

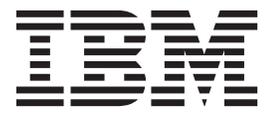
IBM InfoSphere Optim
Version 8 Release 1

Move User Manual



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Version 8 Release 1

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Note

Before using this information and the product it supports, read the information in "Notices" on page 215.

Version 8 Release 1 (November 2011)

This edition applies to version 8, release 1 of IBM InfoSphere Optim and to all subsequent releases and modifications until otherwise indicated in new editions.

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Contents

About the Move User Manual v

Organization of the Move User Manual v

Chapter 1. Purpose of Move component 1

Common Elements and Utilities 1

Optim Directory and Common Optim Objects . . . 1

Common Utilities. 2

Optim Product and Security Options 2

Chapter 2. Processing Flow 5

Extract Data 5

Extract Request 5

Extract File 5

Access Definition 5

Extract Process Report 6

Insert Data 6

Insert Request 6

Control File. 7

Table Maps 7

Column Maps 7

Insert Process Report 7

Optim Server Option 7

Other Actions 8

Utilities 8

Sample Database Tables 9

Scenario 1 – A Set of Customers 10

Create an Extract Request 10

Create an Access Definition 11

Create the Table List 12

Narrow the Focus 14

Define Relationships 16

Review the Access Definition 18

Save the Extract Request 21

Process the Extract Request 22

Browse the Extracted Data 24

Create an Insert Request 24

Edit the Table Map 27

Save the Insert Request 28

Process the Insert Request 29

Scenario 2 – A Set of Items 33

Open the Extract Request. 34

Modify the Local Access Definition 35

Select ITEMS Rows using Point and Shoot . . . 36

Define Relationships 37

Review the Access Definition 38

Save the Extract Request 42

Process the Extract Request 42

Open the Insert Request 43

Edit the Table Map 46

Edit the Column Map 47

Save the Insert Request 49

Process the Insert Request 49

Chapter 3. Convert Process. 51

Open the Convert Request Editor 52

Create a Convert Request. 52

Select a Convert Request to Edit 53

Open a Convert Request dialog. 53

Using the Convert Request Editor 54

General Tab 56

Comma Separated Tab - for Business Objects

(CSV) File 59

Create a Business Objects (CSV) File 60

Select Join Table Dialog 61

Column and Order Specification Dialog -

Business Object (CSV) File 63

Comma Separated Value Tab - for Comma

Separated Value (CSV) File 64

XML Tab - for XML Formatted File 67

Business Object (XML) Tab 68

Create a Business Object (XML) File 69

Enterprise Content Management (CSV) Tab. . . 70

Age Function Tab 72

Global Aging Tab 75

Currency Tab. 75

Report Options Tab. 77

Notify Tab. 78

Process a Convert Request 78

Schedule a Convert Request 78

Run a Convert Request 78

Convert Request Progress Dialog 79

Convert Process Report 79

Chapter 4. Extract Process 83

Open the Extract Request Editor 84

Create an Extract Request 85

Select an Extract Request to Edit 85

Open an Extract Request dialog 85

Using the Extract Request Editor 87

General Tab 89

Objects Tab 93

Point and Shoot Tab 94

Variables Tab 96

Object List Tab 97

Notify Tab. 99

Convert Tab 99

Process an Extract Request 100

Schedule an Extract Process 102

Run an Extract Process Request 102

Error Messages 102

Warning Messages. 103

Extract Request Progress Dialog 104

Extract Process Report 105

Chapter 5. Insert Process 113

Open the Insert Request Editor 114

Create an Insert Request. 114

Select an Insert Request to Edit 114

Open an Insert Request dialog. 115

Using the Insert Request Editor 116

General Tab	118
Insert Request Table Specification Dialog	121
Age Function Tab	125
Global Aging Tab	128
Currency Tab	128
Report Options Tab	130
Notify Tab	131
Process an Insert Request	131
Schedule an Insert Request	131
Run an Insert Request	131
Insert Request Progress Dialog	131
Cascading Delete/Update Confirmation	133
Insert Process Report	133

Chapter 6. Load Process 137

Open the Load Request Editor.	139
Create a Load Request	139
Resource Estimation	139
Load Request Editor Options Dialog	142
Select a Load Request to Edit	144
Open a Load Request dialog	144
Using the Load Request Editor	145
General Tab	147
DB Alias Tab — DB2	149
DB Alias Tab — Oracle	156
DB Alias Tab — Sybase ASE	161
DB Alias Tab — SQL Server	166
DB Alias Tab — Informix	169
DB Alias Tab - iSeries, Load Request Editor	173
DB Alias Tab - Teradata, Load Request Editor	175
DB Alias Tab — z/OS	180
Age Function Tab	183
Global Aging Tab	186
Currency Tab	186

Report Options Tab	188
Notify Tab	189
Process a Load Request	189
Schedule a Load Request	189
Run a Load Request	189
Load Request Progress Dialog	191
Cascading Delete/Update Confirmation	192
Load Process Report	192

Appendix. Command Line Interface 197

Extract, Insert, Load, and Convert Process Syntax	198
Extract, Insert, Load, and Convert Process	
Command-line Keywords	199
Override Keywords	202
Restart or Retry a Process	208
Syntax.	209
Command-line Keywords	209
Return Codes	210
Examples.	211
Example 1 - Run a Process Directly from the	
Command Line.	211
Example 2 - Run a Scheduled Job from the	
Command Line.	211
Example 3 - Run One or More Processes Using	
a Parameter File	212
Example 4 - Use Overrides in Addition to the	
Process Parameters	212
Example 5 - Restart a Process	213

Notices 215

Trademarks	217
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Index 219

About the Move User Manual

The IBM® InfoSphere® Optim™ solution includes the components Archive, Compare, Edit, and Move. This User Manual provides information on how to use Move to extract sets of relational data from one database and move them to another.

See the System Requirements document at ibm.com® for complete information on supported platforms and data sources.

Organization of the Move User Manual

The information provided in this guide is organized into the following chapters:

Chapter 1, “Purpose of Move component,” on page 1

Provides general information about Move.

Chapter 2, “Processing Flow,” on page 5

Provides an overview of the steps used by Optim to migrate data.

Chapter 3, “Convert Process,” on page 51

Explains how to use a Convert Request to transform data before using Insert or Load processing. Optim provides a consistent method for converting and saving data to an Extract File, which serves as a source for other processing.

Chapter 4, “Extract Process,” on page 83

Explains how to use an Extract Request to extract data from source tables and save that data to an Extract File. Optim allows you to extract sets of relationally intact data according to your specifications.

Chapter 5, “Insert Process,” on page 113

Explains how to use an Insert Request to insert and update data in a destination database. Optim offers several process options to allow more flexibility.

Chapter 6, “Load Process,” on page 137

Explains how to use Optim to transform an Extract File to the format required by the database load utility and invoke the utility to perform the load.

“Command Line Interface,” on page 197

Explains the use of the Command Line Interface that allows you to browse an Extract or Control File, run one or more process requests, or run a scheduled job, without first opening the graphical user interface.

Chapter 1. Purpose of Move component

The Move component extracts, copies, and moves sets of relationally intact data from multiple source tables to corresponding destination tables. Move handles an arbitrarily complex data model consisting of any number of tables and relationships and ensures a referentially intact set of data for use in application testing, data migration, and date aging.

Move is indispensable for the following purposes:

- Creating test databases that are relationally intact subsets of an existing production database.
- Migrating subsets of data that require data transformations as part of the migration. This feature is especially useful for masking data used in testing applications or to introduce altered data to the production database.
- Aging all types of date columns, regardless of initial format, and adjusting the resulting dates to suit site-specific business rules. An extensive set of sample definitions to handle these business rules is distributed with Move. Definitions can be customized to accommodate organization-specific business rules.

Move is easy to use, simple in concept, yet powerful in supporting complex database structures. Intuitive dialogs simplify data entry tasks and provide data options for extracting relationally intact sets of data. Intelligent window handling technology allows you to display multiple dialogs, pop-up windows, context sensitive online help, and tutorials.

Common Elements and Utilities

To carry out its functions, Optim relies on user-defined objects as supplements to objects defined to the database (for example, tables, primary keys, relationships, stored procedures). These user-defined objects (collectively, Optim objects) are stored in the Optim Directory.

Features common to all or most of the Optim components (i.e., Archive, Move, Edit, and Compare), are explained in the *Common Elements Manual*.

Optim Directory and Common Optim Objects

The Optim Directory is a set of tables in which Optim tracks processing status and stores objects needed for processing. You must use the **Configuration** program to create or configure the Directory tables and stored procedures needed to access the Directory.

Objects in the Directory that are common to Optim components include the following:

Access Definitions

An Access Definition identifies a set of related data to be processed by Optim. It references the database tables and their relationships, and provides criteria to select specific rows within tables. An Access Definition is required for an Extract Process.

Column Maps

A Column Map provides specifications needed to match columns between two tables referenced in a Table Map. Also, a Column Map can be used to transform data, age dates in tables, and exclude one or more columns from processing. A Column Map can be referenced in a Table Map for an Insert or Load Process.

Column Map Procedures

A Column Map Procedure facilitates data transformations in a Convert, Insert, Load, or Restore Process that are beyond the scope of native Column Map functions.

DB Aliases

A DB Alias provides parameters needed to connect with a specific database. A DB Alias name is used as a high-order qualifier for an object or table name, providing information that Optim needs to access the appropriate database. A DB Alias is needed anytime Optim references a database object; for example, to qualify the name of an Optim primary key, Optim relationship, or a database table referenced in an Access Definition, Column Map, or Table Map.

Primary Keys

Primary key columns uniquely identify each row in a database table. A primary key can be used to create an Optim relationship, and is required for a table that is changed by an Insert Process or a table that is visited more than once in an Extract Process. A primary key is also required to enable the row selection (Point and Shoot) feature for an Access Definition or an Extract Process.

Relationships

A relationship is a defined connection between the rows of two tables that determines the parent or child rows to be processed and the order in which they are processed. Optim uses relationships to determine the data to be retrieved from related tables and rely upon relationships defined to the database, when available. However, you can also define relationships to supplement those in the database. Generally, a relationship is needed in a process that uses an Access Definition.

Table Maps

A Table Map identifies and matches two tables or sets of tables in an Insert or Load Process and can exclude one or more tables from processing. A Table Map is required for an Insert, Load, or Restore Process.

Common Utilities

This topic discusses the utilities that are common to all components of Optim.

The utilities that are common to all components of Optim are documented in the *Common Elements Manual*, as follows:

- **Restart/Retry.** Use this utility to restart a process that terminated abnormally or to retry a process for which all rows are not successfully processed. You can use this utility to restart or retry an Insert, Insert/Update, or Update Process.
- **Calendar.** Use this utility to customize handling of dates for aging data in a Convert, Insert, or Load Process and for scheduling process requests.
- **Currency.** Use this utility to customize currency conversion parameters for Convert, Insert, or Load processes.
- **Schedule.** Use the Scheduler to schedule processes and monitor processing
- **Browse.** Use this utility to review the contents of an Archive, Extract, or Control File.
- **Export/Import.** Use these utilities to copy Optim objects from one Directory to another.
- **Create.** Use this utility to create database objects from definitions in an Archive or Extract File.

Note: The **Storage Profile** utility is documented in the *Archive User Manual*.

Optim Product and Security Options

Various options are used to maintain the Optim environment. Generally, **Product Options** enforce site and system requirements, while **Personal Options** allow you to customize Optim for use at each workstation.

See the *Installation and Configuration Guide* and the *Common Elements Manual* for further information.

Security options allow you to establish as many as three levels of security for using Optim:

- Functional security allows you to control user access to the interface for functions provided by Optim.

- Object security allows you to control access to specific objects in the Directory.
- Archive File security allows you to control access to data in Archive Files.

All security options are documented in the *Installation and Configuration Guide* .

Chapter 2. Processing Flow

Move uses a two-step process to migrate data: an *Extract* step and an *Insert* step.

- The Extract step copies data from one or more related tables in one or more database instances to an external file called an Extract File.
- The Insert step copies data from the Extract File to one or more destination databases. The destination tables may or may not reside in the same database as the source tables. If the destination tables do not exist, Move generates the SQL to create the tables.

Extract Data

The Extract Process selects data from a source (one or more tables in a database) and copies that data to a destination (an Extract File).

To extract data, you must create an Extract Request that includes the specifications for the data to be extracted, called the Access Definition, and the parameters for the Extract Process. You can process the Extract Request immediately, or schedule the process to run automatically. You can also run the Extract Process from the command line, using overrides for specifications in the request.

Extract Request

The Extract Request Editor dialog allows you to select parameters for processing the Extract Request. These parameters include the following:

- The Extract File, Access Definition, row limit, and items to extract: data, objects (metadata), or both.
- Types of objects to extract: primary keys, relationships, indexes, aliases/synonyms, functions, defaults, UDTs, packages, procedures, sequences, triggers, views, and/or rules. (Move always extracts table and column definitions.)

You can choose to run the Extract Request immediately or schedule the request for later processing.

Extract File

The Extract File contains the selected relationally intact data, the object definitions, or both. The Extract File is stored locally on the client system or on a shared file server. After you create an Extract File, you can use the file as often as needed to create new, or refresh existing, databases.

After you have extracted data and created an Extract File, you can browse the contents of the file. This is useful to ensure that the contents are as expected.

Access Definition

The Access Definition governs the overall Extract Process. An Access Definition specifies the tables, relationship traversal, and selection criteria for the data you want to extract. You can select a named Access Definition or create a new Access Definition for a single Extract Request.

The Access Definition enables you to:

- Specify the set of tables to be included in the Extract Process. You can specify the name of a single table and request that Move provide the names of all related tables. One table is identified as the Start Table, or table from which data is first extracted.
- Select relationships to be traversed to extract the data. Move has default rules for how relationships are traversed between the specified tables. You can select from a list of all of the relationships defined to the database and to the Optim Directory. (The relationships contained in the Directory supplement the relationships contained in the database.)

- Define criteria for the rows to be extracted by specifying:
 - Selection criteria for any selected table using SQL syntax.
 - A selection of rows chosen while browsing the data (Point and Shoot).
 - A sampling of rows, accomplished by extracting every *n*th row.
 - A maximum number of rows for a single table.
 - A maximum number of children per parent.
 - Grouping (e.g., extract 20 customers from each of the 50 states).
- Ensure that the desired data is extracted using the Show Steps function to review how Move will traverse the database.

Extract Process Report

An Extract Process Report is generated as part of the Extract Process. The report contains general information and statistics about the process. The content of the report reflects what has been extracted—data, object definitions, or both.

Insert Data

The Insert Process obtains data from an Extract File and copies that data to a destination (one or more tables in a database). The destination can be any database located on any server in your network, including the source database. Because the object definitions are included in the Extract File, you can clone the original database, if needed.

To Insert extracted data, you create an Insert Request that contains the specifications for the Insert Process. You can process the Insert Request immediately, or use the Insert Request as a template for application-generated jobs run from the command line, using overrides as appropriate.

Insert Request

The Insert Request Editor dialog allows you to select parameters for processing the Insert Request, including the following:

- The Extract File that contains the data to insert.
- The Control File that tracks the process.
- The Table Map that matches tables in the Extract File to tables at the destination.
- Specifications to delete rows in target tables prior to the Insert.

You can choose to run the Insert Request immediately or schedule the request for later processing.

Process Options

Insert If the primary key value is unique to the destination table, the new row is added to the destination table. If the primary key value is not unique to the destination table (the row already exists), the row is discarded. Move uses a Control File to keep track of discarded rows so that you can review them and possibly reprocess them later.

Update Only

If the primary key of a row in the source data matches the primary key of a row in the destination table, the row is updated. If the primary key of a row in the source data does not match the primary key of a row in the destination table, the row is reported as failed.

Update/Insert

If the primary key value is unique to the destination table, the new row is added to the destination table. If the primary key value is not unique to the destination table (the row already exists), the row in the Extract File replaces or updates the existing row.

Mixed Move also allows a mix of insertion methods where some tables are inserted and others are updated.

Object Definitions

If destination tables do not exist, Move can generate the SQL to create the tables from the object definitions contained in the Extract File—either as part of the Insert or as a separate step. In addition to tables, other object definitions can be created.

Control File

A Control File is generated by the Insert Process to record details about the success or failure of processing each row in the Extract File. You must specify the name of a Control File when you create a request to Insert data.

The Control File also makes it easy to distinguish among different process requests that use the same Extract File. If a path is not specified, Control Files are stored in the data directory specified in Personal Options. For details on specifying the data directory and other Personal Options, see the *Common Elements Manual*.

You can browse the Control File to identify problems with a process, such as rows in the Extract File that failed to process or the cause of an unexpected termination. Diagnostics accompany the discarded rows to identify why they were not processed. For details on the Browse Utility, see the *Common Elements Manual*.

Table Maps

Table Maps match source tables to destination tables. Individual tables can be excluded, and tables with different names can be mapped. You can use an existing Table Map or define the Table Map along with the other specifications for the Insert Process.

When the columns in the destination table match the columns in the source table, Move automatically inserts the data. When the columns do not match, the unmapped data is not inserted unless Column Maps are specified.

Column Maps

Column Maps are used to match source columns to destination columns that have different column names, eliminate columns from the process, and most importantly, allow the specification of values to be used to populate the destination columns.

Values that can be used to populate a destination column include special registers, the NULL value, literals, constants, expressions, and exit routines.

The Age function enables you to age individual columns.

The Currency function enables you to convert from one currency to another.

Insert Process Report

An Insert Process Report is generated as part of the Insert Process. The report contains general information and statistics about the process. The report contains details of what has been inserted—data, object definitions, or both—and what has been discarded.

Optim Server Option

In the standard configuration, Optim operates as a client application with all processing taking place directly on the Windows workstation. Unless the database is installed locally, Optim uses the appropriate DBMS client software to communicate with the remote database via a network.

The Optim Server option allows a user to define tasks on a workstation and direct any resource-intensive data processing functions to a machine more suited to the task. When a task requires the movement, processing or storage of very large volumes of data, the request can be defined at the workstation in the normal way, then directed for remote processing on a machine hosting Optim Server.

If your site has installed the Optim Server option on a machine, you can direct the Extract Request and the Insert Request to the Optim Server for processing. The Extract Request Editor and the Insert Request Editor each contain a box for delegating the processing to a machine hosting Optim Server. (The other actions available from the main menu can also be directed to a server for processing. For additional information, refer to the chapter corresponding to each action.)

If the Optim Server option is not enabled at your site, the box on the request editor is unavailable.

Other Actions

Optim provides other processing capabilities in addition to the Extract and Insert Processes. These include the Load Process and Convert Process.

Load Process

The Extract File can be transformed to Load format to take advantage of the Load Utility distributed with a database. Typically, this is used to insert large volumes of data.

Convert Process

The data in the Extract File can be transformed based on Table Map and Column Map specifications. This transformed data can be saved in the same or a different Extract File. This is useful to mask source data and create consistent, refreshable test data.

Utilities

Optim includes the following processing utilities in addition to the available actions:

Restart

Use Restart when an Insert Process does not complete successfully. A process can terminate unexpectedly due to resource restrictions, such as space allocation or network failure. When you use Restart, the process restarts from the last commit point. Move keeps track of the last successfully committed row in the Extract File, and restarts the process with the next row in the file.

Retry Use Retry when an Insert Process completed, but could not be performed for one or more rows in the Extract File. When a process cannot be performed for a specific row, that row is marked as discarded. The Retry Process will attempt the previous operation for the rows that were discarded.

Calendar

Use the Calendar Utility to create calendars for date aging. A sample set of international calendars is provided, including dates and rules, that you can use immediately. Use the Calendar Editor to define Dates and Rules specific for your site.

Schedule

Use the Schedule Utility to schedule processes to run at a later time. This reduces the impact on production processing and enables you to automatically re-execute a process at specific time intervals.

Browse Extract and Control Files

Use the Browse Utility to review Extract Files to ensure that the extracted data is what you expected and to determine which Extract File is appropriate for a Convert, Insert, or Load Process. Use Browse to review Control Files to view the status of each row or to view only those rows that had errors.

Export / Import

Use the Export and Import Utilities to migrate definitions from one Optim Directory to another.

Create Use the Create Utility to create objects (e.g., tables, primary keys and relationships, indexes, and views) using the object definitions in the Extract File, without actually inserting the data.

Reset Object Cache

Use the Reset Object Cache Utility to refresh current database objects or configuration parameters, especially when definitions are subject to frequent change.

Sample Database Tables

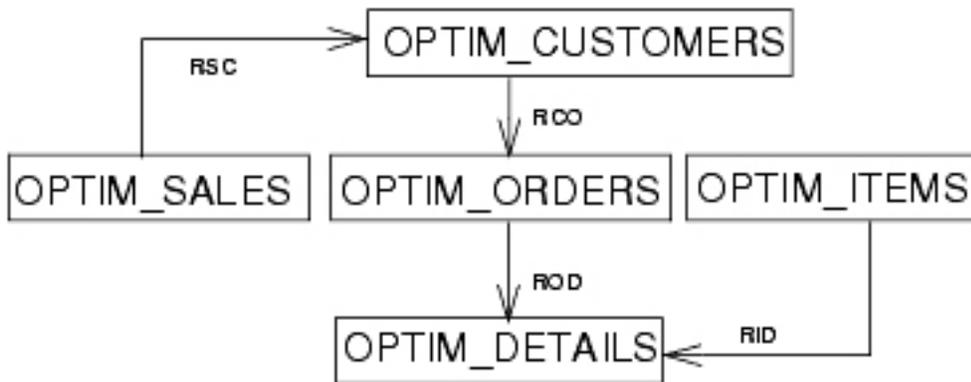
Optim is distributed with sample database tables. These tables correlate with the tables used in the examples within this manual.

The sample database tables distributed with Optim are as follows. (Table names are prefixed with a Creator ID, which is specified at installation.)

- OPTIM_SALES
- OPTIM_CUSTOMERS
- OPTIM_ORDERS
- OPTIM_DETAILS
- OPTIM_ITEMS
- OPTIM_MALE_RATES
- OPTIM_FEMALE_RATES
- OPTIM_SHIP_TO
- OPTIM_SHIP_INSTR
- OPTIM_STATE_LOOKUP

Note: The tables used in examples in this manual do not contain the prefix "OPTIM_" in their names.

The major relationships between pairs of tables in the sample database are shown in the following diagram. The arrows indicate the flow from parent to child.



In this diagram, the relationships between tables are represented by three-character codes consisting of the letter "R", the first letter of the parent table, and the first letter of the child table.

The relationships between tables are as follows:

- OPTIM_SALES is a parent of OPTIM_CUSTOMERS (relationship RSC)
- OPTIM_CUSTOMERS is a parent of OPTIM_ORDERS (relationship RCO)
- OPTIM_ORDERS is a parent of OPTIM_DETAILS (relationship ROD)
- OPTIM_ITEMS is a parent of OPTIM_DETAILS (relationship RID)

The sample database includes four additional tables:

- OPTIM_CUSTOMERS2
- OPTIM_DETAILS2

- OPTIM_ORDERS2

- OPTIM_ITEMS2

These four tables are distributed empty and are related in the same way as the similarly named tables described previously. The empty tables are provided for demonstrating the Insert Process.

For a complete description of the sample database tables, see the *Installation and Configuration Guide*.

Scenario 1 – A Set of Customers

Scenario 1 guides you through the steps required to create a test database of data from four sample tables distributed with Optim. The data in the test database will include a sampling of customers. To create the test database, you must extract a subset of related data from the source database and insert the data into a target database.

Scenario 1 demonstrates how to migrate a relational set of data in two steps.

The first step describes how to specify, extract, and store a relational set of data.

- An Extract Request lists the specifications for the Extract Process.
- An Access Definition specifies the data to extract.
- An Extract File stores the extracted set of data.
- An Extract Process Report records the results of the Extract Process.

The second step describes how to insert the relational set of data into newly-created destination tables.

- An Insert Request lists the specifications for the Insert Process.
- A Table Map specifies the destination of the data.
- The Create Utility creates new destination tables as exact copies of the original source tables.
- The relational set of data stored in the Extract File populates the destination tables.
- An Insert Process Report records the results of the Insert Process.

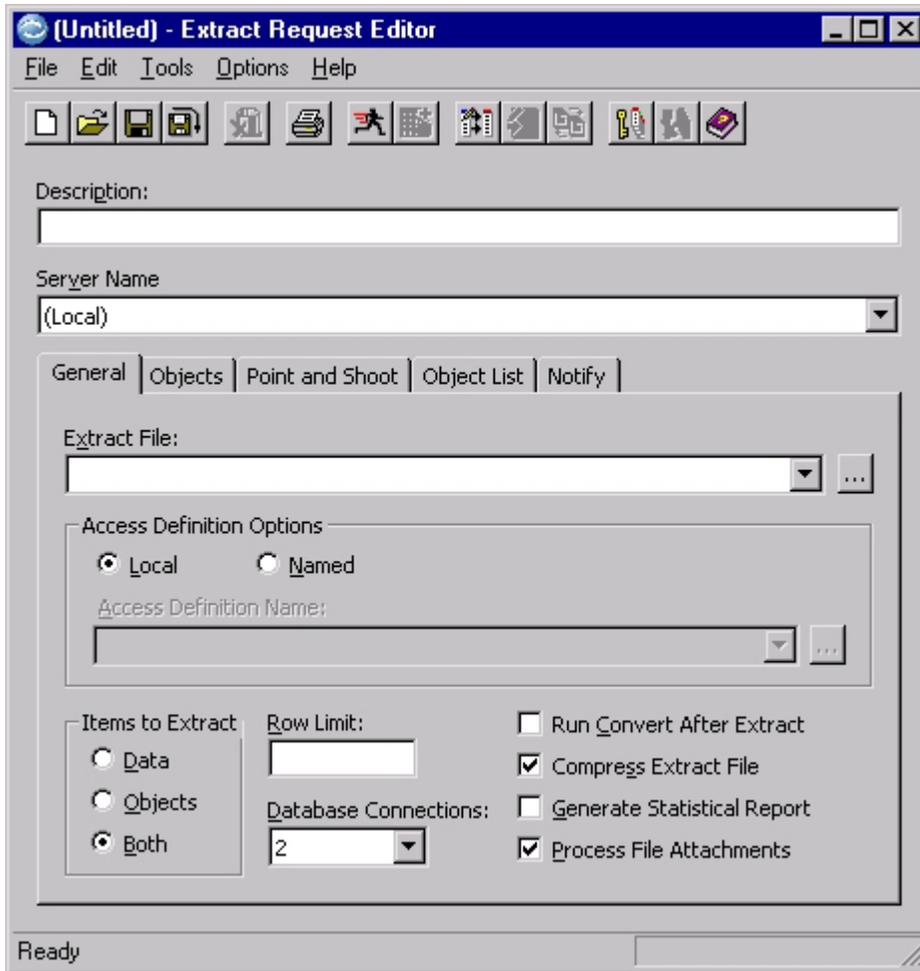
In this scenario, you will create a subset of data by extracting every tenth CUSTOMERS row in the sample database. The subset of data will also include all orders from the selected customers (from the ORDERS table) and the details for those orders (from the DETAILS table). The data also includes all rows from the ITEMS table, which is designated as a Reference Table. The extracted data will be inserted into new database tables created during the Insert Process.

Note: If you are not authorized to create new tables, you may be unable to complete the Insert Process in this scenario. Check with the site management for the destination tables to use.

Create an Extract Request

To create an Extract Request, begin by clicking **File > New > Extract** from the main window to display the Extract Request Editor.

Use the Extract Request Editor to create and edit requests for extracting data from a database. The **General** tab is used to name the Extract File and open the Access Definition, in which you will list the tables that contain the desired data and define specifications for the data in the listed tables.



Specify a **Description** of the Extract Request to identify its purpose or function.

If the optional Optim Server component is installed, you can use the **Server Name** box to select a server on which to process the request, or select **Local** to process the request locally. For this scenario, select **Local**, which is the default.

Use the Extract Request Editor to specify the following parameters for the Extract Process:

Extract File

The Extract File contains a copy of the specified source data. The default file name extension for an Extract File is **.xf**. Type a name for the Extract File.

Access Definition Options

The Access Definition defines the set of data to be extracted. An Access Definition can be named and saved to be used again, or specified as **Local** and saved as an embedded part of the Extract Request. For this scenario, select the button labeled **Local**.

Note: For this scenario, all of the other Extract Process parameters are used at the default settings. For additional information about other parameters available in an Extract Request, see “Using the Extract Request Editor” on page 87.

Create an Access Definition

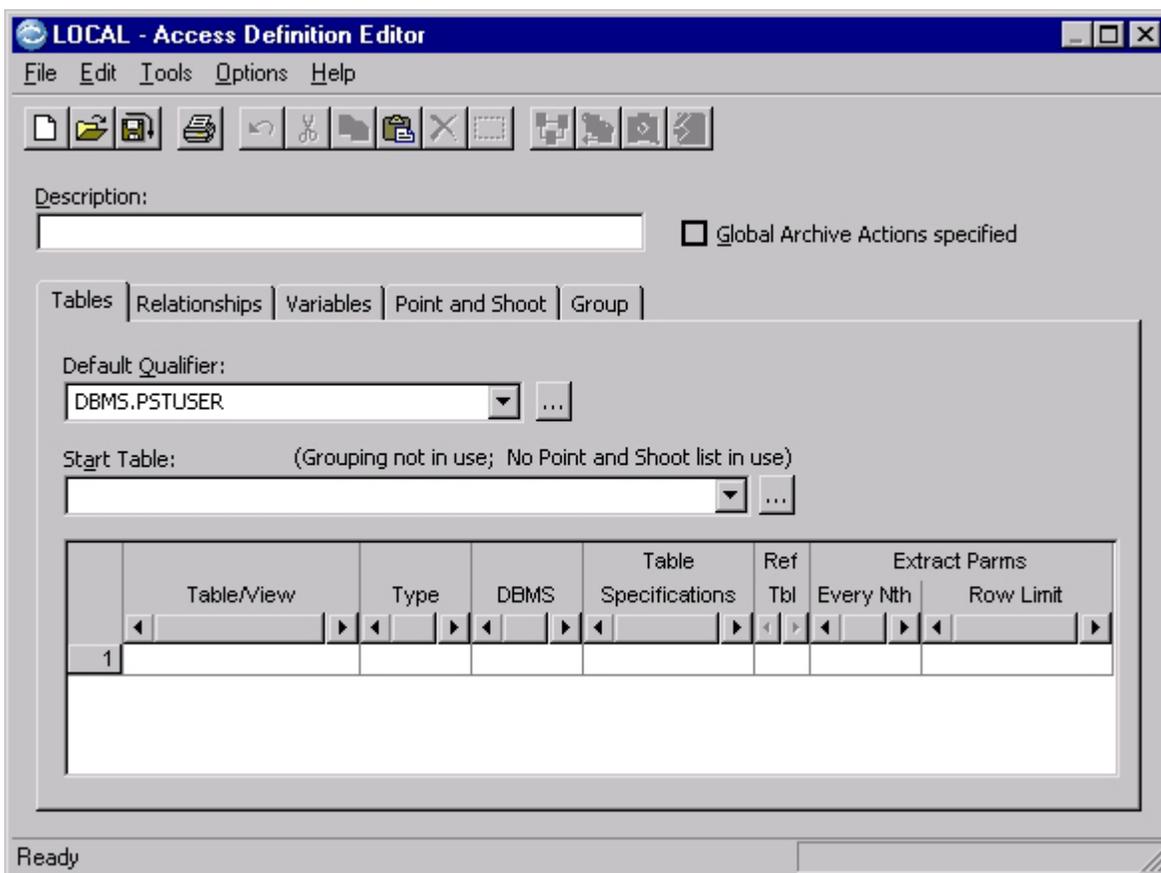
After specifying the Extract Process parameters, you must provide an Access Definition. The Access Definition references the tables that contain the data, provides selection criteria for the data, and

prescribes the way that relationships between tables are traversed. In other words, an Access Definition defines the data you want to extract and provides table specific parameters for processing.

In this scenario, you will create an Access Definition that is local or exclusive to the current Extract Request. You will:

- Select the tables that contain the data you want to extract.
- Define selection criteria for the data—in this example, every tenth CUSTOMERS table row is selected.
- Define the traversal path—the relationships between tables that Move traverses and the direction in which they are traversed during the Extract Process.
- Review the traversal path to ensure the appropriate data is selected.

Click **Tools > Edit Access Definition** from the Extract Request Editor to display the Access Definition Editor, which is used to create and edit Access Definitions. Specify a **Description** of the Access Definition to identify its purpose or function.



Create the Table List

Use the **Tables** tab of the Access Definition Editor to specify the list of tables to include in the Extract Process.

Default Qualifier

The Default Qualifier saves time when you enter table names in the grid, or Table List. A fully qualified table name has three parts: *dbalias.creatorid.tablename*. The Default Qualifier serves as the prefix for names in the Table List that are not fully qualified.

dbalias

Associates a user-defined name with a specific database.

creatorid

Identifies a table with the Creator ID (DB2[®], Informix[®]), Schema Name (Oracle), or Owner ID (Sybase ASE, SQL Server).

The Default Qualifier can be either *dbalias* or *dbalias.creatorid*. Generally, use a Default Qualifier that applies to most or all tables in the Table List. For this scenario, enter the *dbalias* and *creatorid* that correspond to the Optim sample database tables.

Start Table

Each Extract Process begins with a Start Table, the table from which data is first extracted, and proceeds to obtain related data from the remaining tables in the Table List. Move automatically places the Start Table in the first line of the Table List. If you do not specify a Start Table, the first name entered in the Table List is the assumed Start Table.

For this scenario, type CUSTOMERS in the **Start Table** box. Using this Start Table, you can create a subset of data based on a sampling of customers.

Table List

The Table List references tables from which data is extracted. When you add a table name to the Table List, Move automatically displays the type of object referenced by the table name and the name of the DBMS for the table.

You can use two methods to add table names to the list. One method is to type names under the **Table/View** heading. An easier method, however, may be to let Move find the tables that contain related data, using the Select Table(s) dialog.

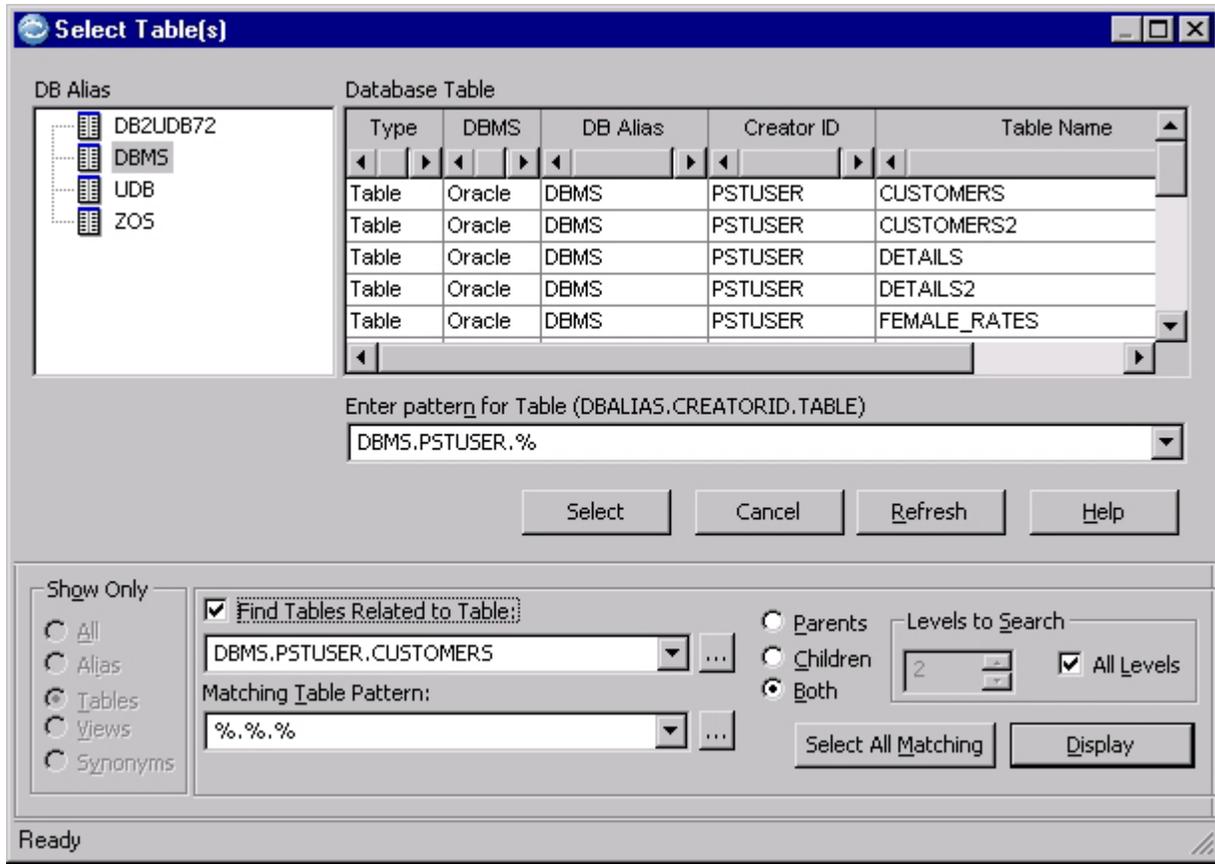
For this scenario, use the Select Table(s) dialog to display a listing of tables related to the Start Table. You can review the list and select tables you want to include in the Extract Process.

Select Tables Dialog

To display the Select Table(s) dialog, right-click the CUSTOMERS table name in the Table List and click **Add Tables** in the shortcut menu. The dialog provides a list of tables, based on the Default Qualifier.

For this scenario, limit the list to tables related to the CUSTOMERS table, and select specific tables from the list.

- Select the **Find Tables Related to Table** check box, ensure the default settings **Both** and **All Levels** are selected, and click **Display**.
- Locate the following tables in the list: ORDERS, DETAILS, and ITEMS. Select each table while pressing the Ctrl key, and click **Select** to add the tables to the Table List in the Access Definition.



The Table List in the Access Definition Editor is now populated with the Start Table, CUSTOMERS, and all the tables related to the CUSTOMERS table.

Narrow the Focus

To narrow the focus of the Access Definition, you can define limits and selection criteria. Move provides several methods to limit the scope of the extracted data.

Table Specifications

Table specifications provide the display and criteria parameters for data. You can set specifications for any table in the Table List by clicking right mouse button on the table name and selecting a Table Specifications option from the shortcut menu. A brief description of each option follows:

Columns

Select columns from the Start Table to display for Point and Shoot. Point and Shoot allows you to extract specific rows from the Start Table.

Selection Criteria

Specify selection criteria for any column in a selected table. Choose AND or OR to combine selection criteria, as required.

SQL

Select SQL to view a list of valid logical or relational operators and define a detailed SQL Where clause as selection criteria. Use this option when multiple conditions are required.

Sort

Sort columns in the Start Table to display for Point and Shoot.

File Attachments

Specify parameters to extract a file referenced within or associated with a row of extracted data and include it in an Extract File.

For this scenario, Table Specifications are not used. For complete information about Table Specifications, see the *Common Elements Manual*.

Reference Table

Under the heading **Ref Tbl**, you can select a check box to designate a table as a Reference Table. Unless selection criteria are specified for the Reference Table, all rows are selected from the table. The Start Table cannot be a Reference Table. For this scenario, designate ITEMS as a Reference Table.

Extract Parm

Under the heading **Extract Parm** on the Table List, you can enter values under the following subheadings to limit the number of rows to extract:

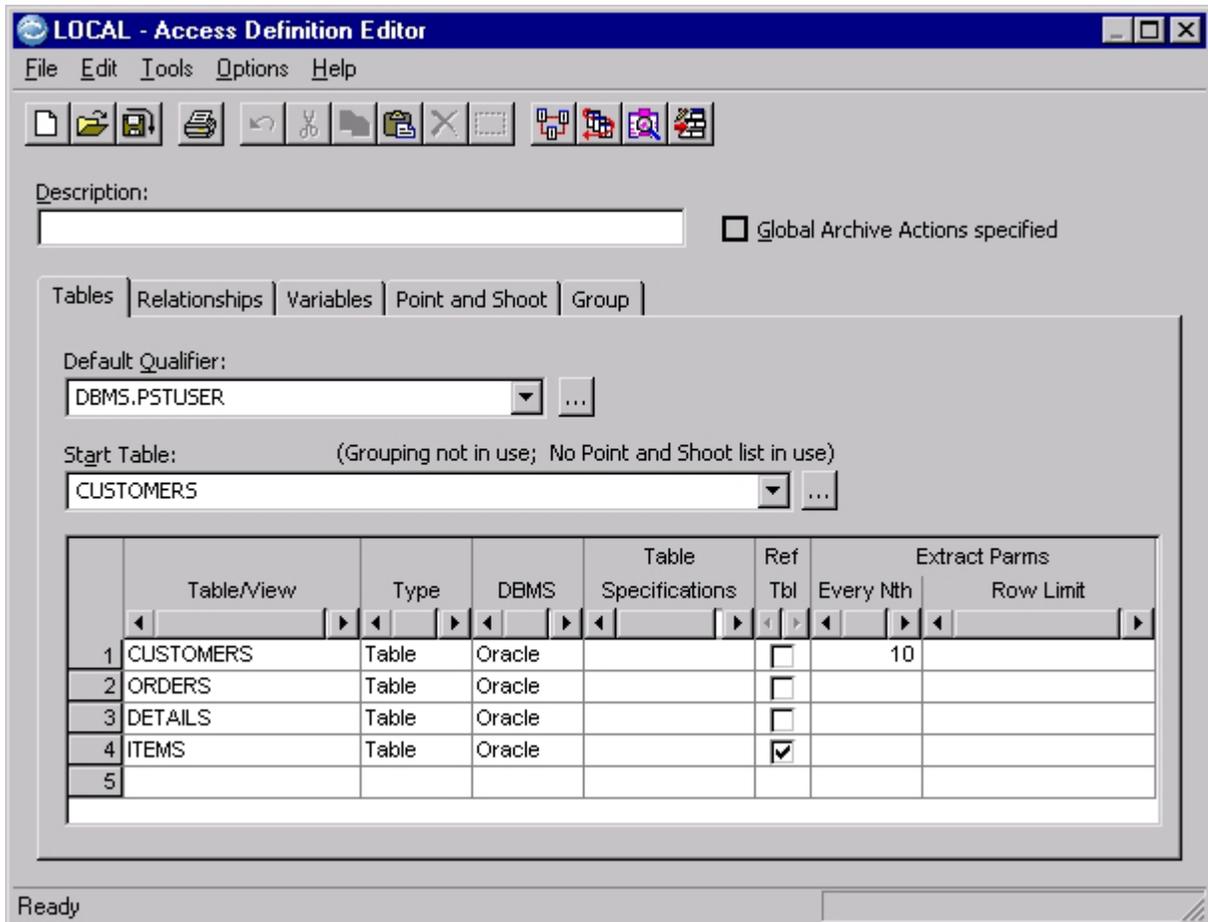
Every Nth

Enter a numerical value “N” under this heading to extract every Nth row of the corresponding table.

Row Limit

Specify the maximum number of rows to extract from a table.

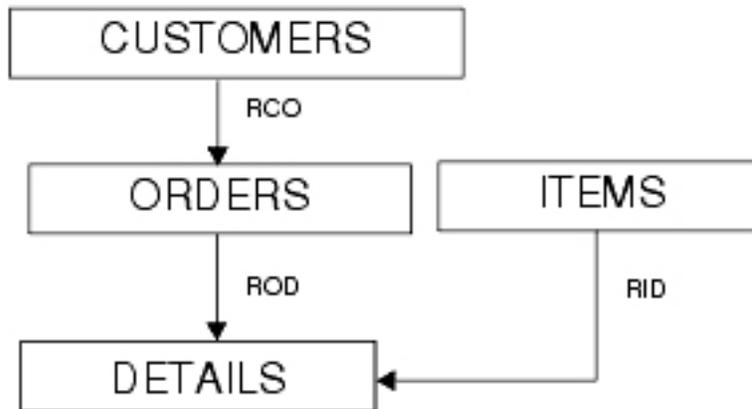
For this scenario, extract a sampling of the CUSTOMERS rows. Type the number “10” in **Every Nth** for the CUSTOMERS table to select every tenth row. Leave the **Row Limit** blank.



Define Relationships

After selecting the tables and specifying selection criteria for the data, you must define the traversal path. That is, you select the relationships to be used and the direction in which the relationships are traversed—from parent to child, from child to parent, or in both directions—during the Extract Process.

The traversal path determines the sequence in which Move selects data from tables referenced in the Access Definition. Consider the database structure of the tables you selected for extracting:



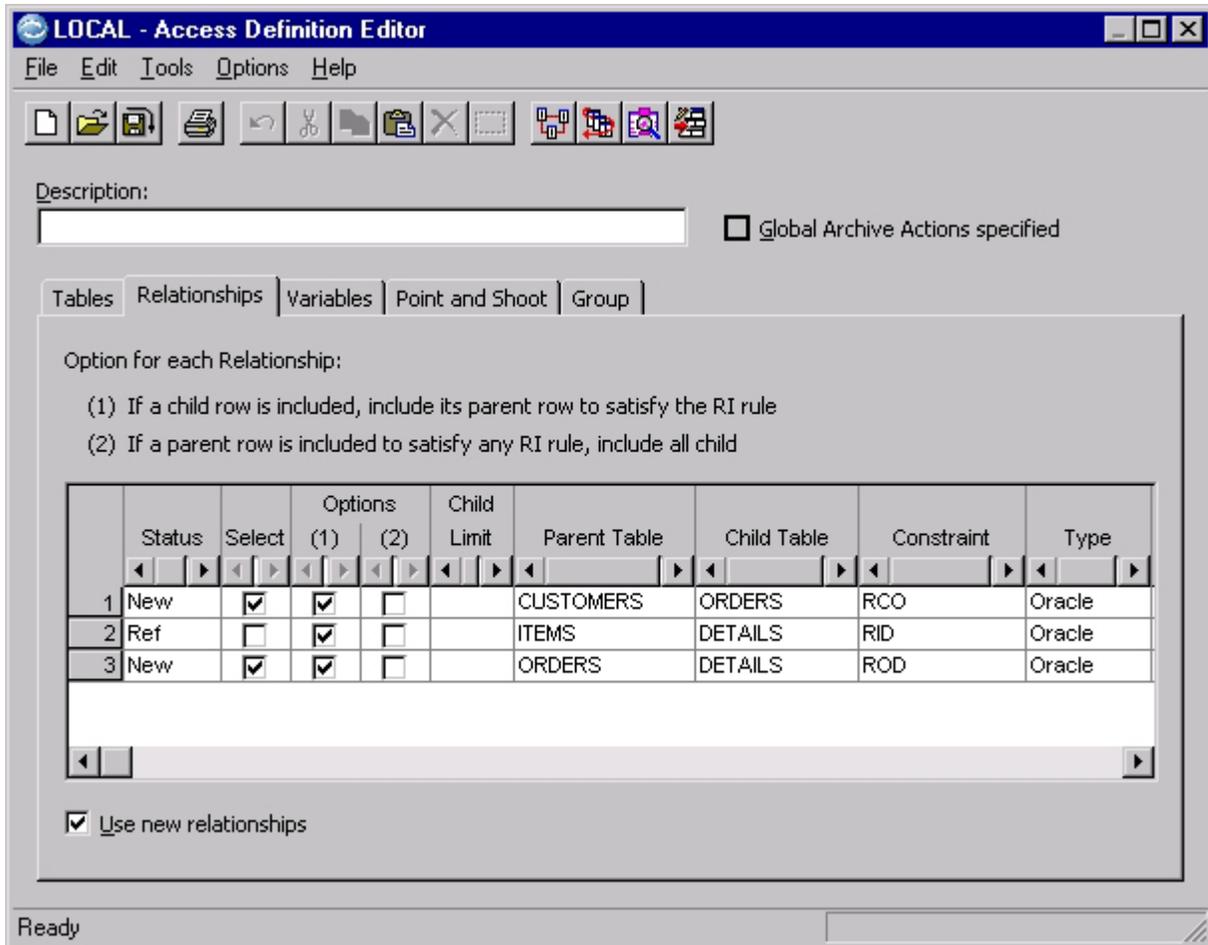
In this diagram, the relationships between tables are represented by three-character codes consisting of the letter "R", the first letter of the parent table, and the first letter of the child table.

CUSTOMERS is the Start Table, because you want to extract a subset of CUSTOMER data. Based on the relationships between each pair of tables:

- CUSTOMERS is the parent of ORDERS (relationship RCO).
- ORDERS is the parent of DETAILS (relationship ROD).
- ITEMS is not part of a traversal path, because it is a Reference Table.

To obtain the desired set of data for this scenario, you will include relationships RCO and ROD in the Extract Process and specify the direction in which Move traverses them.

Use the options on the **Relationships** tab to define the traversal path for selecting data from the tables referenced in the Access Definition. All relationships between pairs of tables in the Table List are displayed. The parent table and the corresponding child table in each relationship is provided.



Review Status

Each listed relationship has a status, which indicates:

New Relationship is listed for the first time. The status of a relationship is New the first time the list is displayed after:

- A new relationship between tables on the list is defined.
- A table is added to the list.

(After you have viewed the relationship, the status is no longer New and is shown as blank the next time you display the **Relationships** tab.)

When you run the Extract Process, a warning message advises you of any new relationships. Although you may proceed despite the warning, it may be prudent to review the relationship usage list.

Blank Relationship is defined and is not new to the list.

Ref Relationship is ignored because the parent or child table is a reference or lookup table, as specified on the **Tables** tab.

Unknown

Relationship does not exist. This condition can occur when a change in the Default Qualifier causes a new set of tables and relationships to be referenced in the Access Definition.

Relationships with Unknown status are ignored during a process. To remove a relationship in Unknown status, right-click the relationship and click **Remove** or **Remove All Unknown** in the shortcut menu.

The **Use new relationships** check box is selected by default to include all relationships with a **New** status in the Extract Process. If you clear this check box, you must manually select new relationships to include them in an Extract Process. Clearing the check box ensures that a completed Access Definition is not affected by the addition of a new relationship.

Select Relationships

The **Select** column determines whether a relationship is used in the Extract Process.

For this scenario, verify that check boxes for relationships RCO and ROD are selected.

Specify Options 1 and 2

You can use the **Options** check boxes to extend the traversal path:

- Option (1) determines whether Move traverses a relationship from child to parent and extracts a parent row for each selected child row. By default, Option (1) is selected. As a result, this setting maintains the relational integrity of the data.
- Option (2) determines whether additional child rows are extracted when a parent row is extracted because of Option (1). In other words, if Move has traversed a relationship from child to parent and extracted a parent row, all children of that parent are extracted when Option (2) is selected. By default, Option (2) is cleared.

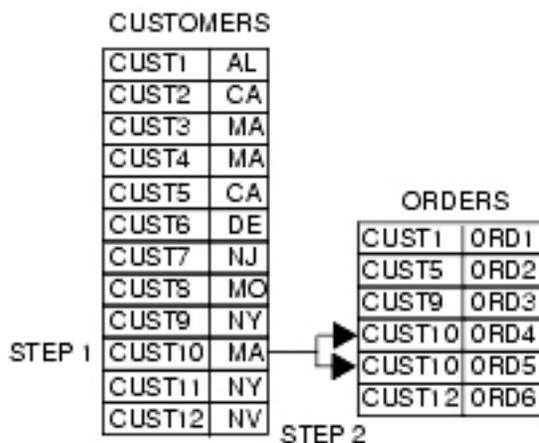
For this scenario, only Option (1) is selected because no tables will be traversed from child to parent.

Review the Access Definition

Consider the steps performed to extract the data based on the specified parameters, selected relationships and specifications for Options (1) and (2). The following simplified data is displayed for each table to aid in the explanation.

Steps:

1. Every tenth **CUSTOMERS** row is extracted based on the sampling factor.
2. The **ORDERS** rows for these **CUSTOMERS** rows are extracted because of the parent to child traversal of relationship RCO.



3. The **DETAILS** that are related to the extracted **ORDERS**, **ORD4** and **ORD5**, are extracted by traversing the relationship **ROD** from parent to child.

4. Lastly, all rows in the ITEMS table are extracted because the table is designated as a Reference

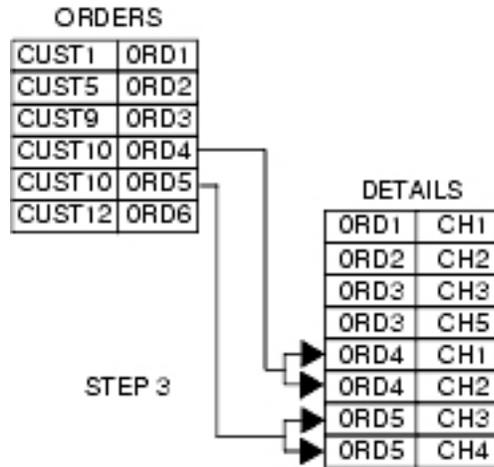
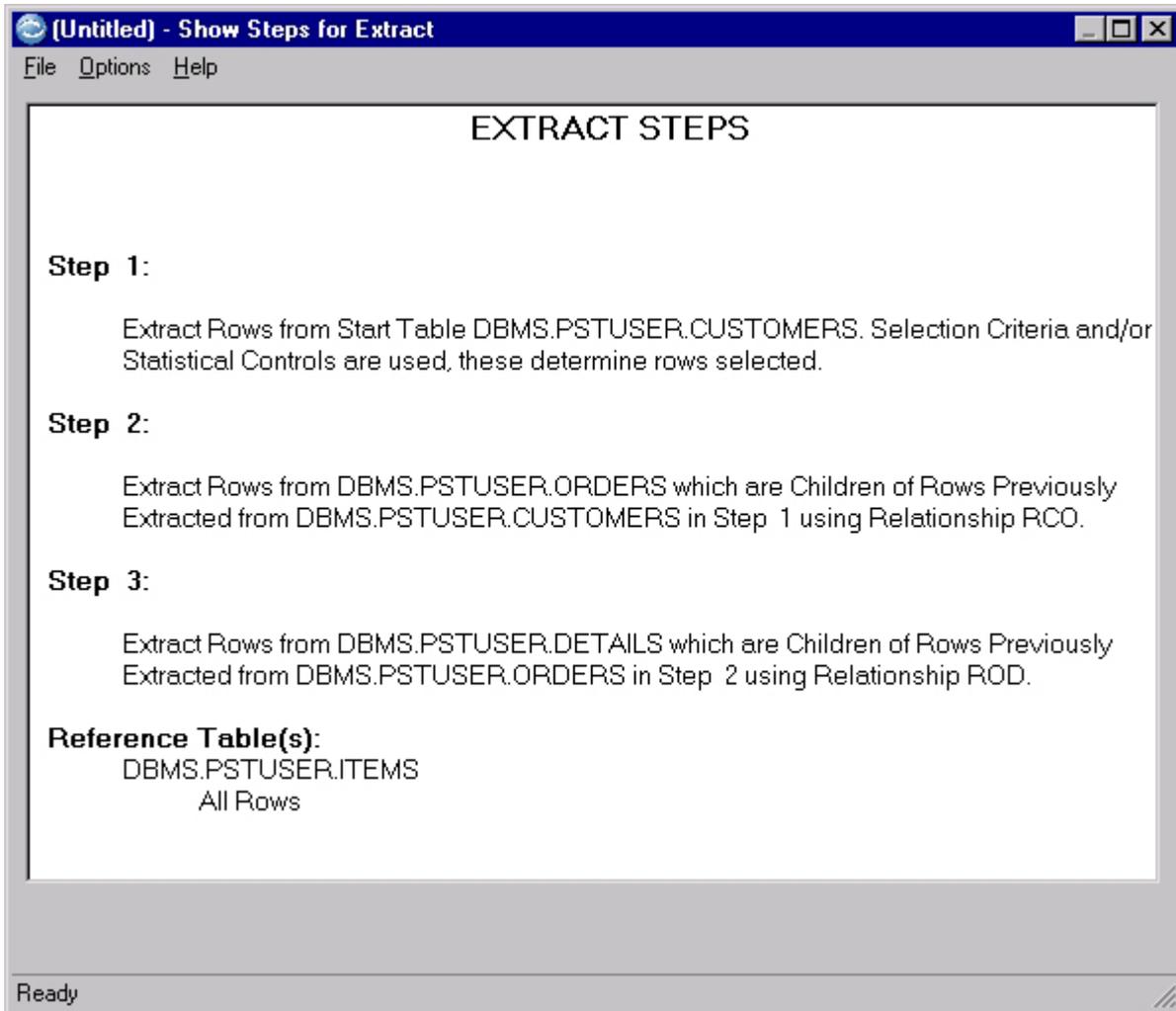


Table.

Optim provides tools in the Access Definition Editor for you to evaluate the set of data to be extracted prior to performing the Extract Process. After specifying the list of tables, selection criteria, Extract parameters and relationships, evaluate the data to extract using the **Tools** menu in the Access Definition Editor.

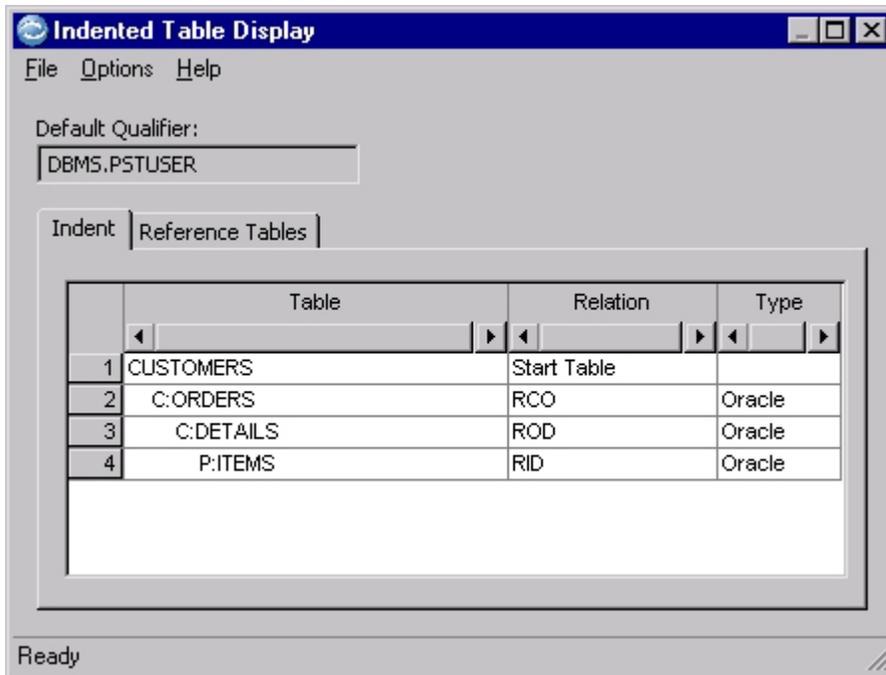
Show Steps Tool

Click **Tools > Show Steps** to display a narrative that describes the traversal path of the Extract Request. Verify the traversal path to ensure that you extract the desired set of data.



Indent Tool

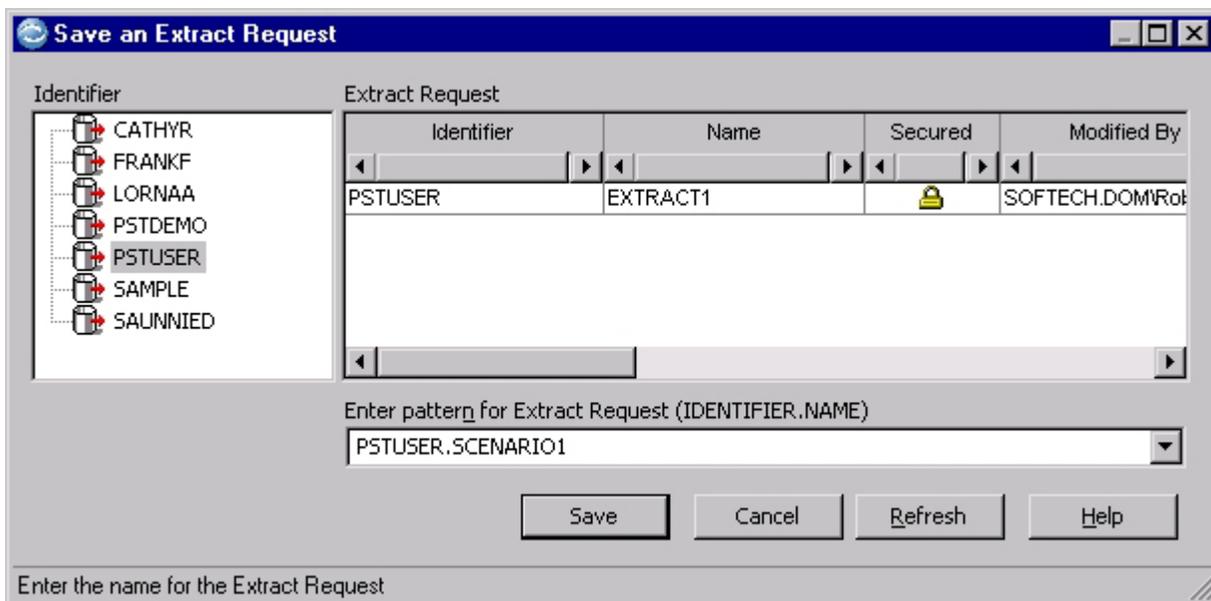
Click **Tools > Indent** from the Access Definition Editor to display the Indented Table Display dialog, which shows the list of tables formatted to show relationships. The related tables are displayed with a prefix of C or P to indicate Child table or Parent table, respectively.



