



QAD 2007 Conversion Guide Oracle Database

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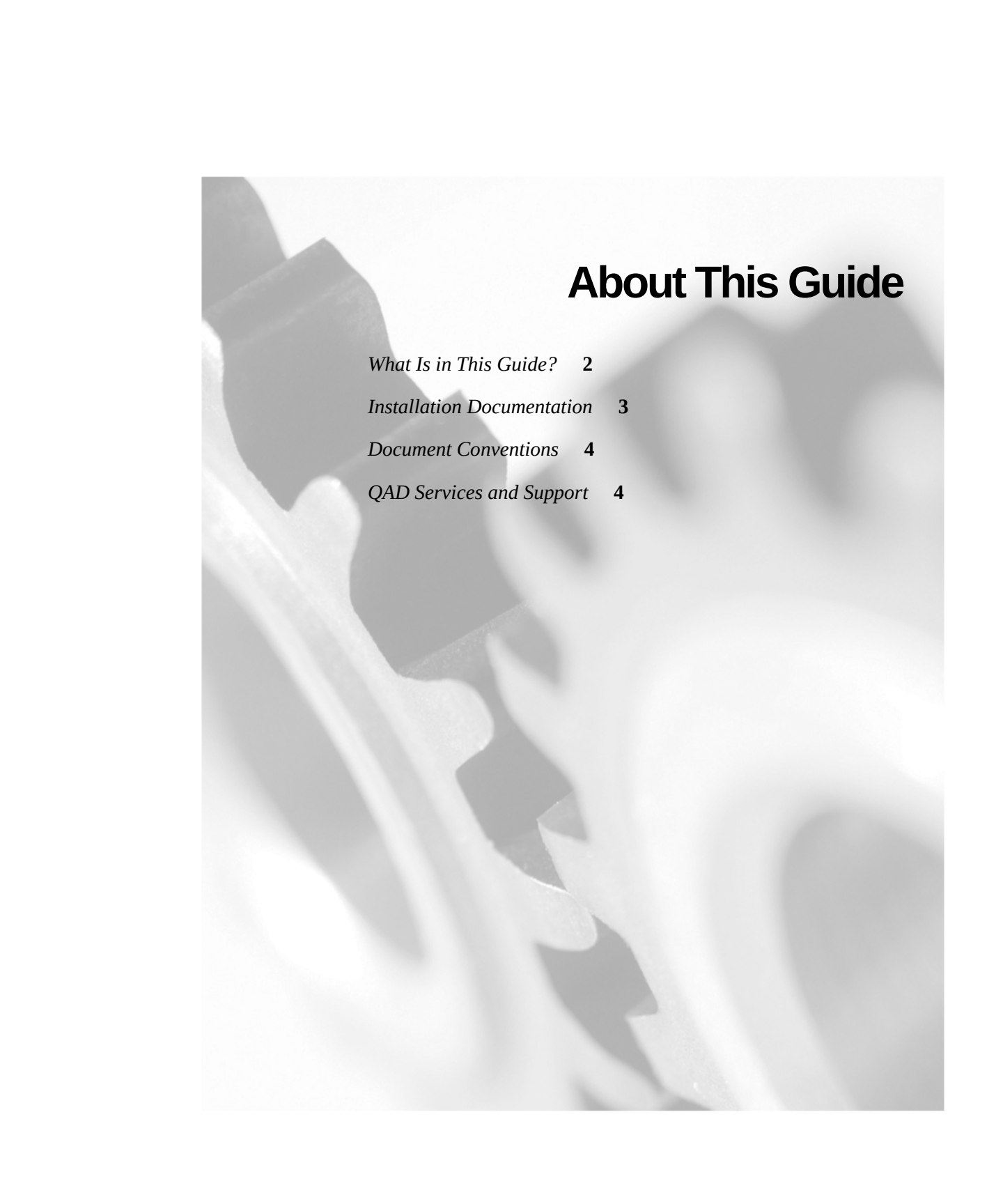
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What Is in This Guide?

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: Oracle Database*

If you have already installed the initial release of eB2.1, use the *MFG/PRO eB2.1 Service Pack Installation Guide*.

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 Appendix A, “Conversion Checklists,” on page 185.

For advanced users, or for less experienced users who want to track their progress on the conversion, this guide includes an appendix which 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 MFG/PRO system administrator who is installing the MFG/PRO database and is familiar with UNIX operating systems, Oracle database environments, Microsoft Windows, Progress software, and networking as needed for the planned installation.

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.

- 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.
<i>italicized monospaced text</i>	A variable name for a value you enter as part of an operating system command; for example, <i>cdrom</i> .
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/>

Planning an MFG/PRO Oracle Conversion

This chapter discusses the following topics:

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Conversion Overview

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

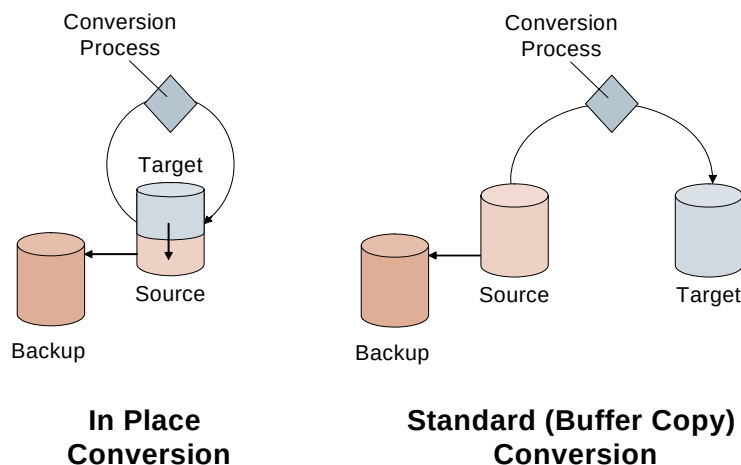
- All conversion operations are now completed from the Convert Database workflow or from the Conversions menu in MFG/UTIL. MFG/CONV has been retired.
- All conversion programs have been rewritten to automate and streamline the conversion process.
- You must complete several new conversion steps, such 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



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. 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 for large databases. 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 source version 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, the source version admin and help schema is dropped and eB2.1 admin and help schema is created in the database. In addition, you need to migrate your Oracle databases that are not already on your target Oracle version.

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.

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.

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

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 value.

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 3 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 53
- In-Place steps: “Domain Conversions (8.5 – eB2)” on page 76

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.
- 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.

◆ See also “User Group Length Conversion (8.5 – eB2)” on page 97.

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 58
- In-Place steps: “Euro Data Conversion (8.5 – 8.6D)” on page 81

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.

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

Service/Support Management Conversions (8.5 – eB)

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 57
- In-Place steps: “EDI ECommerce Conversions (8.6E – eB)” on page 79

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 97

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 (8.5 – eB2)

This conversion generates a correct OID value for all existing database records. This needs to be done only if you are implementing Enhanced Controls and can also be run as a separate operation at the time that Enhanced Controls is implemented. Enhanced Controls is not available for Oracle databases at this time.

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 171.

Additional References

- Chapter 8, “Fixed Assets Conversion,” on page 171

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 (v`ep_mstr`) and summary data master (v`s_mstr`) as well as in the linked detail records, performance data detail (v`epd_det`) and summary data detail (v`esd_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.

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 103

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 25

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 98

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 98

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 26

- Buffer Copy steps: “Global Shipping Conversion (8.5)” on page 52
- In-Place steps: “Global Shipping Conversion (8.5)” on page 75
- Post-processing steps: “Global Shipping Conversion (8.5)” on page 97

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

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 **24**

Oracle Recommendations **24**

General Preparations **24**

Version-Specific Preparations **25**

Running Data Verification Programs **27**

Preserving Custom System Data **29**

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.

Oracle Recommendations

In general, this conversion process assumes:

- If you are using UNDO tablespaces, QAD recommends setting UNDO_RETENTION=0. This avoids large UNDO tablespace growth.
- Prior to executing the conversion routines, back up your Oracle database.

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
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

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

Program Name	Source Version Menu Numbers	eB2.1 Menu Number
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.
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

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

Program Name	Source Version Menu Numbers	eB2.1 Menu Number
Orders in Transit (dsdmp03.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 99 to incorporate your customizations in your target version environment.

Menus, Messages, and Labels

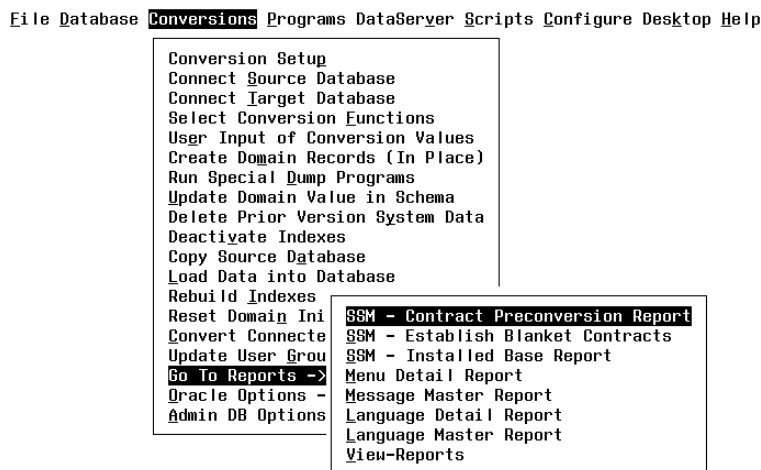
The MFG/UTIL conversion does not convert custom changes to this data. However, you can generate reports that display all the custom changes you have made so that you can reenter them.

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|Go To Reports menu.

Fig. 2.1
Conversion Reports
Menu



- 4 Select the report you want. 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

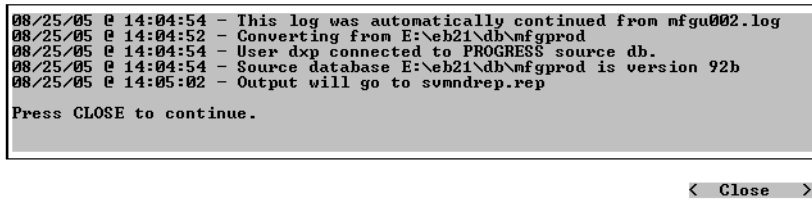
- 1 Choose Go To Reports from the MFG/UTIL Conversions menu, and choose View Reports. The report viewer displays.
- 2 Select the report you want to view and choose View. Table 2.2 lists program file names and report names.

Table 2.2
Conversion Reports

Programs	Report Names
svmndrep	Menu Detail Report
svmsgrep	Message Master Report

Programs	Report Names
svlngrep	Language Master Report
svlndrep	Language Detail Report

- The report location displays in the log window.



```

08/25/05 @ 14:04:54 - This log was automatically continued from mfgu002.log
08/25/05 @ 14:04:52 - Converting from E:\eb21\db\mfgprod
08/25/05 @ 14:04:54 - User dxp connected to PROGRESS source db.
08/25/05 @ 14:04:54 - Source database E:\eb21\db\mfgprod is version 92b
08/25/05 @ 14:05:02 - Output will go to svmdndrep.rep
Press CLOSE to continue.
  
```

< Close >

Fig. 2.2
Conversion Report
Log Window for
Menu Detail Report
(svmdndrep)

Dump GUI Tablespace

In MFG/PRO 9.0 and earlier releases, some administrative data was stored in the gui tablespace. This data is currently stored in the admin tablespace and the gui tablespace no longer exists. You first need to identify these tables and then dump the data using the following steps:

- Enter the following to access SQL as the MFG/PRO schema owner (typically, qad):

```
sqlplus qad/qad
```
- Run the following command to display all of the tables that reside in the gui tablespace:

```
select table_name from user_tables where tablespace_name = '%GUI%';
```

You will use this list when selecting tables to dump in step 6.
- In MFG/UTIL, choose Database|Dump Data from Database.
- Connect to the Progress schema holder first, then the Oracle production database.
- Enter a dump directory for the data.
- In Select Tables, scroll down and press Spacebar on each table included in the gui tablespace.
- Choose OK to dump the data.

Dump Custom Help

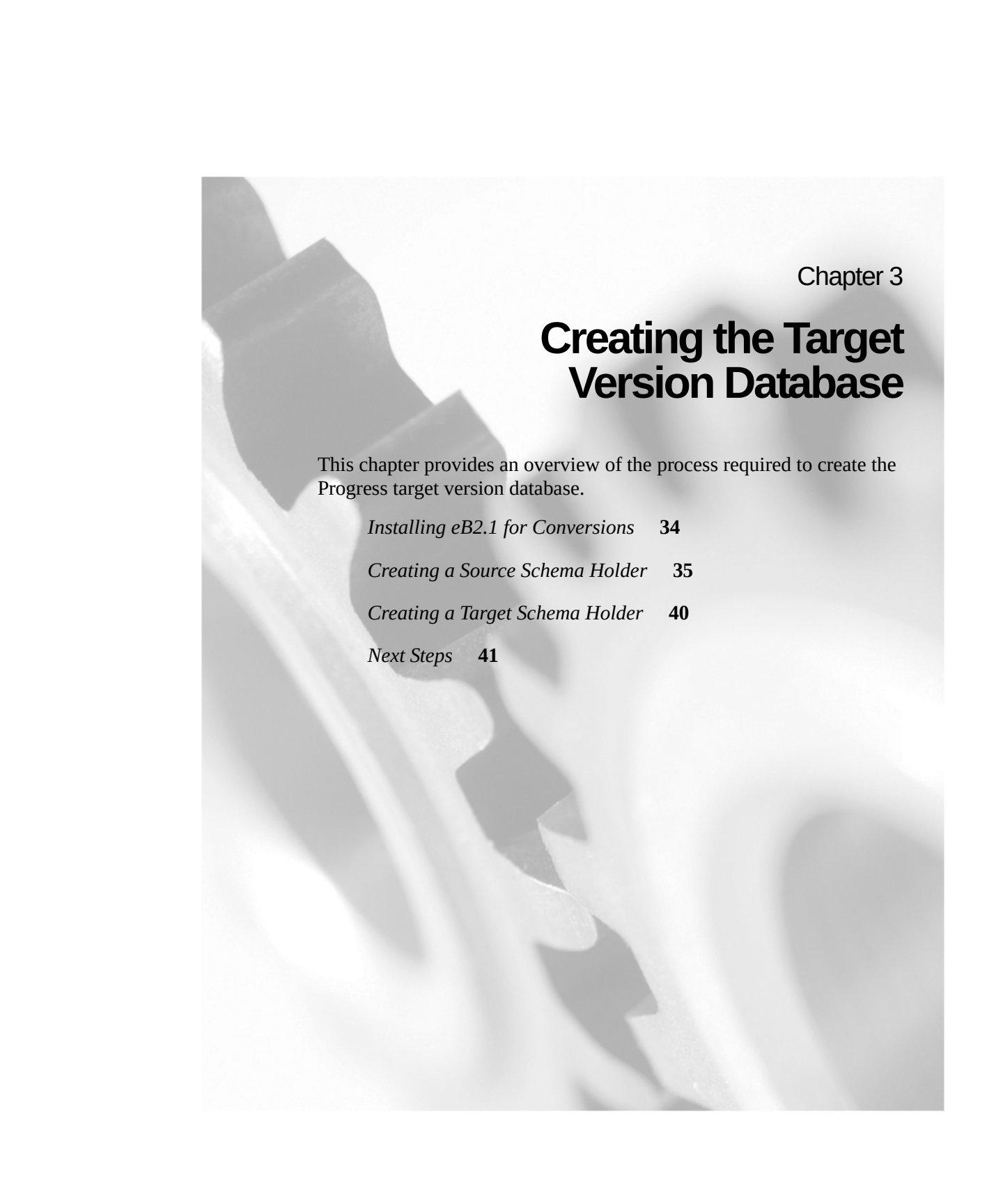
If you have written custom field help in your source system, complete this set of steps:

- 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.

The background of the page is a grayscale image of several interlocking gears. The gears are of different sizes and are positioned in a way that they appear to be meshing together. The lighting is soft, creating a professional and technical feel.

Chapter 3

Creating the Target Version Database

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

Installing eB2.1 for Conversions **34**

Creating a Source Schema Holder **35**

Creating a Target Schema Holder **40**

Next Steps **41**

Installing eB2.1 for Conversions

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 *MFG/PRO eB2.1 Installation Guide: Oracle Database* to install and configure the target MFG/PRO environment.

- 1 Install the target version Progress software.
- 2 Install the target version Oracle 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*.

- 3 Install and configure the database server, language files, and at least one character client using the instructions in the installation guide. However, note the following differences and requirements to support conversions.

For either conversion method, buffer copy or in-place, you require:

- A new source schema holder (`srchold`)
This is a new schema holder created using the target version of MFG/UTIL. The schema from your original source schema holder is dumped, the database name modified to source, and the resulting `.df` file is then loaded into the new source schema holder.
- Your original source database
- A new target schema holder (`trghold`)
This is created in MFG/UTIL by copying the `oraempty.db` created during the install. During the copy, when asked to enter the Oracle database name, you enter target.

Buffer copy conversions also require:

- A new target database

This is the eB2.1 database created with QAD-provided templates and the Oracle DBCA (refer to *MFG/PRO eB2.1 Installation Guide: Oracle Database* for further information). This database should not contain eB2.1 system data or have MFG/PRO indexes built. These functions are performed during the conversion process.

When assigning tablespaces for the target Oracle database, consider the size of the tables in your source version instance.

This chapter provides the steps to create the required schema holders.

- 4 Set up a compile (a schema holder and oraempty) and a production database set with a production schema holder other than the conversion target schema holder. The production schema holder embeds the appropriate FOREIGN-DATABASE reference, typically the ORACLE_SID, and not target.
- 5 Configure a database set containing the standard target version schema holder (not trghold) and Oracle database for the compile.
- 6 Compile your target version application code.
- 7 Record the locations of your target version database and the directory where you installed the target version database server files.

Creating a Source Schema Holder

To create a source version schema holder, you dump your source schema, modify the resulting .df file, create a new schema holder in the new environment, and load the modified .df into it.

Preliminary Requirements

The following steps assume that:

- You have installed Progress Version OE10B02 and the OE10B02 patch bundle CD delivered with your MFG/PRO eB2.1 software. Alternatively, you have installed OE10B03, which includes a required modification for the Oracle Dataserver.

