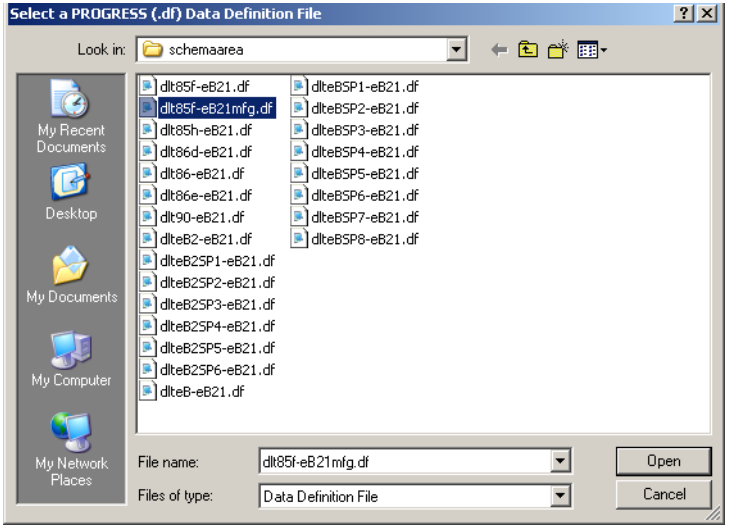


Fig. 5.22 Selecting the New Delta .df File

5 Choose OK to return to the Find Data Definition screen. Choose OK to initiate the load.

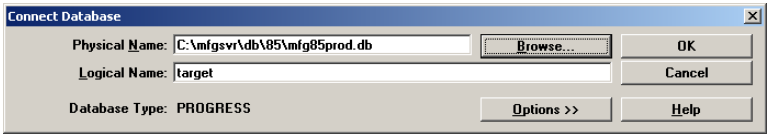
6 The Log Window displays. The load screen displays on top of this showing progress. Close the Log Window when the load completes.

Delete Prior System Data

The next step removes obsolete system data from tables such as the field help master (flh_mstr) and message master (msg_mstr).

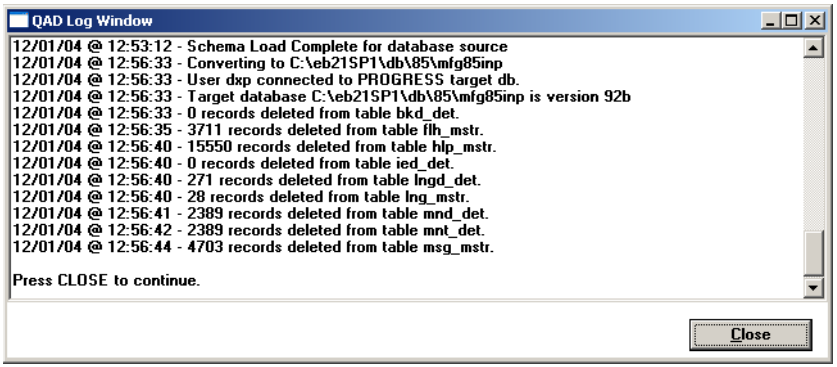
1 You are prompted to connect to your conversion database as target.

Fig. 5.23
Connect to Target Database



2 The Log Window displays as obsolete system data is deleted.

Fig. 5.24
Delete Prior System Data Log



3 On completion, choose Close to continue.

Reindex and Seed qaddb_ctrl

You now reindex the `qaddb_ctrl` table to enable the database for the data loads.

1 The QAD Log Window show reindexing progress for `qaddb_ctrl`.

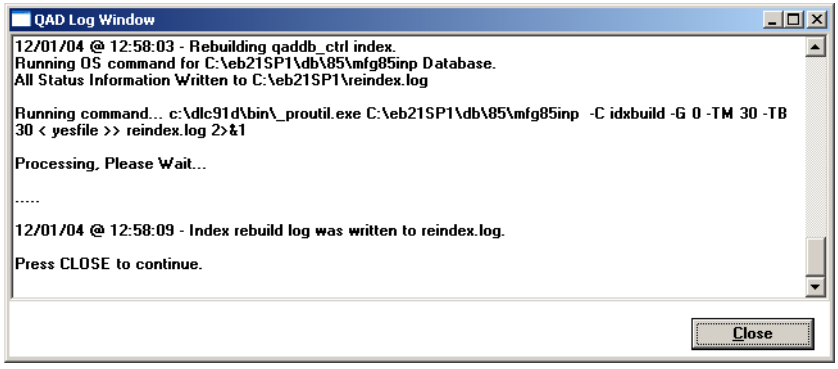


Fig. 5.25
qaddb_ctrl Index Rebuild Log

2 Choose Close to continue.

3 Connect to the target database again.

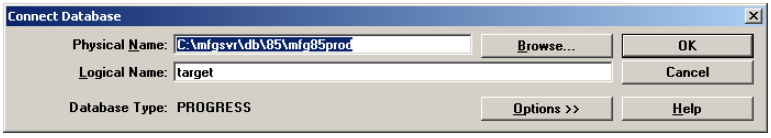


Fig. 5.26
Connect to Target

4 The Log Window displays to confirm the connection. Choose Close to continue.

5 The Log Window displays again showing progress as a `qaddb_ctrl` record is created and the initial seed value assigned.

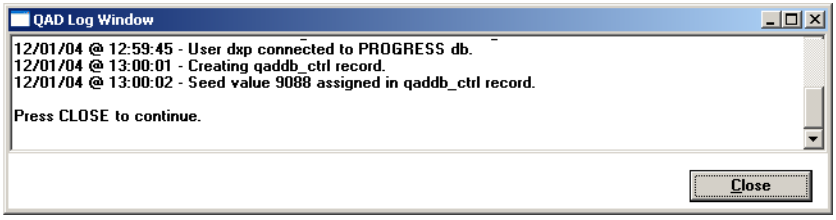


Fig. 5.27
QAD Log Window

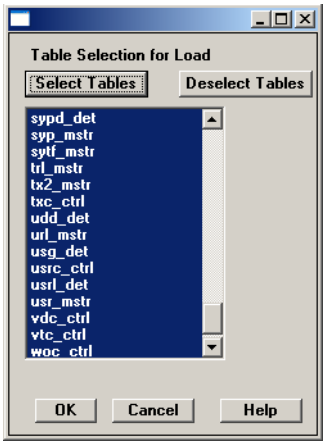
6 Close the Log Window on completion.

Load Production Data

In this task, you load the default system data supplied by QAD into each database. You load both language-independent system data and language-specific data such as menus and messages.

1 The Table Selection for Load screen displays, showing the language-independent data files for tables in the `mfg` subdirectory. This screen may take a moment to load the data file list.

Fig. 5.28
Table Selection for Load Screen



2 By default, all the tables are selected. This is correct. Choose OK to start the load. The Log Window displays the load progress.

3 When the load completes, choose Close to continue.

Load Language-Specific System Data

You now load the language-specific system data.

1 The Table Selection for Load screen displays again, showing the tables to be updated with language-specific data files. All are selected by default.

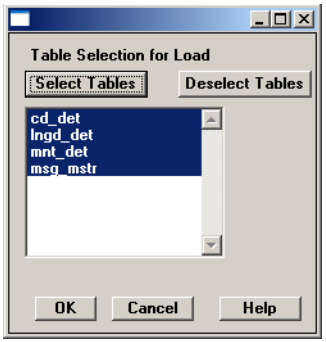


Fig. 5.29
Second Table Selection for Load Screen

2 Choose OK to load the data.The Log Window displays the load progress.

3 When the load completes, choose Close to continue.

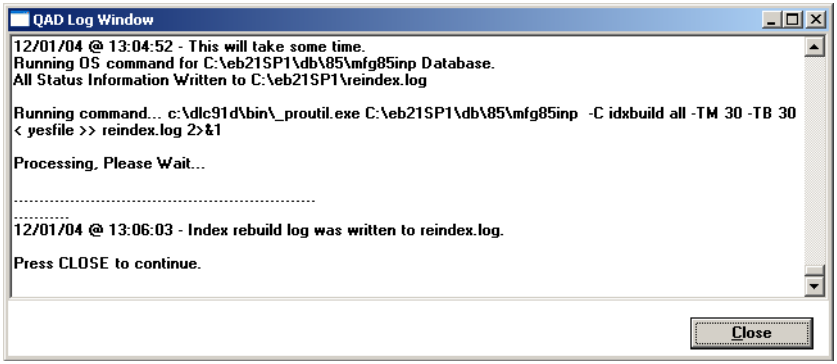
4 Repeat steps 1 through 3 for each installed language.

Rebuild Indexes

The index rebuild now starts. For an in-place conversion, the new schema is loaded with the indexes disabled to make the data loads more efficient. This step reindexes all the loaded data.

1 The QAD Log Window displays, showing progress of the index build step.

Fig. 5.30
Index Rebuild Log Window



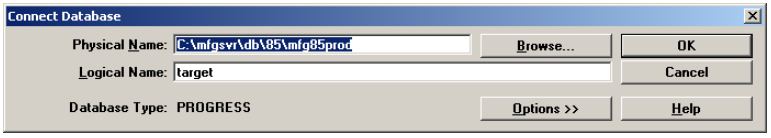
2 When the build is complete, choose OK to continue.

Reset Domain Fields

You now connect to the conversion database and reset the domain fields to blank. During the conversion, a domain value is required at the schema level to permit the creation of new records in the database. However, during normal database operation, the domain field must be assigned to the user's current domain, requiring that the domain value at the schema level start out as blank. This step accomplishes that change.

1 You are prompted to connect to your conversion database as target. Always verify the database name and path, especially if you are performing more than one conversion using this version of MFG/UTIL.

Fig. 5.31
Connect to Target Database



2 The Log Window displays to confirm database connection and show domain reset progress.

Fig. 5.32
Domain Reset Log

3 Choose Close to continue.

Convert the Database

MFG/UTIL now calls the various conversion programs required to convert your specific source version.

1 The Log Window displays showing which conversions will be run, then runs them.

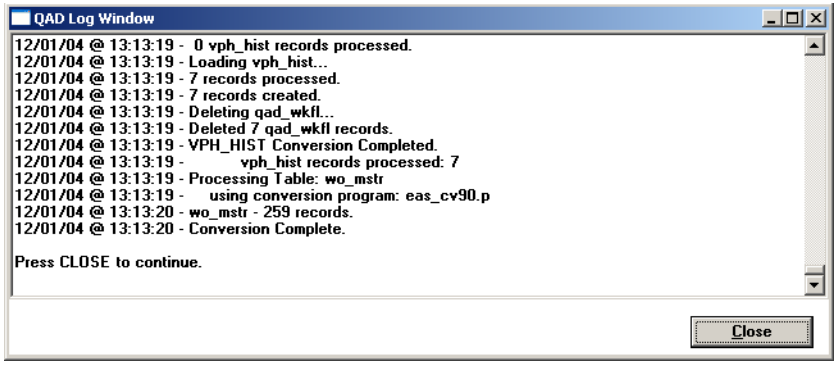
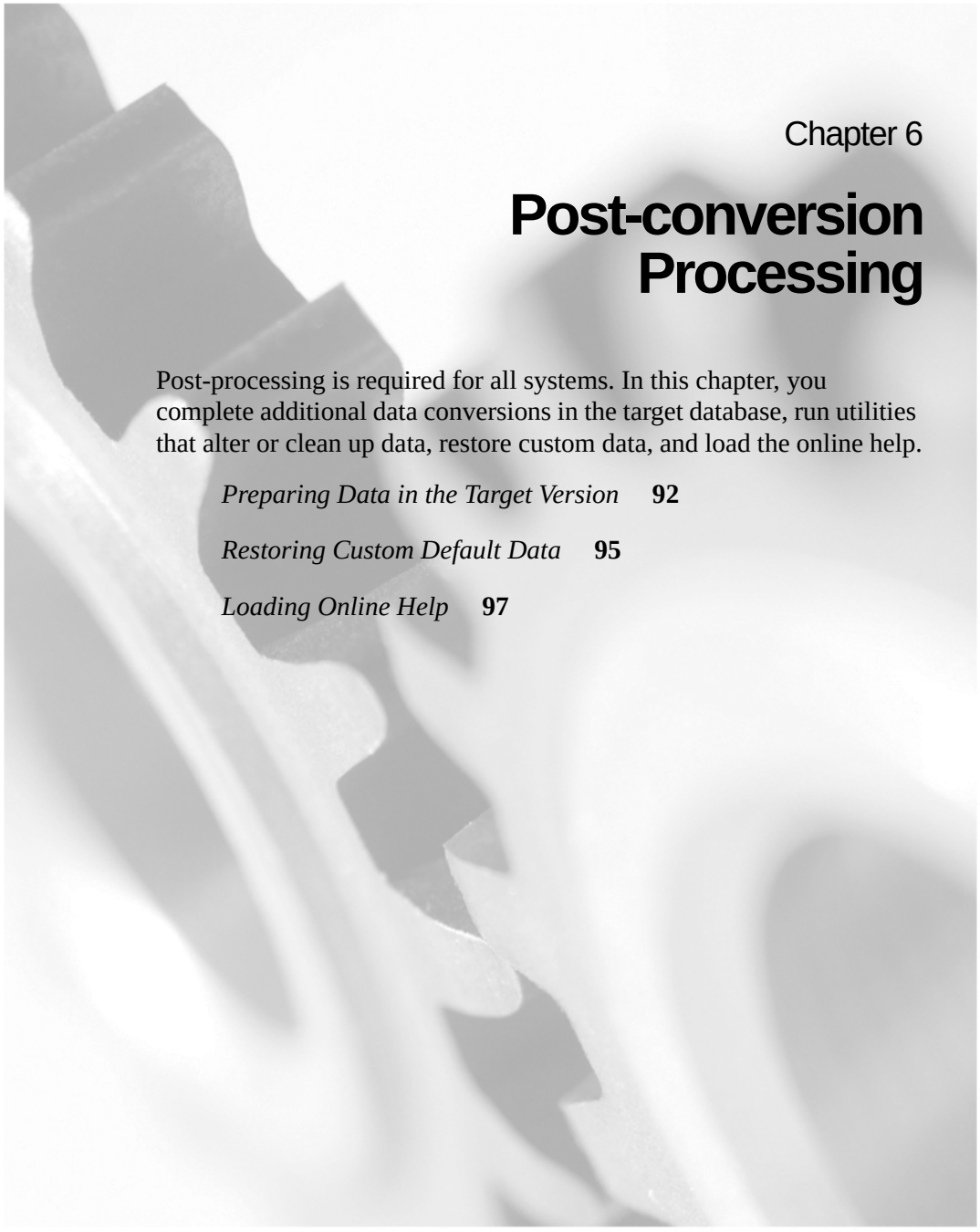


Fig. 5.33
Conversion Complete Log

2 When the conversion is complete, review the log for errors. Then choose Close to complete the conversion.

Convert Additional Databases

Repeat these steps starting with “Running the Conversion” on page 66 for additional production databases in Progress environments.



Chapter 6

Post-conversion Processing

Post-processing is required for all systems. In this chapter, you complete additional data conversions in the target database, run utilities that alter or clean up data, restore custom data, and load the online help.

Preparing Data in the Target Version

Depending on which MFG/PRO features you plan to implement, complete the appropriate steps in this section. You must make these preparations in order for the target version programs to run correctly.

Perform all data preparation in a target version MFG/PRO session. To launch a target version session, complete the following steps.

Preliminary Setup

- Modify the `.profile` for user `mfg` to set the DLC variable to the Progress 9.1 installation directory.
- Log in to MFG/PRO eB2.1 as `mfg`.
- Launch a client session using the target version client startup script:

  `client.`*`Production`*

User Group Length Conversion (8.5 – eB2)

User groups in eB2.1 are limited to 8 characters in length. Use the User Group Conversion utility to convert existing group name lengths to the correct length and to update security features in MFG/PRO that use groups, such as menus and sites. Run this program only after all other conversions have been run.

1. In MFG/UTIL, select Update User Group Lengths from the Conversion menu.
2. You are prompted to continue. Choose No to cancel the process; choose Yes to proceed with the user group conversion.
3. A series of messages is displayed as the program collects data about groups. Press OK to continue at each message.
4. As the process discovers group names longer than 8 characters, it displays the names and prompts you to enter an 8-character replacement. Choose OK for each.
5. After the last group name is changed and you choose OK, the program updates all MFG/PRO group security features.

EDI ECommerce Data Conversion (9.0)

QAD introduced the ECommerce module for enhanced electronic data interchange (EDI) functionality in MFG/PRO 9.0. If you have this module implemented in your source version, complete the following steps. If you do not have the ECommerce module implemented in your source version, you can skip this section.

In MFG/PRO 9.0, the database elements for the ECommerce module were located in the main production database. In MFG/PRO eB2.1, these elements are located in the administration support database. Complete the following instructions to load your source version ECommerce data into the target version `admin` database.

1. In MFG/UTIL, select Convert Admin Database from the Conversion menu. If you run this menu option for any version other than 9.0, a message displays, but no processing takes place.
2. In the Connect Database screen, make sure you connect to the target `admprod` or `admin` database and choose OK.
3. Choose OK to run the load. The Log Window displays during processing.
4. Choose Close to continue.

Sequences Update

A program to initialize sequences used in MFG/PRO, including those that existed in the source version and any introduced in the target version, is required for all conversions.

1. Start a target version MFG/PRO session.
2. Type `utsequp.p` at any menu-level prompt and press Go.
3. On completion, close the MFG/PRO session.

Load GUI Data

Important Skip this section if you are converting from eB or eB2.

In this section, you load the data you dumped from the source version `gui` database into the target version administration (`admin`) database.

If you did not dump source version `gui` data, you can skip this section.

1. Change directories to the `conv` subdirectory below the target version installation directory:

   ```
   cd TVInstallDir/conv
   ```

2. Run the GUI load program (`ld91gui.p`) using the following command:

   ```
   $DLC/bin/pro AdminDB -p ld91gui.p -param /dumpdir
       -yy 1920
   ```

3. Check any Progress error files (extension `.e`) that were created in the conversion dump directory for data conflicts.

See Chapter 9, “Resolving Conversion Errors,” on page 181.

Global Shipping Conversion (8.5)

Complete these steps if you plan to implement Global Shipping:

1. Each pre-shipper, shipper, and master bill of lading that cannot be renumbered must have a valid NRM sequence. To be considered valid, a shipping document number must match the format of an NRM sequence of the appropriate dataset—as though the NRM sequence was used initially to issue the number. Create as many NRM sequences as necessary to account for all existing pre-shipper, shipper, and master bill of lading numbers that cannot be renumbered.

   Note Shipping documents with numbers that do not match a valid NRM sequence are renumbered by the conversion utility.

2. The conversion creates company address records for all shipping sites without corresponding address records. All fields in the new address records are copied from the default company address specified in Sales Order Control (7.1.24). To use different company addresses, either create new address records prior to running the conversion or edit the address records after the conversion.

See *User Guide Volume 9: Manager Functions.*

Flow Scheduling (9.0 – eB)

If you have set up generalized codes for the Purchase/Manufacture field, you must add W (flow) and (L) line manufactured as valid codes for field `pt_pm_code` using Generalized Codes Maintenance (36.2.13). You can modify Purchase/Manufacture codes for existing items one at a time using item maintenance functions (1.4.1, 1.4.7, and 1.4.17), or use a batch load file to update some or all of them automatically.

European Accounting Conversion (8.5 – eB)

The EA conversion routine can, depending on what is set up in the source database, create address master records (`ad_mstr`) with address codes prefixed BK and then a six-digit sequence number. Use Address Code Change (2.11) to update records after performing the conversion.

The conversion may also (depending on the source data) create inventory movement code master records with a transaction type of UNKNOWN. Correct these to a valid current MFG/PRO transaction type after conversion.

Migrate Freight Information (eB)

The Migrate Freight Information (36.25.71) utility (utfrtrls.p) must be run if you are upgrading from eB Service Pack 4 or higher. This utility updates the fields so_manual_fr_terms and sod_manual_fr_list with values of so__qadl04 and sod__qadl02 respectively and reinitializes so__qadl04 and sod__qadl02 to No.

Restoring Custom Default Data

After you have completed the conversion, follow these steps to restore your custom changes to the MFG/PRO default data.

See “Preserving Custom System Data” on page 29.

Custom Menus and Messages

You must reenter your custom menu and message information into the target version. To help identify what your custom changes were, you should have printed the following reports from MFG/UTIL:

- Menu Detail Report (`svmndrep`)
- Message Master Report (`svmsgrep`)
- Language Detail Report (`svlndrep`)
- Language Master Report (`svlngrep`)

MFG/PRO Custom Browse Updates

If you created custom browses for your source database, you can reassign your custom browses to the correct fields and procedures, and reassign them to menu locations, in the following steps. These steps assume you have recorded your custom browse settings from the source database.

1. Open Drill Down/Lookup Maintenance (36.20.1). For each custom drill-down record that references a browse, follow these steps to reassign the custom browse.
2. Enter the browse type, Drill Down or Lookup. Enter the Field Name and Calling Procedure as necessary and enter the custom browse file name in Procedure to Execute. Press Go.
3. Enter label and description information. Press Go to save.