Click **File > Update and Return** from the Access Definition Editor to update the Access Definition and return to the Extract Request Editor.

Save the Extract Request

Although you need not save an Extract Request to process it, Scenario 2 builds on the Extract in Scenario 1. Therefore, click **File > Save** from the Extract Request Editor to display the Save an Extract Request dialog.

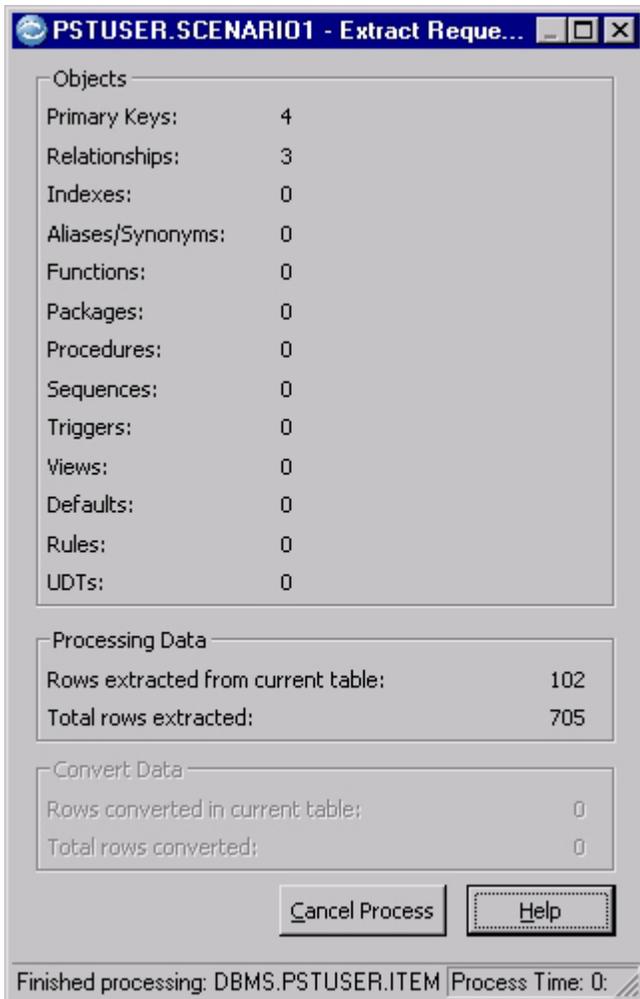


Type a two-part name (*IDENTIFIER.NAME*) in the box labeled **Enter pattern for Extract Request** to save the Extract Request.

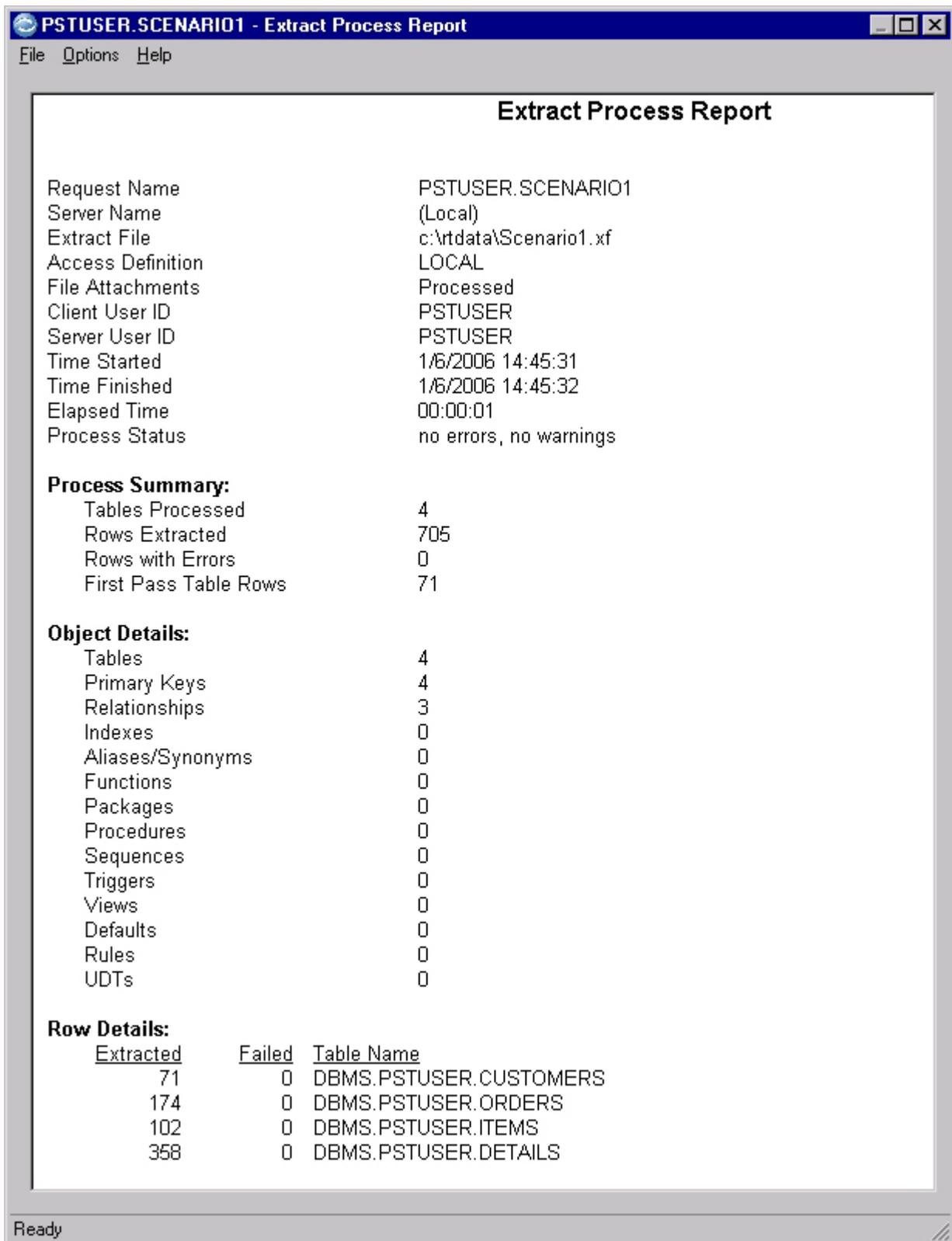
Process the Extract Request

Click **File > Run** from the Extract Request Editor to process the Extract Request, and then click to continue.

The Extract Request Progress dialog is displayed while the Extract Request is processed.



When the Extract Process is done, the Extract Process Report is displayed.



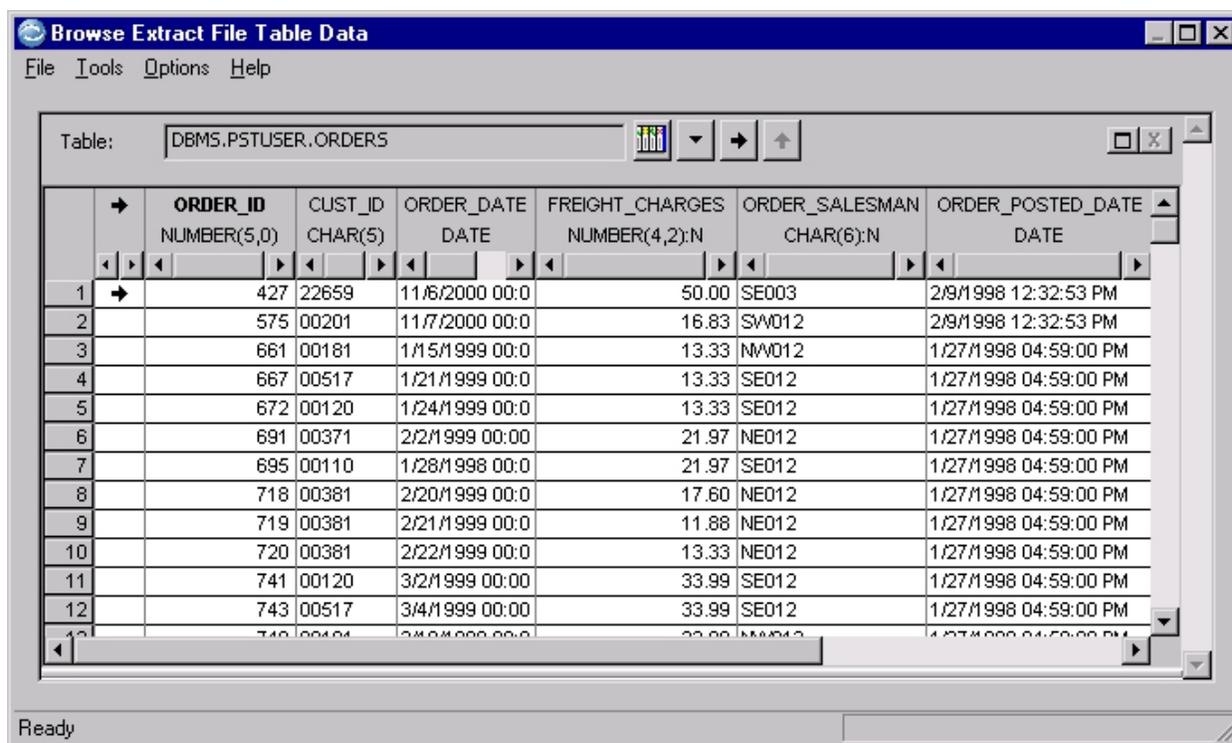
Click **File > Save As** to save the report or **File > Print** to print it.

Browse the Extracted Data

You can browse the contents of the Extract File to ensure that the extracted data is as expected. The displayed information can be viewed, but not edited.

Do the following to browse the contents of the Extract File:

- Click **Utilities > Browse** to open the Browse dialog.
- Click **File > Last Created Extract File** to open the last Extract File created.
- Double-click a table name to display the rows extracted for the particular table in the Browse Extract File Table Data dialog.



	→	ORDER_ID NUMBER(5,0)	CUST_ID CHAR(5)	ORDER_DATE DATE	FREIGHT_CHARGES NUMBER(4,2):N	ORDER_SALESMAN CHAR(6):N	ORDER_POSTED_DATE DATE
1	→	427	22659	11/6/2000 00:0	50.00	SE003	2/9/1998 12:32:53 PM
2		575	00201	11/7/2000 00:0	16.83	SW012	2/9/1998 12:32:53 PM
3		661	00181	1/15/1999 00:0	13.33	NW012	1/27/1998 04:59:00 PM
4		667	00517	1/21/1999 00:0	13.33	SE012	1/27/1998 04:59:00 PM
5		672	00120	1/24/1999 00:0	13.33	SE012	1/27/1998 04:59:00 PM
6		691	00371	2/2/1999 00:00	21.97	NE012	1/27/1998 04:59:00 PM
7		695	00110	1/28/1998 00:0	21.97	SE012	1/27/1998 04:59:00 PM
8		718	00381	2/20/1999 00:0	17.60	NE012	1/27/1998 04:59:00 PM
9		719	00381	2/21/1999 00:0	11.88	NE012	1/27/1998 04:59:00 PM
10		720	00381	2/22/1999 00:0	13.33	NE012	1/27/1998 04:59:00 PM
11		741	00120	3/2/1999 00:00	33.99	SE012	1/27/1998 04:59:00 PM
12		743	00517	3/4/1999 00:00	33.99	SE012	1/27/1998 04:59:00 PM
13		745	00120	3/4/1999 00:00	33.99	SE012	1/27/1998 04:59:00 PM

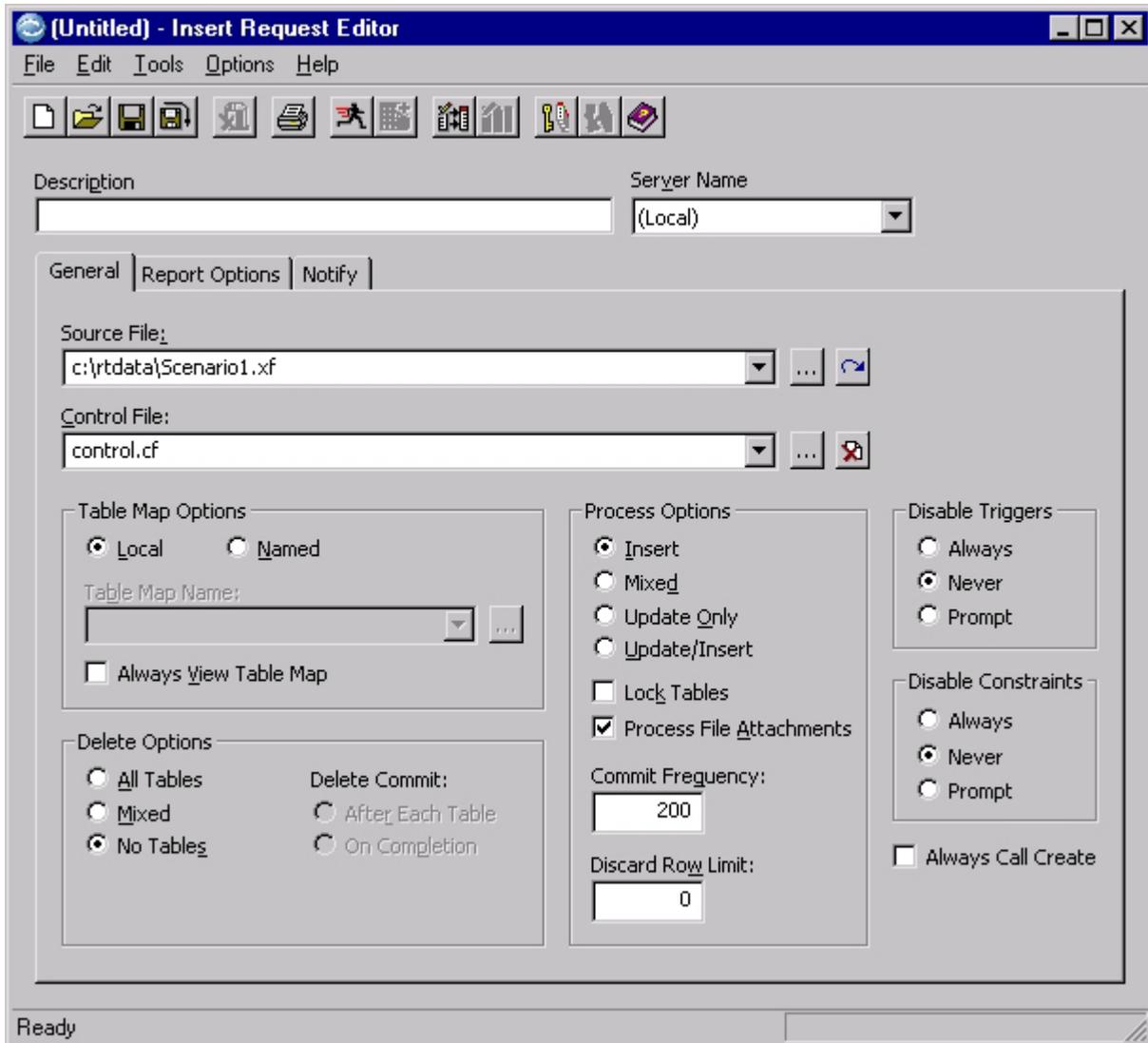
Create an Insert Request

After the referentially intact set of data is extracted and stored in the Extract File, use the Extract File as the source to insert data using the Insert Process. The parameters for the Insert Process are specified in an Insert Request.

In this scenario, you will create a test database using an Insert Request and populate the database with the data in the Extract File.

Note: If you are not authorized to create new tables, you may be unable to continue this scenario. Check with the site management for the destination tables to use.

To begin the Insert Process, click **File > New > Insert** from the main window to display the Insert Request Editor.



Use the Insert Request Editor to create and edit requests for inserting data into a database. You can enter a **Description** to indicate the purpose or function of the Insert Request.

If the optional Optim Server component is installed, you can use the **Server Name** box to select a server on which to process the request, or select **Local** to process the request locally. For this scenario, select **Local**, which is the default.

Use the **General** tab to specify parameters for the Insert Process. The other tabs are not used.

Source File

Enter the name of the Extract File that contains the data to insert.

For this scenario, click the Last Extract button  to select the last Extract File created. If the

Scenario 1 Extract File was not the last Extract File created, use the Browse button  to locate the file.

Control File

Enter the name of a Control File. A Control File is generated during the Insert Process to track the success or failure of each row in the Extract File. Control Files have a .cf extension by default.

Table Map Options

A Table Map directs the placement of data in the Insert Process by identifying and matching tables in the source, or Extract File, with those in the database. In addition, you can use a Table Map to exclude tables from processing.

Table Map Options allow you to use a named Table Map that is saved and can be used with other process requests, or a Local Table Map that is saved as part of the Insert Request.

For this scenario, select **Local** to create a Local Table Map.

Always View Table Map

Use this option to open the Table Map Editor each time you run the Insert Request. This option provides an opportunity to review the Table Map specifications before you insert data.

For this scenario, do not select this option.

Delete Options

Delete Options let you delete rows from all or specified destination tables or retain all rows in destination tables (no delete).

For this scenario, use the default setting **No Tables** to retain rows already in the database.

Process Options

Process Options allow you to select the type of Insert Processing to be performed and specify parameters to be used. You can insert new rows only; insert new rows and update existing rows; or update existing rows only. You can apply these options globally or on a table-by-table basis.

For this scenario, select **Insert** to insert new rows of data into the specified tables.

Process File Attachments

Select this check box to insert file attachments specified in the Access Definition.

Lock Tables

Select this check box to lock database tables (if authorized) to ensure that other database activity does not interfere during processing.

For this scenario, do not select this option. Lock Tables is not applicable to this scenario because the tables you create for the test database are new.

Commit Frequency

Specify the number of rows to process before committing the changes to the database.

For this scenario, use the default Commit Frequency established by the system administrator. (See the *Installation and Configuration Guide*.)

Discard Row Limit

Specify the maximum number of rows that can be discarded. When the specified limit is reached and all rows in the array have been processed, the Insert Process is cancelled.

For this scenario, use the default setting of **0** to allow an unlimited number of discarded rows.

Disable Triggers

Specify options to disable database triggers during the Insert Process.

For this scenario, use the default setting. For complete information about disabling triggers in an Insert Request, see "Disable Triggers" on page 123.

Disable Constraints

Specify options for disabling referential integrity constraints.

For this scenario, use the default setting. For complete information about disabling constraints in an Insert Request, see "Disable Constraints" on page 124.

Always Call Create

Select this option to always start the Create Utility to create or drop objects in the destination

database before inserting the data. If you do not select the option, the Create Utility starts only when necessary to create desired objects in the destination database.

For this scenario, do not select this option.

Note: The **Age Function** and **Global Aging** tabs are used to age data. The **Report Options** tab enables you to customize the process report, and the **Currency** tab is used to specify default currency conversion factors. For this scenario, the data is not aged, the report is not customized, and currency is not converted, therefore these tabs are not used. See “Using the Insert Request Editor” on page 116 for detailed information about Insert Requests.

Edit the Table Map

In an Insert Process, you use a Table Map to direct the placement of data. A Table Map matches the source tables in the Extract File to the destination tables in the database.

To display the Table Map Editor, click **Tools > Edit Table Map** from the Insert Request Editor.

Note: If the **Always View Table Map** option is selected in the Insert Request Editor, the Table Map Editor automatically displays when you run the process. This option allows you to verify the Table Map.

Source

Displays the Extract File and **Qualifier** associated with the source data.

Destination

Enter the **Qualifier** for the destination data. For this scenario, enter the same Destination Qualifier as the Source Qualifier.

Description

You can enter an optional description of the Table Map.

Column Map ID

Specify a default Qualifier for Column Maps used in the Table Map. Use a Column Map to correlate source and destination columns and to transform source data before inserting it. For this scenario, leave the box blank because Column Maps are not used.

Server Name

Displays the name of an Optim Server or Local, to indicate where processing will take place

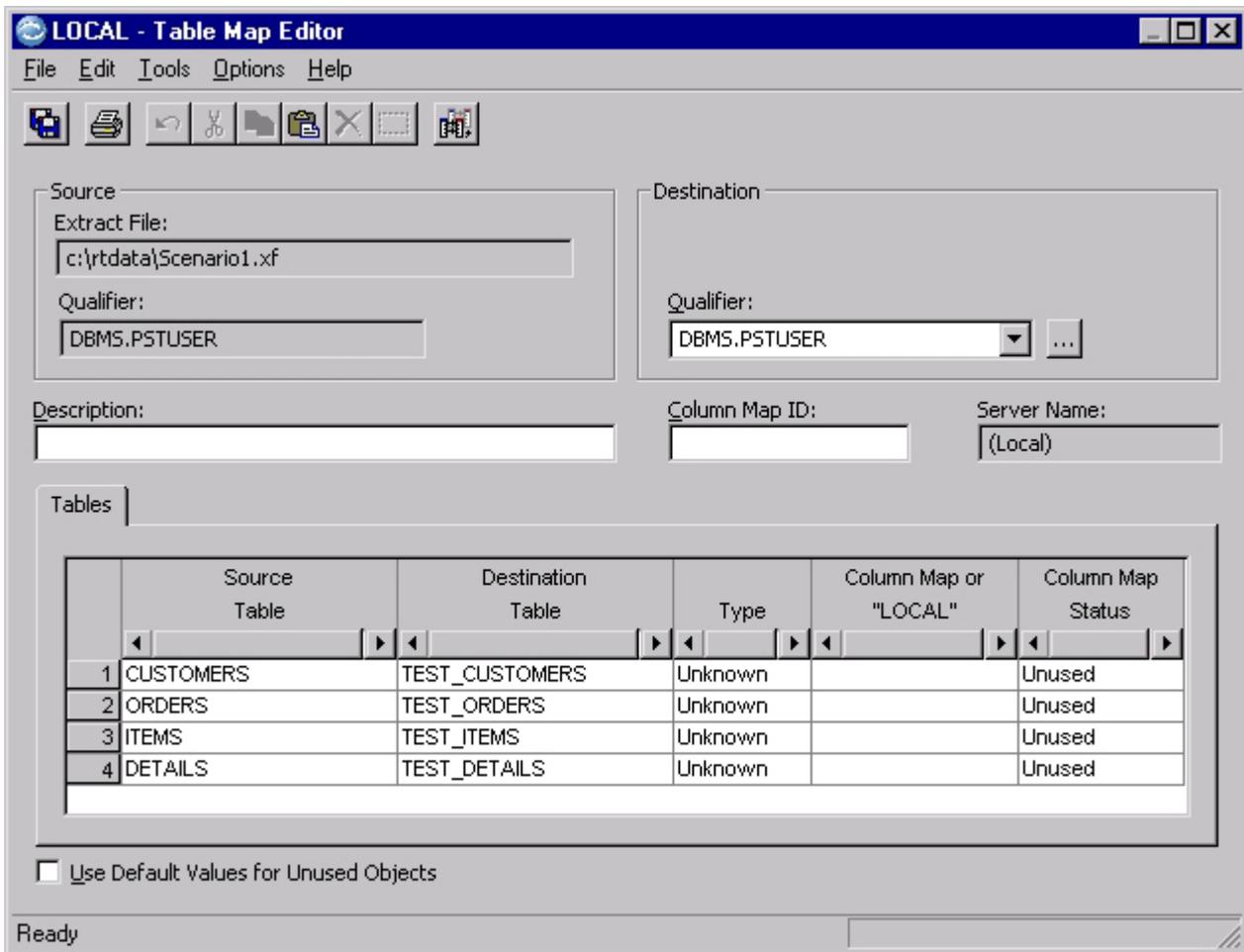
Source Table

Lists the source table names in the Extract File.

Destination Table

Lists the destination table names. When you create a new Table Map, the destination table names are the same as the source table names by default. You can modify the destination table names. For this scenario, prefix the destination table names with Test_ to create new tables for the test database.

Type Identifies the type of object in **Destination Table**. For this scenario, **Type** will display Table for each destination table until you change the table names. After you change the names, **Type** will display Unknown for each new table name.

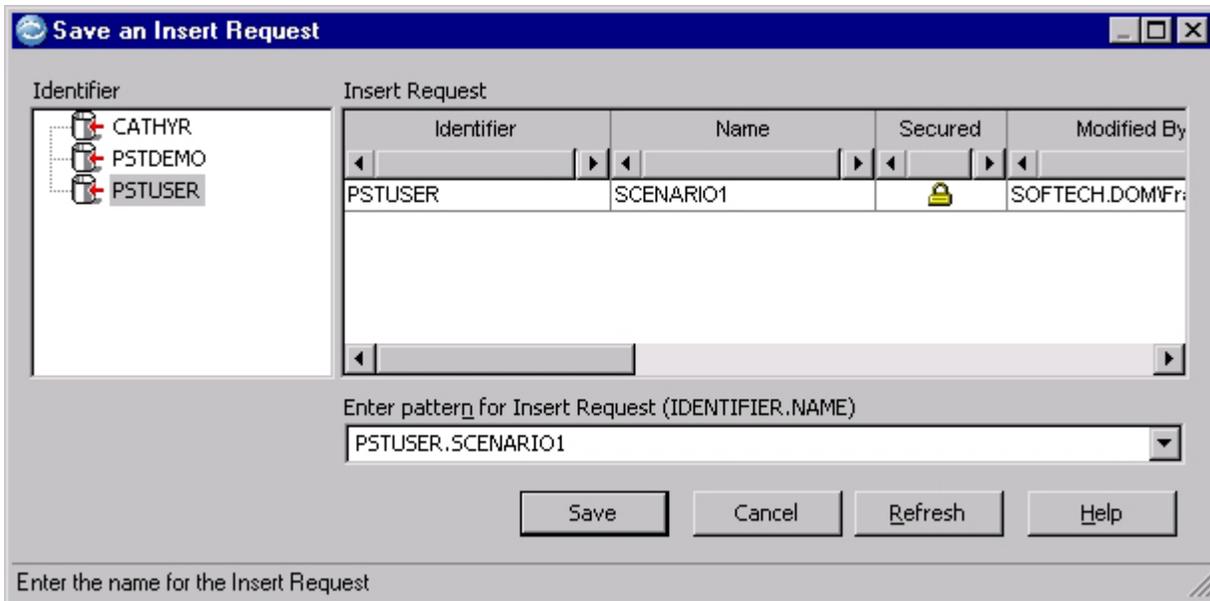


Click **File > Update and Return** from the Table Map Editor to return to the Insert Request Editor.

For further information about Table Maps, see the *Common Elements Manual*.

Save the Insert Request

Although you need not save an Insert Request to process it, Scenario 2 builds upon the Insert in Scenario 1. Therefore, click **File > Save** from the Insert Request Editor to display the Save an Insert Request dialog.



Type a two-part name (*IDENTIFIER.NAME*) in the **Enter pattern for Insert Request** box to save the Insert Request. You can give the Insert Request the same name as the Extract Request, if desired.

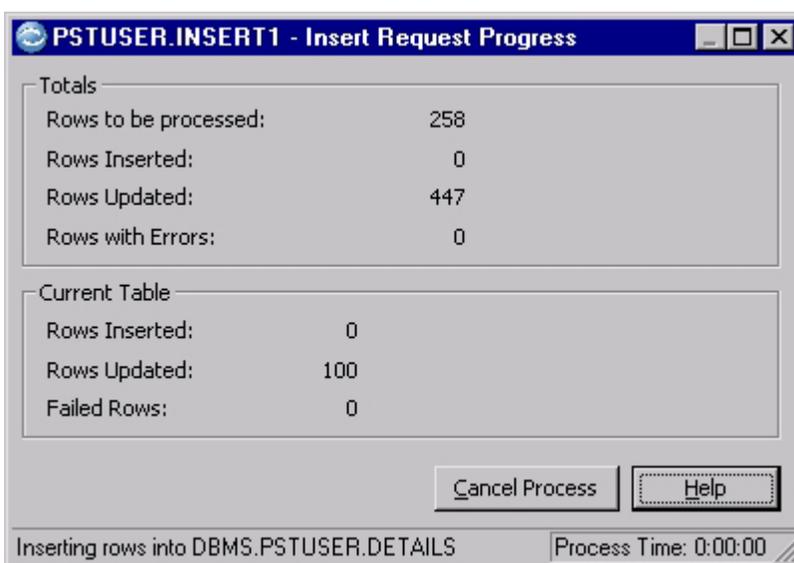
Process the Insert Request

To process the Insert Request, click **File > Run** from the Insert Request Editor.

Note: If you are not authorized to create new tables, you may be unable to continue this scenario. Check with the site management for the destination tables to use.

Insert Progress

The Insert Request Progress dialog is displayed while the Insert Request is processed. The Insert Process populates the tables with the data from the Extract File.



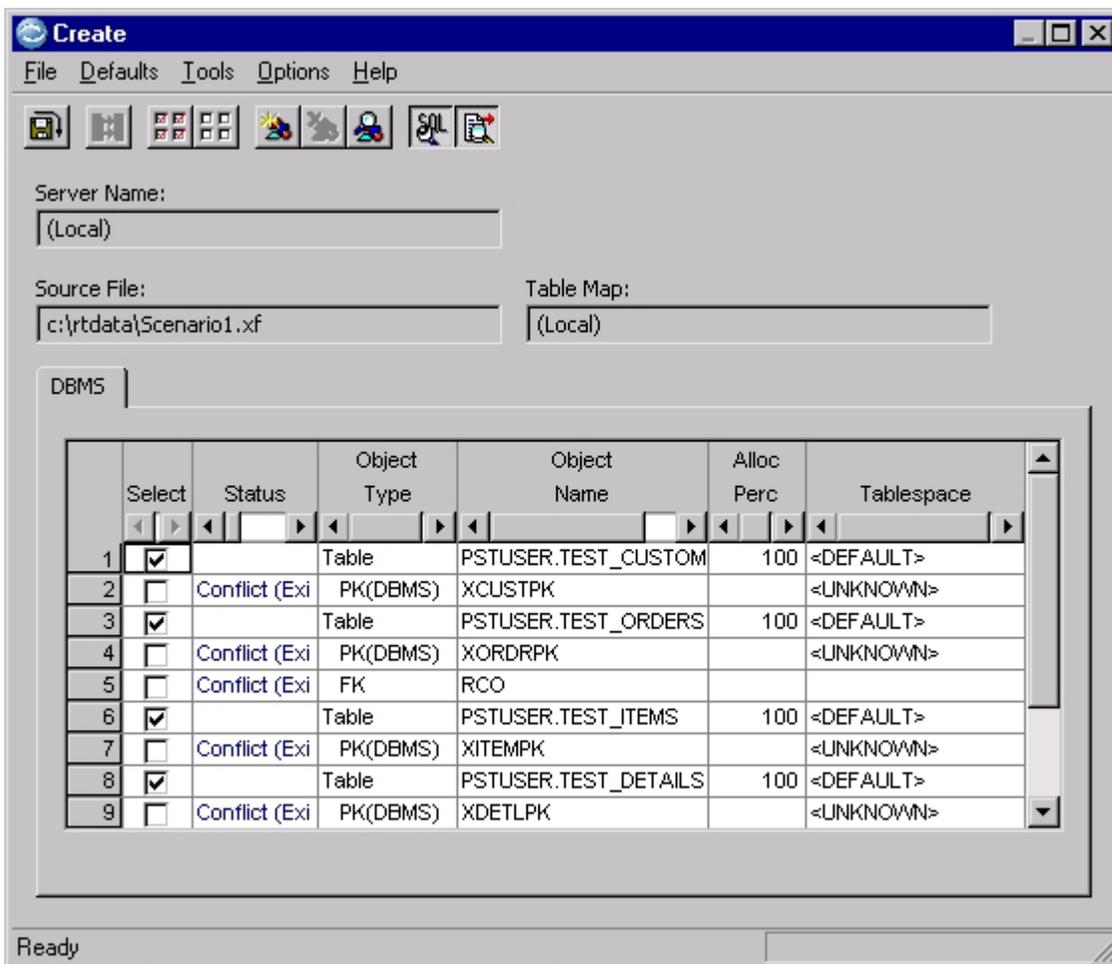
Create Utility

If the status of any table in the Table Map is Unknown, meaning it does not exist, the Create Utility is opened. The Create Utility uses the object definitions in the Extract File to create those objects in the database.

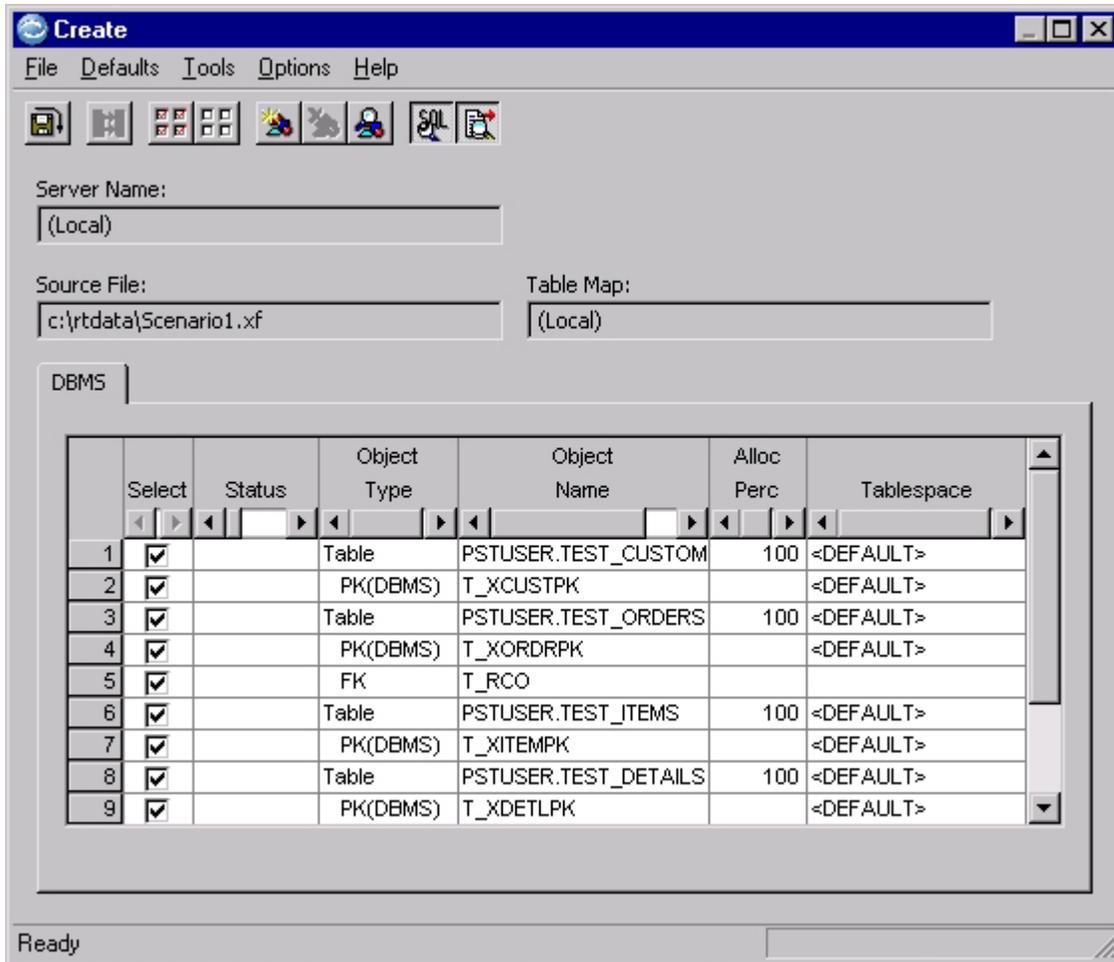
When the Create Utility is opened, the Create dialog lists all objects in the Extract File that do not exist at the destination. Objects that do not exist at the destination are selected for the Create Process by default, unless a conflict exists.

In this scenario, the object types **PK** (for Primary Key) and **FK** (for Foreign Key) are in conflict. The **Object Names** of the Primary Keys and Foreign Keys in the Extract File conflict with names that already exist in the database.

Note: The Create dialog may differ slightly from the example shown, depending on the database you use. For this scenario, the Oracle version is displayed.



For this scenario, resolve the conflicts by changing the **Object Name** for the objects in Conflict status. For example, insert T_ before each name, as shown below.



To create the objects, click **Tools > Create All Selected Objects** from the Create dialog, or right-click and select the command from the shortcut menu.

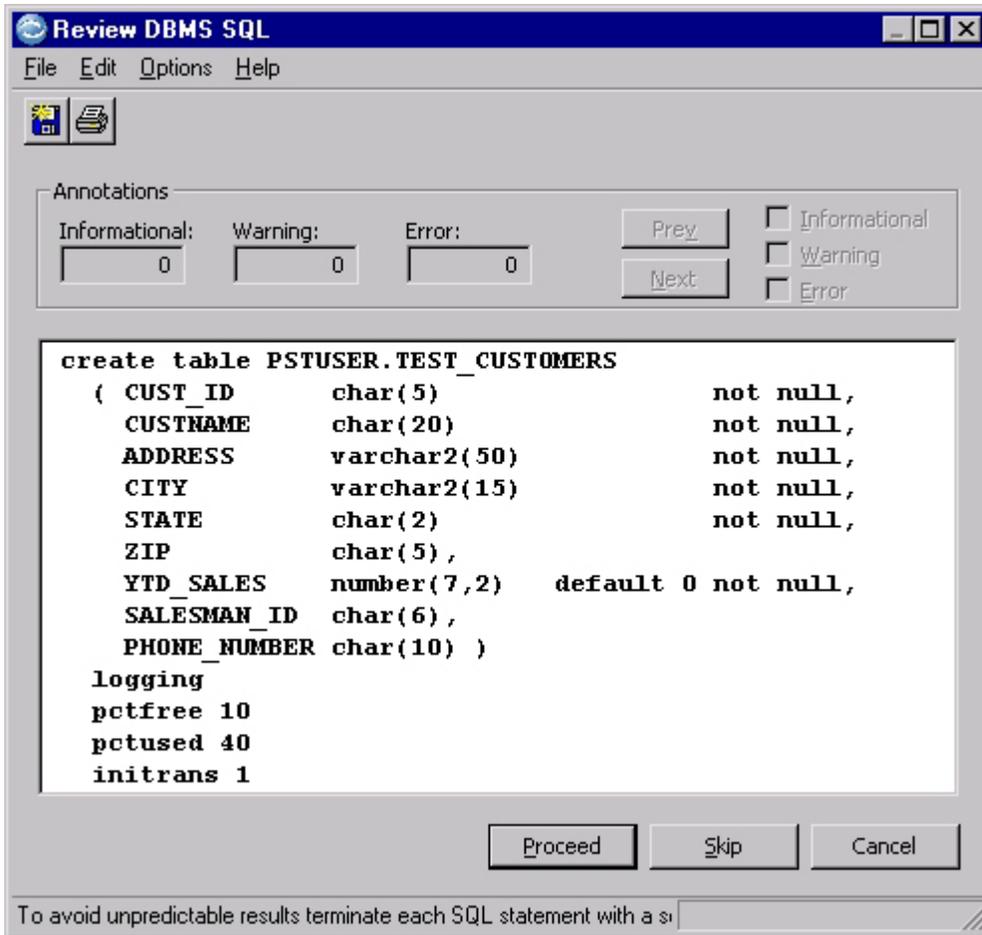
Note: You can also create each object individually using **Create Object** from the shortcut menu.

Review SQL

The Review SQL dialog is displayed by default to enable you to examine the SQL produced to create the objects. The SQL can be edited, if necessary.

For this scenario, click **Proceed** to create the objects.

Note: If there are errors, the Review SQL dialog displays again. You can edit the SQL to try to correct the problem, or abandon the Create Request.

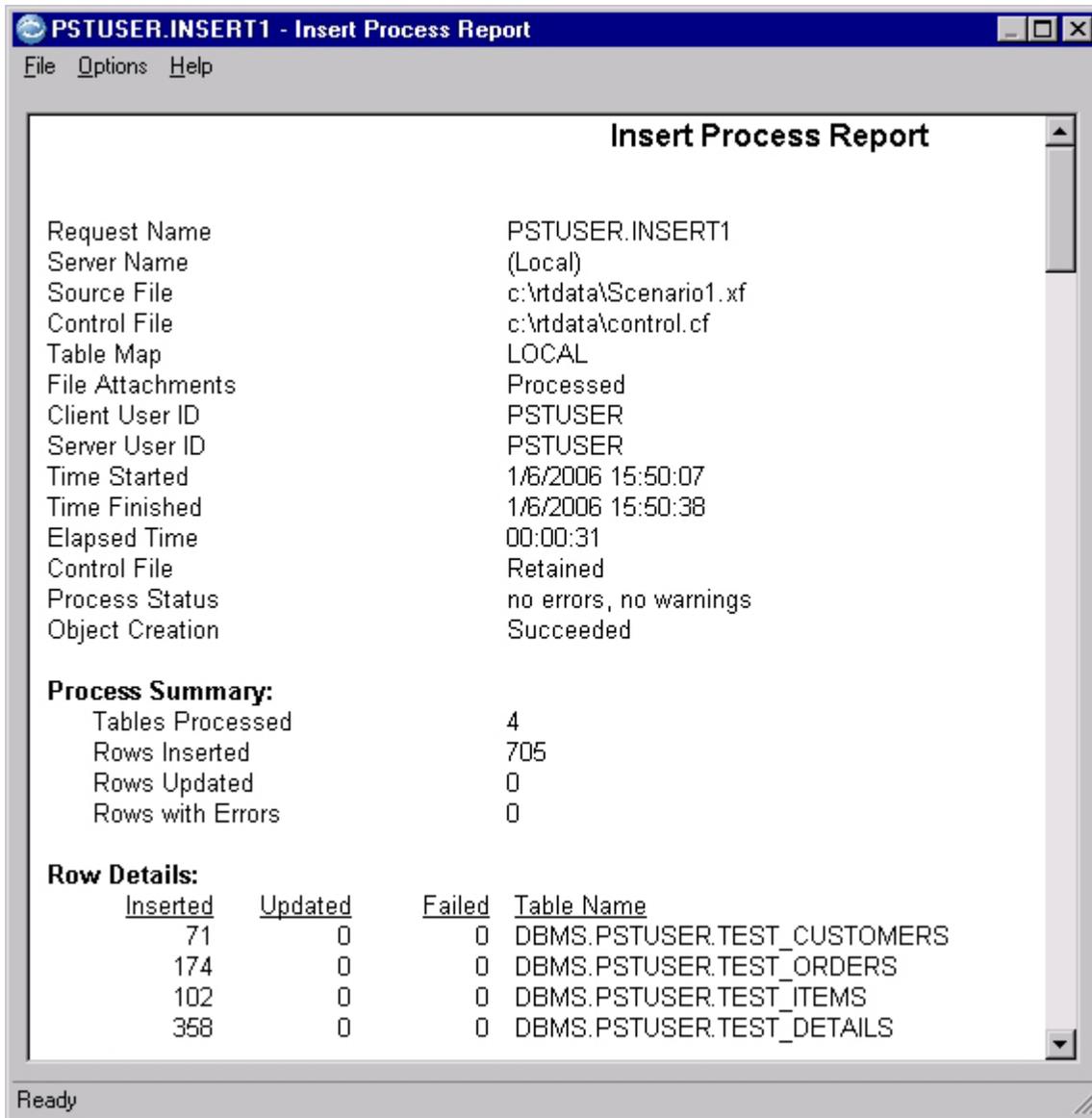


After the objects are created, the Browse SQL dialog is displayed, enabling you to browse the SQL statements and the results of the Create Utility. Click **Continue** to return to the Create dialog. The objects successfully created are displayed with the status of Created.

After the new objects are created at the destination, click **File > Close** from the Create dialog.

Insert Process Report

When the Insert Process has completed, the Insert Process Report is displayed. The report provides statistics and general information about the Insert Process.



Note: The report information displayed in the sample illustration may vary from the results displayed on your workstation.

You can optionally save or print the Insert Process Report. Click **File > Save As** to save the report or **File > Print** to print it. To return to the Insert Request Editor, click **File > Close**.

Scenario 2 – A Set of Items

In this scenario, you will use the same set of tables from the sample database that are used for Scenario 1, but the Extract Process in Scenario 2 is more complex. Scenario 2 also demonstrates Move's ability to transform, age, and update when migrating the set of data. Similar to Scenario 1, Scenario 2 demonstrates how to migrate a relational set of data in two steps.

The first step describes how to specify, extract, and store a relational set of data.

- An Extract Request lists the specifications for the Extract Process.
- An Access Definition specifies the data to extract.

- A Point and Shoot list specifies the exact rows from the Start Table to extract.
- An Extract File stores the extracted set of data.
- An Extract Process Report records the results of the Extract Process.

The second step describes how to transform data, insert the new data, and update existing data in the destination tables.

- An Insert Request contains the specifications for the Insert Process.
- A Table Map specifies the destination of the data.
- A Column Map specifies the transformation of the data.
- The relational set of data stored in the Extract File populates the destination tables.
- An Insert Process Report records the results of the Insert Process.

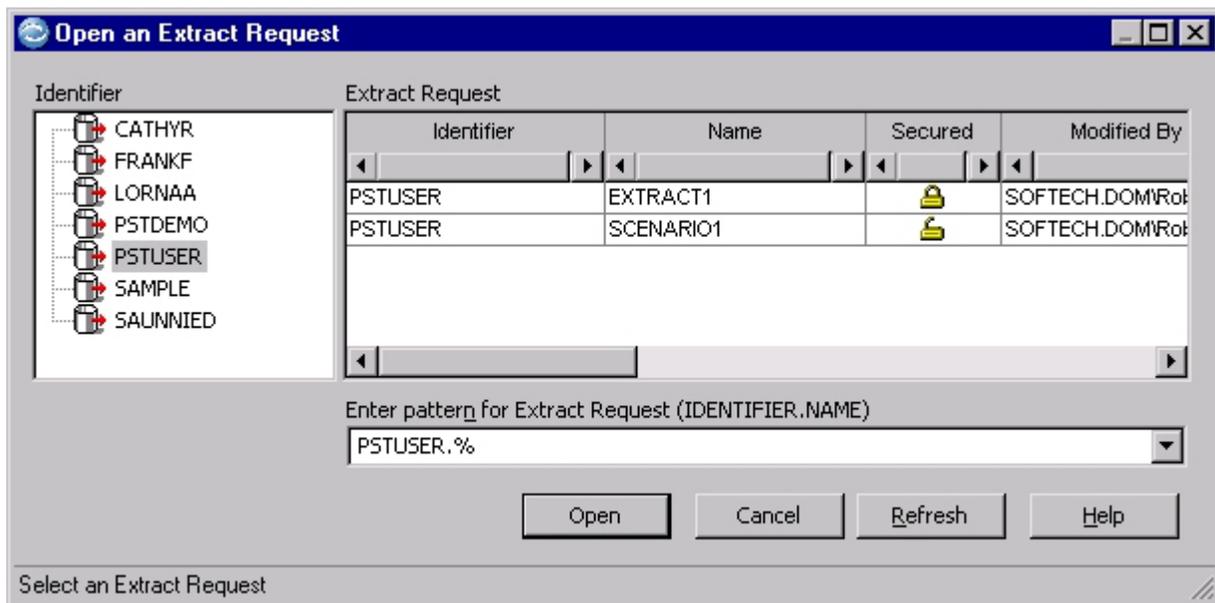
Scenario 2 directs you through the steps required to extract a set of data for specific items, including the details and the orders for the items. To obtain the desired set of data, you will specify the ITEMS table as the Start Table and select specific ITEMS rows using the Point and Shoot Editor. Since the extracted set of data must be referentially intact, this scenario will include the orders for these items (from the ORDERS table), the customers who placed the orders (from the CUSTOMERS table), and the DETAILS table rows for any order that contains the selected items.

Scenario 2 uses the same destination tables created in Scenario 1. The Insert Process in Scenario 2 also updates the destination data and uses a Column Map to modify data.

Open the Extract Request

This scenario builds on the Extract Request created in Scenario 1. To begin, open that Extract Request.

Click **File > Open** from the the main window. Double-click **Extract Request** in the **Identifier** list box to display the list of saved Extract Requests on the Open an Extract Request dialog. Double-click the name of the Extract Request saved from Scenario 1.



Optim populates the Extract Request Editor with the specifications saved in Scenario 1.

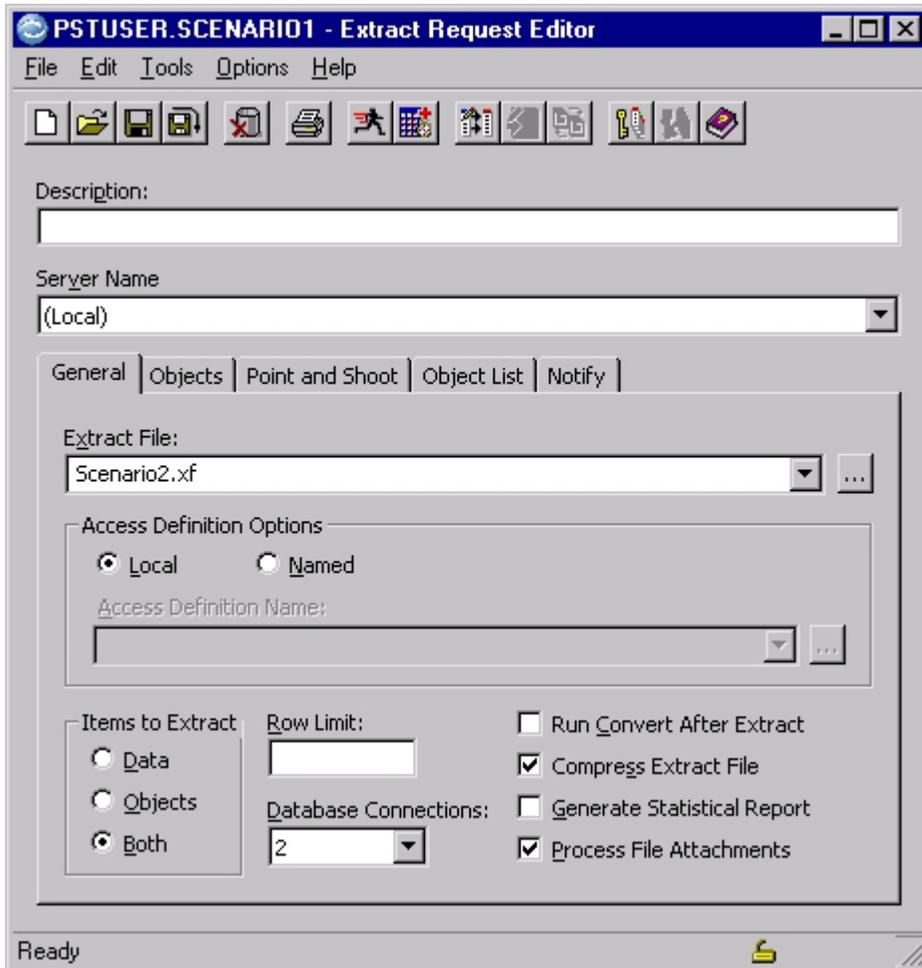
Rename the Extract Request

Before you modify the Extract Request for Scenario 2, click **File > Save As** to display Save an Extract Request dialog and create a copy of the original Extract Request.

Type a new name for the request to create a copy of the Extract Request for Scenario 2. The original Extract Request will remain unchanged and modifications for Scenario 2 will apply only to the new copy.

For this scenario, modify the Extract Request as follows:

- Type a new **Description**.
- On the **General** tab, type a new **Extract File** name.



Note: In this scenario, all the other Extract Process parameters are used at the default settings. For additional information about other parameters available in an Extract Request, see “Using the Extract Request Editor” on page 87.

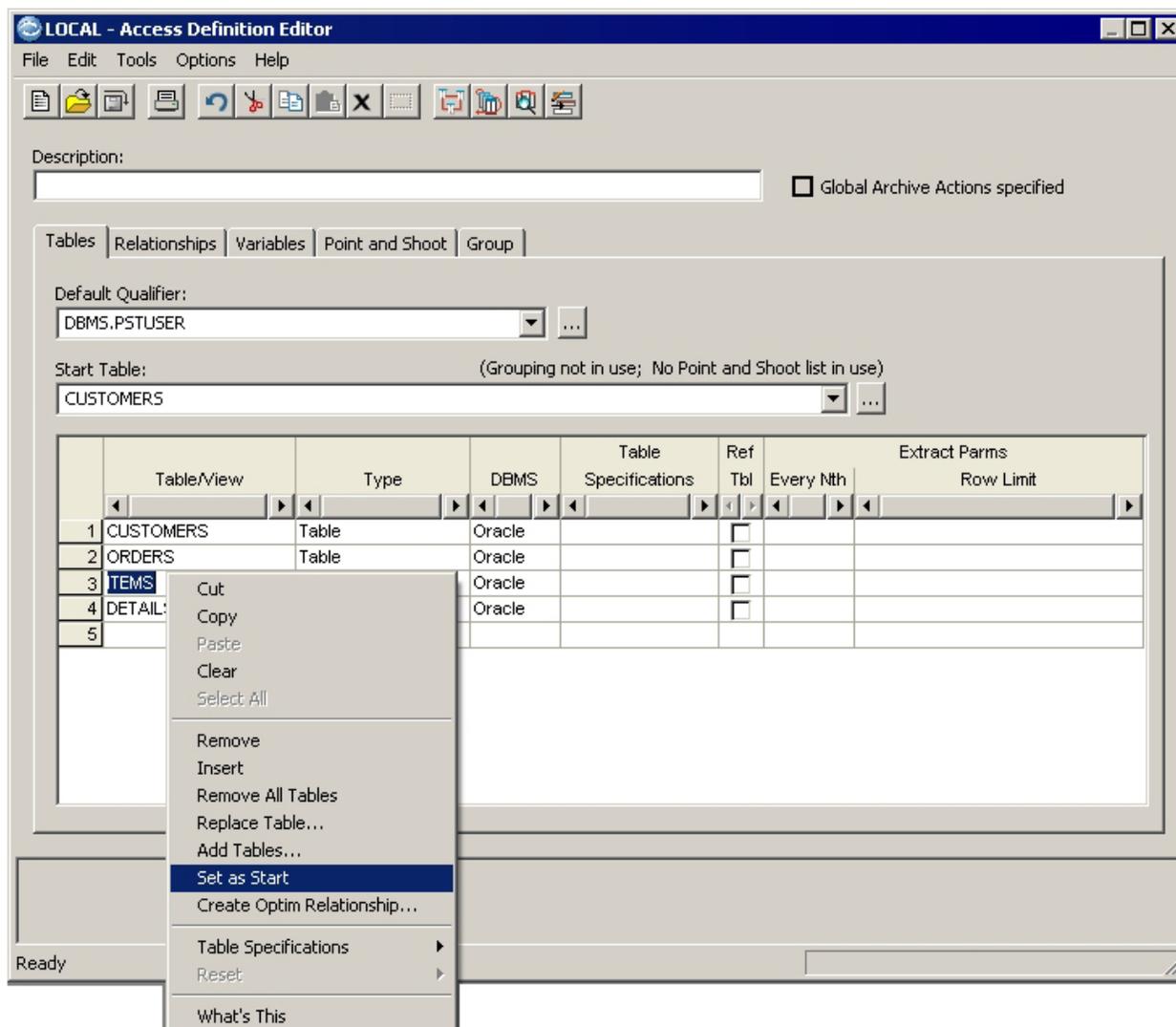
Modify the Local Access Definition

Click **Tools > Edit Access Definition** from the Extract Request Editor to display the Access Definition Editor.

For this scenario, modify the Access Definition as follows:

- Change the **Description** of the Access Definition.
- On the **Tables** tab, clear the **Every Nth** column for the CUSTOMERS table.
- Clear the check box in the **Ref Tbl** column for the ITEMS table. (To begin the Extract Process with rows from the ITEMS table, the ITEMS table must be designated as the Start Table. The Start Table cannot be a Reference Table.)

- Right-click the ITEMS table and click **Set as Start** in the shortcut menu to designate ITEMS as the Start Table.



Select ITEMS Rows using Point and Shoot

Use the Point and Shoot Editor to select individual Start Table rows that will be used to begin the Extract Process. The Point and Shoot Editor displays all of the rows from the Start Table, allowing you to view the data you select. In this scenario, specific ITEMS rows are selected.

To display the Point and Shoot Editor, click **Tools > Edit Point and Shoot List** from the Access Definition Editor.



For this scenario, do the following in the Point and Shoot Editor:

- Select the check box in the **Sel** column for the first four rows.
- Click **Tools > Convert to Local**, and click **Yes** in the confirmation pop-up. This option creates a local Point and Shoot list, which is stored with the Access Definition only; otherwise, the Point and Shoot list is stored in the Optim Directory.
- Click **File > Update and Return** to return to the Access Definition Editor.

For further information on using the Point and Shoot Editor, see the *Common Elements Manual*.

The **Point and Shoot** tab in the Access Definition Editor indicates the Point and Shoot list option selected:

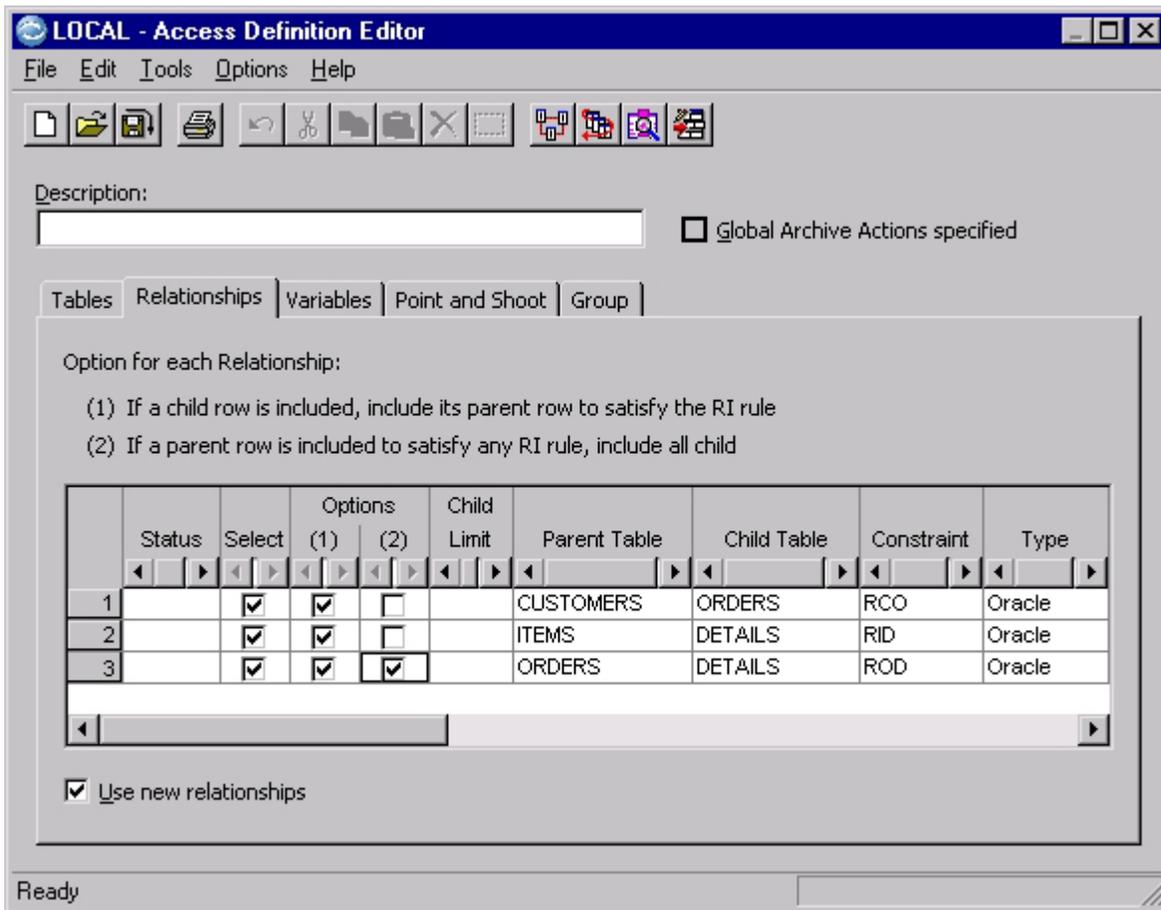
- None** Specifies that a Point and Shoot list is not used with the Access Definition. Select this choice to drop an existing Point and Shoot list.
- Local** Specifies that a local Point and Shoot list is saved as part of the Access Definition but not saved as a file, and therefore not available to use with other Access Definitions.
- File** Indicates that a named Point and Shoot File is specified for the Access Definition. You can change to a different Point and Shoot list, as required.