Note The software must include at least one Progress 4GL license.

- No other users are logged onto the source version instance.

- Your environment variables are set as follows:
 - DLC is set to the target version Progress directory.
 - ORACLE_HOME is set to the target Oracle directory.

Dump Source Schema

The source schema must be dumped and the logical database name altered to source prior to starting the conversion.

- 1 Log in as the MFG/PRO installation user (typically mfg) or any appropriately privileged owner to access MFG/UTIL.
- 2 In MFG/UTIL, select Database|Progress Data Dictionary. The Progress Data Dictionary opens.
- 3 In the dictionary, select Database|Connect.
- 4 In the Connect Database screen, locate your original source version schema holder and choose OK.

Fig. 3.1
Connecting to the
Source Version
Schema Holder

Connect Database

Physical Name: /dr04/mfgpro/eb21sp3/db/oraempty.db < Files... >
 Logical Name: _____
 Database Type: PROGRESS [] Multiple Users
 User ID: _____
 Password: _____
 Trigger Location: _____ < Files... >
 Parameter File: _____ < Files... >

Other CONNECT Statement Parameters:

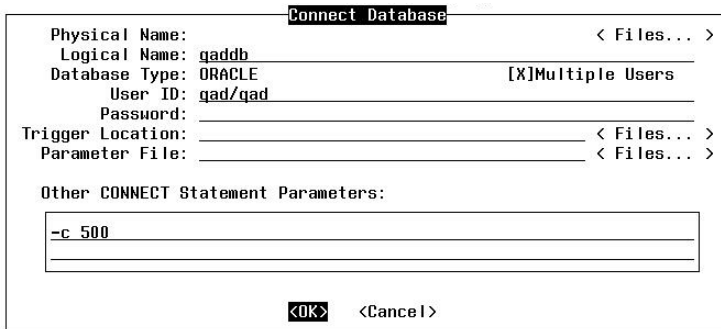
<OK> <Cancel>

- 5 You connect to the schema holder and the Select Working Database screen displays both the schema holder and the associated Oracle database. Arrow down to the Oracle database and press Enter.

Fig. 3.2
Selecting a
Working Database

Select Working Database				
Logical DBName	Physical DBName	DB Type	Schema Holder	Con
oraempty	o/eb21sp3/db/oraempt	PROGRESS	oraempty	yes
qaddb	?	ORACLE	oraempty	no

- 6 You are asked whether you want to connect to the Oracle database. Choose Yes. The Connect Database screen displays for the Oracle database. Enter the user and password, and add the appropriate open cursors setting (-c 500 in the example) to the connection parameters.



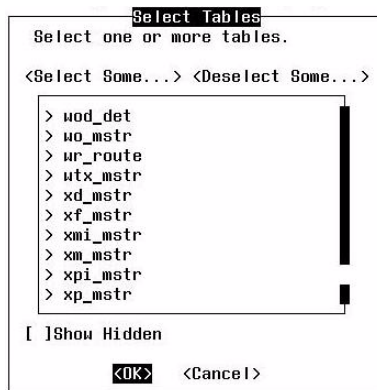
The 'Connect Database' dialog box contains the following fields and options:

- Physical Name: (empty)
- Logical Name: qadddb
- Database Type: ORACLE [X]Multiple Users
- User ID: qad/qad
- Password: (empty)
- Trigger Location: (empty) < Files... >
- Parameter File: (empty) < Files... >
- Other CONNECT Statement Parameters:
 - c 500

Buttons: <OK> <Cancel>

Fig. 3.3
Connecting to the
Source Oracle
Database

- 7 In the Dictionary, select Data Definitions (.df file) from the Admin|Dump Data and Definitions menu. The Table Selection screen displays.
- 8 Choose Select Some to open the pattern editor. Accept the default asterisk (*) to select all tables and choose OK. The Select Tables screen displays with all tables selected. Choose OK.



The 'Select Tables' dialog box contains the following elements:

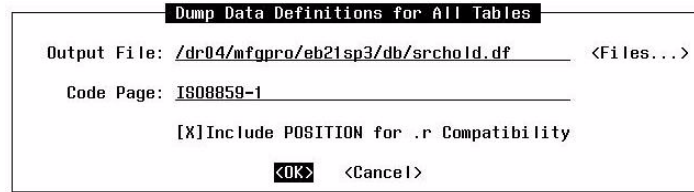
- Header: Select one or more tables.
- Buttons: <Select Some...> <Deselect Some...>
- Table List:

>	uod_det
>	uo_mstr
>	ur_route
>	utx_mstr
>	xd_mstr
>	xf_mstr
>	xmi_mstr
>	xm_mstr
>	xpi_mstr
>	xp_mstr
- Footer: [] Show Hidden
- Buttons: <OK> <Cancel>

Fig. 3.4
Table Selection for
the .df Dump

- 9 You are prompted to enter the name of the schema file to create. Enter the path and file name and choose OK.

Fig. 3.5
Creating the
Schema File



- 10** When the file is created, a completion message displays. Choose OK to exit the message.
- 11** Select Database|Exit to close the Data Dictionary and return to MFG/UTIL. The databases are automatically disconnected.

Modify the Schema File Header

In this step you alter the database name in the header of the schema file you just created.

- 1** In a text editor, open the .df file created in the last set of steps.
- 2** Alter the database name in the first line to source:
ADD DATABASE "source" TYPE ORACLE
- 3** Save and exit the file.

Create Source Schema Holder

In this set of steps, you create a new source schema holder. It will be on the target version of Progress, but will contain your source schema.

- 1 In MFG/UTIL, choose Database|Create. The Create Database screen displays.

Create Database

New Physical Database Name:
./db/srcho1d <Files...>
(.db extension can be omitted)

Start with:
(X)An EMPTY Database
()A Copy of the SPORTS Database
()A Copy of Some Other Database

[]Replace If Exists

<OK> <Cancel>

Fig. 3.6
Creating a Source
Schema Holder

- 2 Enter the new schema holder name of srcho1d, ensure An EMPTY database is selected, and choose OK.
- 3 Choose Database|Load Database Schema (.df) File. The Connect Database screen opens.

Connect Database

Physical Name: /dr04/mfgpro/eh21sp3/db/srcho1d.db < Files... >

Logical Name: _____

Database Type: PROGRESS []Multiple Users

User ID: _____

Password: _____

Trigger Location: _____ < Files... >

Parameter File: _____ < Files... >

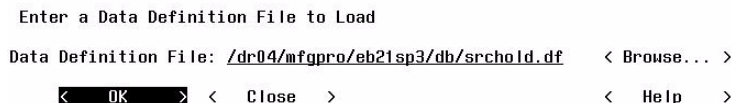
Other CONNECT Statement Parameters:

<OK> <Cancel>

Fig. 3.7
Connect to the
Source Schema
Holder

- 4 Locate the new schema holder and choose OK. The Data Definition Load screen opens.

Fig. 3.8
Loading the .df File



- 5 Choose OK to load the schema.

Creating a Target Schema Holder

To create a target version schema holder, you copy the new schema holder you created during the installation in the new environment, naming it `trghold`.

Preliminary Requirements

The following steps assume that:

- You have installed Progress Version OE10B02 and the OE10B02 patch bundle CD delivered with your MFG/PRO eB2.1 software. Alternatively, you have installed OE10B03, which includes a required modification for the Oracle Dataserver.

Note The software must include at least one Progress 4GL license.

- No other users are logged onto the source or target version instances.
- Your environment variables are set as follows:
 - DLC is set to the target version Progress directory.
 - ORACLE_HOME is set to the target Oracle directory.

Create Target Schema Holder

This step creates the target schema holder and sets the internal reference to the target Oracle database to `target`.

- 1 Log in as `mfg`.
- 2 In MFG/UTIL, select Copy New Schema Holder from Existing SH from the DataServer|Oracle menu.
- 3 Locate `oraempty.db` in `TVInstallDir/db`. Enter the path and file name for `trghold`. Choose OK to create the schema holder.



Fig. 3.9
Creating trghold

- 4 A log window displays. Scroll down in the window to make sure the process is complete. Then choose Close.
- 5 The Oracle database name screen displays showing the database name as qaddb. Change this to target. Choose OK.

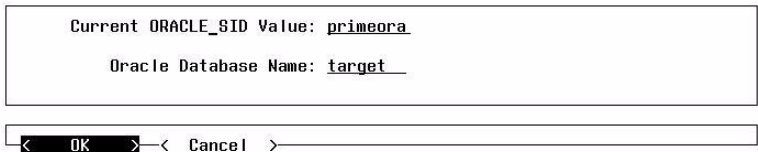


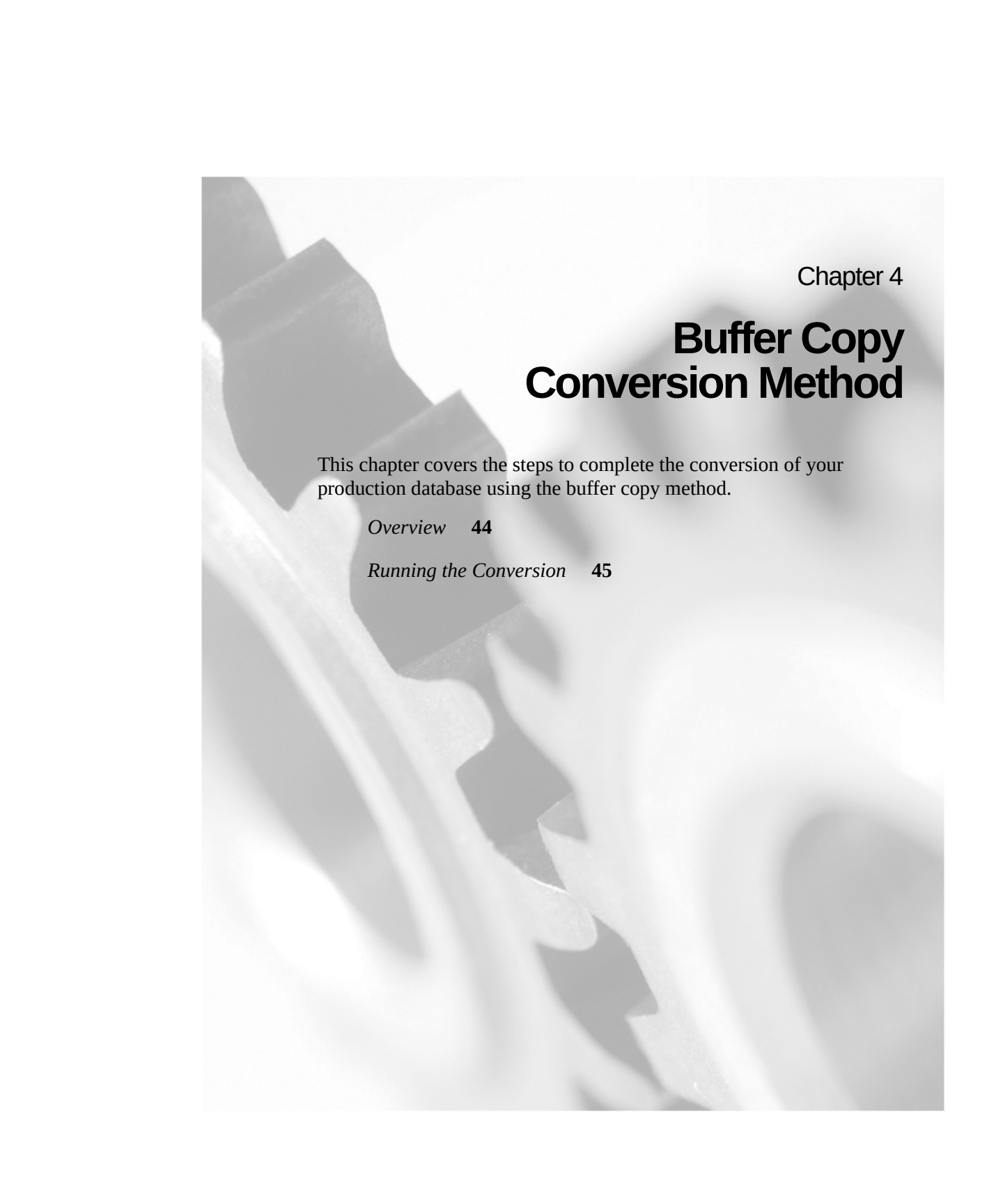
Fig. 3.10
Setting the Oracle
Database Name

- 6 You are asked to confirm that the name is correct. Choose Yes.

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 43.
- To complete an in-place conversion, go to Chapter 5, “In-Place Conversion Method,” on page 67.



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 **44**

Running the Conversion **45**

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 Oracle environment:

- Production
- Training
- Demo
- European Accounting

Set Environment Variables

Prior to running the conversion steps, make sure the PATH variable contains the Progress OpenEdge installation and /bin directories and the target ORACLE_HOME directories, not the source directories.

Oracle Connections

Progress can only have one shared memory connection to Oracle when multiple Oracle databases are connected. Therefore, the second database connection for a buffer copy conversion requires a service set up.

Typically, you connect to the first Oracle database using shared memory. This requires that the ORACLE_SID value in the environment is set to the first database. The second Oracle database can then connect through Oracle Net Services to ensure connection to the proper database.

For example, if ORACLE_SID is set to the source Oracle database, then the connection to the source database occurs in shared memory (qad/qad or -U qad -P qad). The target database would be connected through Net Services:

```
qad/qad@servicename or -U qad@ servicename -P qad
```

Running the Conversion

Important If you make an error during the database connection process, stop the conversion workflow mid-stream, or are converting multiple databases, you must delete the following files before restarting the conversion workflow:

- envvars.ini
- srchold.ini (source schema holder name)
- source.ini
- trghold.ini (target schema holder name)
- target.ini

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 Oracle Database (Copy) from the Operation Set drop-down.

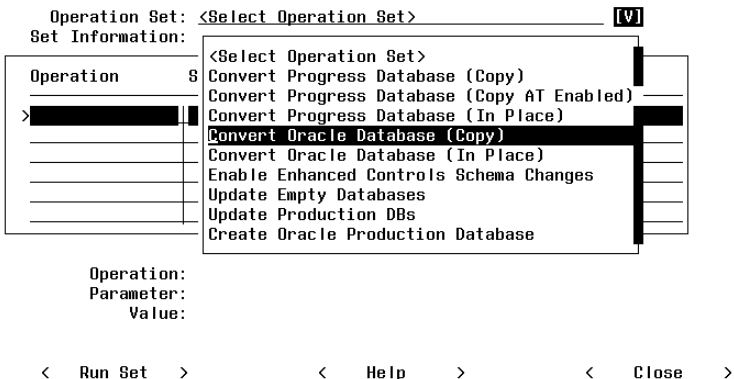


Fig. 4.1
Conversion
Operation Set
Selections

5 The conversion workflow displays.

Fig. 4.2
Convert Oracle
Database (Copy)
Operation Set

Operation Set: Convert Oracle Database (Copy) [V]
Set Information: 0 of 14 operations complete.

Operation	Status	Parameter	Value
>ConvSetup	Not Run		
ConvOraSetup	Not Run		
ConnSrc	Not Run	LDBName	orasrc
ConnTrg	Not Run	LDBName	oratrgr
ConvFunc	Not Run		
ConvInput	Not Run		

Operation: Setup for conversions.
Parameter:
Value:

< Run Set > < Help > < Close >

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

Conversion Setup

Destination directory for dumped data:
/dr04/mfgpro/eb21sp3/dumpdir

In Place Conversion:
No

Additional Index Rebuild Parameters:

Temporary Index Build Directory:

< OK > <Cancel>

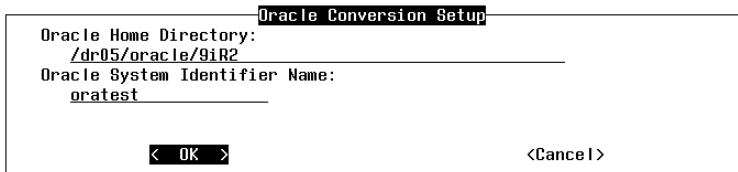
Destination directory for dumped data. Specify the location where you want the source version data files to be dumped during the special dumps.

In Place Conversion. Set this to No.

Additional Index Rebuild Parameters. Not used for Oracle.

Temporary Index Build Directory. Not used for Oracle.

- 2 Choose OK. If the directory does not exist, you are asked to confirm the creation of the directory. Choose Yes.
- 3 The Oracle Conversion Setup screen displays. Enter the Oracle home directory and the Oracle SID. Choose OK to continue.



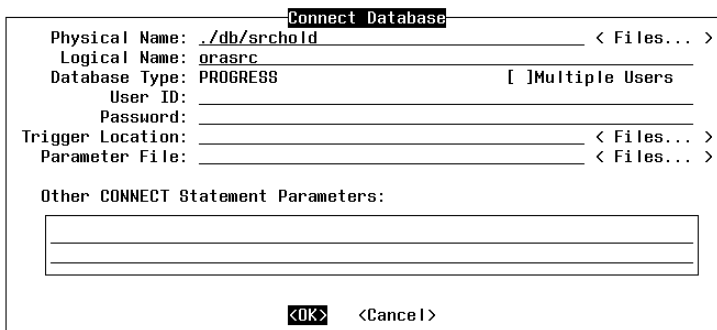
The dialog box is titled "Oracle Conversion Setup". It contains two text input fields. The first field is labeled "Oracle Home Directory:" and contains the text "/dr05/oracle/9iR2". The second field is labeled "Oracle System Identifier Name:" and contains the text "oratest". At the bottom of the dialog, there are two buttons: "< OK >" on the left and "<Cancel>" on the right.

Fig. 4.4
Oracle Conversion
Setup

- 4 The Connect Database screen displays with `orasc` as the Logical Database Name.

Connect Source Database

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



The dialog box is titled "Connect Database". It contains several fields and a checkbox. The "Physical Name:" field contains "/db/srchold" and has a "< Files... >" button to its right. The "Logical Name:" field contains "orasc". The "Database Type:" field contains "PROGRESS" and has a "[] Multiple Users" checkbox to its right. The "User ID:" field is empty. The "Password:" field is empty. The "Trigger Location:" field is empty and has a "< Files... >" button to its right. The "Parameter File:" field is empty and has a "< Files... >" button to its right. Below these fields is a section labeled "Other CONNECT Statement Parameters:" with a text area containing three empty lines. At the bottom of the dialog, there are two buttons: "<OK>" on the left and "<Cancel>" on the right.