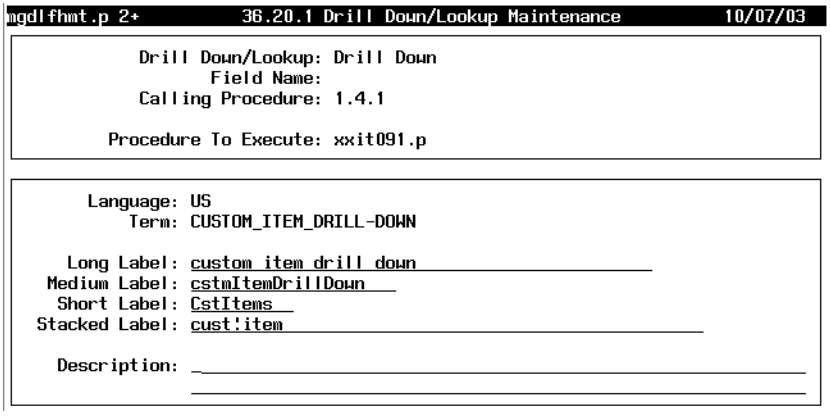


Fig. 6.1 Drill Down/Lookup Maintenance (36.20.1)

4 If you replaced a browse on the MFG/PRO menu with a custom browse, open Menu Substitution Maintenance (36.20.6) and reenter your source version custom menu substitutions.

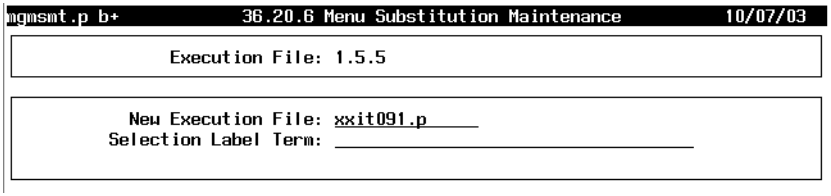


Fig. 6.2 Menu Substitution Maintenance (36.20.6)

5 Compile each browse program using MFG/UTIL.

- **a** Create a compile list file with a name such as `utbrowse.wrk`. This should list all the custom browse programs to recompile.
- **b** Launch MFG/UTIL.
- **c** Select Compile Procedures from the Programs menu.
- **d** Complete the dialog box, entering the new compile list file name, `utbrowse.wrk`, and choose Compile.

For information on compiling with MFG/UTIL, see the installation guide for your database.

Loading Online Help

Complete the following instructions to load the MFG/PRO online help.

Default Target Version Help

Use the following to load target MFG/PRO field and procedure help:

1 Start a target version session and select Field Help Load (36.4.19).

2 In the Language field, enter the language code.

3 Skip to the Field Help Load File field. Enter the MFG/PRO language directory followed by the help file `fieldhlp.fhd`. For example, for US English, you would enter: *`TVInstallDir`*`/us/fieldhlp.fhd`.

4 Accept the default value in the following field:

```
Skip loading help with lower status: yes
```

5 Press Go to begin the load process. As the load proceeds, the number of records read and loaded displays on the screen.

6 To implement multiple languages, repeat the preceding steps for each language. In step 3, specify the `fieldhlp.fhd` help file, below the two-letter language code subdirectory, below *`TVInstallDir`*.

For example, to implement French, you would load the *`TVInstallDir`*`/fr/fieldhlp.fhd` help file.

Custom Source Version Help

To load custom online help dumped from your source version database:

1 Start a target version session and select Field Help Load (36.4.19).

2 Enter the language code in the Language field.

3 Enter `user` as the beginning and ending range in the Text Type and To fields.

4 Enter the field help dump file name you specified in “Dump Custom Help” on page 32.

5 Press Go to begin the load.

Chapter 7

GTM Conversions

Use this chapter to convert to the Global Tax Management (GTM) system.

GTM Conversions Summary

Prior to MFG/PRO eB, MFG/PRO supported four tax processing systems:

- Value-added tax (VAT)
- United States (US) taxes
- Canadian taxes
- Global Tax Management (GTM)

See “Converting to GTM From No Taxes” on page 141.

Note Some companies may not have implemented any tax system, either because they were using an external tax package or had some other alternate method for tracking taxes. In this case, some preparation is still required to convert to GTM and continue without a tax system.

Of the four systems, GTM offers the most precise calculations and the greatest flexibility for calculating taxes for multiple countries. Therefore, MFG/PRO no longer supports regional tax system.

QAD supplies programs with GTM to automate most conversion tasks (Table 7.1). These programs generate GTM codes and update existing MFG/PRO records. They also create records required for tax reporting.

Table 7.1 GTM Conversion Programs

Menu Number	Program
2.13.22.1	VAT to GTM–Setup
2.13.22.2	VAT to GTM–Masters
2.13.22.3	VAT to GTM–Transactions
2.13.22.5	USA to GTM–Setup
2.13.22.6	USA to GTM–Masters
2.13.22.7	USA to GTM–Transactions
2.13.22.9	CAN to GTM–Setup
2.13.22.10	CAN to GTM–Masters
2.13.22.11	CAN to GTM–Transactions

Pre-conversion Planning

To save time and reduce the likelihood of errors, address the following issues before you start the GTM conversion process:

- Timing

  Perform the conversion any time in transaction processing. You do not have to close open transactions or post transactions to the general ledger beforehand. However, for a clearer division of reporting, consider converting at the beginning of a new financial period.

  To prevent record-contention conflicts, run the conversion programs only when no other users are on the system.

- Records to Convert

  Determine the range of records to convert. Master records such as customers and items are converted first, followed by transaction records. Records must be converted in the order in which their selection options display on the conversion screen. Finally, transactions that are prerequisites for other transactions must be converted first. For example, purchase order receipts must be converted before their respective vouchers.

  The conversion programs select records by number, not creation date or effective date. To convert records for a specific date range, specify the first record number for the starting date and/or the last record number for the ending date.

  The conversion programs do not perform cross-checks on your selection of records to convert. For example, for accounts payable, they do not verify that selected payment records are the ones associated with the selected voucher records.

- Code Naming Conventions

  Each conversion has default naming conventions for GTM tax classes, tax zones, and tax environments. Review these and decide if they are what you want.

- Integration of GTM Enhancements

  The objective of the conversion is to move your existing tax processing configuration into GTM. You must complete the conversion before you can incorporate new GTM features. There are two reasons for this. First, your current configuration does not have

Tip
Practice running the conversion on a copy of your live database. You can identify problems in existing records, as well as familiarize yourself with the conversion process.

the data to support these features. Second, some of the conversion subprograms expect to encounter specific data values. They will not run correctly if you change these values prematurely.

- Custom Programming

  For some situations, custom programming is required. An example of such a situation is the need to merge two VAT class codes to one GTM tax class code without using GTM tax usage codes.

Post-conversion Procedures

Once you complete the conversion, you still have to exercise some controls to ensure a clean division for pre- and post-GTM reporting:

- Handling of Closed Transactions

  Closed transactions that were not included in the conversion should never be reversed or deleted once you start using GTM.

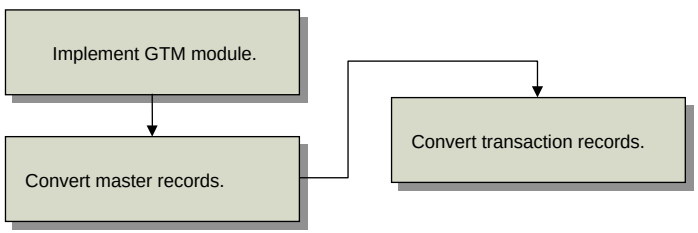
- Effective Date for Tax Reports

  Tax reports should be printed with a post-conversion tax date, to exclude transactions you did not bring into GTM.

Converting VAT Taxes to GTM

This section describes converting to GTM from MFG/PRO's VAT system.

Fig. 7.1
VAT to GTM
Conversion Process



The VAT to GTM conversion translates VAT data to GTM equivalents and updates existing MFG/PRO records. Figure 7.1 summarizes the conversion work flow, which revolves around three sets of activities.

Implementing GTM. Implementing GTM for VAT, you make planning decisions and then run a setup program. How this program works depends on whether a country is a member of the European Community.

See page 103.

Converting Master Records. Run a program that populates database tables for customer and supplier addresses, items, product lines, and other master records with GTM data values.

See page 109.

Converting Transaction Records. Run a second program that populates transaction records. All transactions subject to tax are affected, including sales, purchasing, accounts payable, accounts receivable, and service/support management.

See page 113.

Important After each of these activities, review the corresponding reports and audit trails. Mistakes can be pervasive and costly.

Table 7.2 lists the MFG/PRO programs used during the conversion.

Table 7.2 MFG/PRO Programs Used to Convert VAT to GTM

Activity	MFG/PRO Programs
Implementing GTM	Country Code Maintenance (2.14.1)
	VAT to GTM–Setup (2.13.22.1)
Converting master records	VAT to GTM–Masters (2.13.22.2)
Converting transaction records	VAT to GTM–Transactions (2.13.22.3)

Implementing GTM

An automated setup program can create most of the codes you need to implement GTM, based on how your VAT taxes are defined. Before executing this program, you should understand the options it provides and the default logic it uses.

Country Codes and Tax Environments

The first step in implementing VAT taxes in GTM is to ensure that all countries are defined in Country Code Maintenance (2.14.1). Countries that are part of the European Community must have the EC field set to Yes. This is important because two options are available during the automated setup:

1. You can create tax zones and tax environments with countries summing into one of two predefined tax zones: union and non-union. To do this, you must specify a code representing the union. By default, this is EU. The system then creates two tax zones—EU and NON-EU. These zones correspond to special country code values of ~1 (EU) and ~0 (NON-EU).

   This approach results in a minimum number of tax environments:

   - One environment for each country defined in the country master.
   - IN-EU for transactions within the union but outside the borders of one country.
   - FROM-EU for transactions between a member of the union and a nonmember.
   - TO-EU for transactions from a nonmember to a member of the union.
   - NON-EU for transactions between two countries that are both nonmembers of the union.

2. You can create tax zones and environments based on each defined country without summing into a union. This option results in the maximum number of tax environments—one for each combination of ship-from and ship-to countries. If, for example, you do business with 10 countries, 100 tax environments are created.

   If you choose this option, you do not need to specify a union code, and the setup program does not create the EU and NON-EU zones or the ~1 and ~0 countries.

Defining Custom Tax Class and Usage Codes

By default, the conversion setup generates tax classes that correspond to your VAT classes, without associated GTM tax usage codes. You can override this by creating your own map for the setup program and specifying it in the Class File field. The same class file is also referenced in the programs that convert master data and transaction records.

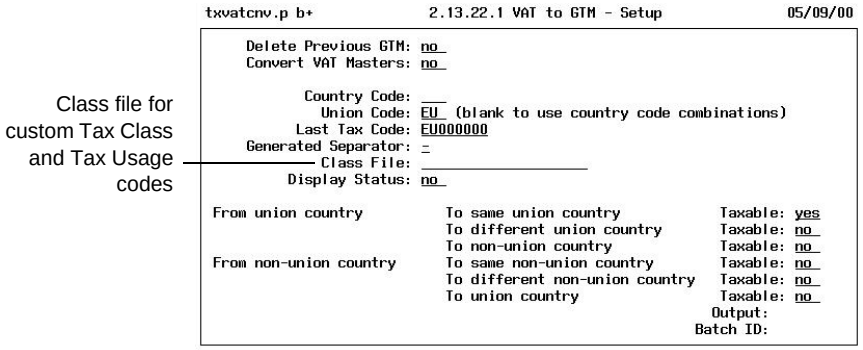


Fig. 7.2
Class File in VAT to GTM–Setup (2.13.22.1)

You should create a class file if:

- Your company plans to change tax class codes during the conversion.
- Within a tax class, a company can be taxed based on its nature of operation or the way it intends to use an item. In GTM, these conditions are identified by tax usage codes.

The class file is an ASCII file with text strings in the following format:

```
"Current VAT Class" "GTM Tax Class" "GTM AP Tax Usage"
"GTM AR Tax Usage"
```

GTM tax classes are a maximum of three characters, and tax usage codes are eight characters. An unused optional value is represented by a null string (either " " or "").

The class file can have any name or extension. However, code values in .csv files must be separated by commas instead of blank characters. The file must be located in the home directory for the Progress session.

Tip
A `.csv` file is a Windows comma-separated value file format for saving values recorded in a spreadsheet.

The class file accommodates companies that use different tax class and/or tax usage codes for AP and AR processing. If you use one set of codes for both kinds of tax processing, simply specify the same usage code for both.

Example Your current VAT classes are 1 and 2. You want to map VAT class 1 to GTM tax class A, tax usage code FOOD, and VAT class 2 to GTM tax class B, tax usage DRUG.

```
"1" "A" "FOOD" "FOOD"
"2" "B" "DRUG" "DRUG"
```

AP and AR usage codes are applied differently during the conversion to master records and transactions.

Table 7.3
AP and AR Usage Codes

Usage Code	Applied to...
AP Usage Codes	The master conversion applies AP usage codes to supplier records. The transaction conversion uses them to update purchasing and accounts payable records.
AR Usage Codes	The master conversion applies AR usage codes to customers, warranty types, and contract types. The transaction conversion uses them to update sales, accounts receivable, and service/support management transactions.

Processing Logic

VAT to GTM–Setup creates records as described in Table 7.4.

Table 7.4
New GTM Records

Type of Record	Explanation
Tax zones	Based on the value of Union Code, setup builds the tax zone hierarchy for EU and non-EU countries in your current system or tax zones for all countries.
Tax types	Setup creates a tax type of VAT and NON-TAX.
Tax environments	Based on the value of Union Code, setup either generates sums-into tax environments or environments for all ship-to/ship-from country combinations.
Tax rates	Based on VAT rates, setup generates tax rates for the tax jurisdictions and percentages used in your current system, as well as a nontaxable tax rate.
Tax classes	By default, setup generates tax classes based on your current VAT classes and a NOT-TAX class for nontaxable transactions. To create different classes, define a class file (see "Defining Custom Tax Class and Usage Codes" on page 105).
Tax usages	By default, setup does not generate tax usages. However, you can create these with a class file.

Type of Record	Explanation
Country code	The setup generates a record for the default country code you specify when you run the setup. If you enter a union code, setup creates `~1` and `~0` country codes.
Company addresses and address list types	In GTM, company sites require a corresponding company address record because taxes are calculated by address, not site. The setup verifies that each company site has an address record and creates any missing ones, along with any needed address list type records. The setup also creates a `~taxes` address record to provide a default tax address whenever a transaction is missing a company site code.

GTM Control Settings

Setup defines Global Tax Management Control (2.13.24) as described in Table 7.5.

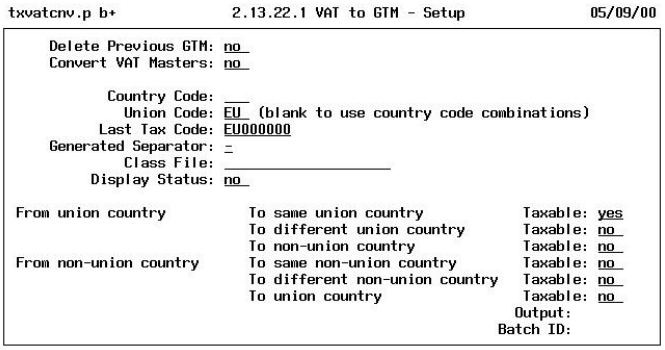
Table 7.5
Updates to GTM Control Settings

Field	Explanation
Country Code	Value specified in VAT to GTM–Setup
Tax Method	01
Tax-By-Line	No
Accrue Tax at Receipt	No
Discount Tax at Invoice	Same setting as in VAT Control (2.15.2.24)
Discount Tax at Payment	Same setting as in VAT Control (2.15.2.24)
Last Tax Code	Value specified in VAT to GTM–Setup

VAT to GTM–Setup

Based on your implementation decisions, use VAT to GTM–Setup (2.13.22.1) to set up GTM for VAT tax processing.

Fig. 7.3
VAT to GTM–Setup (2.13.22.1)



Delete Previous GTM. This option determines whether the setup deletes previously created GTM records from the database. If you select this option, the setup deletes tax zones, tax types, tax environments, transaction tax details, and other GTM records.

- Enter No if you have not yet converted your database to GTM.
- Enter Yes to clean up the database if it contains GTM records from unsuccessful conversion or installation attempts.

Convert VAT Masters. This option determines whether setup generates GTM records based on country codes and VAT classes.

- Enter Yes to create GTM records corresponding to VAT classes.
- Enter No if you only want to delete previous GTM records and do not want the setup program to generate new GTM records.

Country Code. Enter the default country code for the GTM control program.

Union Code. Enter a three-character code (default is EU) representing the European Union if you want countries to sum into a union and non-union zone. Leave blank if you want tax environments to be created for each combination of ship-to and ship-from countries.

Last Tax Code. Enter a value to update the corresponding field in the Global Tax Management Control. In GTM, tax codes identify individual tax rates. Codes are generated sequentially based on the value of Last Tax Code in the GTM control program.

The default Last Tax Code is the union code followed by zeros. For example, for union code EU, the default Last Tax Code is EU000000. This value is recommended if you specified a value in Union Code.

If you are not summing into a union code, enter the default country code followed by zeros.

Generated Separator. Enter a character to be used as a separator in system-generated tax zones and environments. Using a separator can improve the readability of the component elements of these codes.

Tip
The system-generated nontaxable tax type is NON-TAX, regardless of the separator you specify.

The default separator is the dash (–), but you can enter any character. A sample GTM code that uses the dash separator is PAR–FR for Paris, France. If you do not want to use separators, enter blank. However, you cannot use blank as a separator character.

Class File. To provide custom mapping of VAT classes to GTM classes and usage codes, specify an ASCII file with conversion information.

See “Defining Custom Tax Class and Usage Codes” on page 105.

Display Status. This setting determines whether the system displays status messages online during the conversion. These messages list database tables and their indexes as they are converted. If you select this option, messages display on the screen and the printed report.

Taxable. Enter the appropriate values for the six possible combinations of transactions between EC countries and non-EC countries. Yes indicates the transaction is taxable.

Converting Master Records

Once you finish implementing VAT processing in GTM, the next activity is to update tax settings in the following master records:

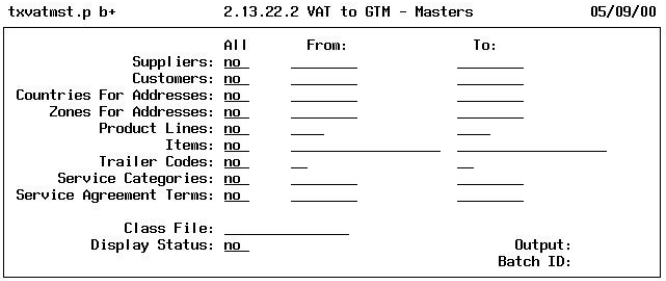
- Suppliers
- Customers
- Product lines
- Items
- Trailer codes
- Service categories
- Service agreement terms

GTM has additional fields and may require new values for existing fields.

VAT to GTM–Masters

To convert master records, run VAT to GTM–Masters (2.13.22.2).

Fig. 7.4
VAT to GTM–Masters (2.13.22.2)



In addition to updating the tax settings in the master records, this program assigns tax zone codes to supplier, customer, and company address records. For verification of changes, the program generates an audit trail.

For each type of record, you can convert all records, a range of records, or individual records. The program converts records in the same order as the options on the screen. For separate audit trails, run the report separately for each type of record.

See page 105.

If you created a class file during the setup step, specify its name in the Class File field. Display status, output, and Batch ID are the same as in the setup program.

Master Conversion Audit Trail

The master conversion prints a report of changed records. The format varies depending on the records included in the conversion. For each group of converted records, the report shows the record number and name followed by the before and after tax information, such as country code, tax zone code, taxable status, whether tax is included in item amounts, tax class, and tax usage.

Groups of converted records are printed in the same order as the screen selection criteria, and each group is separated by a page break. Warning and error messages identify potential conversion problems.

If you specified a class file, the report prints the VAT class and the corresponding GTM tax class and tax usage if any.

Figure 7.5 and Figure 7.6 show representative audit trail formats.

```
Processing: Customers

Address Name                                    Taxable Tax In TxC TaxUsage
-------- ----------------------------          ------- ------ --- --------
10000001 Consolidated Industries Ltd. Before     No      No     E   1-P-MFG
                                      After      No      No     E   1-P-MFG
10000002 Office Automation B.V.       Before     Yes     No     H   1-P-MFG
                                      After      Yes     No     H   1-P-MFG
10000003 MMB Verkehrssysteme GmbH     Before     Yes     No     G   1-P-MFG
                                      After      Yes     No     G   1-P-MFG
```

Fig. 7.5 Customer Audit Trail

```
Processing: Countries For Addresses

Address Name                                  Ctry Country
-------- ----------------------------          ---- --------------------------
10000001 Consolidated Industries Ltd. Before        United Kingdom
                                      After    UK   United Kingdom
10000002 Office Automation B.V.       Before        Netherlands
                                      After    NL   Netherlands
10000003 MMB Verkehrssysteme GmbH     Before        Germany
                                      After    D    Germany
```

Fig. 7.6 Countries for Addresses Audit Trail

Troubleshooting the Master Conversion

The error messages in the audit trail identify conditions you should analyze and address before you convert transactions. Table 7.6 lists some common problems along with explanations. Before you make corrections, restore the database from backup.

Warning Do not proceed to the transaction conversion until the master conversion audit trail is free of errors.

Table 7.6 Troubleshooting the Master Conversion

Error	Explanation
Tax class cannot be converted.	Class file does not contain VAT class that matches the one in the master record.
Blank tax class not allowed.	VAT class is blank in the class file.
Tax class cannot exceed 3 characters (*xxx*).	VAT class in the class file is longer than three characters. Message shows the first three characters.
Tax class does not exist (*x*).	VAT class in the class file not in the VAT master.
Tax class is not unique (*x*).	VAT class occurs in multiple places in the class file.