Define Relationships

On the **Relationships** tab, review the relationships and the traversal path to be used in the Extract Process. The extracted set of data must be referentially intact; therefore, for this set of data, the Extract Process begins with the rows specified from the ITEMS table and proceeds to the related children from the DETAILS table.

To ensure that the relationships between DETAILS and ORDERS and between ORDERS and CUSTOMERS are traversed from child to parent, select **Option (1)** for these relationships. (This is the default.)

In order to retrieve the additional DETAILS rows for the ORDERS rows and extract complete order information, select **Option (2)** for the relationship ROD between ORDERS and DETAILS. This option will ensure that the Extract Process retrieves all rows from the child table (DETAILS) related to the parent table (ORDERS).



For this scenario, do the following in the **Relationships** tab:

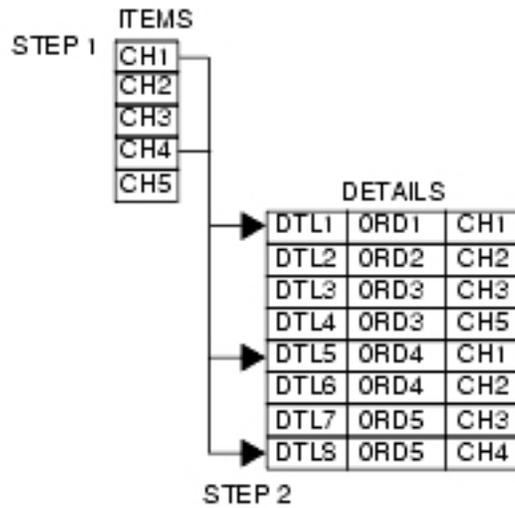
- Verify that the **Select** check box is selected for each relationship.
- Verify that the **Option (1)** check box is selected for each relationship.
- Select the **Option (2)** check box for the relationship between ORDERS and DETAILS.

Review the Access Definition

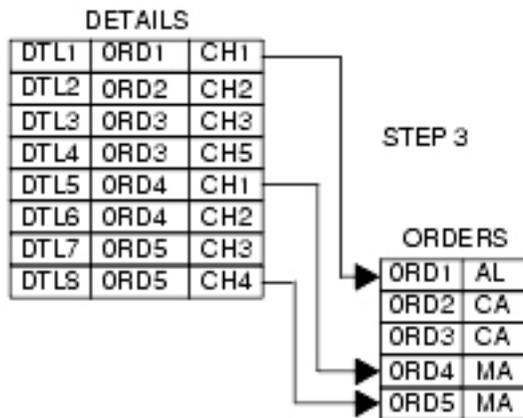
Consider the steps performed to extract the data based on the selection criteria, selected relationships, and specifications for Options (1) and (2). The following simplified data is displayed for each table to aid in the explanation.

Steps:

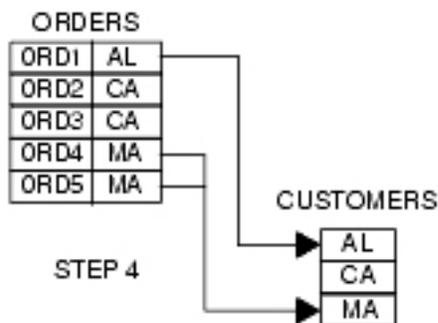
1. The rows from the Start Table, ITEMS, are selected by Point and Shoot to extract specific items. The specific ITEMS in this example are CH1 and CH4.
2. The DETAILS rows for these ITEMS rows are extracted because the DETAILS are children of the previously selected ITEMS using the relationship RID. The extracted DETAILS rows are DTL1, DTL5, and DTL8.



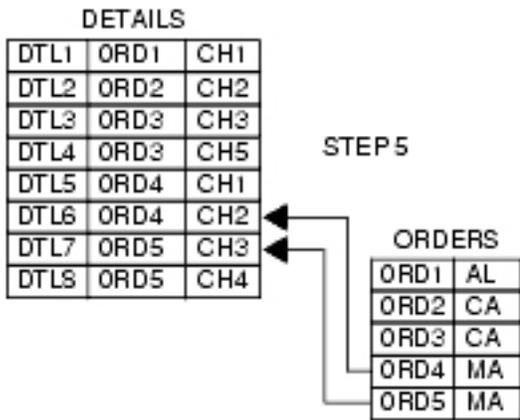
- The ORDERS related to the extracted DETAILS rows, ORD1, ORD4 and ORD5, are extracted by traversing the relationship ROD from child to parent.



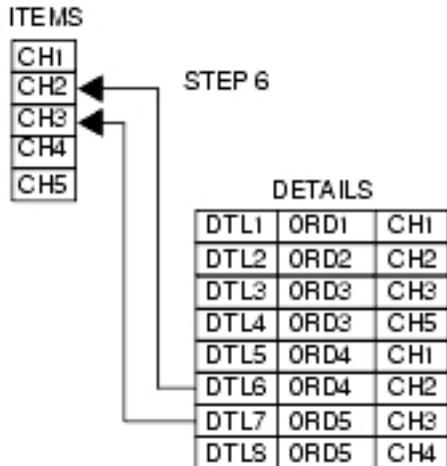
- The CUSTOMERS related to the ORDERS are extracted by traversing the relationship RCO from child to parent.



- The additional DETAILS for the extracted ORDERS are extracted by traversing the relationship ROD from parent to child because Option (2) is selected. Additional DETAILS rows for ORDERS rows ORD4 and ORD5 are extracted.

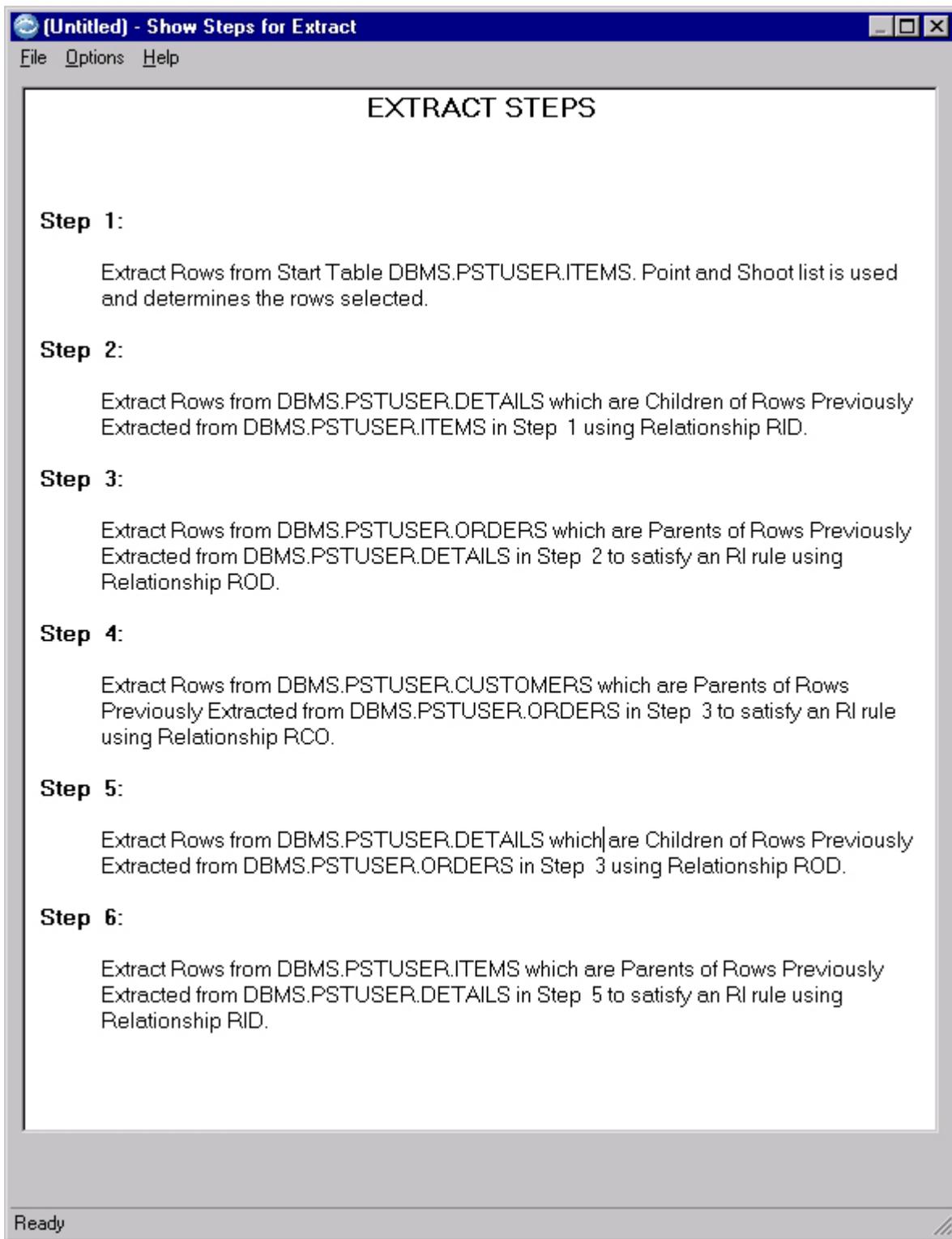


- The ITEMS rows related to the additional extracted DETAILS rows are extracted by traversing the relationship RID from child to parent. The rows for CH2 and CH3 are extracted from the ITEMS table for the additional DETAILS rows.



Show Steps

Click **Tools > Show Steps** to display a narrative that describes the traversal path of the Extract Request.



Click **File > Close** to return to the Access Definition Editor. Click **File > Update and Return** from the Access Definition Editor to update the Access Definition and return to the Extract Request Editor.

Save the Extract Request

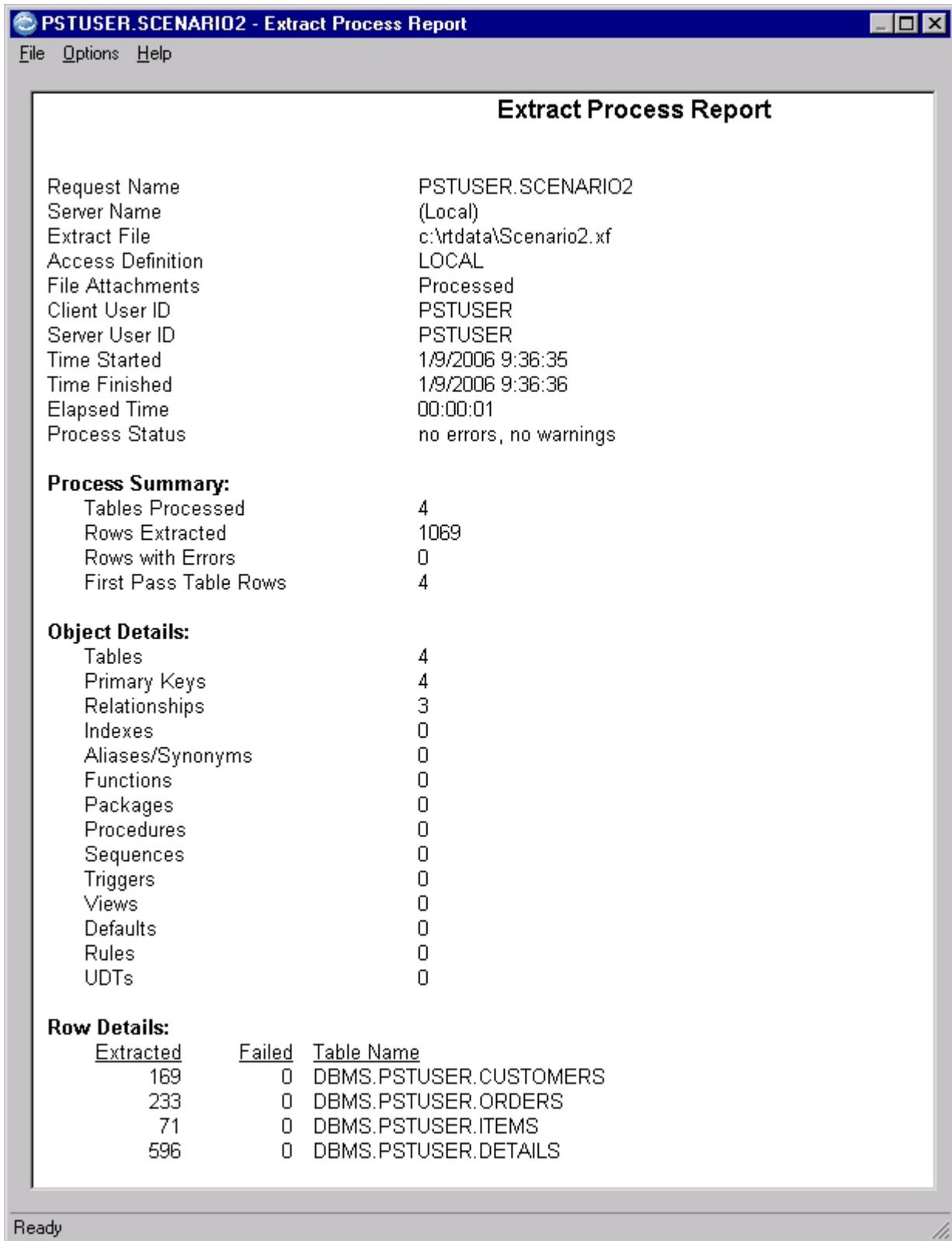
Although you need not save an Extract Request to process it, saving an Extract Request is recommended. To save the Extract Request, click **File > Save** from the Extract Request Editor to display the Save an Extract Request dialog.

Type a two-part name for the Extract Request in the box labeled **Enter pattern for Extract Request**.

Process the Extract Request

For this scenario, click **File > Run** from the Extract Request Editor to process the Extract Request

When the Extract Process is done, the Extract Process Report is displayed. Click **File > Save As** to save the report, or **File > Print** to print it.



Open the Insert Request

Using the Extract file created in the Scenario 2 Extract Process, you will specify an Insert Process that also inserts new rows and updates existing rows in the destination database. You will use the same

destination tables used in Scenario 1, but the Scenario 2 Table Map will include a Column Map that transforms the inserted data. Scenario 2 uses the remaining Insert Request settings from Scenario 1.

Open the Insert Request

This scenario builds on the Insert Request created in Scenario 1. To begin, open that Insert Request.

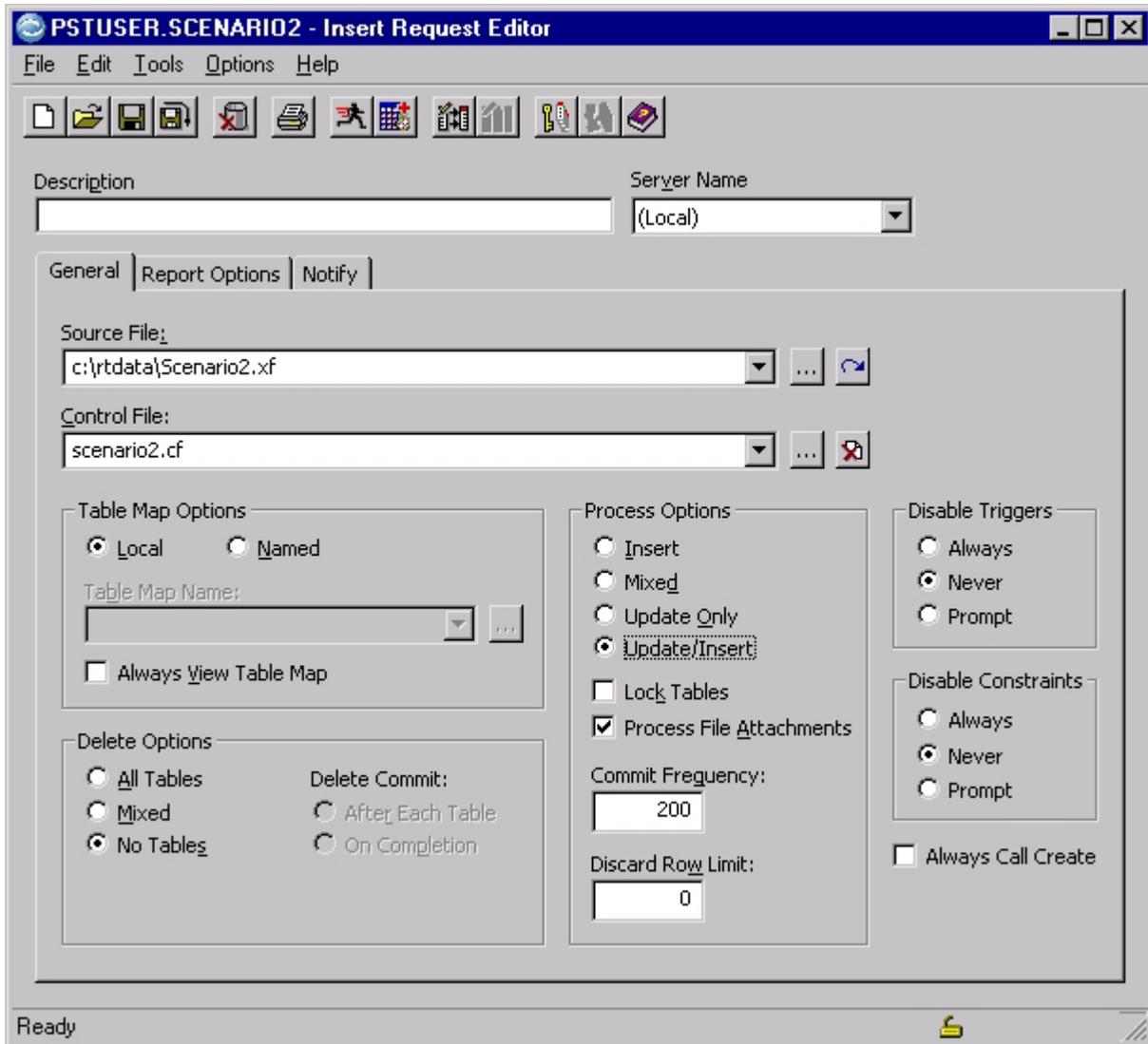
- Click **File > Open** from the main window.
- Double-click **Insert Request** in the **Identifier** list to display the list of saved Insert Requests.
- Double-click the name of the Insert Request saved from Scenario 1.

Move populates the Insert Request Editor with the specifications saved in Scenario 1.

Rename the Insert Request

Before you modify the Insert Request for Scenario 2, click **File > Save As** to display the Save an Insert Request dialog and create a copy of the original Insert Request.

Type a new name to create a copy of the Insert Request for Scenario 2. The original Insert Request will remain unchanged and modifications for Scenario 2 will apply only to the new copy.



Type a new **Description** for the Insert request, and specify the following parameters on the **General** tab:

Extract File

Enter the name of the Extract File that contains the data for Scenario 2. For this scenario, click the

Last Extract button  to specify the last Extract File. If the Scenario 2 Extract File was not the

last Extract File created, use the Browse button  to locate the file.

Control File

Enter the name of a Control File. You can use the same Control File repeatedly. If a process executes successfully, there is no particular reason to save the Control File.

Table Map

Similar to Scenario 1, select the button labeled **Local**. Edit the Table Map in the next step of this scenario.

Process Options

For this scenario, select **Update/Insert** to insert new rows and update existing rows in the specified destination tables, as follows:

- If the primary key of a row in the source data *does not match* the primary key of a row in the destination table, the row is inserted.
- If the primary key of a row in the source data *matches* the primary key of a row in the destination table, the row is updated.

Edit the Table Map

You will use the same Table Map specifications from Scenario 1, but the Scenario 2 Table Map will include a Column Map for the ORDERS table.

To display the Table Map Editor, click **Tools > Edit Table Map**.

Destination

For this scenario, verify the **Qualifier** matches the DB Alias and Creator ID of the test database tables created in Scenario 1.

Description

Enter a description of the Table Map.

Column Map ID

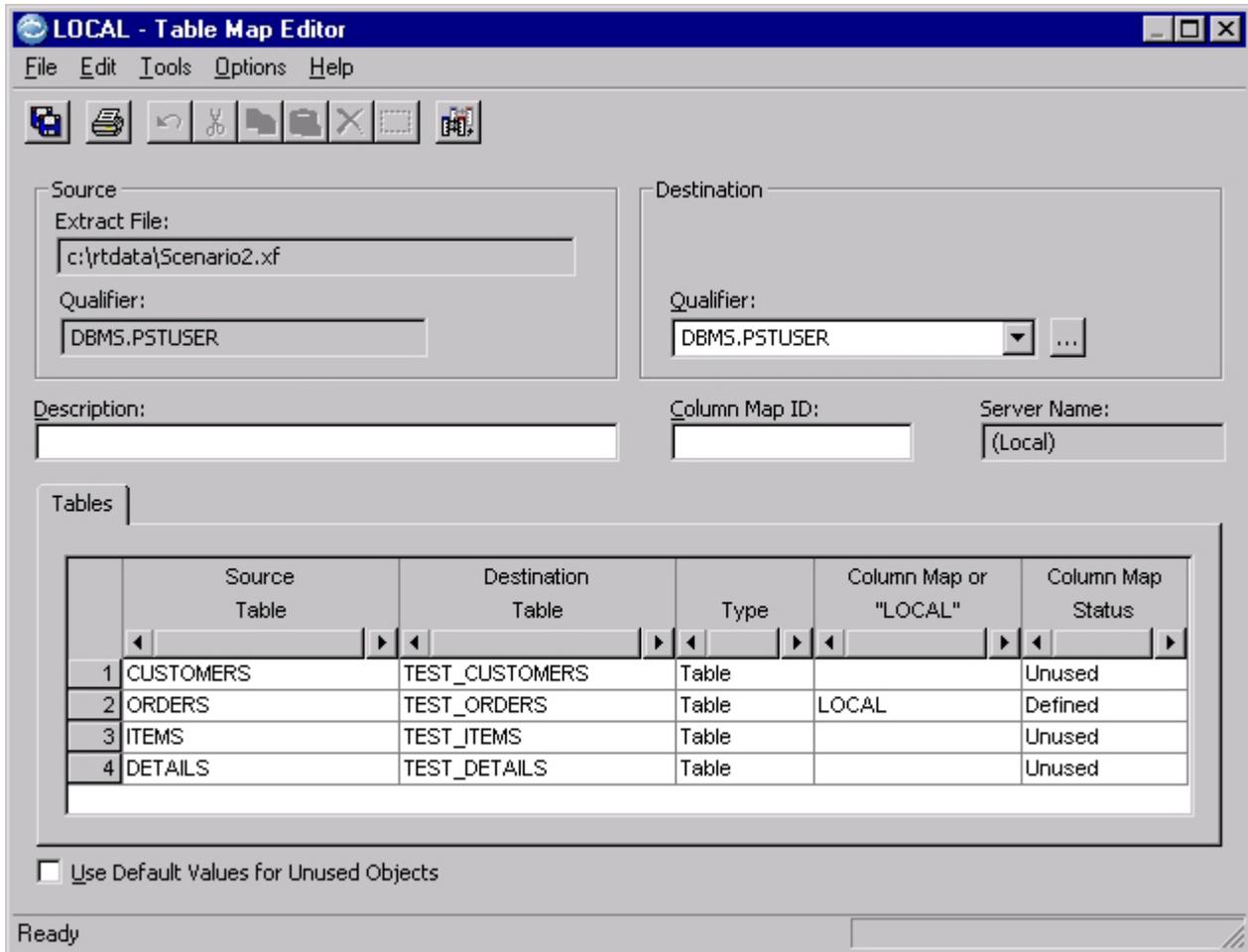
For this scenario, leave the **Column Map ID** box blank. A Column Map ID is only required when the name of one or more specified Column Maps is not fully qualified.

Destination Table Names

For this scenario, verify the destination table names match those created in Scenario 1.

Column Map or "LOCAL"

For this scenario, specify a local Column Map. Type the word LOCAL in the **Column Map or LOCAL** column for the ORDERS table. When you click outside the grid cell, the **Status** column changes from **Unused** to **Unknown**. The status is Unknown until you define the Column Map in the next step.

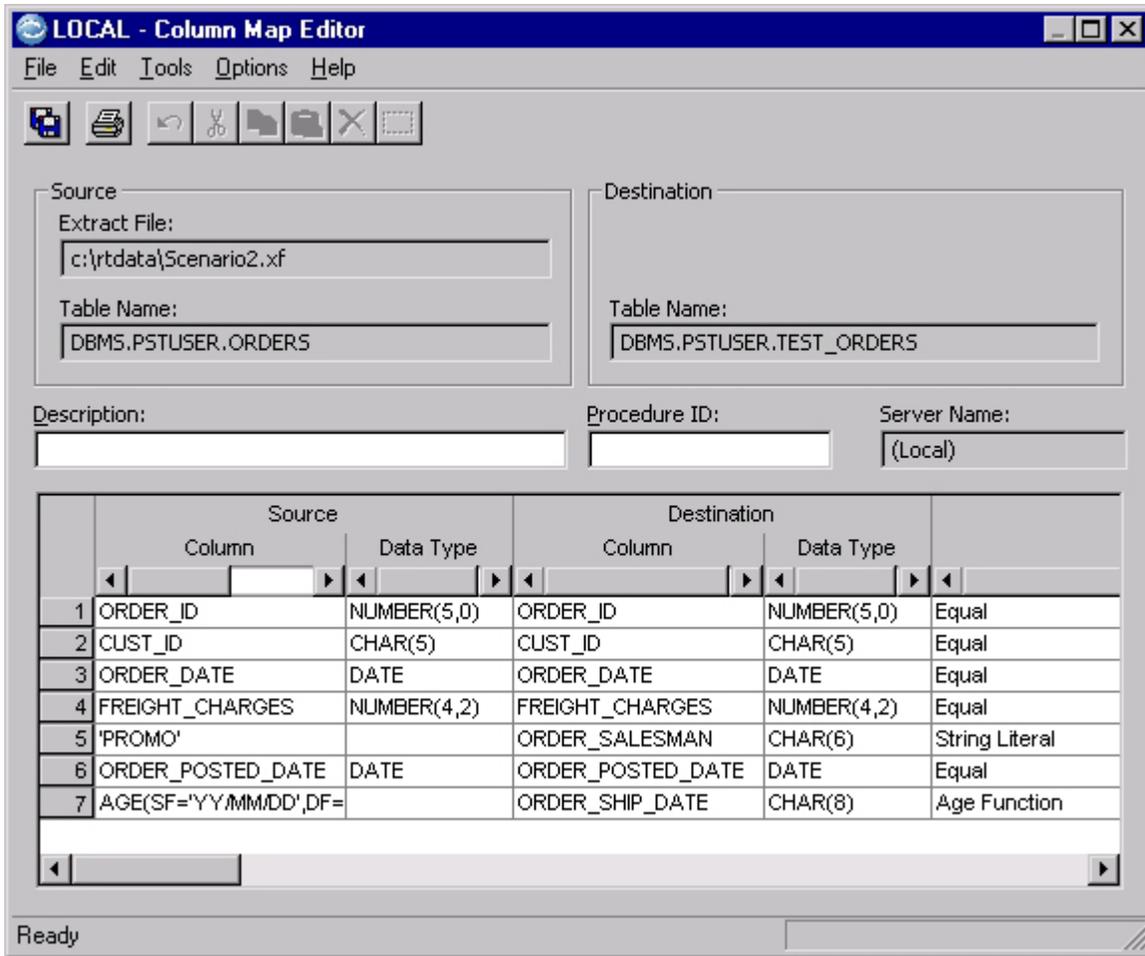


Edit the Column Map

In an Insert Process, you use a Column Map to map columns of compatible data between source and destination tables as well as to manipulate data inserted in the destination table.

In this scenario, you will specify a Column Map that inserts a special value into a column and defines an aging parameter for another column.

To display the Column Map Editor, right-click in the grid cell of the Table Map Editor where you typed LOCAL and click **Open Column Map** in the shortcut menu.



The Column Map Editor includes the following entries:

Source

There are two entries under the heading **Source**:

Extract File, which is automatically populated with the name of the Extract File specified in the Insert Request.

Table Name, which is automatically populated with the three-part source table name: *dbalias.creatorid.tablename*.

Destination

Automatically populated with the three-part destination table name: *dbalias.creatorid.tablename*.

Description

Enter a description for the Column Map.

Source Column

The names of the columns in the source table are listed and can be altered as required. For this scenario, do the following:

- Replace ORDER_SALESMAN in the **Source** column list by typing the literal 'PROMO' in single quotes. This literal value will replace the original value for the column.
- Replace ORDER_SHIP_DATE in the **Source** column list with the following Age Function that will age the shipping date by six weeks and change the date from a two-digit year to a four-digit year format: AGE(SF='YY/MM/DD',DF='YYYYMMDD',+6W)

where:

AGE	Invokes the Age Function.
SF='YY/MM/DD'	The format of the source data.
DF='YYYYMMDD'	The format of the destination data, limited by the data type to eight characters.
+6W	The amount by which to age the date.

- Status** The status of each destination column is displayed. In this scenario, the following statuses apply:
- The ORDER_ID, CUST_ID, ORDER_DATE, FREIGHT_CHARGES, and ORDER_POSTED_DATE columns are defined as Equal, since the data types of the source and destination columns are identical.
 - The ORDER_SALESMAN column is defined as String Literal.
 - The ORDER_SHIP_DATE column is defined as Age Function.

Note: The data types in the source and destination columns must be compatible. If not, **Status** indicates the discrepancy. For complete information, see the *Common Elements Manual*.

Click **File > Update and Return** from the Column Map Editor to return to the Table Map Editor. Then click **File > Update and Return** from the Table Map Editor to return to the Insert Request Editor.

Save the Insert Request

Although you need not save an Insert Request to process it, saving an Insert Request is recommended. If you choose to save the Insert Request, click **File > Save** from the Insert Request Editor to display the Save an Insert Request dialog.

Type a two-part name (*identifier.name*) in the **Enter pattern for Insert Request** box to save the Insert Request. You can give the Insert Request the same name as the Extract Request, if desired.

Process the Insert Request

Click **File > Run** from the Insert Request Editor to begin processing the Insert Request.

The Insert Request Progress dialog is displayed while the Insert Request is processed. When the Insert Process is done, the Insert Process Report is displayed.

Chapter 3. Convert Process

You may want to convert data to assure data privacy or to systematically transform data to meet your application testing requirements. You can import converted data into a spreadsheet program, insert it into a testing database, or restore it to a reporting database.

Use the Convert Process to transform data in an Extract or Archive File. Specifications for the Convert Process can be stored as a Convert Request.

When you convert data in an Extract File, you can save the converted data to the same file or as a different Extract File, with some restrictions (refer to “Destination File” on page 58). Depending upon circumstances, it may be useful to retain the original file to maintain a consistent starting point. For example, you can create a set of Extract Files that contain the same data, aged to different dates, by saving the output of each conversion as a separate Extract File. Conversely, you can overwrite the original Extract File in order to mask sensitive data. For details on creating an Extract File, see “Create an Extract Request” on page 85.

Convert File Formats

Additionally, you can convert an Extract or Archive File into one of several output formats, which you can then import into a spreadsheet program or a database. These file formats are:

- Extract File
- Business Objects (CSV)

Note: In releases prior to Optim 8.1, Business Objects (CSV) format was known as Comma Separated Value (CSV).

- Comma Separated Value (CSV)
- XML
- Business Objects (XML)
- Enterprise Content Management (CSV) - for Archive Files only

For details on these formats see File Format Types.

Table Maps

Specify a Table Map in a Convert Request to match tables in the Source File to tables in the Destination File or to exclude tables from the process. For detailed information on using Table Maps, see the *Common Elements Manual*.

Column Maps

Use Column Maps in the Table Map to specify which data to convert and how it is to be converted. For complete details on using Column Maps, see the *Common Elements Manual*.

Run or Schedule

You can process a Convert Request immediately (by clicking **File > Run**), or you can save and schedule the request for processing at a later time (by clicking **File > Schedule**). You must save the request before it is scheduled, but it is not necessary to save the request before it is run.

Naming Conventions

Note: The fully qualified name of a Convert Request consists of the following: *identifier.name*.

identifier

Identifier that serves as the prefix for the Convert Request name (1 to 8 characters).

name Name assigned to the Convert Request (1 to 12 characters).

When you create Convert Requests, it is helpful to use a logical set of naming conventions to identify the use for each and to organize them for easy access.

Chapter Contents

This chapter explains how to create, maintain, and process a Convert Request, including how to:

- Specify the Source File containing the data to convert and a Destination File to contain the converted data.
- Choose the file format for the Destination File.
- Specify the Control File to record information about the process.
- Select or create a Table Map and Column Maps to provide the specifications for converting the data.
- Specify default parameters for date aging and currency conversions in specified columns.
- Specify notification options.
- Run, save, and schedule a Convert Request.
- Review, save and print a Convert Process report.

Open the Convert Request Editor

Use the Convert Request Editor to create and maintain requests to convert data. These requests are stored in the Optim Directory.

There are different ways to open the editor depending on whether you want to create a new Convert Request or select a Convert Request to edit.

Create a Convert Request

Use this task to create a Convert Request. A Convert Request is a set of specifications that determines how the convert process inserts data.

To create a Convert Request:

1. Click **File > New > Convert** from the main window to open the Convert Request Editor.
2. Specify the file type format for the Destination File, and the names of a Source File, a Control File, and a Destination File.
3. Specify a Table Map:
 - If you select **Local**, you must then click **Tools > Edit Table Map** to define a Table Map.
 - If you select **Named**, specify the name of an existing Table Map or specify a name and click **Tools > Edit Table Map** to define a new Table Map.

These steps are the minimum required to create a Convert Request. After you create a request, you can run the process immediately or save the request and schedule it. Because the options to create and modify a Convert Request are similar, see “Using the Convert Request Editor” on page 54 for details.

An alternate method for opening the Convert Request Editor is to click **Convert** from the **Actions** menu in the main window. By default, the last Convert Request you edited is shown. Your next step depends on your purpose:

- To create a new Convert Request, click **File > New** from the Convert Request Editor.
- To create a new Convert Request modeled on an existing one, open the desired Convert Request and click **File > Save As** from the Convert Request Editor.
- To create and store a copy of the active Convert Request and continue editing, click **File > Save Copy As** from the Convert Request Editor.

Select a Convert Request to Edit

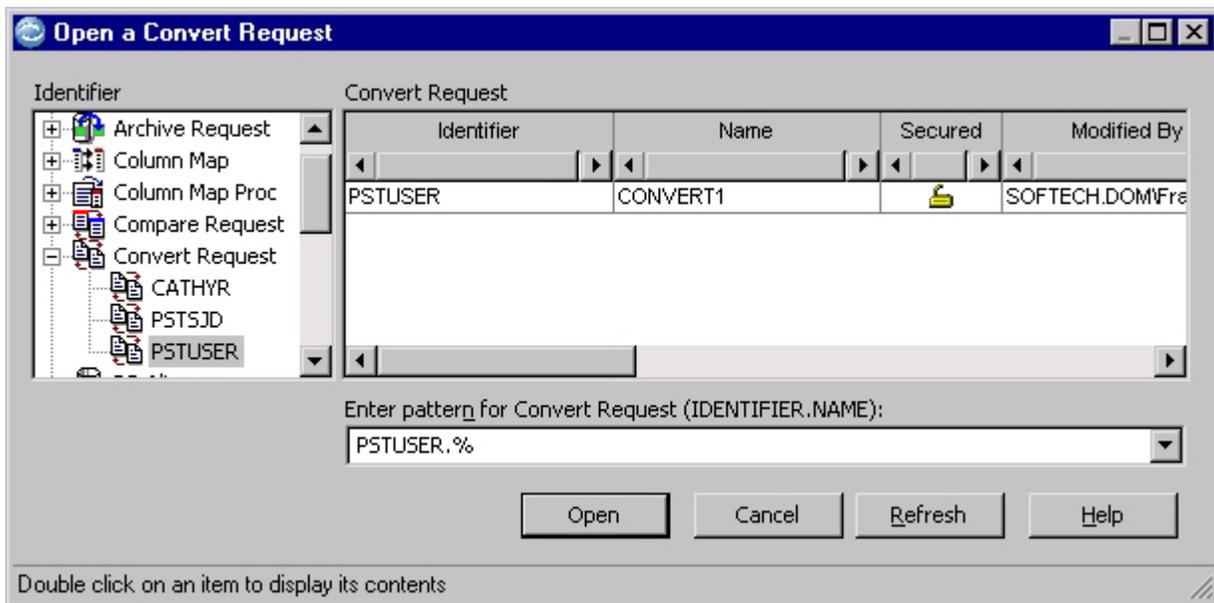
Use this task to select a Convert Request to edit.

Do the following to Select a Convert Request to Edit:

1. Click **File > Open** in the main window to open the object selection dialog.
2. Double-click to select **Convert Request** and expand the object list.
3. Double-click the Convert Request Identifier to display a list of Convert Requests.
4. Double-click the desired Convert Request to open the Convert Request Editor.

Open a Convert Request dialog

The Open a Convert Request dialog is divided into two areas. The object identifiers are listed on the left and the associated objects appear on the right. The list of objects varies depending on the identifier you select.

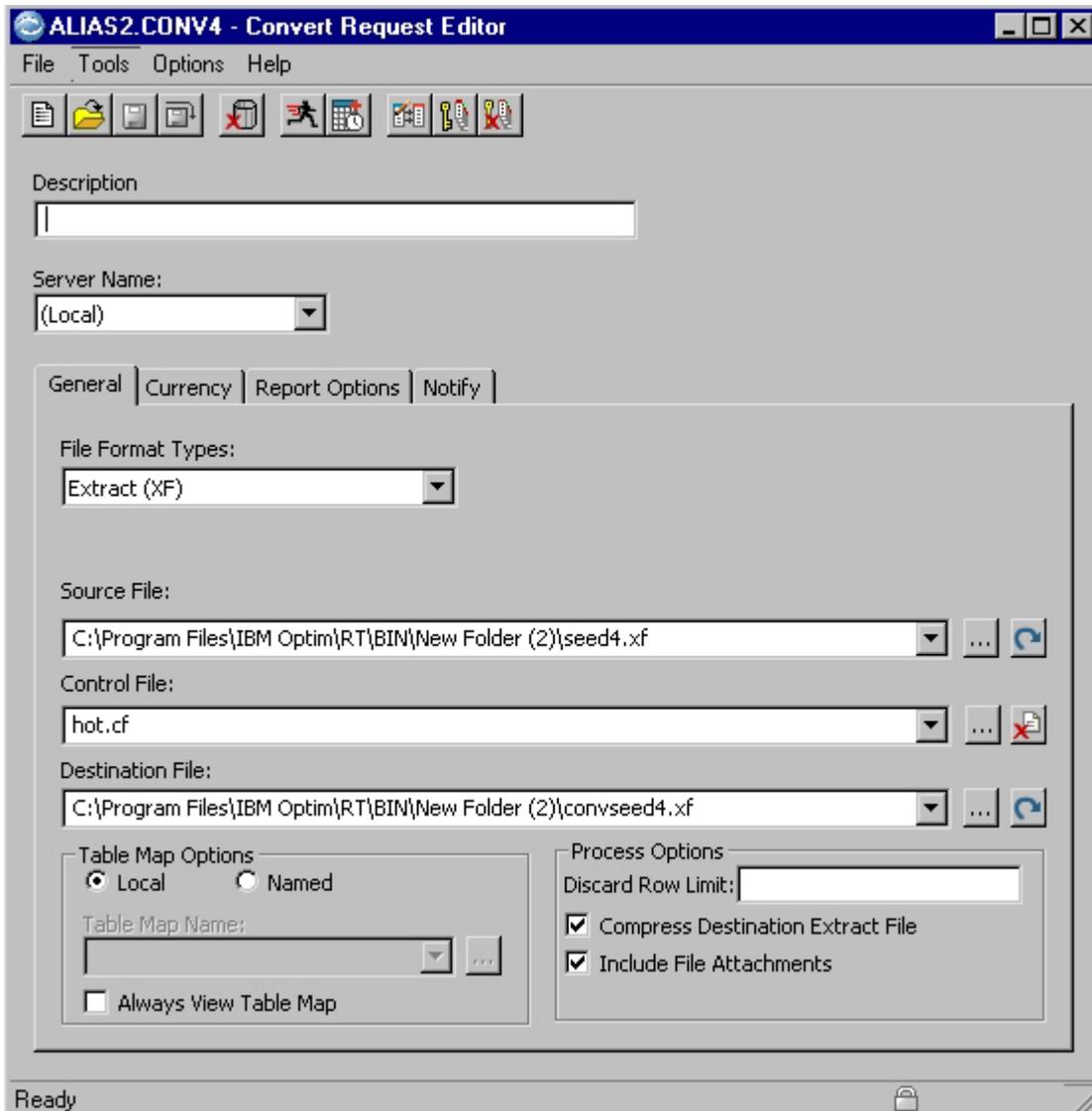


Specify a **Pattern** to limit the list of requests in the Open a Convert Request dialog. A Convert Request name has two parts: *identifier.name*. The **Pattern** must also have two parts. You can use the % (percent) wild card to represent one or more characters or use the _ (underscore) wild card to represent a single character in an object definition name. (The underscore must be selected as the SQL LIKE character on the **General** tab of **Personal Options**.)

Note: After you specify a **Pattern**, click **Refresh** to redisplay the list based on your criteria.

Using the Convert Request Editor

You can use the Convert Request Editor to create, modify, or delete Convert Requests stored in the Optim Directory.



Description

Enter text to describe the purpose of the Convert Request (up to 40 characters).

Server Name

If the optional Optim Server component is installed on your network, you can delegate resource-intensive Convert Request processing (for example, when the source file contains a large number of tables or rows) to a machine hosting Optim Server.

Click the down arrow to select a machine hosting Optim Server, or select **Local** to process the request on the local workstation.

Note: If the Optim Server is not enabled at your site, the **Server Name** box is unavailable.

Tabs

The Convert Request Editor displays tabs that allow you to specify parameters and select options to define and maintain Convert Requests.

General

Specifications for the process, including the format of the converted file, and names of the Source File, the Control File, and the Destination File. Each time you open the editor, the **General** tab is shown first.

If you choose one of the following formats for the converted file, the appropriate tab displays:

- Business Object (CSV) - **Comma Separated** tab
- Comma Separated Value (CSV) - **Comma Separated Value** tab
- XML - **XML** tab
- Business Object (XML) - **Business Object (XML)** tab
- Enterprise Content Management (CSV) - **Enterprise Content Management (CSV)** tab (for Archive Files only)

These file types are described in File Format Types.

Note: Unlike the above file formats, if you are converting to Extract File format, there is no related tab to display.

Age Function

Default parameters for aging data in columns defined with an Age function in a Column Map.

Global Aging

Default parameters for aging data in columns that have a native date data type.

Currency

Default Currency Table and define currency conversion parameters for columns with a native currency data type.

Report Options

Parameters for displaying errors and aging specifications on the process report.

Notify Options for automatic email notification of the success or failure of the process.

Menu Commands

In addition to the standard File commands, you can select the following commands from the other menus in the Convert Request Editor.

Tools Menu

Edit Table Map

Open the Table Map Editor to create or edit a Table Map for use with the active Convert Request only. For complete details on creating and maintaining Table Maps, see the *Common Elements Manual*.

Edit ACL

Open the Access Control List Editor to secure the Convert Request with an Access Control List. Available when Object Security is enabled.

Delete ACL

Delete the Access Control List securing the Convert Request. Available for secured Convert Requests only.

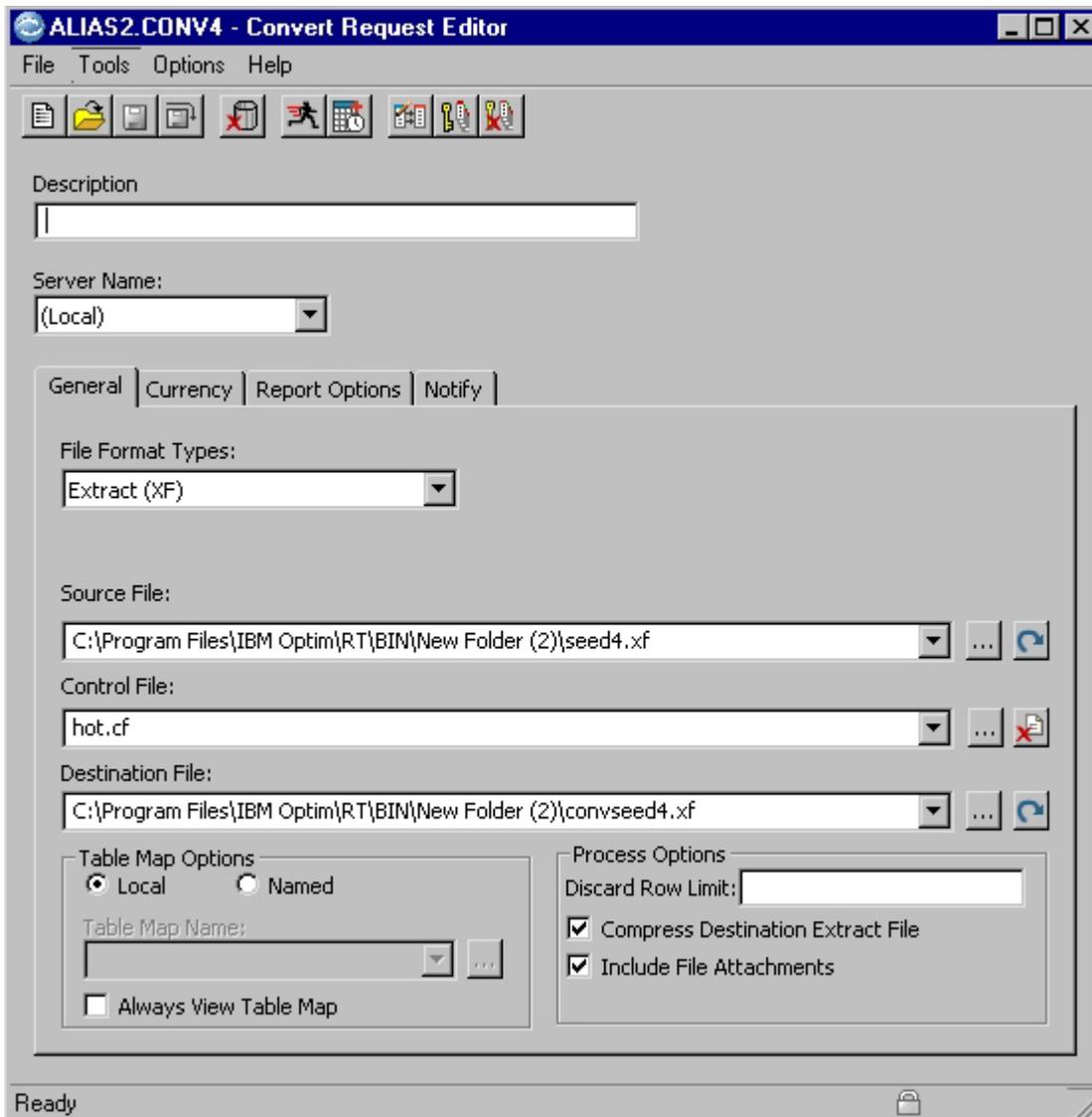
Options Menu

Show Aging/Show Currency

Select these commands to switch between hiding or displaying the corresponding tab.

General Tab

To convert data, specify the format of the converted file and other parameters.



File Format Types

Select the file format for the converted file output:

Extract File

You can convert the file to the same name as the original or to a new file name, with the following limitation:

- You can save converted data to the original Source File only when the Source File is on fixed media, and the default segment size value for fixed media (specified in Personal Options) is zero.

Business Objects (CSV)

Convert the Source File to a Business Objects (CSV) file, which can then be opened in a text editor or imported into a spreadsheet or database application. If you are converting to a Business Objects (CSV), the name of the Destination File cannot match the name of the Source File. When **Business Objects (CSV)** is selected, the request adds the suffix ".csv" to the Destination File if a suffix is not specified.

When you convert to this file format, you can select the columns from each joined table that are to be included in the file. The rows in file are not grouped by table name. Instead, the rows are presented as a joined view with all selected columns listed as a single 'table'. Thus, a parent row is repeated for each child row.

Note:

- Column Maps are not used to create a Business Objects (CSV) file. If a Column Map is specified and you are converting to a Business Objects (CSV) file, a warning message will be displayed during the Convert Process.
- Data Privacy functions are not supported for this file type.

Comma Separated Value (CSV)

Select this value to convert the Source File to a Comma Separated Values (.csv) file, which can then be opened in a text editor or imported into a spreadsheet or database application. When **Comma Separated Value (CSV)** is selected, the request adds the suffix ".csv" to the Destination File if a suffix is not specified. If you are converting to a Comma Separated Value (CSV) file, the name of the Destination File cannot match the name of the Source File.

You can also create separate .csv files for each table or view.

XML Use this option to produce an XML formatted file. When this format is selected, the request adds the suffix ".xml" to the Destination File if a suffix is not specified. Data Privacy functions can be applied. You can also create separate XML files for each table or view.

Business Objects (XML)

Select this file format to convert to an XML formatted file. The Business Objects (XML) file includes the same information as the Business Object (CSV) file, but in XML format.

Note: Data Privacy functions are not supported for this file type.

Enterprise Content Management (CSV)

This format is available only when converting an Archive File, and can include metadata options such as Archive File name, Archive File creation date, Archive GUID and Archive Request description. When this format is selected, the request adds the suffix ".ecm" to the Destination File if a suffix is not specified. You can also create separate Enterprise Content Management (CSV) files for each table or view.

Source File

The name of the Extract File or Archive File that contains the data to convert. You can convert an Archive File to any file format. Extract Files can be converted to any file format except Enterprise Content Management (CSV). If you enter an Extract File and select **Enterprise Content Management (CSV)**, an error is displayed, and you will not be able to save or run the Convert Request.

Note: When you choose to convert an Extract File as part of an Extract Process, Source File is automatically populated with the name of the Extract File from the Extract Request Editor, and cannot be modified.

Control File

Enter the name of a Control File. This file is used to track the success or failure of processing for each row in the Source File. Control Files are given a .cf extension by default.

If you specify the name of a Control File that already exists, a dialog prompts you to confirm that you want to overwrite the file when you run the Convert Request. To disable this confirmation feature, you can change a setting in **Personal Options**.

Destination File

Enter the name of the Destination File for the converted data. To save converted data to the original Source File, specify the path and name of the Source File, or leave blank.

A converted file does not include any object definitions present in the Extract File. Therefore, if the Destination File is also the Source Extract File, object definitions in the Source File are discarded. If you want to write the Extract File to removable media, specify the path to the desired device.

If you do not specify a path for file names, the request uses the drive and directory defined in **Personal Options** as the default Data Directory.

Notes:

1. You can save converted data to the original Source File only when the Source File is on fixed media, and the default segment size value for fixed media (specified in Personal Options) is zero.
2. To browse a converted Extract File, right-click the Destination File and select **Browse** from the shortcut menu. For details on the Browse Utility, see the *Common Elements Manual*.

If you are converting an Extract or Archive File to a Business Objects (CSV) or Comma Separated Value (CSV), the request adds the suffix **.csv** if one is not specified. Additionally, if you are converting to a Business Objects (CSV), Comma Separated Value (CSV), Business Object (XML), XML or Enterprise Content Management (CSM), the name of the Destination File cannot match the name of the Source File.

Table Map Options

Specify a Table Map to match tables in the Source File with destination tables or to exclude tables in the Source File from the request. You cannot save or process a Convert Request without a valid Table Map.

Within a Table Map, specify a Column Map for any pair of tables to:

- Map source and destination columns that are compatible, but have unlike names.
- Specify destination column values other than the source column values.
- Ignore specific columns.

Note: You cannot use a Column Map for a Business Objects (CSV) or Business Objects (XML) file format.

Click **Tools > Edit Table Map** from the Convert Request Editor to open the Table Map Editor. For details on how to create, edit, or merge Table Maps, see the *Common Elements Manual*.

Local Select this option to create a Table Map to be used only with the active Convert Request. Local Table Maps are saved as part of the Convert Request.

Named

Select this option to create a new Table Map or select an existing Table Map to be used with the Convert Request. You must specify a name for the Table Map you want to create or the name of the existing Table Map you want to use.

Note: If changes are made to database tables since the last time a Table Map was used, the specifications may no longer be valid, and a warning message is displayed.

Table Map Name

Name of the new or existing Table Map to use with the Convert Request. A Table Map name has two parts: *identifier.name*.

identifier

Identifier (1 to 8 characters) to identify the Table Map.

name

Name of the Table Map (1 to 12 characters).

Always View Table Map

Select this check box to open the Table Map Editor any time you save or run a Convert Request. This option provides an opportunity to review the Table Map specifications before you convert the data. If you clear this check box, the Table Map Editor opens only when needed (for instance, when the specified Table Map does not include all the tables in the Extract File).

Process Options

The output file format determines which process options are available.

Discard Row Limit

Rows that cannot be processed are discarded. For example, in an insert process, a row is discarded if source data is not compatible with the data type of the destination column. Enter 0 or leave blank to impose no limit or enter a number from 1 to 99999999 to stop processing after the specified number of rows are discarded and all rows in the array processed. You can Restart or Retry a process that stops because the limit is reached.

Compress Destination Extract File

This check box is available only when you select Extract File for File Format Type. Select this check box to automatically compress the destination Extract File for storage.

Include File Attachments

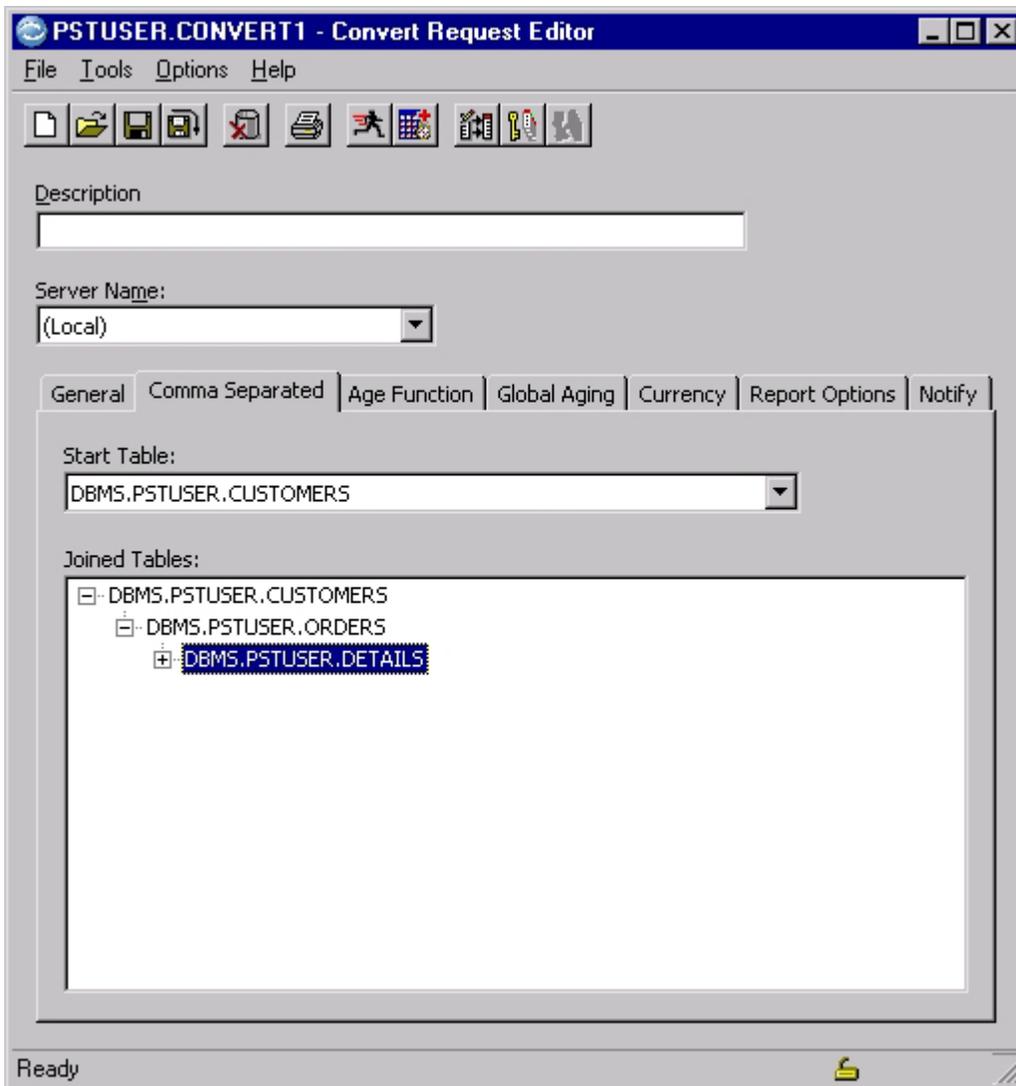
Select this check box to include file attachments in the destination file. File attachments are not converted.

Comma Separated Tab - for Business Objects (CSV) File

Use the **Comma Separated** tab to select the tables and columns to include in a Business Objects (CSV) file.

On the tab, select a Start Table from the Source File (an Extract or Archive File), and then join any additional tables to the display. When finished, open the Modify Column List dialog and select columns to include in the Business Objects (CSV) file.

Note: The **Comma Separated** tab is available only when you select **Business Objects (CSV)** file from **File Format Types**: on the **General** tab.



Create a Business Objects (CSV) File

Use this task to create a Business Objects (CSV) file. The Comma Separated Tab displays when you choose Business Objects (CSV) for the format of the converted file.

To create a Business Objects (CSV) file:

1. Click the **Comma Separated** tab of the Convert Request Editor.
2. Click the down arrow to select the desired Start Table.
3. Right-click a table and select **Add Joined Table** to display the Select Join Table dialog, which allows you to join one or more tables to the Start Table (or any additional table, once joined).
4. On the Select Join Table dialog, select the desired tables and then click **OK**.
5. If more than one relationship between the two tables exists, the Select a Join Relationship dialog is displayed. Select the desired relationship and click **OK**.
6. Right-click a table name and select **Modify Column List** to select the columns to be included in the Comma Separated Values file.
7. Click the Run button  to run the Convert Request and create the Business Objects (CSV) File.

Select the table in the Source File (Extract or Archive File) to use as the basis for converting data. Click the down arrow to select a table name from those in the Source File. Once you have selected the Start Table, it is shown as the first entry in Joined Tables.

Lists the tables in the Source File to be included in the Business Objects (CSV) file. To add additional tables, right-click the name of a table in the list and select **Add Joined Table**, which opens the Select Join Table dialog, allowing you to join related tables to the list.

After you select the tables to be included in the Business Objects (CSV) file, you must specify the columns in the selected tables to be included in the file. Right-click the name of a joined table and select **Modify Column List** to open the Column and Order Specification dialog. For more information, see “Column and Order Specification Dialog - Business Object (CSV) File” on page 63.

To expand a table in the list, click the Plus icon \oplus . The expanded list shows the parent and child tables. To condense the list of tables, click the Minus icon \ominus . Expanding or condensing the table list does not affect whether a table is included in the Business Objects (CSV) file.

To remove an existing table, right-click the table name and select **Remove Joined Table**.

Select Join Table Dialog

The Select Join Table dialog lists tables in the Source File that are related to the table selected on the **Comma Separated** tab.



Table Name of the table to which you want to join one or more related tables.

Join to Table

Lists tables in the Source File related to the current table.