Fig. 4.5
Connecting to the
Source Schema
Holder

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

Accept all other defaults.

- 2 Choose OK. The source schema holder is connected. You are asked if you want to connect to the associated Oracle database. Choose Yes to continue.

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

Fig. 4.6
Connecting to the
Oracle Source
Database

Physical Name. The physical name will be blank and uneditable.

Logical Name. This correctly defaults in as source.

User ID. Enter your Oracle ID and password in the form qad/qad.

Other CONNECT Statement Parameters. Enter a value for open cursors, for example -c 500. Add a cursor value (-c) appropriate for your source database. The value must be lower than the value set for Oracle. For example, if your Oracle open_cursors value is 512, set -c 500.

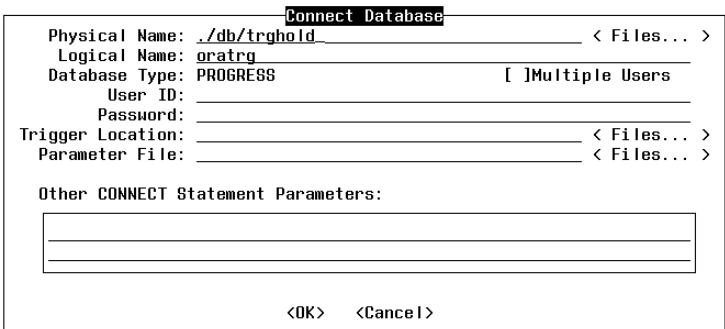
- 4 Choose OK. The MFG/UTIL Log Window displays showing a successful database connection.

Fig. 4.7
QAD Log Window
after Source
Connection

- 5 Choose Close.

Connect Target Database

- 1 The Connect Database screen displays for the target schema holder. Use the screen and field descriptions to complete this dialog.



The screenshot shows a dialog box titled "Connect Database". It contains the following fields and options:

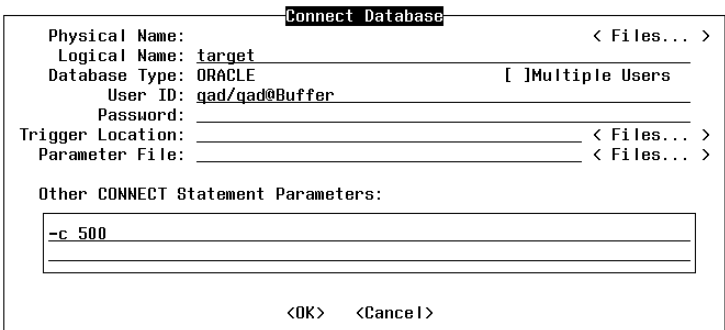
- Physical Name: `./db/trghold` (with a "< Files... >" button)
- Logical Name: `oratrg`
- Database Type: `PROGRESS` (with a "[]Multiple Users" checkbox)
- User ID: (empty field)
- Password: (empty field)
- Trigger Location: (empty field, with a "< Files... >" button)
- Parameter File: (empty field, with a "< Files... >" button)
- Other CONNECT Statement Parameters: (a text area with three lines)
- Buttons: "<OK>" and "<Cancel>"

Fig. 4.8
Connecting the
Target Schema
Holder

Physical Name. Enter the name of your target database; for example, `./db/trghold`.

Accept all other defaults.

- 2 Choose OK. The target schema holder is connected. You are asked if you want to connect to the associated Oracle database. Choose Yes to continue.
- 3 Complete the Connect Database screen using a service—such as Oracle NetService. Follow the screen example and field descriptions.



The screenshot shows a dialog box titled "Connect Database". It contains the following fields and options:

- Physical Name: (blank field, with a "< Files... >" button)
- Logical Name: `target`
- Database Type: `ORACLE` (with a "[]Multiple Users" checkbox)
- User ID: `qad/qad@Buffer`
- Password: (empty field)
- Trigger Location: (empty field, with a "< Files... >" button)
- Parameter File: (empty field, with a "< Files... >" button)
- Other CONNECT Statement Parameters: (a text area with three lines, containing the text `-c 500`)
- Buttons: "<OK>" and "<Cancel>"

Fig. 4.9
Connecting to the
Oracle Target
Database

Physical Name. The physical name will be blank and uneditable.

Logical Name. This correctly defaults in as `target`.

User ID. Enter your Oracle ID and password in the form qad/
qad@*Buffer* where *Buffer* is your Oracle SID value.

Other CONNECT Statement Parameters. Enter an open-cursor value appropriate for your system, such as -c 500.

- 4 Choose OK. The MFG/UTIL Log Window displays showing a successful database connection.
- 5 Choose Close in the log window to continue.

Select Conversion Functions

This step displays all required and optional conversions depending on the source database version. Required conversions are set to Yes and you cannot modify them. You can select the optional conversions you want to run by setting them to Yes. Based on this selection, data screens appear for each of the conversions as needed for your specific environment.

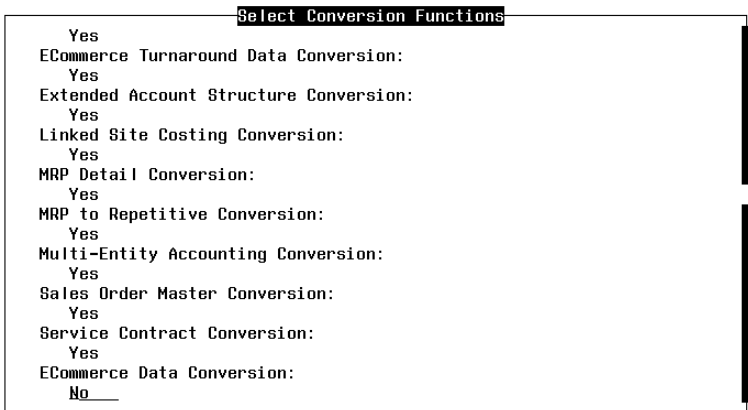
Important This screen shows the conversions available for the source version you are starting with. The sample screens in Figure 4.10 through Figure 4.12 show conversions for a source MFG/PRO 9.0 database.

- 1 Complete the Select Conversion Functions screen.

Fig. 4.10
Upper Portion of
Conversion
Functions Screen

Select Conversion Functions	
Add All OIDs Conversion:	No
ECommerce Cross Reference Conversion:	Yes
ECommerce Transformation Conversion:	Yes
ECommerce Turnaround Data Conversion:	Yes
Extended Account Structure Conversion:	Yes
Linked Site Costing Conversion:	Yes
MRP Detail Conversion:	Yes
MRP to Repetitive Conversion:	Yes
Multi-Entity Accounting Conversion:	Yes
Sales Order Master Conversion:	Yes
Service Contract Conversion:	Yes
ECommerce Data Conversion:	No

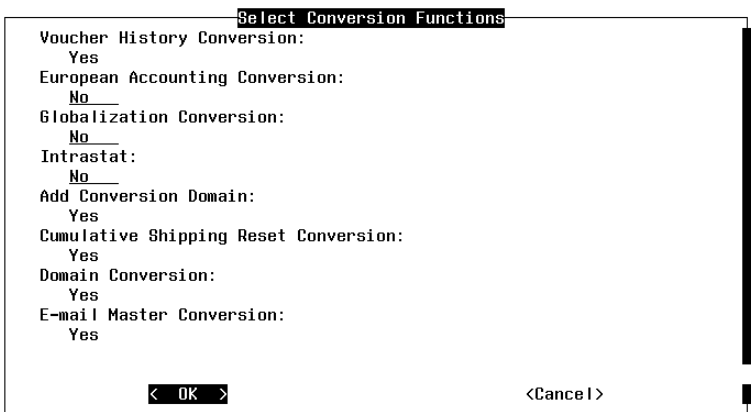
- 2 Scroll or tab down to view all options. Set optional conversions you want to run against your database to Yes.



The screenshot shows a terminal window titled "Select Conversion Functions". It lists several conversion options, each followed by a "Yes" or "No" response. The options are: ECommerce Turnaround Data Conversion: Yes, Extended Account Structure Conversion: Yes, Linked Site Costing Conversion: Yes, MRP Detail Conversion: Yes, MRP to Repetitive Conversion: Yes, Multi-Entity Accounting Conversion: Yes, Sales Order Master Conversion: Yes, Service Contract Conversion: Yes, and ECommerce Data Conversion: No. The "No" for ECommerce Data Conversion is underlined.

```
Select Conversion Functions
Yes
ECommerce Turnaround Data Conversion:
Yes
Extended Account Structure Conversion:
Yes
Linked Site Costing Conversion:
Yes
MRP Detail Conversion:
Yes
MRP to Repetitive Conversion:
Yes
Multi-Entity Accounting Conversion:
Yes
Sales Order Master Conversion:
Yes
Service Contract Conversion:
Yes
ECommerce Data Conversion:
  No
```

Fig. 4.11
Middle Portion of
Conversion
Functions Screen



The screenshot shows a terminal window titled "Select Conversion Functions". It lists several conversion options, each followed by a "Yes" or "No" response. The options are: Voucher History Conversion: Yes, European Accounting Conversion: No, Globalization Conversion: No, Intrastat: No, Add Conversion Domain: Yes, Cumulative Shipping Reset Conversion: Yes, Domain Conversion: Yes, and E-mail Master Conversion: Yes. The "No" responses for European Accounting Conversion, Globalization Conversion, and Intrastat are underlined. At the bottom, there are two buttons: "< OK >" and "<Cancel>".

```
Select Conversion Functions
Voucher History Conversion:
Yes
European Accounting Conversion:
  No
Globalization Conversion:
  No
Intrastat:
  No
Add Conversion Domain:
Yes
Cumulative Shipping Reset Conversion:
Yes
Domain Conversion:
Yes
E-mail Master Conversion:
Yes

< OK >                <Cancel>
```

Fig. 4.12
Lower Portion of
Conversion
Functions Screen

- 3 Choose OK to begin the conversion process.

Enter OID Generator Code (8.5 – eB2)

See “OID Generator Code” on page 10.

The OID generator code is stored for a later conversion step that creates OID values for each record in the database.

Fig. 4.13
Creating the OID Generation Code

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. 4.14
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. 4.15
Select Conversion
Database Screen

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

Fig. 4.16
Master Domain
Entry

- 3 The master domain screen shown in Figure 4.16 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. 4.17
Database
Connection Master
for a New Domain

The screenshot shows a window titled "Enter Domain Information". Inside, the following fields are displayed with their current values:

- Active: yes
- Database: qaddb
- Domain: mfgprod
- Modified Date: 08/19/05
- User ID: root
- Name: Western Braybury Plant
- Short Name: Braybury
- Domain Type: normal

At the bottom of the window, there are two buttons: "< OK >" on the left and "<Cancel>" on the right.

- 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.

ECommerce Turnaround Data Conversion

Turnaround data last accessed date:
08/19/2005

Turnaround data last accessed UserID:
mfg

Turnaround data creation date:
08/19/2005

Turnaround data creation UserID:
mfg

< OK >
<Cancel>

Fig. 4.18
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:

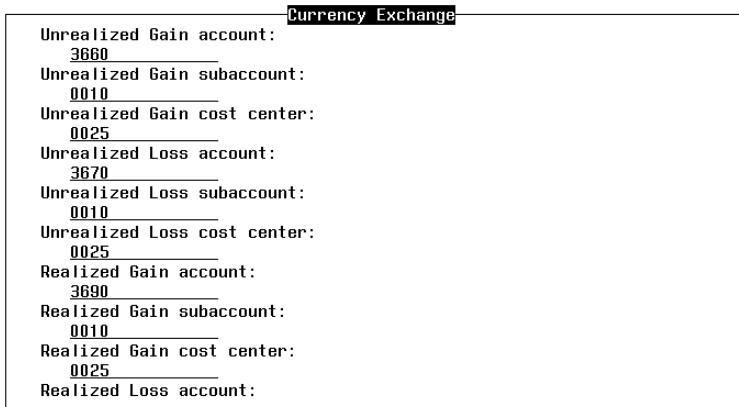
Unrealized Gain Account, Sub-account, Cost Center. These prompts create a default account, sub-account, and cost center for posting unrealized gains in currency exchanges. If you leave the account blank, the Unrealized Exch Rate Gain/Loss account defined in General Ledger Control (25.24) is used as a 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.



Currency Exchange

Unrealized Gain account: 3660

Unrealized Gain subaccount: 0010

Unrealized Gain cost center: 0025

Unrealized Loss account: 3670

Unrealized Loss subaccount: 0010

Unrealized Loss cost center: 0025

Realized Gain account: 3690

Realized Gain subaccount: 0010

Realized Gain cost center: 0025

Realized Loss account:

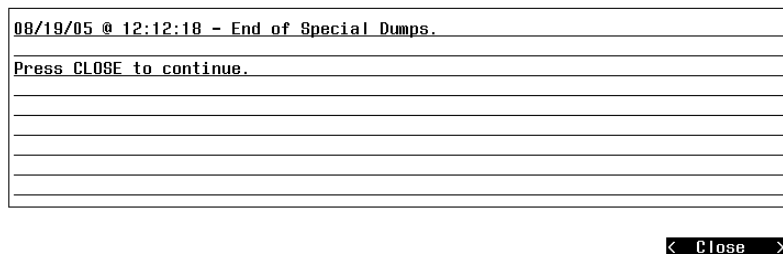
Fig. 4.19
Currency Exchange
Accounts
Conversion Screen

- 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.

Fig. 4.20
Special Dumps Log
Window



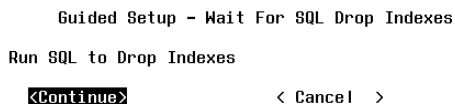
- 2 Choose Close. A wait-for screen displays.

Drop Indexes

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

- 1 The MFG/UTIL workflow displays a wait-for screen at this point, telling you to complete the dropping of the Oracle indexes in a separate screen.

Fig. 4.21
Wait-For Screen for
Index Drops



- 2 Open a separate command window and navigate to *MFGPROInstalldir/db*.
- 3 Make sure your ORACLE_SID is set correctly in your environment. In UNIX:

```
echo $ORACLE_SID
```

Or, for Windows or UNIX, access SQL and check the value:

- a Enter the following to access SQL:
`sqlplus qad/qad`
 - b Enter the following select statement to view the current SID:
`select name from v$database`
 - c On completion, enter `exit` to close the SQL session.
- 4 To run the drop indexes script, enter the following, including all capitalization:
`sqlplus qad/qad < eB21dropindexes.sql`
- 5 On completion, return to the open MFG/UTIL screen, and select Continue in the wait-for screen.

Buffer Copy Source Data

- 1 The copy of your source production data to the target database starts after you close the drop indexes wait-for. However, you first must reconnect to the four databases: `srchold`, `source`, `trghold`, and `target`. All values should default in from your previous connection process. As a reminder:

Physical	Logical	User ID	Other Parameters
./db/srchold	orasrc		
source	source	qad/qad	-c 500
./db/trghold	oratr		
target	target	qad/qad@Buffer	-c 500

Table 4.1
Database
Connections

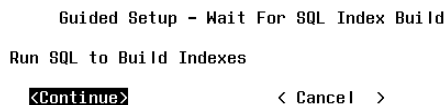
- 2 The copy starts after you close the log window that appears after the target Oracle database is connected. The time requirement for this step is highly dependent on the amount of production data in the source database.
- 3 Choose Close. A wait-for screen displays.

Build Indexes

You now rebuild the indexes in the target Oracle database.

- 1 The MFG/UTIL workflow displays a wait-for screen at this point, telling you to complete the build of the Oracle indexes in a separate screen.

Fig. 4.22
Wait-For Screen for
Index Builds



- 2 Open a separate command window and navigate to *TVInstallDir/db*.
- 3 To run the build indexes scripts, enter the following, including all capitalization:
`sqlplus qad/qad < oraempty-idx.sql`
- 4 Repeat step 3 for the following index files:
 - oadmempty-idx.sql
 - ohpempty-idx.sql
- 5 On completion, return to the open MFG/UTIL screen and choose Continue in the wait-for screen.

Update Database OID Generator Value

Once the indexes are rebuilt, the OID value you entered during the installation is updated as described in “Enter OID Generator Code (8.5 – eB2)” on page 52.

- 1 The Connect Database screen displays with the target schema entered by default. Choose OK to continue.
- 2 Respond Yes to connect to the target Oracle database.
- 3 Accept the defaults in the Connect Database screen for the Oracle database and choose OK.
- 4 The Log Window displays to confirm your connection. Choose Close.

- 5 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.

```

08/19/05 @ 14:22:46 - Running program oidseed.p.
08/19/05 @ 14:23:16 - Converting to ./db/trghold
08/19/05 @ 14:23:21 - User root connected to Oracle target db.
08/19/05 @ 14:23:21 - Target database ./db/trghold is version 92b 08/19/05 @
14:24:21 - Creating qaddb_ctrl record.
08/19/05 @ 14:24:26 - OID Generator Code 0 assigned in qaddb_ctrl record.

Press CLOSE to continue.

```

< Close >

Fig. 4.23
Database OID
Update Log

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 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.

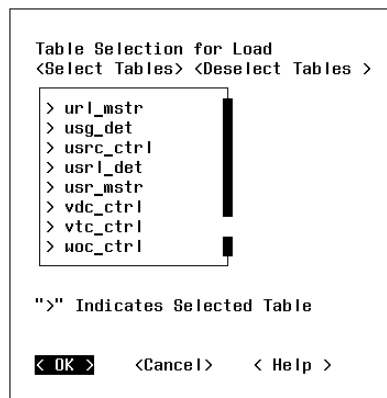


Fig. 4.24
Table Selection for
Load Screen

- 2 By default, all the tables are selected. This is correct. Choose OK to start the load.