Error	Explanation
Tax class does not exist (*xxx*).	GTM tax class in the class file does not exist in the GTM tax class master.
Tax usage cannot exceed 8 characters (*xxxxxxxx*).	GTM tax usage in the class file is longer than eight characters. Message shows the first eight characters.
Tax usage does not exist (*xxxxxxxx*).	GTM tax usage in the class file does not exist in the GTM tax usage master.
Tax class/tax usage combination is not unique (*xxx xxxxxxxx*).	GTM tax class and tax usage combination occurs in multiple places in the class file.

Note *x*, *xxx*, and *xxxxxxxx* are placeholders for the actual codes displayed in the error message.

How the Conversion Changes Master Records

The following is provided to assist developers and others who require technical information on how the master conversion updates the database.

The menu-level program for VAT to GTM–Masters is `txvatmst.p`. This program calls subprograms that set the GTM tax values in the individual database tables. These programs can either set the existing VAT class value or retrieve an alternate value from a class file.

Table 7.7 lists the affected database tables and summarizes the changes.

Table 7.7
Changes to Master Records

Table	Summary of Changes
ad_mstr	In supplier records, `txvatvd.p` sets ad_taxable from vd_taxable. It also sets ad_taxc and ad_tax_usage from ad_taxc or from the class file with AP usage if any. In customer records, `txvatcm.p` sets ad_taxable from cm_taxable and ad_tax_in from cm_tax_in. It also sets cm_taxc, ad_taxc, and ad_tax_usage from cm_taxc and from the class file with AR tax usage if any. In all address records, `txvatct.p` sets ad_ctry from ad_country and vice versa. `txvatzn.p` calls `txtxzget.p` to set ad_tax_zone.
fsc_mstr	`txvatfsc.p` sets fsc_taxc from fsc_taxc or from the AR tax usage if any.
pl_mstr	`txvatpl.p` sets pl_taxc from pl_taxc or from the class file if any.
pt_mstr	`txvatpt.p` sets pt_taxc from pt_taxc or from the class file if any.
sv_mstr	`txvatsv.p` sets sv_taxc from sv_taxc or from the class file with AR tax usage if any.
trl_mstr	`txvattrl.p` sets trl_taxc from trl_taxc or from the class file if any.

Converting Transaction Records

Once you finish converting master records, you can convert the following transaction records:

- Purchase orders and receipts
- Accounts payable vouchers and payments
- Service contracts, calls, and return material authorizations
- Sales quotes and orders
- Accounts receivable memos, invoices, and payments

In GTM, every transaction subject to tax has a transaction tax detail record. This record stores the information used to calculate tax. It also separates the tax into component elements such as recoverable and non-recoverable amounts.

Note If you already have GTM transaction records in the database when you perform transaction conversion, the conversion process updates them using the current default tax values. Values replaced in these records include tax environment, class, usage, and so on.

VAT to GTM–Transactions

To convert existing transaction records so they are accessible in GTM, run VAT to GTM–Transactions (2.13.22.3).

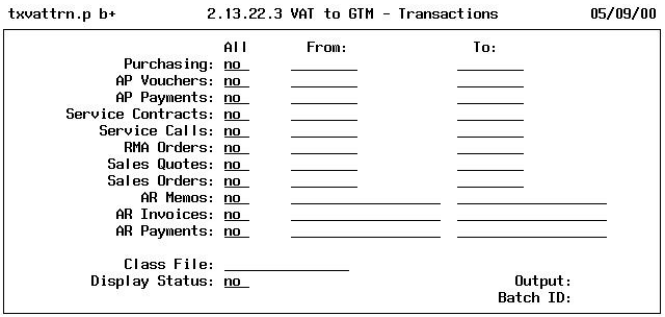


Fig. 7.7
VAT to GTM–Transactions (2.13.22.3)

In addition to updating transactions, this program generates an audit trail for verification of changes.

You can convert all records, a range of records, or individual records. The program converts records in the same order they display on the screen.

Note In some cases, the record sequence is important. Purchasing transactions must be converted before accounts payable vouchers and vouchers before payments. Accounts receivable memos and invoices must be converted before payments.

See page 105.

If you created a class file during the setup step, specify its name in the Class File field. Display status, output, and Batch ID are the same as in the setup program.

Transaction Audit Trail

The transaction conversion prints a report of changed records. The format varies depending on the records included in the conversion. For each group of converted records, the report shows the transaction number and name followed by the before and after tax information for each line item, such as taxable status, tax environment, tax class, and tax usage. Groups of converted records are printed in the same order as the screen selection criteria, and each group is separated by a page break.

Warning and error messages identify potential conversion problems. Messages that appear at the end of a transaction apply to the entire transaction; those that appear between the Before and After line apply only to that line. If you specified a class file, the report prints the VAT class and the corresponding GTM tax class and tax usage if any.

Figure 7.8 and Figure 7.9 show representative audit trail formats.

Fig. 7.8
Purchasing Audit Trail

```
Processing: Purchasing

Order    Receiver  Ln         Tax TxC TaxUsage Tax Env  prh_tax_at
-------- --------- ---        --- --- -------- -------- ----------
01104533             Before  No
                     After   No  E            BE-NE
                   1 Before  Yes e
                     After   Yes E            BE-NE
         RC1290      1 Before      e                    E
                     After         E            BE-NE    Yes
```

```
Processing: Service Calls

Call ID  Call/SR  Line Record                Tax TxC TaxUsage Tax Env
-------- -------- ---- ----------            --- --- -------- ----------------
CA127                  Call       Before     No  0
                                  After      No  0   1-P-MFG  GER-NE
         CA127       1 Item       Before     No  0
                                  After      No  0   1-P-MFG  GER-NE
         CA127       1 Billing    Before     No  0
                                  After      No  0   1-P-MFG  GER-NE
```

Fig. 7.9
Service Calls Audit Trail

Troubleshooting Transaction Conversion

The warning and error messages in the audit trail identify conditions you should analyze and address before you resume live GTM processing. Table 7.8 lists some common problems along with explanations. Before you make corrections, restore the database from backup.

Warning Do not resume live processing until the transaction conversion audit trail is free of errors.

In addition to examining the audit trail, you should review the Tax Detail by Transaction Report (2.13.15.3). This report shows the tax environments, tax types, and tax amounts for the converted records. Verify that tax calculations are what you expect.

Note Converted transactions may have minor differences in before/after tax amounts. These can occur because GTM uses a different calculation algorithm or rounding method than your current system. To synchronize the general ledger with the converted transactions, record adjusting entries.

Table 7.8
Troubleshooting the Transaction Conversion

Error	Explanation
Detail tax environment must match header.	In accounts payable vouchers and accounts receivable debit/credit memos, the tax environment must be the same in both the header and detail lines.

Warning Do not correct transaction records programmatically. This approach often causes additional problems.

To eliminate ambiguity, the audit trail shows before and after values for purchasing, accounts payable, and accounts receivable records by their Progress database field name, not their screen label. For example, the audit trail displays voucher line types in the vod_type column.

Use Table 7.9 to Table 7.13 to interpret audit trails for the transaction conversion. These tables summarize before and after tax values.

Note In these tables, quotation marks indicate an untranslatable value.

Table 7.9
VAT to GTM, Purchasing Transactions

Status	Tax System	pod_taxable	prh_tax_at
Taxable	VAT	Yes	VAT class
	GTM	Yes	“Yes”
Nontaxable	VAT	No	“0”[a]
	GTM	No	Blank

a. First VAT class with a zero percentage.

Table 7.10
VAT to GTM, AP Voucher Receiver Lines

Status	Amt	Tax System	Tax	TxC	vod_type	vod_tax	vod_tax_at
Taxable	Item	VAT	No	VAT class	“R”	Blank	VAT class
		GTM	Yes	Tax class	“R”	Blank	“Yes”
	Tax	VAT	No	Blank	Blank	VAT class	Blank
		GTM	No	Blank	“T”	“t”	“No”
Nontaxable	Item	VAT	No	VAT class	“R”	Blank	VAT class
		GTM	No	Tax class	“R”	Blank	Blank
	Tax[a]	VAT	No	Blank	Blank	VAT class	Blank
		GTM	–	–	–	–	–

a. The conversion deletes VAT tax lines resulting from nontaxable amounts.

Table 7.11
VAT to GTM, AP Voucher Memo Lines

Status	Amt	Tax System	Tax	TxC	vod_type	vod_tax	vod_tax_at
Taxable	Item	VAT	No	Blank	Blank	Blank	VAT class
		GTM	Yes	Tax class	Blank	Blank	“Yes”
	Tax	VAT	No	Blank	Blank	VAT class	Blank
		GTM	No	Blank	“T”	“t”	“No”
Nontaxable	Item	VAT	No	Blank	Blank	Blank	“0”[a]
		GTM	No	Tax class	Blank	Blank	“No”
	Tax	VAT	No	Blank	Blank	VAT class	Blank
		GTM	–	–	–	–	–

a. The conversion deletes VAT tax lines resulting from nontaxable amounts.

Table 7.12
VAT to GTM, AR Invoices

Status	Amt	Tax System	TxC	ard_tax	ard_tax_at
Taxable	Item	VAT	Blank	VAT class	Blank
		GTM	Tax class	Blank	Tax class
	Tax	VAT	Blank	Blank	VAT class
		GTM	Blank	“t”	“No”
Nontaxable	Item	VAT	Blank	Blank	“0”[a]
		GTM	Tax class	Blank	Tax class
	Tax[b]	VAT	Blank	“0”	Blank
		GTM	–	–	–

a. First VAT class with a zero percentage.
b. The conversion deletes VAT tax lines resulting from nontaxable amounts.

Table 7.13
VAT to GTM, AR DR/CR Memos

Status	Amt	Tax System	TxC	ard_tax	ard_tax_at
Taxable	Item	VAT	Blank	Blank	VAT class
		GTM	Tax class	Blank	“Yes”
	Tax	VAT	Blank	VAT class	Blank
		GTM	Blank	“t”	“No”
Nontaxable	Item	VAT	Blank	Blank	“0”
		GTM	Tax class	Blank	“No”
	Tax[a]	VAT	Blank	“0”[b]	Blank
		GTM	–	–	–

a. The conversion deletes VAT tax lines resulting from nontaxable amounts.
b. First VAT class with a zero percentage.

How the Conversion Changes Transaction Records

The following information is provided to assist developers and others who require technical information on how the transaction conversion updates the database.

The menu-level program for VAT to GTM–Transactions is `txvattrn.p`. This program calls subprograms that set the GTM tax values in the individual database records. For all transactions, the conversion also generates corresponding tax detail records in the tx2d_det database table.

When setting the GTM tax class value, these programs can either set the existing VAT class value or retrieve an alternate value from a class file.

Table 7.14 lists the affected database tables and summarizes the changes.

Table 7.14 Changes to Transaction Records

Tables	Summary of Changes
ard_det	For debit/credit memos, `txvatarm.p` sets ard_tax, ard_tax_at, ard_taxc, and ard_tax_usage from the class file with AR usage if any. For invoices, `txvatari.p` sets ard_taxc and ard_tax_usage from the class file with AR tax usage if any, and ard_tax and ard_tax_at. Duplicate records for unique keys are merged into one record.
ar_mstr	For debit/credit memos, `txvatarm.p` sets ar_tax_env.
ca_mstr	`txvatca.p` sets ca_taxc and ca_tax_usage from ca_taxc or from the class file with AR tax usage if any. It also sets ca_tax_env using `txtxeget.p`.
idh_hist	`txvatari.p` sets idh_taxc and idh_tax_usage from idh_taxc or from the class file with AR tax usage if any. It also sets idh_tax_env using `txtxeget.p`.
ih_hist	`txvatari.p` sets ih_taxc and ih_tax_usage from ih_taxc or from the class file, with AR tax usage if any. It also sets ih_tax_env using `txtxeget.p`.
itm_det	If itm_prefix is CA and itm_type is any value except INV, `txvatca.p` sets itm_taxc and itm_tax_usage from itm_taxc or from the class file with AR usage if any. It also sets itm_tax_env using `txtxeget.p`.
pod_det	For inventory items, `txvatpo.p` sets pod_taxc and pod_tax_usage from pod_taxc or from the class file, with AP tax usage if any. For memo items, `txvatpo.p` sets pod_taxc from po_taxc and pod_tax_usage from po_tax_usage.
po_mstr	`txvatpo.p` sets po_tax_pct[1], po_tax_pct[2], and po_tax_pct[3] to 0. It sets po_tax_usage from ad_tax_usage and po_taxc from ad_taxc. It also sets po_tax_env using `txtxeget.p`.
prh_hist	For inventory items, `txvatpo.p` sets prh_taxc and prh_tax_usage from prh_taxc or from the class file, with AP tax usage if any. For memo items, `txvatpo.p` sets prh_taxc from pod_taxc and prh_tax_usage from pod_tax_usage. For all items, `txvatpo.p` also sets prh_tax_at from pod_taxable.
qod_det	txvatqo.p sets qod_taxc and qod_tax_usage from qod_taxc or from the class file with AR usage if any. If qo_taxable and qod_taxable are No and the quote is for an inventory item, `txvatqo.p` sets qod_taxc from pt_taxc. It also sets qod_tax_env.

Tables	Summary of Changes
qo_mstr	txvatqo.p sets qo_tax_pct[1], qo_tax_pct[2], and qo_tax_pct[3] to 0. txvatqo.p also sets qo_taxc and qo_tax_usage from qo_taxc or from the class file with AR usage if any. It also sets qo_tax_env.
rma_mstr	txvatrma.p sets rma_taxc from rma_taxc or from the class file with AR usage if any.
sad_det	txvatsc.p sets sad_taxc and sad_tax_usage from sad_taxc or from the class file with AR usage if any. txvatsc.p sets sad_tax_env from sa_site and sa_taxc using `txtxeget.p`.

Converting US Taxes to GTM

This section describes converting to GTM from MFG/PRO US taxes.

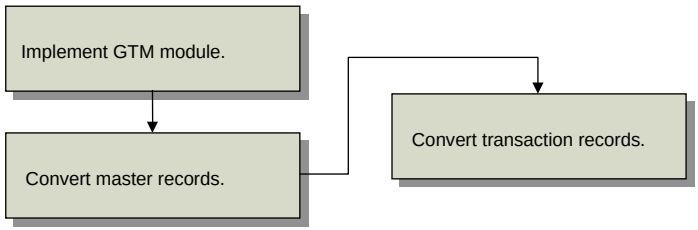


Fig. 7.10
USA to GTM Conversion Process

The USA to GTM conversion process translates United States tax data to GTM equivalents and updates existing MFG/PRO records. Figure 7.10 summarizes the conversion work flow:

Implementing GTM. Run a setup program to implement GTM for US tax processing.

See page 120.

Converting Master Records. Run a second program to populate database tables for customer and supplier addresses, items, product lines, and other master records with GTM data values.

See page 131.

Converting Transaction Records. Run a third program to populate transaction records. All transactions subject to tax are affected, including sales, purchasing, accounts payable, accounts receivable, and service/support management.

See page 134.

Note After each of these activities, review the corresponding reports and audit trails. Mistakes can be pervasive and costly.

Table 7.15 lists the MFG/PRO programs used during the conversion.

Table 7.15 MFG/PRO Programs Used to Convert US Taxes to GTM

Activity	MFG/PRO Programs
Implementing GTM	USA to GTM–Setup (2.13.22.5)
Converting master records	USA to GTM–Masters (2.13.22.6)
Converting transaction records	USA to GTM–Transactions (2.13.22.7)

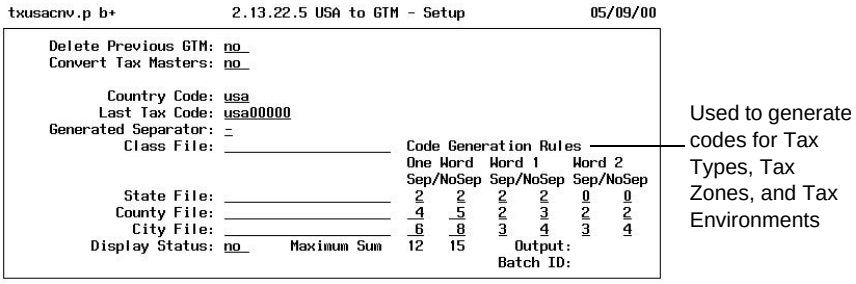
Implementing GTM

An automated setup program creates the codes you need to implement GTM, based on how your US taxes are currently defined. Before executing this program, you should understand the options it provides and the default logic it uses

Code Generation Rules

GTM codes for tax types, tax zones, and tax environments consist of text strings that uniquely identify the state, county, and city of a tax jurisdiction. Manual setup of these codes would be a tedious process, since there are thousands of them.

Fig. 7.11 Code Generation Rules in USA to GTM–Setup (2.13.22.5)



Therefore, by default, USA to GTM–Setup creates codes based on a set of rules. These rules systematically select characters from the state code, county name, and city name in the tax master.

To determine if the generated codes are appropriate for your company, run the setup and review the audit trail. If you need a different coding scheme, read the rest of this section and settings for the code generation rules as necessary. Then, rerun the setup with Delete Previous GTM set to Yes and Convert Tax Masters set to Yes.

Table 7.16 lists the default generated code formats for US taxes.

Table 7.16 Default Generated Code Formats in USA to GTM–Setup (2.13.22.5)

Code	Format	Explanation
Tax zones and tax environments	*SS-CCCC-cccccc*	*SS* is the 2-character state code, *CCCC* is the 4-character county name, and *cccccc* is the 6-character city name. Each text string is separated by a dash (–).
Tax Types	*SS-CCCC-cccccc-#*	This format is the same as the previous one, except that tax types have an extra digit (#) to identify whether the tax type applies to the state (1), county (2), or city (3).

The rules that determine the characters to select depend on two factors:

- Whether the US code or name used to generate the text string consists of one word or multiple words (text separated by blank spaces).
- Whether separator characters are used.

Table 7.17 lists the default number of characters for each text string under the different conditions. However, you can change the number of characters and use a different separator or no separator, as long as the total number of generated characters—including the separator and any ending integers—is 16 or less.

Table 7.17 Code Generation Rules in USA to GTM–Setup (2.13.22.5)

Code	One Word		Multiple Words			
			Word 1		Word 2	
	Sep	No Sep	Sep	No Sep	Sep	No Sep
State	2	2	2	2	0	0
County	4	5	2	3	2	2
City	6	8	3	4	3	4
Maximum Total Characters, With Separator						12
Maximum Total Characters, Without Separator						15

Tip
To override duplicate strings such as AR for the states Arkansas and Arizona, see “Defining Custom Codes for States, Counties, and Cities” on page 123.

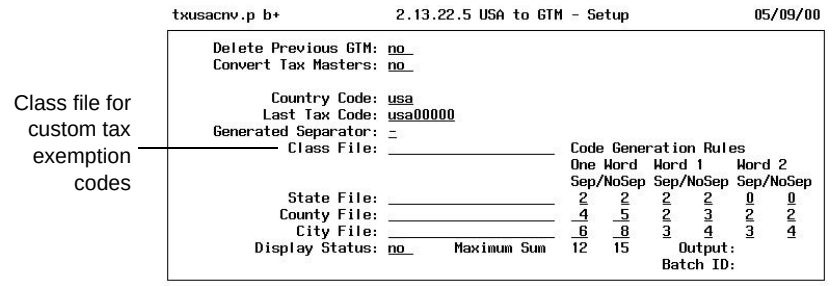
Example If the original state code for Arkansas is ARKA, the generated text string is AR regardless of whether separators are used. For the county of Orange, the generated text string is Oran if separators are used and Orang if they are not. For the city of North Hollywood, the generated text string is NorHol if separators are used and NortHoll if they are not.

The setup retains the capitalization from the original US code or name. If the original code or name contains punctuation such as a period, the code generation rules treat it the same as any other non-blank character.

Defining Custom Tax Exemption Codes

By default, the conversion generates corresponding GTM tax classes for your current tax exemption codes. For example, for tax exemption 1, the conversion generates GTM tax class 1. You can override this by creating your own map for the setup program and specifying it in the Class File field. The same class file is also referenced in the programs that convert master data and transaction records.

Fig. 7.12
Class File in USA to GTM–Setup (2.13.22.5)



You should create a class file if:

- Your company plans to change its tax exemption codes during the GTM conversion.
- You want to convert exemption codes to tax usages instead of tax classes.

The class file is an ASCII file with text strings in the following format:

```
“Current Tax Exemption Code” “GTM Tax Class” “GTM Tax Usage”
```

GTM tax classes can have a maximum of three characters and tax usage codes eight characters. An unused optional value is represented by a null string (either “ ” or “”).

The file name can have any name or extension. However, code values in .csv files must be separated by commas instead of blank characters. The file must be located in the home directory for the Progress session.

Tip
A .csv file is a Windows comma-delimited file format that saves values recorded in a spreadsheet.

Example Your current exemption codes are 1 and 2. You want to map these to GTM tax classes 01 and 02.

```
“1” “01” “ ”
“2” “02” “ ”
```

Defining Custom Codes for States, Counties, and Cities

The generated codes for tax zones, tax environments, and tax types consist of text strings that identify the state, county, and city. By default, the code generation rules define the structure of these text strings. However, if you need a different naming convention, you can create geographic files for state codes, county names, and/or city names.

See “Updates to Company Addresses” on page 128.

In addition to supporting alternate naming conventions, such files can resolve code generation conflicts. For example, for state codes ARIZ and ARKA, the generated GTM code is AR. A state file is necessary to provide unique values.

Note You only need to define codes for conditions not supported by the code generation rules.