Number of Relationships

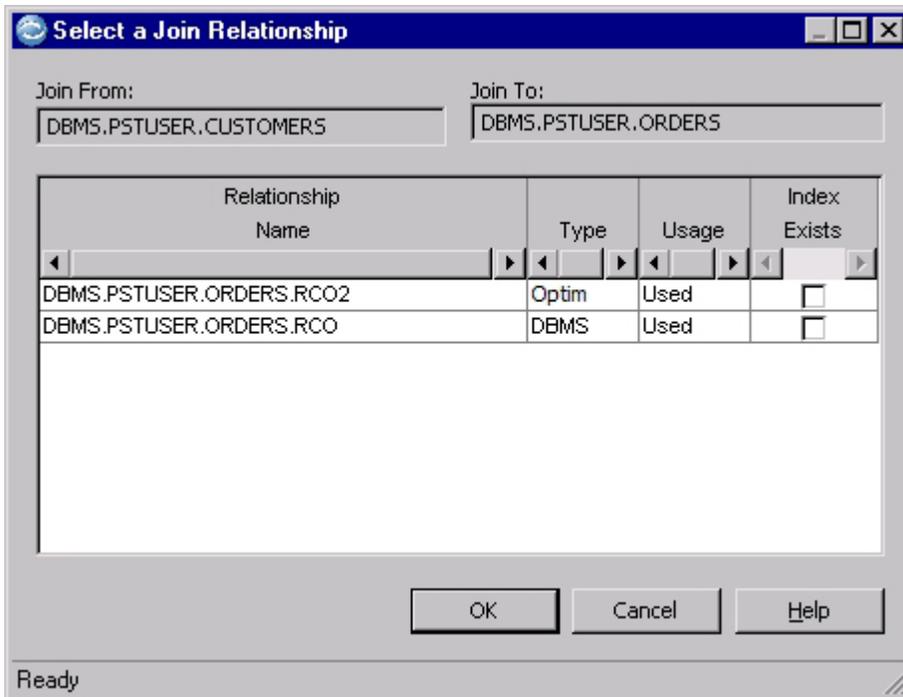
Lists the number of relationships between the related table and the current table.

Select one or more table names from the list and click **OK**. If a single relationship between the tables exists, the table is joined automatically.

Note: If only one relationship exists between the current table and an eligible join table, you can select **Open Relationship** from the shortcut menu to open the Relationship Editor. If you select a join table with more than one relationship, you can select **Open Relationship** from the shortcut menu on the Select a Join Relationship dialog to open the Relationship Editor. For more information see n the *Common Elements Manual*.

Specify a Relationship for Joining

If more than one relationship for a table exists for a table you want to join, you must choose a relationship from the list on the Select a Join Relationship dialog.



Join From

Name of the table to which you want to join a related table.

Join To

Name of the table selected in the Join Table dialog.

Relationship Name

The fully qualified name for a relationship consists of the following:

dbalias Alias of the database where the child table is defined (1 to 12 characters).

creatorid

Creator ID assigned to the child table (1 to 64 characters).

tablename

Name of the child table (1 to 64 characters).

constraint

Name assigned to the relationship (1 to 64 characters).

Type Indicates whether the relationship is generic, explicit (Optim), or defined to a specific DBMS.

Usage Indicates whether the relationship was used to extract rows during the Archive or Extract Process:

Used Relationship was used to extract rows.

Ref The Join From or Join To table is a Reference Table, and the relationship was not used to extract rows.

Unsel The relationship was deselected in the Access Definition, so the relationship was not used to extract rows.

Index Exists

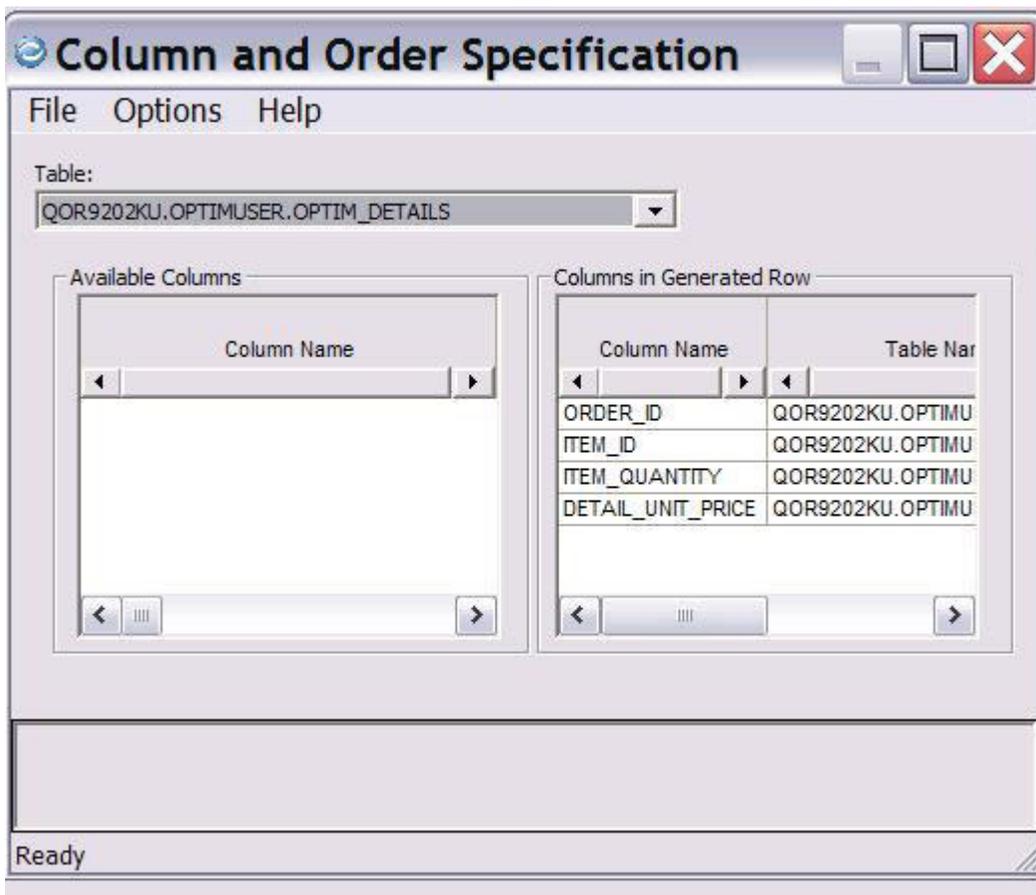
Indicates that this relationship has been used to join the Join From and Join To tables during a Browse session.

When a relationship is used to join tables during a Browse session, an index is created. This index stores primary key and foreign key information to expedite the retrieval of data.

Note: You can select **Open Relationship** from the shortcut menu to open the Relationship Editor. For more information, see the *Common Elements Manual*.

Column and Order Specification Dialog - Business Object (CSV) File

Use the Column and Order Specification dialog to include columns from the tables listed on the **Comma Separated** tab for a Business Object (CSV) file.



Note: Rows in the Business Object (CSV) file are not grouped by table name. Instead, the rows are presented in joined view, and all selected columns are listed as a single 'table'. A parent row is repeated for each child row.

Table Click the down arrow to select the name of a joined table.

Available Columns

The names of the available columns in the specified table. Double-click the grid to add a column name to the **Columns in Generated Row** list.

Note: Columns in the specified table(s) with a Binary, Bit, BLOB, or CLOB data type are not available for selection.

Additionally, you can right-click a column name to display the shortcut menu:

- **Add Column** — add column to the **Columns in Generated Row** list.
- **Add All Columns** — add all columns from currently selected table to the **Columns in Generated Row** list.

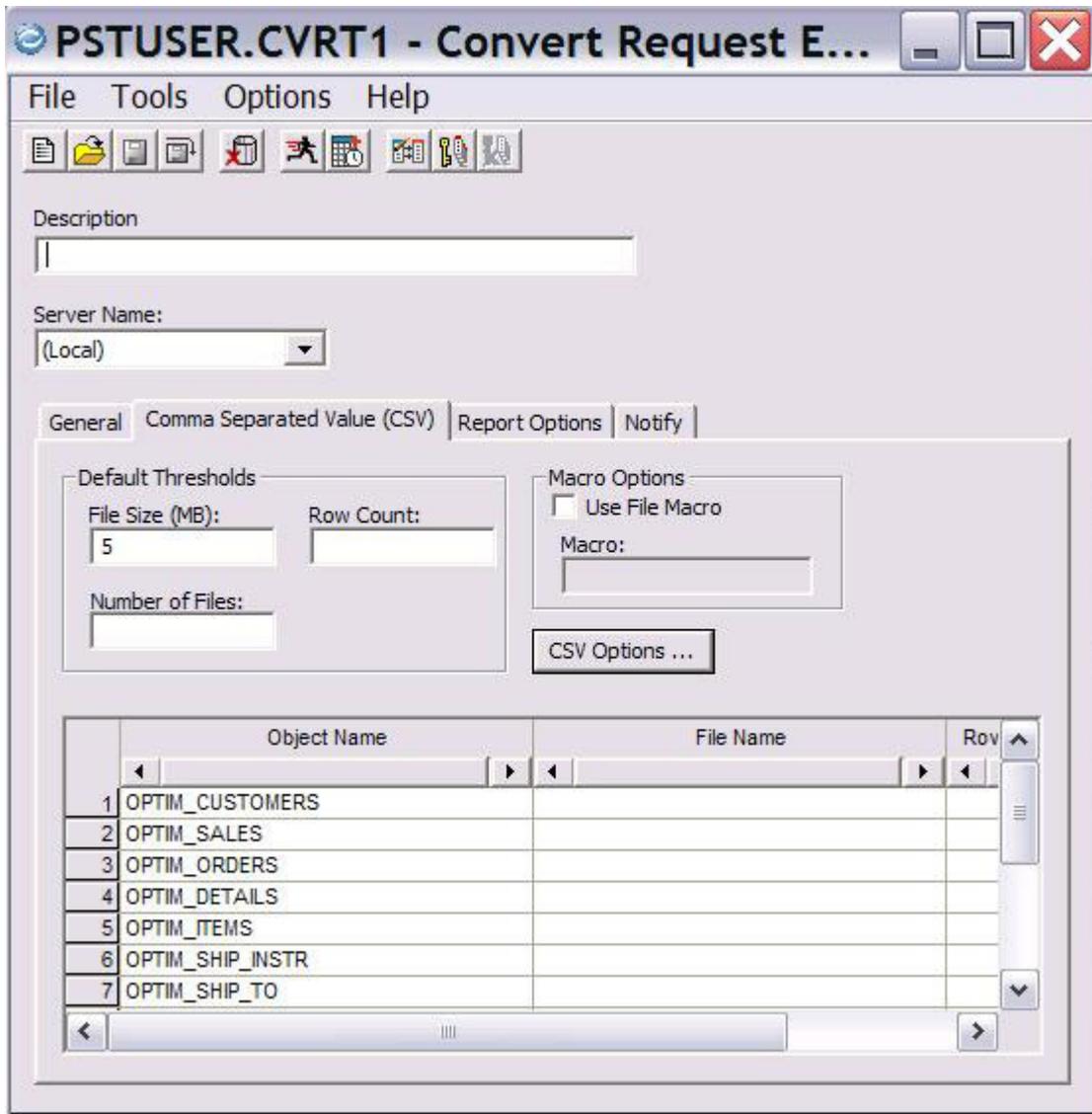
Columns in Generated Row

The names of the columns (from all tables) to be included in the Business Objects (CSV) file. Double-click the grid to remove a column name from the list. Additionally, you can right-click a column name to display the shortcut menu:

- **Remove Column** — remove column from the list.
- **Remove Columns in Same Table** — remove all columns from the list that share the same table.
- **Remove All Columns** — remove all columns from the list.

Comma Separated Value Tab - for Comma Separated Value (CSV) File

The **Comma Separated Value** tab displays when you select the Comma Separated Value (CSV) file format for the converted file. The options on this tab are described below.



Default Thresholds

File Size (MB)

Specify the maximum size of the converted file. Allowable values are 1 to 9,99,999,999,999. The default is 5 MB.

Row Count

Maximum number of records to be written to converted file. If this count is reached, a new file would be created. Specify a value in the range 1 to 9,99,999,999,999. There is no default.

Number of Files

Maximum number files that can be created for a table or view. Specify a value in the range 1 to 9,99,999,999,999. There is no default.

Macro Options

Use File Macro

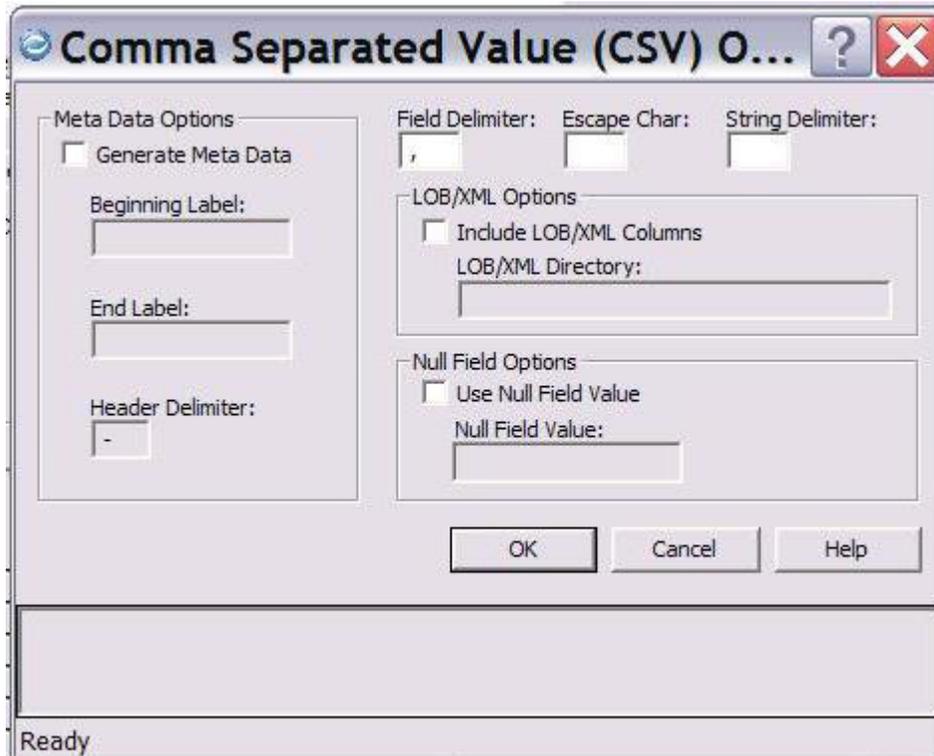
Select this check box to use a macro to create unique files for each table shown in the grid.

Macro:

Specify the name of the Optim macro to be used to generate the unique file names. For example: Specify the \$OBJNAME macro to generate a file name that includes the name of the table or view. For details on using Optim macros to generate file names, refer to the *Common Elements Manual*, Appendix A. Enhanced File Names.

CSV Options

Select this to display the following:

**Meta Data Options****Generate Meta Data**

Selecting this check box writes the column names at the beginning of the first record for a table. You can specify the following:

Beginning Label:

You can specify a label, up to 10 characters, to be prefixed before the first column name.

End Label:

Specify a label, up to 10 characters, to be suffixed after the last column name.

Header Delimiter:

Character to be used to separate column names. Specify 1 character. The default is a dash (-).

Field Delimiter

This parameter is required. Specify 1 character to separate column values. The default is a comma (,).

Escape Character

Specify a single character to be prepended to any string column values. If you specify an Escape Character, Optim scans all character data. There is no default.

Note: Use caution before specifying an Escape Character, as scanning all character data imposes significant impact on processing.

String Delimiter

Character to delimit string column values. There is no default.

LOB/XML Options

Include LOB/XML Columns

Select this check box to have a separate file created for each LOB or XML column in each row.

LOB/XML Directory

Fully qualified path to the directory for the LOB/XML column files to be created. If the check box to **Include LOB/XML Columns** is not selected, the **LOB/XML Directory** box is unavailable.

Null Field Options

Use Null Field Value

Select this check box to replace any column with a null value with a string.

Null Field Value

Specify the string, up to 15 characters in length, to be used as a replacement value for any column that has a null value.

Grid This grid is populated only if a Table Map has been specified. These columns are included:

Object Name

Names of the tables or views for the converted file. The values in this column are the Destination Table Names from the Table Map and cannot be modified.

File Location

Name of the unique file to be created for this table or view. Specify:

filename

Name of the file to be created. If you do not specify a fully-qualified path for the file, Optim creates a file with this name in the directory specified on the Convert General tab for Destination File. If you do not specify a file name, Optim creates a file with the name specified on the Convert General tab for Destination File. If you specified File Macros, Optim uses those macros to create unique files for all empty columns in this grid.

Row Count Per File Threshold

Number of records to write to a file before creating a new file. Allowable values are 1 to 9,99,999,999,999. If you do not supply a value in this grid column, the value for Row Count, if specified, is used.

File Size

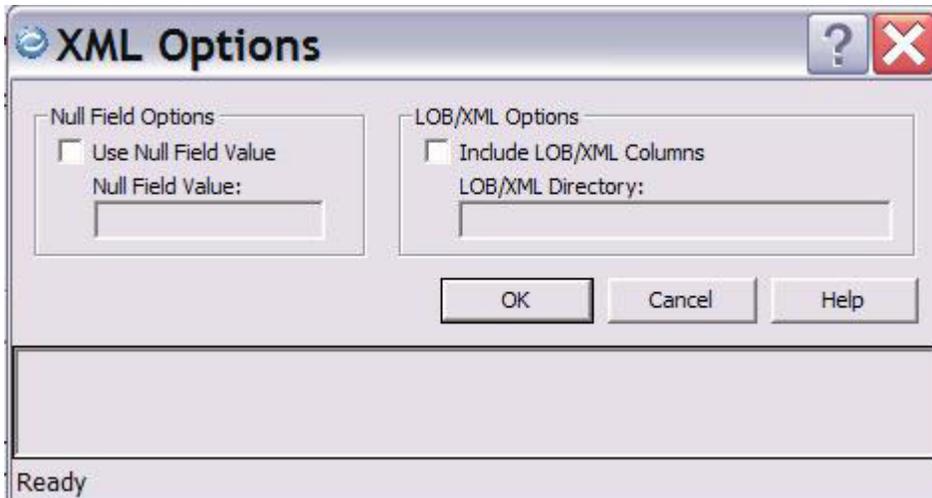
Maximum file size (in MB) to write before creating a new file. Allowable values are 1 to 9,99,999,999,999. If you do not specify a value in this grid column, the value for File Size (MB), if specified, is used.

Number of Files

Maximum number of files that can be created for a single table or view. Allowable values are 1 to 9,99,999,999,999. If you do not specify a value in this grid column, the value for Number of Files, if specified, is used.

XML Tab - for XML Formatted File

When you select XML as the file format for the converted file, the XML tab displays. The options on this tab are described below.



Null Field Options

Use Null Field Value

Select this check box if you wish to specify a string value to be written into any column whose value is null.

Null Field Value:

Specify a string, up to a maximum of 15 ASCII characters, to be written into any column whose value is null.

LOB/XML Options

Include LOB/XML Columns

Select this check box to have a separate file created for each LOB or XML column in each row.

LOB/XML Directory

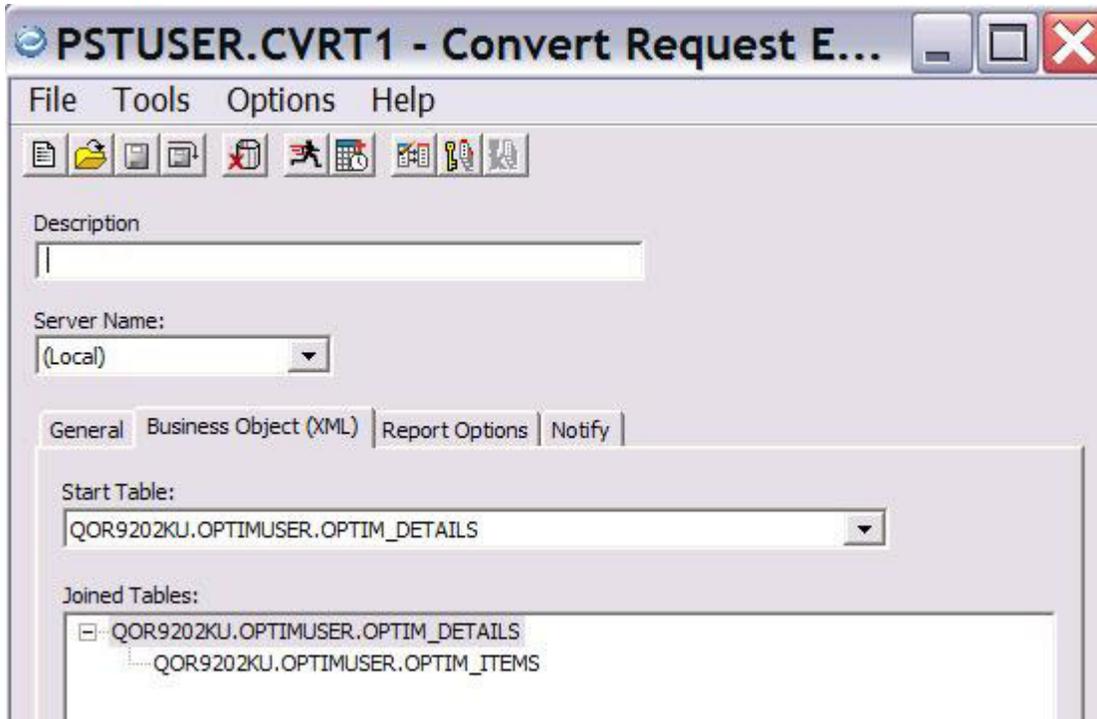
Fully qualified path to the directory for the LOB/XML column files to be created. If the check box to **Include LOB/XML Columns** is not selected, the **LOB/XML Directory** box is unavailable.

Business Object (XML) Tab

When you select Business Objects (XML) as the file type for the converted file, use the Business Object (XML) tab to specify options for the file.

On the tab, select a Start Table from the Source File (an Extract or Archive File), and then join any additional tables to the display. When finished, open the Modify Column List dialog and select columns to include in the Business Object (XML) file.

Note: The **Business Object (XML)** tab is available only when you select **Business Objects (XML)** file from **File Format Types:** on the **General** tab.



Create a Business Object (XML) File

Use this task to create a Business Object (XML) file. The Business Object (XML) Tab displays when you choose Business Objects (XML) for the format of the converted file.

To create a Business Objects (XML) file:

1. Click the **Business Object (XML)** tab of the Convert Request Editor.
2. Click the down arrow to select the desired Start Table.
3. Right-click a table and select **Add Joined Table** to display the Select Join Table dialog, which allows you to join one or more tables to the Start Table (or any additional table, once joined).
4. On the Select Join Table dialog, select the desired tables and then click **OK**.
5. If more than one relationship between the two tables exists, the Select a Join Relationship dialog is displayed. Select the desired relationship and click **OK**.
6. Right-click a table name and select **Modify Column List** to select the columns to be included in the file.
7. Click the Run button  to run the Convert Request and create the Business Object (XML) File.

Select the table in the Source File (Extract or Archive File) to use as the basis for converting data. Click the down arrow to select a table name from those in the Source File. Once you have selected the Start Table, it is shown as the first entry in Joined Tables.

Lists the tables in the Source File to be included in the Business Object (XML) file. To add additional tables, right-click the name of a table in the list and select **Add Joined Table**, which opens the Select Join Table dialog, allowing you to join related tables to the list.

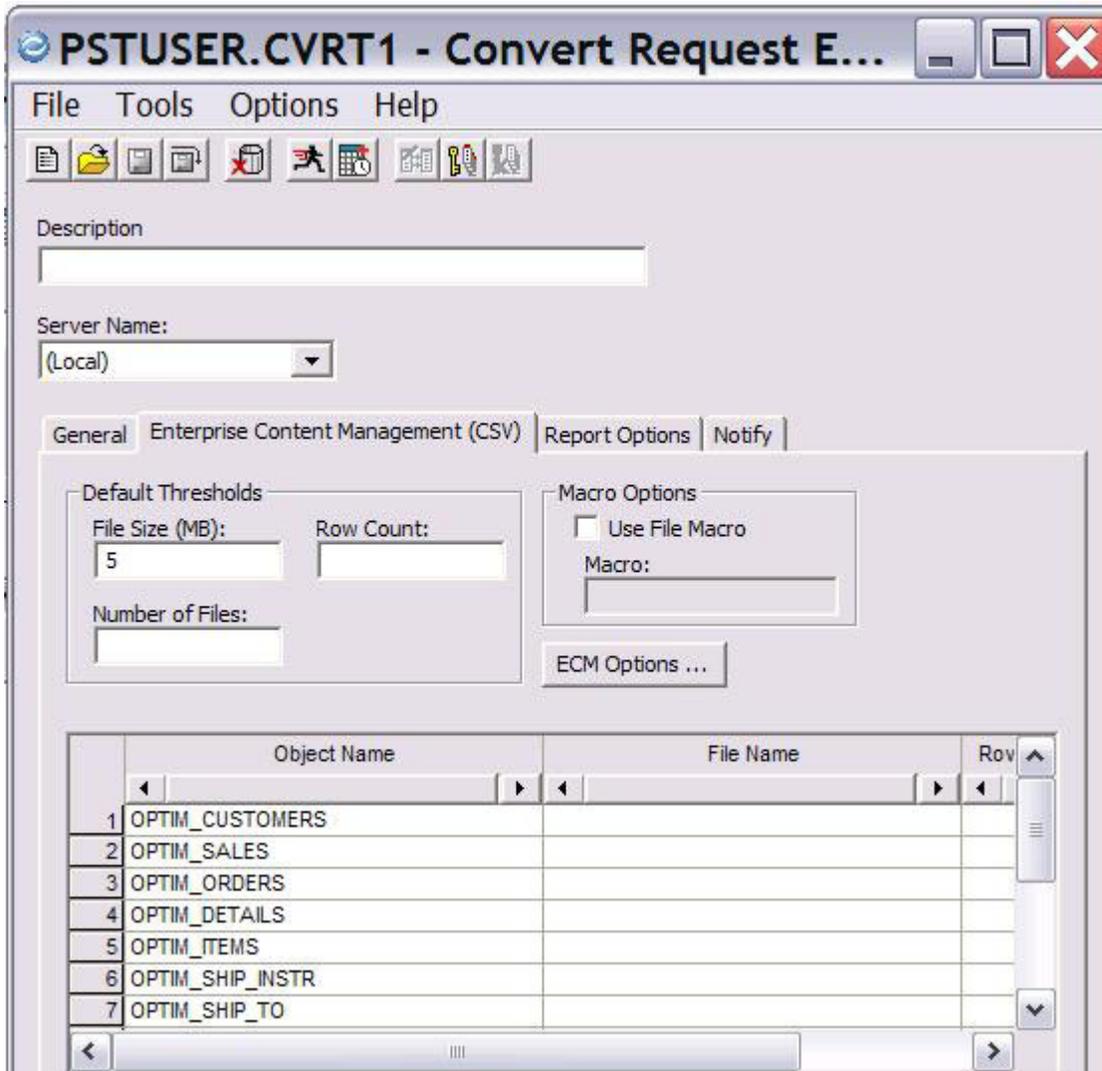
After you select the tables to be included in the Business Object (XML) file, you must specify the columns in the selected tables to be included in the file. Right-click the name of a joined table and select **Modify Column List** to open the Column and Order Specification dialog. For more information, see “Column and Order Specification Dialog - Business Object (CSV) File” on page 63.

To expand a table in the list, click the Plus icon . The expanded list shows the parent and child tables. To condense the list of tables, click the Minus icon . Expanding or condensing the table list does not affect whether a table is included in the Business Object (XML) file.

To remove an existing table, right-click the table name and select **Remove Joined Table**.

Enterprise Content Management (CSV) Tab

The Enterprise Content Management (CSV) tab displays when you convert an Archive File to Enterprise Content Management (CSV) format. The options on this tab are described below.



Default Thresholds

File Size (MB)

Specify the maximum size of the converted file. Allowable values are 1 to 9,99,999,999,999. The default is 5 MB.

Row Count

Maximum number of records to be written to converted file. If this count is reached, a new file would be created. Specify a value in the range 1 to 9,99,999,999,999. There is no default.

Number of Files

Maximum number files that can be created for a table or view. Specify a value in the range 1 to 9,99,999,999,999. There is no default.

Macro Options

Use File Macro

Select this check box to use a macro to create unique files for each table shown in the grid.

Macro:

Specify the name of the Optim macro to be used to generate the unique file names. For example: Specify the \$OBJNAME macro to generate a file name that includes the name of the table or view. For details on using Optim macros to generate file names, refer to the *Common Elements Manual*, Appendix A. Enhanced File Names.

ECM Options

Select this to display the following:

The screenshot shows a dialog box titled "Enterprise Content Management...". It contains several sections of options:

- Meta Data Options:** Includes a checkbox for "Generate Meta Data", and text input fields for "Beginning Label:", "End Label:", and "Header Delimiter:" (containing a hyphen).
- Field Delimiter:** Three text input fields for "Field Delimiter:", "Escape Char:", and "String Delimiter:", each containing a comma.
- Archive Metadata Options:** A group box containing four checked checkboxes: "Archive File Name", "Archive Description", "Archive File Creation Date", and "Archive GUID".
- Null Field Options:** Includes a checkbox for "Use Null Field Value" and a text input field for "Null Field Value:".
- LOB/XML Options:** Includes a checkbox for "Include LOB/XML Columns" and a text input field for "LOB/XML Directory:".

At the bottom of the dialog are "OK", "Cancel", and "Help" buttons. The status bar at the very bottom of the window displays "Ready".

Meta Data Options

Generate Meta Data

Selecting this check box writes the column names at the beginning of the first record for a table. You can specify the following:

Beginning Label:

You can specify a label, up to 10 characters, to be prefixed before the first column name.

End Label:

Specify a label, up to 10 characters, to be suffixed after the last column name.

Header Delimiter:

Character to be used to separate column names. Specify 1 character. The default is a dash (-).

Null Field Options**Use Null Field Value**

Select this check box to replace any column with a null value with a string.

Null Field Value

Specify the string, up to 15 characters in length, to be used as a replacement value for any column that has a null value.

Field Delimiter

This parameter is required. Specify 1 character to separate column values. The default is a comma (,).

Escape Character

Specify a single character to be prepended to any string column values. If you specify an Escape Character, Optim scans all character data. There is no default.

Note: Use caution before specifying an Escape Character, as scanning all character data imposes significant impact on processing.

String Delimiter

Character to delimit string column values. There is no default.

Archive Metadata Options

Select a check box to include metadata for:

- Archive File Name
- Archive Description
- Archive File Creation Date
- Archive GUID

LOB/XML Options**Include LOB/XML Columns**

Select this check box to have a separate file created for each LOB or XML column in each row.

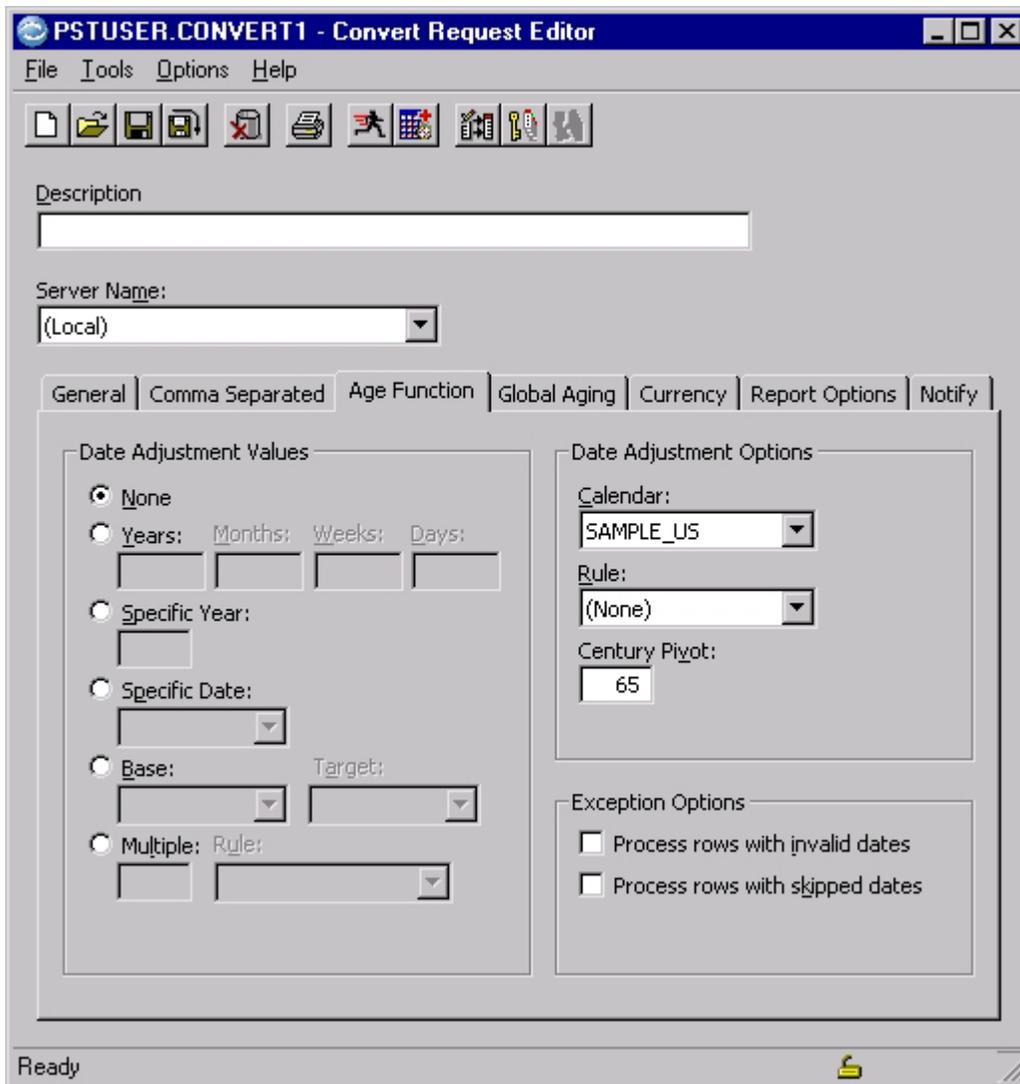
LOB/XML Directory

Fully qualified path to the directory for the LOB/XML column files to be created. If the check box to **Include LOB/XML Columns** is not selected, the **LOB/XML Directory** box is unavailable.

Age Function Tab

Use the **Age Function** tab to specify parameters for aging data when using the Age function in a Column Map.

These values are applied to columns for which you specify the Age function as **AGE(DEF)** or **AGE(RU=DEF)**. These values are also used to complete the specifications for date adjustment values in columns defined with the Age function when the specifications are incomplete.



Date Adjustment Values

None Specifies that an aging increment is not used.

Years, Months, Weeks, Days

Adjusts the date incrementally by the specified number of years, months, weeks, and/or days. Use a minus (-) sign to decrement the date. The plus (+) sign is not required to increment the date.

Years Number of years (-2500 to +1581) to adjust the date.

Months

Number of months (-30000 to +30000) to adjust the date.

Weeks Number of weeks (-30000 to +30000) to adjust the date.

Days Number of days (-99999 to +99999) to adjust the date.

Specific Year

Adjusts the date to a specific four-digit year (1582 to 3999).

Specific Date

Adjusts the date to a specific date. To select a date from a perpetual calendar, click on the down arrow. Click the arrow buttons to set the month and year. Click on a day to set the day of the month.

Note: If you do not specify a date, the system (current) date displays. The date format is based on the Regional Settings on the Control Panel of your computer.

Base/Target

Adjusts the date incrementally by a calculated aging amount. The aging amount is the number of days between the **Base** date and the **Target** date. To select a base or target date from a perpetual calendar, click on the down arrow. Click the arrow buttons to set the month and year. Click on a day to set the day of the month.

Base Specify an explicit start date for calculating the aging amount.

Target Specify an explicit end date for calculating the aging amount.

Multiple/Rule

Adjusts the date by applying the specified date aging rule the specified number of times.

For example, if the rule is defined as NEXTPAYDAY and you specify 4 as the multiple, the date is adjusted from the source date to the fourth NEXTPAYDAY.

Multiple

Number of times (1 to 30000) to apply the specified rule for date aging.

Rule Name of the rule to use.

Date Adjustment Options

Calendar

Enter the name of the calendar to use by default. To select from a list of available calendars, click the down arrow.

Rule Enter the name of the rule to use by default. To select from a list of available rules, click the down arrow. (You can define calendars and rules by selecting **Utilities > Calendar**. For details on defining Calendars and rules, see the *Common Elements Manual*.)

Century Pivot

Enter the value to use to determine the appropriate century when a date value is defined with a two-digit year. If you do not specify a value, 65 is used by default. For example, if you specify 55 as the Century Pivot:

- All two-digit years equal to or greater than 55 are assumed to be in the 20th century.
- All two-digit years less than 55 are assumed to be in the 21st century.

Exception Options

Select the following exception options to handle special date values when aging data. Rather than treat these dates as errors, the dates are moved directly from the source to the destination if the column attributes are identical.

- **Process rows with invalid dates** — If you select this check box, rows with columns that contain invalid dates are processed and the results are written to the destination. If you clear the check box, the rows are discarded and are noted in the Control File.
- **Process Rows with skipped dates** — If you select this check box, rows with columns formatted as skipped dates are processed and the results are written to the destination. If you clear the check box, the rows are discarded and are noted in the Control File.

At times, special values called skipped dates are used to indicate special handling or unique conditions. To determine whether or not to skip a date, the date aging function evaluates each date for the following:

- If a date column contains all spaces, hexadecimal zeros (low values), or hexadecimal 'FF' (high values), the date is skipped.
- If a date column contains a skipped date value, the value is parsed based on the specified date format or exit routine.

The date aging function recognizes the following as skipped dates:

Date Format	Skipped Date Value	Date Format	Skipped Date Value
Y/M/D	1999/99/99	Y/M	1999/999
	9999/99/99		9999/999
	9999/12/31		1900/0
	1900/0/0		2000/0
	2000/0/0		0/0
	0/0/0		Y
	1/1/1	0	
Y/J	1999/999	M/D	99/99
	9999/999		0/0
	1900/0	M	99
	2000/0/0		0/0
	0/0	D	9/9
			0/0

This list is intended to be as comprehensive as possible. If you require additional skipped dates, contact Optim Support.

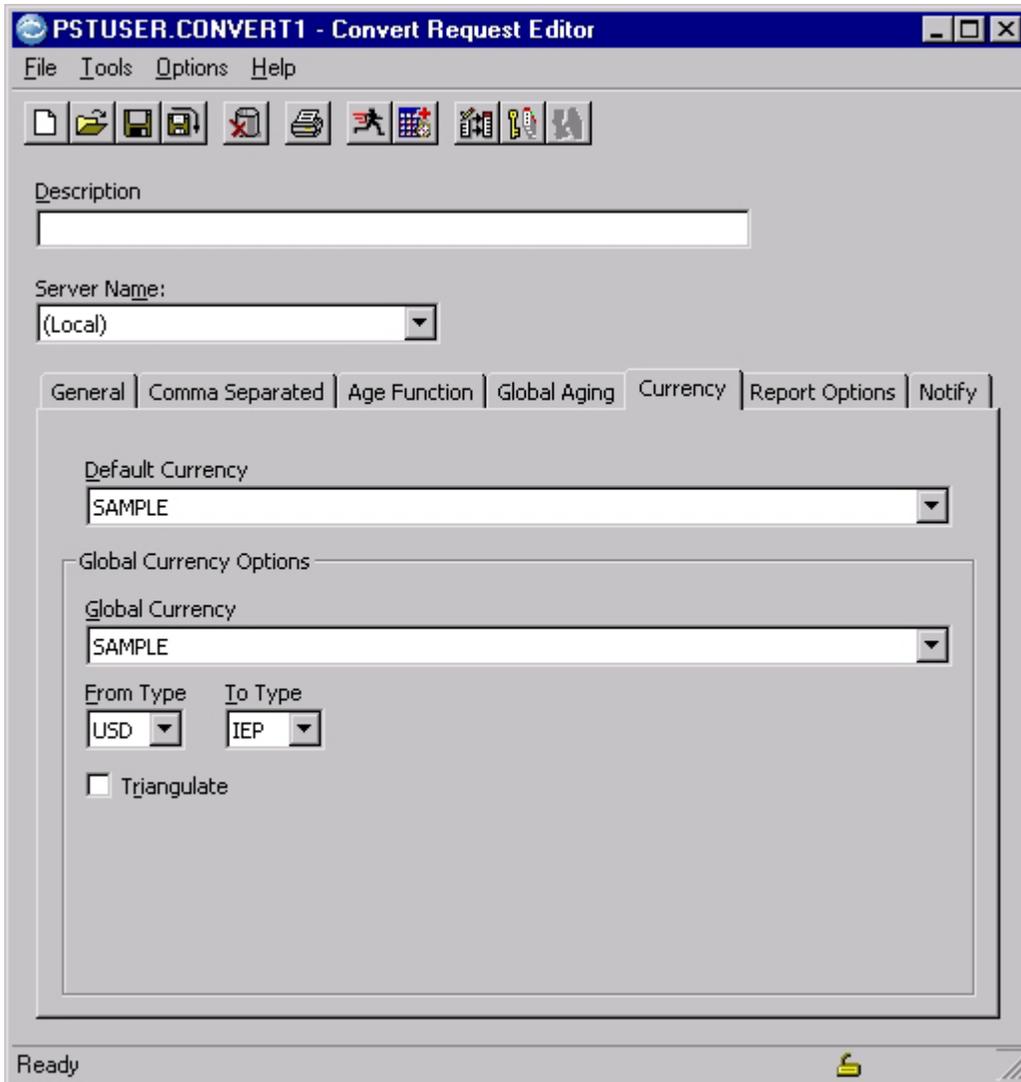
Global Aging Tab

Use the **Global Aging** tab to specify parameters for aging data in columns defined with a native date data type. Global Aging parameters apply to all date columns not specifically defined by an Age function in a Column Map.

Note: The parameters shown on the **Global Aging** tab are the same as those shown on the **Age Function** tab. For information about each parameter, see “Age Function Tab” on page 72.

Currency Tab

Use the **Currency** tab to specify the default Currency Table to use when the Currency function is defined in a Column Map. Specify global parameters for currency conversions in columns that have a native currency data type.



Default Currency

Specify the Currency Table to use when the Currency function is specified in a Column Map.

Global Currency Options

Global Currency

Specify the default Currency Table to use for currency conversions in columns that have a native currency data type.

From Type To Type

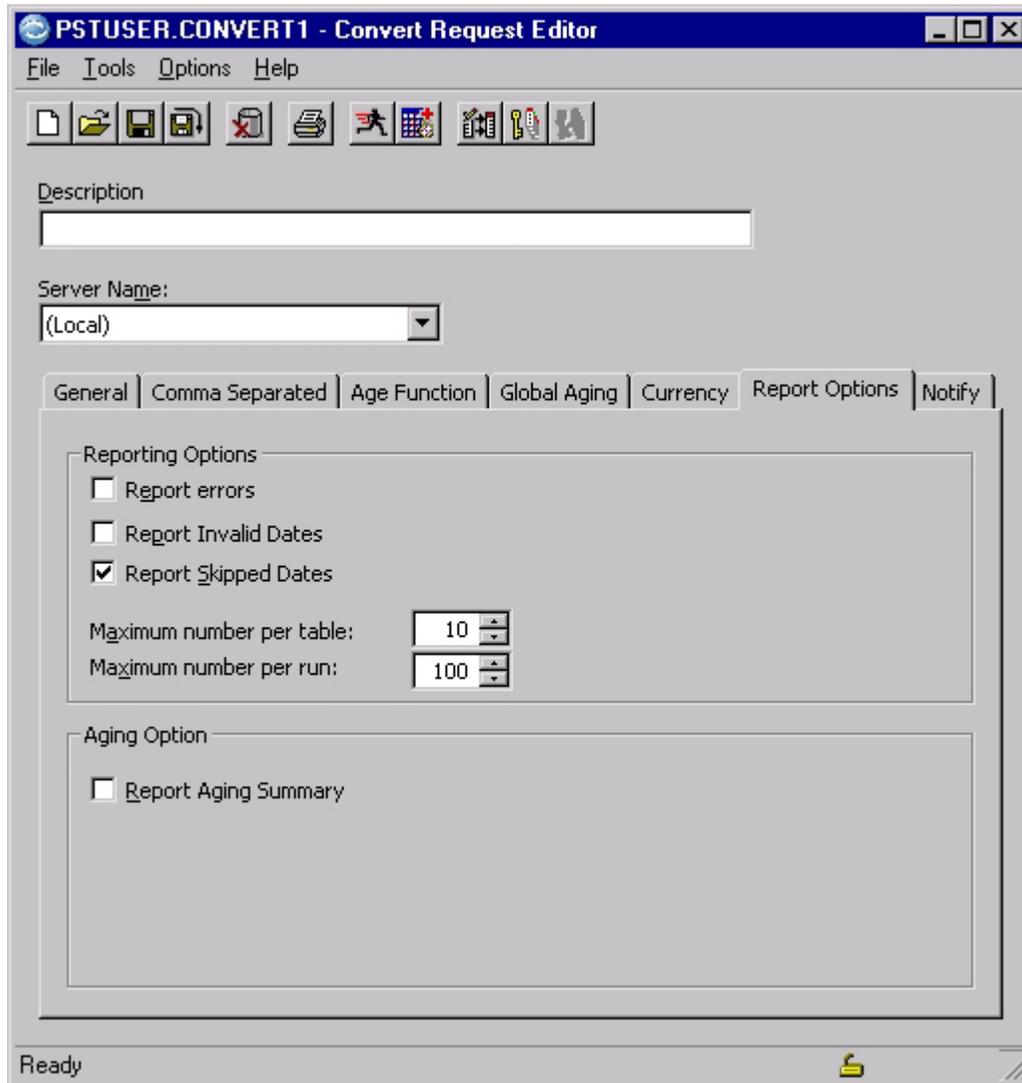
Enter specific currency types for the source and destination currency when converting currency values in columns that have a native currency data type.

Triangulate

Select this check box to convert the specified source currency to the euro dollar, then convert the euro dollar value to the specified destination currency.

Report Options Tab

Specify which information is included in the Convert Process Report on the **Report Options** tab.



Reporting Options

Report errors

Select this check box to specify that the Convert Process Report includes the list of errors encountered during the Convert Process.

Report Invalid Dates

Select this check box to include rows with invalid dates in the Convert Process Report when you select the corresponding Exception Option on the **Age Function** or **Global Aging** tab.

Report Skipped Dates

Select this check box to include rows with skipped dates in the Convert Process Report when you select the corresponding Exception Option on the **Age Function** or **Global Aging** tab.

Maximum number per table

Specify the maximum number of errors, invalid dates and skipped dates per table to include in the Convert Process Report.

Maximum number per run

Specify the maximum number of errors, invalid dates and skipped dates per run to include in the Convert Process Report.

Aging Option

Report Aging Summary

Select this check box to include a summary in the Convert Process Report of any aging parameters specified for the Convert Process. A report that includes the Aging Summary can be printed in landscape mode only.

Notify Tab

Use the **Notify** tab to specify options and addresses for automatic email notification of the success or failure of the process. The process report generated when the process completes is automatically sent as an attachment.

Process a Convert Request

You can process a Convert Request at any time. However, if you create a new Convert Request and want to use it again, you must save the request.

You can run a Convert Request immediately or schedule the Convert Request.

Note: Depending on how Optim is configured at your site, you may encounter a logon prompt during processing. See the *Common Elements Manual* for information about the DB Alias Connection Logon and Optim Directory Connection Logon dialogs.

Schedule a Convert Request

To schedule a Convert Process to run once or repeatedly at a specified future time, save the Convert Request, and click **File > Schedule**.

- Processing is initiated at the scheduled time; you do not review the process as it is performed.
- If warning conditions exist, processing continues without prompting, depending on the **Stop on Error** parameter you specified on the **Steps** tab of the Scheduling Job dialog.
- During processing, if an error occurs, processing stops.

For details on scheduling, see the *Common Elements Manual*.

Run a Convert Request

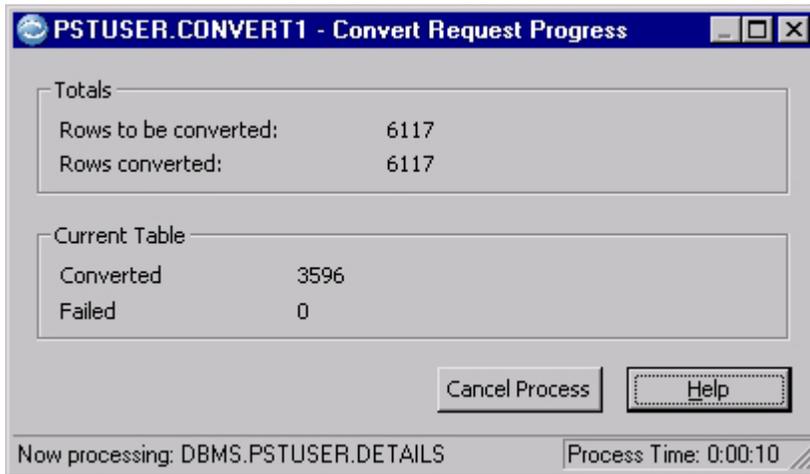
To process a Convert Request immediately, select **File > Run**. It is not necessary to save the Convert Request before it is run.

- Before processing begins, the request is verified. If warning conditions exist, you can review the details in the Warnings dialog, and choose to continue or cancel processing.
- During processing, if an error occurs, processing stops.

A progress dialog and status messages provide information while the request is processing. When processing completes, or stops because of an error, you can review the details in the Process Report. You can also browse the Control File to review process details.

Convert Request Progress Dialog

When the Convert Process begins, the Convert Request Progress dialog displays status information.



Totals

Rows to be converted:

Total number of rows in the Source File to be processed.

Rows converted:

Total number of rows that were processed.

The totals in the Convert Request Progress dialog are revised after a number of rows (specified on the **Actions** tab in **Personal Options**) are converted for each table, and when the conversion for one table completes and the process begins for the next table. (See the *Common Elements Manual* for more information.)

Current Table

Converted

Total number of rows converted.

Failed Total number of rows that could not be converted and were discarded.

Command Button

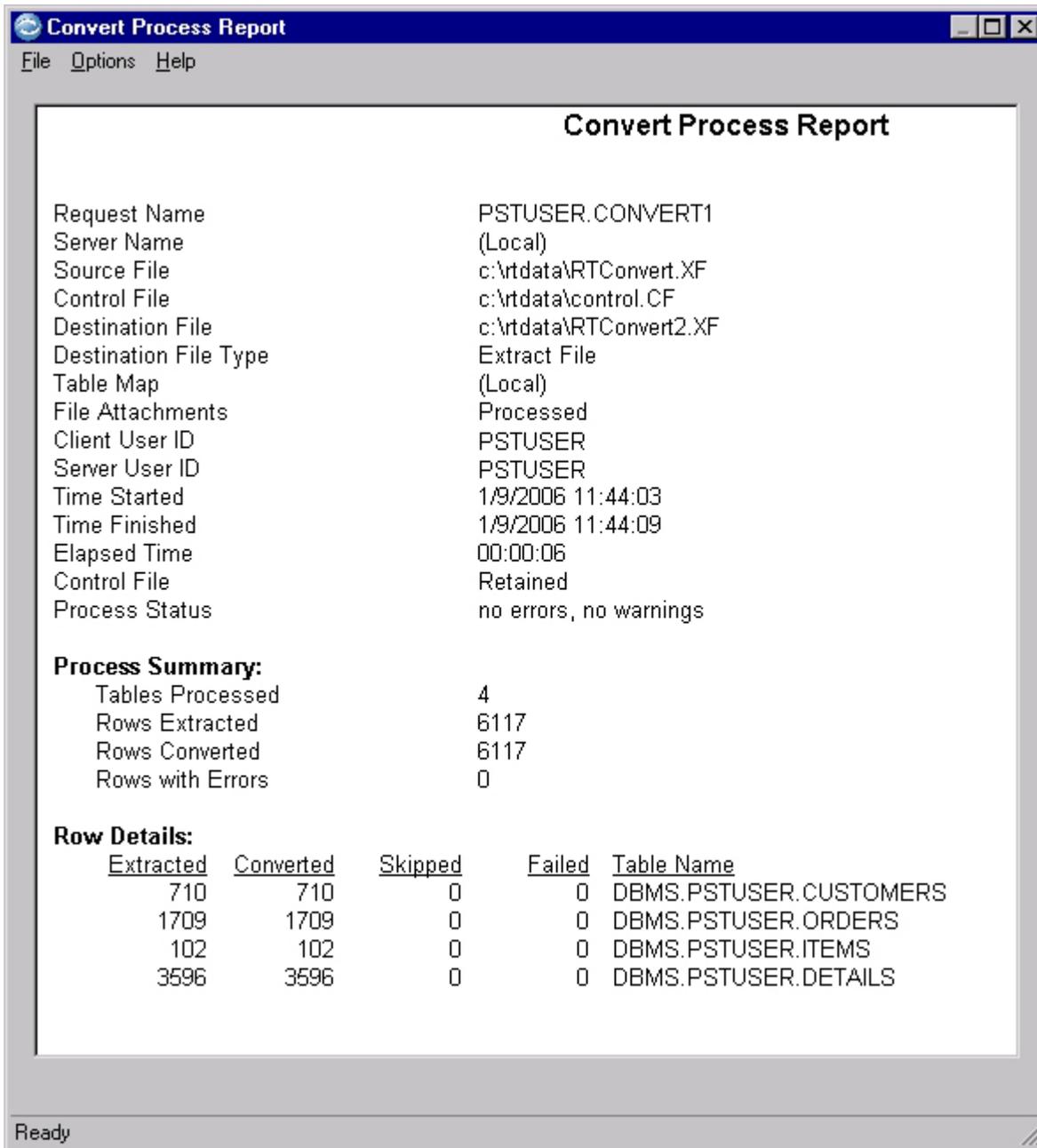
Cancel Process

To stop the process, click **Cancel Process**. A confirmation dialog opens. Click **Yes** to stop the process and return to the Convert Request Editor, or click **No** to continue processing.

The Status Bar at the bottom of the dialog displays the name of the table being processed or a description of the action being performed.

Convert Process Report

The Convert Process generates a Convert Process Report that provides general information and statistics about the Convert Process, as shown in the following example.



The Convert Process Report displays the following information:

- Name of the Convert Request (or “Untitled” if you did not save the request).
- Name of the Optim Server or “(Local)”, for client workstation.
- Name of the Source File used as input to the process.
- Name of the Control File specified in the Convert Request.
- Name of the generated Destination Extract File, or Destination Extract File segments.
- Name of the Table Map or “LOCAL”, as specified in the Convert Request.
- Indicator (“Skipped” or “Processed”) for processing file attachments.
- User ID of the user requesting the Convert Process.
- User ID of the Server for the Convert Process.
- Date and time the Convert Process started.

- Date and time the Convert Process completed.
- Elapsed time for the Convert Process to complete.
- Status of the process.

Errors

If any errors or warnings occur during processing, a list of the errors or warnings is provided. Review the list of errors that caused processing to stop. For example, an internal error condition exists when the process exceeds the discard row limit or if you are not authorized to access a particular database table.

Process Summary

Statistics are provided for the converted data:

- Total number of Tables Processed.
- Total number of Rows Extracted.
- Total number of Rows Converted.
- Total number of Rows with Errors.

Row Details

Information is provided for each table:

- Number of rows extracted.
- Number of rows converted.
- Number of failed rows.
- List of tables used in the Convert Process. The tables are listed in the same order as in the Extract File.

Save the Report

To save the report to a file, click **File > Save As** to open the Windows Save dialog.

Print the Report

To print the report, click **File > Print** to open the Windows Print dialog.

Redisplay the Report

If you close the report and want to redisplay it, click **File > Redisplay Results**, and then click **Current** to redisplay the report from the last Convert Process run, or click **All** to display a list of all retained Convert Process reports.

For information about retaining process reports, see the *Common Elements Manual*.

Chapter 4. Extract Process

Use the Extract Process to copy a set of related rows from one or more tables and save the rows to an external Extract File. Specifications for the Extract Process are stored as an Extract Request.

The Extract Request specifies the set of parameters needed to extract data and object definitions from source tables and the Extract File in which to store the extracted information.

The Extract Process always extracts definitions for tables and columns. These definitions are used to create the destination tables, if necessary. You can also choose to extract other object definitions, including primary keys, relationships, and indexes.

You use an Extract File to Convert, Extract, Insert, or Load data, and to Create objects in a destination database. An Extract File can be used repeatedly and simultaneously by many users.

Storage Media for Extract Files

You can create Extract Files on fixed or secondary storage media. Fixed media include local hard drives, network drives, or servers. Examples of secondary media include diskettes and zip disks.

Factors that influence the type of storage to use depend on your business objectives. Specific factors to consider include:

- the cost effectiveness of each type of media
- longevity of storage required
- mandates for off-site storage, security, and resource management (time and personnel).

For example, if quick access to Extract Files is of primary importance, you may decide to store Extract Files on the hard disk. However, if the need for off-site storage and portability is the primary consideration, secondary media would be the more logical choice.

Durability of the media type could be another consideration — for Extract Files you must retain for an extended period of time, a network storage system may be the best choice. Conversely, tape storage might be more desirable for short-term storage, due to the large capacity and cost-effectiveness of the media.

Secondary Media

Although Optim can create Extract Files on fixed media, you can also direct Extract Files to secondary media, e.g., a drive for removable media or a NetApp SnapLock device — simply by providing the path to the appropriate device with the file name. You can also use Optim with a hierarchical storage management (HSM) system.

You cannot directly specify a tape drive as the path in order to place an Extract File on tape. However, you can copy Extract Files from disk to tape or other secondary media using the appropriate vendor software and remove the files from disk. (Note that you must arrange to return a file to disk for processing or browsing.)

If your facility uses an HSM system, files can be migrated to tape or other secondary media and removed from disk in the normal course of HSM processing. You can transfer management of Extract Files to the Symantec VERITAS Enterprise Vault by providing the path to the device with the file name.

Support for Secondary Media

When an Extract File is created on removable media, the capacity of the media must be considered. If an Extract File is larger than the space on the target media, the file must be divided into segments to allow the file to span more than one volume. You can specify segment size values for fixed and removable media in Personal Options. See the *Common Elements Manual* for further information.

Cross-Platform Compatibility

The Extract Process can access data from a variety of databases (DB2, Oracle, Sybase ASE, SQL Server, and Informix). You can create Extract Files to move data between the Windows and MVS™ platforms. An Extract File created with the Optim solution for the IBM z/OS™ environment can also be used with Move. (An Extract File created using Move, however, is not compatible with the Optim z/OS® Solution. Use Move to move data from a Windows platform into DB2 UDB for z/OS.)

Run or Schedule

You can process an Extract Request immediately by clicking **File > Run**, or you can schedule the request for processing at a later time by clicking **File > Schedule**. You must save the request before it is scheduled, but it is not necessary to save the request before it is run.

Naming Conventions

The fully qualified name of an Extract Request consists of: *identifier.name*.

identifier

Identifier that serves as the prefix for the Extract Request name (1 to 8 characters).

name Name assigned to the Extract Request (1 to 12 characters).

When you create Extract Requests, it is helpful to use a logical set of naming conventions to identify the use for each and to organize definitions for easy access.

Section Contents

This section explains how to create, maintain, and process an Extract Request, including how to:

- Specify the Extract File to store data.
- Select or create the Access Definition for an Extract Request.
- Select the types of objects to extract (e.g., primary keys, relationships, and indexes).
- Choose Point and Shoot list options. A Point and Shoot list is used to select specific rows from the Start Table to extract.
- Assign variable default values.
- Specify notification options.
- Specify Convert options.
- Run, save, and schedule an Extract Request.
- Review, save, and print the Extract Process Report.

Open the Extract Request Editor

Use the Extract Request Editor to create and maintain requests to extract data. Extract Requests are stored in the Optim Directory.

There are different ways to open the editor, depending on whether you want to create a new Extract Request or edit an existing Extract Request.

Create an Extract Request

Use this task to create an Extract Request.

Do the following to create an Extract Request:

1. Click **File > New > Extract** from the main window to open the Extract Request Editor.
2. Specify the name of an Extract File.
3. Select the type of Access Definition: **Named** or **Local**. If you select **Named**, specify the name of a new or existing Access Definition.
4. Click **Tools > Edit Access Definition** to create or edit an Access Definition.

These steps are the minimum required to create an Extract Request. After you create a request, you can run the process immediately or save the request and schedule it. Because the options to create an Extract Request and to modify an Extract Request are similar, see “Using the Extract Request Editor” on page 87 for complete details.