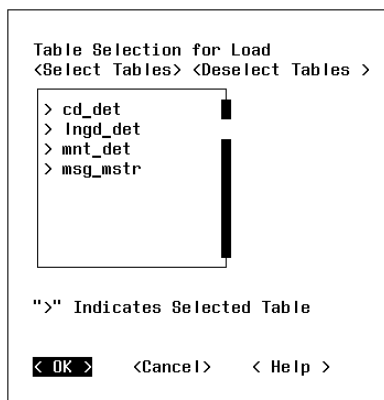
- 3 The Log Window displays the load progress. When the load completes, choose Close to continue.

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. 4.25
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. (This only occurs if you manually modified the workflow .ini file as described in *MFG/PRO eB2.1 Installation Guide: Oracle Database*.)

Convert the Database

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

- 1 The conversion start. The first step is to complete special conversions. On completion, the Log Window displays.

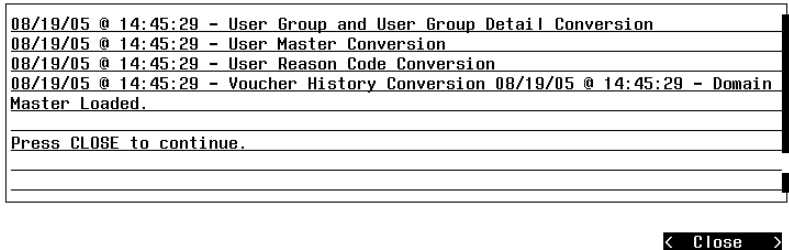


Fig. 4.26
Conversion Log

- 2 Choose Close to continue. The main conversion begins. The duration of the process depends on the size of the database.
- 3 When the conversion is complete, review the log for errors. Then choose Close to complete the conversion.
- 4 For source versions 90 through eB2, admin tables may have been dumped during the special dump process. To ensure special dumped admin data is reloaded, run `admconv.p` from MFG/UTIL.
 - a In MFG/UTIL, select File|Progress Editor.
 - b From the Progress Editor, execute:
`run admconv.p`
 - c Connect to the target schema holder, `trghold`.
 - d Choose Yes to connect to the Oracle database.
 - e Once Oracle is connected, the specially dumped admin data is loaded.
 - f When the program is done, exit the Progress editor.
- 5 Remaining admin and language-specific admin data must be loaded into the converted database if the admin data was not loaded at the time the target database was created during the install.
 - a In MFG/UTIL, select Database|Load System Data into the Database.
 - b Connect to the target schema holder, `trghold`.
 - c Choose Yes to connect to the Oracle database.

- d** Load the data from `./us/admin`.
 - e** Load the data from `./admin`.
 - f** You can exit MFG/UTIL at this point.
- 6** The initial client startup for the newly converted database requires new MFG/PRO license codes. Edit the current license display with eB2.1 license codes supplied with the MFG/PRO media. Previous MFG/PRO license codes will not be valid in the eB2.1 release.

Convert Additional Databases

Repeat these steps starting with “Running the Conversion” on page 45 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 **68**

Running the Conversion **68**

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 an Oracle environment:

- Production
- Training
- Demo
- European Accounting

Set Environment Variables

Prior to running the conversion steps, make sure the PATH variable contains the Progress OpenEdge installation and /bin directories and the target ORACLE_HOME directories, not the source 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 Oracle Database (In Place) from the Operation Set drop-down.

Operation Set: <Select Operation Set> [V]

Set Information:

Operation	S
>	<Select Operation Set>
	Convert Progress Database (Copy)
	Convert Progress Database (Copy AT Enabled)
	Convert Progress Database (In Place)
	Convert Oracle Database (Copy)
	Convert Oracle Database (In Place)
	Enable Enhanced Controls Schema Changes
	Update Empty Databases
	Update Production DBs
	Create Oracle Production Database

Operation:
Parameter:
Value:

< Run Set > < Help > < Close >

Fig. 5.1
Conversion
Operation Set
Selections

- 5 The conversion workflow displays.

Operation Set: Convert Progress Database (In Place) [V]

Set Information: 0 of 15 operations complete.

Operation	Status	Parameter	Value
>ConvSetup	Not Run		
ConnSrc	Not Run		
ConvFunc	Not Run		
ConvInput	Not Run		
SpecDump	Not Run		
UpdateSchemaFil	Not Run		

Operation: Setup for conversions.
Parameter:
Value:

< Run Set > < Help > < Close >

Fig. 5.2
Convert Oracle
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. 5.3
Conversion Setup

```

Conversion Setup
Destination directory for dumped data:
/dr04/mfgpro/eb21sp3/ipdump
In Place Conversion:
Yes
Additional Index Rebuild Parameters:
Temporary Index Build Directory:

< OK >                                <Cancel>

```

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. Not used for Oracle.

Temporary Index Build Directory. Not used for Oracle.

- 2 Choose OK. If the directory does not exist, you are asked to confirm the creation of the directory. Choose Yes.
- 3 The Oracle Conversion Setup screen displays. Enter the Oracle home directory and the Oracle SID. Choose OK to continue.

Fig. 5.4
Oracle Conversion Setup

```

Oracle Conversion Setup
Oracle Home Directory:
/dr05/oracle/9iR2
Oracle System Identifier Name:
stgobain

< OK >                                <Cancel>

```

- 4 The Connect Database screen displays with orasrc as the Logical Database Name.

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.

Connect Database

Physical Name: ./db/srcho1d < Files... >
Logical Name: orasrc
Database Type: PROGRESS [] Multiple Users
User ID: _____
Password: _____
Trigger Location: _____ < Files... >
Parameter File: _____ < Files... >

Other CONNECT Statement Parameters:

<OK> <Cancel>

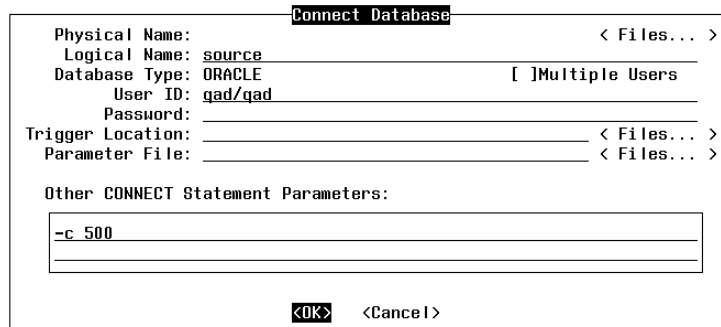
Fig. 5.5
Connecting the
Source Schema
Holder

Physical Name. Enter the name of your source production or other database; for example, ./db/srcho1d.

Accept all other defaults.

- 2 Choose OK. The source schema holder is connected. You are asked if you want to connect to the associated Oracle database. Choose Yes to continue.
- 3 Complete the Connect Database screen using the screen example and field descriptions below.

Fig. 5.6
Connecting to the
Oracle Source
Database



The 'Connect Database' dialog box contains the following fields and options:

- Physical Name: < Files... >
- Logical Name: source
- Database Type: ORACLE [] Multiple Users
- User ID: qad/qad
- Password:
- Trigger Location: < Files... >
- Parameter File: < Files... >
- Other CONNECT Statement Parameters:

-c 500

Buttons: <OK> <Cancel>

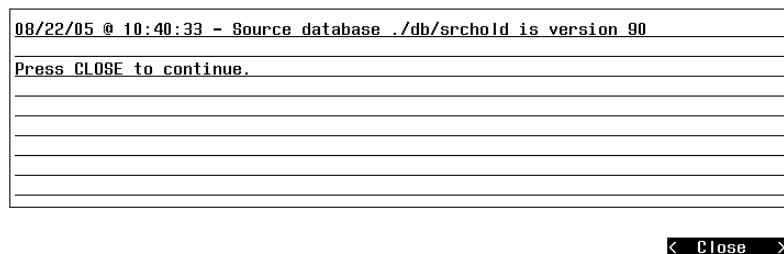
Logical Name. This correctly defaults in as source.

User ID. Enter your Oracle ID and password in the form qad/qad.

Other CONNECT Statement Parameters. Enter a value for open cursors, for example -c 500. Add a cursor value (-c) appropriate for your source database. The value must be lower than the value set for Oracle. For example, if your Oracle open_cursors value is 512, set -c 500.

- 4 Choose OK. The MFG/UTIL Log Window displays showing a successful database connection.

Fig. 5.7
QAD Log Window
after Source
Connection



The QAD Log Window displays the following text:

```
08/22/05 @ 10:40:33 - Source database ./db/srcho1d is version 90
Press CLOSE to continue.
```

Buttons: < Close >

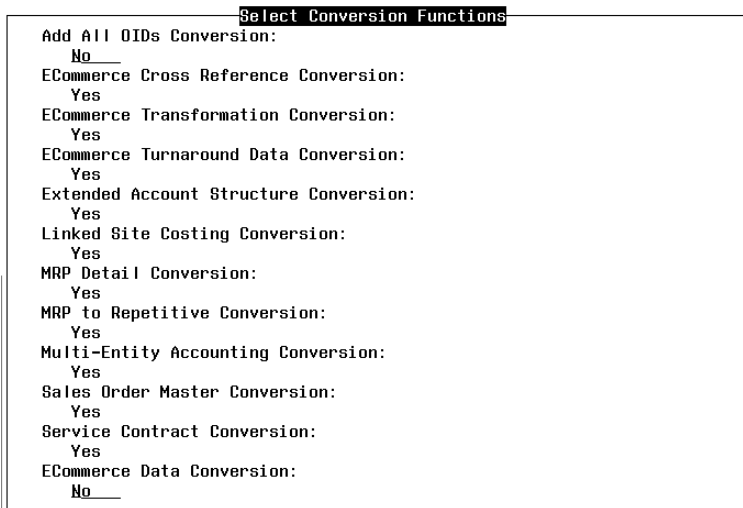
- 5 Choose Close.

Select Conversion Functions

This step displays all required and optional conversions depending on the source database version. Required conversions are set to Yes and you cannot modify them. You can select the optional conversions you want to run by setting them to Yes. Based on 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 5.8 through Figure 5.10 show conversions for a source MFG/PRO 9.0 database.

- 1 Complete the Select Conversion Functions screen.



The screenshot shows a terminal-style window titled "Select Conversion Functions". It contains a list of conversion functions, each followed by a selection (Yes or No). The selections are as follows:

Conversion Function	Selection
Add All OIDs Conversion:	No
ECommerce Cross Reference Conversion:	Yes
ECommerce Transformation Conversion:	Yes
ECommerce Turnaround Data Conversion:	Yes
Extended Account Structure Conversion:	Yes
Linked Site Costing Conversion:	Yes
MRP Detail Conversion:	Yes
MRP to Repetitive Conversion:	Yes
Multi-Entity Accounting Conversion:	Yes
Sales Order Master Conversion:	Yes
Service Contract Conversion:	Yes
ECommerce Data Conversion:	No

Fig. 5.8
Upper Portion of
Conversion
Functions Screen

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

Fig. 5.9
Middle Portion of
Conversion
Functions Screen

Conversion Function	Status
Yes	
ECommerce Turnaround Data Conversion:	
Yes	
Extended Account Structure Conversion:	
Yes	
Linked Site Costing Conversion:	
Yes	
MRP Detail Conversion:	
Yes	
MRP to Repetitive Conversion:	
Yes	
Multi-Entity Accounting Conversion:	
Yes	
Sales Order Master Conversion:	
Yes	
Service Contract Conversion:	
Yes	
ECommerce Data Conversion:	
No	

Fig. 5.10
Lower Portion of
Conversion
Functions Screen

Conversion Function	Status
Voucher History Conversion:	
Yes	
European Accounting Conversion:	
No	
Globalization Conversion:	
No	
Intrastat:	
No	
Add Conversion Domain:	
Yes	
Cumulative Shipping Reset Conversion:	
Yes	
Domain Conversion:	
Yes	
E-mail Master Conversion:	
Yes	

< OK > <Cancel>

3 Choose OK to begin the conversion process.

Enter OID Generator Code (8.5 – eB2)

See “OID Generator Code” on page 10.

The OID generator code is stored for a later conversion step that creates OID values for each record in the database.

Fig. 5.11
Creating the OID
Generation Code

OID Generator Code:
9980

< OK > <Cancel>

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.

Global Shipping Conversion

Prefix for new pre-shipper NRM sequence IDs:
1000

Prefix for new shipper NRM sequence IDs:
1100

Prefix for new master bill NRM sequence IDs:
2000

Prefix for new shipper document format codes:
2100

New list type for existing 'carrier' addresses:
3000

< OK >

<Cancel>

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)

♦ 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.

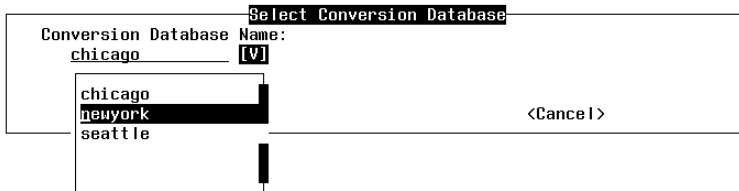


Fig. 5.13
Select Conversion
Name Screen

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

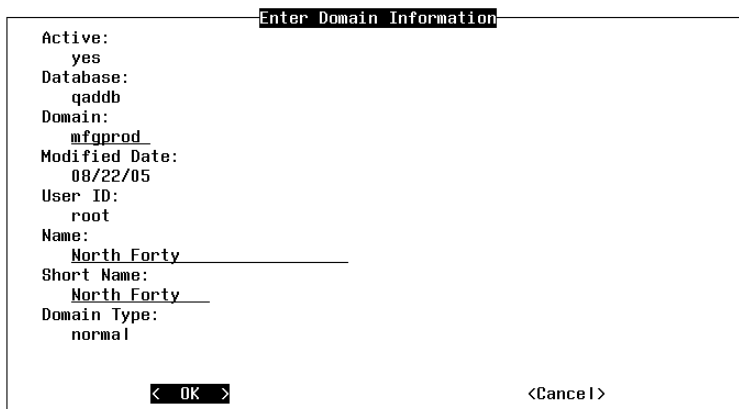


Fig. 5.14
Master Domain
Entry

- 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

```

Enter Domain Information
Active:
  yes
Database:
  qaddb
Domain:
  mfgprod
Modified Date:
  08/22/05
User ID:
  root
Name:
  North Forty
Short Name:
  North Forty
Domain Type:
  normal

< OK >           <Cancel>
  
```

- 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 Conversion

Turnaround data last accessed date:
08/22/2005

Turnaround data last accessed UserID:
mfg

Turnaround data creation date:
08/22/2005

Turnaround data creation UserID:
mfg

< OK > <Cancel>

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.

The European Accounting database is called qadepm or largo by default.

- 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

Currency Exchange	
Unrealized Gain account:	3660
Unrealized Gain subaccount:	0010
Unrealized Gain cost center:	0025
Unrealized Loss account:	3670
Unrealized Loss subaccount:	0010
Unrealized Loss cost center:	0025
Realized Gain account:	3690
Realized Gain subaccount:	0010
Realized Gain cost center:	0025
Realized Loss account:	

- 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.

Fig. 5.18
Special Dumps Log
Window

08/22/05 @ 10:44:42 - End of Special Dumps.
Press CLOSE to continue.

< Close >

- 2 Choose Close.

Update the Source Schema

You now create a delta schema file that converts the target database to the conversion domain. You select a .sql file for your source version that is then copied and modified in order to be run later. The file is located in:

TVInstallDir\inplace\oracle\90\convdomain.sql

This function creates a file named *convdomainDOMAINNAME.sql* where *DOMAINNAME* is the conversion domain you entered in “Domain Conversions (8.5 – eB2)” on page 76.

Warning Make sure you use the correct version for your source database. Using the wrong .sql file will result in errors.

- 1 After you close the Log Window following the special dumps, you select the appropriate delta SQL file for your source version and choose Open. The file path displays in the SQL File screen. Choose OK to create the new delta file for your environment.

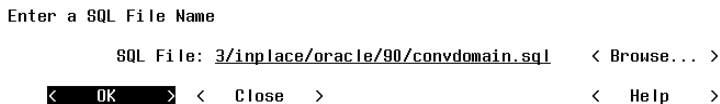


Fig. 5.19
Find Delta Schema
SQL Screen

- 2 The Log Window displays, showing file creation progress and location. Choose Close. A wait-for screen displays.

Schema Updates

You now run a series of SQL scripts in a predefined sequence to update the source Oracle database with the target schema modifications.

- 1 The MFG/UTIL workflow displays a wait-for screen at this point, to let you run the schema updates.

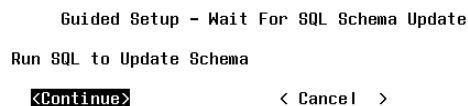


Fig. 5.20
Schema Updates
Wait-For

- 2 Open a separate command window and navigate to *TVInstallDir\inplace\oracle*.

Modify addtablespaces.sql

You now modify the `addtablespaces.sql` script, which creates mandatory and non-mandatory tablespaces missing from the source database. Review the file carefully and ensure that all tablespaces needed are created prior to executing the remaining SQL scripts.

During the conversion, you can move renamed tables to a CONV tablespace during later SQL script execution. Review the CONV tablespace section at the end of `addtablespaces.sql` to set up creation of this tablespace. If you choose to move renamed tables to CONV, you must also run the `XXmovetables.sql` script later on.

The `addtablespaces.sql` file requires modifications for all installs.

- 1 Open `addtablespaces.sql` in a text editor. Use the SQL symbol of two dashes (`--`) to comment out unneeded lines.
- 2 For all source versions that are not 8.5, comment out the mandatory 8.5 tables as shown in Figure 5.21.