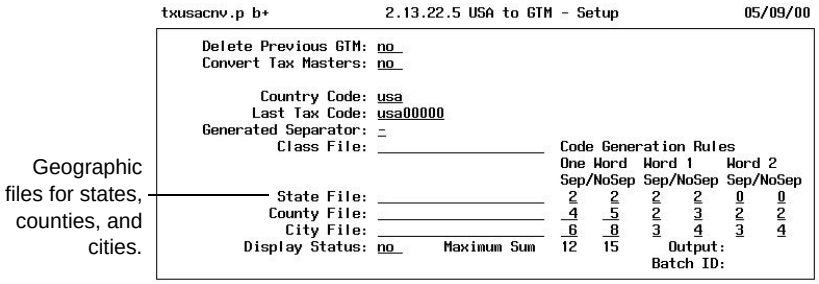


Fig. 7.13
State, County, and City Files in USA to GTM–Setup (2.13.22.5)

Create a separate file for each kind of text string and reference the file in USA to GTM–Setup as shown in Figure 7.13. A geographic file is the same as a class file, except that the file is formatted as follows:

```
"Current Code or Name" "GTM Text String"
```

Example To create unique codes for Arizona and Arkansas, create a state file with these lines:

```
"ARIZ" "AZ"
"ARKA" "AR"
```

Processing Logic

USA to GTM–Setup creates records as described in Table 7.18.

Table 7.18
New GTM Records

Type of Record	Explanation
Tax zones	Based on code generation rules or a class file, setup builds the tax zone hierarchy for the country and all state/county/city combinations in your current system.
Tax types	Based on code generation rules or a class file, setup generates tax types for all state/county/city combinations in your current system.
Tax environments	Based on code generation rules or a class file, setup generates tax environments for all ship-to tax zones. In the US, the tax environment's ship-from tax zone is the default country code, and the customer or supplier tax class is blank.
Tax rates	Based on code generation rules or a class file, setup generates tax rates for the tax jurisdictions and percentages in the tax master.
Tax classes	By default, setup generates corresponding tax classes for existing US tax exemption codes. However, if you reference a class file, the mappings in the class file determine the actual exemption codes.
Tax usages	By default, the setup does not generate tax usages. However, you have the option to do so in the class file.
Rounding method	The setup enters the rounding method specified in System/Account Control (36.1) as the GTM rounding method in Global Tax Management Control (2.13.24).

Type of Record	Explanation
Country code	The setup generates a record for the default country code you specify when you run the setup. This country code is the top-level zone in the tax zone hierarchy.
Company addresses and address list types	In GTM, company sites require a corresponding company address record because taxes are calculated by address, not site. The setup verifies that each company site has an address record and creates any missing ones, along with any needed address list type records. The setup also creates a ~taxes address record to provide a default tax address whenever a transaction is missing a company site code.

GTM Control Settings

The setup resets Global Tax Management Control (2.13.24) as described in Table 7.19.

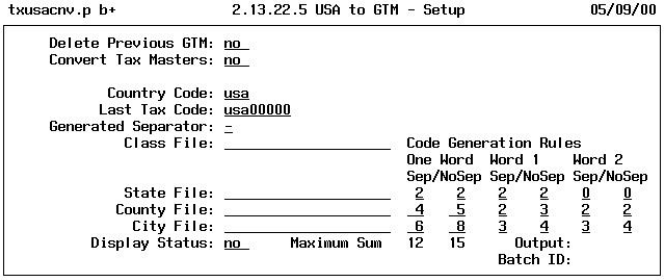
Table 7.19
Updates to GTM Control Settings

Field	Explanation
Country Code	As specified during the setup
Tax Method	01
Tax-By-Line	No
Accrue Tax at Receipt	Yes
Discount Tax at Invoice	No
Discount Tax at Payment	No
Last Tax Code	As specified during the setup
Rounding Method	Value specified in System/Account Control (36.1)

USA to GTM–Setup

Based on your implementation decisions, use USA to GTM–Setup (2.13.22.5) to set up GTM for US tax processing.

Fig. 7.14
USA to GTM–Setup (2.13.22.5)



Warning As noted previously, the purpose of the conversion is to replicate your existing tax processing setup in GTM. Do not attempt to implement new GTM functionality until after the entire conversion is complete. Do not change settings in the new GTM records or in Global Tax Management Control (2.13.24). If you do, conversions may fail.

Delete Previous GTM. This option determines whether the setup deletes previously created GTM records from the database. If you select this option, the setup deletes tax zones, tax types, tax environments, transaction tax details, and other GTM records from the database.

- Enter No if you have not yet converted your database to GTM.
- Enter Yes to clean up the database if it contains GTM records from unsuccessful conversion or installation attempts.

Convert Tax Masters. This option determines whether the setup generates the GTM master records from USA tax master records.

- Enter Yes to create corresponding GTM records for the USA tax master: tax classes, tax types, tax zones, tax environments, tax rates, and so on. The audit trail shows the USA tax master records and the new tax zone codes.
- Enter No if you only want to delete previous GTM records and do not want the setup program to generate new GTM records.

Country Code. This country code is the top-level tax zone in the tax zone hierarchy. All other tax zones sum into this one.

If Global Tax Management Control (2.13.24) already has a country code, it displays here. Otherwise, the setup sets the default country code to USA. If you override the value here, the setup assigns it to the control program.

Last Tax Code. Enter a value to update the corresponding field in Global Tax Management Control. In GTM, tax codes identify individual tax rates. Codes are generated sequentially based on the value of Last Tax Code in the GTM control program.

The default Last Tax Code is an 8-character value that consists of the GTM country code and a right-justified integer with placeholder zeros. For example, for country code USA, the default Last Tax Code is USA00000. The system assigns the number USA00001 to the first tax rate record created in GTM and increments this number for subsequent rates.

If you want tax codes to have a different format, enter a different prefix. Codes display alphanumerically in screens and reports. Tax codes that are totally numeric are left-justified and have no placeholder zeros. For example, codes 1 through 30 display in a report column as follows:

```
1
...
19
2
20
...
30
```

Generated Separator. Enter a character to be used as a separator in system-generated tax zone, type, and environment codes. Using a separator improves readability of the elements of these codes.

The default separator is the dash (–), but you can enter any character. A sample GTM code that uses the dash separator is CA–SBa–SBa for Santa Barbara, California. If you do not want to use separators, enter blank. However, you cannot use blank as a separator character.

Class File. To provide custom mapping of US tax exemption codes to GTM classes and usage codes, specify an ASCII file with conversion information.

See page 122.

State, County, City File. To override default code generation rules, specify specific values for geographic locations in an ASCII file.

See page 123.

See page 120.

Code Generation Rules. Enter appropriate values for your organization.

Display Status. This setting determines whether the system displays status messages online during the conversion. These messages list database tables and their indexes as they are converted. If you select this option, messages display on the screen and the printed report.

Updates to Company Addresses

In GTM, company sites require a corresponding company address record because taxes are calculated by address, not site. The setup creates any missing company address records for company sites. However, the setup does not populate these new address records with the city, county, state, and country. You must supply this information manually in Company Address Maintenance (2.12).

Also set up tax zone codes to support these new addresses if the setup did not already generate codes for these tax jurisdictions. Do this in Tax Zone Maintenance (2.13.3.13). Then, assign the tax zone to the address.

Setup Audit Trail

USA to GTM–Setup prints an audit trail of updated tax master records. For each record, the report shows the state/county/city combination, tax effective date, the tax rates for the effective date, and the taxable status of trailer charges. It also shows the corresponding generated tax zone and its sums-into tax zone.

Figure 7.15 shows the audit trail format.

Fig. 7.15
Setup Audit Trail

```
Processing: Create GTM from tax masters
                                                        Tax                Sums-Into
State County City      Effective  Tax    Tax    Tax    Trl Tax Zone        Tax Zone
----- ------ --------- ---------- ------ ------ ------ --- --------------- --------
FL    ORANGE KISSIMMEE 08/07/97   8.00% 2.00% 6.00% NO  FL-ORAN-KISSIM USA
FL    ORANGE ORLANDO   10/17/92   7.00% 0.00% 9.00% NO  FL-ORAN-ORLAND USA
```

Troubleshooting GTM Setup

After you run USA to GTM–Setup, verify that the GTM setup is correct before you continue with the conversion. The problems listed in Table 7.20 can cause errors or unexpected values. Before you proceed to the master conversion, review the audit trail, the GTM reports for the new records, and Global Tax Management Control settings. Correct any problems before continuing.

Subsequent setups do not automatically overwrite records created by previous ones. To set up new records, you must first delete the old ones. If you rerun the setup, you must remove the records created by the earlier setup attempt by setting Delete Previous GTM to Yes and Convert Tax Masters to Yes.

Note If you must rerun the setup after you have run any of the other conversion programs, restore the database first. Then, rerun the setup and any other conversion programs you ran previously. This is necessary to perpetuate changes to master data, transactions, and tax details.

Table 7.20 Troubleshooting the GTM Setup

Error	Explanation
Tax system must be USA.	The USA to GTM setup can be run only on a US tax system.
Must delete previous GTM when converting.	When you set Convert Tax Masters to Yes, you must also set Delete Previous GTM to Yes.
Tax-trailers has changed, cannot convert prior to this date.	The setup can convert only the current tax environment, not previous variations. If the taxable status of trailer charge codes was changed in the span of time included in the conversion, the setup creates tax environments only for current conditions.

Warning Do not correct records programmatically. This approach often causes additional problems.

How the Setup Changes GTM Records

The following information is provided to assist developers and others who require technical information on how the setup updates the database.

The menu-level program for USA to GTM–Setup is `txusacnv.p`. This program calls subprograms (primarily `txusatax.p`) that set the GTM tax values in the individual database records. Table 7.21 lists the affected database tables and summarizes the changes.

Table 7.21
Changes to GTM Records

Tables	Summary of Changes
ad_mstr	`txusatax.p` creates one ~taxes record for the database. It also scans si_mstr and creates an address record for any company site that does not already have one.
code_mstr	For the nine US exemption codes in tax_mstr, `txusatax.p` creates corresponding tax classes. If a class file is referenced, it creates the specified tax classes. For each of the three rates that tax_mstr stores for US tax jurisdictions, `txusatax.p` creates a tax type. For non-taxable transactions, it also creates a default NON-TAX tax type. Finally, for each ship-to tax zone, `txusatax.p` creates a tax environment and assigns it the tax types associated with the tax zone.
ctry_mstr	`txusatax.p` creates a record for the default country code specified in the selection data.
ls_mstr	`txusatax.p` creates ls_mstr record for each new ad_mstr record, if any.
tx2_mstr	For each of the three rates that tax_mstr stores for US tax jurisdictions, `txusatax.p` creates a tax rate. It also runs txtx2_nt.i to create a non-taxable tax rate and txtxmeth.i to create tax method 01.
txc_ctrl	`txusatax.p` sets txc_ctry_code and txc_tax_code from the selection data. It sets txc_method to 01, txc_by_line, txc_inv_disc, and txc_pmt_disc to No, and txc_rcpt_tax_point to Yes.
txe_mstr	`txusatax.p` creates tax environment zone detail records for every tax environment code it generates for the code_mstr.
txed_det	`txusatax.p` creates tax environment tax type detail records for every tax environment code it generates for the code_mstr.
txz_mstr	`txusatax.p` creates a top-level sums-into tax zone for the new ctry_mstr record. For each state/county/city combination in tax_mstr, it creates a ship-to tax zone.

Converting Master Records

Once you finish the GTM setup, the next activity is to update tax settings in the following master records:

- Suppliers
- Customers
- Product lines
- Items
- Trailer codes
- Service categories
- Service agreement terms

GTM has additional fields and may require new values for existing fields.

USA to GTM–Masters

To convert master records, run USA to GTM–Masters (2.13.22.6).

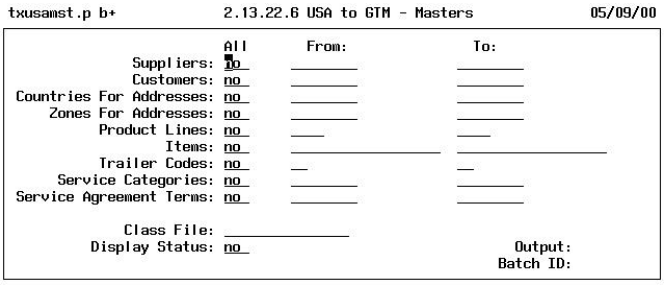


Fig. 7.16
USA to GTM–Masters (2.13.22.6)

In addition to updating the tax settings in the master records, this program assigns tax zone codes to supplier, customer, and company address records. For verification of changes, the program generates an audit trail.

Important Before you run USA to GTM–Masters, do the following.

- Run USA to GTM–Setup (2.13.22.5).
- To avoid record-contention conflicts with other users, shut down the database. Restart it with no other users on the system.

For each type of record, you can convert all records, a range of records, or individual records. This program converts records in the same order as the options on the screen. For separate audit trail reports, run the report separately for each type of record.

See “Defining Custom Tax Exemption Codes” on page 122.

If you created a class file during the setup step, specify its name in the Class File field. Display Status, Output, and Batch ID are the same as in the setup program.

Master Conversion Audit Trail

The master conversion prints a report of changed records. The format varies depending on the records included in the conversion. For each group of converted records, the report shows the record number and name followed by the before and after tax information, such as country code, tax zone code, taxable status, whether tax is included in item amounts, and tax class.

Groups of converted records are printed in the same order as the screen selection criteria, and each group is separated by a page break. Warning and error messages identify potential conversion problems.

Figure 7.17 and Figure 7.18 show representative audit trail formats.

Fig. 7.17 Customer Audit Trail

```
Processing: Customers

Address  Name                                        Taxable TxC TaxUsage
-------- ----------------------------               ------- --- --------
32174893 Consolidated Industries Inc. Before        No       1
                                      After         No       1
32174895 Asheville Manufacturing      Before        Yes
                                      After         Yes
32174897 Hartford Electronics         Before        Yes
                                      After         Yes
```

Fig. 7.18 Countries for Addresses Audit Trail

```
Processing: Countries For Addresses

Address  Name                                        Ctry Country
-------- ----------------------------               ---- -------------
32174893 Consolidated Industries Inc. Before             United States
                                      After         USA  United States
32174895 Asheville Manufacturing      Before             United States
                                      After         USA  United States
32174897 Hartford Electronics         Before             United States
                                      After         USA  United States
```

Troubleshooting the Master Conversion

The error messages in the audit trail identify conditions you should analyze and address before you convert transactions. Table 7.22 lists some common problems along with explanations. Before you make corrections, restore the database from backup.

Warning Do not proceed to the transaction conversion until the master conversion audit trail is free of errors.

Table 7.22 Troubleshooting the Master Conversion

Error	Explanation
Tax class cannot be converted.	Class file does not contain a tax exemption that matches the one in the master record.
Blank tax class not allowed.	Tax exemption is blank in the class file.
Tax class cannot exceed 3 characters (*xxx*).	Tax exemption in the class file is longer than three characters. The message shows the first three characters.
Tax class does not exist (*x*).	Tax exemption in the class file not in the US tax master.
Tax class is not unique (*x*).	Tax exemption occurs in multiple places in the class file.
Tax class does not exist (*xxx*).	GTM tax class in the class file does not exist in the GTM tax class master.
x, *xxx*, and *xxxxxxxx* are placeholders for the actual codes displayed in the error message.	

How the Conversion Changes Master Records

The following is provided to assist developers and others who require technical information on how the master conversion updates the database.

The menu-level program for USA to GTM–Masters, `txusamst.p`, sets the GTM tax values in the individual tables.

When setting the GTM tax class value, the programs can either set the existing tax exemption code or retrieve an alternate from a class file.

See “Defining Custom Tax Exemption Codes” on page 122.

Table 7.23 lists the affected database tables and summarizes the changes.

Table 7.23 Changes to Master Records

Tables	Summary of Changes
ad_mstr	In supplier records, `txusavd.p` sets ad_taxable from vd_taxable. It also sets ad_taxc and ad_tax_usage to blank. In customer records, `txusacm.p` sets ad_taxable from cm_taxable and ad_tax_in from cm_tax_in. It also sets cm_taxc, ad_taxc, cm_taxc, and ad_tax_usage from cm_taxc or from the AR class file, if any. In all address records, `txusact.p` sets ad_ctry from ad_country and visa versa. `txusazn.p` calls `txtxzget.p` to set ad_tax_zone.
fsc_mstr	`txusafsc.p` sets fsc_taxc from fsc_taxc or from the AR class file if any.
pl_mstr	`txusapl.p` sets pl_taxc from pl_taxc or from the class file, if any.
pt_mstr	`txusapt.p` sets pt_taxc from pt_taxc or from the class file, if any.

Tables	Summary of Changes
sv_mstr	`txusasv.p` sets sv_taxc and sv_tax_usage from sv_taxc or from the AR class file, if any.
trl_mstr	`txusatrl.p` sets trl_taxc from trl_taxc or from the class file, if any.

Converting Transaction Records

Once you finish converting master records, you can convert the following transaction records:

- Purchase orders and receipts
- Accounts payable vouchers and payments
- Service contracts, calls, and return material authorizations
- Sales quotes and orders
- Accounts receivable memos, invoices, and payments

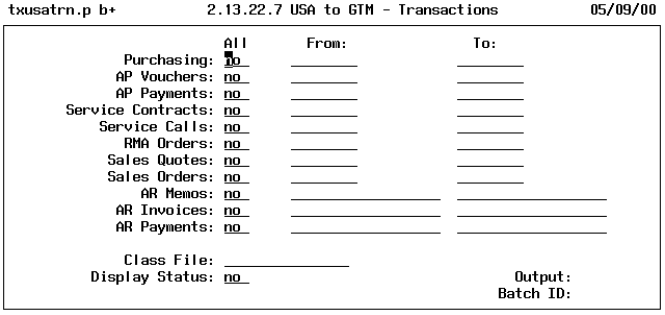
In GTM, every transaction subject to tax has a transaction tax detail record. This record stores the information used to calculate tax.

Note If you already have GTM transaction records in the database when you perform transaction conversion, the conversion process updates them using the current default tax values. Values replaced in these records include tax environment, class, usage, and so on.

USA to GTM–Transactions

To convert existing transaction records, run USA to GTM–Transactions (2.13.22.7).

Fig. 7.19
USA to GTM–Transactions (2.13.22.7)



In addition to updating transactions, this program generates an audit trail for verification of changes.

Important Before you run USA to GTM–Transactions, do the following:

- Run USA to GTM–Setup (2.13.22.5) and USA to GTM–Masters (2.13.22.6).
- Avoid record-contention conflicts with other users. Shut down the database and restart it when no other users are on the system.

You can convert all records, a range of records, or individual records. The program converts records in the same order they display on the screen.

Tip
For separate audit trail reports, run the report separately for each type of record.

Note In some cases, the record sequence is important. Purchasing transactions must be converted before accounts payable vouchers and vouchers before payments. Accounts receivable memos and invoices must be converted before payments.

If you created a class file during the setup step, specify its name in the Class File field. Display Status, Output, and Batch ID are the same as in the setup program.

See “Defining Custom Tax Exemption Codes” on page 122.

Transaction Audit Trail

The transaction conversion prints a report of changed records. The format varies depending on the records included in the conversion. For each group of converted records, the report shows the transaction number and name followed by the before and after tax information for each line item, such as taxable status, tax environment, and tax class. Groups of converted records are printed in the same order as the screen selection criteria, and each group is separated by a page break.

Warning and error messages identify potential conversion problems. Messages that appear at the end of a transaction apply to the entire transaction; those that appear between the Before and After line apply only to that line.

Figure 7.20 and Figure 7.21 show representative audit trail formats.

Fig. 7.20
Purchasing Audit Trail

```
Processing: Purchasing

Order    Receiver  Ln         Tax TxC TaxUsage Tax Env  prh_tax_at
-------- -------- ---        --- --- -------- -------- ----------
01104533             Before  No  1
                     After   No  1            NJ-TRENT
                   1 Before  Yes B
                     After   Yes B            NJ-TRENT
         RC1290    1 Before      B                    B
                     After       B            NJ-TRENT B
```

Fig. 7.21
Service Calls Audit Trail

```
Processing: Service Calls

Call ID  Call/SR  Line Record              Tax TxC TaxUsage Tax Env
-------- -------- ---- ----------          --- --- -------- ----------------
CA127                  Call       Before    No  1
                                  After     No  1   1-P-MFG  NJ-TRENT
         CA127       1 Item       Before    No  1
                                  After     No  1   1-P-MFG  NJ-TRENT
         CA127       1 Billing    Before    No  1
                                  After     No  1   1-P-MFG  NJ-TRENT
```

Troubleshooting Transaction Conversion

The error messages in the audit trail identify conditions you should analyze and address before you resume live GTM processing. Table 7.24 lists some common problems along with explanations. Before you make corrections, restore the database from backup.

Table 7.24
Troubleshooting the Transaction Conversion

Error	Explanation
Detail tax environment must match header.	In accounts payable vouchers and accounts receivable debit/credit memos, the tax environment must be the same in both the header and detail lines.

Warning Do not resume live processing until the transaction conversion audit trail is free of errors. Do not correct transaction records programmatically. This approach often causes additional problems.

In addition to examining the audit trail, it is advisable to review the Tax Detail by Transaction Report (2.13.15.3). This report shows the tax environments, tax types, and tax amounts for the converted records. Verify that tax calculations are what you expect.

Converted transactions may have minor differences in before/after tax amounts. These occur because GTM uses a different calculation algorithm or rounding method than your source version. To synchronize the general ledger with converted transactions, record adjusting entries.