An alternate method for opening the Extract Request Editor is to click **Actions > Extract** from the main window. By default, the last Extract Request you edited will display. Your next step depends on your purpose:

- To create a new Extract Request, click **File > New** from the Extract Request Editor.
- To create a new Extract Request modeled on an existing one, open the desired Extract Request and click **File > Save As** from the Extract Request Editor.
- To create and store a copy of the current Extract Request and continue editing, click **File > Save Copy As** from the Extract Request Editor.

Select an Extract Request to Edit

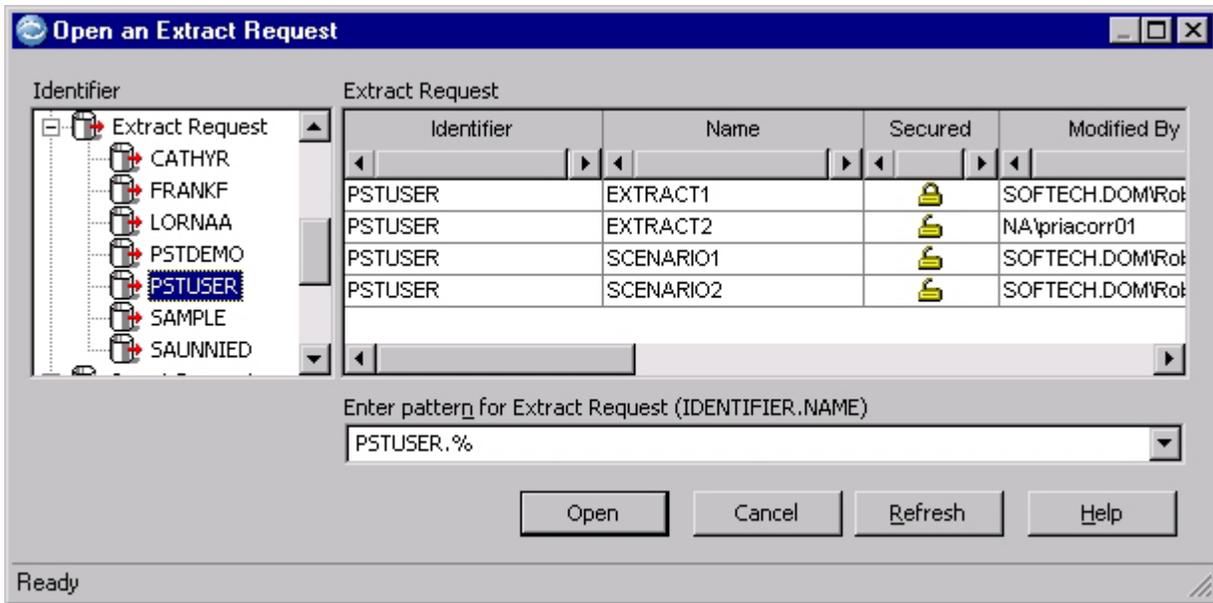
Use this task to select an Extract Request to edit.

Do the following to select an Extract Request to edit:

1. Click **File > Open** from the main window to open the object selection dialog.
2. Double-click to select **Extract Request** and expand the object list.
3. Double-click the **Extract Request Identifier** to display a list of Extract Requests.
4. Double-click the desired Extract Request name to open the Extract Request Editor.

Open an Extract Request dialog

The Open dialog is divided into two areas. The object identifiers are on the left and associated objects appear on the right. The list of objects varies to reflect the identifier you select.

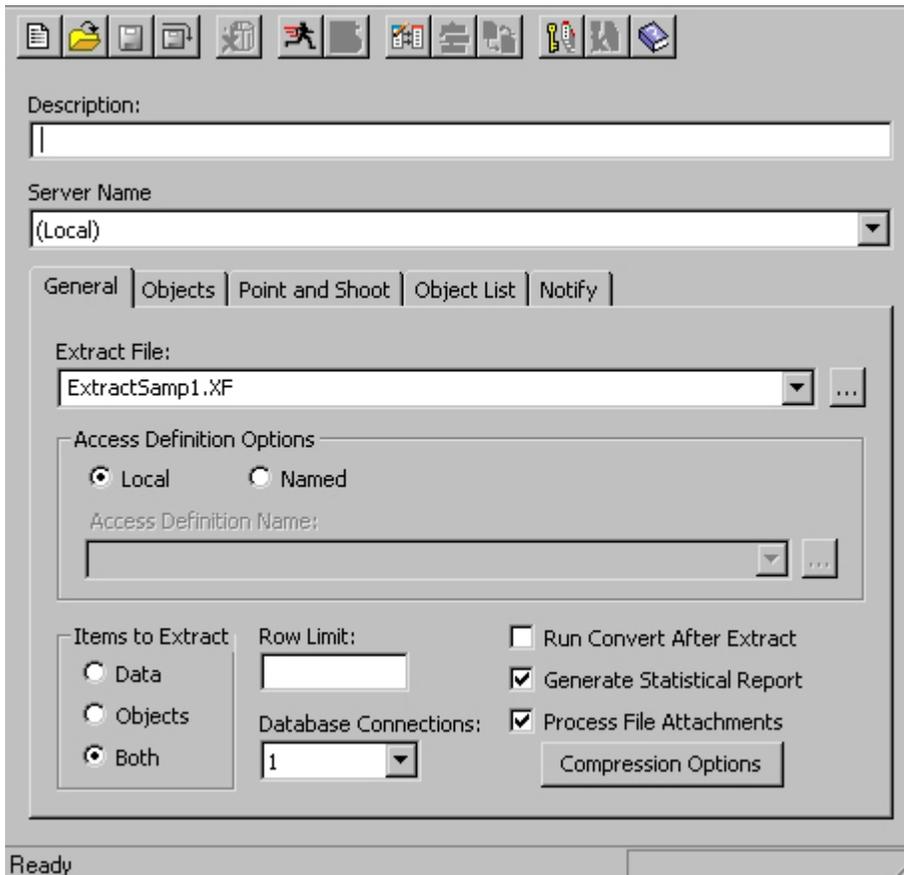


You can use a **Pattern** to limit the list of requests in the Open dialog. An Extract Request name consists of two parts: *identifier.name*. The **Pattern** must also have two parts. You can use the % (percent) wild card to represent one or more characters or use the _ (underscore) wild card to represent a single character in an object definition name. (The underscore must be selected as the SQL LIKE character on the **General** tab of Personal Options.)

Note: After you specify a **Pattern**, click **Refresh** to redisplay the list according to your criteria.

Using the Extract Request Editor

Use the Extract Request Editor to create, modify, or delete Extract Requests stored in the Optim Directory.



Description

Enter text to describe the purpose of the Extract Request (up to 40 characters).

Server Name

If the optional Optim Server component is installed on your network, you can delegate resource-intensive Extract Request processing (for example, when extracting a large number of tables or rows) to a machine hosting Optim Server.

Click the down arrow to select a machine hosting Optim Server, or select **Local** to process the request on the local workstation.

Note: If the Optim Server option is not enabled at your site, the **Server Name** box is unavailable.

Tabs

The Extract Request Editor displays tabs that enable you to specify extract parameters and select options for running Extract Requests.

Each tab in the editor serves a unique purpose:

General

Provide parameters for the Extract Process, including the Extract File name, Access Definition, items to extract, and a limit for the number of rows to extract. The **General** tab is shown first.

Objects

Indicate the type of objects to extract. When you open the Extract Request Editor for the first time, all objects are selected by default. The **Objects** tab appears only when you select **Objects** or **Both** in the **Items to Extract** box on the **General** tab.

Point and Shoot

Specify options to override the Point and Shoot specification in the Access Definition.

Variables

Define values for substitution variables. (This tab appears only if variables are specified in the Access Definition.)

Object List

Specify other non-related objects for extraction.

Notify Specify options for automatic email notification of the success or failure of the process.

Convert

Specify parameters for an optional Convert Process following the Extract Process. (This tab appears only when you select **Run Convert After Extract** on the **General** tab.)

Menu Commands

In addition to the standard **File** and **Edit** menu commands, you can select the following commands from the **Tools** menu:

Edit Access Definition

Opens the Access Definition Editor. Edit the list of tables, select relationships, and define selection criteria in the Access Definition used to select the data to extract. See the *Common Elements Manual* for further information.

Edit Point and Shoot

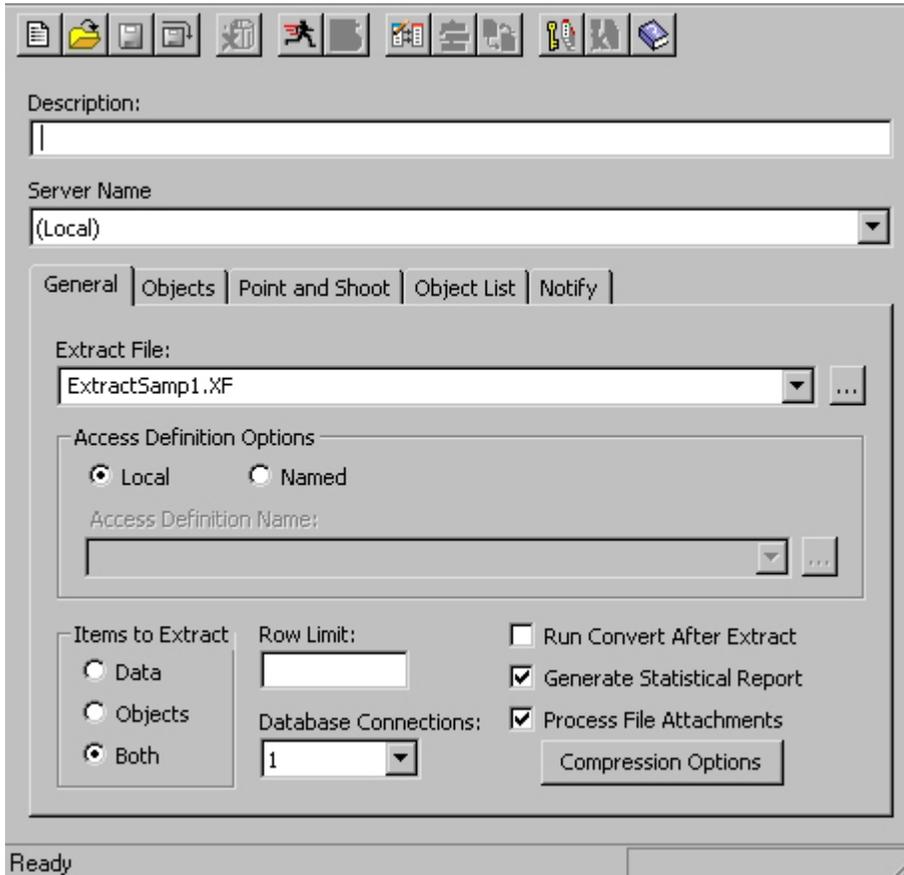
Opens the Point and Shoot Editor. Create a list of Start Table rows to extract. See the *Common Elements Manual* for further information.

Edit Convert Request

Opens the Convert Request Editor. You can specify parameters for converting the Extract File at the completion of the Extract Process. See Chapter 3, "Convert Process," on page 51 for further information.

General Tab

Use the **General** tab parameters to define the data to extract.



The screenshot shows the 'General' tab of an extract utility. At the top is a toolbar with icons for file operations. Below it is a 'Description:' text box. The 'Server Name' dropdown is set to '(Local)'. A tabbed interface shows 'General' selected, with other tabs for 'Objects', 'Point and Shoot', 'Object List', and 'Notify'. The 'Extract File:' dropdown is set to 'ExtractSamp1.XF'. Under 'Access Definition Options', the 'Local' radio button is selected. The 'Access Definition Name:' dropdown is empty. In the 'Items to Extract' section, the 'Both' radio button is selected. The 'Row Limit:' is set to '1'. The 'Database Connections:' dropdown is set to '1'. Checkboxes for 'Run Convert After Extract' (unchecked), 'Generate Statistical Report' (checked), and 'Process File Attachments' (checked) are present. A 'Compression Options' button is also visible. The status bar at the bottom left shows 'Ready'.

Extract File

Enter the name of a new or existing Extract File to store the extracted data. Extract Files have an **.xf** extension by default. If you want to write the Extract File to secondary media, specify the path to the desired device.

If you do not include a path with the file name, the default Data Directory specified in Personal Options is used. Network drives resolve to the appropriate Universal Naming Convention (UNC) name, as applicable.

You can browse the contents of an existing Extract File by right-clicking its name and selecting **Browse** from the shortcut menu. For details on the Browse Utility, see the *Common Elements Manual*.

If you specify the name of a file that already exists, a dialog prompts you to confirm that you want to overwrite the file when you run the Extract Request. To disable this feature, see Personal Options, the *Common Elements Manual*.

Access Definition

Local Select this option to create an Access Definition that is stored and can only be used with the Extract Request.

Named

Select this option to specify the name of a new or existing Access Definition. A named Access Definition can be used with more than one process request. The name of an Access Definition is composed of two parts: *identifier.name*.

identifier

Qualifier to identify the Access Definition (1 to 8 characters).

name Name of the Access Definition (1 to 12 characters).

An Access Definition identifies the Start Table and other tables to be traversed during the Extract, as well as the relationships that govern traversal paths. You can define an Access Definition to include:

- Selection criteria for one or more tables.
- A Point and Shoot list. Use Point and Shoot to select specific rows from a Start Table to begin extracting data.
- Substitution variables to be used with selection criteria or SQL statements.
- Parameters to select rows based on values in a particular column in the Start Table.

When you specify the name of an existing Access Definition in the Extract Request, you can use the definition as it is, or you can edit it. If changes to database tables have been made since the last time the Access Definition was used, the specifications may no longer be valid. If any specification is invalid, a warning message is displayed when you open, save, or use the Access Definition.

To edit an Access Definition, click **Tools > Edit Access Definition** from the Extract Request Editor to open the Access Definition Editor. For details, see the *Common Elements Manual*.

Items to Extract

Select the types of objects to extract.

Data Extract data rows only.

Objects

Extract object definitions only.

Both Extract data rows and object definitions.

Note: When you select **Objects** or **Both**, you must select types of objects to extract on the **Objects** tab or specify explicit objects to extract on the **Object List** tab, or both.

Row Limit

Maximum number of rows to extract. You can specify a row limit if you are extracting rows by selecting **Data** or **Both**. Clear the **Row Limit** box to use the maximum limit. The row limit for an Extract Process is any number from 1 to the maximum limit specified in Product Options. For more information, see the *Installation and Configuration Guide*.

Database Connections

Increase the number of concurrent database connections for the Extract Process. Increasing database connections improves performance when processing large quantities of data by allowing multiple threads to extract rows concurrently.

To increase the maximum number of connections, select an even number from 2 to the site maximum as specified on the Personal Options dialog. This option is available only if **Maximum Database Connections** on the **Database** tab of Product Options is 2 or greater.

Note:

- For performance reasons, you can only select an even number of maximum database connections.
- Increasing the number of database connections to process small amounts of data may decrease performance, rather than increase it.

Run Convert after Extract

Select this check box to specify parameters for running a Convert Process immediately following the Extract Process. When you select this check box, the **Convert** tab in the Extract Request Editor is enabled. Use the **Convert** tab to specify whether to use a named or local Convert Request.

The Convert Process can transform or mask data in the Extract File. To specify or modify parameters for the Convert Process, click **Tools > Edit Convert Request** to display the Convert Request Editor. See “Open the Convert Request Editor” on page 52.

Generate Statistical Report

This check box is selected by default to include statistical information in the Extract Process Report. For details, see “Statistical Information” on page 107.

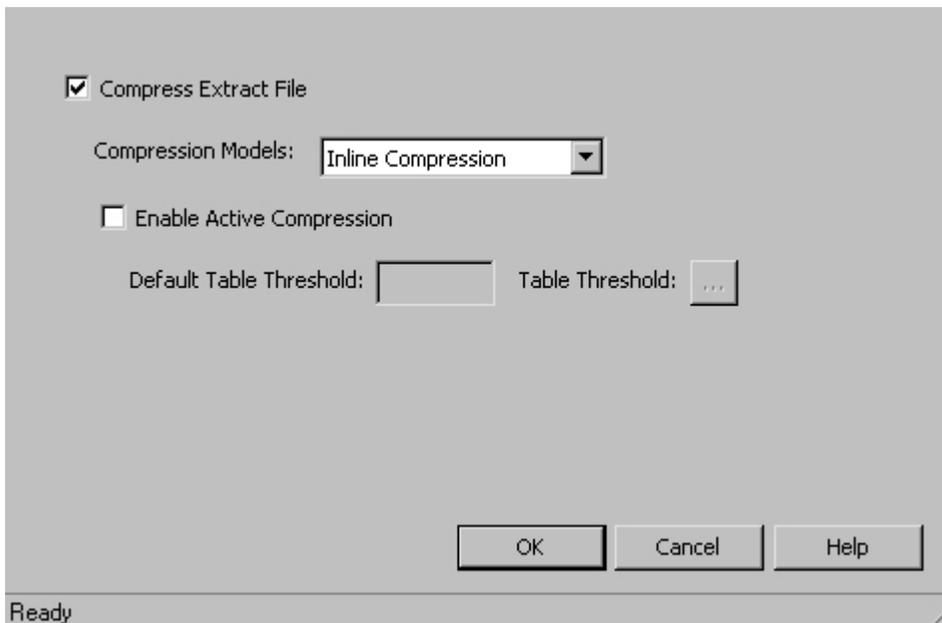
Note: Statistical information may indicate whether you can improve performance by overriding the default method (scan or key lookup) of accessing a table. For details, see the *Common Elements Manual*.

Process File Attachments

Select this check box to extract file attachments specified in the Access Definition.

Compression Options

Select this box to choose options for compressing the Extract File or specific tables in the Extract File. The Compression Options dialog displays:



This dialog has the following options:

Compress Extract File

Select this check box to compress the Extract File. Next, select a Compression Model.

Compression Models:

Choose the type of compression from this drop-down list:

Inline Compression

Data is compressed as it is extracted and before it is written to the Extract File. Inline Compression has lower I/O and shorter elapsed time for the Extract, though it requires longer time to be connected to the database, when compared with Post Compression.

Post Compression

Data is compressed after it is extracted and written to the Extract File. Compared with Inline Compression, Post Compression has a higher I/O rate and a longer elapsed time for the Extract, though the connection to the database is for a shorter time.

Enable Active Compression

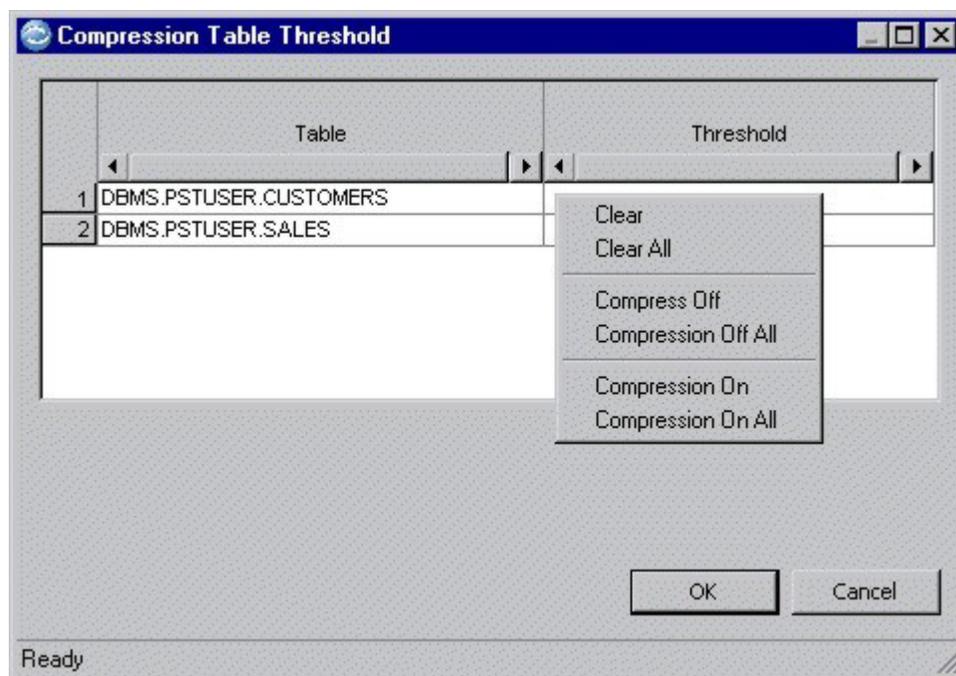
Select this check box to perform compression on an individual table basis.

Default Table Threshold:

Specify the default threshold for compressing the tables in the Extract File. Choose a value for the percentage of reduction in table size that you expect compression to achieve. For example, if you specify a value of 20, Optim compresses any table in the Extract File that can be reduced in size by 20 percent or more. Allowable values are 1 - 99.

Table Threshold:

Select this box to specify compression options for individual tables. The Compression Table Threshold dialog displays:



Threshold

For each table, specify ON or OFF for compression or specify a value for Optim to use as the compression threshold. If no value is specified for a table, the default is to set compression on and use the **Default Table Threshold**. Allowable values are:

ON Sets compression ON for this table. This is the default. The **Default Table Threshold**

value is used to determine whether compression is performed. If no value is specified for **Default Table Threshold**, the table is compressed. This is the default.

OFF Sets compression OFF for this table.

n Sets compression ON for this table and uses this value as the threshold. Allowable values are 1 - 99. The threshold value is the minimum amount of reduction in size that you expect to achieve by compressing the table. Enter a value in the range 1 - 99 to set a threshold value for that table.

Right-click on the line next to the table name to display these options:

Clear Clears any Threshold column setting for this table. Use **Clear All** to clear Threshold column settings for all tables in this Extract File.

Compression Off

Turns off compression for this table. Use **Compression Off All** to turn off compression for all tables in this Extract File. Selecting **Compress Off All** overrides any value in the Threshold column.

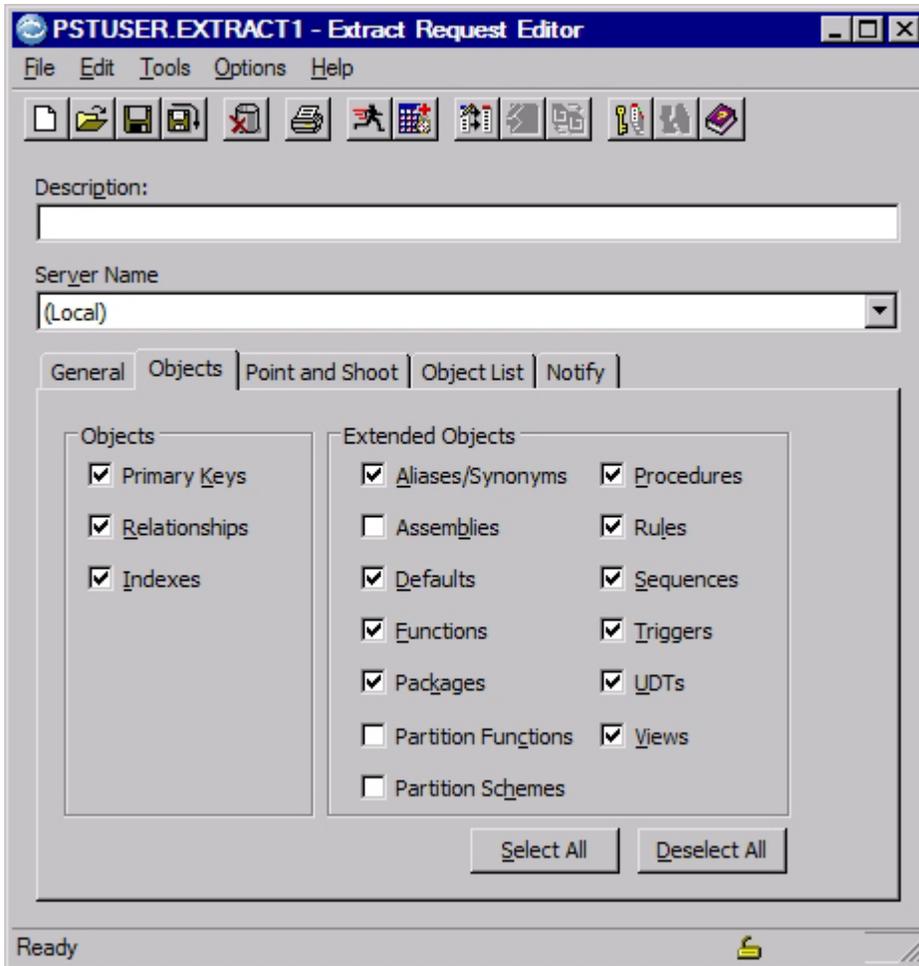
Compression On

Turns on compression for this table. If **Default Table Threshold** is specified, that value determines whether to compress the table. If no **Default Table Threshold** is specified, the table is compressed. Use **Compression On All** to turn on compression for all tables in this Extract File. Selecting **Compression On All** overrides any value in the Threshold column.

Objects Tab

The **Objects** tab is displayed and objects are extracted only when you select **Objects** or **Both** on the **General** tab. If so, object definitions for tables and columns listed in the Access Definition are automatically extracted. By default, all other objects are also extracted.

Use the **Objects** tab to select among the other objects to be extracted.



Objects

Common objects available for extracting. Select a check box to extract the corresponding object. To exclude an object, clear the corresponding check box.

Extended Objects

Additional objects available for extracting. Select a check box to extract the corresponding object. To exclude an object, clear the corresponding check box.

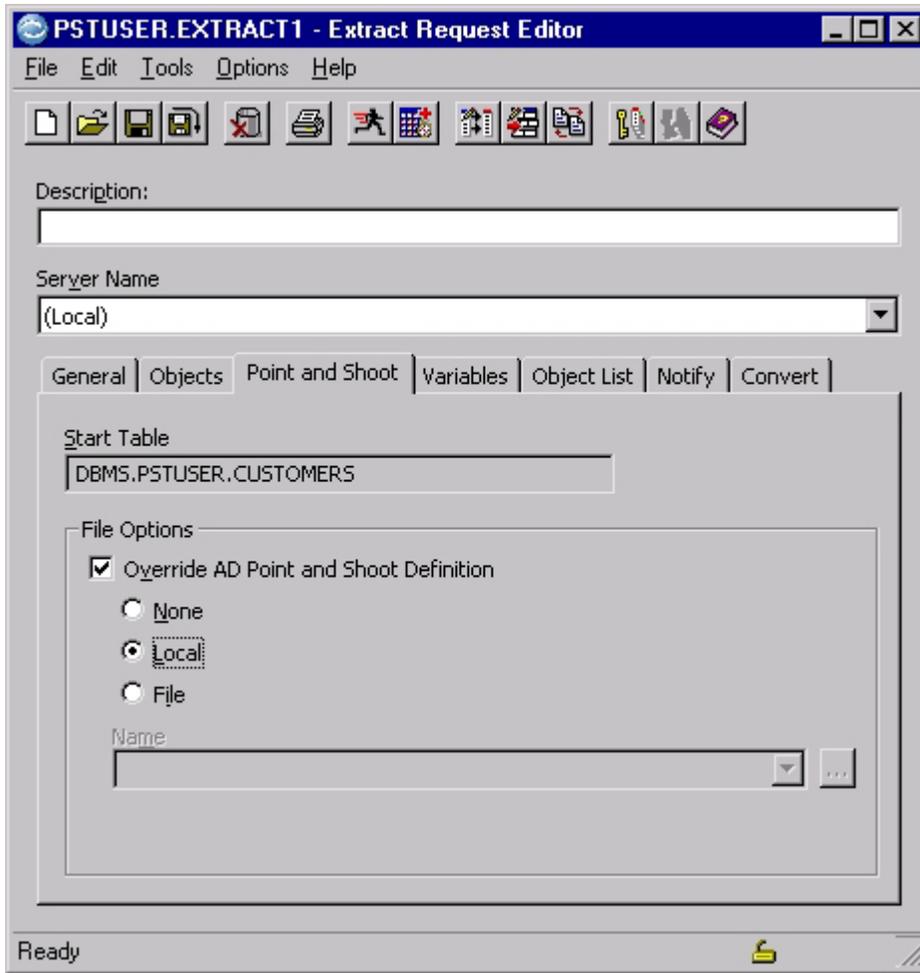
Select All Deselect All

Click **Select All** to extract all listed objects. Click **Deselect All** to exclude all listed objects from the Extract Process.

Point and Shoot Tab

Use this tab to override the Point and Shoot specification in the Access Definition. The Point and Shoot specification in the Access Definition is used by default.

For details on using Point and Shoot, see the *Common Elements Manual*.



Start Table

The name of the Start Table designated by the Access Definition.

File Options

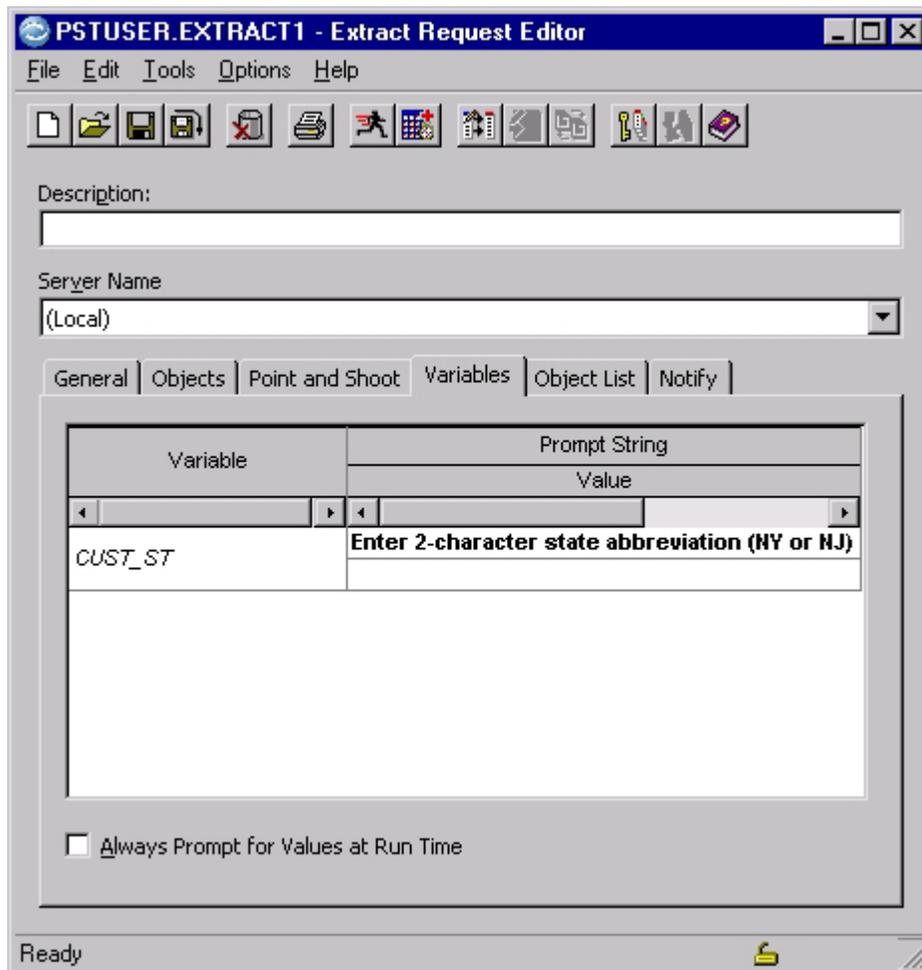
Select the **Override AD Point and Shoot Definition** check box to disregard Point and Shoot specifications in the Access Definition. Then select one of the following:

- None** Disregard any Point and Shoot specification in the Access Definition when running the Extract Request.
 - Local** Use a Local Point and Shoot list when running the Extract Request. A Local Point and Shoot list is unavailable to other process requests and Access Definitions. To create or edit a Local Point and Shoot list, select **Local** and then click **Tools > Edit Point and Shoot List** to display the Point and Shoot Editor. A name for the Point and Shoot list is unnecessary because the list is stored with the Extract Request.
 - File** Use an existing or new Point and Shoot List File when running the Extract Request. This file is available to other process requests and Access Definitions. To use an existing file or to create a new named Point and Shoot File, select **File**, type a file name in the **Name** box, and then click **Tools > Edit Point and Shoot List** to display the Point and Shoot Editor.
- Name** Point and Shoot files are saved in ASCII format and have a **.pns** extension by default.

Variables Tab

Selection criteria define the subset of related data to extract from the list of tables in the Access Definition. You can define explicit selection criteria in the Access Definition, or create variables with default values that can be overridden by values specified on the **Variables** tab in the Extract Request Editor. You can also choose to be prompted for values at runtime.

The flexibility provided by using variables allows you to use the same Access Definition for different processes.



Grid Details

Information for each variable in the Access Definition is presented in three parts on the grid. The variable name is shown in the left column. The grid cell in the right column is divided in two. The prompt string for the variable displays in the top half of the cell and the value used as criteria displays in the bottom.

Variable

The list of variables defined in the Access Definition. The name of the variable displays in italics, unless the default value is overridden by a value entered on the **Variables** tab. You can modify the name of the variable in the Access Definition Editor only. To open the Access Definition Editor, click **Tools > Edit Access Definition**.

Prompt String

Text that prompts for a value at run time. You can modify the prompt string in the Access Definition Editor only. To open the Access Definition Editor, click **Tools > Edit Access Definition**.

Value The value assigned to the variable. You can right-click and select **Set Default Value** to use the values assigned as defaults in the Access Definition.

Note: A value for each variable is required to perform the Extract Process. If a default value is not specified in the Access Definition and no value is provided on the **Variables** tab, you are prompted for a value at run time.

Specify Values

Assigned values must be the appropriate data type and size for the column and must conform to the SQL syntax. For example, assume a variable named **ST** is assigned to a character column containing state abbreviations. The variable delimiter is a colon. If the variable is defined with single quotes in the Access Definition, you must specify the value without single quotes on the **Variables** tab:

Access Definition	Value
'ST'	CA

If the variable is defined without single quotes in the Access Definition, you must specify the value with single quotes on the **Variables** tab:

Access Definition	Value
:ST	'CA'

Note: Values are not validated until run time. Errors during processing may result if the value is an incorrect data type or size for the column, or the resulting specification does not conform to SQL syntax.

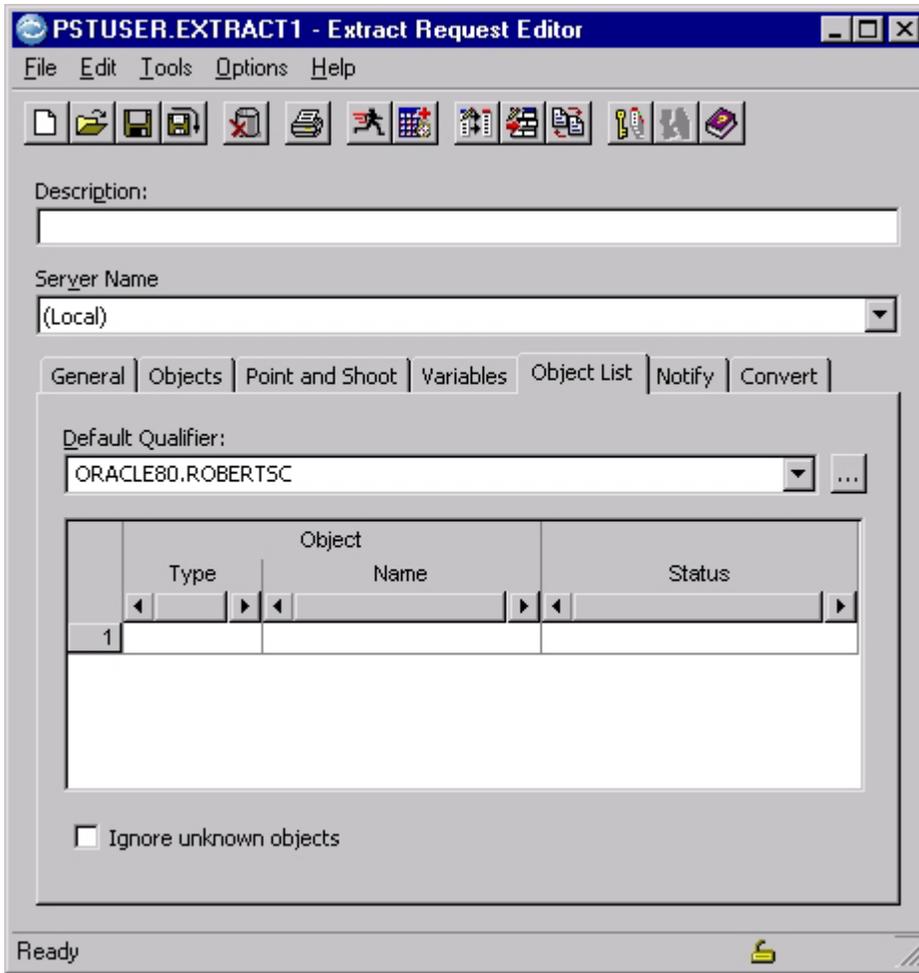
Always Prompt for Values at Run Time

Select the **Always Prompt for Values at Run Time** check box to display the prompt string before each Extract Process is performed, regardless of whether a value has been assigned. Clear the check box to display the prompt string only when a value for a variable has not been assigned.

Object List Tab

Use the **Object List** tab to specify other non-related objects for extraction.

Note: Objects you specify on the **Object List** tab are extracted only when you select **Objects** or **Both** as the items to extract on the **General** tab.



Qualifier

The two-part qualifier serves as a prefix to unqualified object names in the Object List. To select from a list of the most recently used qualifiers, click the down arrow. To select a qualifier that is not on the list, click the browse button. The Default Qualifier consists of:

dbalias Alias of the database in which an object is defined (1 to 12 characters).

creatorid

Creator ID assigned to the object (1 to 64 characters).

Object

Type The type of object to extract: Default, Function, Package, Procedure, Rule, Sequence, UDT, or View. Click the grid cell to display a down arrow, then click the down arrow to select from a list. You must specify an object type for each entry. The last line in the grid can remain blank.

To clear entries, right-click a grid cell and select **Remove** or **Remove All** from the shortcut menu.

To add objects, right-click a grid cell, select **Add**, then select the object type from the submenu. You can drag an object name from the Select dialog to any line in the grid. The type, name, and status are inserted in the list. You can also add objects to the list manually.

Name Name of the explicit object to extract. You cannot specify duplicate object names for the same type object. The fully qualified object name consists of:

dbalias Identifies the database where the object resides.

creatorid
Creator ID assigned to the object.

objectname
Base object name.

Status

The status of the listed object.

Defined

Object exists in the database.

Inaccessible

Cannot connect to the database indicated by the DB Alias.

Incomplete

Object type is not specified, or the object name is not fully qualified. Select an object type, or specify a Qualifier or a three-part object name, as appropriate.

Pending

When you select an object type, the object is pending until you specify an object name.

Unavailable

Object type is not supported for the specified DB Alias (DBMS type).

Unknown

Object does not exist. To create an object, use the Create Utility.

Ignore Unknown Objects

Select this check box to ignore **Unknown** or **Unavailable** objects when you run the Extract Request. If you clear this check box, the status of all objects must be **Defined** to save or run the Extract Request.

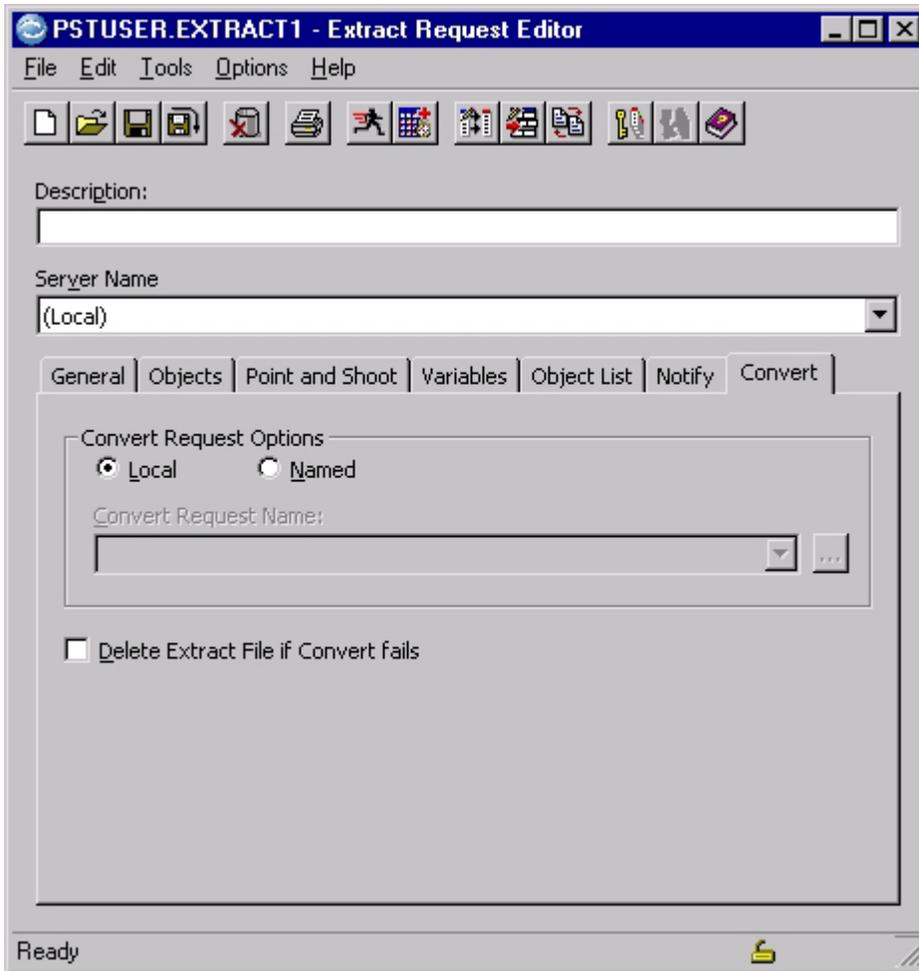
Notify Tab

Use the **Notify** tab to specify options and addresses for automatic e-mail notification of the success or failure of the process. The process report generated when the process completes is automatically sent as an attachment.

Convert Tab

Select **Convert after Extract** on the **General** tab to display the **Convert** tab. Use the **Convert** tab to specify whether to use a named or local Convert Request.

The Convert Process can transform or mask data in an Extract File. To specify or modify parameters for the Convert Process, click **Tools > Edit Convert Request** to display the Convert Request Editor. For details, see "Open the Convert Request Editor" on page 52.



Convert Request Options

Select one of the following options:

Local Use a Local Convert Request with the Extract Request. (A Local Convert Request is stored as part of the Extract Request and is unavailable to other process requests.) To create or edit a Local Convert Request, select **Local**, then click **Tools > Edit Convert Request** to display the Convert Request Editor.

Named

Use an existing or new Convert Request with the Extract Request. To use an existing Convert Request or to create a new named request, select **Named**, type a name in the **Convert Request Name** box, and then click **Tools > Edit Convert Request** to display the Convert Request Editor.

Delete Extract File if Convert fails

Select this check box to delete the Extract File created by the Extract Process when the Convert Process does not execute successfully.

Process an Extract Request

An Extract Request is run in several steps. The steps differ slightly if you schedule the Extract to run later, rather than immediately, as explained in this topic.

Note: You may encounter a logon prompt during processing, depending on how Optim is configured at your site. See the *Common Elements Manual* for information about the DB Alias Connection Logon and Optim Directory Connection Logon dialogs.

Validate the Access Definition

Optim validates the specifications in the Access Definition. If the Access Definition is valid, processing continues. If the Access Definition is invalid, processing proceeds as follows:

- If the Extract Process is scheduled, the **Stop on Error** parameter on the **Steps** tab of the Job Details dialog determines whether processing continues.
- If the Extract Process is run immediately, Optim displays an error message and processing stops.

Locate the Extract File

Optim locates the Extract File. If the file does not exist, Optim creates it. If the Extract File does exist, processing proceeds as follows:

- If the Extract Process is scheduled, processing continues. The file is overwritten.
- If the Extract Process is run immediately, a dialog prompts you to confirm that the data in the file is to be overwritten. To disable this feature, use Personal Options.

Validate Variable Value

Optim checks whether variables are defined in the Access Definition and, if so, verifies that valid values are provided for each variable.

- If valid values are provided, processing continues.
- If invalid values are provided (for example, the data type, size, or resulting SQL syntax is invalid), processing stops and errors are recorded on the Process Report.
- If values are missing or the check box labeled **Always Prompt for Values at Run Time** is selected on the **Variables** tab (see “Variables Tab” on page 96) processing proceeds as follows:
 - If the Extract Process is scheduled, processing stops and errors are recorded on the Process Report.
 - If the Extract Process is run immediately, the Extract File Variable Values dialog is displayed. Enter values for variables, as required, to continue processing.

Validate Point and Shoot

If a Point and Shoot list is specified, Optim verifies that the rows are valid.

- If the rows in the Point and Shoot list are valid, processing continues.
- If a Point and Shoot list file is specified and cannot be found, processing stops.
- If the rows in a Point and Shoot list are invalid, missing, or if primary key values in the file do not exist in the Start Table, processing proceeds as follows:
 - If the Extract Process is scheduled, the **Stop on Error** parameter you specified on the **Steps** tab of the Job Details dialog determines whether processing continues.
 - If the Extract Process is run immediately, you are prompted to specify how to proceed. You can select to continue processing the Extract without using the Point and Shoot list, or select to cancel the Extract.

Extract Data and Generate a Process Report

Optim performs the Extract for each table listed in the Access Definition and generates an Extract Process Report.

- If the Extract Process is scheduled, the process proceeds when scheduled and the report is saved to a file. Open and print the process report from the Scheduler after the Extract completes.

- If the Extract Process is run immediately, the Extract Request Progress dialog displays a status message as rows of data are extracted from each table. The process report displays automatically when the Extract completes. Review and print the report, as required.

Schedule an Extract Process

To schedule an Extract to run once at a specified future time or repeatedly at intervals, save the Extract Request, and then click **File > Schedule**.

- Processing is initiated at the scheduled time; you do not review the Extract Process as it is performed.
- If warning conditions exist, processing continues without prompting, depending on the **Stop on Error** parameter you specified on the **Steps** tab of the Scheduling Job dialog.
- If an error occurs during the extract, processing stops.

For details on scheduling, see the *Common Elements Manual*.

Run an Extract Process Request

To process an Extract Request immediately, click **File > Run**. It is not necessary to save the Extract Request before it is run.

- Before processing begins, the Extract Request is verified. If errors exist, you can review the details on the message bar at the bottom of the Extract Request Editor.
- After the Extract Request has been verified, the process parameters are verified. If warnings or errors exist, you can review the details in the Warnings dialog and choose to continue or cancel the extract.
- If an error occurs during the extract, processing stops.

Error Messages

If error conditions are detected in the Access Definition or the Extract Request when the Extract is run, processing stops and an error message is displayed. For example, errors can occur if changes have been made to the tables since the Access Definition was created.

Error messages, such as those listed below, appear in the message bar of the Extract Request Editor:

Duplicate Table Entries

A single table is listed in the Access Definition twice. You cannot specify a table and one or more views or aliases of that table, or specify more than one view or alias of a table.

No Valid Table

No valid table is specified. The list of tables in the Access Definition does not include any valid tables. These tables may have been dropped from the database.

Invalid WHERE Clause

An SQL WHERE Clause is invalid. Selection criteria for one or more tables are invalid. (For example, a column used in an SQL WHERE Clause has been dropped from the table.)

Invalid Start Table

The Start Table is invalid. This can occur when the table is dropped or the Creator ID changed. The table is then marked as **Unknown** and cannot be used as the Start Table.

Missing Primary Keys

A child table that has multiple parents does not have a primary key. The primary key is required when the child table is related to multiple parents to ensure that multiple copies of a row are not extracted.

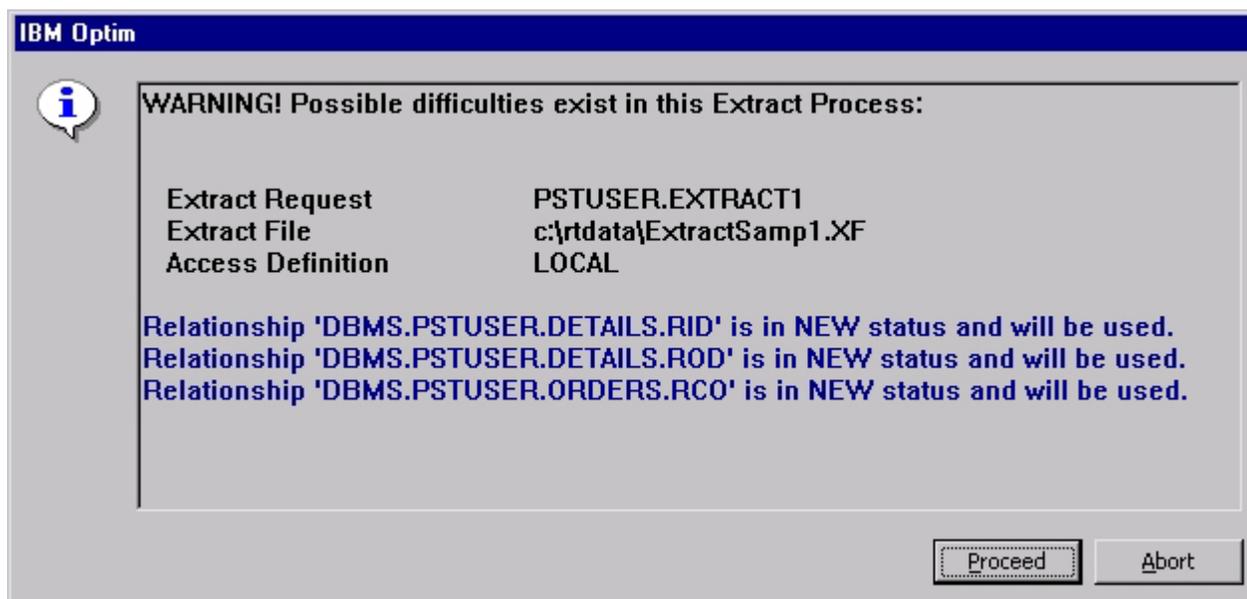
A parent table does not have a primary key. Relationships defined in the Optim Directory are not required to include a primary key for the parent table. However, a primary key is required to enable tracking of outstanding parent rows.

Improper Authorization

The person requesting the extract is not authorized to access data from a table included in the Access Definition.

Warning Messages

If one or more warning conditions exist, the Warnings dialog opens to report the details. Warning messages indicate a condition that may require attention.



Command Buttons

To command buttons are available on the Warnings dialog: **Proceed** and **Abort**.

- Click **Proceed** to continue the Extract Process, regardless of the warnings. (You can review details of the warnings in the Extract Process Report.)
- Click **Abort** to cancel the Extract Process.

Warning Messages

The following are categories of warning messages that may appear.

New Status

A relationship is in **New** status indicating that a relationship is new to the Access Definition, and is not explicitly selected.

- To view the relationship list and select or unselect individual relationships, use the **Relationships** tab of the Access Definition Editor.
- To specify that **New** relationships are selected by default, use the **Use New Relationships** check box on the **Relationships** tab of the Access Definition Editor.

Unknown Relationship

A relationship is in **Unknown** status. This condition occurs when the Creator ID of a table has changed or a relationship has been dropped from the database.

Unknown Table

A table is in **Unknown** status. This condition occurs when a table has been dropped from the database or the identifier has changed.

Untraversed Table

A table specified in the Access Definition will not be traversed by the Extract Process. This condition indicates that the selected relationships do not define a path from the Start Table to the untraversed table.

Untraversed Relationship

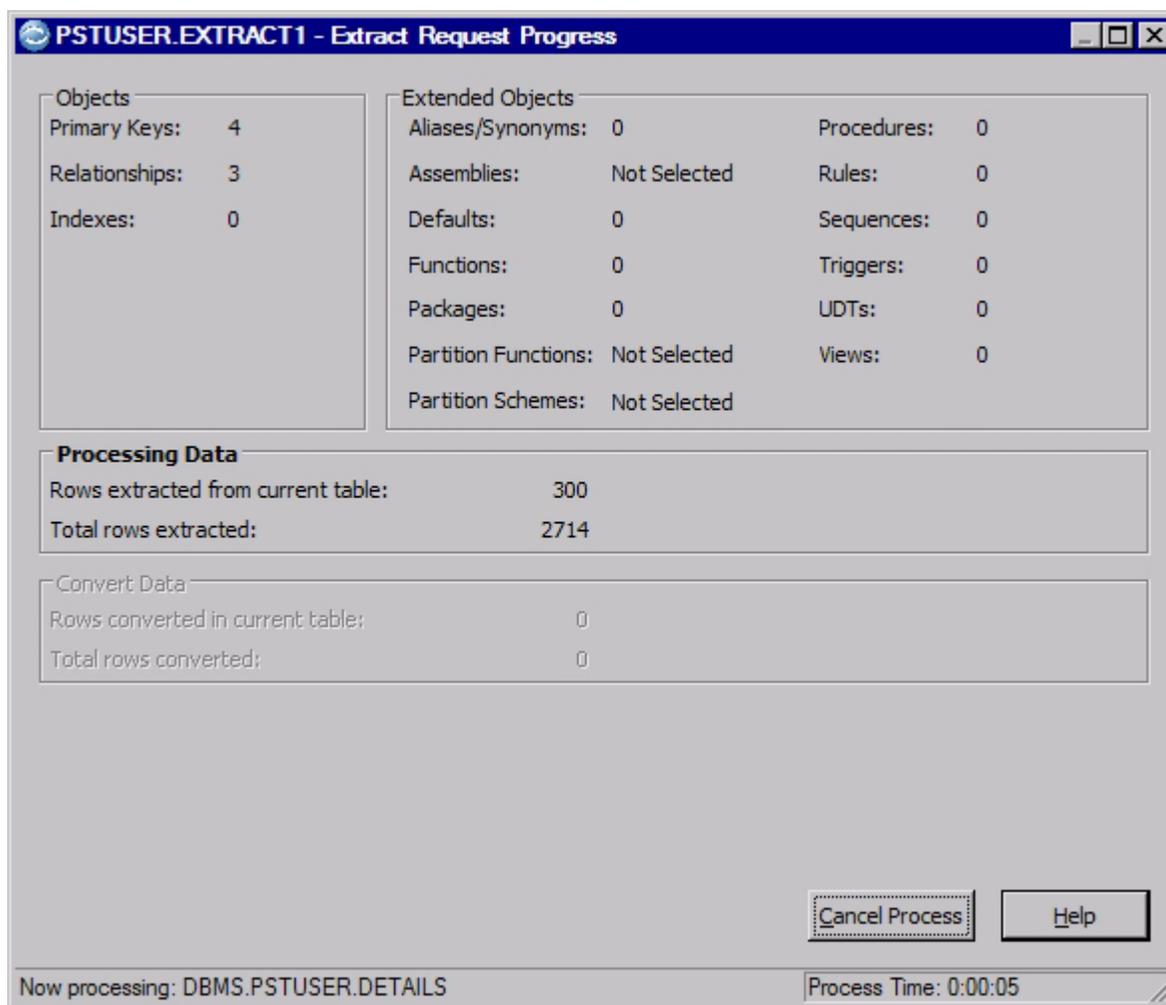
A relationship listed in the Access Definition will not be traversed by the Extract.

Runstats Error

RUNSTATS has not been applied to a DB2 table in the Access Definition. This condition can affect performance if the table is large.

Extract Request Progress Dialog

When the Extract Process begins, the Extract Request Progress dialog will display status information about the extract.



Objects

As common objects are extracted, the number of each type is displayed.

Extended Objects

As additional objects are extracted, the number of each type is displayed.

Extract Data

Rows are extracted table by table, traversing the relationships. Some tables may be revisited as relationships are traversed.

Rows extracted from current table

The total number of rows extracted from the current table.

Total rows extracted

The total number of rows extracted from all tables.

Move revises these totals after a number of rows are extracted for each table, after a number of seconds pass, and when the extract for one table completes and the process begins for the next table.

Note: The frequency with which the Progress dialog is updated (i.e., the number of rows and seconds) is specified on the **Actions** tab in Personal Options. (See the *Common Elements Manual* for further information.)

Convert Data

Rows are converted table by table.

Rows converted in current table

The total number of rows converted in the current table.

Total rows converted

The total number of rows converted from all tables.

The totals are revised after a number of rows (specified on the **Actions** tab in Personal Options) are converted for each table, and when the conversion for one table completes and the process begins for the next table. (See the *Common Elements Manual* for more information.)

Cancel Process

To stop the process, click **Cancel Process**. A confirmation dialog is displayed:

- To cancel the Extract Process, click **Yes** to return to the Extract Request Editor. You can review the Process Report, re-enter parameters, and restart the Extract Process.
- To continue processing, click **No** to close the confirmation dialog.

Status Bar

Describes the action being performed and indicates the name of the table being processed, as applicable.

Process Time

Lists the elapsed process time for the Extract Process.

Extract Process Report

The Extract Process generates an Extract Process Report that provides general information and statistics about the Extract Process.

PSTUSER.EXTRACT1 - Extract Process Report

File Options Help

Extract Process Report

Request Name PSTUSER.EXTRACT1
 Server Name (Local)
 Extract File C:\RTData\ExtractSamp1.XF
 Access Definition LOCAL
 File Attachments Processed
 Client User ID PSTUSER
 Server User ID PSTUSER
 Time Started 8/16/2006 11:36:33
 Time Finished 8/16/2006 11:36:43
 Elapsed Time 00:00:10
 Process Status no errors, 3 warnings

Extract Process Warnings:
 Relationship 'DBMS.PSTUSER.DETAILS.RID' is in NEW status and will be used.
 Relationship 'DBMS.PSTUSER.DETAILS.ROD' is in NEW status and will be used.
 Relationship 'DBMS.PSTUSER.ORDERS.RCO' is in NEW status and will be used.

Process Summary:

Tables Processed	4
Rows Extracted	6112
Rows with Errors	0
First Pass Table Rows	705

Object Details:

Tables	4
Primary Keys	4
Relationships	3
Indexes	0
Aliases/Synonyms	0
Functions	0
Packages	0
Procedures	0
Sequences	0
Triggers	0
Views	0
Defaults	0
Rules	0
UDTs	0
Assemblies	Not Selected
Partition Functions	Not Selected
Partition Schemes	Not Selected

Row Details:

<u>Extracted</u>	<u>Failed</u>	<u>Table Name</u>
705	0	DBMS.PSTUSER.CUSTOMERS
1709	0	DBMS.PSTUSER.ORDERS
3596	0	DBMS.PSTUSER.DETAILS
102	0	DBMS.PSTUSER.ITEMS

Ready

The Extract Process Report displays the following information:

- Name of the Extract Request (or “Untitled” if you did not save the request).
- Name of the Optim Server, or “(Local)” for a client workstation.
- Name of the generated Extract File or Extract File segments.
- Name of the Access Definition for the Extract Request or “LOCAL”.
- Indicator (“Skipped” or “Processed”) for processing file attachments.
- User IDs of the user requesting the Extract Process.
- Date and time the Extract Process started.
- Date and time the Extract Process completed.
- The elapsed time.

Extract Process Warnings

A list of any warnings or errors that occur during processing is provided.

Process Summary

Statistics for the data extracted are provided:

- Total number of Tables Processed.
- Total number of Rows Extracted.
- Total number of Rows with Errors.
- Total number of First Pass Table Rows.

Object Details

The number of objects copied to the Extract File or “Not Selected” if the object was not selected in the Extract Request.

Row Details

Statistics for each table are provided:

- Total number of rows extracted from each table.
- Total number of failed rows for each table.
- Names of tables used in the Extract. The tables are listed in the same order as in the Access Definition.

Statistical Information

If you selected the **Generate Statistical Report** check box on the Extract Request Editor, detailed performance information for each step in the traversal path is displayed at the end of the report. (The steps correspond to those displayed using the **Show Steps** command, available from the **Tools** menu in the Access Definition Editor.)

Each step consists of a Table entry, and may include one or more Relationship entries, Primary Key entries, or DBMS Access entries.

Note: Statistical information may indicate whether you can improve performance by overriding the default method (scan or key lookup) of accessing a table. For details, see the *Common Elements Manual*.

Settings During Extract

Indicates if file system compression is used on the directory containing the Extract File.

Table

A Table entry provides general table information and the strategy used to process key values for extracting related rows. The title line for a Table entry displays the table name and step number. (If the table is a reference table, "Ref Table" is shown instead of the step number.)

DBMS

Type of DBMS associated with the table.

Version

Version number of the DBMS.

Columns

Number of columns in the table.

Cycle Indicator (Yes or No) that the table is part of a traversal cycle.

Lobs Indicator (Yes or No) that the table contains large objects.