Fig. 5.21
Mandatory 8.5
Tables Commented
Out

```
+66 -- *****
+67 -- **          MANDATORY SOURCE VERSION 8.5 ONLY
+68 -- **
+69 -- ** MANDATORY TABLESPACES FOR 8.5 SOURCE DATABASES
+70 -- *****
+71
+72 -- create tablespace GRS datafile
+73 --      '/DATAFILE_LOC/grs01.dbf'
+74 --      size 10M autoextend on
+75 --      extent management local segment space management auto;
+76
+77 -- create tablespace GRS_IDX datafile
+78 --      '/DATAFILE_LOC/grs_idx01.dbf'
+79 --      size 10M autoextend on
+80 --      extent management local segment space management auto;
+81
+82
+83 -- *****
+84 -- **          END OF 8.5 MANDATORY TABLESPACES
+85 -- *****
```

- 3 Delete or comment out the Enhanced Controls tables. Enhanced Controls is not available for Oracle databases at this time.

```

+89 -- *****
+90 -- **          ***OPTIONAL***
+91 -- ** TABLESPACE CREATION FOR ENHANCED CONTROLS.
+92 -- **
+93 -- ** TABLESPACES ARE OPTIONAL IF ENHANCED CONTROLS IS NOT
+94 -- ** IMPLEMENTED (Auditing added to standard MFG/PRO)
+95 -- *****
+96
+97 -- create tablespace ATMSTR datafile
+98 -- ' /DATAFILE_LOC/atmstr01.dbf'
+99 -- size 5M autoextend on
+100 -- extent management local segment space management auto;
+101
+102 -- create tablespace ATMSTR_IDX1 datafile
+103 -- ' /DATAFILE_LOC/atmstr_idx101.dbf'
+104 -- size 5M autoextend on
+105 -- extent management local segment space management auto;

```

Fig. 5.22
Commenting Out
Enhanced Controls
Tables

- 4 All token values of DATAFILE_LOC must be replaced with a fully qualified directory where the new datafile will reside. For example, at the end of the addtablespaces.sql file, replace DATAFILE_LOC in the conv.dbf path with the location you want to use (sample path shown in boxed area of Figure 5.23).

```

+166 -- *****
+167 -- **          *****OPTIONAL CONVERSION TABLESPACE*****
+168 -- **
+169 -- ** Conversion Tablespace is used to relocate renamed source tables
+170 -- ** during the In-Place Conversion process.
+171 -- ** Refer to the Conversion documentation for additional information.
+172 -- *****
+173
+174 create tablespace CONV datafile
+175 ' $ORACLE_HOME/oradata/stgobain/conv.dbf'
+176 size 20M autoextend on
+177 extent management local segment space management auto;

```

Fig. 5.23
Modified conv.dbf
Path

- 5 Save and exit addtablespaces.sql.

Run SQL Scripts

- 1 Make sure your ORACLE_SID is set correctly in your environment. In UNIX:

```
echo $ORACLE_SID
```

Or, for Windows or UNIX, access SQL and check the value:

- a Enter the following to access SQL:

```
sqlplus qad/qad
```

- b Enter the following select statement to view the current SID:

```
select name from v$database
```

c On completion, enter `exit` to close the SQL session.

- 2** Run the first schema update script as the `sysdba` user. Enter the following, including all capitalization:

```
sqlplus "/as sysdba" < addtablespaces.sql
```

- 3** As the MFG/PRO schema owner (typically `qad`), execute each SQL script in Table 5.1 in the order listed. `XX` is the source version, and `DOMAINNAME` is the conversion domain.

Note Errors may be encountered on `XXspecdump.sql` if European Accounting is not included in your source database. They can safely be ignored.

Table 5.1
SQL Files in
Execution Order

File Name	Directory
<code>XXdropindexes.sql</code>	<code>TVInstallDir/inplace/oracle/XX</code>
<code>XXdroptables.sql</code>	<code>TVInstallDir/inplace/oracle/XX</code>
<code>XXnocopy.sql</code>	<code>TVInstallDir/inplace/oracle/XX</code>
<code>XXspecdump.sql</code>	<code>TVInstallDir/inplace/oracle/XX</code>
<code>XXrenamecols.sql</code>	<code>TVInstallDir/inplace/oracle/XX</code>
<code>XXrenametabs.sql</code>	<code>TVInstallDir/inplace/oracle/XX</code>
<code>XXmovetables.sql</code> (optional) ^a	<code>TVInstallDir/inplace/oracle/XX</code>
<code>oraempty-tblinp.sql</code>	<code>TVInstallDir/inplace/oracle</code>
<code>oadmemory-tblinp.sql</code>	<code>TVInstallDir/inplace/oracle</code>
<code>ohpempty-tblinp.sql</code>	<code>TVInstallDir/inplace/oracle</code>
<code>XXsequences.sql</code>	<code>TVInstallDir/inplace/oracle/XX</code>
<code>convdomainDOMAINNAME.sql</code>	<code>TVInstallDir/inplace/oracle/XX</code>
<code>XXnologging.sql</code>	<code>TVInstallDir/inplace/oracle/XX</code>
<code>XXinsert.sql</code>	<code>TVInstallDir/inplace/oracle/XX</code>
<code>XXlogging.sql</code>	<code>TVInstallDir/inplace/oracle/XX</code>

a. Run `XXmovetables.sql` only if you implemented the CONV section in `addtablespaces.sql`.

- 4** On completion, return to the open MFG/UTIL screen, and select Continue in the wait-for screen.

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 schema holder as oratrg. All values should default in from your prior connection.

Connect Database

Physical Name: `./db/trghold` < Files... >
 Logical Name: `oratrg`
 Database Type: `PROGRESS` [] Multiple Users
 User ID: `oratrg`
 Password:
 Trigger Location: < Files... >
 Parameter File: < Files... >

Other CONNECT Statement Parameters:

<OK> <Cancel>

Fig. 5.24
Connect to Target
Schema Holder

- 2 Choose Yes in the query to connect to the Oracle database.
- 3 Connect to the Oracle database as target.

Connect Database

Physical Name: < Files... >
 Logical Name: `target`
 Database Type: `ORACLE` [] Multiple Users
 User ID: `qad/qad`
 Password:
 Trigger Location: < Files... >
 Parameter File: < Files... >

Other CONNECT Statement Parameters:

`-c 500`

<OK> <Cancel>

Fig. 5.25
Connect to the
Oracle Target
Database

- 4 The Log Window displays the successful connection of the databases. Choose Close to continue.
- 5 The Log Window displays a second time after the system data has been deleted. Choose Close to continue.

Update qaddb_ctrl

▶ See “Enter OID Generator Code (8.5 – eB2)” on page 74.

You now create the OID generator value in the qaddb_ctrl table to enable the database for the data loads.

- 1 Connect to the target schema holder as `oratrgr`.
- 2 Choose Yes in the query to connect to the Oracle database.
- 3 Connect to the Oracle database as `target`.
- 4 The Log Window displays the successful connection of the databases. Choose Close to continue.
- 5 The Log Window displays again as the OID generator value is created in the target database.

Fig. 5.26
qaddb_ctrl OID
Generator Code
Update

```
08/22/05 @ 12:11:53 - Running program oidseed.p.
08/22/05 @ 12:12:44 - Converting to ./db/trghold
08/22/05 @ 12:12:48 - User root connected to Oracle target db.
08/22/05 @ 12:12:48 - Target database ./db/trghold is version 92b 08/22/05 @
12:13:35 - Creating qaddb_ctrl record.
08/22/05 @ 12:13:39 - OID Generator Code 9980 assigned in qaddb_ctrl record.

Press CLOSE to continue.
```

< Close >

- 6 Choose Close. A wait-for screen displays.

Run SQL to Reset Domain

The domain value must be reset prior to data loads.

- 1 The MFG/UTIL workflow displays a wait-for screen at this point, to let you run the domain update.

Fig. 5.27
Domain Update
Wait-For

```
Guided Setup - Wait For SQL Schema Update

Run SQL to reset domain initial value

<Continue> < Cancel >
```

- 2 Open a separate command window and navigate to `TVInstallDir/inplace/oracle/xx` where `xx` is your source version.

- 3 To run the domain update script, enter the following, including all capitalization:

```
sqlplus qad/qad < defaultdomain.sql
```
- 4 On completion, return to the open MFG/UTIL screen, and select Continue in the wait-for screen.

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 Connect to the target schema holder as `oratrg`.
- 2 Choose Yes in the query to connect to the Oracle database.
- 3 Connect to the Oracle database as `target`.
- 4 The Log Window displays the successful connection of the databases. Choose Close to continue.
- 5 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.

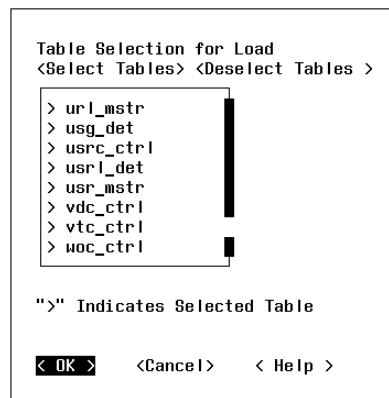


Fig. 5.28
Table Selection for
Load Screen

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

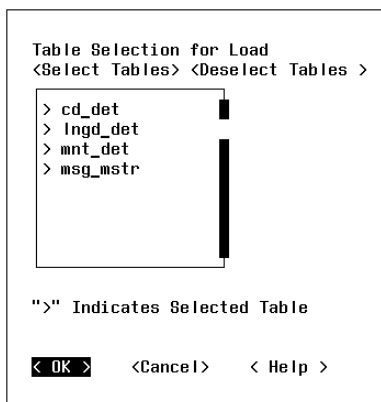
- 7 When the load completes, choose Close to continue.

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. (This only occurs if you manually modified the workflow .ini file as described in the *MFG/PRO eB2.1 Installation Guide: Oracle Database*.)
- 5 Choose Close. A wait-for screen displays.

Run SQL to 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 MFG/UTIL workflow displays a wait-for screen at this point, to allow you to run the index rebuild scripts.

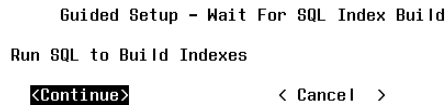


Fig. 5.30
Index Rebuild
Wait-For

- 2 Open a separate command window and navigate to *TVInstallDir/db*.
- 3 To run the first index rebuild script, enter the following, including all capitalization:
`sqlplus qad/qad < oraempty-idxinp.sql`
- 4 Repeat step 3 for the following SQL files in the following order:

File Name	Directory
oadmemory-idxinp.sql	<i>TVInstallDir</i> /inplace/oracle
ohpempty-idxinp.sql	<i>TVInstallDir</i> /inplace/oracle

Table 5.2
Index Update SQL
Scripts

- 5 On completion, return to the open MFG/UTIL screen and choose Continue in the wait-for screen.

Load the Domain Master

The domain master is updated in the next step.

- 1 Connect to the target schema holder as `oratrg`.
- 2 Choose Yes in the query to connect to the Oracle database.
- 3 Connect to the Oracle database as `target`.
- 4 The Log Window displays the load progress.

Fig. 5.31
Domain Master
Load

```

08/22/05 @ 14:21:46 - Voucher History Conversion
08/22/05 @ 14:22:45 - Converting to ./db/trghold
08/22/05 @ 14:22:50 - User root connected to Oracle target db.
08/22/05 @ 14:22:50 - Target database ./db/trghold is version 92b 08/22/05 @
14:22:52 - Domain Master Loaded.

Press CLOSE to continue.

```

< Close >

- 5 Choose Close to continue.

Convert the Database

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

- 1 Connect to the target schema holder as ora trg.
- 2 Choose Yes in the query to connect to the Oracle database.
- 3 Connect to the Oracle database as target.
- 4 The Log Window displays the conversion progress.

Fig. 5.32
Conversion Log

```

08/23/05 @ 11:38:18 - wr_route - 20000 records.
08/23/05 @ 11:38:49 - wr_route - 30000 records.
08/23/05 @ 11:39:20 - wr_route - 39957 records.
08/23/05 @ 11:39:20 - Processing Table: wtx_mstr
08/23/05 @ 11:39:20 - using conversion program: oidpop.p
08/23/05 @ 11:39:22 - Conversion Complete.

Press CLOSE to continue.

```

< Close >

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

- 6 For source versions 90 through eB2, admin tables may have been dumped during the special dump process. To ensure special dumped admin data is reloaded, run `admconv.p` from MFG/UTIL.
 - a In MFG/UTIL, select File|Progress Editor.
 - b From the Progress Editor, execute:

```
run admconv.p
```
 - c Connect to the target schema holder, `trghold`.
 - d Choose Yes to connect to the Oracle database.
 - e Once Oracle is connected, the specially dumped admin data is loaded.
 - f When the program is done, exit the Progress editor.
- 7 Remaining admin and language-specific admin data must be loaded into the converted database.
 - a In MFG/UTIL, select Database|Load System Data into the Database.
 - b Connect to the target schema holder, `trghold`.
 - c Choose Yes to connect to the Oracle database.
 - d Load the data from `./us/admin`.
 - e Load the data from `./admin`.
 - f You can exit MFG/UTIL at this point.
- 8 You now update the `count_return` procedure by running `lvorasp.plb`. This routine is located in `TVInstallDir/db`, and must be executed as the MFG/PRO schema owner (typically qad):

```
sqlplus qad/qad < lvorasp.plb
```
- 9 The initial client startup for the newly converted database requires new MFG/PRO license codes. Edit the current license display with eB2.1 license codes supplied with the MFG/PRO media. Previous MFG/PRO license codes will not be valid in the eB2.1 release.

- 10 Once the conversion is complete, the tables renamed and/or moved may safely be removed from the database. You run one of two scripts depending on whether you created the optional CONV tablespace in `addtablespaces.sql`. Both scripts are located in *TVInstallDir*/inplace/oracle/XX, where XX is your source version.

If the CONV tablespace was created, run:

```
sqlplus qad/qad < dropconvtablespace.sql
```

This script drops the CONV tablespace including contents and datafiles.

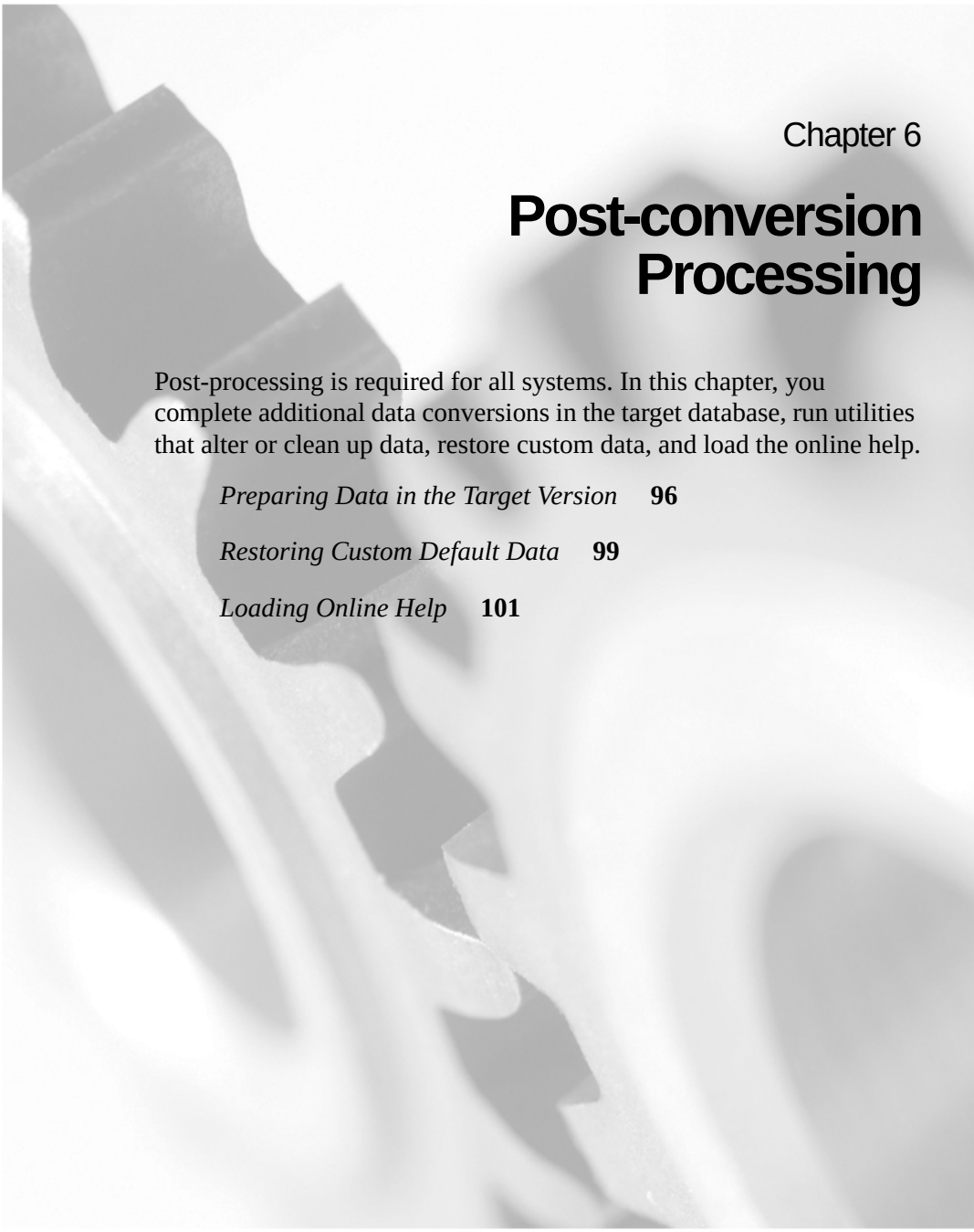
If the CONV tablespace was not created, run:

```
sqlplus qad/qad < xxdroprenametabs.sql
```

This script will drop all previously renamed source tables from the database.

Convert Additional Databases

Repeat these steps starting with “Running the Conversion” on page 68 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 **96**

Restoring Custom Default Data **99**

Loading Online Help **101**

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 OE10 installation directory.
- Log in to MFG/PRO eB2.1 as `mfg`.
- Launch a client session using the target version client startup script:
`client.Production`

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.

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.

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

▶ See *User Guide Volume 9: Manager Functions*.

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.