To eliminate ambiguity, the audit trail shows before and after values for purchasing, accounts payable, and accounts receivable records by their Progress database field name, not their screen label. For example, the audit trail displays voucher line types in the vod_type column.

As you interpret the audit trail for the transaction conversion, it can be helpful to see Table 7.25 through Table 7.29. These tables summarize the nature of before/after tax values.

Note In these tables, quotation marks indicate an untranslatable value.

Table 7.25 USA to GTM, Purchasing Transactions

Status	Tax System	pod_taxable	prh_tax_at
Taxable	USA	Yes	“y”
	GTM	Yes	“Yes”
Non-taxable	USA	No	“n” or blank[a]
	GTM	No	Blank

a. An item is non-taxable if pod_taxable is n (No). If the transaction is non-taxable, the tax exemption code is optional.

Table 7.26 USA to GTM, AP Voucher Receiver Lines

Status	Amt	Tax System	Tax	TxC	vod_type	vod_tax	vod_tax_at
Taxable	Item	USA	No	Blank	“R”	Blank	“y”
		GTM	Yes	Tax class	“R”	Blank	“Yes”
	Tax	USA	No	Blank	Blank	“y”	Blank
		GTM	No	Blank	“T”	“t”	“No”
Non-taxable	Item	USA	No	Exemption code or blank[a]	“R”	Blank	Blank
		GTM	No	Tax class	“R”	Blank	Blank
	Tax[b]	USA	No	Blank	Blank	“y”	Blank
		GTM	–	–	–	–	–

a. An item is non-taxable if its taxable status is No. If the transaction is non-taxable, the tax exemption code is optional.

b. The conversion deletes US tax lines resulting from non-taxable amounts.

Table 7.27
USA to GTM, AP Voucher Memo Lines

Status	Amt	Tax System	Tax	TxC	vod_type	vod_tax	vod_tax_at
Taxable	Item	USA	No	Blank	Blank	Blank	Y
		GTM	Yes	Tax class	Blank	Blank	"Yes"
	Tax	USA	No	Blank	Blank	y	Blank
		GTM	No	Blank	"T"	"t"	"No"
Non-taxable	Item	USA	No	Blank	Blank	Blank	n or blank[a]
		GTM	No	Tax class	Blank	Blank	"No"
	Tax[b]	USA	No	Blank	Blank	y	Blank
		GTM	–	–	–	–	–

a. An item is non-taxable if its taxable status is n (No). If the transaction is non-taxable, the tax exemption code is optional.
b. The conversion deletes USA tax lines resulting from non-taxable amounts.

Table 7.28
USA to GTM, AR Invoices

Status	Amt	Tax System	ard_tax	ard_tax_at	ard_taxc
Taxable	Item	USA	Blank	Blank	Blank
		GTM	Blank	Tax class	Tax class
	Tax	USA	Blank	Blank	Blank
		GTM	"t"	"No"	Blank
Non-taxable	Item	USA	Blank	Blank	Blank
		GTM	Blank	Tax class	Tax class
	Tax[a]	USA	–	–	–
		GTM	–	–	–

a. In the US tax system, no tax records are created for non-taxable amounts, so the conversion creates no new records for GTM.

Table 7.29
USA to GTM, AR DR/CR Memos

Status	Amt	Tax System	ard_tax	ard_tax_at	ard_taxc
Taxable	Item	USA	Blank	"y"	Blank
		GTM	Blank	"Yes"	Tax class
	Tax	USA	"y"	Blank	Blank
		GTM	"t"	"No"	Blank
Non-taxable	Item	USA	Blank	"n"	Blank
		GTM	Blank	"No"	Tax class
	Tax[a]	USA	–	–	–
		GTM	–	–	–

a. In the US tax system, no tax records are created for non-taxable amounts, so the conversion creates no new records for GTM.

How the Conversion Changes Transaction Records

The following information is provided to assist developers and others who require technical information on how the transaction conversion updates the database.

The menu-level program for USA to GTM–Transactions is `txusatrn.p`. This program calls subprograms that set the GTM tax values in the individual database records. For all transactions, the conversion also generates corresponding tax detail records in the tx2d_det table.

When setting the GTM tax class value, these programs can either set the existing tax exemption code value or retrieve an alternate value from a class file.

See “Defining Custom Tax Exemption Codes” on page 122.

Table 7.30 lists the affected database tables and summarizes the changes.

Table 7.30 Changes to Transaction Records

Tables	Summary of Changes
ard_det	For debit/credit memos, `txusaarm.p` sets ard_tax and ard_tax_at.
ar_mstr	For debit/credit memos, `txusaarm.p` sets ar_tax_env using `txtxeget.p`.
ca_mstr	`txusaca.p` sets ca_taxc and ca_tax_usage from ca_taxc or from the class file, if any. It also sets ca_tax_env using `txtxeget.p`.
idh_hist	`txusaari.p` sets idh_taxc and idh_tax_usage from idh_taxc or from the class file, if any. It also sets idh_tax_env using `txtxeget.p`.
ih_hist	`txusaari.p` sets ih_taxc and ih_tax_usage from ih_taxc or from the class file, if any. It also sets ih_tax_env using `txtxeget.p`.
itm_det	If itm_prefix is CA and itm_type is any value except INV, `txusaca.p` sets itm_taxc and itm_tax_usage from itm_taxc or from the class file, if any. It also sets itm_tax_env using `txtxeget.p`.
pod_det	If pod_taxable is Yes, `txusapo.p` sets pod_taxc to blank and sets pod_tax_env using `txtxeget.p`. If pod_taxable is No, `txusapo.p` sets pod_tax_env from po_tax_env.
po_mstr	`txusapo.p` sets po_tax_pct[1], po_tax_pct[2], and po_tax_pct[3] to 0. It sets po_tax_usage from ad_tax_usage and po_taxc from ad_taxc. It also sets po_tax_env using `txtxeget.p`.
prh_hist	`txusapo.p` sets prh_taxc to blank if prh_tax_at is “y”. It also sets prh_tax_env from pod_tax_env. If pod_taxable is Yes, `txusapo.p` sets prh_tax_at to “Yes”; otherwise, to blank.
qod_det	`txusaqo.p` sets qod_taxc and qod_tax_usage from qod_taxc or from the class file, if any. It also sets qod_tax_env using `txtxeget.p`.

Tables	Summary of Changes
qo_mstr	`txusaqo.p` sets qo_tax_pct[1], qo_tax_pct[2], and qo_tax_pct[3] to 0. `txusaqo.p` also sets qo_taxc and qo_tax_usage from qo_taxc or from the class file, if any. It also sets qo_tax_env using `txtxeget.p`.
rma_mstr	`txusarma.p` sets rma_taxc from rma_taxc or from the class file, if any.
sad_det	`txusasc.p` sets sad_taxc and sad_tax_usage from sad_taxc or from the class file, if any. `txusasc.p` sets sad_tax_env from sa_site and sa_taxc using `txtxeget.p`.
sa_mstr	`txusasc.p` sets sa_tax_pct[1], sa_tax_pct[2], and sa_tax_pct[3] to 0. It sets sa_taxc and sa_tax_usage from sa_taxc or from the class file, if any. It also sets sa_tax_env using `txtxeget.p`.
sfb_det	`txusaca.p` sets sfb_taxc and sfb_tax_usage from sfb_taxc or from the class file, if any. `txusaca.p` sets sfb_tax_env using `txtxeget.p`.
sod_det	`txusaso.p` sets sod_taxc and sod_tax_usage from sod_taxc or from the class file if any. `txusaso.p` sets sod_tax_env using `txtxeget.p`.
so_mstr	`txusaso.p` sets so_tax_pct[1], so_tax_pct[2], and so_tax_pct[3] to 0. `txusaso.p` sets so_taxc and so_tax_usage from so_taxc or from the class file, if any. `txusaso.p` sets so_tax_env using `txtxeget.p`.
tx2d_det	`txusapo.p` creates tax details for purchase orders (GTM transaction type 20), receivers (21), reconciliations (23), and returns (25). `txusaapv.p` creates tax details for vouchers (22) and recurring vouchers (32). `txusaapp.p` creates tax details for accounts payable tax on discount at payment (29). `txusaqo.p` creates tax details for sales quotes (10). `txusaso.p` creates tax details for invoiced service calls (38), return material authorizations (36), sales orders (11), and pending invoices (13). `txusaarm.p` creates tax details for debit/credit memos (18). `txusaari.p` creates tax details for invoices (16). `txusaarp.p` creates tax details for accounts receivable tax on discount at payment (19). `txusasc.p` creates tax details for service quotes (33) and service contracts (34).
vod_det	`txusaapv.p` sets vod_taxable, vod_taxc, vod_tax_usage, vod_tax, vod_tax_at, vod_type, and vod_tax_env. If vod_type is “r” and vod_tax_at is “Y”, vod_taxc is set to blank.
vo_mstr	For vouchers, `txusaapv.p` sets vo_tax_pct[1], vo_tax_pct[2], and vo_tax_pct[3] to 0. It also sets vo_taxable, vo_taxc, vo_tax_usage, and vo_tax_env.

Converting to GTM From No Taxes

If you are not using any tax method in your source database, then follow the steps in “Converting US Taxes to GTM” on page 119 to convert master records and transactions details. The modifications to the process documented in that section are as follows:

USA to GTM Setup

Under “Implementing GTM” on page 120, when you run USA-to-GTM–Setup (2.13.22.5), use the following settings:

Field	Value
Delete Previous GTM	Yes
Convert Tax Masters	Yes
Country Code	Non-blank
Last Tax Code	USA00000
Display Status	Yes

Accept default values for all other fields.

Enter any new country codes entered in US-to-GTM Setup in Country Code Maintenance (2.14.1). In addition, create a country code called `All` with a name of `All`. The Name field in Country Code Maintenance must match the Country field in the address master table (`ad_mstr`).

USA to GTM Masters

Under “Converting Master Records” on page 131, run the following programs:

- Tax Zone Maintenance (2.13.3.13). Create a Tax Zone `All` with a country code of `All`. In addition, create tax zones for each country code. Set the option Sums-Into Tax Zone to `All`.

- Tax Environment (2.13.5.1). Create a non-taxable environment with the following setup:

	Field	Value
	Tax Environment	non-tax
1st record:	Ship-From Zone	All
	Ship-To Zone	blank
2nd record:	Ship-From Zone	blank
	Ship-To Zone	All

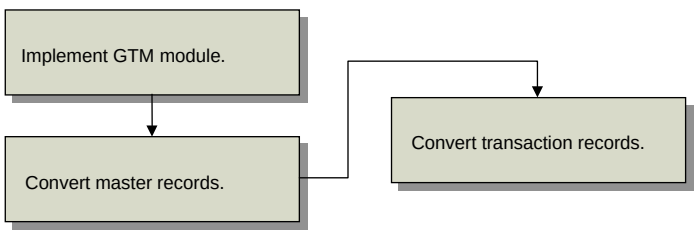
- Global Tax Management Control (2.13.24). Enter the default tax zone and tax environment. Set Tax Zone to the zone created for your country and set Tax Environment to `non-tax`.

Continue on with “USA to GTM–Masters” on page 131 and “USA to GTM–Transactions” on page 134.

Converting Canadian Taxes to GTM

This section describes how to convert to GTM from MFG/PRO’s Canadian tax system.

Fig. 7.22
Canadian to GTM Conversion Process



The Canadian to GTM conversion process translates Canadian tax data to GTM equivalents and updates existing MFG/PRO records. Figure 7.22 summarizes the conversion work flow, which revolves around three sets of activities.

See page 143.

Implementing GTM. You run a setup program to implement GTM for Canadian tax processing.

See page 154.

Converting Master Records. You run a second program to populate database tables for customer and supplier addresses, items, product lines, and other master records with GTM data values.

Converting Transaction Records. You run a third program to populate transaction records. All transactions subject to tax are affected, including sales, purchasing, accounts payable, accounts receivable, and service/support management.

See page 158.

Note After each of these activities, it is crucial to review the corresponding reports and audit trails. Mistakes can be pervasive and costly.

Table 7.31 lists the MFG/PRO programs used during the conversion.

Table 7.31 MFG/PRO Programs Used to Convert Canadian Taxes to GTM

Activity	MFG/PRO Programs
Implementing GTM	CAN to GTM–Setup (2.13.22.9)
Converting master records	CAN to GTM–Masters (2.13.22.10)
Converting transaction records	CAN to GTM–Transactions (2.13.22.11)

Implementing GTM

An automated setup program creates most of the codes you need to implement GTM, based on how your Canadian taxes are defined. Before executing this program, you should understand the options it provides and the default logic it uses.

Code Generation Rules

GTM codes for tax types, tax zones, and tax environments consist of text strings that uniquely identify the province, county, and city of a tax jurisdiction. In Canada, manual setup of these codes would be a tedious process, since there are thousands of them.

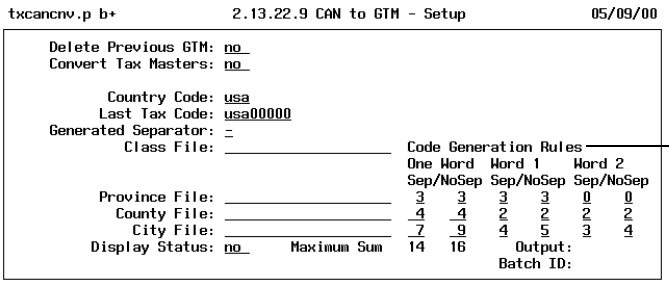


Fig. 7.23 Code Generation Rules in CAN to GTM–Setup (2.13.22.9)

Therefore, by default, CAN to GTM–Setup generates codes based on its code generation rules (Figure 7.23). These rules systematically select characters from the province code, county name, and city name in the tax master.

To determine if generated codes are suitable for your company, run the setup and review the audit trail. If you need a different coding scheme, read the rest of this section and change the settings for the code generation rules as necessary. Then, rerun the setup with Delete Previous GTM set to Yes and Convert Tax Masters set to Yes.

For Canadian taxes, the default generated code format for tax zones, tax types, and tax environments is:

```
PPP-CCCC-ccccccc
```

PPP is the 3-character province code, *CCCC* the 4-character county or district name, and *ccccccc* the 7-character city name. Each text string is separated by a dash (–).

The rules used to determine the characters to select depend on:

- Whether the Canadian code or name used to generate the text string consists of one word or multiple words (text strings separated by blank spaces).
- Whether separator characters are used.

Table 7.32 lists the default number of characters for each text string under the different conditions. However, you can change the number of characters and use a different separator or no separator, as long as the total number of generated characters—including the separator and any ending integers—is 16 or less.

Table 7.32 Code Generation Rules in CAN to GTM–Setup (2.13.22.9)

Code	One Word		Multiple Words			
			Word 1		Word 2	
	Sep	No Sep	Sep	No Sep	Sep	No Sep
Province	3	3	3	3	0	0
County	4	4	2	2	2	2
City	7	9	4	5	3	4
Maximum Total Characters, With Separator						14
Maximum Total Characters, Without Separator						16

Example If the original province code for Alberta is ALBA, the generated text string is ALB regardless of whether separators are used. For the city of Southampton, the generated text string is Southam if separators are used and Southampt if they are not. For the city of Thunder Bay, the generated text string is ThunBay if separators are used and ThundBay if they are not.

Setup retains the capitalization from the original Canadian code or name. If the original code or name contains punctuation such as a period, the code generation rules treat it the same as any other non-blank character.

Defining Custom Tax Class and Tax Usage Codes

By default, the setup generates tax classes that directly correspond to your Canadian GST master records. To distinguish the two sets of codes, it appends the letter P to the GST + PST code. For example, if your current GST classes are 0, 1, and 2, the generated GTM classes are 0, 1, and 2 (for GST only) and 0P, 1P, and 2P (for GST + PST). The system does not automatically generate tax usages.

You can override this by creating your own map for the setup program and specifying it in the Class File field. The same class file is also referenced in the programs that convert master data and transaction records.

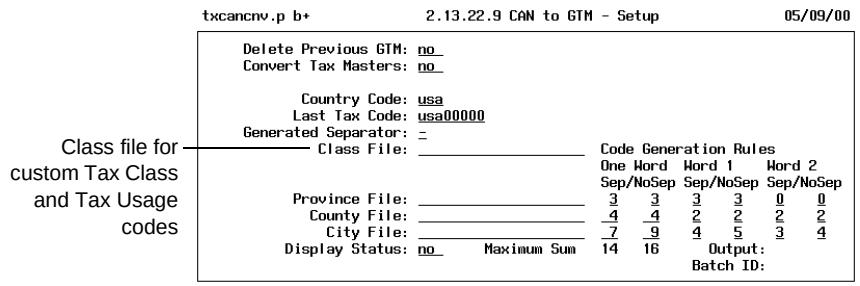


Fig. 7.24
Class File in CAN to GTM–Setup (2.13.22.9)

You should create a class file if:

- Your company plans to change its tax class codes during the GTM conversion. In this situation, you must define custom codes for GST only and GST + PST.

- Within a tax class, a company can be taxed based on its nature of operation or the way it intends to use an item. In GTM, these conditions are identified by tax usage codes.

The class file is an ASCII file with text strings in the following format:

```
"Current GST Class" "GST Class" "GST Usage" "Class for GST + PST"
"Usage for GST + PST"
```

GTM tax classes can have a maximum of three characters, and tax usage codes eight characters. An unused optional value is represented by a null string (" " or "").

Tip
A .csv file is a Windows comma-separated values file format that saves values recorded in a spreadsheet.

The class file can have any name or extension. However, code values in .csv files must be separated by commas instead of blank characters. The file must be located in the home directory for the Progress session.

Example Your current GST codes are 0, 1, and 2, and you want to change them to A, B, and C, plus add a G to indicate GST only.

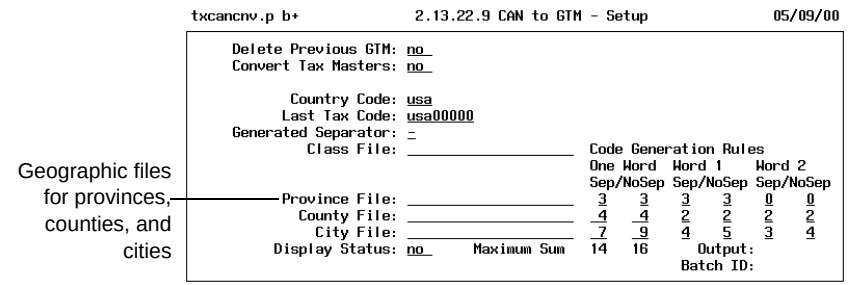
```
"0" "AG" "" "A" ""
"1" "BG" "" "B" ""
"2" "CG" "" "C" ""
```

Defining Custom Codes for Provinces, Counties, and Cities

See "Code Generation Rules" on page 143.

The generated codes for tax zones, tax environments, and tax types consist of text strings that identify the province, county, and city. By default, the code generation rules define the structure of these text strings. However, if you need a different naming convention, you can create geographic files for province codes, county names, and/or city names.

Fig. 7.25
Province, County, and City Files in CAN to GTM–Setup (2.13.22.9)



Create a separate file for each kind of text string and reference the file in CAN to GTM–Setup as shown in Figure 7.25. A geographic file is the same as a class file, except that the file is formatted as follows:

```
"Current Code or Name" "GTM Text String"
```

Tip
You only need to define codes for conditions not already supported by code generation rules.

Example To map province codes for the provinces of Manitoba and Quebec, create a province file with these lines:

```
"MANI" "MB"
"QUE" "QB"
```

Processing Logic

This program creates MFG/PRO records as described in Table 7.33.

Table 7.33
New GTM Records

Type of Record	Explanation
Tax zones	Based on code generation rules or a class file, setup builds the tax zone hierarchy for the country and all province/county/city combinations used in your current system.
Tax types	Based on code generation rules or a class file, setup generates tax types for the province/county/city combinations used in your current system.
Tax environments	Based on code generation rules or a class file, setup generates tax environments for all ship-to tax zones.
Tax rates	Based on code generation rules or a class file, setup generates tax rates for the tax jurisdictions and percentages used in your current system.
Tax classes	By default, the setup generates tax classes based on your Canadian GST master records, in which GST and PST are represented as separate codes. However, the GTM setup generates tax classes for GST only and GST + PST. It sets up PST only as GST + PST with a GST tax rate of 0%. It sets up non-taxable as GST only with GST and PST tax rates of 0%. To distinguish the generated codes, the setup appends the letter P to the GST + PST code. For example, if your current GST classes are 0, 1, and 2, the generated GTM classes are 0, 1, and 2 (for GST only) and 0P, 1P, and 2P (for GST + PST). The system does not automatically generate tax usages. You can choose to bypass the default setup behavior by defining a class file. For more information, see “Defining Custom Codes for Provinces, Counties, and Cities” on page 146.

Type of Record	Explanation
Tax usages	By default, setup does not generate tax usages. However, you can do this with a class file.
Country code	The setup generates a record for the default country code you specify when you run the setup. This country code is the top-level zone in the tax zone hierarchy.
Company addresses and address list types	In GTM, company sites require a corresponding company address record because taxes are calculated by address, not site. The setup verifies that each company site has an address record and creates any missing ones, along with any needed address list type records. The setup also creates a ~taxes address record to provide a default tax address whenever a transaction is missing a company site code.

GTM Control Settings

Setup defines Global Tax Management Control (2.13.24) as described in Table 7.34.