Est. Rows

Estimated number of rows in the table. (N/A indicates that DBMS statistics are not available.)

Row Length

Size of the row in bytes.

DB Connections

Number of concurrent database connections used to extract data from the table.

Select w/ UR

Indicator (Yes or No) that uncommitted rows were extracted from the table.

PK W/Index

Number of primary key values to process; the primary key has a supporting index.

PK WO/Index

Number of primary key values to process; the primary key does not have a supporting index.

FK W/Index

Number of foreign key values to process; the foreign key has a supporting index.

FK WO/Index

Number of foreign key values to process; the foreign key does not have a supporting index.

Parent Strategy

Identifies the strategy (scan or key lookup) used to process primary key values for extracting related rows.

Note: A scan reads all rows in a table at one time; whereas, a key lookup locates rows using a WHERE clause to search for key values.

No Keys

No key values to process.

Only one Key

Use a key lookup, since there is only one key value to process.

KeyLookup - All Keys indexed

Use a key lookup, since all keys have supporting indexes.

Scan - No Index

Use a scan, since one or more keys do not have supporting indexes.

Scanning due to large number of keys

Use a scan, since the number of key values to process is a significant portion of the table.

User Forced Scan

Use a scan, as specified by the user on the **Relationships** tab in the Access Definition Editor.

User Forced Key Lookup

Use a key lookup, as specified by the user on the **Relationships** tab in the Access Definition Editor.

Dependent Strategy

Identifies the strategy (scan or key lookup) used to process foreign key values for extracting related rows. (The same values shown above for **Parent Strategy** are valid for **Dependent Strategy**.)

Where Clause

Identifies user-specified criteria, if any.

Relationship or Primary Key

A Table entry may include one or more Relationship entries, if the table is a child table in a relationship with a previously processed table, or one or more Primary Key entries, if the table is the parent table in a relationship with a previously processed table.

The title line for a Relationship entry displays the name of the relationship used to traverse from parent to child during the Extract Process, and the entry indicates the number of foreign key values used to extract related child rows. A Primary Key entry indicates the number of primary key values used to extract related parent rows.

Lookup Keys

Number of key values from related rows already extracted.

Direction

Indicates the direction of the traversal path:

dependent

Traverse from parent to child for a Relationship entry.

parent Traverse from child to parent for a Primary Key entry.

Indexed

Indicator (Yes or No) that a supporting index is available.

Keys Per Cursor

Number of key values to include in the WHERE clause when using a key lookup. For example, if the key has a single column (COL1) and **Keys Per Cursor** is 5, then the WHERE clause would include "COL1 IN (?, ?, ?, ?, ?)" and 5 key values would be processed in a single request to the DBMS.

Note: By default, Move processes 1 key value at a time. You can increase this value on the **Relationships** tab of the Access Definition Editor. (For details, see the *Common Elements Manual*.)

DB2 Lookup Cost

The DBMS estimated cost to process a single key value, if the DBMS is DB2 or UDB and RUNSTATS have been run for the table.

DB2 Scan Cost

The DBMS estimated cost to scan the entire table, if the DBMS is DB2 or UDB and RUNSTATS have been run for the table.

Key Length

The length of the key value.

Access

Indicates whether the method of accessing the table was forced.

Note: By default, Move determines whether to use a scan or a key lookup. You can specify a forced scan or key lookup on the **Relationships** tab of the Access Definition Editor. For details, see the *Common Elements Manual*.

Not Forcing

User did not force a scan or a key lookup.

User Forced Scan

User forced a scan.

User Forced Key Lookup

User forced a key lookup.

Lookup SQL

The SQL condition, including the key column names and host variables, used to process a single key value.

DBMS Access

A Table entry may also include one or more DBMS Access entries, which provide information about the database access to the table. A DBMS Access entry is provided for each SELECT statement used to process related rows in the table.

Access Type

Indicates the method used to access the table:

Cursor Scan

Use a single cursor to read all rows in the table. Selection criteria, if specified, is included in the WHERE clause of the SELECT statement.

PK Lookup

Use a key lookup to extract rows for one or more primary key values.

FK Lookup

Use a key lookup to extract rows for one or more foreign key values.

Keys Per Cursor

If **Access Type** is **PK Lookup** or **FK Lookup**, the number of key values processed using a single SELECT statement. (Note that if **Access Type** is **Cursor Scan**, this value is zero (0).)

Open Cursor

Number of times a cursor is opened for the SELECT statement.

Rows Fetched

Number of rows fetched for the SELECT statement.

Rows Written

Number of rows written to the Extract File.

Process Time

The elapsed time from when the cursor was first opened to when the cursor was last closed for the SELECT statement.

Time in DBMS

The elapsed time spent in calls to the DBMS.

Rows Per Sec

Number of rows extracted per second of elapsed time.

Totals

Elapsed Time

The total amount of elapsed time for all steps.

Time in DBMS

The total amount of time spent in calls to the DBMS for all steps.

To save the report to a file, click **File > Save As** to open the Windows Save dialog.

To print the report, click **File > Print** to open the Print dialog.

To refer to the report after you close it, click **File > Redisplay Results > Current** to redisplay the report from the last Extract Process run, or **All** to display a list of retained reports. For details about retaining process reports, see the *Common Elements Manual*.

Chapter 5. Insert Process

Use the Insert Process to insert data stored in an Archive File or Extract File into a destination database. If tables in the Archive or Extract File do not exist at the destination, the Insert Process uses the object definitions stored in the Archive or Extract File to create them.

Specifications for the Insert Process can be stored as an Insert Request to be reused. Based on your specifications and the primary key values in each table, you can:

- Insert new rows only. If the primary key value of a row in a source table does not match an existing row in the destination table, the process inserts the row. If the primary key value of the source matches a row in the destination, the source row is discarded.
- Insert new rows and update existing rows. If the primary key value of a row in a source table does not match an existing row in the destination table, the process inserts the row. If the primary key value of a row in a source table matches an existing row in the destination table, the process updates the existing data.

Mapping and Transformation

Map data from the source to the destination using Table Maps and Column Maps. You must use a Table Map to specify the destination for the tables in the Archive or Extract File. You may also use Column Maps for one or more destination tables. Column Maps enable you to specify the source data for each column and, optionally, to transform the data before it is inserted.

Long Object Names (LONs)

When inserting data from an Archive File migrated from the mainframe version of Optim (i.e., the Optim z/OS Solution), any object names that exceed the maximum length for an Optim client/server object of the same type are truncated. When this happens, the truncated name is suffixed with the code “__TRUNC__”. A 128-character Creator ID, for example, might be truncated in Optim as follows:

```
PSTASLG_1234567890_xx__TRUNC__
```

Run or Schedule

You can process an Insert Request immediately by clicking **File > Run**, or you can schedule the request for processing at a later time by clicking **File > Schedule**. You must save the request before it is scheduled, but it is not necessary to save the request before it is run.

Naming Conventions

The fully qualified name of an Insert Request consists of: *identifier.name*.

identifier

Identifier that serves as the prefix for the Insert Request name (1 to 8 characters).

name Name assigned to the Insert Request (1 to 12 characters).

When you create Insert Requests, it is helpful to use a logical set of naming conventions to identify the use for each and to organize them for easy access.

Chapter Contents

This chapter explains how to create, maintain, and process an Insert Request, including how to:

- Specify the Source File containing the data to insert.
 - Specify the Control File to record information about the process.
 - Select or create a Table Map and Column Maps to map the source data to the destination.
 - Specify default parameters for date aging to adjust dates in specified columns.
 - Specify parameters for converting currency in specified columns.
 - Specify notification options.
 - Run, save, and schedule an Insert Request.
 - Review, save, and print an Insert Process Report.
-

Open the Insert Request Editor

Use the Insert Request Editor to create and maintain requests to insert or update data. These requests are stored in the Optim Directory.

There are different ways to open the editor depending on whether you want to create a new request or select a request to edit.

Create an Insert Request

Use this task to create an Insert Request.

Do the following to create an Insert Request:

1. Click **File > New > Insert** from the main window to open the Insert Request Editor.
2. Specify the name of the Source File and a Control File.
3. Specify a Table Map: If you select **Local**, click **Tools > Edit Table Map** to define a Table Map. If you select **Named**, specify the name of an existing Table Map, or specify a name and click **Tools > Edit Table Map** to define a new Table Map.
4. Select Process Options.
5. Specify Delete Options.

These steps are the minimum required to create an Insert Request. After you create a request, you can run the process immediately or save and schedule it. Because the options to create and modify an Insert Request are similar, see “Using the Insert Request Editor” on page 116 for complete details.

An alternate method for opening the Insert Request Editor is to click **Actions > Insert** from the main window. By default, the last Insert Request you edited will display. Your next step depends on your purpose:

- To create a new Insert Request, click **File > New** from the Insert Request Editor.
- To create a new Insert Request modeled on an existing one, open the desired Insert Request and click **File > Save As** from the Insert Request Editor.
- To create and store a copy of the active Insert Request and continue editing, click **File > Save Copy As** from the Insert Request Editor.

Select an Insert Request to Edit

Use this task to select an Insert Request to edit.

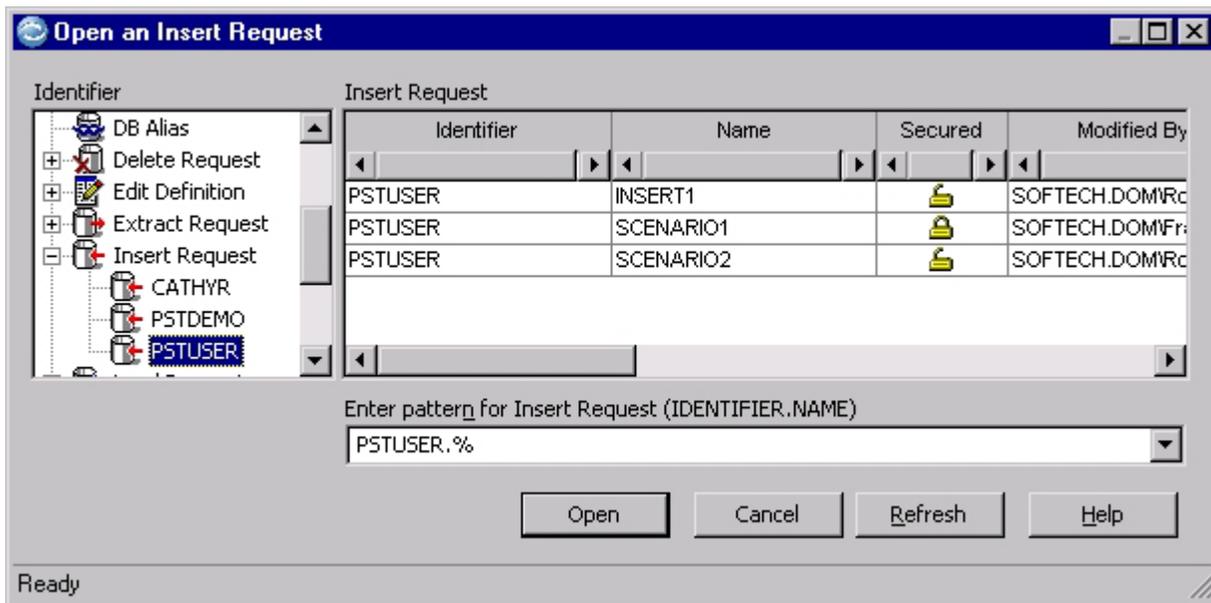
Do the following to select an Insert Request to edit:

1. Click **File > Open** from the main window to open the object selection dialog.

2. Double-click to select **Insert Request** and expand the object list.
3. Double-click the Insert Request Identifier to display a list of Insert Requests.
4. Double-click the desired Insert Request to open the Insert Request Editor.

Open an Insert Request dialog

The Open dialog is divided into two areas. The object identifiers are listed on the left and the associated objects appear on the right. The list of objects varies depending on the identifier you select.

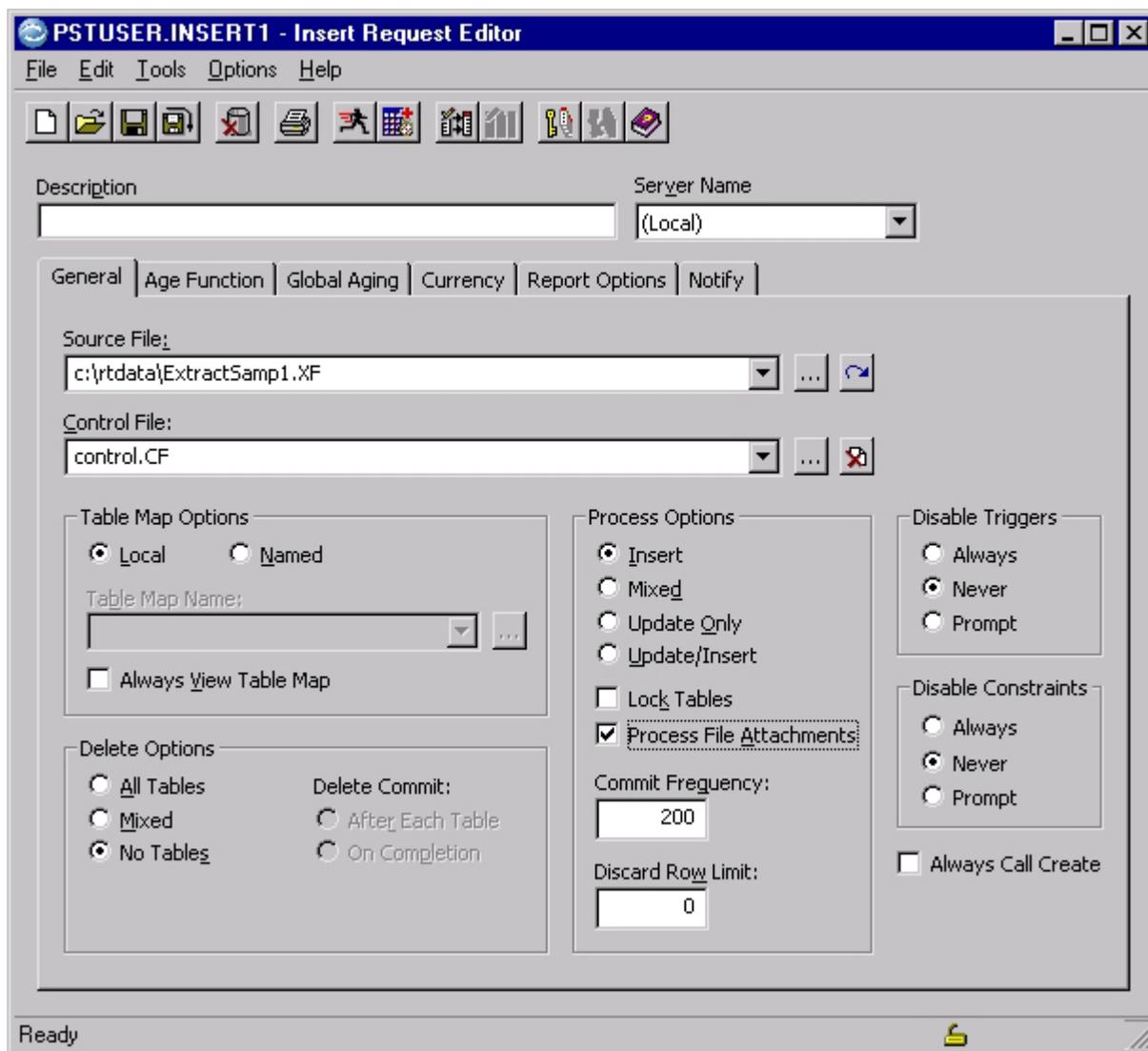


Use the **Enter pattern for Insert Request** box to limit the list of requests in the Open dialog. An Insert Request name consists of two parts: *identifier.name*. The **pattern** specified also must have two parts. You can use the % (percent) wild card to represent one or more characters, or use the _ (underscore) wild card to represent a single character in an object definition name. (The underscore must be selected as the SQL LIKE character on the **General** tab in Personal Options.)

Note: After you specify a **pattern**, click **Refresh** to redisplay the list based on your criteria.

Using the Insert Request Editor

Use the Insert Request Editor to create, modify, or delete Insert Requests stored in the Optim Directory.



Description

Enter text to describe the purpose of the Insert Request (up to 40 characters).

Server Name

If the optional Optim Server component is installed on your network, you can direct resource-intensive Insert Request processing (for example, when the source file contains a large number of tables or rows) to a machine hosting Optim Server.

Click the down arrow to select a machine hosting Optim Server, or select **Local** to process the request on the local workstation.

Note: If the Optim Server machine option is not enabled at your site, the **Server Name** box appears dimmed.

Tabs

The Insert Request Editor displays tabs that allow you to specify parameters and select options to define and maintain Insert Requests. Each tab in the editor serves a unique purpose.

General

Enter the specifications for the process, including the names of the Source File, Control File, and Table Map. Each time you open the editor, the **General** tab is shown first.

Age Function

Specify default parameters for aging data in columns defined with an Age function in a Column Map.

Global Aging

Specify default parameters for aging data in columns that have a native date data type.

Currency

Select a default Currency Table and define currency conversion parameters for columns with a native currency data type.

Report Options

Enter parameters for displaying errors and aging specifications on the process report.

Notify Specify options for automatic email notification of the success or failure of the process.

Menu Commands

In addition to the standard **File** and **Edit** commands, you can select the following commands from the other menus in the Insert Request Editor:

Tools

Menu

Convert to Local

When using a named Insert Request in a Restore Request, select this command to save the Insert Request as a local request within the Restore Request.

Edit Table Map

Opens the Table Map Editor, allowing you to create or edit a Table Map to be used with the active Insert Request. For details on creating and maintaining Table Maps, see the *Common Elements Manual*.

Edit Table Specifications

Opens the Insert Request Table Specifications dialog allowing you to select the tables to include in Mixed (selective) processing.

Edit Directory Map

Opens the Directory Map dialog, allowing you to map file attachments to destination directories.

Edit ACL

Open the Access Control List Editor to secure the Insert Request with an Access Control List. Available when Object Security is enabled.

Delete ACL

Delete the Access Control List securing the Insert Request. Available for secured Insert Requests only.

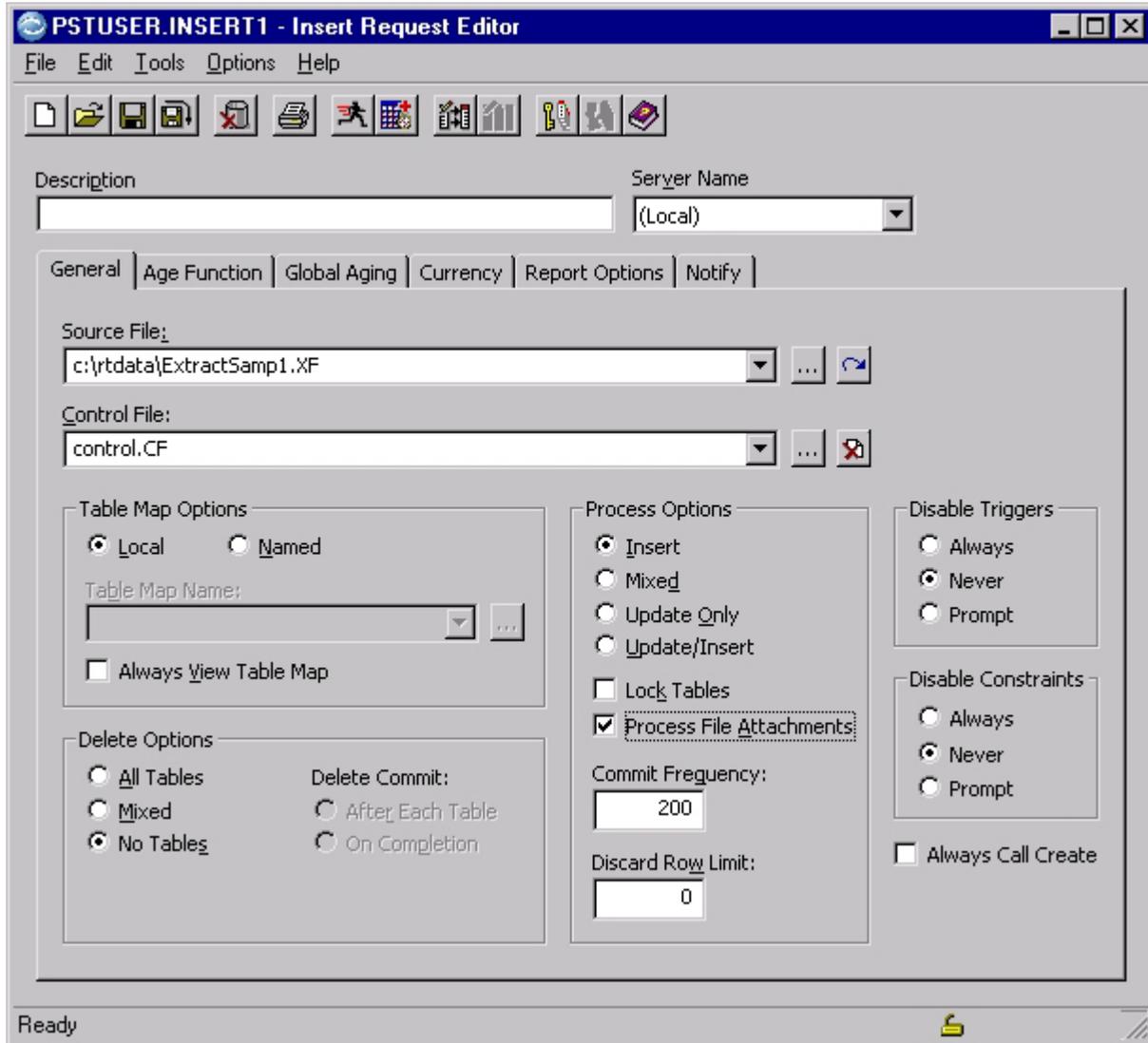
Options Menu

Show Aging/Show Currency

Select these commands to switch between hiding or displaying the corresponding tab.

General Tab

Before you can insert data, you must specify the source and other parameters, as described in this topic.



Source File

Enter the name of the Archive or Extract File that contains the data to insert. By default, Extract Files have an .xf extension and Archive Files have an .af extension.

Control File

Enter the name of a Control File. This file is used during the process to track the success or failure of each row in the Archive or Extract File. Control Files have a .cf extension by default. If you specify the name for an existing Control File, a dialog will prompt you to confirm that you want to overwrite the file when you run the Insert Request. Use Personal Options to disable this feature.

Note: You can browse the contents of an Extract, Archive or Control File by clicking **Utilities > Browse**, or by right-clicking and selecting **Browse** from the shortcut menu. For details on the Browse Utility, see the *Common Elements Manual*.

If you do not specify a path for file names, the request uses the drive and directory defined as the default Data Directory. See the *Common Elements Manual* for further information.

Table Map Options

Specify a Table Map to match tables in the Archive or Extract File with destination tables or to exclude tables from the request. You cannot save or process an Insert Request without a valid Table Map.

Within a Table Map, specify a Column Map for any pair of tables to:

- Map source and destination columns that are compatible, but have unlike names.
- Specify destination column values other than the source column values.
- Ignore specific columns.

Local Select this option to create a Table Map to be used only with the active Insert Request. Local Table Maps are saved as part of the Insert Request.

Named

Select this option to create a new Table Map or select an existing Table Map to be used with the Insert Request. You must specify a name for the Table Map you want to create or the name of the existing Table Map you want to use.

Note: If changes have been made to the database since the last time the Table Map was used, the specifications may no longer be valid, and a warning is displayed.

Table Map Name

Name of the new or existing Table Map to use with the Insert Request. A Table Map name has two parts: *identifier.name*.

identifier

Identifier to identify the Table Map (1 to 8 characters).

name Name of the Table Map (1 to 12 characters).

Always View Table Map

Select this check box to open the Table Map Editor any time you save or run an Insert Request.

This option provides an opportunity to review the Table Map specifications before you insert the data. If you clear this check box, the Table Map Editor opens only when needed (for instance, when the specified Table Map does not include all the tables in the Archive or Extract File).

Select **Edit Table Map** from the Insert Request Editor to open the Table Map Editor. For details on how to create, edit, or merge Table Maps, see the *Common Elements Manual*.

Delete Options

Select options for removing all rows from specified tables before processing the Insert Request. Delete is useful for restoring data during testing. If a row cannot be deleted for any reason, all deleted rows up to the last commit are restored, and insert processing stops.

All Tables

Deletes all rows from all tables before processing. If you choose this option, you must also select a **Delete Commit** option. **All Tables** is valid only if the **Process Option** selected is **Insert**.

Mixed Deletes all rows before processing from tables you select on the Insert Request Table Specification dialog. To display the Insert Request Table Specification dialog, select **Tools > Edit Table Specification**.

- If you choose this option, you must also select a **Delete Commit** option.
- All rows are deleted from tables you select in the Insert Request Table Specification dialog. If you do not select a table, the rows in that table are not deleted.

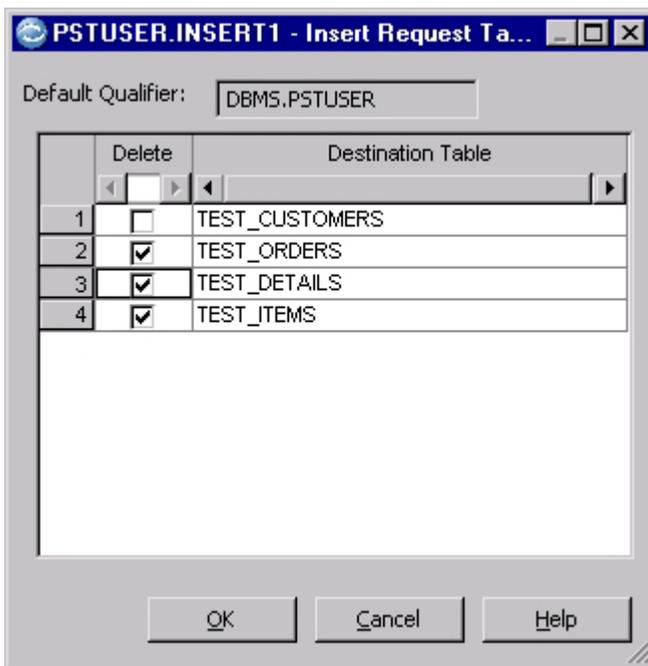
- If you do not select any tables, the **Delete Option** changes from **Mixed** to **No Tables**.
- If you select all of the tables, the **Delete Option** changes from **Mixed** to **All Tables**.
- If you specify **Mixed**, and then save, run, or schedule the Insert Request, the Insert Request Table Specification dialog is displayed automatically.

Note: You cannot specify **Mixed** if the **Process Option** selected is **Insert/Update** or **Update Only**.

No Tables

Retains all rows in all tables before processing.

The Insert Request Table Specification dialog enables you to delete all rows before processing from selected tables.



Delete Commit

Select an option for committing changes to the database. These options are available only when you select **All Tables** or **Mixed**.

After Each Table

Commits changes to the destination database after deleting all rows from each selected table.

On Completion

Commits changes to the destination database after deleting all rows from all tables or all selected tables.

Process Options

Select the type of processing to be performed. Specify parameters to lock tables, set a commit frequency and set a discard row limit.

Insert Inserts new rows into the tables.

- If the primary key of a row in the source data *does not match* the primary key of a row in the destination table, the row is inserted.

- If the primary key of a row in the source data *matches* the primary key of a row in the destination table, the row is bypassed and marked as discarded in the Control File.

Mixed Updates, Inserts, or Updates/Inserts according to your selection for each table on the Insert Request Table Specification dialog. To display the Insert Request Table Specification dialog, click **Tools > Edit Table Specification**. Select a process option for each table.

- If you select **Mixed**, and then save, run, or schedule the Insert Request, the Insert Request Table Specification dialog is displayed automatically.
- If you select **Mixed** and do not specify selections on the Insert Request Table Specifications dialog, or you set all tables to the same selection, the Process Option changes to indicate the process used for all tables.

Note: You cannot select **Mixed** if the **Delete Option** specified is **All Tables**.

Update Only

Updates rows in the tables. Tables must have a primary key.

- If the primary key of a row in the source data *matches* the primary key of a row in the destination table, the row is updated.
- If the primary key of a row in the source data *does not match* the primary key of a row in the destination table, the row is reported as failed.

Note: You cannot select **Update Only** if the Delete Option specified is **All Tables** or **Mixed**.

Update/Insert

Updates and inserts rows in tables. Tables must have a primary key.

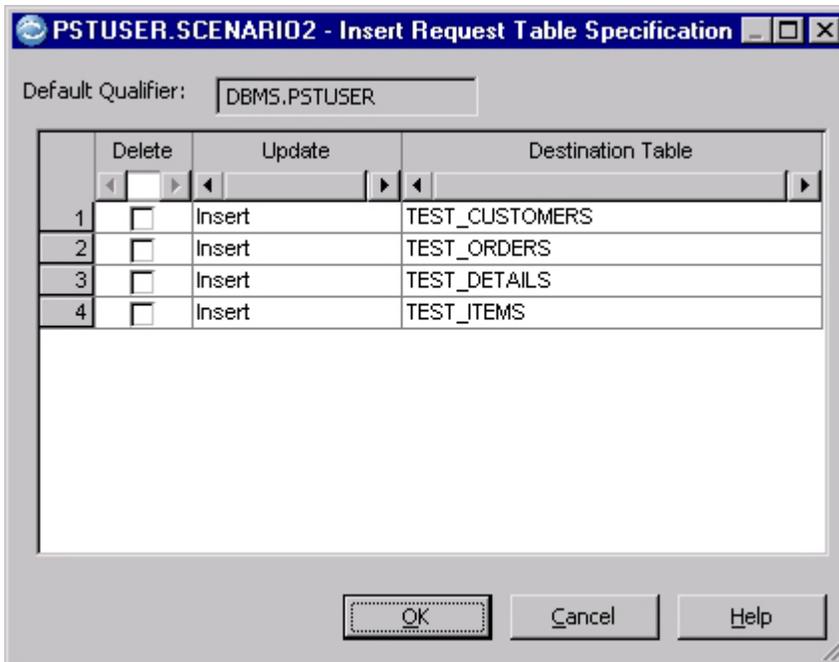
- If the primary key of a row in the source data *does not match* the primary key of a row in the destination table, the row is inserted.
- If the primary key of a row in the source data *matches* the primary key of a row in the destination table, the row is updated.

Note: You cannot select **Update/Insert** if the **Delete Option** specified is **All Tables** or **Mixed**.

Insert Request Table Specification Dialog

The Insert Request Table Specification dialog enables you to select a specific process option for each table.

Click the **Update** column to select a process option from the drop down list, for each table. You can also right-click to use shortcut menu commands to set all tables at once.



Lock Tables

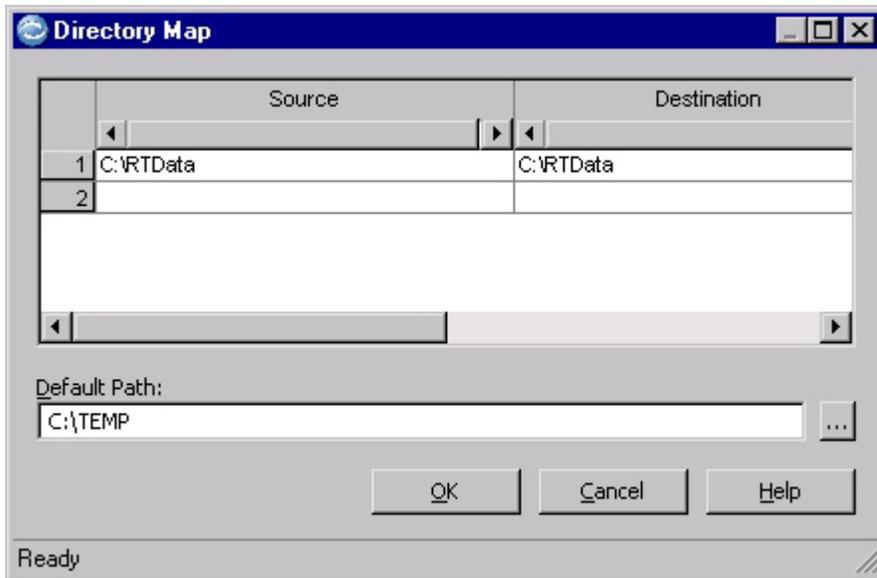
Select this check box to lock each table until all rows in the Archive or Extract File for that table are processed. Lock tables to ensure that other database activity does not interfere with the process. However, locking prevents other users from accessing tables involved in the process. If a site option prevents you from locking tables, this option is disabled.

Process File Attachments

Select this check box to process file attachments included in the Archive or Extract File. If this option is selected and the Archive or Extract File contains file attachments, each file is restored to a location determined by the Directory Map. The Directory Map dialog is available from the **Tools** menu or opened automatically when you run the Insert Process.

Use the Directory Map dialog to control the destination for file attachments during Insert Processing. By default, file attachments are returned to the directory from which they were extracted. The **Source** column identifies the original directory from which file attachments were extracted. The **Destination** column identifies the directory where files from the corresponding source directory are placed.

You can edit both directories in the Directory Map by entering a path or using the browse button. All source entries must be unique. If the specified source directory does not match the original path or the source is blank, the **Default Path** is used for the insert. If the Default Path is not found, the Insert Process will attempt to insert the file into the original path. If no matching paths are found, the Insert Process will stop before inserting any data.



Several shortcut menu commands are available. Select **Remove** to remove one row of source and destination entries, or select **Remove All** to remove all entries. Select **Clear Column** to remove all entries for the source or destination. Use **Add Entries from File** to add the original paths found in the Archive or Extract File.

Commit Frequency

Enter the number of rows to process before committing the changes to the database, up to a maximum of 999999. Clear this box to use the number specified as the **Maximum Commit Frequency** in **Product Options**. This option is disabled if **Lock Tables** is selected.

Frequent commits keeps locking to a minimum, but may slow the process. If the process ends abnormally, click **Utilities > Restart/Retry** to resume processing from the last commit point. See the *Common Elements Manual* for further information.

Discard Row Limit

Enter 0 or leave blank to impose no limit or enter a number from 1 to 999999999 to stop processing after the specified number of rows are discarded and all rows in the array processed. You can Restart or Retry a process that stops because the limit is reached.

Discard Row Limit is an approximate value due to array processing. For example, assume the discard limit is set to 50 and the array supports 200 rows for a given table. If the first 50 rows fail, the DBMS continues to process the remaining 150 rows in the array, before evaluating the discard limit. (The number of rows that can be inserted via one call to the DBMS depends on the size of the row.)

Disable Triggers

The following options are supported for disabling triggers for Oracle, Informix, SQL Server (Version 7 or later), and Sybase ASE (Version 12 or later).

Always

Select this option to disable all database triggers for the Insert Process, re-enabling the triggers after the process completes.

Never Select this option to execute all database triggers during the Insert Process.

Prompt

Select this option to selectively disable database triggers during the Insert Process and selectively re-enable triggers when the process is complete.

Disable Constraints

The following options are supported for disabling constraints for Oracle, Informix, and SQL Server (Version 7 or later)

Always

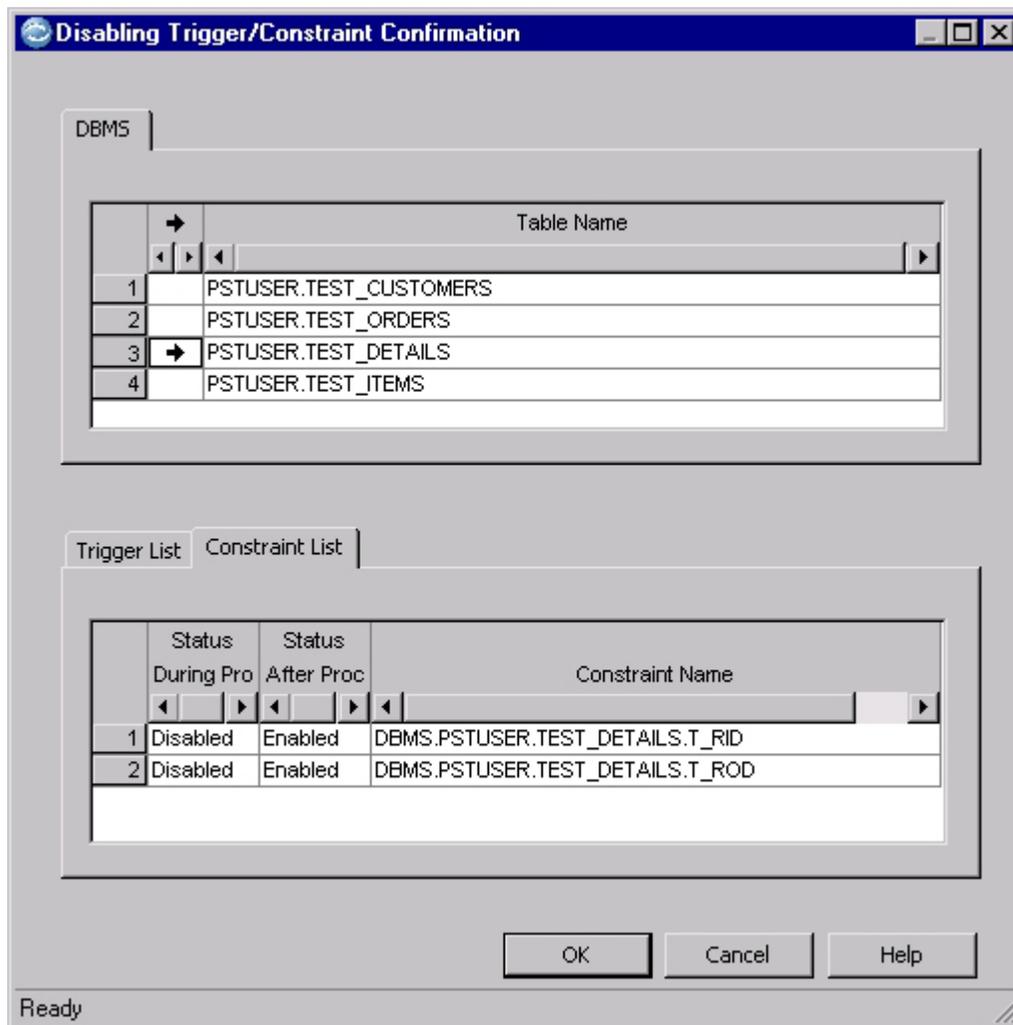
Select this option to disable constraints during the Insert Process and re-enable the constraints after the process completes.

Never Select this option if you do not want to disable referential integrity constraints. When this option is selected, a warning message displays to remind you when you run the Insert Request.

Prompt

Select this option to display the Disabling Trigger/Constraint Confirmation dialog. The dialog displays a list of tables for each applicable DB Alias and the corresponding triggers and constraints. You can right-click to enable or disable constraints during the Insert Process for each table. You can also enable or disable the constraints after the Insert Process completes.

The Disabling Trigger/Constraint Confirmation dialog displays the list of tables in the Insert Process from each specified database and tabs that contain the corresponding database triggers and referential integrity constraints for each table.



The first grid column contains a Focus Arrow to indicate the table for which triggers and constraints are listed. To display the corresponding triggers and constraints for a different table, click a Focus Arrow grid cell to reposition the arrow, or use the up/down arrows on your keyboard.

Right-click in the **Status During Process** column to select to enable or disable the corresponding trigger or constraint during the Insert Process. Right-click in the **Status After Process** column to select whether to enable or disable the trigger or constraint after the Insert Process completes.

Note: For Informix, you can also select to enable constraints with or without using a violation table. Select **With Vio** to enable the constraint and use a violation table. Select **No Vio** to enable the constraint and not use a violation table. (If you select **Enabled**, the Informix default for violation tables applies.)

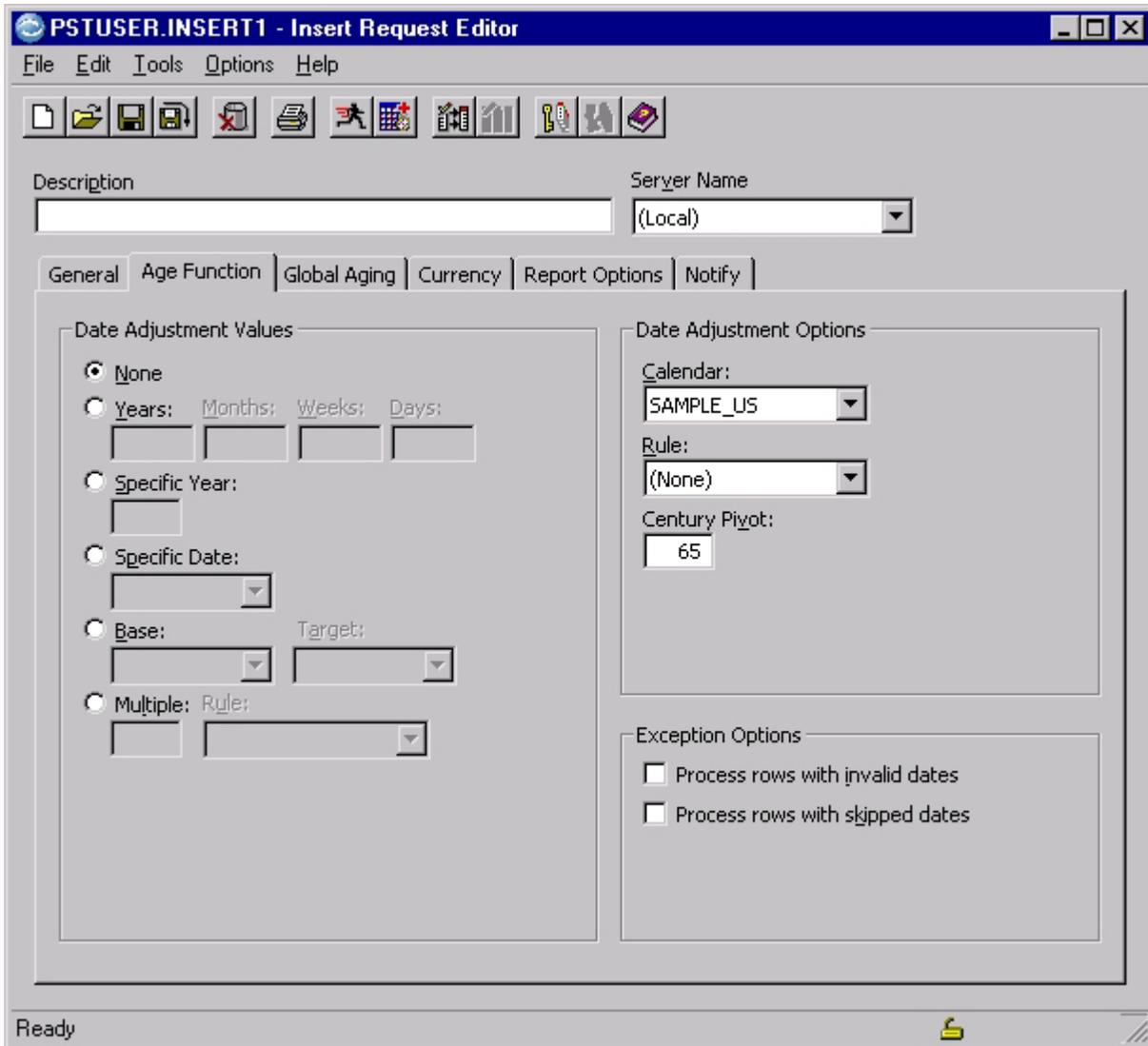
Always Call Create

Select this check box to start the Create Utility before the Insert Process begins, to allow you to create or drop objects in the destination database. Clear this check box to start the Create Utility only when necessary to create desired objects in the destination database.

Age Function Tab

Use the **Age Function** tab to specify parameters for aging data when using a Column Map.

These values are applied to columns for which you specify the Age function as **AGE(DEF)** or **AGE(RU=DEF)**. These values are also used to complete incomplete specifications for date adjustment values in columns defined with the Age function.



Date Adjustment Values

Select one of the following options:

None Specifies that an aging increment is not used.

Years, Months, Weeks, Days

Adjusts dates incrementally by a specified number of years, months, weeks, and/or days. Use a minus (-) sign to decrement the date. The plus (+) sign is not required to increment the date.

Years Number of years (-2500 to +1581) to adjust the date.

Months

Number of months (-30000 to +30000) to adjust the date.

Weeks Number of weeks (-30000 to +30000) to adjust the date.

Days Number of days (-99999 to +99999) to adjust the date.

Specific Year

Adjusts the date to a specific four-digit year (1582 to 3999).

Specific Date

Adjusts the date to a specific date. To select a date from a perpetual calendar, click on the down arrow. Click the arrow buttons to set the month and year. Click on a day to set the day of the month.

Note: If you do not specify a date, the system (current) date displays. The date format is based on the Regional Settings on the Control Panel of your computer.

Base/Target

Adjusts the date incrementally by a calculated aging amount. The aging amount is the number of days between the **Base** date and the **Target** date. To select a base or target date from a perpetual calendar, click on the down arrow. Click the arrow buttons to set the month and year. Click on a day to set the day of the month.

Base Specify an explicit start date for calculating the aging amount.

Target Specify an explicit end date for calculating the aging amount.

Multiple/Rule

Adjusts the date by applying the specified date aging rule the specified number of times. For example, if the rule is defined as NEXTPAYDAY and you specify 4 as the multiple, the date is adjusted from the source date to the fourth NEXTPAYDAY.

Multiple

Number of times (1 to 30000) to apply the specified rule for date aging.

Rule Name of the rule to use.

Date Adjustment Options

Calendar

Enter the name of the calendar to use by default. To select from a list of available calendars, click the down arrow.

Rule Enter the name of the rule to use by default. To select from a list of available rules, click the down arrow.

Note: Define calendars and rules by clicking **Utilities > Calendar**. For details on defining calendars and rules, see the *Common Elements Manual*.

Century Pivot

Enter the value to use to determine the appropriate century when a date value is defined with a two-digit year. If you do not specify a value, 65 is used by default. For example, if you specify 55 as the Century Pivot, then:

- All two-digit years equal to or greater than 55 are assumed to be in the 20th century.
- All two-digit years less than 55 are assumed to be in the 21st century.

Exception Options

Select the following exception options to handle special date values when aging data. Rather than treat these dates as errors, the dates are moved directly from the source to the destination if the column attributes are identical.

- **Process rows with invalid dates** — If you select this check box, rows with columns that contain invalid dates are processed and the results are written to the destination. If you clear the check box, the rows are discarded and are noted in the Control File.
- **Process Rows with skipped dates** — If you select this check box, rows with columns formatted as skipped dates are processed and the results are written to the destination. If you clear the check box, the rows are discarded and are noted in the Control File.

At times, special values called skipped dates are used to indicate special handling or unique conditions. To determine whether or not to skip a date, the date aging function evaluates each date for the following:

- If a date column contains all spaces, hexadecimal zeros (low values), or hexadecimal 'FF' (high values), the date is skipped.
- If a date column contains a skipped date value, the value is parsed based on the specified date format or exit routine.

The date aging function recognizes the following as skipped dates:

Date Format	Skipped Date Value	Date Format	Skipped Date Value
Y/M/D	1999/99/99	Y/M	1999/999
	9999/99/99		9999/999
	9999/12/31		1900/0
	1900/0/0		2000/0
	2000/0/0		0/0
	0/0/0		Y
	1/1/1	0	
Y/J	1999/999	M/D	99/99
	9999/999		0/0
	1900/0	M	99
	2000/0/0		0/0
	0/0		D
		0/0	

This list is intended to be as comprehensive as possible. If you require additional skipped dates, contact Technical Support.

Global Aging Tab

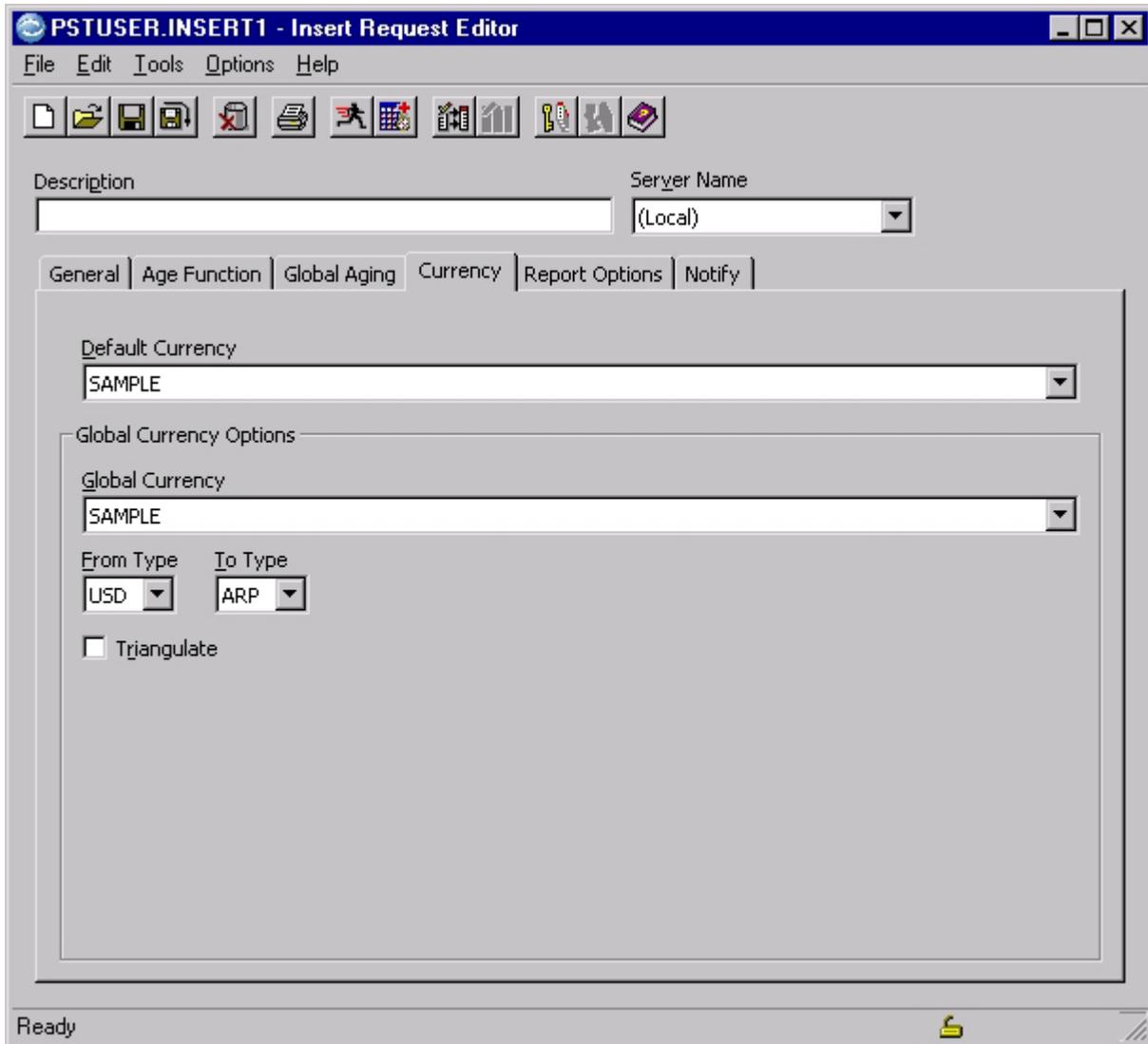
Use the **Global Aging** tab to specify parameters for aging data in columns defined with a native date data type. Global Aging parameters apply to all date columns not specifically defined by an Age function in a Column Map.

Note: The parameters shown on the **Global Aging** tab are the same as those shown on the **Age Function** tab. For information about each parameter, see “Age Function Tab” on page 125.

Currency Tab

Use the **Currency** tab to specify the default Currency Table to use when the Currency function is defined in a Column Map.

Specify global parameters for currency conversions in columns that have a native currency data type.



Default Currency

Specify the Currency Table to use when the Currency function is specified in a Column Map.

Global Currency Options

Global Currency Definition

Specify the default Currency Table to use for currency conversions in columns that have a native currency data type.

From Type To Type

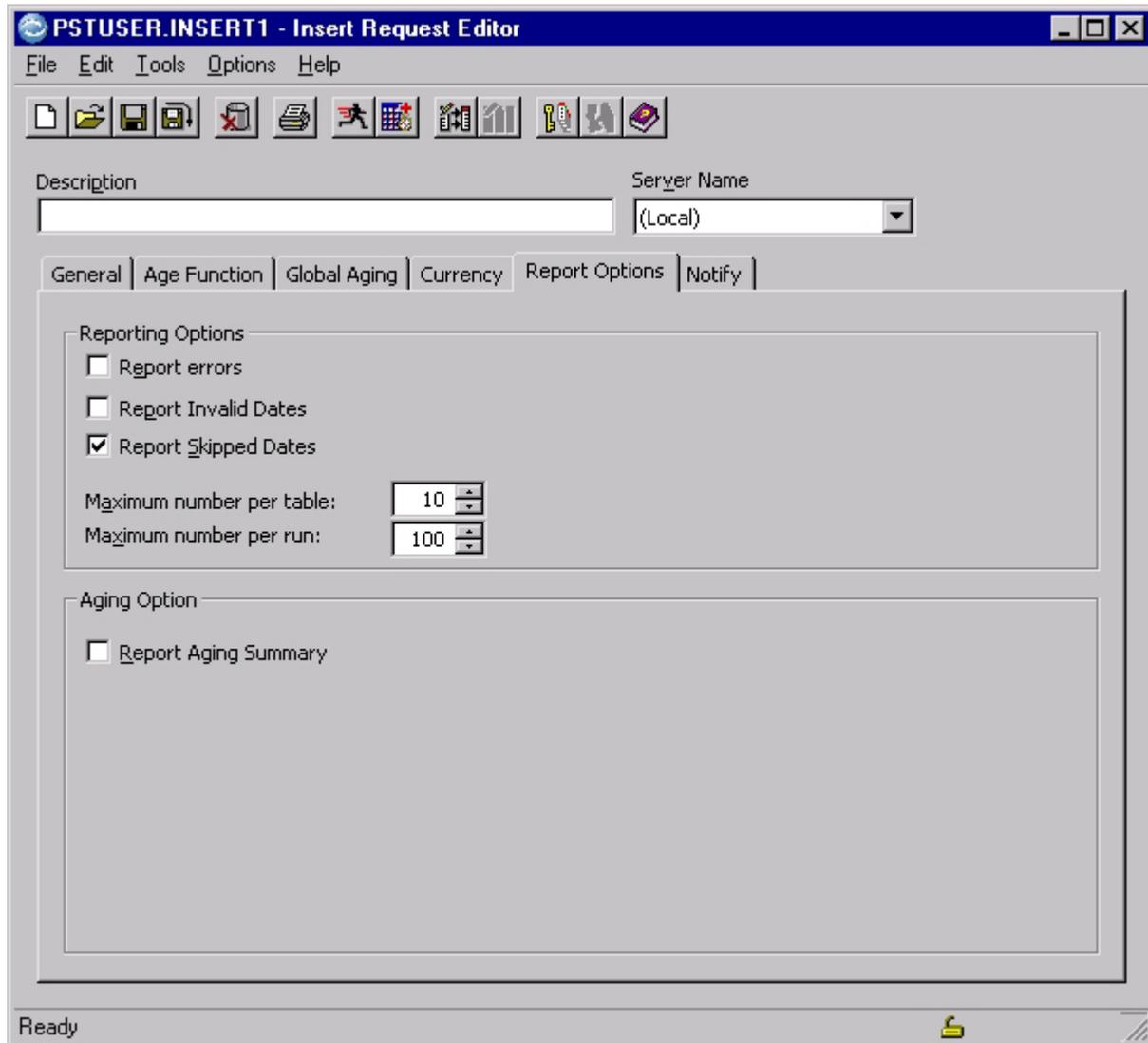
Enter specific currency types for the source and destination currency when converting currency values in columns that have a native currency data type. To select from a list of currency types, click the down arrow.

Triangulate

Select this check box to convert the specified source currency to the euro dollar, then convert the euro dollar value to the specified destination currency.

Report Options Tab

Use this task to specify what information is included in the Insert Process Report.



Reporting Options

Report errors

Select this check box to specify that the Insert Process Report includes the list of errors encountered during the Insert Process.

Report Invalid Dates

Select this check box to include rows with invalid dates in the Insert Process Report when you select the corresponding Exception Option on the **Age Function** or **Global Aging** tab.

Report Skipped Dates

Select this check box to include rows with skipped dates in the Insert Process Report when you select the corresponding Exception Option on the **Age Function** or **Global Aging** tab.

Maximum number per table

Specify the maximum number of errors, invalid dates and skipped dates per table to include in the Insert Process Report.

Maximum number per run

Specify the maximum number of errors, invalid dates and skipped dates per run to include in the Insert Process Report.

Aging Option

Report Aging Summary

Select this check box to include a summary in the Insert Process Report of any aging parameters specified for the Insert Process. A report that includes the Aging Summary can be printed in landscape mode only.

Notify Tab

Use the **Notify** tab to specify options and addresses for automatic e-mail notification of the success or failure of the process. The process report generated when the process completes is automatically sent as an attachment.

Process an Insert Request

You can process an Insert Request at any time, but if you create a new Insert Request and reuse it, you must save it. You can either run an Insert Request immediately or schedule it.

Note: Depending on how Optim is configured at your site, you may encounter a logon prompt during processing. See the *Common Elements Manual* for information on the DB Alias Connection Logon dialog, and the Optim Directory Connection Logon dialog.

Schedule an Insert Request

To schedule an Insert Process to run once or repeatedly at a specified future time, save the Insert Request, and then click **File > Schedule**.

- Processing is initiated at the scheduled time; you do not review the process as it is performed.
- If warning conditions exist, processing continues without prompting, depending on the **Stop on Error** parameter you specified on the **Steps** tab of the Scheduling Job dialog.
- If an error occurs, processing stops.

For details on scheduling, see the *Common Elements Manual*.

Run an Insert Request

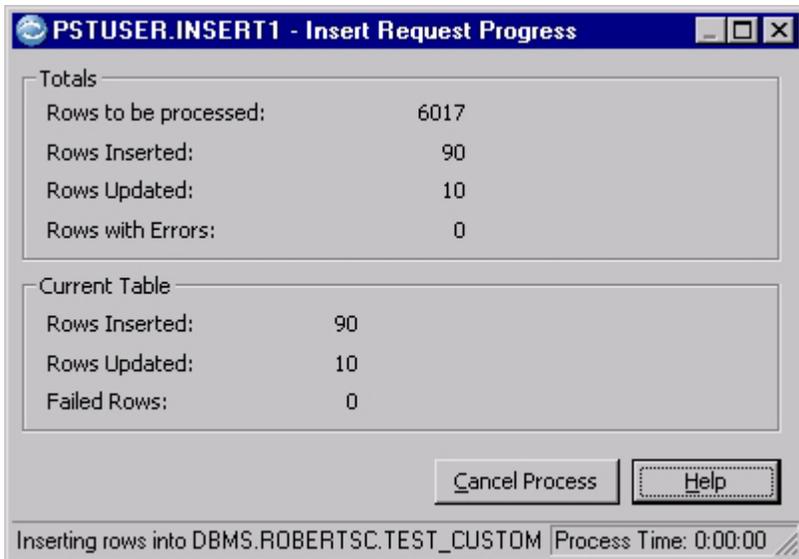
To process an Insert Request immediately, click **File > Run**. It is not necessary to save the Insert Request before it is run.

- Before processing begins, the request is verified. If warning conditions exist, you can review the parameters in the Warnings dialog and choose to continue or cancel processing.
- During processing, if an error occurs, processing stops.

A progress dialog and status messages provide information while the request is processing. When processing completes, or stops because of an error, you can review the details in the Process Report. You can also browse the Control File to review process details.

Insert Request Progress Dialog

When the Insert Process begins, the Insert Request Progress dialog will display status information about the Insert Process.



Totals

Rows to be processed

Total number of rows in the Source File to be processed.

Rows Inserted

Total number of rows that were inserted.

Rows Updated

Total number of rows that were updated.

Rows with Errors

Total number of rows from all the tables that have errors.

The totals in the Insert Request Progress dialog are revised after a number of rows are inserted for each table, after a number of seconds pass, and when the insert for one table completes and the process begins for the next table.

Note: The frequency with which the Progress dialog is updated (i.e., the number of rows and seconds) is specified on the **Actions** tab in Personal Options. See the *Common Elements Manual* for details.

Current Table

Rows Inserted

Total number of rows inserted in the table.

Rows Updated

Total number of rows updated in the table.

Failed Rows

Total number of rows that could not be inserted and were discarded.