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 – eB2)

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)

mgdlfhmt.p 2+ 36.20.1 Drill Down/Lookup Maintenance 10/07/03	
Drill Down/Lookup: Drill Down Field Name: Calling Procedure: 1.4.1 Procedure To Execute: xxit091.p	
Language: US Term: CUSTOM_ITEM_DRILL-DOWN Long Label: <u>custom item drill down</u> Medium Label: <u>cstmItemDrillDown</u> Short Label: <u>CstItems</u> Stacked Label: <u>cust!item</u> Description: _____	

- 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)

mgusmt.p b+ 36.20.6 Menu Substitution Maintenance 10/07/03	
Execution File: 1.5.5	
New Execution File: <u>xxit091.p</u> Selection Label Term: _____	

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

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

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

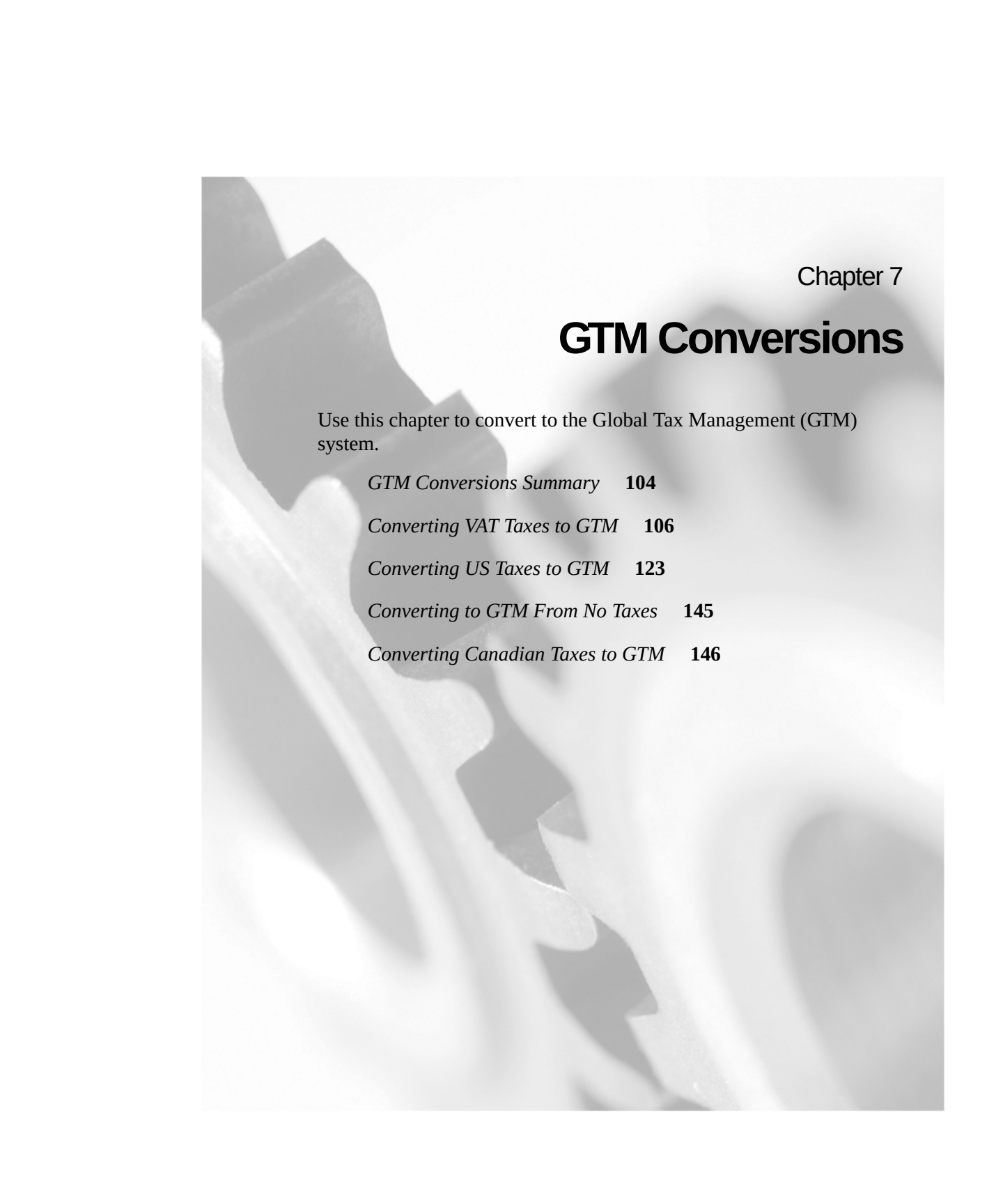
- 4 Accept the default value in the following field:
Skip loading help with lower status: yes
- 5 Press Go to begin the load process. As the load proceeds, the number of records read and loaded displays on the screen.
- 6 To implement multiple languages, repeat the preceding steps for each language. In step 3, specify the `fieldhlp.fhd` help file found in 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.

The background of the page features a grayscale image of several interlocking gears. The gears are of different sizes and are positioned in a way that creates a sense of depth and mechanical complexity. The lighting is soft, highlighting the teeth of the gears and creating subtle shadows.

Chapter 7

GTM Conversions

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

GTM Conversions Summary **104**

Converting VAT Taxes to GTM **106**

Converting US Taxes to GTM **123**

Converting to GTM From No Taxes **145**

Converting Canadian Taxes to GTM **146**

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 145.

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.

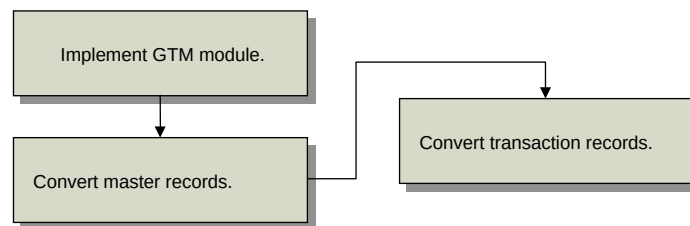
- Effective Date for Tax Reports

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 107.

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 113.

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 117.

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.

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)

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

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.

Class file for
custom Tax Class
and Tax Usage
codes

txvatcnv.p b+
2.13.22.1 VAT to GTM - Setup
05/09/00

Delete Previous GTM: no

Convert VAT Masters: no

Country Code:

Union Code: EU (blank to use country code combinations)

Last Tax Code: EU000000

Generated Separator: =

Class File:

Display Status: no

From union country	To same union country	Taxable: <u>yes</u>
	To different union country	Taxable: <u>no</u>
	To non-union country	Taxable: <u>no</u>
From non-union country	To same non-union country	Taxable: <u>no</u>
	To different non-union country	Taxable: <u>no</u>
	To union country	Taxable: <u>no</u>
		Output: <u> </u>
		Batch ID: <u> </u>

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.

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.

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

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 109).
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.

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

Table 7.5
Updates to GTM
Control Settings

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)

```

txvatcnv.p b+          2.13.22.1 VAT to GTM - Setup          05/09/00
Delete Previous GTM: no_
Convert VAT Masters: no_

Country Code: _____
Union Code: EU_ (blank to use country code combinations)
Last Tax Code: EU000000
Generated Separator: =
Class File: _____
Display Status: no_

From union country      To same union country      Taxable: yes_
                        To different union country      Taxable: no_
                        To non-union country            Taxable: no_
From non-union country  To same non-union country  Taxable: no_
                        To different non-union country  Taxable: no_
                        To union country                Taxable: no_

Output:
Batch ID:

```

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.

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.

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.

Tip

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

♦ See “Defining Custom Tax Class and Usage Codes” on page 109.

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
- Trailing codes
- Customers
- Service categories
- Product lines
- Service agreement terms
- Items

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)

txvatmst.p b+		2.13.22.2 VAT to GTM - Masters		05/09/00	
	All	From:		To:	
Suppliers:	no	_____		_____	
Customers:	no	_____		_____	
Countries For Addresses:	no	_____		_____	
Zones For Addresses:	no	_____		_____	
Product Lines:	no	_____		_____	
Items:	no	_____		_____	
Trailer Codes:	no	_____		_____	
Service Categories:	no	_____		_____	
Service Agreement Terms:	no	_____		_____	
Class File:	_____				
Display Status:	no			Output:	
				Batch ID:	

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 109.

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.

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.

Table 7.6
Troubleshooting
the Master
Conversion

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 (xxxxxxx).	GTM tax usage in the class file is longer than eight characters. Message shows the first eight characters.
Tax usage does not exist (xxxxxxx).	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 xxxxxxx).	GTM tax class and tax usage combination occurs in multiple places in the class file.

Note x, xxx, and xxxxxxx 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, <code>txvatvd.p</code> sets <code>ad_taxable</code> from <code>vd_taxable</code> . It also sets <code>ad_taxc</code> and <code>ad_tax_usage</code> from <code>ad_taxc</code> or from the class file with AP usage if any. In customer records, <code>txvatcm.p</code> sets <code>ad_taxable</code> from <code>cm_taxable</code> and <code>ad_tax_in</code> from <code>cm_tax_in</code> . It also sets <code>cm_taxc</code> , <code>ad_taxc</code> , and <code>ad_tax_usage</code> from <code>cm_taxc</code> and from the class file with AR tax usage if any. In all address records, <code>txvatct.p</code> sets <code>ad_ctry</code> from <code>ad_country</code> and vice versa. <code>txvatzn.p</code> calls <code>txtxzget.p</code> to set <code>ad_tax_zone</code> .
fsc_mstr	<code>txvatfsc.p</code> sets <code>fsc_taxc</code> from <code>fsc_taxc</code> or from the AR tax usage if any.
pl_mstr	<code>txvatpl.p</code> sets <code>pl_taxc</code> from <code>pl_taxc</code> or from the class file if any.
pt_mstr	<code>txvatpt.p</code> sets <code>pt_taxc</code> from <code>pt_taxc</code> or from the class file if any.
sv_mstr	<code>txvatsv.p</code> sets <code>sv_taxc</code> from <code>sv_taxc</code> or from the class file with AR tax usage if any.
trl_mstr	<code>txvattrl.p</code> sets <code>trl_taxc</code> from <code>trl_taxc</code> 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).

txvattn.p b+ 2.13.22.3 VAT to GTM - Transactions 05/09/00

	All	From:	To:
Purchasing:	no		
AP Vouchers:	no		
AP Payments:	no		
Service Contracts:	no		
Service Calls:	no		
RMA Orders:	no		
Sales Quotes:	no		
Sales Orders:	no		
AR Memos:	no		
AR Invoices:	no		
AR Payments:	no		
Class File:			
Display Status:	no		Output: Batch ID:

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 109.

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	
	CA127	1	Item	Before	No	0	1-P-MFG GER-NE
				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.

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.

Table 7.8
Troubleshooting the Transaction Conversion

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, AP
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.

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	–	–	–

Table 7.12
VAT to GTM, AR
Invoices

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

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	–	–	–

Table 7.13
VAT to GTM, AR
DR/CR Memos

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

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	txvatpsc.p sets sad_taxc and sad_tax_usage from sad_taxc or from the class file with AR usage if any. txvatpsc.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.

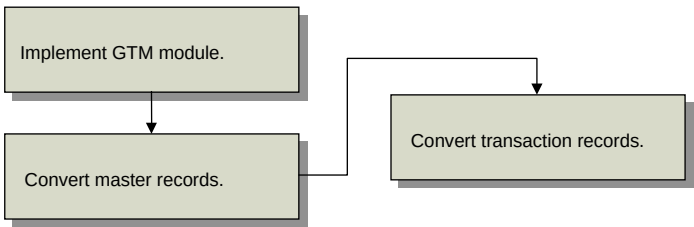


Fig. 7.10
USA to GTM
Conversion Process

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 124.
- 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 135.
- 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 138.

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)

```

txusacnv.p b+          2.13.22.5 USA to GTM - Setup          05/09/00

Delete Previous GTM: no_
Convert Tax Masters: no_

Country Code: usa
Last Tax Code: usa000000
Generated Separator: -
Class File: _____

State File: _____
County File: _____
City File: _____
Display Status: no_      Maximum Sum 12 15      Output:
                                           Batch ID:

Code Generation Rules
One Word  Word 1  Word 2
Sep/NoSep Sep/NoSep Sep/NoSep
  2    2    2    0    0
  4    5    2    3    2
  6    8    3    4    4
  
```

Used to generate
codes for Tax
Types, Tax
Zones, and Tax
Environments

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.

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).

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

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.

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

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

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 127.

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 NorthHoll 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)

txusacnv.p b+ 2.13.22.5 USA to GTM - Setup 05/09/00

Delete Previous GTM:	no
Convert Tax Masters:	no
Country Code:	usa
Last Tax Code:	usa00000
Generated Separator:	=
Class File:	
State File:	
County File:	
City File:	
Display Status:	no
Maximum Sum	12 15
Code Generation Rules	
One Word	Word 1 Word 2
Sep/NoSep	Sep/NoSep Sep/NoSep
2 2 2 2 0 0	
4 5 2 3 2 2	
6 8 3 4 3 4	
Output:	
Batch ID:	

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.