Table 7.34
Updates to GTM Control Settings

Field	Explanation
Country Code	As specified during the setup
Tax Method	01
Tax-By-Line	No
Accrue Tax at Receipt	Yes
Discount Tax at Invoice	No
Discount Tax at Payment	No
Last Tax Code	As specified during the setup
Rounding Method	Value specified in System/Account Control (36.1)

CAN to GTM–Setup

Based on your implementation decisions, use CAN to GTM–Setup (2.13.22.9) to set up GTM for Canadian tax processing.

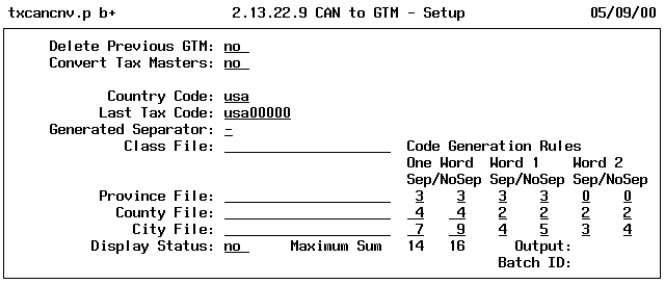


Fig. 7.26
CAN to GTM–Setup (2.13.22.9)

Warning As noted previously, the purpose of the conversion is to replicate your existing tax processing setup in GTM. Do not attempt to implement new GTM functionality until after the entire conversion is complete. Do not change settings in the new GTM records or in Global Tax Management Control (2.13.24). If you do, the master and/or transaction conversions may fail.

Delete Previous GTM. This option determines whether the setup deletes previously created GTM records from the database. If you select this option, the setup deletes tax zones, tax types, tax environments, transaction tax details, and other GTM records from the database.

- Enter No if you have not yet converted your database to GTM.
- Enter Yes to clean up the database if it contains GTM records from unsuccessful conversion or installation attempts.

Convert Tax Masters. This option determines whether the setup generates the GTM master records from the master tables for Canadian GST and PST.

- Enter Yes to create GTM records corresponding to Canadian tax masters: tax classes, tax types, tax zones, tax environments, tax rates, and so on. The audit trail shows the new GTM records.
- Enter No if you only want to delete previous GTM records and do not want the setup program to generate new GTM records.

Country Code. This country code is the top-level tax zone in the tax zone hierarchy. All other tax zones sum into this one.

If Global Tax Management Control already has a country code, it displays here. Otherwise, the setup sets the default country code to CAN. If you override the value here, the setup assigns it to the control program.

Last Tax Code. Enter a value to update the corresponding field in Global Tax Management Control. In GTM, tax codes identify individual tax rates. Codes are generated sequentially based on the value of Last Tax Code in the GTM control program.

The default Last Tax Code is an 8-character value that consists of the GTM country code and a right-justified integer with placeholder zeros. For example, for country code CAN, the default Last Tax Code is CAN00000. The system assigns the number CAN00001 to the first tax rate record created in GTM and increments this number for subsequent rates.

If you want tax codes to have a different format, enter a different prefix. Codes display alphanumerically in screens and reports. Tax codes that are totally numeric are left-justified and have no placeholder zeros. For example, codes 1 through 30 display in a report column as follows:

```
1
...
19
2
20
...
30
```

Generated Separator. Enter a character to be used as a separator in system-generated tax zones, types, and environments. Using a separator can improve the readability of the component elements of these codes.

The default separator is the dash (–), but you can enter any character. A sample GTM code that uses the dash separator is BC–Van for Vancouver, British Columbia. If you do not want to use separators in codes, enter blank. However, you cannot use blank as a separator character.

Class File. To provide custom mapping of Canadian tax classes to GTM classes and usage codes, specify an ASCII file with conversion information.

See page 145.

Province, County, City File. To override default code generation rules, specify specific values for geographic locations in an ASCII file.

See page 146.

Code Generation Rules. Enter appropriate values for your organization.

See page 143.

Display Status. This setting determines whether the system displays status messages online during the conversion. These messages list database tables and their indexes as they are converted. If you select this option, messages display on the screen and the printed report.

Updates to Company Addresses

In GTM, company sites require a corresponding company address record because taxes are calculated by address, not site. The setup creates any missing company address records for company sites. However, the setup does not populate these new address records with the city, county, province, and country. You must supply this information manually in Company Address Maintenance (2.12).

Also set up tax zone codes to support these new addresses if the setup did not already generate codes for these tax jurisdictions. Do this in Tax Zone Maintenance (2.13.3.13). Then, assign the tax zone to the address.

Set Up Audit Trail

CAN to GTM–Setup prints a report of updated tax master records for GST and PST rates. For GST rates, the report shows the GST class, description, starting and ending effective dates, the GST percent, and the general ledger tax accounts for accounts payable and accounts receivable. For PST, the report shows the province/county/city, tax effective date, tax rate for the effective date, whether PST is based on GST, and the generated GTM tax zone and sums-into zone.

Figure 7.27 and Figure 7.28 show the audit trail formats.

Fig. 7.27
GST Audit Trail

```
Processing: Create GTM GST from GST masters

GST Class Description Start Eff End Eff   GST Pct AP GST Acct AR GST Acct
--------- ----------- --------- -------- -------- ----------- -----------
0         GST 0       01/01/97              0.00% 1400        2400
1         GST 1       01/01/97              5.00% 1400        2400
2         GST 2       05/29/97  12/31/99    7.00% 1400        2400
3         GST 3       07/02/97  12/31/99   10.00% 1400        2400
```

Fig. 7.28
PST Audit Trail

```
Processing: Create GTM PST from PST masters
                                                                  Sums-Into
Province County City        Effective  Tax   On GST Tax Zone     Tax Zone
-------- ------ ----------- --------- ------ ------ ------------ ---------
ALB             Calgary     01/01/96  0.00%   No    ALB-Calgary  ALB
BC              Vancouver   01/01/96  7.00%   Yes   BC-Vancouv   BC
NFL             Bay Roberts 01/01/96  8.00%   No    NFL-BayRob   NFL
ONT             Bala        01/01/96  8.00%   Yes   ONT-Bala     ONT
PEI             Souris      01/01/96  10.00%  Yes   PEI-Souris   PEI
```

Troubleshooting GTM Setup

After you run CAN to GTM–Setup, verify that the GTM setup is correct before you continue with the conversion. The problems listed in Table 7.35 can cause errors or unexpected values. Before you proceed to the master conversion, review the audit trail, the GTM reports for the new records, and Global Tax Management Control settings. Correct any problems before going on.

Subsequent setups do not automatically overwrite records created by previous ones. To set up new records, you must first delete the old ones. If you rerun the setup, you must remove the records created by the earlier setup attempt. To do this, rerun the setup with Delete Previous GTM set to Yes and Convert Tax Masters set to Yes.

Note If you must rerun the setup after you have run any of the other conversion programs, restore the database first. Then, rerun the setup and any other conversion programs you ran previously. This is necessary to perpetuate changes to master data, transactions, and tax details.

Table 7.35 Troubleshooting the GTM Setup

Error	Explanation
Tax system must be Canadian.	The CAN to GTM setup can only be run on a Canadian tax system.
Must delete previous GTM when converting.	When you set Convert Tax Masters to Yes, you must also set Delete Previous GTM to Yes.
On GST has changed, cannot convert prior to this date.	The setup can convert only the current tax environment, not previous variations. If a city's GST Only status was changed in the span of time included in the conversion, the setup creates tax environments only for current conditions.

Warning Do not correct records programmatically. This approach often causes additional problems.

How the Setup Changes GTM Records

The following information is provided to assist developers and others who require technical information on how the setup updates the database.

The menu-level program for CAN to GTM–Setup is `txcancnv.p`. This program calls subprograms (primarily `txcantax.p`) that set the GTM tax values in the individual database tables.

Table 7.36 lists the affected database tables and summarizes the changes.

Table 7.36 Changes to GTM Records

Tables	Summary of Changes
ad_mstr	`txcantax.p` creates one ~taxes record for the database. It also scans si_mstr and creates an address record for any company site that does not already have one.
code_mstr	For each vt_mstr record, `txcantax.p` creates tax classes for GST only and GST + PST. If a class file is referenced, it creates the specified tax classes and tax usages, if any. For the GST rate in vt_mstr and each PST rate in tax_mstr, `txcantax.p` creates a tax type code. For non-taxable transactions, it also creates a default NON-TAX tax type. Finally, for each ship-to tax zone, `txcantax.p` creates a tax environment and assigns it the tax types associated with the tax zone.
ctry_mstr	`txcantax.p` creates a record for the default country code specified in the selection data.
ls_mstr	`txcantax.p` creates ls_mstr record for each new ad_mstr record, if any.

Tables	Summary of Changes
tx2_mstr	For each vt_mstr record, `txcantax.p` creates a tax rate for GST only and GST + PST. For each tax_mstr record, `txcantax.p` creates multiple tx2_mstr records, one for each combination of (1) GST only and GST + PST and (2) each GST class. (For example, if there are three GST classes, the setup generates six tx2_mstr records.) It also runs `txtx2_nt.i` to create a non-taxable tax rate and `txtxmeth.i` to create tax method 01.
txc_ctrl	`txcantax.p` sets txc_ctry_code and txc_tax_code from the selection data. It sets txc_method to 01, txc_by_line to Yes, txc_inv_disc and txc_pmt_disc to No, and txc_rcpt_tax_point to Yes.
txbd_det	`txcantax.p` creates a tax base record for PST + GST.
txe_mstr	`txcantax.p` creates tax environment zone detail records for every tax environment code it generates for code_mstr.
txed_det	`txcantax.p` creates tax environment tax type detail records for every tax environment code it generates for code_mstr.
txz_mstr	`txcantax.p` creates a top-level sums-into tax zone for the new ctry_mstr record. For each province/county/city combination in tax_mstr, it creates a ship-to tax zone.

Converting Master Records

Once you finish the GTM setup, the next activity is to update tax settings in the following master records:

- Suppliers
- Customers
- Product lines
- Items
- Trailer codes
- Service categories
- Service agreement terms

GTM has additional fields and may require new values for existing fields.

CAN to GTM–Masters

Use CAN to GTM–Masters (2.13.22.10) to convert master records.

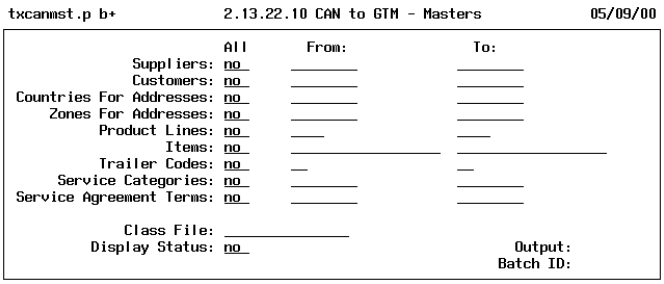


Fig. 7.29
CAN to GTM–Masters (2.13.22.10)

In addition to updating the tax settings in the master records, this program assigns tax zone codes to supplier, customer, and company address records. For verification of changes, the program generates an audit trail.

Important Before you run CAN to GTM–Masters, do the following:

- Run CAN to GTM–Setup (2.13.22.9).
- To avoid record-contention conflicts with other users, shut down the database and restart it when no other users are on the system.

You can convert all records, a range of records, or individual records. This program converts records in the order in which their selection options display on the screen. For separate audit trail reports, run the report separately for each type of record.

If you created a class file during the setup step, specify its name in the Class File field. Display Status, Output, and Batch ID are the same as in the setup program.

See “Defining Custom Tax Class and Tax Usage Codes” on page 145.

Master Audit Trail

CAN to GTM–Master prints a report of changed records. The format varies depending on the records included in the conversion. For each group of converted records, the report shows the record number and name followed by the before and after tax information, such as country code, tax zone code, GST and PST taxable status, whether tax is included in item amounts, tax class, and tax usage.

Groups of converted records are printed in the same order as the screen selection criteria, and each group is separated by a page break. Warning and error messages identify potential conversion problems.

Figure 7.30 and Figure 7.31 show representative audit trail formats.

Fig. 7.30 Customers Audit Trail

```
Processing: Customers

Address  Name                                        GST PST Tax In TxC TaxUsage
-------- ----------------------------               --- --- ------ --- --------
10000000 Harris Steel                 Before         No  No  No     0
                                      After          No      No     0
10000001 Computer Services            Before         Yes Yes No     1
                                      After          Yes     No     1P
10000002 Niagara Byteworks            Before         Yes Yes No     2
                                      After          Yes     No     2P
```

Fig. 7.31 Countries for Addresses Audit Trail

```
Processing: Countries For Addresses

Address  Name                                        Ctry Country
-------- ----------------------------               ---- -------
10000000 Harris Steel                 Before              Canada
                                      After          CAN  Canada
10000001 Computer Services            Before              Canada
                                      After          CAN  Canada
10000002 Niagara Byteworks            Before              Canada
                                      After          CAN  Canada
```

Troubleshooting Master Conversions

The error messages in the audit trail identify conditions you should analyze and address before you convert transactions. Table 7.37 lists some common problems along with explanations. Before you make corrections, restore the database from backup.

Warning Do not proceed to the transaction conversion until the master conversion audit trail is free of errors.

Table 7.37 Troubleshooting the Master Conversion

Error	Explanation
Tax class cannot be converted.	Class file does not contain a GST class that matches the one in the master record.
GST class must exist 0%.	GST class master must have at least one GST class with a zero percentage.
Blank tax class not allowed.	GST class is blank in the class file.

Error	Explanation
Tax class cannot exceed 3 characters (*xxx*).	GST class in the class file is longer than three characters. The message shows the first three characters.
Tax class does not exist (*x*).	GST class in the class file does not exist in the GST master.
Tax class is not unique (*x*).	GST class occurs in multiple places in the class file.
Tax class does not exist (*xxx*).	GTM tax class in the class file does not exist in the GTM tax class master.
Tax usage cannot exceed 8 characters (*xxxxxxxx*).	GTM tax usage in the class file is longer than eight characters. Message shows the first eight characters.
Tax usage does not exist (*xxxxxxxx*).	GTM tax usage in the class file does not exist in the GTM tax usage master.
Tax class/tax usage combination is not unique (*xxx xxxxxxxx*).	GTM tax class and tax usage combination occurs in multiple places in the class file.
Conversion will ignore tax class (*x*).	Class file does not have an entry for a GST class that is in the class master.
x, *xxx*, and *xxxxxxxx* are placeholders for the actual codes displayed in the error message.	

How the Conversion Changes Master Records

The following is provided to assist developers and others who require technical information on how the master conversion updates the database.

The menu-level program for CAN to GTM–Masters, `txcanmst.p`, calls subprograms that set the GTM tax values in the individual tables.

When setting the GTM tax class value, these programs can either set the existing tax class code or retrieve an alternate value from a class file.

See “Implementing GTM” on page 143.

Table 7.38 lists the affected database tables and summarizes the changes.

Table 7.38
Changes to Master Records

Tables	Summary of Changes
ad_mstr	In supplier records, `txcanvd.p` sets ad_taxable from vd_taxable. It also sets ad_taxc and ad_tax_usage from ad_taxc or from the class file, if any. If vd_taxable is No, ad_taxc is GST only; otherwise, GST + PST. In customer records, `txcancm.p` sets ad_taxable from cm_taxable and ad_tax_in from cm_tax_in. It also sets cm_taxc and ad_tax_usage from cm_taxc or from the class file, if any. If cm_pst is No, the tax class is GST only; otherwise, GST + PST. In all address records, `txcanct.p` sets ad_ctry from ad_country and visa versa. `txcanzn.p` calls `txtxzget.p` to set ad_tax_zone.
fsc_mstr	`txcanfsc.p` sets fsc_taxc from fsc_taxc or from the class file if any. Tax class is set to GST only.
pl_mstr	`txcanpl.p` sets pl_taxc from pl_taxc or from the class file, if any. If pl_pst is No, the tax class is GST only; if it is Yes, to GST + PST.
pt_mstr	`txcanpt.p` sets pt_taxc from pt_taxc or from the class file, if any. Tax class is set to GST only.
sv_mstr	`txcansv.p` sets sv_taxc and sv_tax_usage from sv_taxc or from the class file, if any. Tax class is set to GST only.
trl_mstr	`txcantrl.p` sets trl_taxc from trl_taxc or from the class file, if any. It also sets trl_taxable to Yes. If trl_pst is No, the tax class is GST only; if it is Yes, to GST + PST.

Converting Transaction Records

Once you finish converting master records, you can convert the following transaction records:

- Purchase orders and receipts
- Accounts payable vouchers and payments
- Service contracts, calls, and return material authorizations
- Sales quotes and orders
- Accounts receivable memos, invoices, and payments

In GTM, every transaction subject to tax has a transaction tax detail record. This record stores the information used to calculate tax.

Note If you already have GTM transaction records in the database when you perform transaction conversion, the conversion process updates them using the current default tax values. Values replaced in these records include tax environment, class, usage, and so on.

CAN to GTM–Transactions

Use CAN to GTM–Transactions (2.13.22.11) to convert existing transaction records.

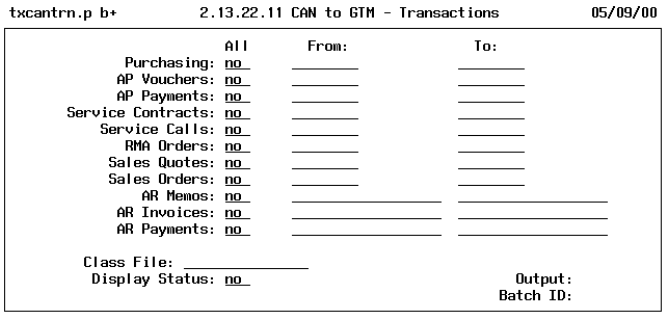


Fig. 7.32
CAN to GTM–Transactions (2.13.22.11)

In addition to updating transactions, this program generates an audit trail for verification of changes.

Important Before you run CAN to GTM–Transactions, do the following:

- Run CAN to GTM–Setup (2.13.22.9) and CAN to GTM–Masters (2.13.22.10).
- To avoid record-contention conflicts with other users, shut down the database and restart when no other users are on the system.

You can convert all records, a range of records, or individual records. This program converts records in the same order they display on the screen.

Tip
For separate audit trail reports, run the report separately for each type of record.

In some cases, the record sequence is important. Purchasing transactions must be converted before accounts payable vouchers and vouchers before payments. Accounts receivable memos and invoices must be converted before payments.

See “Defining Custom Tax Class and Tax Usage Codes” on page 145.

If you created a class file during the setup step, specify its name in the Class File field. Display status, output, and Batch ID are the same as in the setup program.

Transaction Audit Trail

The transaction conversion prints a report of changed records. The format varies depending on the records included in the conversion. For each group of converted records, the report shows the transaction number and name followed by the before and after tax information for each line item, such as taxable status, tax environment, tax class, and tax usage. Groups of converted records are printed in the same order as the screen selection criteria, and each group is separated by a page break.

Warning and error messages identify potential conversion problems. Messages that appear at the end of a transaction apply to the entire transaction; those that appear between the Before and After line apply only to that line.

Figure 7.33 and Figure 7.34 show representative audit trail formats.

Fig. 7.33
Accounts Payable Audit Trail

```
Processing: AP Vouchers

Ref Type Supplier Ln       GST TxC TaxUsage Tax Env vod_type vod_tax vod_tax_at
--- ---- -------- --       --- --- -------- ------- -------- ------- ----------
105 VO   32487432    Before No
                     After  Yes 0P           PEI-GG
                   1 Before No  1                    R                1
                     After  Yes 1            PEI-GG  R                Yes
                   2 Before No                              1
                     After  No                      T       t        No
```

Fig. 7.34
Service Calls Audit Trail

```
Processing: Service Calls

                          Cust
Call ID Call/SR Cust      PST   Ln Record            GST PST TxC TaxUsage Tax Env
------- ------- --------- ---- --- ---------        --- --- --- -------- -------
CA124           10000000 Yes    1 Call      Before   Yes     1
                                            After    Yes     1P           NB
CA125           10000001 Yes    1 Item      Before   Yes Yes 1
                                            After    Yes     1P           NB
CA126           10000002 Yes    1 Billing   Before   Yes Yes 1
                                            After    Yes     1P           NB
                                2 Billing   Before   No  Yes 0
                                            After    Yes     1P           NB
```

Troubleshooting Transaction Conversions

The error messages in the audit trail identify conditions you should analyze and address before you resume live GTM processing. Table 7.39 lists some common problems along with explanations. Before you make corrections, restore the database from backup.

Warning Do not resume live processing until the transaction conversion audit trail is free of errors. Do not correct transaction records programmatically. This approach often causes additional problems.

In addition to examining the audit trail, it is advisable to review the Tax Detail by Transaction Report (2.13.15.3). This report shows the tax environments, tax types, and tax amounts for the converted records. Verify that tax calculations are what you expect.

Converted transactions may have minor differences in before/after tax amounts. These occur because GTM uses a different calculation algorithm or rounding method than your current system. To synchronize the general ledger with the converted transactions, record adjusting entries.

Table 7.39 Troubleshooting the Transaction Conversion

Error	Explanation
GST class must exist 0%.	The GST class master must have at least one GST class with a zero percentage.
Freight, brokerage, or duty charges cannot be converted.	There is no equivalent ability in GTM.
Detail tax environment must match header.	In accounts payable vouchers and accounts receivable debit/credit memos, the tax environment must be the same in both the header and detail lines.

To eliminate ambiguity, the audit trail shows before and after values for purchasing, accounts payable, and accounts receivable records by their Progress database field name, not their screen label. For example, the audit trail displays voucher line types in the vod_type column.