Command Button

Cancel Process

To stop the process, click **Cancel Process** to open a confirmation dialog. Then click **Yes** to stop the process and return to the Insert Request Editor, or click **No** to continue processing.

Status Bar

Describes the action being performed and indicates the name of the table being processed, as applicable.

Process Time

Lists the elapsed process time for the Insert Process.

Cascading Delete/Update Confirmation

Optim performs a cascading delete/update check during processing of an Insert Request, and displays the Cascading Delete/Update Confirmation dialog if the following conditions are true:

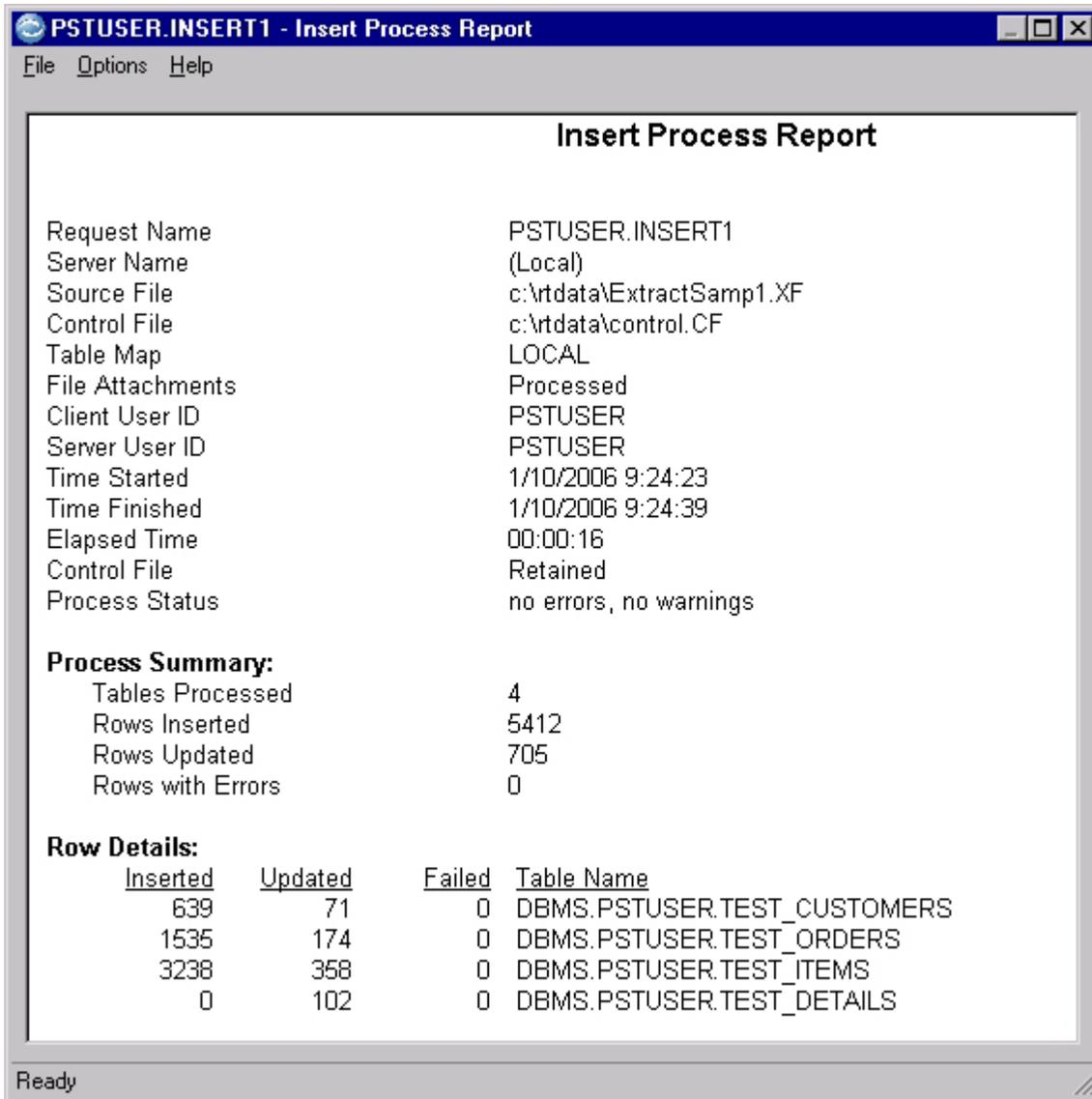
- The **Warn on Cascade Delete/Update** option in either Product or Personal Options must be set to **Runtime** or **Always**. (See the *Installation and Configuration Guide* and the *Common Elements Manual*.)
- **All Tables** or **Mixed** must be selected for Delete Options on the **General** tab of the Insert Request Editor.
- The cascade delete or update must affect at least one table that is not explicitly included in the Insert Process.

Click **OK** to continue processing the Insert Request, or click **Cancel** to stop processing and return to the Insert Request Editor.

For details on the Cascading Delete/Update Confirmation dialog, see the *Common Elements Manual*.

Insert Process Report

The Insert Process generates an Insert Process Report that provides general information and statistics about the Insert Process, as shown below.



The Insert Process Report displays the following information:

- Name of the Insert Request or “Untitled” if you did not save the request.
- Name of the Optim Server or “(Local)” for client workstation.
- Name of the Source file used as input to the process.
- Name of the Control File specified in the Insert Request.
- Name of the Table Map or LOCAL, as specified in the Insert Request.
- Indicator (“Skipped” or “Processed”) for processing file attachments.
- User IDs of the user requesting the Insert Process.
- Date and time the Insert Process started.
- Date and time the Insert Process completed.
- Elapsed time for the Insert Process to complete.

Errors

If any errors or warnings occur during processing, a list of the errors or warnings is provided. Review the list of errors that caused processing to stop. For example, an internal error condition exists when the

process exceeds the discard row limit or if you are not authorized to access a particular database table.

Process Summary

Statistics are provided for the inserted data:

- Total number of Tables Processed.
- Total number of Rows Inserted.
- Total number of Rows Updated.
- Total number of Rows with Errors.

Row Details

Information is provided for each table:

- Number of rows inserted.
- Number of rows updated.
- Number of failed rows.
- List of tables used in the Insert Process. The tables are listed in the same order as in the source file.

Save the Report

To save the report to a file, click **File > Save As** to open the Windows Save dialog.

Print the Report

To print the report, click **File > Print** to open the Windows Print dialog.

Redisplay the Report

If you close the report and want to view it again, click **File > Redisplay Results**, and then do one of the following:

- Click **Current** to redisplay the report from the last Insert Process run.
- Click **All** to display a list of all retained Insert Process Reports.

For details about retaining process reports, see the *Common Elements Manual*.

Chapter 6. Load Process

Use the Load Process to transform the contents of an Archive or Extract File into a format that is appropriate for a particular DBMS loader and then, if specified, start the corresponding database load utility.

The Load Process generates a data file in the correct format for each table in the Archive or Extract File and an SQL file or a BAT file (Batch Execution), depending on the DBMS, that contains the syntax necessary to start the database loader.

A Load Request contains the parameters used to prepare data for a DBMS loader and the instructions required to process the load. Specify a Table Map in the Load Request to map the destination for the data to load. Use optional Column Maps in the Load Request to transform data before loading. For details, see the *Common Elements Manual*.

Data to be loaded must be contained in an Archive or Extract File. You can use the Archive or Extract Process to create the corresponding file, or use an existing Archive or Extract File. See Chapter 4, “Extract Process,” on page 83, or see the *Archive User Manual*.

Load versus Insert

Optim can move data into a database in two ways — using a Load Process or an Insert Process. Consider the following when deciding which method to use:

- The volume of data and the speed of using the database load utility may offset the advantages of the Insert Process.
- The data may contain referential integrity (RI) cycles that exceed the capability of the Insert Process to insert all the data successfully.
- The database load utility requires exclusive control of the database and prevents user access during the Load Process. The database is available to other users while the Insert Process is performed.
- The database load utility either inserts new data or replaces existing data. The Insert Process allows for Update/Insert processing in one step.

Process File Names

The Load Process generates the following types of files to support the database utility load process:

- **Data files** — Data files contain the data you want to load, prepared in the format appropriate for the DBMS you are using. Optim generates a data file for each table in the Archive or Extract File. Data files are named the same as the Archive or Extract File, but contain sequentially numbered file name extensions. For example, an Extract File named *demo.xf* that contains three tables will generate three data files named: *demo.001*, *demo.002*, and *demo.003*.
- **Message files** — Message files contain information that the database load utility generates during the Load Process. Typically, there is one message file for the entire Load Process. The message file is named the same as the Archive or Extract File, but contains the extension *.msg*. For example, if the Extract File is named *demo.xf*, the message file is named *demo.msg*.
- For DB2, an **SQL file** is generated with one statement for each destination table that contains the loader syntax to manually execute the loader. The SQL file is named the same as the Archive or Extract file, but has the extension *.sql*.
- For Oracle, Sybase ASE, SQL Server, and Informix, a **BAT file** is generated that contains the syntax to manually execute the loader for each table. A BAT file is generated for each DB Alias specified in the Table Map. Each BAT file resides in the directory with the corresponding converted Load file. If you

chose to manually execute the loader, the BAT file must be edited (in Notepad, for example) to replace a string of eight question marks with specific password information (except Informix).

Additionally, a **Format file** is generated for each data file. A format file has the same name as the corresponding data file, except that the file name extension is different. If there are less than 500 tables to load, the format file name extension is 500 greater numerically than the data file name extension. (For example, if there are three data files named *demo.001*, *demo.002*, and *demo.003*, the corresponding format files are named *demo.501*, *demo.502* and *demo.503*, respectively.) If there are more than five hundred tables, a more complex file extension generation algorithm is employed.

Note: If your file server does not allow long file names of greater than 8 characters and the Archive or Extract File has a long name, the Load Process will fail. The best solution is to avoid using long file names for Archive or Extract Files. If needed, you can copy and rename a file before you use it for a Load Process.

Run or Schedule

You can process a Load Request immediately by clicking **File > Run**, or you can save and schedule the request for processing at a later time by clicking **File > Schedule**. You must save the request before it is scheduled, but it is not necessary to save the request before it is run.

Note: You must have authority from the SYSADM or DBA to run or schedule the Load Process.

You can also direct the Load Process to generate the necessary files immediately, but defer running the database load utility. If you choose not to start the database load utility as part of the Load Request, the loader must be started manually.

Note: You cannot start the database load utility from within Optim using a previously created set of SQL statements.

Naming Conventions

The fully qualified name of a Load Request consists of: *identifier.name*.

identifier

Identifier that serves as the prefix for the request name (1 to 8 characters).

name Name assigned to the request (1 to 12 characters).

When you create Load Requests, it is helpful to use a logical set of naming conventions to identify the use for each and to organize them for easy access.

Chapter Contents

This chapter explains how to create and maintain a Load Request, including how to:

- Specify the Source File containing the data you want to load.
- Specify the Control File to record information about the process.
- Choose to run DBMS loaders in parallel or in sequence.
- Select or create a Table Map (and optional Column Maps) to provide more control over the data you want to load.
- Specify default options for date aging to adjust dates in specified columns.
- Specify notification options.
- Run, save, and schedule a Load Request.
- Review, save and print the Load Process Report.

Note: For details on using a particular DBMS loader, refer to the documentation provided with your DBMS.

Open the Load Request Editor

Use the Load Request Editor to create and maintain requests to prepare data for a DBMS loader. These requests are stored in the Optim Directory.

There are different ways to open the editor depending on whether you want to create a new Load Request or select an existing Load Request to edit.

Create a Load Request

Use this task to create a Load Request.

do the following to create a Load Request:

1. Click **File > New > Load** from the main window to open the Load Request Editor Options dialog.
2. Specify the Source File, Control File, and Table Map options and click **OK** to display the Load Request Editor.
3. On the **General** tab, specify options for using the DBMS loaders.
4. On the **DB Alias** tab, specify options for using the specific DBMS loader.

These steps are the minimum required to create a new Load Request. When you create a new Load Request, the Load Request Editor Options dialog and the Load Request Editor open at the same time. After you create a request, you can run the process immediately or save and schedule the request. Because the options to create and modify a Load Request are similar, see “Using the Load Request Editor” on page 145 for further information.

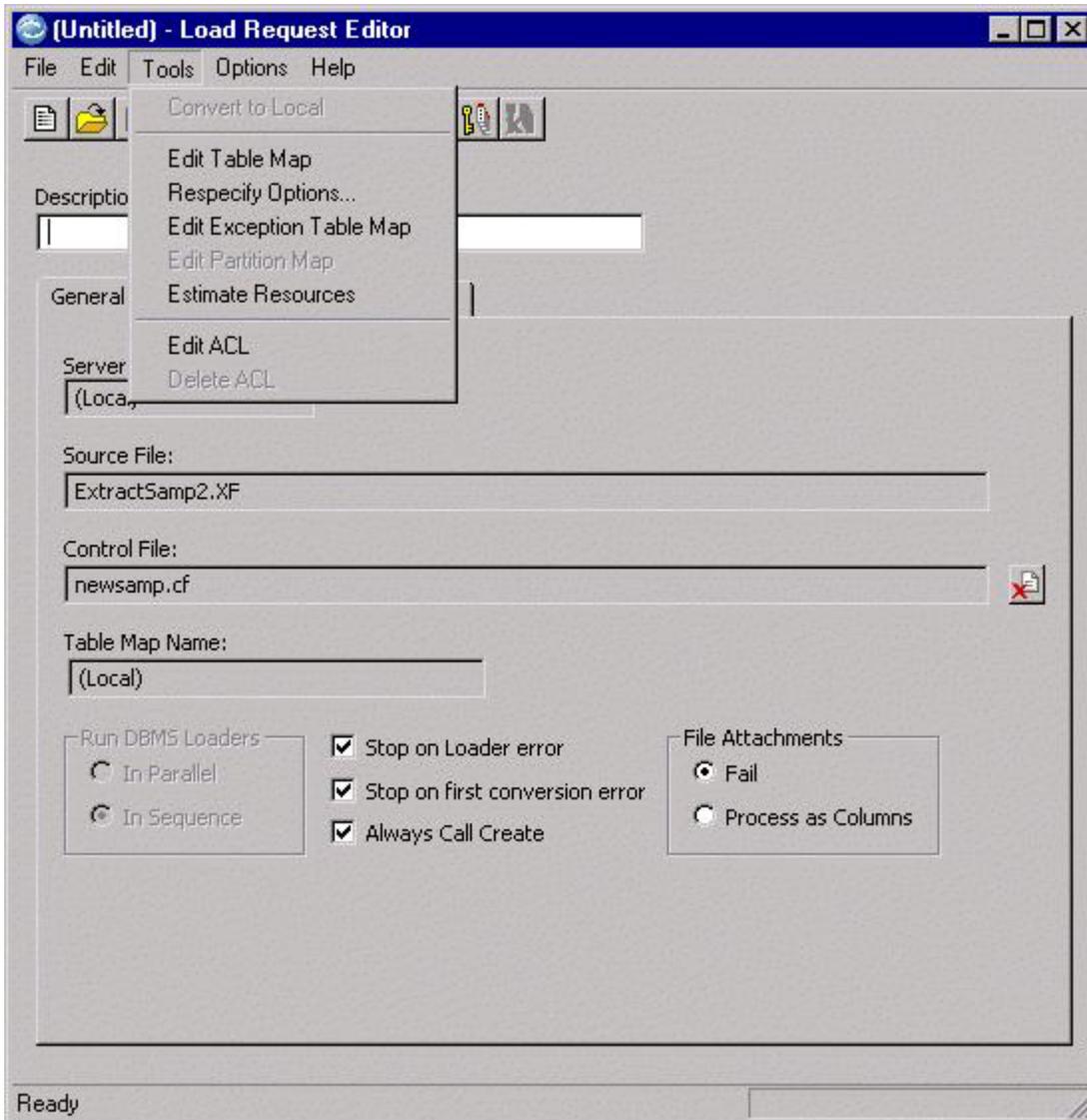
An alternate method for opening the Load Request Editor is to click **Actions > Load** from the main window. By default, the last Load Request you edited will display. The next step depends on your purpose:

- To create a new Load Request, click **File > New** from the Load Request Editor.
- To create a new Load Request modeled on an existing one, open the desired Load Request and click **File > Save As** from the Load Request Editor.
- To create and store a copy of the active Load Request and continue editing, click **File > Save Copy As** from the Load Request Editor.

Resource Estimation

Optim is able to calculate the storage needed to process a Load Request. This information can be valuable in determining when to run the load, or what options to use. The Resource Estimator creates a report with storage estimates for each object in a Load Request. The Resource Estimator must be run on the same machine where the input file for the Load Request is located.

To estimate resources for a Load Request, open the Load Request Editor and click **Tools** to display these options:



When you click **Estimate Resources** Optim calculates the amount of storage necessary for this Load process and creates a Resource Estimation Report:

Resource Estimation Report Load Request

Request Name	BUG.LOAD1
Server Name	(Local)
Source File	C:\Program Files\IBM Optim\RT\Data\samp.XF
Control File	ex1.CF
Table Map	(Local)
Client User ID	administrator
Time Started	10/08/20 10 16:47:50
Time Finished	10/08/20 10 16:47:50
Elapsed Time	00:00:00
Process Status	no errors, no warnings

Resource Estimation Analysis:

<u>Status</u>	<u>Estimated Storage (K)</u>	<u>Resource Name</u>
Passed	30	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.000
Passed	2	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.500
Passed	7129	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.001
Passed	3	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.501
Passed	994	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.002
Passed	2	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.502
Passed	1105	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.003
Passed	2	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.503
Passed	75	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.004
Passed	2	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.504
Passed	2	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.ORD
Passed	23	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.CON
Passed	10	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.LOG
Passed	2	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.BAT
Passed	10	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\samp.ORA

Resource Estimation Analysis by Location:

<u>Status</u>	<u>Estimated Storage (K)</u>	<u>Location Name</u>
Passed	9331	C:\Program Files\IBM Optim\RT\Data\BKKALIAS\

The first section of the Resource Estimation Report shows the type of request, source file, elapsed time, and other details as in the Load Process Report. For complete information, see "Load Process Report" on page 192. The Resource Estimation Analysis section includes the following:

Status Status of storage estimated for this object in the Load request:

Passed

There is sufficient storage available to load this object.

Failed There is not sufficient storage available to load this object. If this is the first object in the load request, there is currently insufficient storage. If this is not the first object in the load request, there is insufficient storage to load this object after loading the objects that precede this object in the load request.

Estimated Storage (K)

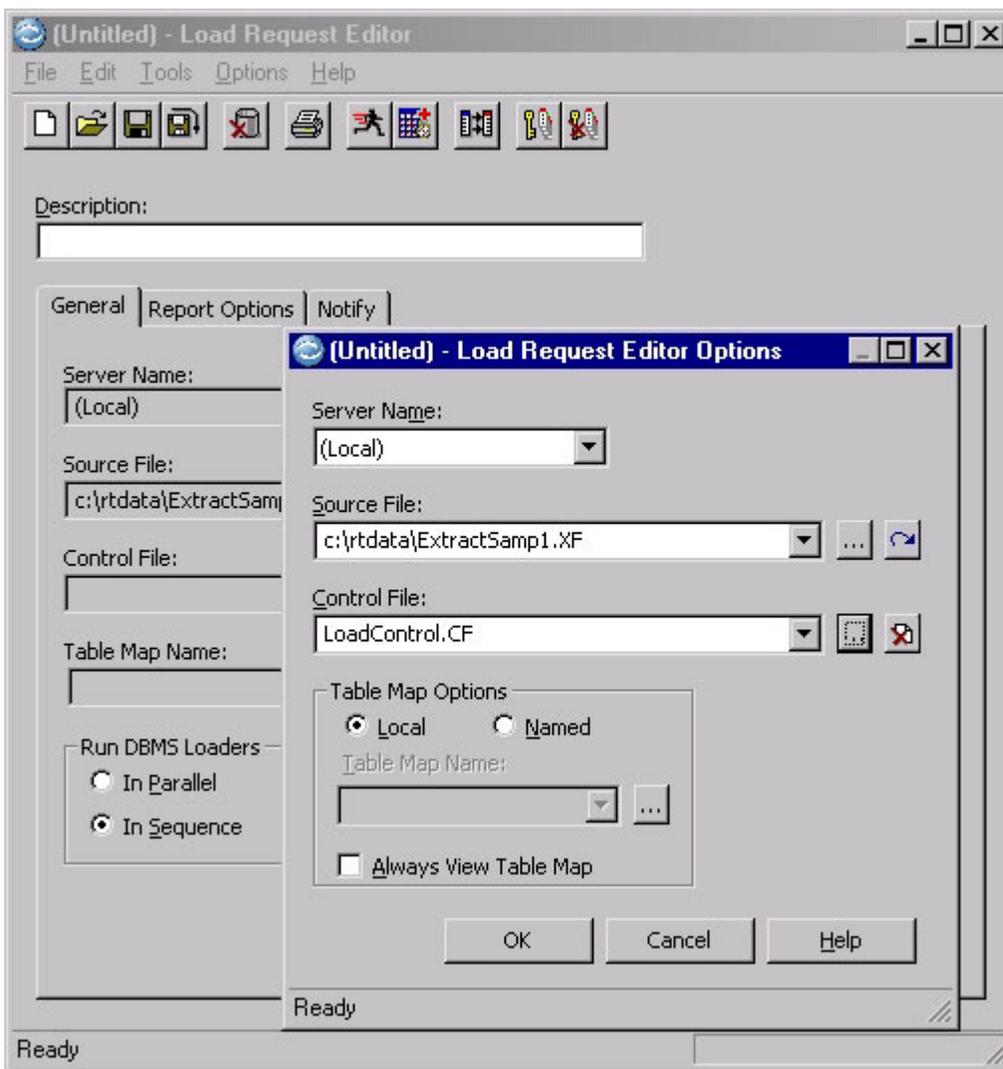
Amount of storage needed to load this object.

Resource Name

Fully-qualified name of the object to be loaded.

Load Request Editor Options Dialog

When you create a new Load Request, the Load Request Editor Options dialog and the Load Request Editor open at the same time.



Server Name

If the optional Optim Server is installed on your network, you can delegate resource-intensive Load Request processing (for example, when the source file contains a large number of tables or rows) to a machine hosting Optim Server.

Click the down arrow to select a machine hosting Optim Server, or select **Local** to process the request on the local workstation.

Note: If the Optim Server machine option is not enabled at your site, the **Server Name** box is unavailable.

Source File

Enter the name of the Archive or Extract File that contains the data to load. By default, Extract Files have an **.xf** extension and Archive Files have an **.af** extension.

Control File

Enter the name of a Control File. This file is used during the process to track the success or failure of preparing each row in the Source File. Control Files have a **.cf** extension by default.

If you specify a file name that already exists, a dialog prompts you to confirm that you want to overwrite the file when you run the Load Request. (The overwrite confirmation dialog does NOT display when you *schedule* the Load Request.) To disable this feature, use Personal Options.

Note: If you do not specify the full directory path, the process uses the path defined as the default Data Directory in Personal Options.

You can browse the contents of an Archive, Extract or Control File by clicking **Utilities > Browse**, or by right-clicking and selecting **Browse** from the shortcut menu. For details on the Browse Utility, see the *Common Elements Manual*.

Table Map Options

Specify a Table Map to match source tables in an Archive or Extract File with destination tables or to exclude tables in the Source File from the request. You cannot save or process a Load Request without a valid Table Map.

Within a Table Map, specify a Column Map for any pair of tables to:

- Map source and destination columns that are compatible, but have unlike names.
- Specify destination column values other than the source column values.
- Ignore specific columns.

Click **Tools > Edit Table Map** from the Load Request Editor to open the Table Map Editor. For details on how to create, edit, or merge Table Maps, see the *Common Elements Manual*.

Local Select this option to create a Table Map to be used only with the active Load Request. Local Table Maps are saved as part of the Load Request.

Named

Select this option to create a new Table Map or select an existing Table Map to be used with the Load Request. You must specify a name for the Table Map you want to create or the name of the existing Table Map you want to use.

Note: If changes have been made to database tables since the last time a Table Map was used, the specifications may no longer be valid, and a warning message displays.

Table Map Name

Name of the new or existing Table Map to use with the Load Request. A Table Map name has two parts: *identifier.name*.

identifier

Identifier to identify the Table Map (1 to 8 characters).

name Name of the Table Map (1 to 12 characters).

Always View Table Map

Select this check box to open the Table Map Editor any time you save or run a Load Request. This option provides an opportunity to review the Table Map specifications before you perform the Load Process. If you clear this check box, the Table Map Editor opens only when needed (for instance, when the specified Table Map does not include all the tables in the Source File).

Select a Load Request to Edit

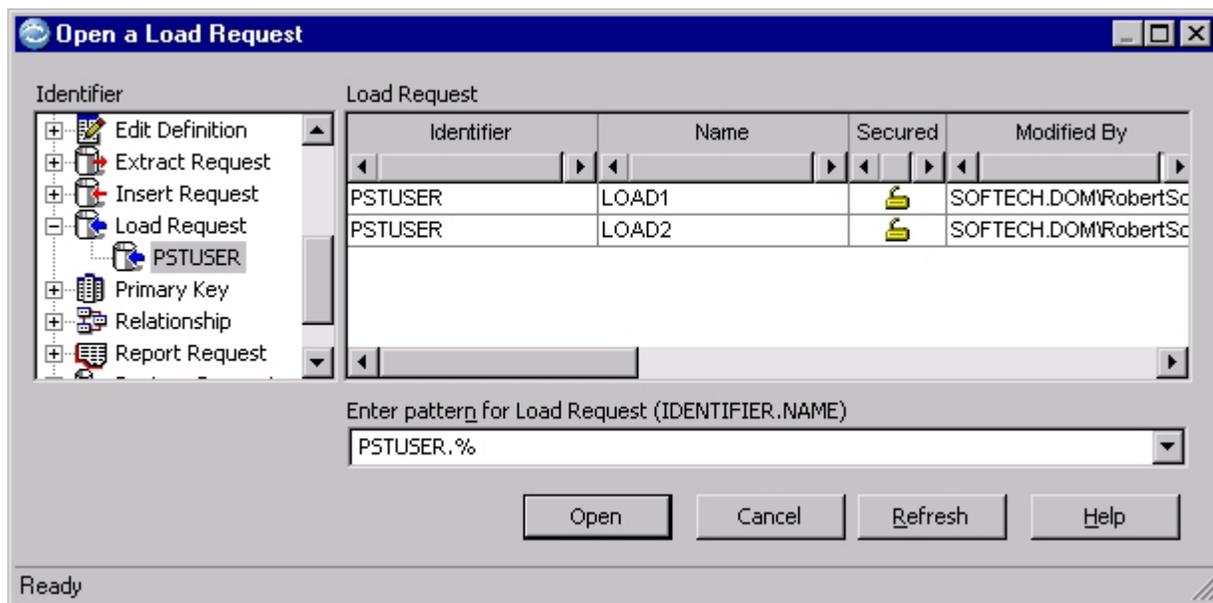
Use this task to select a Load Request to edit.

Do the following to select a Load Request to edit:

1. Click **File > Open** from the main window to open the object selection dialog.
2. Double-click to select **Load Request** and expand the object list.
3. Double-click the Load Request Identifier to display a list of Load Requests.
4. Double-click the desired Load Request to open the Load Request Editor.

Open a Load Request dialog

The Open dialog is divided into two areas. The object identifiers are listed on the left and the associated objects appear on the right. The list of objects varies depending on the identifier you select.



Pattern

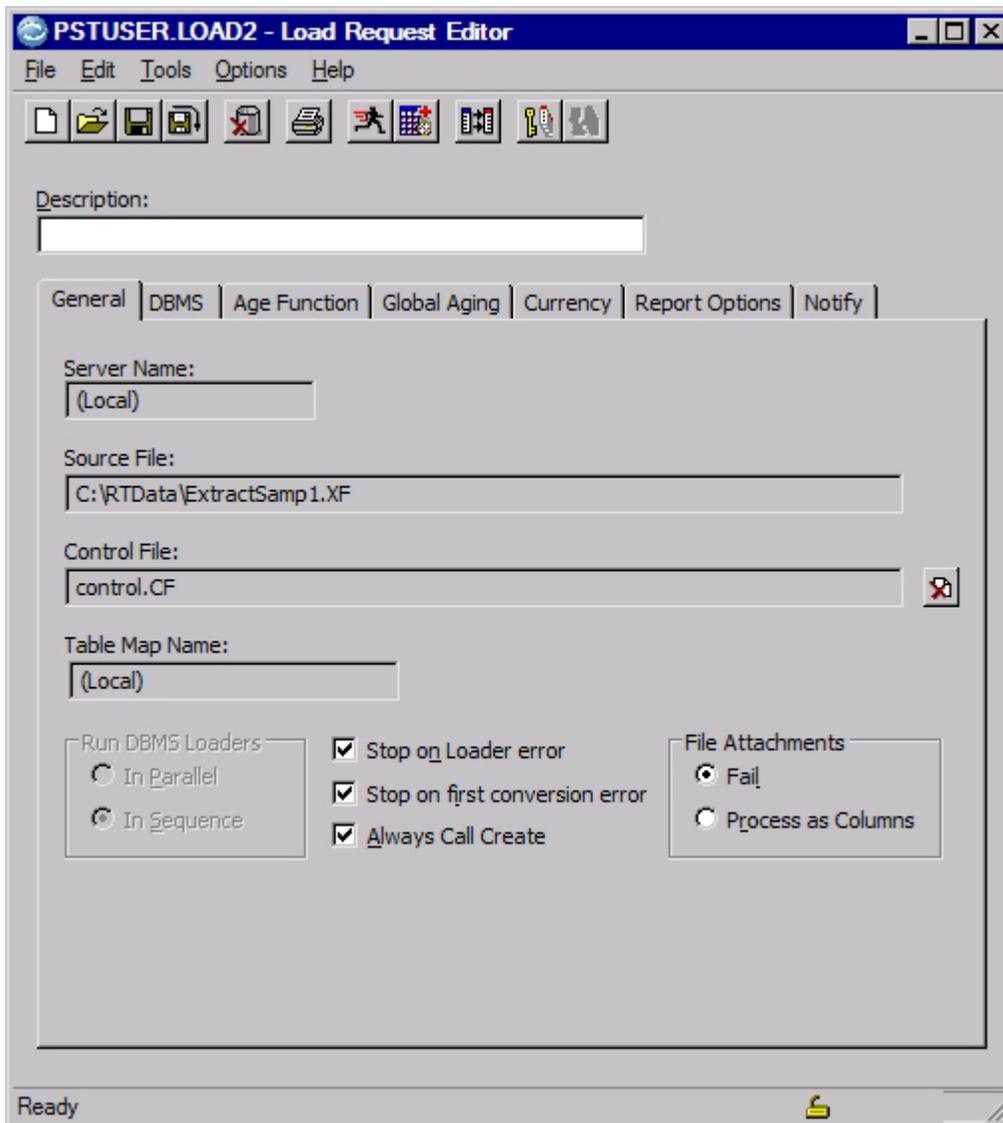
Use the **Enter pattern for Load Request** box to limit the list of requests in the Open dialog. A Load Request name has two parts: *identifier.name*. The **pattern** specified also must have two parts. You can use

the % (percent) wild card to represent one or more characters or use the _ (underscore) wild card to represent a single character in an object definition name. (The underscore must be selected as the SQL LIKE character on the **General** tab of Personal Options.)

Note: After you specify a **pattern**, click **Refresh** to redisplay the list based on your criteria.

Using the Load Request Editor

Use the Load Request Editor to create, modify, or delete Load Requests stored in the Optim Directory.



Description

Enter text to describe the purpose of the Load Request (up to 40 characters).

Tabs

The Load Request Editor displays tabs that allow you to specify necessary parameters and select options to define and maintain Load Requests.

General

Enter specifications for running the DBMS loaders. Each time you open the editor, the **General** tab is shown first.

DBMS (DB Alias)

The Load Request Editor shows a tab for each different database management system specified in the Table Map. Enter the specifications required for each DBMS.

Age Function

Specify default parameters for aging data in columns defined using an Age function in a Column Map.

Global Aging

Specify default parameters for aging data in columns that have a native date data type.

Currency

Select a default Currency Table and define currency conversion parameters for columns with a native currency data type.

Report Options

Select options for reporting errors and aging specifications on the process report.

Notify Specify options for automatic email notification of the success or failure of the process.

Menu Commands

In addition to the standard **File** and **Edit** menu commands, you can select the following commands from the other menus in the Load Request Editor:

Tools Menu

Convert to Local

When using a named Local Request in a Restore Request, select this command to save the Load Request as a local request within the Restore Request.

Edit Table Map

Opens the Table Map Editor to allow you to create or edit a Table Map to be used only with the active Load Request. For details on creating and maintaining Table Maps, see the *Common Elements Manual*.

Respecify Options

Opens the Load Request Editor Options dialog to allow you to modify the names of the Source File and Control File, as well as Table Map options for the data you want to load.

Edit Exception Table Map

Opens the Exception Table Mapping dialog to allow you to explicitly state what tables should be created to contain rows the DBMS loader deems as exceptions (DB2, Oracle, and Informix only). Informix refers to these tables as Violation Tables.

Edit Partition Map

Open the Table Partition Mapping dialog to map a Destination Table to a Sybase Partition.

Estimate Resources

Create a Resource Estimation Report for this Load Request. For details see "Resource Estimation" on page 139.

Edit ACL

Open the Access Control List Editor to secure the Load Request with an Access Control List. Available when Object Security is enabled.

Delete ACL

Delete the Access Control List securing the Load Request. Available for secured Load Requests only.

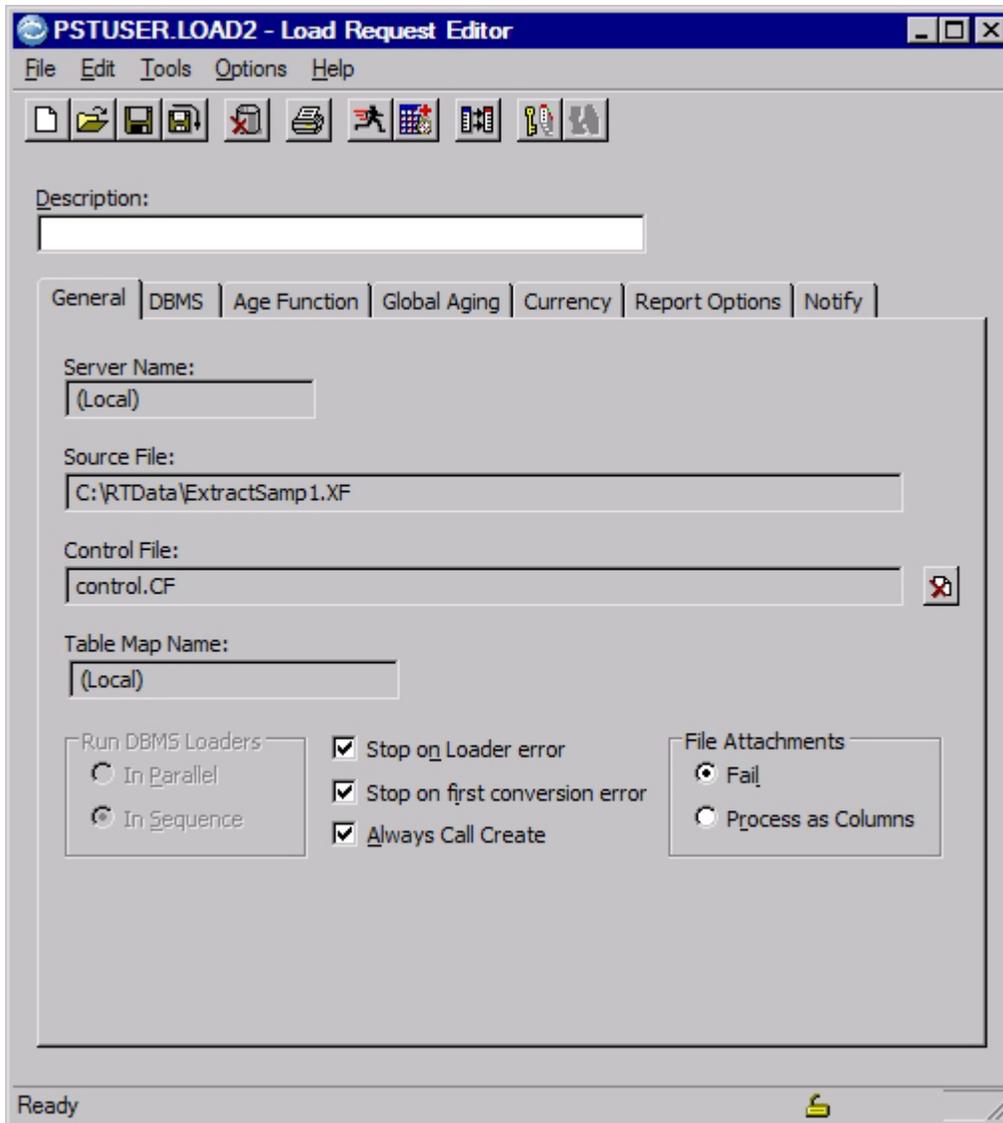
Options Menu

Show Aging/Show Currency

Select these commands to switch between hiding or displaying the corresponding tab.

General Tab

Before you can load data, you must specify how to run the DBMS load utilities.



Server Name

The workstation on which processing will take place, as specified on the Load Request Editor Options dialog. To process on a different machine, click **Tools > Respecify Options**.

Source File

The name of the Source File specified on the Load Request Editor Options dialog. To use a different Source File, click **Tools > Respecify Options**.

Control File

The name of the Control File specified on the Load Request Editor Options dialog. To use a different Control File, click **Tools > Respecify Options**.

Table Map Name

The Table Map specified on the Load Request Editor Options dialog. To use a different Table Map, click **Tools > Respecify Options**.

Run DBMS Loaders

When more than one DB Alias is required to access tables listed in the Table Map, indicate whether to run the DBMS loaders in parallel or in sequence.

In Parallel

Optim runs the different DBMS loaders at the same time.

In Sequence

Optim runs the different DBMS loaders one after another.

Note: This group box is disabled when the Table Map specified in the Load Request includes tables from only one database, that is, when only one **<DB Alias>** tab is displayed.

Stop on Loader error

Select this check box to stop the DBMS loader if an error occurs. When more than one DB Alias is specified in the Table Map, and an error occurs in one DBMS loader:

- If **In Parallel** is selected, processing stops for that DBMS loader, but processing continues in all others.
- If **In Sequence** is selected, processing stops for that DBMS loader and all subsequent DBMS loaders.

Stop on first conversion error

Select this check box to stop Load Request processing when a conversion error occurs.

Clear this check box to continue processing when a conversion error occurs. Rows in error are recorded with an error message in the Results Report. Conversion processing continues to the end to record all possible errors.

If a conversion error occurs, the DBMS loader process is not initiated. See "Report Options Tab" on page 188 to be sure that the **Report errors** option is selected and that the **Maximum number per table** value is set high enough to account for all possible errors.

Always Call Create

Select this check box to start the Create Utility each time before the DBMS loader performs the load, to allow you to create or drop objects in the destination database. Clear this check box to start the Create Utility only when necessary to create desired objects in the destination database. See the *Common Elements Manual* for further information about the Create Utility.

File Attachments

If the source file contains file attachment pseudocolumns, indicate how the Load Process should proceed.

Fail Fail the process.

Process as Columns

Process pseudocolumns as normal table columns. If matching columns do not exist in the table, the pseudocolumns are ignored.

DB Alias Tab — DB2

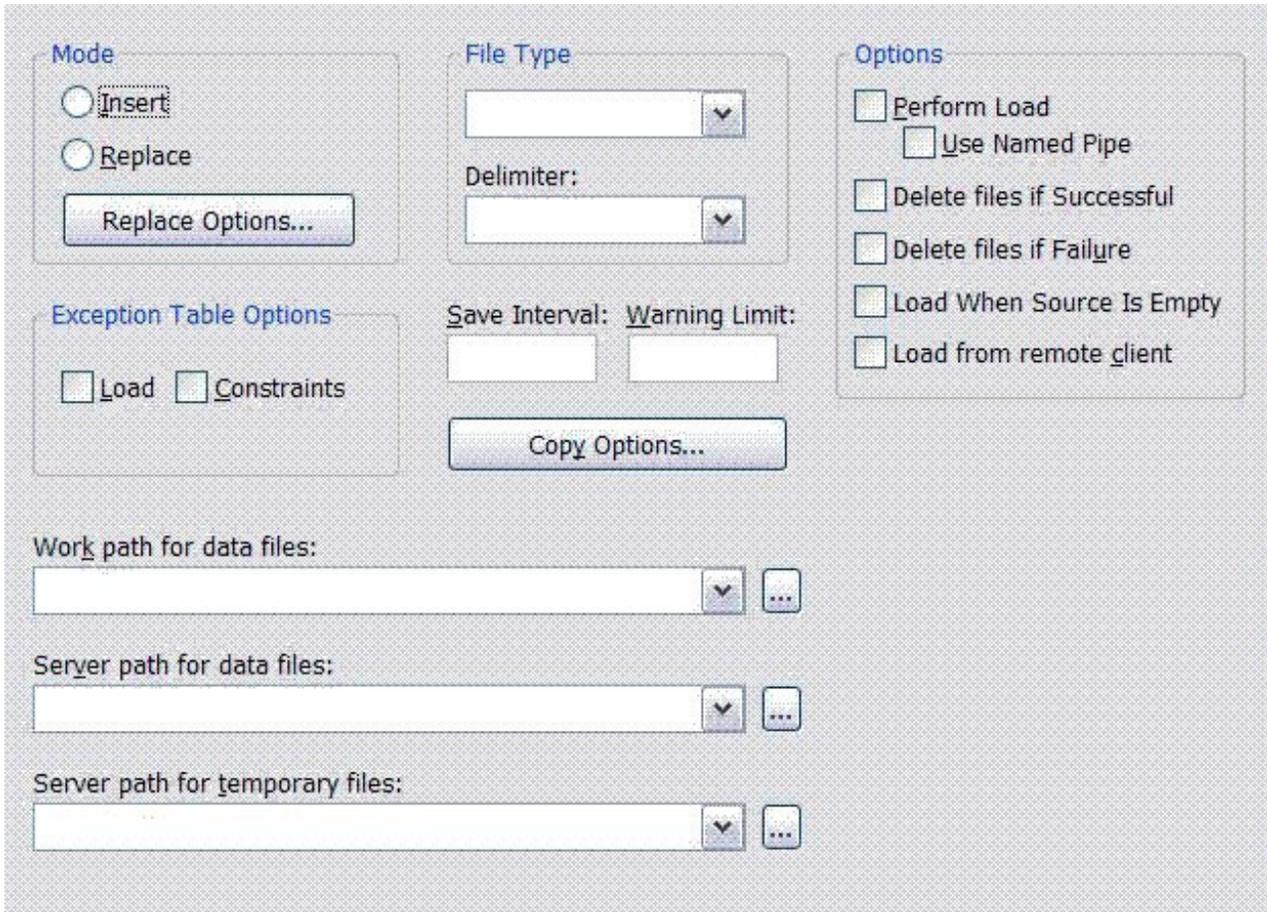
Optim supports the DB2 loader. Use the **DB Alias** tab in the Load Request Editor to define the specific parameters needed to perform the Load Process.

DB2 Remote Client Loading

When Optim loads data to DB2, the data files are created and written to a network location accessible to both Optim and the DB2 server. The loader reads the files from the network location and loads them to DB2. If a common network location is not available, you can use DB2 remote client loading. Remote client loading writes the data files to location outside the network – for example, a local Optim Server hard drive. Optim calls the DB2 client which reads the data file and sends it to the DB2 server for loading. Remote client loading cannot be used to load LOB data. Since it may cause contention, use remote client loading only if there is no network location available.

DB2 Load using Named Pipe

In a Windows or Unix environment, load performance may be significantly improved by using a Named Pipe. When this option is used, the load process runs in a single phase rather than a 2-stage process, resulting in reduced elapsed time for load processing. As the row data is immediately loaded after conversion to a loader format, the space requirements are also significantly reduced, when compared to the 2-stage load process. Optim creates the Named Pipe and writes the Archive or Extract File data to the Named Pipe. The loader utility reads the data from the Named Pipe and then submits the data to the loader.



The DB2 Alias tab of the Load Request Editor has the following elements:

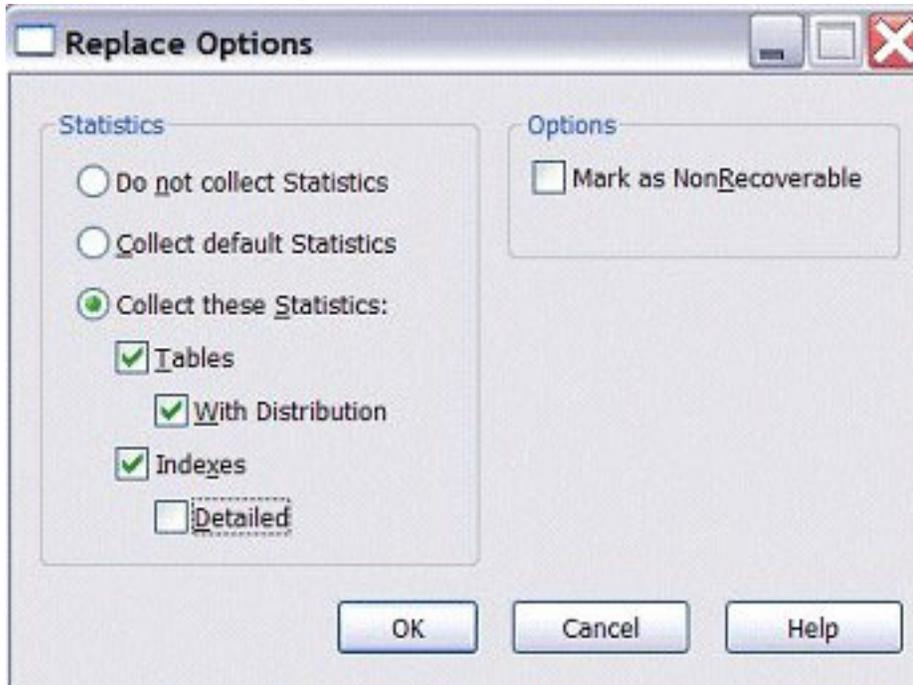
Mode

Insert Inserts the rows from the Source File into the destination tables. If primary key values match, duplicate rows are inserted into the appropriate Exception table if specified, or the table status becomes Check Pending. Refer to the DB2 documentation for additional information about Check Pending status.

Replace

Clears and replaces all of the existing rows in the destination tables with the rows from the

Source File. Selecting **Replace** enables the **Replace Options** button, which opens this dialog:



Do not collect Statistics

Select this button if you do not want to collect statistics for this load process. Optim generates STATISTICS NO in the SQL script. If you select this button, the other statistics options are unavailable.

Collect default Statistics

Select this button to have Optim generate STATISTICS USE PROFILE in the SQL script. The profile defined for this table determines the statistics collected during the load. For details refer to the documentation for the loader.

Collect these Statistics

Select this button to choose the statistics to be collected. Optim generates STATISTICS YES in the SQL script. You can choose:

Tables Select this check box to collect table statistics.

With Distribution

Select this check box to collect table distribution statistics.

Indexes

Select this check box to collect index statistics.

Detailed

Select this check box to collect detailed index statistics.

Mark as NonRecoverable

Select this check box to prevent tables from being left in an unusable state if the Load process fails. Optim generates the NONRECOVERABLE keyword in the SQL. NONRECOVERABLE specifies that a load transaction is to be marked as non-recoverable, and that it will not be possible to recover it by a subsequent rollforward operation. Refer to your loader documentation for details.

Exception Table Options

An exception table contains copies of rows that violate unique index or primary key rules. Each exception table includes a timestamp column and a description column that contains the DB2 description of the violation.

Select one or both of the following options to create an exception table for each destination table as part of database load utility processing.

Load Select this check box to create exception tables to store rows that violate unique index or primary key rules.

Constraints

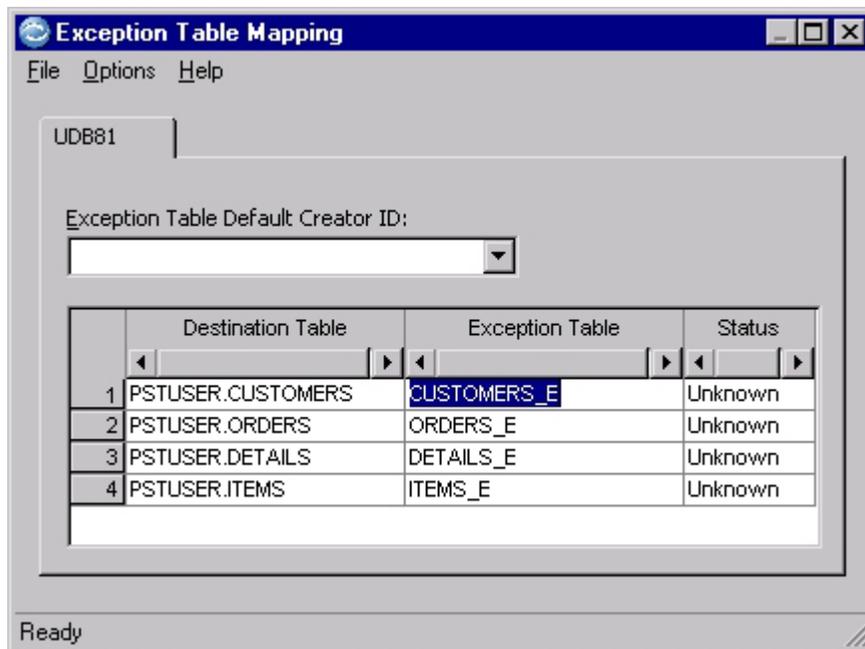
Select this check box to create exception tables to store rows that violate referential integrity or table check constraints.

Optim ensures that the names of exception tables do not match names of destination tables specified in the Load Request. You can modify the exception table names, but make sure that the names do not match the names of any existing database tables.

If the Exception Table name is left blank, duplicate rows are discarded. The Load Process drops existing exception tables before starting the database load utility to ensure that newly created exception tables contain only the information for the current database load.

Note: A confirmation dialog opens before exception tables are dropped. Change the Creator ID to create different exception tables.

Click **Tools > Edit Exception Table Map** to display the Exception Table Mapping dialog.



After the loader begins processing, if any data or referential integrity constraints are violated, the discarded rows are placed in the exception table and the database table is placed in Check Pending status. In addition, Optim issues the DB2 SET CONSTRAINTS statement for each table.

Note: You must use the DBMS utilities to resolve any problems for database tables that have pending status. For complete details, refer to your DBMS documentation.

File Type

ASCII For DB2 Linux, UNIX or Windows, use to import data into other DBRM instances or EEE sites.

ASCII Delimited

For DB2 Linux, UNIX or Windows, use to import data into other DBRM instances or EEE sites. If you select this file type, select a valid delimiter.

iSeries® IXF

For iSeries, use to import data into an iSeries instance.

IXF For DB2 Linux, UNIX or Windows, use as the preferred import file type for expedient processing.

Note: DB2 has an IXF record length (row) limitation of 32K.

Teradata ASCII

For a Teradata loader, use to import data into a Teradata instance. See “DB Alias Tab - Teradata, Load Request Editor” on page 175.

Teradata Delimited

For a Teradata loader, use to import data into a Teradata instance. See “DB Alias Tab - Teradata, Load Request Editor” on page 175.

Delimiter

Delimiter

You can exclude the delimiter from being scanned in character data columns by Optim while generating the loader file. This can improve load performance. To exclude delimiters from scanning, select any of the following values from the Delimiter drop-down list:

X'01' (No Pre-scan)
X'02' (No Pre-scan)
X'03' (No Pre-scan)
X'04' (No Pre-scan)
X'05' (No Pre-scan)

Additional delimiters are supported which are scanned in character data columns by Optim while generating the loader file. Select any of the following values from the Delimiter drop-down list. Optim scans these values while generating the loader file:

X'FA'
X'FB'
X'FC'
X'FD'
X'FE'
X'FF'

Save Interval

Specify whether you want the loader to commit changes to the database after processing a specified number of rows or after each table is processed.

- To commit changes based on a number of rows, enter the number of rows up to a maximum of 999999999.
- To commit changes after all data is loaded into a table, specify zero (0) or leave blank. This method ensures that all data or no data is loaded.

Warning Limit

Specify the number of rows, up to a maximum of 999999999, that the loader can discard during the Load Process. The process stops when the specified number of rows is discarded.

- To end the process if a single row is discarded, specify 1 as the maximum.
- To set no limit to the number of rows that can be discarded, specify zero (0) or leave blank.

Copy Options

Click **Copy Options** to select options to instruct the loader to make an image copy of the input data during the Load Process. These options are specified on the Select Copy Option dialog.



Note: To make an image copy, ensure that the **LOGRETAIN** and **USEREXIT** options are set to **ON** in the loader. You should request an image copy if either **LOGRETAIN** or **USEREXIT** is specified in the loader. The image copy is used to provide forward recovery.

Do not copy

Select this option to choose not to make an image copy.

- If you do not make an image copy, the tablespace where the table resides is placed in a backup pending state. A tablespace backup or a full database backup is required to clear the pending status.
- If **LOGRETAIN** and **USEREXIT** are set to **OFF** in the loader, the database does not provide forward recovery, and the copy image option is ignored.
- If you restore the database to resolve pending states, you must use the **Configuration** tool to apply maintenance for Optim Directory access and DB Alias access. See the *Installation and Configuration Guide* for details.

Copy image to directory

Select this option to create an image copy. The load utility generates the file names for each table based on the date and time of the load.

Note: You can specify a directory path to store the image copy. If the directory does not exist, you can create one by responding to the prompts.

Path Name

Directory path to store the image copy. Click the browse button to select from your system directories.

Copy image using ADSM

Select this option to create an image copy using ADSM. (For complete information on using ADSM, refer to the DB2 documentation.)

I/O Sessions

Specify the number of I/O sessions to be used with ADSM.

The values you specify in the Copy Options dialog are profiled. Therefore, if you always use the same specifications, it is not necessary to set copy options for each Load Request. Click **OK** to retain your specifications. Click **Cancel** to close the dialog, ignore changes, and return to the **DB Alias** tab of the Load Request Editor.

Options

Perform Load

Select this check box to run the loader immediately after file conversion processing is complete.

Note: You can run the loader immediately only if you select IXF file type.

If you clear this check box, or select ASCII file types, the Load Process prepares the data in the appropriate format and creates the SQL to run the loader, but does not initiate the loader. To run the loader, you can copy the syntax from the SQL file. Refer to your DB2 documentation.

Use Named Pipe

This option is only available when the file type is Teradata ASCII, Teradata ACSII Delimited, or IXF. See "DB Alias Tab - Teradata, Load Request Editor" on page 175 for information on loading to Teradata.

Delete files if Successful

Select this check box to delete the data files after the loader completes successfully. If you select this check box, the Fast Load Confirmation feature is unavailable. This option is unavailable if you selected **Use Named Pipe**.

Note: Fast Load Confirmation reduces processing time when you run a Load Request that has run before. See "Run a Load Request" on page 189 for information.

Delete files if Failure

Select to delete the data files if the loader does not complete successfully. If you select this check box, the Fast Load Confirmation feature is unavailable. This option is unavailable if you selected **Use Named Pipe**. This option is unavailable if you selected **Use Named Pipe**.

Load When Source Is Empty

Select this check box to perform the load if a table to be loaded contains no rows. If you do not select this check box, any tables in the Extract File containing no rows will be skipped in the load phase.

To create a clean test environment:

- For an existing target table, use
 - **Load When Source Is Empty**
 - an empty source table
 - **Replace** mode
- For a newly created table, use
 - **Load When Source Is Empty**
 - an empty source table,
 - **Insert** mode

Load from remote client

Select this check box to load using the DB2 LUW remote client option. The data files are written

to a location outside the DBMS server location, read from the DB2 LUW loader client, and sent to the DBMS server. If you select this check box, you must supply a path to the location of the data files. Optim generates a LOAD command with the CLIENT keyword in the SQL.

Directory Paths

Specify directory paths to the location for loader files. The files must be stored on a drive that can be accessed by DB2 and the client as well as by workstation and network server.

Note: If DB2 is running on a remote server and is started before Windows connects to the network drives, you might receive a DB2 error message in the Load Process Report that indicates the path for the file or device is not valid. The solution is to restart DB2.

Work path for data files:

Specify workstation directory path to the location for temporary loader files. The files must be stored on a drive that can be accessed by DB2 and the client as well as by workstation and network server.

Server path for data files:

Specify network server directory paths to the location for temporary loader files. The files must be stored on a drive that can be accessed by DB2 and the client as well as by workstation and network server.

Server path for temporary files:

Path for temporary loader files. Optim generates TEMPFILES PATH clause in the SQL. This is unavailable if Load from remote client is selected.

DB Alias Tab — Oracle

Optim supports the Oracle loader. Use the **DB Alias** tab to define the specific parameters needed to perform the Load Process.

Load to Oracle using Named Pipe

In a Windows or Unix environment, load performance may be significantly improved by using a Named Pipe. When this option is used, the load process runs in a single phase rather than a 2-stage process, resulting in reduced elapsed time for load processing. As the row data is immediately loaded after conversion to a loader format, the space requirements are also significantly reduced, when compared to the 2-stage load process. Optim creates the Named Pipe and writes the Archive or Extract File data to the Named Pipe. Oracle loader utility reads the data from the Named Pipe and then submits the data to the loader.

Mode

Insert Inserts rows from the Source File into empty destination tables. If destination tables contain data, the loader returns an error.

Replace

Clears and replaces all of the existing rows in the destination tables with the rows from the Source File. (**Replace** might be significantly more resource-intensive than **Truncate** since no logging is performed.)

Append

Inserts the rows from the Source File into the destination tables. If the primary key values match, duplicate rows are discarded or inserted into the exception table (if specified).

Truncate

Truncate is the same as **Replace** but the database does not log the rows being deleted, and Truncate requires that RI constraints are disabled.

Disable Triggers

Never Select this option if you do not want to disable database triggers for the loader.

Always

Select this option to disable database triggers during the Load Process and then re-enable the triggers after the process completes.

Prompt

Select this option to display the Disabling Trigger/Constraint Confirmation dialog. This dialog displays a list of tables with all associated triggers. You can right-click to enable or disable triggers during the Load Process for each table. You can also select whether to enable or disable the triggers after the Load Process completes.

Load Method

Conventional Path

Select this option when you want to:

- Load a small number of rows into a large table that has indexes or referential integrity constraints.
- Apply SQL functions to specific data.

Direct Path

Select this option when you want to load and index a large volume of data quickly. The following options are available:

Parallel Loads

Select this option to allow *multiple* load jobs to execute concurrently. This option is available only if you select Direct Path and Append mode.

UnRecoverable Load

This option disables the writing of the data to the Oracle redo logs. This option is available for Direct Path loads only.

Note: Direct path load runs faster than the conventional path, especially when you select the option for Parallel Loads. To use the direct path, the client and the server must be running on the same platform. For complete details on which method to use, refer to the documentation provided by Oracle.

Disable Constraints

Never Select this option when you do not want to disable referential integrity constraints for the loader. A Constraint Non-Disablement Warning message will display when you run the loader.



Always

Select this option to disable referential integrity constraints during the Load Process and then reenable the constraints after the process completes.