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" " " "
```

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

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 132.

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.

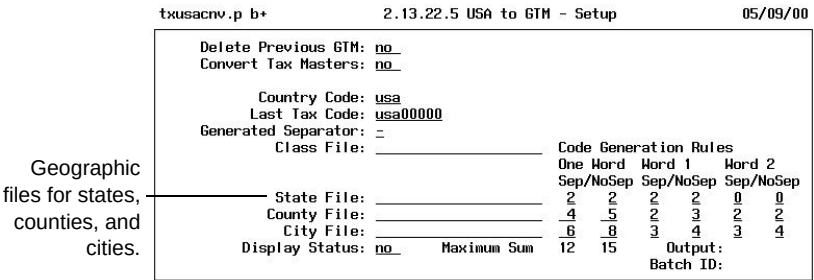


Fig. 7.13
State, County, and City Files in USA to GTM-Setup (2.13.22.5)

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.

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)

Table 7.19
Updates to GTM
Control Settings

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)

txusacnv.p b+		2.13.22.5 USA to GTM - Setup		05/09/00	
Delete Previous GTM:	no				
Convert Tax Masters:	no				
Country Code:	usa				
Last Tax Code:	usa00000				
Generated Separator:	-				
Class File:					
State File:					
County File:					
City File:					
Display Status:	no				
		Code Generation Rules			
		One Word	Word 1	Word 2	
		Sep/NoSep	Sep/NoSep	Sep/NoSep	
		2	2	2	0
		4	5	2	2
		6	8	3	4
		Maximum Sum	12	15	
		Output:			
		Batch ID:			

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 126.

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

▶ See page 127.

See page 124.

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										
State	County	City	Effective	Tax	Tax	Tax	Trl	Tax	Zone	Sums-Into 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.

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.

Table 7.20
Troubleshooting
the GTM Setup

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

txusamst.p b+ 2.13.22.6 USA to GTM - Masters 05/09/00

	All	From:	To:
Suppliers:	<u>no</u>		
Customers:	<u>no</u>		
Countries For Addresses:	<u>no</u>		
Zones For Addresses:	<u>no</u>		
Product Lines:	<u>no</u>		
Items:	<u>no</u>		
Trailer Codes:	<u>no</u>		
Service Categories:	<u>no</u>		
Service Agreement Terms:	<u>no</u>		
Class File:			
Display Status:	<u>no</u>		Output: Batch ID:

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 126.

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.

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.	

Table 7.22
Troubleshooting
the Master
Conversion

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.

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

See “Defining Custom Tax Exemption Codes” on page 126.

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.

Table 7.23
Changes to Master
Records

Tables	Summary of Changes
sv_mstr	txusa <code>sv</code> .p sets sv_taxc and sv_tax_usage from sv_taxc or from the AR class file, if any.
trl_mstr	txusat <code>trl</code> .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)

txusatrn.p b+		2.13.22.7 USA to GTM - Transactions		05/09/00	
	All	From:		To:	
Purchasing:	<u>no</u>				
AP Vouchers:	<u>no</u>				
AP Payments:	<u>no</u>				
Service Contracts:	<u>no</u>				
Service Calls:	<u>no</u>				
RMA Orders:	<u>no</u>				
Sales Quotes:	<u>no</u>				
Sales Orders:	<u>no</u>				
AR Memos:	<u>no</u>				
AR Invoices:	<u>no</u>				
AR Payments:	<u>no</u>				
Class File:					
Display Status:	<u>no</u>			Output:	
				Batch ID:	

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.

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.

Tip

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

▶ See “Defining Custom Tax Exemption Codes” on page 126.

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				
		1	Before	Yes	B			NJ-TRENT	
			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			
	CA127	1	Item	Before	No	1	1-P-MFG	NJ-TRENT	
				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.

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

Table 7.25
USA to GTM,
Purchasing
Transactions

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

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	—	—	—	—	—

Table 7.26
USA to GTM, AP
Voucher Receiver
Lines

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 126.

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

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

Table 7.30
Changes to
Transaction
Records

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

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 123 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 124, 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 135, 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

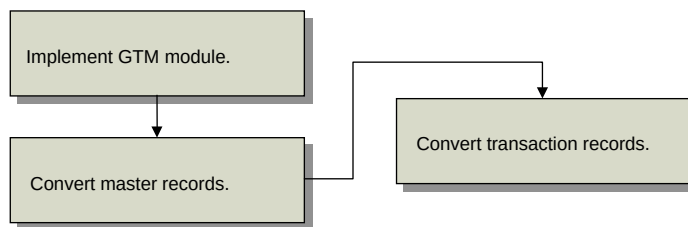
- Global Tax Management Control (2.13.24). Enter the default tax zone and tax environment. Set Tax Zone to the zone created for your country and set Tax Environment to non - tax.

Continue on with “USA to GTM–Masters” on page 135 and “USA to GTM–Transactions” on page 138.

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 147.

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

◆ See page 158.

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 162.

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.

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)

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

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.

txcancnv.p b+2.13.22.9 CAN to GTM - Setup05/09/00

Delete Previous GTM: no
Convert Tax Masters: no

Country Code: usa
Last Tax Code: usa00000
Generated Separator: -
Class File:

Province File:
County File:
City File:
Display Status: no

Maximum Sum

Code Generation Rules

One	Word	Word 1	Word 2
Sep/NoSep	Sep/NoSep	Sep/NoSep	Sep/NoSep
3	3	3	0
4	4	2	2
7	9	4	5
14	16		3

Output:
Batch ID:

Used to generate codes for Tax Types, Tax Zones, and Tax Environments

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.

txcancnv.p b+2.13.22.9 CAN to GTM - Setup05/09/00

Delete Previous GTM: no
Convert Tax Masters: no

Country Code: usa
Last Tax Code: usa000000
Generated Separator: =

Class File:

Province File:
County File:
City File:
Display Status: noMaximum Sum1416

Code Generation Rules
One WordWord 1Word 2
Sep/NoSepSep/NoSepSep/NoSep
333300
442222
794534

Output:
Batch ID:

Class file for custom Tax Class and Tax Usage codes

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

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)

Geographic files for provinces, counties, and cities

txcancnv.p b+2.13.22.9 CAN to GTM - Setup05/09/00

Delete Previous GTM: no
Convert Tax Masters: no

Country Code: usa
Last Tax Code: usa00000
Generated Separator: -
Class File:

Province File:
County File:
City File:
Display Status: noMaximum Sum

Code Generation Rules

One Word	Word 1	Word 2
Sep/NoSep	Sep/NoSep	Sep/NoSep
3	3	0
4	2	2
7	4	5
14	16	

Output:
Batch ID:

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”

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

“MANI” “MB”
“QUE” “QB”

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

Processing Logic

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

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 150.

Table 7.33
New GTM Records

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.

txcancnv.p b+ 2.13.22.9 CAN to GTM - Setup 05/09/00

Delete Previous GTM: no

Convert Tax Masters: no

Country Code: usa

Last Tax Code: usa00000

Generated Separator: =

Class File: _____

Province File: _____

County File: _____

City File: _____

Display Status: no

Code Generation Rules

One Word	Word 1	Word 2
Sep/NoSep	Sep/NoSep	Sep/NoSep
3 3	3 3	0 0
4 4	2 2	2 2
7 9	4 5	3 4
Maximum Sum	14 16	Output:
		Batch ID:

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 149.

Province, County, City File. To override default code generation rules, specify specific values for geographic locations in an ASCII file. ▶ See page 150.

Code Generation Rules. Enter appropriate values for your organization. ▶ See page 147.

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							
Province	County	City	Effective	Tax	On GST	Tax Zone	Sums-Into 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.

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.

Table 7.35
Troubleshooting
the GTM Setup

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.

Tables	Summary of Changes
ad_mstr	<code>txcantax.p</code> creates one ~taxes record for the database. It also scans <code>si_mstr</code> and creates an address record for any company site that does not already have one.
code_mstr	For each <code>vt_mstr</code> record, <code>txcantax.p</code> 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 <code>vt_mstr</code> and each PST rate in <code>tax_mstr</code> , <code>txcantax.p</code> 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, <code>txcantax.p</code> creates a tax environment and assigns it the tax types associated with the tax zone.
ctry_mstr	<code>txcantax.p</code> creates a record for the default country code specified in the selection data.
ls_mstr	<code>txcantax.p</code> creates <code>ls_mstr</code> record for each new <code>ad_mstr</code> record, if any.

Table 7.36
Changes to GTM
Records

Tables	Summary of Changes
tx2_mstr	For each vt_mstr record, <code>txcantax.p</code> creates a tax rate for GST only and GST + PST. For each tax_mstr record, <code>txcantax.p</code> 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 <code>txtx2_nt.i</code> to create a non-taxable tax rate and <code>txtxmeth.i</code> to create tax method 01.
txc_ctrl	<code>txcantax.p</code> sets <code>txc_etry_code</code> and <code>txc_tax_code</code> from the selection data. It sets <code>txc_method</code> to 01, <code>txc_by_line</code> to Yes, <code>txc_inv_disc</code> and <code>txc_pmt_disc</code> to No, and <code>txc_rcpt_tax_point</code> to Yes.
txbd_det	<code>txcantax.p</code> creates a tax base record for PST + GST.
txe_mstr	<code>txcantax.p</code> creates tax environment zone detail records for every tax environment code it generates for code_mstr.
txed_det	<code>txcantax.p</code> creates tax environment tax type detail records for every tax environment code it generates for code_mstr.
txz_mstr	<code>txcantax.p</code> 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
- Trailer codes
- Customers
- Service categories
- Product lines
- Service agreement terms
- Items

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)

txcanmst.p b+ 2.13.22.10 CAN to GTM - Masters 05/09/00

	All	From:	To:
Suppliers:	<u>no</u>	_____	_____
Customers:	<u>no</u>	_____	_____
Countries For Addresses:	<u>no</u>	_____	_____
Zones For Addresses:	<u>no</u>	_____	_____
Product Lines:	<u>no</u>	_____	_____
Items:	<u>no</u>	_____	_____
Trailer Codes:	<u>no</u>	_____	_____
Service Categories:	<u>no</u>	_____	_____
Service Agreement Terms:	<u>no</u>	_____	_____
Class File:	_____		
Display Status:	<u>no</u>		Output: Batch ID:

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 149.

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 147.

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, <code>txcanvd.p</code> sets <code>ad_taxable</code> from <code>vd_taxable</code>. It also sets <code>ad_taxc</code> and <code>ad_tax_usage</code> from <code>ad_taxc</code> or from the class file, if any. If <code>vd_taxable</code> is No, <code>ad_taxc</code> is GST only; otherwise, GST + PST. In customer records, <code>txcancm.p</code> sets <code>ad_taxable</code> from <code>cm_taxable</code> and <code>ad_tax_in</code> from <code>cm_tax_in</code>. It also sets <code>cm_taxc</code> and <code>ad_tax_usage</code> from <code>cm_taxc</code> or from the class file, if any. If <code>cm_pst</code> is No, the tax class is GST only; otherwise, GST + PST. In all address records, <code>txcanct.p</code> sets <code>ad_ctry</code> from <code>ad_country</code> and visa versa. <code>txcanzn.p</code> calls <code>txtxzget.p</code> to set <code>ad_tax_zone</code>.
fsc_mstr	<code>txcanfsc.p</code> sets <code>fsc_taxc</code> from <code>fsc_taxc</code> or from the class file if any. Tax class is set to GST only.
pl_mstr	<code>txcanpl.p</code> sets <code>pl_taxc</code> from <code>pl_taxc</code> or from the class file, if any. If <code>pl_pst</code> is No, the tax class is GST only; if it is Yes, to GST + PST.
pt_mstr	<code>txcanpt.p</code> sets <code>pt_taxc</code> from <code>pt_taxc</code> or from the class file, if any. Tax class is set to GST only.
sv_mstr	<code>txcansv.p</code> sets <code>sv_taxc</code> and <code>sv_tax_usage</code> from <code>sv_taxc</code> or from the class file, if any. Tax class is set to GST only.
trl_mstr	<code>txcantrl.p</code> sets <code>trl_taxc</code> from <code>trl_taxc</code> or from the class file, if any. It also sets <code>trl_taxable</code> to Yes. If <code>trl_pst</code> 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.

txcantrn.p b+ 2.13.22.11 CAN to GTM - Transactions 05/09/00

	All	From:	To:
Purchasing:	no	_____	_____
AP Vouchers:	no	_____	_____
AP Payments:	no	_____	_____
Service Contracts:	no	_____	_____
Service Calls:	no	_____	_____
RMA Orders:	no	_____	_____
Sales Quotes:	no	_____	_____
Sales Orders:	no	_____	_____
AR Memos:	no	_____	_____
AR Invoices:	no	_____	_____
AR Payments:	no	_____	_____
Class File:	_____		
Display Status:	no		Output: Batch ID:

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.

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.

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

See “Defining Custom Tax Class and Tax Usage Codes” on page 149.

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	V0	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										
Call ID	Call/SR	Cust	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.

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.

Table 7.39
Troubleshooting
the Transaction
Conversion

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.

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	–	–	–

Table 7.43

CAN to GTM, AR Invoices

a. Blank for PST.

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

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	–	–	–

Table 7.44

CAN to GTM, AR DR/CR Memos

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 `txcant rn.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 149.

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, <code>txcanarm.p</code> sets <code>ard_tax</code> and <code>ard_tax_at</code> . It also sets <code>ard_taxc</code> (GST only), <code>ard_tax_usage</code> , and <code>ard_tax_at</code> .
ar_mstr	For debit/credit memos, <code>txcanarm.p</code> sets <code>ar_tax_env</code> .
ca_mstr	<code>txcanca.p</code> sets <code>ca_taxc</code> and <code>ca_tax_usage</code> from <code>ca_taxc</code> or from the class file, if any. If <code>cm_pst</code> is No, <code>ca_taxc</code> is GST only; otherwise, it is GST + PST. It also sets <code>ca_tax_env</code> using <code>txtxeget.p</code> .
idh_hist	<code>txcanari.p</code> sets <code>idh_taxc</code> and <code>idh_tax_usage</code> from <code>idh_taxc</code> or from the class file, if any. It sets <code>idh_taxable</code> to Yes. If <code>idh_pst</code> is No, <code>idh_taxc</code> is GST only; otherwise, it is GST + PST. It also sets <code>idh_tax_env</code> using <code>txtxeget.p</code> .
ih_hist	<code>txcanari.p</code> sets <code>ih_taxable</code> to Yes and <code>ih_pst_pct</code> to 0. It sets <code>ih_taxc</code> (GST only) and <code>ih_tax_usage</code> from <code>ih_taxc</code> or from the class file, if any. It also sets <code>ih_tax_env</code> using <code>txtxeget.p</code> .
itm_det	<code>txcanca.p</code> sets <code>itm_taxc</code> (GST + PST) and <code>itm_tax_usage</code> from <code>itm_taxc</code> or from the class file, if any. It sets <code>itm_taxable</code> to Yes. It also sets <code>itm_tax_env</code> using <code>txtxeget.p</code> .
pod_det	<code>txcanpo.p</code> sets <code>pod_taxable</code> to Yes and <code>pod_tax_env</code> using <code>txtxeget.p</code> . If <code>pod_pst</code> is No, then <code>pod_taxc</code> is 0; otherwise, <code>pod_taxc</code> is 0P.
po_mstr	<code>txcanpo.p</code> sets <code>po_tax_pct[1]</code> , <code>po_tax_pct[2]</code> , and <code>po_tax_pct[3]</code> to 0. It sets <code>po_taxable</code> to Yes. It sets <code>po_taxc</code> and <code>po_tax_usage</code> from the <code>ad_taxc</code> value for the corresponding supplier. It also sets <code>po_tax_env</code> using <code>txtxeget.p</code> .

Table 7.45 — Changes to Transaction Records — (Page 1 of 3)

Tables	Summary of Changes
prh_hist	<code>txcanpo.p</code> sets <code>prh_taxc</code> from <code>pod_taxc</code> , <code>prh_tax_usage</code> from <code>pod_tax_usage</code> , and <code>prh_tax_env</code> from <code>pod_tax_env</code> . Since <code>po_taxable</code> is Yes, it sets <code>prh_tax_at</code> to Yes.
qod_det	<code>txcanqo.p</code> sets <code>qod_taxable</code> to Yes. It sets <code>qod_taxc</code> and <code>qod_tax_usage</code> from <code>qod_taxc</code> or from the class file, if any. It sets <code>qod_taxable</code> to Yes. If <code>qod_pst</code> is No, tax class is GST only; otherwise, it is GST + PST. It also sets <code>qod_tax_env</code> using <code>txtxeget.p</code> .
qo_mstr	<code>txcanqo.p</code> sets <code>qo_tax_pct[1]</code> , <code>qo_tax_pct[2]</code> , and <code>qo_tax_pct[3]</code> to 0. It sets <code>qo_taxable</code> to Yes and <code>qo_pst_pct</code> to 0. It sets <code>qo_taxc</code> and <code>qo_tax_usage</code> from <code>qo_taxc</code> or from the class file, if any. If <code>cm_pst</code> is No, tax class is GST only; otherwise, it is GST + PST. It also sets <code>qo_tax_env</code> using <code>txtxeget.p</code> .
rma_mstr	<code>txcanrma.p</code> sets <code>rma_taxc</code> from <code>rma_taxc</code> or from the class file, if any. It sets <code>rma_taxable</code> to Yes. If <code>cm_pst</code> is No, tax class is GST only; otherwise, it is GST + PST.
sad_det	<code>txcansc.p</code> sets <code>sad_taxc</code> and <code>sad_tax_usage</code> from <code>sad_taxc</code> or from the class file, if any. It sets <code>sad_taxable</code> to Yes. If <code>sad_pst</code> is No or <code>sa_prefix</code> is QA, tax class is GST only; otherwise, it is GST + PST. It also sets <code>sad_tax_env</code> from <code>sa_site</code> and <code>sa_taxc</code> using <code>txtxeget.p</code> .
sa_mstr	<code>txcansc.p</code> sets <code>sa_tax_pct[1]</code> , <code>sa_tax_pct[2]</code> , and <code>sa_tax_pct[3]</code> to 0. It sets <code>sa_taxable</code> to Yes and <code>sa_can_tax</code> to 0. It sets <code>sa_taxc</code> and <code>sa_tax_usage</code> from <code>sa_taxc</code> or from the class file, if any. If <code>cm_pst</code> is No, tax class is GST only; otherwise, it is GST + PST. It also sets <code>sa_tax_env</code> using <code>txtxeget.p</code> .
sfb_det	<code>txcanca.p</code> sets <code>sfb_taxc</code> from <code>itm_taxc</code> and <code>sfb_tax_usage</code> from <code>itm_tax_usage</code> . It sets <code>sfb_taxable</code> to Yes. It also sets <code>sfb_tax_env</code> using <code>txtxeget.p</code> .
sod_det	<code>txcanso.p</code> sets <code>sod_taxc</code> and <code>sod_tax_usage</code> from <code>sod_taxc</code> or from the class file if any. It sets <code>sod_taxable</code> to Yes. If <code>sod_pst</code> is No, tax class is GST only; otherwise, it is GST + PST. It also sets <code>sod_tax_env</code> using <code>txtxeget.p</code> .
so_mstr	<code>txcanso.p</code> sets <code>so_taxable</code> to Yes and <code>so_pst_pct</code> to 0. It sets <code>so_tax_pct[1]</code> , <code>so_tax_pct[2]</code> , and <code>so_tax_pct[3]</code> to 0. It sets <code>so_taxc</code> and <code>so_tax_usage</code> from <code>so_taxc</code> or from the class file, if any. If <code>cm_pst</code> is No, tax class is GST only; otherwise, it is GST + PST. It also sets <code>so_tax_env</code> using <code>txtxeget.p</code> .

Table 7.45 — Changes to Transaction Records — (Page 2 of 3)

Tables	Summary of Changes
tx2d_det	<code>txcanpo.p</code> creates tax details for purchase orders (GTM transaction type 20), receivers (21), reconciliations (23), and returns (25). <code>txcanapv.p</code> creates tax details for vouchers (22) and recurring vouchers (32). <code>txcanapp.p</code> creates tax details for accounts payable tax on discount at payment (29). <code>txcanqo.p</code> creates tax details for sales quotes (10). <code>txcanso.p</code> creates tax details for invoiced service calls (38), return material authorizations (36), sales orders (11), and pending invoices (13). <code>txcanarm.p</code> creates tax details for debit/credit memos (18). <code>txcanari.p</code> creates tax details for invoices (16). <code>txcanarp.p</code> creates tax details for accounts receivable tax on discount at payment (19). <code>txcansc.p</code> creates tax details for service quotes (33) and service contracts (34).
vod_det	<code>txcanapv.p</code> sets <code>vod_taxable</code> to Yes. It sets <code>vod_taxc</code> (GST only) and <code>vod_tax_usage</code> from <code>vod_tax_at</code>. It sets <code>vod_tax</code>, <code>vod_tax_at</code>, and <code>vod_type</code>. It also sets <code>vod_tax_env</code> using <code>txtxeget.p</code>.
vo_mstr	For vouchers, <code>txcanapv.p</code> sets <code>vo_tax_pct[1]</code>, <code>vo_tax_pct[2]</code>, and <code>vo_tax_pct[3]</code> to 0. It sets <code>vo_taxable</code>, <code>vo_taxc</code>, and <code>vo_tax_usage</code>. It also sets <code>vo_tax_env</code> using <code>txtxeget.p</code>.

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.

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Loading Enhanced Depreciation Methods **172**

Running the Migration Utility **173**

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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.

```

facvmt.p b+      32.25.2 Fixed Assets Migration Utility      06/12/00

  Input File Name: /qad/mfgapro/eB/conv/dumpdir/fa_dump.dat
  Output File Name: fa_mgnt.dat
  Default Location:
  Default Class:
  Migrate Retired Assets: No

  Method Conversion Completed: No
  Book Conversion Completed: No
  Location Conversion Completed: No
  Class Conversion Completed: No
  Create Date: 05/15/2000

  <Update> <Master> <Create> < Save > < End >
  
```

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.

```

facvmt.p b+      32.25.2 Fixed Assets Migration Utility      06/12/00

  Input File Name: /nad/mfgpro/eB/conv/dumpdir/fa_dump.dat
  Output File Name: fa_mgrt.dat
  Default Location:
  Default Class:
  Migrate Retired Assets: No

  Method Conversion Completed: No
  Book Conversion Completed: No
  Location Conversion Completed: No
  Class Conversion Completed: No
  Create Date: 05/15/2000

  <Update> <Master> <Create> < Save > < End >

```

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.
- 5 In the Default Class field, enter a default legacy class ID.
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.

For details, see
User Guide
Volume 4B:
Financials.

For details, see
User Guide
Volume 4B:
Financials.

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

Master Files Migration	
Method Conversion Completed:	no
Book Conversion Completed:	no
Location Conversion Completed:	no
Class Conversion Completed:	no

<Method> <Book> <Loc> <Class> <End>

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.

```

facvmt.p b+          32.25.2 Fixed Assets Migration Utility          06/12/00
----- Method Migration -----
Method: DB      Declining Balance      Conv: Full-Month
((abd_db_pct / 100) * (1 / abd_life_yr)) * (abd_curr_cost - abd_udec4).