As you interpret the audit trail for the transaction conversion, it can be helpful to see Table 7.40 through Table 7.44. These tables summarize the nature of before/after tax values.

Note In these tables, quotation marks indicate an untranslatable value.

Table 7.40
CAN to GTM, Purchasing Transactions

Status	Tax System	pod_taxable	prh_tax_at
Taxable	CAN	Yes	Tax class
	GTM	Yes	“Yes”
Non-taxable	CAN	No	“0”
	GTM	Yes	“Yes”

Table 7.41
CAN to GTM, AP Voucher Receiver Lines

Status	Amt	Tax System	GST	TxC	vod_type	vod_tax	vod_tax_at
Taxable	Item	CAN	Yes	GST class	“R”	Blank	GST class
		GTM	Yes	Tax class	“R”	Blank	“Yes”
	Tax	CAN	No	Blank	Blank	GST class	Blank
		GTM	No	Blank	“T”	“t”	“No”
Non-taxable	Item	CAN	No	Blank	“R”	Blank	0% GST class
		GTM	Yes	Tax class	“R”	Blank	Blank
	Tax[a]	CAN	No	Blank	Blank	GST class	Blank
		GTM	–	–	–	–	–

a. The conversion deletes Canadian tax lines resulting from non-taxable amounts.

Table 7.42
CAN to GTM, AP Voucher Memo Lines

Status	Amt	Tax System	GST	TxC	vod_type	vod_tax	vod_tax_at
Taxable	Item	CAN	Yes	Blank	Blank	Blank	GST class
		GTM	Yes	Tax class	Blank	Blank	“Yes”
	Tax	CAN	No	Blank	Blank	GST class	Blank
		GTM	No	Blank	“T”	“t”	“No”
Non-taxable	Item	CAN	No	Blank	Blank	Blank	0% GST class
		GTM	Yes	Tax class	Blank	Blank	“No”
	Tax[a]	CAN	No	Blank	Blank	GST class	Blank
		GTM	–	–	–	–	–

a. The conversion deletes Canadian tax lines resulting from non-taxable amounts.

Table 7.43 CAN to GTM, AR Invoices

Status	Amt	Tax System	ard_tax	ard_tax_at	ard_taxc
Taxable	Item	CAN	Blank	GST class	Blank
		GTM	Blank	Tax class	Tax class
	Tax	CAN	GST class or blank[a]	Blank	Blank
		GTM	“t”	“No”	Blank
Non-taxable	Item	CAN	Blank	0% GST class	Blank
		GTM	Blank	Tax class	Tax class
	Tax[b]	CAN	0% GST class	Blank	Blank
		GTM	–	–	–

a. Blank for PST.

b. The conversion deletes Canadian tax lines resulting from non-taxable amounts.

Table 7.44 CAN to GTM, AR DR/CR Memos

Status	Amt	Tax System	ard_tax	ard_tax_at	ard_taxc
Taxable	Item	CAN	Blank	GST class	Blank
		GTM	Blank	“Yes”	Tax class
	Tax	CAN	GST class[a]	Blank	Blank
		GTM	“t”	“No”	Blank
Non-taxable	Item	CAN	Blank	0% GST class	Blank
		GTM	Blank	“No”	Tax class
	Tax[b]	CAN	–	–	–
		GTM	–	–	–

a. DR/CR memos do not calculate PST.

b. The conversion deletes Canadian tax lines resulting from non-taxable amounts.

How the Conversion Changes Transaction Records

The following information is provided to assist developers and others who require technical information on how the transaction conversion updates the database.

The menu-level program for CAN to GTM–Transactions is `txcantrn.p`. This program calls subprograms that set the GTM tax values in the individual database tables. For all transactions, the conversion also generates corresponding tax detail records in tx2d_det.

See “Defining Custom Tax Class and Tax Usage Codes” on page 145.

When setting the GTM tax class value, these programs either set the existing tax class code or retrieve an alternate value from a class file.

Table 7.45 lists the affected database tables and summarizes the changes.

Table 7.45 Changes to Transaction Records

Tables	Summary of Changes
ard_det	For debit/credit memos, `txcanarm.p` sets ard_tax and ard_tax_at. It also sets ard_taxc (GST only), ard_tax_usage, and ard_tax_at.
ar_mstr	For debit/credit memos, `txcanarm.p` sets ar_tax_env.
ca_mstr	`txcanca.p` sets ca_taxc and ca_tax_usage from ca_taxc or from the class file, if any. If cm_pst is No, ca_taxc is GST only; otherwise, it is GST + PST. It also sets ca_tax_env using `txtxeget.p`.
idh_hist	`txcanari.p` sets idh_taxc and idh_tax_usage from idh_taxc or from the class file, if any. It sets idh_taxable to Yes. If idh_pst is No, idh_taxc is GST only; otherwise, it is GST + PST. It also sets idh_tax_env using `txtxeget.p`.
ih_hist	`txcanari.p` sets ih_taxable to Yes and ih_pst_pct to 0. It sets ih_taxc (GST only) and ih_tax_usage from ih_taxc or from the class file, if any. It also sets ih_tax_env using `txtxeget.p`.
itm_det	`txcanca.p` sets itm_taxc (GST + PST) and itm_tax_usage from itm_taxc or from the class file, if any. It sets itm_taxable to Yes. It also sets itm_tax_env using `txtxeget.p`.
pod_det	`txcanpo.p` sets pod_taxable to Yes and pod_tax_env using `txtxeget.p`. If pod_pst is No, then pod_taxc is 0; otherwise, pod_taxc is 0P.
po_mstr	`txcanpo.p` sets po_tax_pct[1], po_tax_pct[2], and po_tax_pct[3] to 0. It sets po_taxable to Yes. It sets po_taxc and po_tax_usage from the ad_taxc value for the corresponding supplier. It also sets po_tax_env using `txtxeget.p`.

Table 7.45 — *Changes to Transaction Records* — (Page 1 of 3)

Tables	Summary of Changes
prh_hist	`txcanpo.p` sets prh_taxc from pod_taxc, prh_tax_usage from pod_tax_usage, and prh_tax_env from pod_tax_env. Since po_taxable is Yes, it sets prh_tax_at to Yes.
qod_det	`txcanqo.p` sets qod_taxable to Yes. It sets qod_taxc and qod_tax_usage from qod_taxc or from the class file, if any. It sets qod_taxable to Yes. If qod_pst is No, tax class is GST only; otherwise, it is GST + PST. It also sets qod_tax_env using `txtxeget.p`.
qo_mstr	`txcanqo.p` sets qo_tax_pct[1], qo_tax_pct[2], and qo_tax_pct[3] to 0. It sets qo_taxable to Yes and qo_pst_pct to 0. It sets qo_taxc and qo_tax_usage from qo_taxc or from the class file, if any. If cm_pst is No, tax class is GST only; otherwise, it is GST + PST. it also sets qo_tax_env using `txtxeget.p`.
rma_mstr	`txcanrma.p` sets rma_taxc from rma_taxc or from the class file, if any. It sets rma_taxable to Yes. If cm_pst is No, tax class is GST only; otherwise, it is GST + PST.
sad_det	`txcansc.p` sets sad_taxc and sad_tax_usage from sad_taxc or from the class file, if any. It sets sad_taxable to Yes. If sad_pst is No or sa_prefix is QA, tax class is GST only; otherwise, it is GST + PST. It also sets sad_tax_env from sa_site and sa_taxc using `txtxeget.p`.
sa_mstr	`txcansc.p` sets sa_tax_pct[1], sa_tax_pct[2], and sa_tax_pct[3] to 0. It sets sa_taxable to Yes and sa_can_tax to 0. It sets sa_taxc and sa_tax_usage from sa_taxc or from the class file, if any. If cm_pst is No, tax class is GST only; otherwise, it is GST + PST. It also sets sa_tax_env using `txtxeget.p`.
sfb_det	`txcanca.p` sets sfb_taxc from itm_taxc and sfb_tax_usage from itm_tax_usage. It sets sfb_taxable to Yes. It also sets sfb_tax_env using `txtxeget.p`.
sod_det	`txcanso.p` sets sod_taxc and sod_tax_usage from sod_taxc or from the class file if any. It sets sod_taxable to Yes. If sod_pst is No, tax class is GST only; otherwise, it is GST + PST. It also sets sod_tax_env using `txtxeget.p`.
so_mstr	`txcanso.p` sets so_taxable to Yes and so_pst_pct to 0. It sets so_tax_pct[1], so_tax_pct[2], and so_tax_pct[3] to 0. It sets so_taxc and so_tax_usage from so_taxc or from the class file, if any. If cm_pst is No, tax class is GST only; otherwise, it is GST + PST. It also sets so_tax_env using `txtxeget.p`.

Table 7.45 — *Changes to Transaction Records* — (Page 2 of 3)

Tables	Summary of Changes
tx2d_det	`txcanpo.p` creates tax details for purchase orders (GTM transaction type 20), receivers (21), reconciliations (23), and returns (25). `txcanapv.p` creates tax details for vouchers (22) and recurring vouchers (32). `txcanapp.p` creates tax details for accounts payable tax on discount at payment (29). `txcanqo.p` creates tax details for sales quotes (10). `txcanso.p` creates tax details for invoiced service calls (38), return material authorizations (36), sales orders (11), and pending invoices (13). `txcanarm.p` creates tax details for debit/credit memos (18). `txcanari.p` creates tax details for invoices (16). `txcanarp.p` creates tax details for accounts receivable tax on discount at payment (19). `txcansc.p` creates tax details for service quotes (33) and service contracts (34).
vod_det	`txcanapv.p` sets vod_taxable to Yes. It sets vod_taxc (GST only) and vod_tax_usage from vod_tax_at. It sets vod_tax, vod_tax_at, and vod_type. It also sets vod_tax_env using `txtxeget.p`.
vo_mstr	For vouchers, `txcanapv.p` sets vo_tax_pct[1], vo_tax_pct[2], and vo_tax_pct[3] to 0. It sets vo_taxable, vo_taxc, and vo_tax_usage. It also sets vo_tax_env using `txtxeget.p`.

Table 7.45 — *Changes to Transaction Records* — (Page 3 of 3)

Chapter 8

Fixed Assets Conversion

Use this chapter to convert your legacy fixed assets data to the enhanced Fixed Assets module in MFG/PRO.

Fixed Assets Conversion Summary

During the MFG/PRO conversion, MFG/CONV dumps legacy Fixed Assets data to a file. You specify the name and location of this file in the MFG/CONV environment prompts. Use this dump file and the Fixed Assets Migration Utility (32.25.2) to migrate legacy data to the enhanced Fixed Assets module. This utility lets you perform the following functions:

- Migrate legacy data from the fixed-assets dump file to the enhanced Fixed Assets module
- Resolve any discrepancies between the legacy data model and the enhanced model

You can use the Fixed Assets Migration Report (32.25.3) to generate a report summarizing the migrated fixed-asset data. The report shows the migrated data from the legacy system and the newly mapped data for the new system.

You can choose to include books, methods, locations, classes, and exceptions in the report.

Preliminary Setup

Prior to running the fixed assets conversion, ensure the following environment variables are set.

Table 8.1 Required Environment Variables

Variable	Description
DLC	Progress 9.1 install directory
PATH	Must include target directories, not source

In addition, this section assumes you are logged on as the `mfg` user.

Loading Enhanced Depreciation Methods

Six enhanced depreciation methods are required for the Fixed Assets conversion. These are loaded manually in the target database.

1. Launch MFG/UTIL from the target version installation directory.
2. Select Database|Load Data into Database.

3 In the Connect Database screen, specify the path and name of the target database in the Physical Name field. Leave other fields blank and choose OK.

4 In the Input Directory screen, enter the full path to the `/mfg` directory in the target installation directory:

TVInstallDir`/mfg`

5 Press spacebar to select the `famtmstr.d` table; choose OK to load.

6 Choose OK after the load completes. Exit MFG/UTIL.

Running the Migration Utility

The following sections describe the Fixed Assets Migration Utility. Use this information to map the legacy data model to the enhanced model and to resolve discrepancies. When ready, use the Create button on the Fixed Assets Migration Utility screen to load the data into the enhanced Fixed Assets module.

Fixed Assets Migration Utility (32.25.2) tracks milestones of the migration process. It also lets you map the individual migration data types—methods, books, locations, and classes—in stages and then save these intermediate stages to a migration file. After you have mapped all of the legacy data to the enhanced data model, use the Create button to load the data from the migration file into the enhanced Fixed Assets module.

Important This update can only be done once.

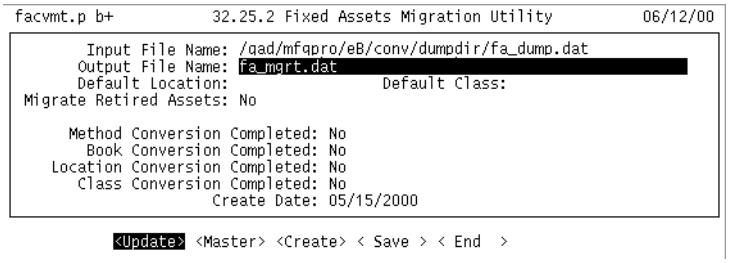


Fig. 8.1
Fixed Assets Migration Utility (32.25.2)

Most of the fields in the Fixed Asset Migration Utility header cannot be updated. They display current mappings set in detail menus and screens. Use the buttons at the bottom to access the detail menus and screens. These are described in the following sections.

Buttons

Update. Use this button to update the Output File Name, Default Location, Default Class, and the Migrate Retired Assets field.

Master. Use this button to access the Master Files Migration screen.

Create. Use this button to load legacy data into the enhanced Fixed Assets module after all the data has been mapped to the enhanced model. This function can only be run once.

Save. Use this button to save the completed work to the file specified in the Output File Name field.

End. Use this button to end a migration utility session. All work is saved to the file specified in the Output File Name field.

Setting Migration Defaults

Choose update to set up the default parameters for your migration.

Use the Default Location and Default Class fields to specify a legacy location and class to default for legacy assets that do not already have this information. The location and class must be part of legacy data. You can run the Fixed Assets Migration Report (32.25.3) to generate a list of your legacy classes and locations.

Set the Migrate Retired Assets field to Yes to migrate retired legacy asset data. Set the field to No to exclude retired assets from the migration.

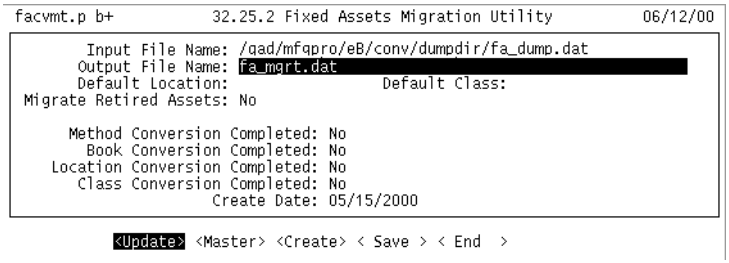


Fig. 8.2
Fixed Assets Migration Utility (32.25.2)

1. The Input File Name field defaults to `fa_dump.dat`. Enter only the file name. If you specified a different file name in the MFG/CONV environment prompts, specify the file name for your legacy data dump file. Press Enter to continue.
2. Choose the Update button.
3. In the Output File Name field, specify the full path, including the file name, to the location where you want to store your migration file. Use this file to store your work as you map the legacy data to the new fixed assets model. The default file name is `fa_mgrt.dat`.
4. In the Default Location field, enter a default legacy location ID. Fixed asset location IDs refer to the accounting location of the fixed asset. This location does not have to be the physical location of the asset.

   ◗ For details, see *User Guide Volume 4B: Financials.*
5. In the Default Class field, enter a default legacy class ID.

   ◗ For details, see *User Guide Volume 4B: Financials.*

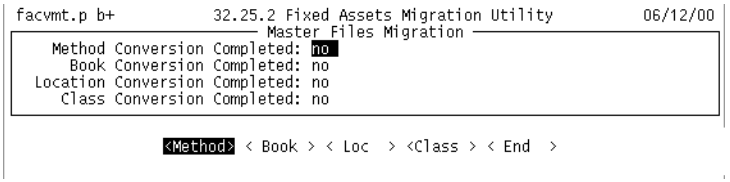
   Classes group similar fixed assets together and define:
   - GL accounts
   - Depreciation books
   - Service lives for calculating depreciation
   - Depreciation methods
6. In the Migrate Retired Assets field, enter Yes if you want to migrate retired assets to the new system. Enter No if you do not want to migrate retired assets.

Mapping Legacy Data

For information on the new fixed-assets data models, see *User Guide Volume 4B: Financials*.

To migrate legacy data to the enhanced module, the existing data models must be mapped to the new data models. Use the Master Files Migration screen to monitor the conversion of the legacy data models. Master Files Migration also provides access to the maintenance programs for each data model. These programs let you map legacy models to enhanced models.

Fig. 8.3
Master Files Migration



Access the maintenance program for each data model using the buttons at the bottom of Master Files Migration.

Buttons

Method. Use this button to access Method Migration.

Book. Use this button to access Book Migration.

Loc. Use this button to access Location Migration.

Class. Use this button to access Class Migration.

End. Use this button to end a Master Files Migration session and return to Fixed Asset Migration Utility.

Converting Methods

For details, see *User Guide Volume 4B: Financials*.

Use Method Migration to convert legacy depreciation methods to the depreciation methods supplied with the enhanced Fixed Assets module.

To convert legacy methods, use the following figure and instructions.

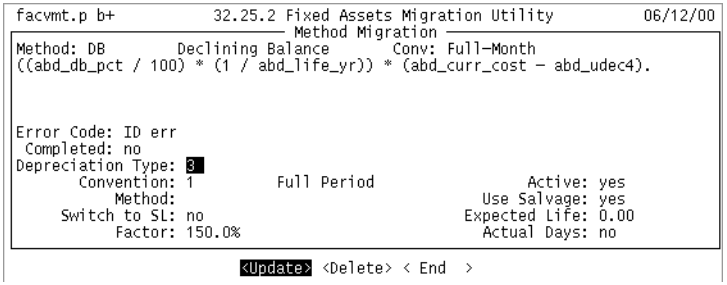


Fig. 8.4
Method Migration

1. Use the arrow keys to scroll through the legacy methods. The legacy method, description, convention, and equation display.
2. If this method is not used by an asset, choose the Delete button to delete it. The system checks that the method is not used, then prompts for confirmation to delete the method.
3. To convert the legacy method, choose the Update button.
4. In the Depreciation Type field, select the enhanced depreciation method that most closely resembles the legacy method. The following depreciation methods are supplied with the enhanced module:
   - 1: Straight Line
   - 2: Units of Production
   - 3: Declining Balance
   - 4: Sum of the Years' Digits
   - 5: Flat Rate
   - 6: Custom Table
5. To modify the standard depreciation methods supplied with the enhanced Fixed Assets module, complete the following fields:
   - Convention
   - Method ID
   - Switch to SL
   - Factor
   - Active
   - Use Salvage
   - Expected Life
   - Actual Days

For details, see *User Guide Volume 4B: Financials*.

Note If you are using the custom-table depreciation method, you must define a custom table in Method Maintenance (32.1.1) before mapping it to a legacy method. Use the same method ID from Method Maintenance for the method in Method Migration.

6 If an error exists with the new method, the Error Code field displays one of the following tables:

- ID err: An error exists with the new method ID. For example, the method ID is missing or there is a duplicate method ID.
- type err: An error exists with the new method description. For example, the method is not supported by the enhanced module.
- conv err: An error exists with the new convention. For example, the convention is missing or the convention is not compatible with the method.
- table err: An error exist with the new table method. The following are examples of possible errors:

  The corresponding method defined in Method Maintenance is not a custom-table method.

  There is a discrepancy with the estimated life.

  Table detail is not defined in Method Maintenance.
- life err: An error exists with the new life. For example, the method is a custom table and the new life is zero.

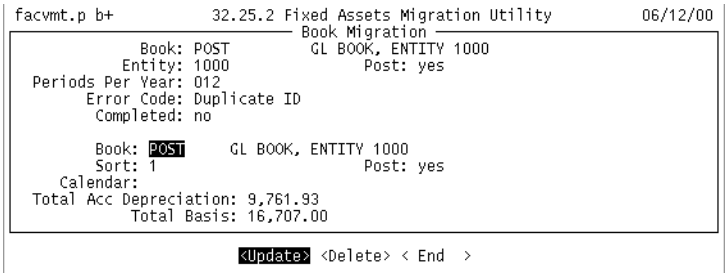
7 After you correct any errors, the Completed field is updated to Yes for the converted method.

8 Repeat steps 1 through 7 for each of the legacy methods.

Converting Books

Use Book Migration to convert legacy books to books used in the enhanced Fixed Assets module. To convert legacy books, use the following figure and instructions. In the legacy system, asset cost is associated with depreciation books; therefore, if an asset contains multiple books, the asset cost comes from the posting book.

Fig. 8.5
Book Migration



1 Use the arrow keys to scroll through the legacy books. The legacy book ID, description, entity, and post field display.

2 If this book is not used by an asset, choose the Delete button to delete it. The system checks that the book is not used, then prompts for confirmation to delete the book.

Note Any legacy asset books that use a depreciation type of none are not created in the new fixed asset system.

3 To convert the legacy book, choose the Update button.

4 Complete the following fields:

- Book
- Description
- Sort Code
- Post
- Calendar

Note You can have only one posting book in the system. If the book was not a posting book in the legacy system, you cannot change it to a posting book for the new system.

5 Total Accumulated Depreciation and Total Basis are automatically calculated. Total Accumulated Depreciation displays the total accumulated depreciation for the legacy book. Total Basis displays the total basis for all of the fixed assets use the legacy book.

6 If there are duplicate book IDs, the Error Code field displays Duplicate ID.

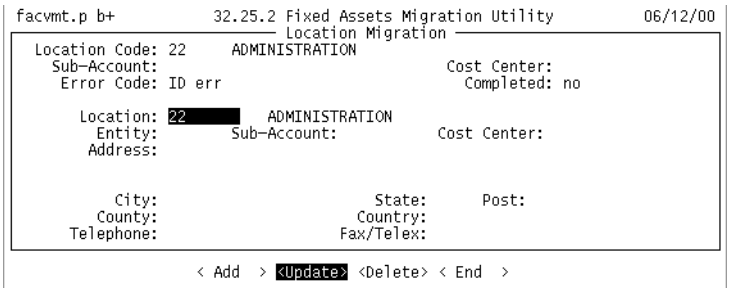
7 After you correct any errors, the Completed field is updated to Yes for the converted book.

8 Repeat steps 1 through 7 for each of the legacy books.

Converting Locations

Use Location Migration to convert legacy locations to locations used in the enhanced Fixed Assets module. To convert legacy locations, use the following figure and instructions.

Fig. 8.6
Location Migration



1. Use the arrow keys to scroll through the legacy locations. The legacy location code, description, sub-account, and cost center display. For each legacy location, the location ID is automatically filled in with the legacy location ID.
2. If this location is not used by an asset, choose the Delete button to delete it. The system checks that the location is not used, then prompts for confirmation to delete the location.
3. To convert the legacy location, choose the Update button.
4. Complete the following fields:
   - Location ID
   - Description
   - Entity
   - Sub-Account
   - Cost Center
   - Address and Telephone information
5. If an error exists with the new location, the Error Code field displays one of the following codes:
   - ID err: An error exists with the new ID. For example, the location ID is used by another module and you must set up a new ID.
   - en err: An error exists with the new entity. For example, the entity code is not defined in Entity Code Maintenance (25.3.1).

- sub err: An error exists with the new sub-account. For example, the sub-account is not defined in Sub-Account Code Maintenance (25.3.17).
- cc err: An error exists with the new cost center. For example, the cost center is not defined in Cost Center Code Maintenance (25.3.20).

6 After you correct any errors, the Completed field is updated to Yes for the converted location.

7 Repeat steps 1 through 6 for each of the legacy locations.

Converting Classes

Use Class Migration to convert legacy classes to classes used in the enhanced Fixed Assets module and set up default GL accounts. To convert legacy classes, use the following figure and instructions.

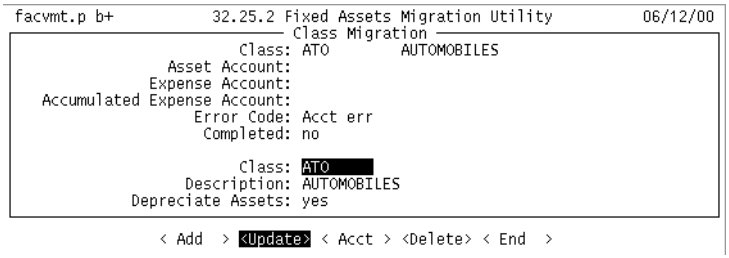


Fig. 8.7
Class Migration

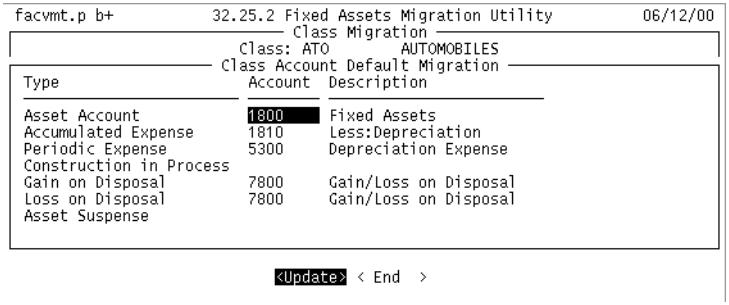
1 Use the arrow keys to scroll through the legacy classes. The legacy class ID, description, asset account, accumulated depreciation account, and depreciation expense account display. For each legacy class, the class ID and description are automatically filled in with the legacy data.

2 If this class is not used by an asset, choose the Delete button to delete it. The system checks that the class is not used, then prompts for confirmation to delete the class.

3 To convert the legacy class, choose Update and enter whether this fixed-asset class is depreciated.

4 Choose the Acct button to modify the default GL accounts for the fixed-asset class.

Fig. 8.8
Class Account Default Migration



5 For each class, you must specify a GL account for the following accounts:

- Asset Account
- Accumulated Expense
- Periodic Expense
- Construction In Process
- Gain on Disposal
- Loss on Disposal
- Asset Suspense

6 If any fixed-asset accounts are not defined, the Error Code field displays acct err.

7 After you correct any errors, the Completed field is updated to Yes for the converted class.

8 Repeat steps 1 through 7 for each of the legacy classes.

Migration Reporting

Use Fixed Assets Migration Report (32.25.3) to generate a report that provides a summary of the migrated fixed-asset data. The report shows the migrated data from the legacy system and the newly mapped data for the new system.

You can choose to include books, methods, locations, classes, and exceptions in the report.

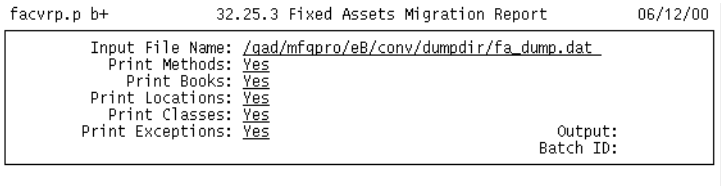


Fig. 8.9
Fixed Assets Migration Report (32.25.3)

1. In the Print Books field, enter Yes to include migrated book data from the legacy system and the newly mapped book data in the report. Enter No to exclude book data.
2. In the Print Methods field, enter Yes to include migrated method data from the legacy system and the newly mapped method data in the report. Enter No to exclude method data.
3. In the Print Locations field, enter Yes to include migrated location data from the legacy system and the newly mapped location data in the report. Enter No to exclude location data.
4. In the Print Classes field, enter Yes to include migrated class data from the legacy system and the newly mapped class data in the report. Enter No to exclude class data.
5. In the Print Exceptions field, enter Yes to include exceptions for your data. Enter no to exclude the exceptions.

Chapter 9

Resolving Conversion Errors

This chapter contains reference information to help you resolve some common conversion issues.

Duplicate Record Errors

During MFG/PRO data loads, MFG/UTIL sets the acceptable error percentage in the Progress data load utility to 100. When an error occurs, an error file (extension `.e`) is generated with the same name as the data file where the error occurred. The error file is stored in the directory from which the data is being loaded. After the error is recorded, the load continues with the next data file. This load method lets you complete a load and then resolve errors in specific data files.

Because a data file can contain multiple records, it can be difficult to locate the exact record that caused the load error. You can use the Progress Reconstruct Bad Load Records utility to isolate the records in a data file that are causing errors.

Solution

Use the following instructions to:

- Run the Reconstruct Bad Load Records utility and identify the individual records that are creating errors.
- For each record identified, modify either the record itself or the database table into which it will be loaded.
- Load the records into the database.

These steps use the variables in Table 9.1.

Table 9.1 Duplicate Record Variables

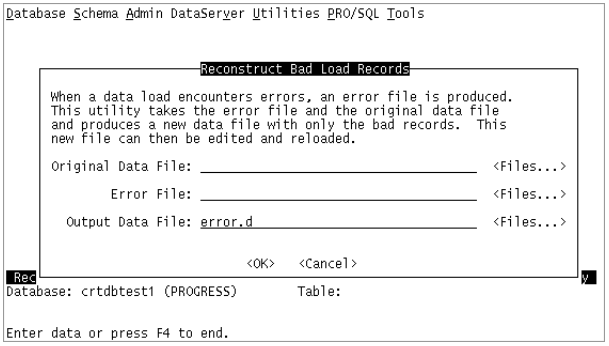
If you see...	It refers to...
SchemaHolder	The target version schema holder
$DLC	The directory where the Progress software is installed

1. Use the following command to launch the Progress Data Dictionary and connect to your target version schema holder:

   ```
   $DLC/bin/pro SchemaHolder -p dict.p
   ```

2. From the Data Dictionary, select the Admin menu. Then select Load Data and Definitions and choose Reconstruct Bad Load Records.

3. For each of the data files where errors occurred, use the following graphic and table to complete Reconstruct Bad Load Records.



Field	Enter
Original Data File	The path and name of the data file in which the error occurred; for example, `mnt_det.d`.
Error File	The path and name of the corresponding error file; for example, `mnt_det.e`.
Output Data File	A directory location and name for the Reconstruct Bad Load Records utility's output file. This file contains only those records from the original data file that caused errors; for example, `error.d`.

4 For each record in `error.d`, you must determine if the record is a duplicate or if it needs to be added to the database table.

- If the record is a duplicate of a record already in the database table, remove the record from `error.d`.
- If the record needs to be added to the table, then you must change the values in the fields that make up the unique index so that they are in fact unique. You can change either the records in `error.d` using an editor or the rows in the table using assign (4GL) statements. You must determine for each record which approach is correct for your circumstance—changing the table's contents or changing the file.

5 Once all the duplicates have been resolved by making their key values unique or by removing them from `error.d`, use the Progress Data Dictionary to load `error.d` into the appropriate database.

6 Repeat steps 2 through 5 for each of the `.e` files created during the data load process.

Progress Century Parameter

If the Progress century startup parameter (`-yy`) does not match in the source version data files and the target version database, errors can occur during the data load.

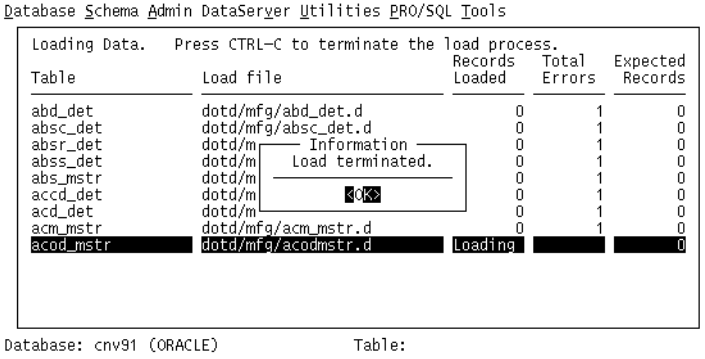
In this case, the message in Figure 9.1 displays in the error files (extension `.e`) created during the data load.

Fig. 9.1
Century Parameter Error Message

```
>> ERROR! -d <mdy> or -yy <n> settings of dump were mdy-1920 **but
current settings are mdy-1950. May cause load errors.
```

One indication that this is happening is that every table loaded shows exactly one error, even when there are no records being loaded. In this case, you can stop the load by pressing Ctrl+C. Figure 9.2 is an example of this situation.

Fig. 9.2
Century Parameter Error Screen



Check the error files in the dump directory. If they all contain the error message in Figure 9.1, delete the records that were loaded and restart the load—making sure to specify `-yy 1920`.

Solution

Use the following instructions to delete the records that were loaded incorrectly:

1. Create an SQL (extension `.sql`) file containing the following command for each table that contains erroneous records. In this command, *`Table_Name`* refers to the database table from which you want to remove records.

```
TRUNCATE TABLE Table_Name
DROP SEQUENCE Table_Name_SEQ
CREATE SEQUENCE Table_Name_SEQ START WITH 1 INCREMENT BY 1 CACHE
75;
```

2. Launch SQL*Plus and connect as the owner of the database tables.

3. Run the `.sql` file you created in step 1.

If records were loaded into a large number of tables before you stopped the load process and you want to remove the records from all of the tables and sequences in the database, use the following instructions:

1. Create an SQL (extension `.sql`) file containing the following commands:

```
set heading off
set pagesize 0
set linesize 100

spool truncall.sql

select 'TRUNCATE TABLE ' || table_name || ';'
from dba_tables
where owner = user;

select 'DROP SEQUENCE ' || sequence_name || ';'
from dba_sequences
where sequence_owner = user
   and sequence_name like '%SEQ';

select 'CREATE SEQUENCE ' || sequence_name || ' START WITH 1
INCREMENT BY 1 CACHE 75;'
from dba_sequences
where sequence_owner = user
   and sequence_name like '%SEQ';

spool off
```

2. Launch SQL*Plus and connect as the owner of the database tables.

3. Run the `.sql` file you created in step 1.

4 Open the `truncall.sql` file created by this process in a text editor:

```
vi truncall.sql
```

5 Remove any line that does not begin with the TRUNCATE, DROP, or CREATE statements.

6 Launch SQL*Plus and connect as the owner of the database tables.

7 Run `truncall.sql`.

Once you have removed all of the erroneous records from the database, dump your source version data, making sure to specify the `-yy 1920` parameter. Then reload your source version data.

Appendix A

Conversion Checklists

This appendix contains conversion checklists for advanced users, or for less experienced users who want to track their progress on the installation. These checklists provide the sequence, the tool set required, the default or recommended values if applicable, and the page reference for the more detailed description of the steps in the guide.

Note The abbreviations shown below appear throughout this appendix.

Abbreviation	Meaning
MInstall	MFG/PRO Installation Directory (*MFGPROInstallDir*)
PInstall	Progress Installation Directory (*ProgressInstallDir*)
TInstall	Target MFG/PRO InstallDir
SInstall	Source MFG/PRO InstallDir
Conv	Conversion
DB	Database
XX	Two-letter language code

Buffer Copy Conversion Checklist

Conversion Specifications	
Source versions supported:	8.5–eB2.1 SP2
Progress version required:	9.1D+
OS patches	Y
IE, Netscape, Mozilla	optional

Table A.1 Buffer Copy Conversion Checklist (Page 1 of 4)

Task	Default	Page
Source Database: Prepare for Conversion		**24**
Post and close financial transactions		
Archive and delete		
Back up source database and Minstall		
8.5–eB only: GTM conversion		24
8.5–8.6D only: Euro Data conversion		25
8.6 only: Supplier Performance conversion		25
8.5 only: Global Shipping conversion		25
8.5 only: Product Change Control conversion		26
8.5 only: Corporate Commodity Codes conversion		26
Run data verification reports		26
Preserve custom system data		29

Table A.1 Buffer Copy Conversion Checklist (Page 2 of 4)

Task	Default	Page
MFG/UTIL: Preliminary Steps	See *Installation Guide: Progress Database*	
Install media		
Create new empty databases		
Modify production databases		
Create new compile database set		
MFG/UTIL: Conversion to eB2.1		**42**
Start MFG/UTIL		
Run Configure|MFG/PRO Guided Setup		
Select Convert Progress Database (Copy)		43
Conversion Setup		44
In-Place Conversion	No	
Connect to source database	Sinstall\db\mfgprod	45
Close Log Window		
Connect to target database	Tinstall\db\mfgprod	46
Close Log Window		
Select conversion functions		46
8.5 only: Global Shipping conversions		49
8.5–eB2: Domain conversions		50
Multiple DBs (more than 1 source dc_mstr)		51
Select conversion database	qaddb	
Enter domain information		
Repeat for each dc_mstr in source database		
Single DB (no dc_mstr)		53
Select Conversion Database	qaddb	
Enter Domain Information		
8.6E–eB only: EDI ECommerce conversions		54
8.5–8.6D only: Euro Data conversions		55
Connect database	easource	
Close Log Window		
Run special dump programs		57
eB+ only: Connect Database	admsource	
Close Log Window		

Table A.1 Buffer Copy Conversion Checklist (Page 3 of 4)

Task	Default	Page
Deactivate indexes		58
Connect database	Tinstall\db\mfgprod	
Close Log Window		
Buffer copy source database		59
Rebuild indexes		59
Update database OID value		59
Connect database	Tinstall\db\mfgprod	
Close Log Window		
Load Production and Admin data		60
Connect database	Tinstall\db\mfgprod	
Close Log Window (DB connect)		
Select tables for load		
Connect database	Sinstall\db\mfgprod	
Close Log Window (DB connect)		
Close Log Window		
Load Language data		61
Select tables for load		
Close Log Window		
Repeat for additional languages		
Convert database		61
Convert additional databases		62
Additional Conversion Steps for eB2.1		**92**
Load EDI ECommerce data		93
Update sequences, utsequp.p		93
Load gui data, ld91gui.p		93
8.5–eB2 only: User group length conversion		92
8.5 only: Global Shipping conversion		94
9.0–eB only: Flow Scheduling conversion		95
8.5–eB only: European Accounting conversion		95
eB–eB2 only: Migrate Freight Information		95
8.5–eB only: Global Tax Management conversion		99
8.5–8.6 only: Fixed Assets conversion		167

Table A.1 Buffer Copy Conversion Checklist (Page 4 of 4)

Task	Default	Page
Restore Custom Default Data		**95**
Reenter custom menus and messages		96
Reassign custom browses		96
Load Online Help		**97**
Load target version help		97
Load custom source help		98
Finalize Target Database	See *Installation Guide: Progress Database*	
Configure Production database set		
Compile target version		
Generate scripts		
Start and register MFG/PRO		
Back up MFG/PRO Install Dir		

In-Place Conversion Checklist

Conversion Specifications	
Source versions supported:	8.5-eB2.1 SP0
Progress version required:	9.1D+
OS patches	Y
IE, Netscape, Mozilla	optional

Table A.2 In-Place Conversion Checklist

Task	Default	Page
Source Database: Prepare for Conversion		**24**
Post and close financial transactions		
Archive and delete		
Back up source database and Minstall		
8.5–eB only: GTM conversion		24
8.5–8.6D only: Euro data conversion		25
8.6 only: Supplier Performance conversion		25
8.5 only: Global Shipping conversion		25
8.5 only: Product Change Control conversion		26
8.5 only: Corporate Commodity Code conversion		26
Run data verification reports		26
Preserve custom system data		29
MFG/UTIL: Preliminary Steps	See *Installation Guide: Progress Database*	
Install media		
Create new empty databases		
Create admin and help databases		
Create new compile database set		
MFG/UTIL: Conversion to eB2.1		**66**
Start MFG/UTIL		
Run Configure|MFG/PRO Guided Setup		67
Select Convert Progress Database (In-Place)		
Conversion Setup		68
In-Place Conversion	Yes	
Connect to source database	Sinstall\db\mfgprod	68

Table A.2 In-Place Conversion Checklist

Task	Default	Page
Close Log Window		
Select conversion functions		69
8.5 only: Global Shipping conversions		72
8.5–eB2: Domain conversions		73
Multiple DBs (more than 1 source dc_mstr)		74
Select conversion database	qaddb	
Enter domain information		
Repeat for each dc_mstr in source database		
Single DB (no dc_mstr)		76
Select conversion database	qaddb	
Enter domain information		
8.6e–eB only: EDI ECommerce conversions		77
8.5–8.6D only: Euro Data conversions		78
Connect database	easource	
Close Log Window		
Run special dump programs		80
eB+ only: Connect database	admsource	
Close Log Window		
Update source schema		81
Find data definition file		
If storage area source DB:	inplace\progress\storagearea\dltxxx-eb21.df	
If schema area source DB:	inplace\progress\schemaarea\dltxxx-eb21.df	
Close Log Window: A new delta .df is generated = original . df + domainname.df		
Load data definition file	inplace\progress\schemaarea\dltxxx-eb21mfg.df	
Close Log Window		
Delete prior system data		84
Connect to target database	Sinstall\db\mfgprod	
Close Log Window		
Reindex and seed qaddb_ctrl		85
Close Log Window		
Connect to target database	Sinstall\db\mfgprod	
Close Log Window (DB connect)		

Table A.2 In-Place Conversion Checklist

Task	Default	Page
Close Log Window		
Load Production and Admin data		86
Connect database	Tinstall\db\mfgprod	
Select tables for load		
Close Log Window		
Load language data		87
Select tables for load		
Close Log Window		
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Glossary

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

Client Machine. The machine in a client/server configuration, often a PC, that runs the client session.

Client Session. An executable running an application that accesses a server running a database.

Client/Server. The configuration in which a client session runs on a separate machine from the database server process. MFG/PRO remote Windows clients require a client/server configuration.

Client/Server Connection. A connection in which a client session runs on a separate machine from the database server process. MFG/PRO remote Windows clients require a client/server connection.

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

Connection Parameter. A Progress parameter that controls how a client session connects to a database.

Conversion. Refers to the transition from one numbered release to the next, such as MFG/PRO 8.6 to MFG/PRO eB2.1. Conversions involve program fixes and, in some cases, major schema changes.

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

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

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

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

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

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

Field. Progress's term for an element in a table that holds one type of information, such as an address.

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

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

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

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

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

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

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

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

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

Object ID (OID). A means of uniquely identifying a database record. In MFG/PRO, OIDs are decimal values based on a date/time stamp and sequence number on the left of the decimal. The right side of the decimal is a registration value based on the OID Generator Code specified in Database Control (36.24).

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

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

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

Record. Progress's term for an entry in a table.

Relational Database Management System (RDBMS). Takes SQL statements and creates, updates, or provides access to the database.

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

Schema Trigger. Progress .p procedures added through the Data Dictionary to the database schema. Schema triggers always execute when a specified event occurs.

Schema Update (minor update). CRCs and timestamps are unaffected by these minor changes only: modifications of formats, labels, and validation expressions/messages. All programs must be recompiled to see the effect of minor changes.

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

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

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

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

Triggers. A series of programmed responses to any type of interaction a user or operating system has with an application. For more information, see the *Progress Programming Handbook*.

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