Error Code: ID err
Completed: no
Depreciation Type: 3
Convention: 1      Full Period      Active: yes
Method:           Use Salvage: yes
Switch to SL: no  Expected Life: 0.00
Factor: 150.0%    Actual Days: no

<Update> <Delete> < End >
  
```

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
 - Active
 - Method ID
 - Use Salvage
 - Switch to SL
 - Expected Life
 - Factor
 - 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

```

facvmt.p b+          32.25.2 Fixed Assets Migration Utility          06/12/00
Book Migration
  Book: POST          GL BOOK, ENTITY 1000
  Entity: 1000        Post: yes
  Periods Per Year: 012
  Error Code: Duplicate ID
  Completed: no

  Book: POST          GL BOOK, ENTITY 1000
  Sort: 1             Post: yes
  Calendar:
  Total Acc Depreciation: 9,761.93
  Total Basis: 16,707.00

  <Update> <Delete> < End >

```

- 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
 - Post
 - Description
 - Calendar
 - Sort Code

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

```

facvmt.p b+          32.25.2 Fixed Assets Migration Utility          06/12/00
                      Location Migration
Location Code: 22      ADMINISTRATION                               Cost Center:
Sub-Account:                               Completed: no
Error Code: ID err
Location: 22          ADMINISTRATION                               Cost Center:
Entity:               Sub-Account:
Address:
City:                 State:           Post:
County:               Country:
Telephone:            Fax/Telex:

< Add > <Update> <Delete> < End >

```

- 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 • Sub-Account
 - Description • Cost Center
 - Entity • 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.

```

facvmt.p b+      32.25.2 Fixed Assets Migration Utility      06/12/00
                  Class Migration
                  Class: ATO      AUTOMOBILES
                  Asset Account:
                  Expense Account:
                  Accumulated Expense Account:
                  Error Code: Acct err
                  Completed: no
                  Class: ATO
                  Description: AUTOMOBILES
                  Depreciate Assets: yes
                  < Add > <Update> < Acct > <Delete> < End >
  
```

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

facvmt.p b+		32.25.2 Fixed Assets Migration Utility	06/12/00
Class Migration			
Class: ATO		AUTOMOBILES	
Class Account Default Migration			
Type	Account	Description	
Asset Account	1800	Fixed Assets	
Accumulated Expense	1810	Less:Depreciation	
Periodic Expense	5300	Depreciation Expense	
Construction In Process			
Gain on Disposal	7800	Gain/Loss on Disposal	
Loss on Disposal	7800	Gain/Loss on Disposal	
Asset Suspense			
Update < End >			

- 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.

```

facvvp.p b+          32.25.3 Fixed Assets Migration Report          06/12/00
Input File Name: /qad/mfaprop/eB/conv/dumpdir/fa_dump.dat
Print Methods: Yes
Print Books: Yes
Print Locations: Yes
Print Classes: Yes
Print Exceptions: Yes
Output:
Batch ID:

```

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.

The background of the page is a grayscale image of several interlocking gears. The gears are of different sizes and are positioned in a way that they appear to be meshing together. The lighting is soft, creating a professional and technical feel.

Appendix A

Conversion Checklists

This appendix contains install checklists for advanced users, or for less experienced users who want to track their progress on the conversion. 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.

Buffer Copy Conversion Checklist **186**

In-Place Conversion Checklist **191**

Note The abbreviations shown below appear throughout this appendix.

Abbreviation	Meaning
Conv	Conversion
DB	Database
MInstall	MFG/PRO Installation Directory (<i>MFGPROInstallDir</i>)
PInstall	Progress Installation Directory (<i>ProgressInstallDir</i>)
SH	Schema holder
SVInstallDir	Source Version MFG/PRO InstallDir
TVInstallDir	Target Version MFG/PRO InstallDir
XX	Two-letter language code

Buffer Copy Conversion Checklist

Conversion Specifications

Source versions supported:	8.5–eB2
Progress version required:	OE10B02 + Oracle patch bundle or OE10B03
Oracle Version Required	9iR2 or 10.1.0.4.0
Memory requirements	3 GB
Machine requirements	100 GB
OS patches	Y
IE, Netscape, Mozilla	optional

Table A.1 Buffer Copy Conversion Checklist

Installation Task	Default Value	Page
Source Database: Prepare for Conversion		
Post and close financial transactions		24
Archive and delete		
Back up source database and Minstall		
8.5–eB only: GTM conversion		25
8.5–8.6 only: Euro data conversion		25
8.6 only: Supplier Performance conversion		25

Table A.1 Buffer Copy Conversion Checklist

Installation Task	Default Value	Page
8.5 only: Global Shipping conversion		26
8.5 only: Product Change Control conversion		26
8.5 only: Corporate Commodity Codes conversion		26
Run data verification reports		27
Preserve custom system data		29
MFG/UTIL: Preliminary Steps		See Installation Guide
Install media		
Install Progress updates as necessary		
Install to DB server		
Install language files		
Repeat for additional languages		
Create new empty schema holders		
Create empty SHs		
Load schema in empty SHs		
Truncate empty SHs		
Copy empty SHs for each language		
Load translated labels		
Create production schema holders		
Copy Oracle Create DB templates (.dbt files)		
Create main production database with DBCA		
Create production schema holder		
Enter default domain		
Enter OID generator code value		
Truncate production schema holders		
Truncate production SHs		
Create new compile database set		
Create compile database set		
Repeat for additional languages		
Convert Source Database Oracle Version		
Migrate Oracle database to 9iR2 or 10.1.0.4.0		35
Create Source Conversion Schema Holder		
MFG/UTIL: Dump Source Schema		36

Table A.1 Buffer Copy Conversion Checklist

Installation Task	Default Value	Page
Select Database Progress Database Dictionary		
Select Database Connect		
Connect to source version schema holder		
Connect to Oracle database in Select Working Database		
Connect to Oracle database as qad/qad		
Set open cursors parameter (e.g., -c 500)		
Select Admin Dump Data and Defs Data Definitions File		
Select all tables		
Set output to srchold.df	TVInstallDir/db	
Exit Data Dictionary		
Modify Schema File Header		38
Use a text editor to open srchold.df		
Change ADD DATABASE reference to “source”		
MFG/UTIL: Create Source Conversion Schema Holder		39
Select Database Create		
Create srchold.db	TVInstallDir/db	
Connect to srchold.db	TVInstallDir/db	
Load srchold.df		
Create Target Conversion Schema Holder		40
Select DataServer Oracle Copy New Schema Holder from Existing SH		
Original database is oraempty.db	TVInstallDir/db	
New database is trghold.db	TVInstallDir/db	
Set the Oracle Database name to target		
MFG/UTIL: Conversion to eB2.1		
Start MFG/UTIL		45
Run Configure MFG/PRO Guided Setup		
Select Convert Oracle Database (Copy)		
Conversion Setup		46
In-Place Conversion	No	
Set Oracle home and SID values		
Connect to source schema holder as orasrc	TVInstallDir/db/srchold	47
Connect to Oracle database as source		

Table A.1 Buffer Copy Conversion Checklist

Installation Task	Default Value	Page
User ID is qad/qad		
Set open cursors parameter (e.g., -c 500)		
Close Log Window		
Connect to target schema holder as oratrg	TVInstallDir/db/trghold	49
Connect to Oracle database as target		
User ID is qad/qad@Buffer		
Set open cursors parameter (e.g., - 500)		
Close Log Window		
Select conversion functions		50
Enter OID Generator Code		52
8.5 only: Global Shipping conversions		52
8.5–eB2: Domain Conversions		53
Multiple databases (more than 1 source dc_mstr)		54
Select Conversion Database	e.g., prodsh	
Enter Domain Information		
Repeat for each dc_mstr in source database		
Single database (no dc_mstr)		56
Select Conversion Database	e.g., prodsh	
Enter Domain Information		
Continue Conversion		
8.6e–eB only: EDI Ecommerce conversions		57
8.5–8.6D only: Euro Data Conversions		58
Connect Database	easource	
Close Log Window		
Run special dump programs		60
eB+ and ECommerce only: Connect Database		
Close Log Window		
Drop indexes (SQL Wait-For)		60
sqlplus qad/qad < eB21dropindexes.sql		
Buffer copy source database		61
Connect to source schema holder as orasrc	TVInstallDir/db/srchold	
Connect to Oracle database as source		

Table A.1 Buffer Copy Conversion Checklist

Installation Task	Default Value	Page
User ID is qad/qad		
Set open cursors parameter (e.g., -c 500)		
Close Log Window		
Connect to target schema holder as oratrg	TVInstallDir/db/trghold	
Connect to Oracle database as target		
User ID is qad/qad@Buffer		
Set open cursors parameter (e.g., -c 500)		
Close Log Window		
Build indexes (SQL Wait-For)		62
sqlplus qad/qad < oraempty-idx.sql		
sqlplus qad/qad < oadmempty-idx.sql		
sqlplus qad/qad < ohpempty-idx.sql		
Update database OID value		62
Connect to target schema holder as oratrg	TVInstallDir/db/trghold	
Connect to Oracle database as target		
User ID is qad/qad@Buffer		
Set open cursors parameter (e.g., -c 500)		
Close Log Window		
Load Production and Admin data		63
Select Tables for Load		
Load Language data		64
Select Tables for Load		
Close Log Window		
Repeat for additional languages		
Convert database		64
Run admconv.p for dumped admin data		
Load target version admin data		
Add new license codes		
Convert additional databases as needed		66
Additional Conversion Steps for eB2.1		
Update sequences, utsequp.p		96
8.5–eB2: User Group Length Conversion		97

Table A.1 Buffer Copy Conversion Checklist

Installation Task	Default Value	Page
8.5: Global Shipping conversion		97
9.0–eB: Flow Scheduling conversion		98
8.5–eB: European Accounting Conversion		98
Migrate Freight Information (eB–eB2)		98
Restore Custom Default Data		
Reenter custom menus and messages		99
Reassign custom browses		99
Load Online Help		
Load target version help		101
Load custom source help		
Finalize Target Database (See Installation Guide)		
Configure Production Database Set		
Compile target version		
Generate scripts		
Start and Register MFG/PRO		
Back up MFG/PRO Install Directory		

In-Place Conversion Checklist

Conversion Specifications	
Source versions supported:	8.5–eB2
Progress version required:	OE10B02 + Oracle patch bundle or OE10B03
Oracle Version Required	9iR2 or 10.1.0.4.0
Memory requirements	3 GB
Machine requirements	100 GB
OS patches	Y
IE, Netscape, Mozilla	optional

Table A.2 In-Place Conversion Checklist

Installation Task	Default Value	Page
Source Database: Prepare for Conversion		
Post and close financial transactions		24
Archive and delete		
Back up source database and Mininstall		
8.5–eB only: GTM conversion		25
8.5–8.6 only: Euro data conversion		25
8.6 only: Supplier Performance conversion		
8.5 only: Global Shipping conversion		
8.5 only: Product Change Control conversion		26
8.5 only: Corporate Commodity Codes conversion		
Run data verification reports		27
Preserve custom system data		29
MFG/UTIL: Preliminary Steps		See Installation Guide
Install media		
Install Progress updates as necessary		
Install to DB server		
Install language files		
Repeat for additional languages		
Create new empty schema holders		
Create empty SHs		
Load schema in empty SHs		
Truncate empty SHs		
Copy empty SHs for each language		
Load translated labels		
Create production schema holders		
Enter default domain		
Enter OID generator code value		
Truncate production schema holders		
Truncate production SHs		

Table A.2 In-Place Conversion Checklist

Installation Task	Default Value	Page
Create Source Conversion Schema Holder		
MFG/UTIL: Dump Source Schema		36
Select Database Progress Database Dictionary		
Select Database Connect		
Connect to source version schema holder		
Connect to Oracle database in Select Working Database		
Connect to Oracle database as qad/qad		
Set open cursors parameter (e.g., -c 500)		
Select Admin Dump Data and Defs Data Definitions File		
Select all tables		
Set output to srchold.df	TVInstallDir/db	
Exit Data Dictionary		
Modify Schema File Header		38
Use a text editor to open srchold.df		
Change ADD DATABASE reference to “source”		
MFG/UTIL: Create Source Conversion Schema Holder		39
Select Database Create		
Create srchold.db	TVInstallDir/db	
Connect to srchold.db	TVInstallDir/db	
Load srchold.df		
Create Target Conversion Schema Holder		
		40
Select DataServer Oracle Copy New Schema Holder from Existing SH		
Original database is oraempty.db	TVInstallDir/db	
New database is trghold.db	TVInstallDir/db	
Set the Oracle Database name to target		
MFG/UTIL: Conversion to eB2.1		
Start MFG/UTIL		68
Run Configure MFG/PRO Guided Setup		
Select Convert Oracle Database (In-Place)		
Conversion Setup		70
In-Place Conversion	Yes	
Set Oracle home and SID values		

Table A.2 In-Place Conversion Checklist

Installation Task	Default Value	Page
Connect to source schema holder as orasrc	TVInstallDir/db/srchohd	71
Connect to Oracle database as source		
User ID is qad/qad		
Set open cursors parameter (e.g., -c 500)		
Close Log Window		
Select conversion functions		73
Enter OID Generator Code		74
8.5 only: Global Shipping conversions		75
8.5-eB2: Domain Conversions		76
Multiple databases (more than 1 source dc_mstr)		77
Select Conversion Database	e.g., prodsh	
Enter Domain Information		
Repeat for each dc_mstr in source database		
Single database (no dc_mstr)		78
Select Conversion Database	e.g., prodsh	
Enter Domain Information		
Continue Conversion		
8.6e-eB only: EDI Ecommerce conversions		79
8.5-8.6D only: Euro Data Conversions		81
Connect Database		
Close Log Window		
Run special dump programs		82
eB+ and ECommerce only: Connect Database		
Close Log Window		
Update Source Schema		
Enter SQL File (xx is source version)	TVInstallDir/inplace/oracle/xx/convdo-main.sql	83
Close Log Window	new delta.sql generated = orig df+domain.sql	
Schema Updates (SQL Wait-For)		
Modify addtablespaces.sql	TVInstallDir/inplace/oracle	83
Comment out 8.5 tables for later versions		
Comment out Enhanced Controls		

Table A.2 In-Place Conversion Checklist

Installation Task	Default Value	Page
OPTIONAL: Update DATAFILE_LOC for conv.dbf		
Run schema updates (xx is source version)		
sqlplus qad/qad < addtablespaces.sql	TVInstallDir/inplace/oracle	
sqlplus qad/qad < xxdropindexes.sql	TVInstallDir/inplace/oracle/XX	
sqlplus qad/qad < xxdroptables.sql	TVInstallDir/inplace/oracle/XX	
sqlplus qad/qad < xxnocopy.sql	TVInstallDir/inplace/oracle/XX	
sqlplus qad/qad < xxspecdump.sql	TVInstallDir/inplace/oracle/XX	
sqlplus qad/qad < xxrenamecols.sql	TVInstallDir/inplace/oracle/XX	
sqlplus qad/qad < xxrenametabs.sql	TVInstallDir/inplace/oracle/XX	
sqlplus qad/qad < xxmovetables.sql	TVInstallDir/inplace/oracle/XX	
<i>Run xxmovetables.sql only if the CONV tablespace was created in addtablespaces.sql</i>		
sqlplus qad/qad < oraempty-tblinp.sql	TVInstallDir/inplace/oracle	
sqlplus qad/qad < oadmempty-tblinp.sql	TVInstallDir/inplace/oracle	
sqlplus qad/qad < ohpempty-tblinp.sql	TVInstallDir/inplace/oracle	
sqlplus qad/qad < xxsequences.sql	TVInstallDir/inplace/oracle/XX	
sqlplus qad/qad < convdomainDOMAIN.sql	TVInstallDir/inplace/oracle/XX	
sqlplus qad/qad < xxnologging.sql	TVInstallDir/inplace/oracle/XX	
sqlplus qad/qad < xxinsert.sql	TVInstallDir/inplace/oracle/XX	
sqlplus qad/qad < xxlogging.sql	TVInstallDir/inplace/oracle/XX	
Delete prior system data		87
Connect to target schema holder as oratrg	TVInstallDir/db/trghold	
Connect to Oracle database as target		
User ID is qad/qad		
Set open cursors parameter (e.g., -c 500)		
Close Log Window		
Close Log Window for delete of data		
Seed qaddb_ctrl Table		88
Connect to target schema holder as oratrg	TVInstallDir/db/trghold	
Connect to Oracle database as target		
User ID is qad/qad		
Set open cursors parameter (e.g., -c 500)		
Close Log Window		

Table A.2 In-Place Conversion Checklist

Installation Task	Default Value	Page
Close Log Window for OID seed update		
Run SQL to Reset Domain (SQL Wait-For)		88
Run SQL scripts (xx is source version)		
sqlplus qad/qad < defaultdomain.sql	TVInstallDir/inplace/oracle/XX	
Load Production and Admin data		89
Connect to target schema holder as oratrg	TVInstallDir/db/trghold	
Connect to Oracle database as target		
User ID is qad/qad		
Set open cursors parameter (e.g., -c 500)		
Close Log Window		
Select Tables for Load		
Close Log Window		
Load Language data		90
Select Tables for Load		
Close Log Window		
Repeat for additional languages		
Run SQL to Rebuild Indexes (SQL Wait-For)		91
Run SQL scripts		
sqlplus qad/qad < oraempty-idxinp.sql	TVInstallDir/inplace/oracle	
sqlplus qad/qad < oadmemory-idxinp.sql	TVInstallDir/inplace/oracle	
sqlplus qad/qad < ohpempty-idxinp.sql	TVInstallDir/inplace/oracle	
Load the Domain Master		91
Connect to target schema holder as oratrg	TVInstallDir/db/trghold	
Connect to Oracle database as target		
User ID is qad/qad		
Set open cursors parameter (e.g., -c 500)		
Close Log Window		
Close Log Window following load		
Convert database		92
Run admconv.p for dumped admin data		
Load target version admin data		
Update count_return procedure	TVInstallDir/db/lvorasp.plb	

Table A.2 In-Place Conversion Checklist

Installation Task	Default Value	Page
Add new license codes		
Remove obsolete tables	TVInstallDir/inplace/oracle/XX,	
Convert additional databases as needed		94
Additional Conversion Steps for eB2.1		
Update sequences, utseup.p		96
8.5–eB2: User Group Length Conversion		97
8.5: Global Shipping conversion		97
9.0–eB: Flow Scheduling conversion		98
8.5–eB: European Accounting Conversion		98
Migrate Freight Information (eB–eB2)		98
Restore Custom Default Data		
Reenter custom menus and messages		99
Reassign custom browses		99
Load Online Help		
Load target version help		101
Load custom source help		
Finalize Target Database (See Installation Guide)		
Configure Production Database Set		
Compile target version		
Generate scripts		
Start and Register MFG/PRO		
Back up MFG/PRO Install Directory		

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 name is `qaddb`. 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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