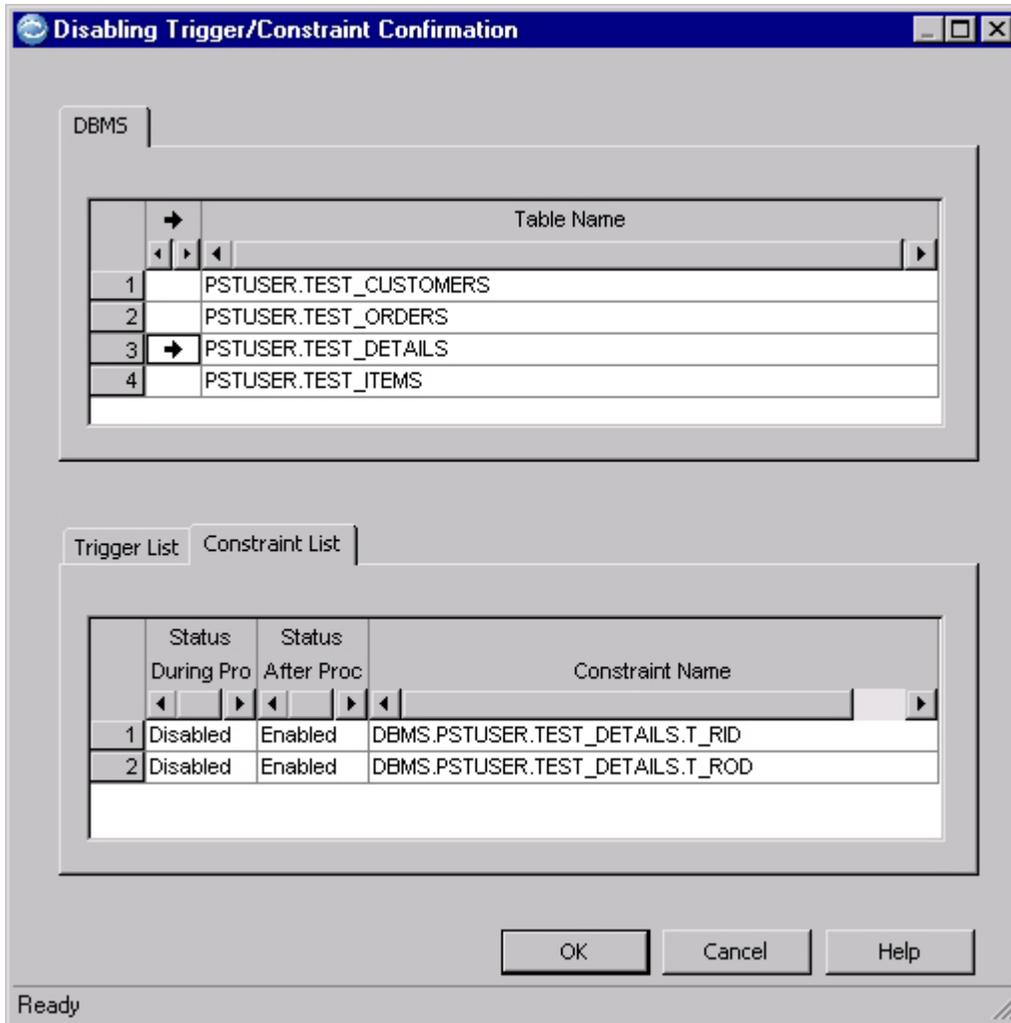
Prompt

Select this option to display the Disabling Trigger/Constraint Confirmation dialog. This dialog displays a list of tables with all associated constraints. You can right-click to enable or disable constraints during the Load Process for each table. You can also select whether to enable or disable the constraints after the Load Process completes.

Note: Options to disable triggers and constraints apply only when you select the **Perform Load** option.

The Disabling Trigger/Constraint Confirmation dialog displays the list of tables in the Load Process and tabs with the corresponding database triggers and referential integrity constraints for each table.

The first grid column contains a Focus Arrow to indicate the table for which triggers and constraints are listed. To display triggers and constraints for a different table, click a Focus Arrow grid cell to reposition the arrow, or use the up/down arrows on your keyboard.



Right-click in the **Status During Process** column to select to enable or disable the corresponding trigger or constraint during the Load Process.

Right-click in the **Status After Process** column to select whether to enable or disable the corresponding trigger or constraint after the Load Process completes.

Options

Perform Load

Select this check box to run the loader automatically after file conversion processing is complete. If you clear this check box, the Load Process prepares the data in the appropriate format and creates the BAT file to run the loader, but does not initiate the loader. To run the loader, edit the BAT file to include the proper password information and then run the BAT file.

Use Named Pipe

Select this check box to use a Named Pipe to load the data. The data to be loaded is written to the Named Pipe and then submitted to the loader. This option is available only when **Perform Load** is selected. If you select **Use Named Pipe**, the options **Delete files if Successful** and **Delete files if Failure** are not available.

Delete files if Successful

Select this check box to delete the data files after the loader completes successfully. If you select this check box, Fast Load Confirmation is unavailable.

Note: Fast Load Confirmation reduces processing time when you run a Load Request that has run before. See “Process a Load Request” on page 189 for detailed information.

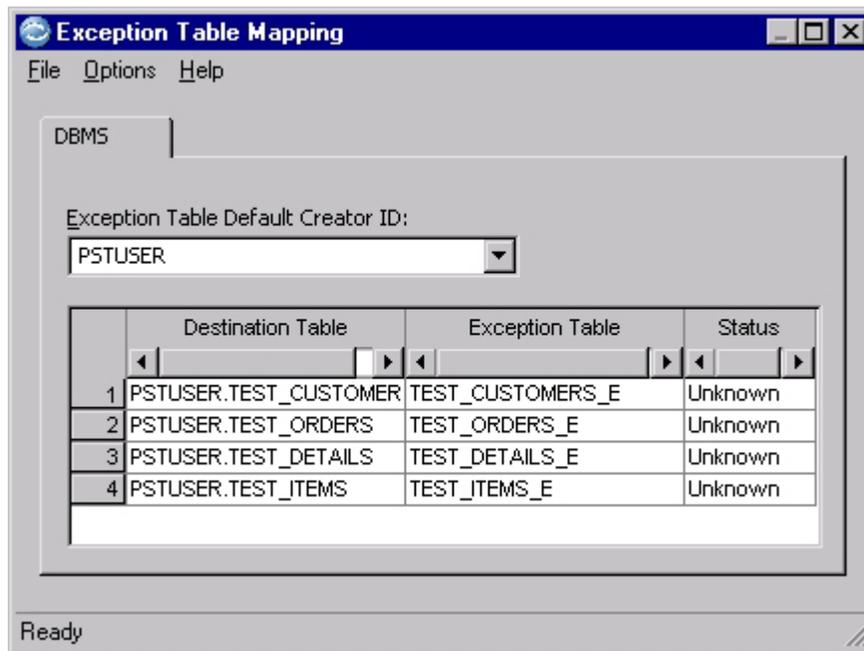
Delete files if Failure

Select this check box to delete the data files if the loader does not complete successfully. If you select this check box, Fast Load Confirmation is unavailable.

Create Exception Tables

Select this check box to create exception tables. An exception table contains copies of rows that violate unique index or primary key rules. Optim ensures that the names of exception tables do not match names of destination tables specified in the Load Request. You can modify the exception table names, however, use care to ensure that the names do not match names of existing database tables. If the exception table name is left blank, duplicate rows are discarded.

Click **Tools > Edit Exception Table Map** to display the Exception Table Mapping dialog.



Inline LOBs

Select this check box to include LOBs in a data file (inline with the table data). If this option is not selected, each LOB is loaded from a separate file that is referenced in the Oracle loader control file.

Create Discard File

Select this check box to instruct the loader to create a discard file to use during the Load Process.

Discard Limit

Enter the number of rows up to 999999999, that the loader can discard during the Load Process. Processing stops when the specified number of rows is discarded.

- To end the process if a single row is discarded, specify 1 as the maximum.
- To set no limit to the number of rows that can be discarded, specify zero (0) or leave blank.

Compressed Files

Select this check box to create variable length data rows instead of fixed length data rows. This option can potentially reduce space required for data conversion, but may slightly increase processing time.

Delimiter

Select a column delimiter from the drop-down list. To avoid a conversion error, do not use a column delimiter that appears in any of the data being loaded.

Commit

Specify the number of rows after which the loader commits changes to the database, up to the limit specified in Product Options. Refer to the *Installation and Configuration Guide* section on Product Options.

Load When Source Is Empty

Select this check box to perform the Load if the source file tables are empty. If you do not select this check box, the loader will not be called for any empty source table.

To create a clean test environment:

- For an existing target table, use
 - **Load When Source Is Empty**
 - an empty source table
 - **Replace** mode
- For a newly created table, use
 - **Load When Source Is Empty**
 - an empty source table,
 - **Insert** mode

Additional Loader Parameters

This field is provided to allow you to augment the loader arguments created automatically by Optim with additional loader parameters, if necessary. The additional parameters you create append to the list created by Optim, but are not validated prior to starting the loader. Refer to Oracle documentation for valid operands. If additional loader parameters are forced from within **Product Options**, this field cannot be modified. (See the *Installation and Configuration Guide*.)

Work Path

Specify a default directory path for storing the temporary loader files.

DB Alias Tab — Sybase ASE

Optim supports the Sybase ASE loader. Use the **DB Alias** tab to define the specific parameters needed to perform the Load Process.

The screenshot displays a configuration window for the Sybase ASE loader. It is organized into several sections:

- Mode:** Two radio buttons are present: **Insert** and **Replace**.
- Options:** Three checkboxes are listed: **Perform Load**, **Delete files if Successful**, **Delete files if Failure**, and **Load when source is Empty**.
- Disable Triggers:** Three radio buttons are shown: **Never**, **Always**, and **Prompt**.
- Error File Options:** Includes a checkbox **Create** and a text input field labeled **Max Errors:**.
- Additional Loader Parameters:** A single text input field.
- Disable Constraints:** Three radio buttons are shown: **Never**, **Always**, and **Prompt**.
- Work path for interim files:** A text input field with a dropdown arrow and a browse button (three dots).

Mode

Insert Insert the rows from the Source File into the destination tables. If the primary key values match, duplicate rows are discarded or inserted into the error file (if specified).

Replace

Clear and replace all existing rows in the destination tables with the rows from the Source File.

Options

Perform Load

Select this check box to run the loader automatically after file conversion processing is complete. If you clear this check box, the Load Process prepares the data in the appropriate format and creates the BAT file to run the loader, but does not initiate the loader. To run the loader, edit the BAT file to include the proper password information and then run the BAT file.

Note: Since Sybase ASE does not accept a Replace operand for a load request, make sure the tables are empty before you run the BAT file.

Delete files if Successful

Select this check box to delete the data files after the loader completes successfully. If you select this check box, the Fast Load Confirmation feature is unavailable.

Note: Fast Load Confirmation reduces processing time when you run a Load Request that has run before. See “Process a Load Request” on page 189 for detailed information.

Delete files if Failure

Select this check box to delete the data files if the loader does not complete successfully. If you select this check box, the Fast Load Confirmation feature is unavailable.

Load When Source Is Empty

Select this check box to perform the load if a table to be loaded contains no rows. If you do not select this check box, any tables in the Extract File containing no rows will be skipped in the load phase.

To create a clean test environment:

- For an existing target table, use
 - **Load When Source Is Empty**
 - an empty source table
 - **Replace** mode
- For a newly created table, use
 - **Load When Source Is Empty**
 - an empty source table,
 - **Insert** mode

Disable Triggers

For Sybase ASE (Version 12 or later), you can disable triggers:

Never Select this option to execute all database triggers during the Load Process.

Always

Select this option to disable all database triggers for the Load Process, re-enabling the triggers after the process completes.

Prompt

Select this option to selectively disable database triggers during the Load Process and selectively re-enable triggers when the process is complete.

Error File Options

Create Select this check box to instruct the loader to create a discard file to use during the Load Process.

Max Errors

Enter the number of rows up to 999999999, that the loader can discard because of errors during the Load Process. The process stops when the specified number of rows is discarded.

- To end the process if a single row is discarded, specify 1 as the maximum.
- To set no limit to the number of rows that can be discarded, specify zero (0) or leave blank.

Additional Loader Parameters

This field is provided to allow you to augment the loader arguments created automatically by Optim with additional loader parameters, if necessary. The additional parameters you create append to the list created by Optim, but are not validated by Optim prior to starting the loader. Refer to Sybase ASE documentation for valid operands. If additional loader parameters are forced from within **Product Options**, this field cannot be modified. (See the *Installation and Configuration Guide*.)

Disable Constraints

Note: Options for disabling referential integrity constraints are applicable to SQL Server Version 7.0 or later.

Never Select this option if you do not want to disable referential integrity constraints for the loader. When this option is selected, a warning message displays when you run the loader.



Always

Select this option to disable constraints during the Load Process and then re-enable the constraints after the process completes.

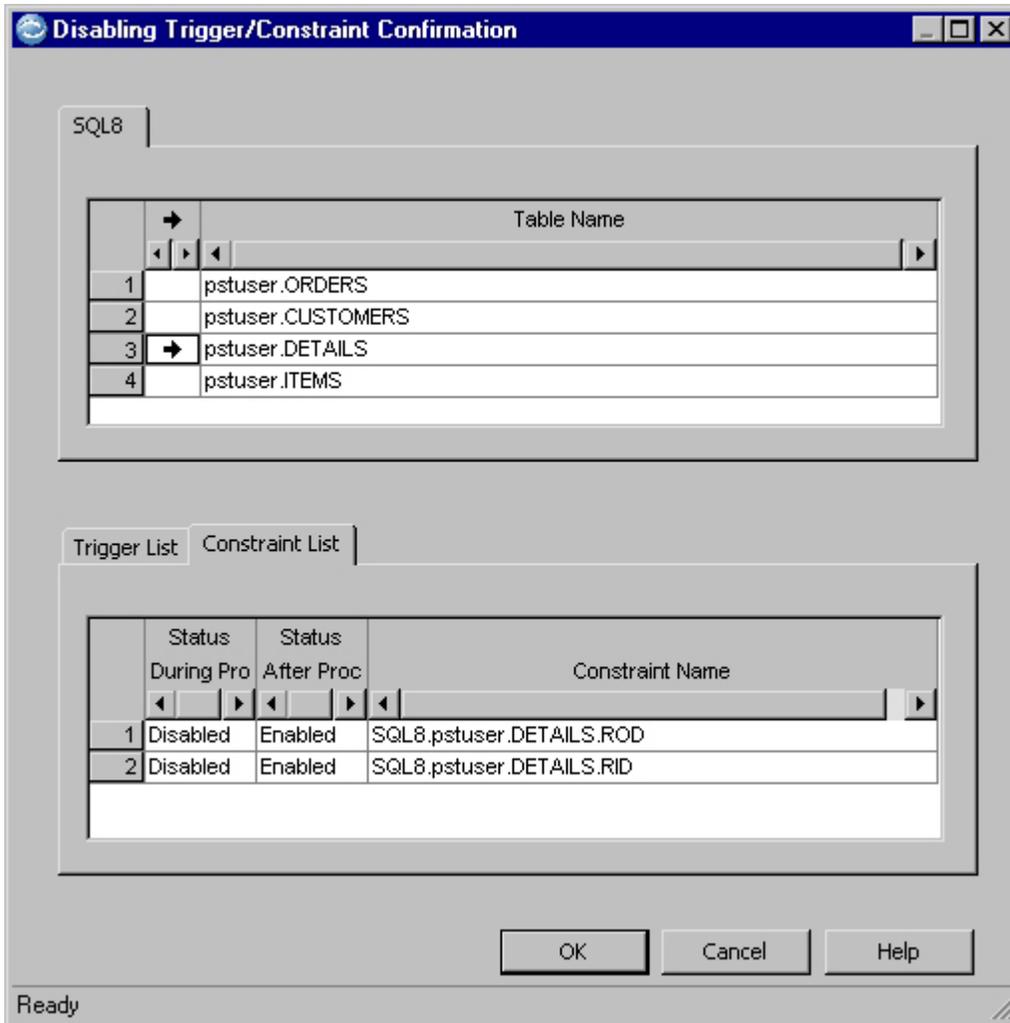
Prompt

Select this option to display the Disabling Trigger/Constraint Confirmation dialog. This dialog displays a list of tables with all associated constraints. You can right-click to enable or disable constraints during the Load Process for each table. You can also select whether to enable or disable the constraints after the Load Process completes.

Note: Options to disable triggers and constraints apply only when you select the **Perform Load** option.

The Disabling Trigger/Constraint Confirmation dialog displays the list of tables in the Load Process and tabs that contain the corresponding database triggers and referential integrity constraints for each table.

A Focus Arrow in the first grid column indicates the table for which triggers and constraints are listed. To display the corresponding triggers and constraints for a different table, click a Focus Arrow grid cell to reposition the arrow, or use the up/down arrows on your keyboard.



Right-click the **Status During Process** column to select to enable or disable the corresponding trigger or constraint during the Load Process.

Right-click the **Status After Process** column to select whether to enable or disable the corresponding trigger or constraint after the Load Process completes.

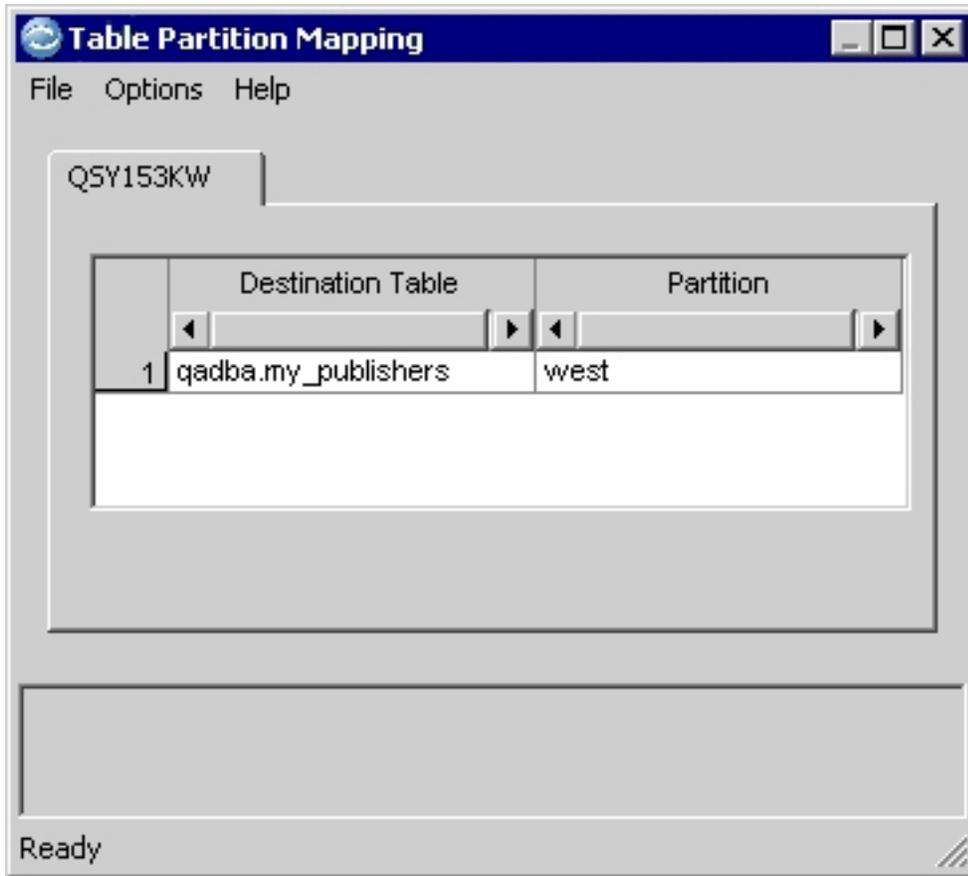
Work path for interim files

Specify a default directory path for storing the temporary loader files.

Load — Table Partition Mapping

If you want to store extracted data in a specific partition, you must pass the appropriate partition name when you run the Load process. (Contact your DBA for the appropriate partition names.) A Table Partition Mapping dialog is used to map the Destination Table to a Sybase Partition.

This dialog is displayed by clicking **Tools > Edit Partition Map**.



The Table Partition Mapping dialog includes a tab for each Sybase DB Alias in the subject Optim Load Request. The Destination Table column lists every table mapped within the Table Map Editor, and the Partition column is used to specify the Sybase partition identifier or name for each table. You can specify one partition name only for each table.

Note: Make sure the Extract File contains data only for the targeted partition, otherwise you will receive an error from the Sybase loader.

Say, for example, you created a table called “my_publishers” that is partitioned by list, according to the values in the state column, as indicated as follows. (Certain entries are shown in bold for emphasis only.)

create table my_publishers
(pub_id char(4) not null,
pub_name varchar(40) null,
city varchar(20) null,
state char(2) null)
partition by list (state)
(west values ('CA', 'OR', 'WA') on seg1,
east values ('NY', 'MA') on seg2)

If your Extract File contains data for three states — California (CA), Oregon (OR), and Washington (WA) — you would specify **west** as the Partition, as shown in the earlier Table Partition Mapping example. Conversely, if your Extract File contained data for two states — New York (NY) and Massachusetts (MA) — you would specify **east** as the Partition.

After you specify the appropriate partition name(s), close the Table Partition Mapping dialog to redisplay the previous dialog.

DB Alias Tab — SQL Server

Optim supports the SQL Server loader. Use the **DB Alias** tab to define the specific parameters needed to perform the Load Process.

Note: SQL Server forces dates to be in a particular format. Therefore, in order to run the request, the Client language must be the same as the language assigned to the SQL Server User ID.

Mode

Insert Inserts the rows from the Source File into the destination tables. If the primary key values match, duplicate rows are discarded or inserted into the error file (if specified).

Replace

Clears all of the existing rows in the destination tables and replaces with the rows from the Source File.

Options

Perform Load

Select this check box to run the loader automatically after file conversion processing is complete.

If you clear this check box, the Load Process prepares the data in the appropriate format and creates the BAT file to run the loader, but does not initiate the loader. To run the loader, edit the BAT file to include the proper password information and then run the BAT file.

Note: Since SQL Server does not accept a Replace operand for a load request, you must ensure the tables are empty before you run the BAT file.

Delete files if Successful

Select this check box to delete the data files after the loader completes successfully. If you select this check box, the Fast Load Confirmation feature is unavailable.

Note: Fast Load Confirmation reduces processing time when you run a Load Request that has run before. See “Process a Load Request” on page 189 for detailed information.

Delete files if Failure

Select this check box to delete the data files if the loader does not complete successfully. If you select this check box, the Fast Load Confirmation feature is unavailable.

Load when source is Empty

Select this check box to perform the Load if the source file tables are empty. For example, if you need to clear database tables of existing data rows, use empty tables for the Load and select the option Load when source is Empty. If you do not select this check box, any empty tables in the source file will not be loaded.

To create a clean test environment:

- For an existing target table, use
 - **Load When Source Is Empty**
 - an empty source table
 - **Replace** mode
- For a newly created table, use
 - **Load When Source Is Empty**
 - an empty source table,
 - **Insert** mode

Disable Triggers

Note: Options for disabling database triggers are applicable to SQL Server Version 7.0 or later.

Never Select this option if you do not want to disable database triggers for the loader.

Always

Select this option to disable database triggers during the Load Process and then re-enable the triggers after the process completes.

Prompt

Select this option to display the Disabling Trigger/Constraint Confirmation dialog. This dialog displays a list of tables with all associated triggers. You can right-click to enable or disable triggers during the Load Process for each table. You can also select whether to enable or disable the triggers after the Load Process completes.

Error File Options

Create Select this check box to instruct the loader to create a discard file to use during the Load Process.

Max Errors

Enter the number of rows up to 999999999, that the loader can discard because of errors during the Load Process. The process stops when the specified number of rows is discarded.

- To end the process if a single row is discarded, specify 1 as the maximum.
- To set no limit to the number of rows that can be discarded, specify zero (0) or leave blank.

Additional Loader Parameters

This field is provided to allow you to augment the loader arguments created automatically by Optim with additional loader parameters, if necessary. The additional parameters you create append to the list

created by Optim, but are not validated by Optim prior to starting the loader. Refer to SQL Server documentation for valid operands. If additional loader parameters are forced from within Product Options, this field cannot be modified. (See the *Installation and Configuration Guide*.)

Use NT Authentication

Select this check box to instruct Optim to supply the -T parameter to instruct the loader to use the User ID and Password used to logon to the network. Clear the check box to use a -U and -P parameter (UserID and Password) when starting the loader.

Disable Constraints

Note: Options for disabling referential integrity constraints are applicable to SQL Server Version 7.0 or later.

Never Select this option if you do not want to disable referential integrity constraints for the loader. A Constraint Non-Disablement Warning message will display when you run the loader.



Always

Select this option to disable constraints during the Load Process and then re-enable the constraints after the process completes.

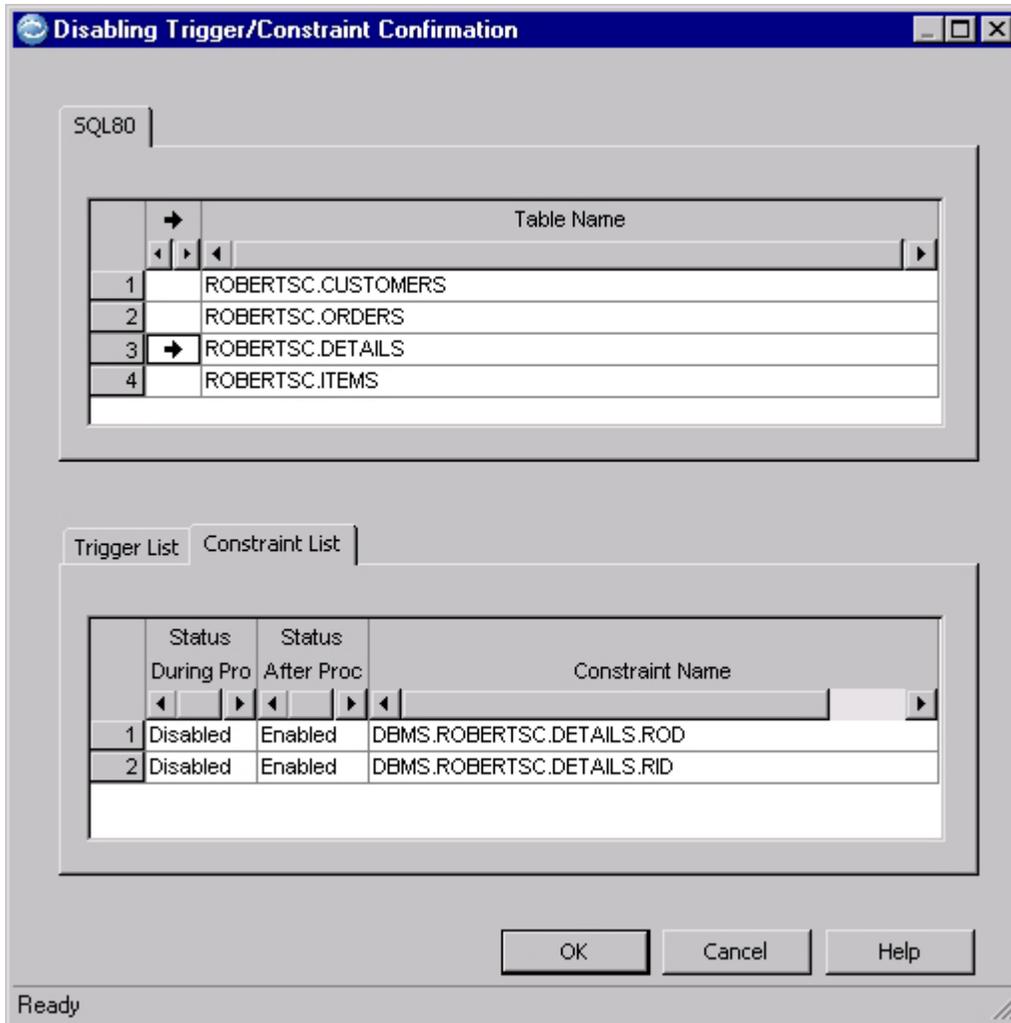
Prompt

Select this option to display the Disabling Trigger/Constraint Confirmation dialog. This dialog displays a list of tables with all associated constraints. You can right-click to enable or disable constraints during the Load Process for each table. You can also select whether to enable or disable the constraints after the Load Process completes.

Note: Options to disable triggers and constraints apply only when you select the **Perform Load** option.

The Disabling Trigger/Constraint Confirmation dialog displays the list of tables in the Load Process and tabs that contain the corresponding database triggers and referential integrity constraints for each table.

The first grid column contains a Focus Arrow to indicate the table for which triggers and constraints are listed. To display the corresponding triggers and constraints for a different table, click a Focus Arrow grid cell to reposition the arrow, or use the up/down arrows on your keyboard.



Right-click in the **Status During Process** column to select to enable or disable the corresponding trigger or constraint during the Load Process.

Right-click in the **Status After Process** column to select whether to enable or disable the corresponding trigger or constraint after the Load Process completes.

Work path for interim files

Specify a default directory path for storing the temporary loader files.

DB Alias Tab — Informix

Optim supports the Informix loader. Use the **DB Alias** tab to define the specific parameters needed to perform the Load Process.

The screenshot shows a configuration dialog for data loading. It includes sections for Mode (radio buttons for Insert and Replace), Options (checkboxes for Perform Load, Delete files if Successful, Delete files if Failure, and Load when source is Empty), Disable Triggers (radio buttons for Never, Always, and Prompt), Violation Table Options (checkboxes for Start Violation Table and Delete all rows), Commit and Warning fields, Additional Loader Parameters, and Disable Constraints (radio buttons for Never, Always, and Prompt). At the bottom, there is a text field for the Workstation path for temporary loader files with a dropdown arrow and a browse button.

Mode

Insert Inserts rows from the Source File into empty destination tables. If destination tables contain data, the loader returns an error.

Replace

Clears all of the existing rows in the destination tables and replaces with the rows from the Source File.

Options

Perform Load

Select this check box to run the loader automatically after file conversion processing is complete.

If you clear this check box, the Load Process prepares the data in the appropriate format and creates the BAT file to run the loader, but does not initiate the loader. To run the loader, edit the BAT file to include the proper password information and then run the BAT file.

Delete files if Successful

Select this check box to delete the data files after the loader completes successfully. If you select this check box, the Fast Load Confirmation feature is unavailable.

Note: Fast Load Confirmation reduces processing time when you run a Load Request that has run before. See “Process a Load Request” on page 189 for detailed information.

Delete files if Failure

Select this check box to delete the data files if the loader does not complete successfully. If you select this check box, the Fast Load Confirmation feature is unavailable.

Load When Source Is Empty

Select this check box to perform the load if a table to be loaded contains no rows. If you do not select this check box, any tables in the Extract File containing no rows will be skipped in the load phase. Using load with an empty source table deletes rows from the target table, resulting in a clean test environment.

To create a clean test environment:

- For an existing target table, use
 - **Load When Source Is Empty**

- an empty source table
- **Replace** mode
- For a newly created table, use
 - **Load When Source Is Empty**
 - an empty source table
 - **Insert** mode

Disable Triggers

Never Select this option if you do not want to disable database triggers for the loader.

Always

Select this option to disable database triggers during the Load Process and then re-enable the triggers after the process completes.

Prompt

Select this option to display the Disabling Trigger/Constraint Confirmation dialog. This dialog displays a list of tables with all associated triggers. You can right-click to enable or disable triggers during the Load Process for each table. You can also select whether to enable or disable the triggers after the Load Process completes.

Violation Table Options

Start Violation Table

Select this check box to issue a Start Violation Table SQL statement. Check for previously linked violation tables and diagnostic tables by clicking **Tools > Edit Exception Table Map** to display the Exception Table Mapping dialog.

Note: The terms violation table and exception table are used synonymously in Optim.

If linked tables are present, the Exception Table Map is automatically populated with the table names. By default, a violation table name is the table name with the suffix '_E'. (A diagnostic table name has the suffix '_D'.) You can change the names of the tables by over-typing them.

Delete all rows

Select this check box to delete all rows in existing violation tables and diagnostic tables, before the Load begins.

Commit

Specify whether you want the loader to commit changes to the database by a specified number of rows or one table at a time.

- To commit changes based on a number of rows, enter the number of rows up to a maximum of 999999999.
- To commit changes after all data is loaded into a table, specify zero (0) or leave blank. This method has advantages when you want to ensure that either all data or no data is loaded.

Warning Limit

Specify the number of rows, up to a maximum of 999999999, that the loader can discard during the Load Process. The process stops when the specified number of rows is discarded.

- To end the process if a single row is discarded, specify 1 as the maximum.
- To set no limit to the number of rows that can be discarded, specify zero (0) or leave blank.

Additional Loader Parameters

This field is provided to allow you to augment the loader arguments created automatically by Optim with additional loader parameters, if necessary. The additional parameters you create append to the list created by Optim, but are not validated by Optim prior to starting the loader. Refer to Informix documentation for valid operands. If additional loader parameters are forced from within Product Options, this field cannot be modified. (See the *Installation and Configuration Guide* for further information.)

Disable Constraints

Never Select this option if you do not want to disable referential integrity constraints for the loader. When this option is selected, a warning message displays when you run the loader.

Always

Select this option to disable referential integrity constraints during the Load Process and then re-enable the constraints after the process completes.

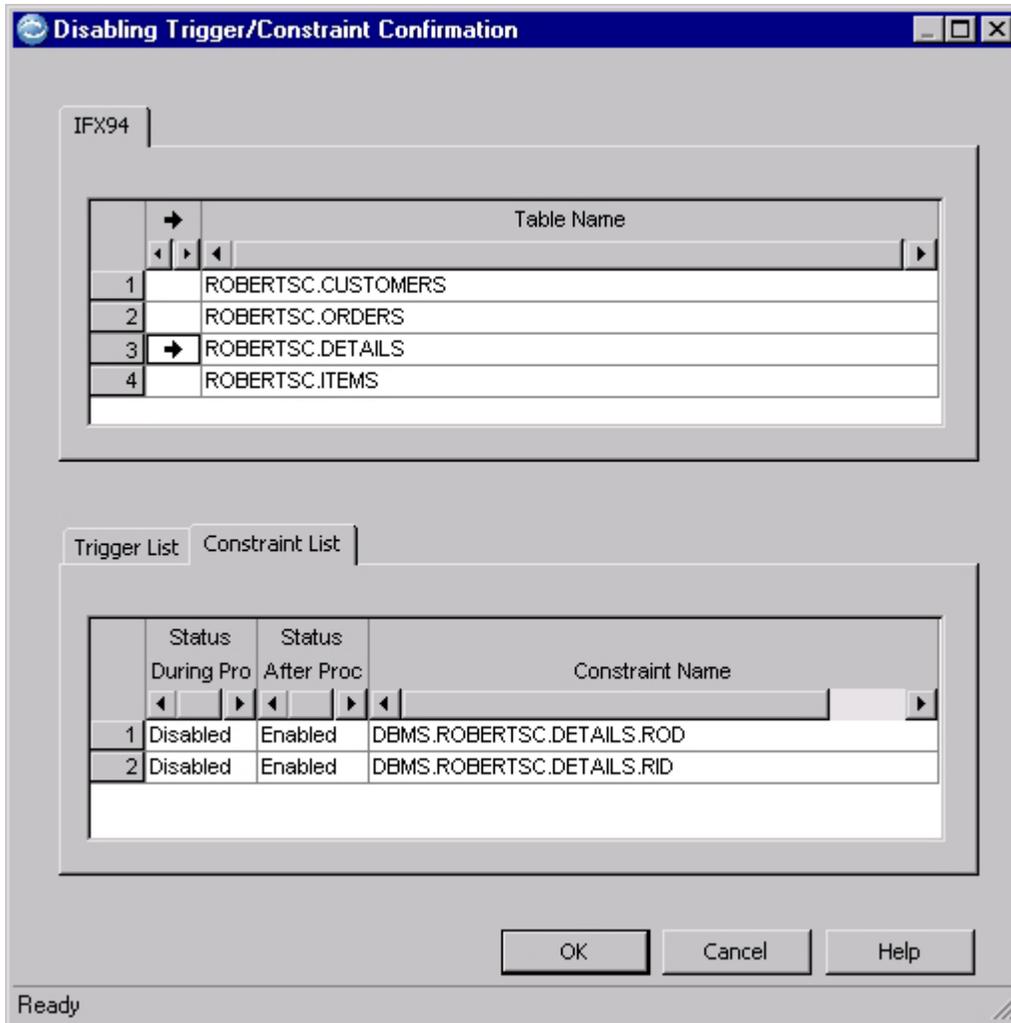
Prompt

Select this option to display the Disabling Trigger/Constraint Confirmation dialog. This dialog displays a list of tables with all associated constraints. You can right-click to enable or disable constraints during the Load Process for each table. You can also select whether to enable or disable the constraints after the Load Process completes.

Note: Options to disable triggers and constraints apply only when you select the **Perform Load** option.

The Disabling Trigger/Constraint Confirmation dialog displays the list of tables in the Load Process and tabs that contain the corresponding database triggers and referential integrity constraints for each table.

The first grid column contains a Focus Arrow to indicate the table for which triggers and constraints are listed. To display the corresponding triggers and constraints for a different table, click a Focus Arrow grid cell to reposition the arrow, or use the up/down arrows on your keyboard.



Right-click in the **Status During Process** column to select to enable or disable the corresponding trigger or constraint during the Load Process. Right-click in the **Status After Process** column to select whether to enable or disable the trigger or constraint after the Load Process completes.

Note: For Informix, you can also select to enable constraints with or without using a violation table. Select **With Vio** to enable the constraint and use a violation table. Select **No Vio** to enable the constraint and not use a violation table. (If you select **Enabled**, the Informix default for violation tables applies.)

Workstation Path

Specify a default directory path for storing the temporary loader files.

DB Alias Tab - iSeries, Load Request Editor

Optim supports loading data into an iSeries DBMS, using the DB2 CLIENT IMPORT command. Use the **DB Alias** tab to define the parameters needed. A DB2 DB Alias must exist before you create the Load Request.

The DB Alias tab of the Load Request Editor has the options described below when loading to an iSeries DBMS.

Mode

Insert Inserts rows from the Source File into empty destination tables. If destination tables contain data, the loader returns an error. This error occurs only if a primary key column is defined and this process attempts to insert the same value into a table row.

Replace

Clears and replaces all of the existing rows in the destination tables with the rows from the Source File.

Options

Perform Load

Select this check box to run the DB2 CLIENT IMPORT command automatically after file conversion processing is complete. If you clear this check box, the Load Process prepares the data in the appropriate format and creates the BAT file, but does not initiate the command. To run the command, edit the BAT file to include the proper password information and then run the BAT file.

Delete files if Successful

Select this check box to delete the data files after the DB2 CLIENT IMPORT command completes successfully. If you select this check box, Fast Load Confirmation is unavailable.

Note: Fast Load Confirmation reduces processing time when you run a Load Request that has run before. See “Process a Load Request” on page 189 for detailed information.

Delete files if Failure

Select this check box to delete the data files if the process does not complete successfully. If you select this check box, Fast Load Confirmation is unavailable.

Load When Source Is Empty

Select this check box to perform the load if a table to be loaded contains no rows. If you do not select this check box, any tables in the Extract File containing no rows will be skipped in the load phase. Using load with an empty source table deletes rows from the target table, resulting in a clean test environment.

To create a clean test environment:

- For an existing target table, use
 - **Load When Source Is Empty**
 - an empty source table
 - **Replace** mode
- For a newly created table, use
 - **Load When Source Is Empty**
 - an empty source table,
 - **Insert** mode

File Type

ASCII For DB2 Linux, UNIX or Windows, use to import data into other DBRM instances or EEE sites.

ASCII Delimited

For DB2 Linux, UNIX or Windows, use to import data into other DBRM instances or EEE sites. If you select this file type, select a valid delimiter.

iSeries IXF

For iSeries, use to import data into an iSeries instance.

IXF For DB2 Linux, UNIX or Windows, use as the preferred import file type for expedient processing.

Teradata ASCII

For a Teradata loader, use to import data into a Teradata instance. This file type is valid for Teradata Fast Load and Multi Load.

Teradata Delimited

For a Teradata loader, use to import data into a Teradata instance. If you select this file type, select a valid delimiter. This file type is valid for Teradata Fast Load and Multi Load.

Delimiter

To avoid error, the delimiter selected must not appear within the data.

Work path for interim files

Specify a default directory path for storing the temporary loader files.

DB Alias Tab - Teradata, Load Request Editor

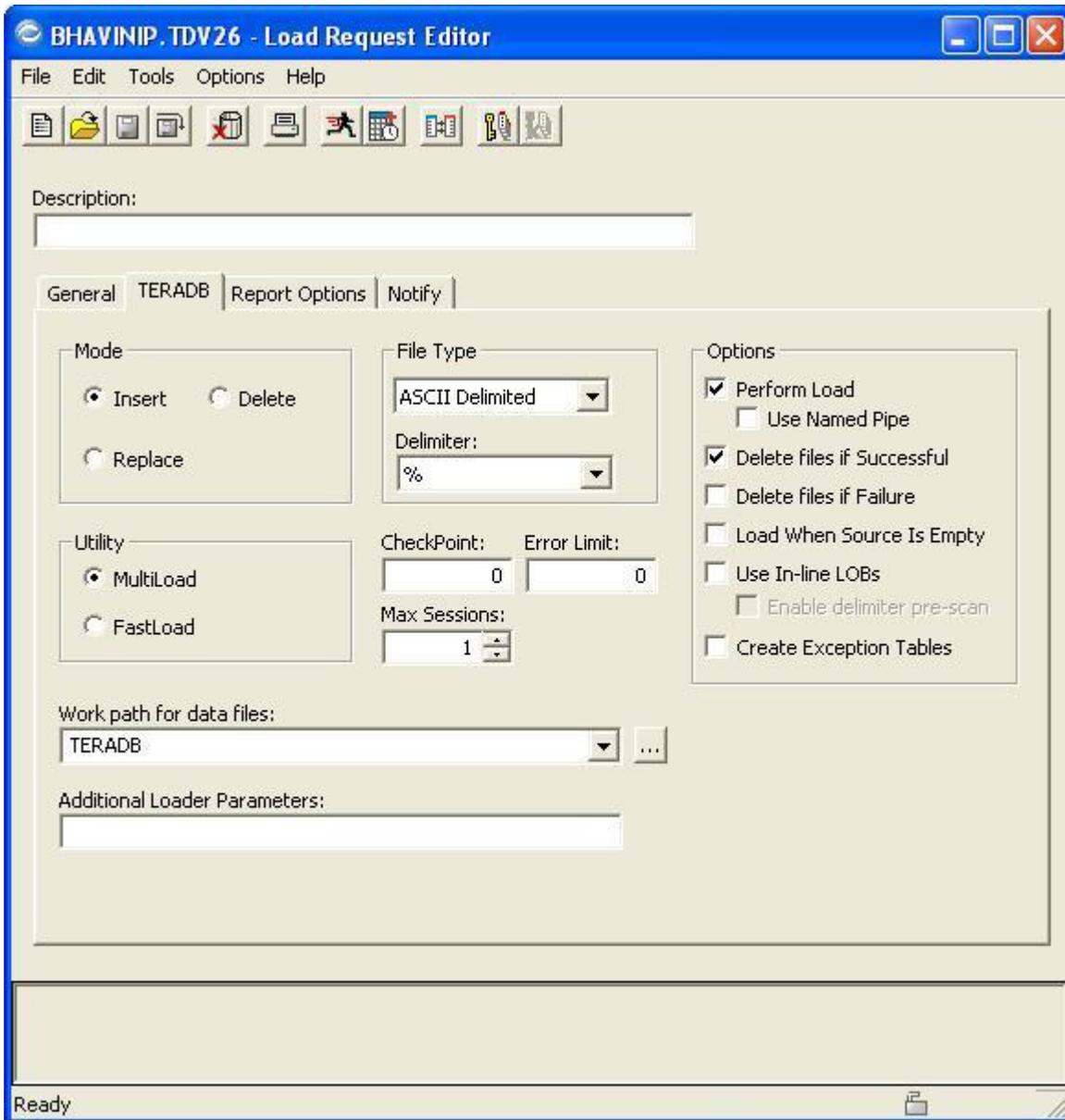
Optim supports the Teradata Loader for both FastLoad and MultiLoad. A DB2 DB Alias must exist before you create the Load Request. Use the **DB Alias** tab to define the parameters needed.

Load using Teradata Named Pipe

Load performance may be significantly improved by using the Teradata Named Pipe Access Module. When this option is used, the load process runs in a single phase rather than a 2-stage process, resulting in reduced elapsed time for load processing. As the row data is immediately loaded after conversion to a loader format, the space requirements are also significantly reduced, when compared to the 2-stage load process.

Optim writes the data to the named pipe, the Teradata Named Pipes Access Module reads and then copies the data, and the data is loaded. You have the option of writing the data to be loaded to a fallback file, in case you need to restart the load using native Teradata utilities outside of Optim. The fallback file has an extension of .fbf and is created in the %TEMP% or %WINDIR%\temp directory. Optim writes data to the fallback file according to the save interval that you set. After the load process completes, the fallback file is automatically deleted.

Use the **Load** tab in Personal Options to specify the Teradata Server, user ID, password, and path to the Loader. See Personal Options in the *Common Elements Manual*.



This panel has the following fields:

Mode

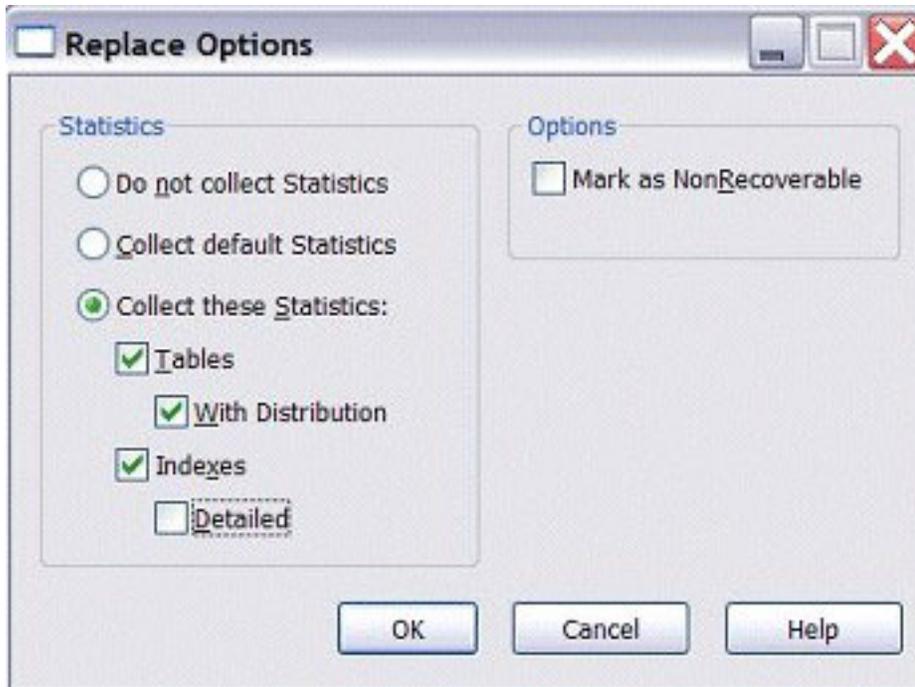
Insert Inserts rows from the Source File into empty destination tables. If destination tables contain data, the loader returns an error.

Replace

Clears and replaces all of the existing rows in the destination tables with the rows from the Source File.

Replace Options

Displays a dialog box with options for collecting statistics and for generating NONRECOVERABLE keyword. NONRECOVERABLE specifies that a load transaction is to be marked as non-recoverable, and that it will not be possible to recover it by a subsequent roll-forward operation. Refer to your loader documentation for details.



Use the Replace Options dialog to select:

Statistics

Do not collect Statistics

Select this check box if you do not want to collect statistics for this load process. Optim will generate a STATISTICS NO clause in the SQL for this load process. For additional information, refer to your Teradata documentation.

Collect default Statistics

Select this check box to add the STATISTICS USE PROFILE keyword to the SQL created for this load process. Refer to your loader documentation for details.

Collect these Statistics

Select this check box to collect statistics for tables or indexes:

Tables Select this check box to collect table statistics.

With Distribution

Collect table statistics with distribution.

Indexes

Select this check box to collect index statistics.

Detailed

Collect detailed index statistics.

Options

Mark as NonRecoverable

Select this check box to generate the NONRECOVERABLE keyword in the SQL created for this load process. NONRECOVERABLE specifies that a load transaction is to be marked as non-recoverable, and that it will not be possible to recover it by a subsequent roll-forward operation. Refer to your loader documentation for details.

File Type

ASCII For DB2 Linux, UNIX or Windows, use to import data into other DBRM instances or EEE sites.

ASCII Delimited

For DB2 Linux, UNIX or Windows, use to import data into other DBRM instances or EEE sites. If you select this file type, select a valid delimiter.

iSeries IXF

For iSeries, use to import data into an iSeries instance.

IXF For DB2 Linux, UNIX or Windows, use as the preferred import file type for expedient processing.

Teradata ASCII

For a Teradata loader, use to import data into a Teradata instance. This file type is valid for Teradata FastLoad and MultiLoad.

Teradata Delimited

For a Teradata loader, use to import data into a Teradata instance. If you select this file type, select a valid delimiter. This file type is valid for Teradata FastLoad and MultiLoad.

Delimiter

You can exclude the delimiter from being scanned in character data columns by Optim while generating the loader file. This can improve load performance. To exclude delimiters from scanning, select any of the following values from the Delimiter drop-down list:

X'01' (No Pre-scan)
X'02' (No Pre-scan)
X'03' (No Pre-scan)
X'04' (No Pre-scan)
X'05' (No Pre-scan)

Additional delimiters are supported which are scanned in character data columns by Optim while generating the loader file. Select any of the following values from the Delimiter drop-down list. Optim scans these values while generating the loader file:

X'FA'
X'FB'
X'FC'
X'FD'
X'FE'
X'FF'

Options

Perform Load

Select this check box to run the loader automatically after file conversion processing is complete. If you clear this check box, the Load Process prepares the data in the appropriate format and creates the BAT file to run the loader, but does not initiate the loader. To run the loader, edit the BAT file to include the proper password information and then run the BAT file.

Use Named Pipe

Select this check box to use the Teradata Named Pipe Access Module to load the data. The data to be loaded is written to the named pipe and then submitted to the loader. This option is only available when the DB2 LUW DB Alias references a Teradata database and file type is Teradata ASCII or Teradata ASCII Delimited.

Delete files if Successful

Select this check box to delete the data files after the loader completes successfully.

- If you select this check box, Fast Load Confirmation is unavailable.
- If you select Use Named Pipe, Delete files if Successful is unavailable.

Note: Fast Load Confirmation reduces processing time when you run a Load Request that has run before. See “Process a Load Request” on page 189 for detailed information.

Delete files if Failure

Select this check box to delete the data files if the loader does not complete successfully.

- If you select this check box, Fast Load Confirmation is unavailable.
- If you select use Named Pipe, Delete files if Failure is unavailable.

Load When Source Is Empty

Select this check box to perform the load if a table to be loaded contains no rows. If you do not select this check box, any table in the Extract File containing no rows will be skipped in the load phase. Using load with an empty source table deletes rows from the target table, resulting in a clean test environment.

To create a clean test environment:

- For an existing target table, use
 - **Load When Source Is Empty**
 - an empty source table
 - **Replace** mode
- For a newly created table, use
 - **Load When Source Is Empty**
 - an empty source table,
 - **Insert** mode

Load from remote client

This option is unavailable when loading to Teradata.

Save Interval:

Specify the interval for committing changes to the database or writing data to the fallback file:

- If you select the check box for Use Named Pipe, the value you choose for Save Interval controls the timing of writing data to the fallback file. Allowable values are: after a specified number of rows or after each table.
- If you do not select the check box for Use Named Pipe, the value you choose for Save Interval controls the timing of committing changes to the database. Allowable values are: after a specified number of rows or after each table.

Warning Limit:

Specify the number of rows, up to a maximum of 999999999, that the loader can discard during the Load Process. The process stops when the specified number of rows is discarded.

- To end the process if a single row is discarded, specify 1 as the maximum.
- To set no limit to the number of rows that can be discarded, specify zero (0) or leave blank.

Work path for interim files

Specify a default directory path for storing the temporary loader files.

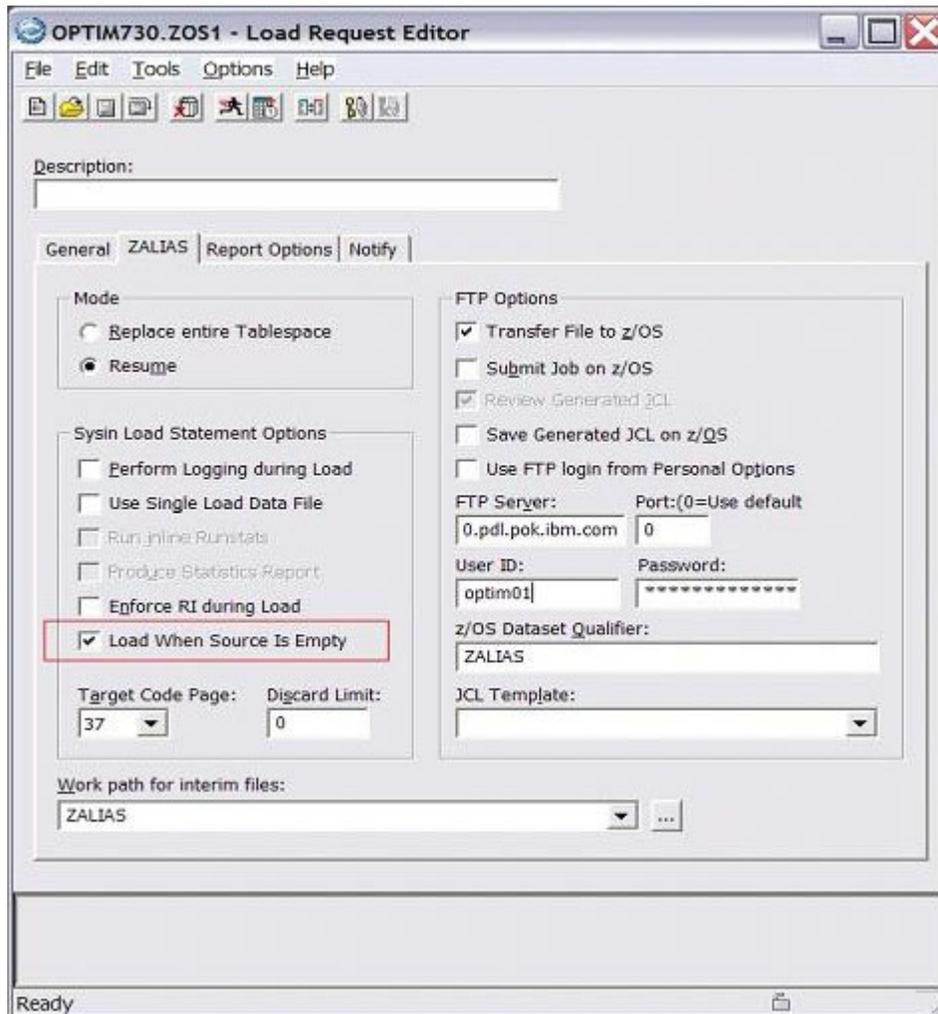
Additional Loader Parameters

You can augment the loader arguments created automatically by Optim with additional loader parameters, if necessary. The additional parameters you create are appended to the list created by Optim, but are not validated by Optim before starting the loader. Refer to Teradata documentation for valid operands. If additional loader parameters are forced from within Product Options, you cannot modify them. Refer to the *Installation and Configuration Guide*.

DB Alias Tab — z/OS

Optim can create load and SQL statement files to support the z/OS loader. Use the **DB Alias** tab in the Load Request Editor to define the specific parameters needed to create the files.

The **FTP Options** on the Load Request Editor allow you to automatically transfer the files to the z/OS FTP server and optionally run the loader.



Mode

Replace entire Tablespace

Select this check box to indicate that all rows in the table space should be deleted before the Load Process is performed.

Resume

Select this check box to indicate that existing rows in the table space should not be deleted when the Load Process is performed.

Sysin Load Statement Options

Perform Logging during Load

Indicates whether to perform logging during the load.

Use Single Load Data File

Indicator for grouping all tables to be converted into a single data file, instead of using an individual file for each table.

Note: You can only use a Single Load Data File when all the tables are to be loaded in the same tablespace.

Run inline Runstats

Invokes RUNSTATS to ensure that statistical data is accurately updated. RUNSTATS is invoked at the tablespace level and includes all tables and indexes in the tablespace.

Produce Statistics Report

Produce report of Runstats, when **Run inline Runstats** is selected.

Enforce RI during Load

Indicates whether data can be loaded into dependent tables without verification of RI constraints. Before the database can be used, RI enforcement determines that the load has not violated RI rules. For example, proper parents must exist for all rows inserted into a child table.

Load When Source Is Empty

Select this check box to perform the load if a table to be loaded contains no rows. If you do not select this check box, any tables in the Extract File containing no rows will be skipped in the load phase. Using load with an empty source table deletes rows from the target table, resulting in a clean test environment.

To create a clean test environment:

- For an existing target table, use
 - **Load When Source Is Empty**
 - an empty source table
 - **Replace entire Tablespace** mode
- For a newly created table, use
 - **Load When Source Is Empty**
 - an empty source table,
 - **Resume** mode

Target Code Page

Specify the target code page to use for proper character translation for the DB2 z/OS environment.

Discard Limit

Enter the number of rows up to 999999999, that the loader can discard during the Load Process. The process stops when the specified number of rows is discarded.

- To end the process if a single row is discarded, specify 1 as the maximum.
- To set no limit to the number of rows that can be discarded, specify zero (0) or leave blank.

FTP Options

Transfer File to z/OS

Indicator for transmitting files to the FTP server after successfully converting the row data. Select this check box to enable the remaining **FTP Options**.

Submit Job on z/OS

Indicator to submit the generated JCL to z/OS after Optim transmits the required files. The job number is provided in the Informational Messages of the Load Process Report.

Note: Optim does not return any output from the actual job. You can, however, determine the status of the job by signing onto z/OS and locating the job in the JES spool.

Review Generated JCL

Indicator to display the Viewing File dialog to review the generated JCL after the files have been transmitted to the z/OS machine but before the job is submitted.

Note: This option is available only when **Submit Job on zOS** is selected.

Save Generated JCL on z/OS

Indicator to save the JCL to z/OS, allowing you to run the job manually.

Use FTP login from Personal Options

Indicator to use FTP login information on the **Load** tab in Personal Options instead of the login information in the FTP Options.

FTP Server

Enter a TCP/IP address or z/OS FTP server name.

Port Enter the port used by Optim to open a connection. Enter 0 to use the default.

User ID

Enter a z/OS FTP server User ID.

Password

Enter the password for the z/OS FTP server User ID.

z/OS Dataset Qualifier

Enter the DSN qualifier(s). The dataset is prefixed with the User ID and the qualifier(s). Use a single quote as the first character to indicate that all datasets transmitted to z/OS are fully qualified and will not be prefixed with the User ID.

The total length of the dataset name cannot exceed 44 characters. The last two qualifiers of the dataset require up to 12 characters (the first 8 characters of the Extract File name and 4 characters for a unique generated file number). For example, 'userID.qualifier.FileName.X001.'

JCL Template

Enter the name of the file used to construct the generated JCL submitted to z/OS.

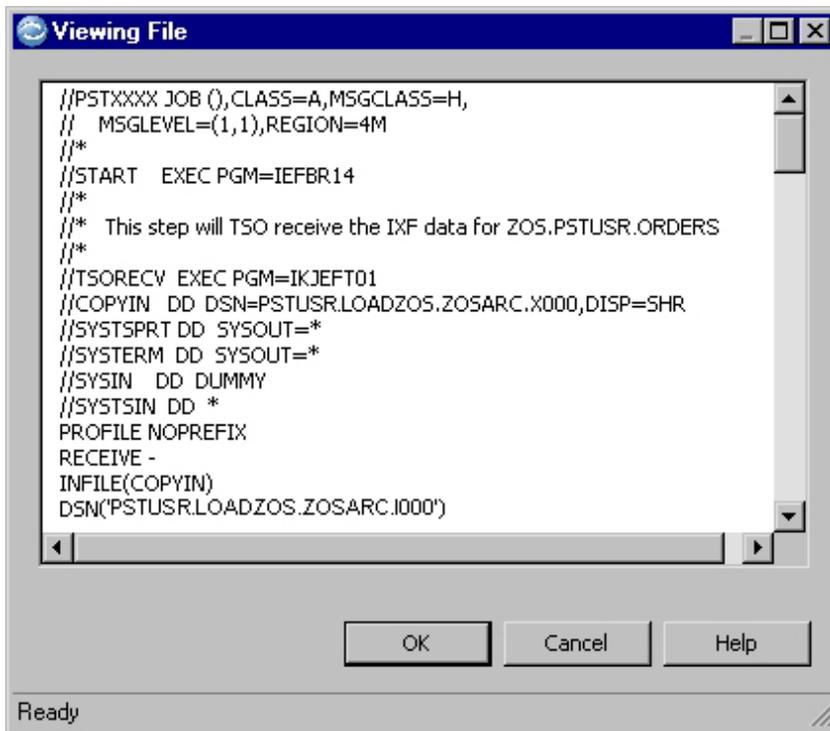
A template file, LOADDB2.JCL, is distributed with Optim in the RT/Samples/JCL directory. It is recommended that you copy this file to your default data directory and modify the JCL to meet the requirements at your site.

Work path for interim files

Specify a directory path for storing the temporary loader files on your workstation or network server.

Viewing File

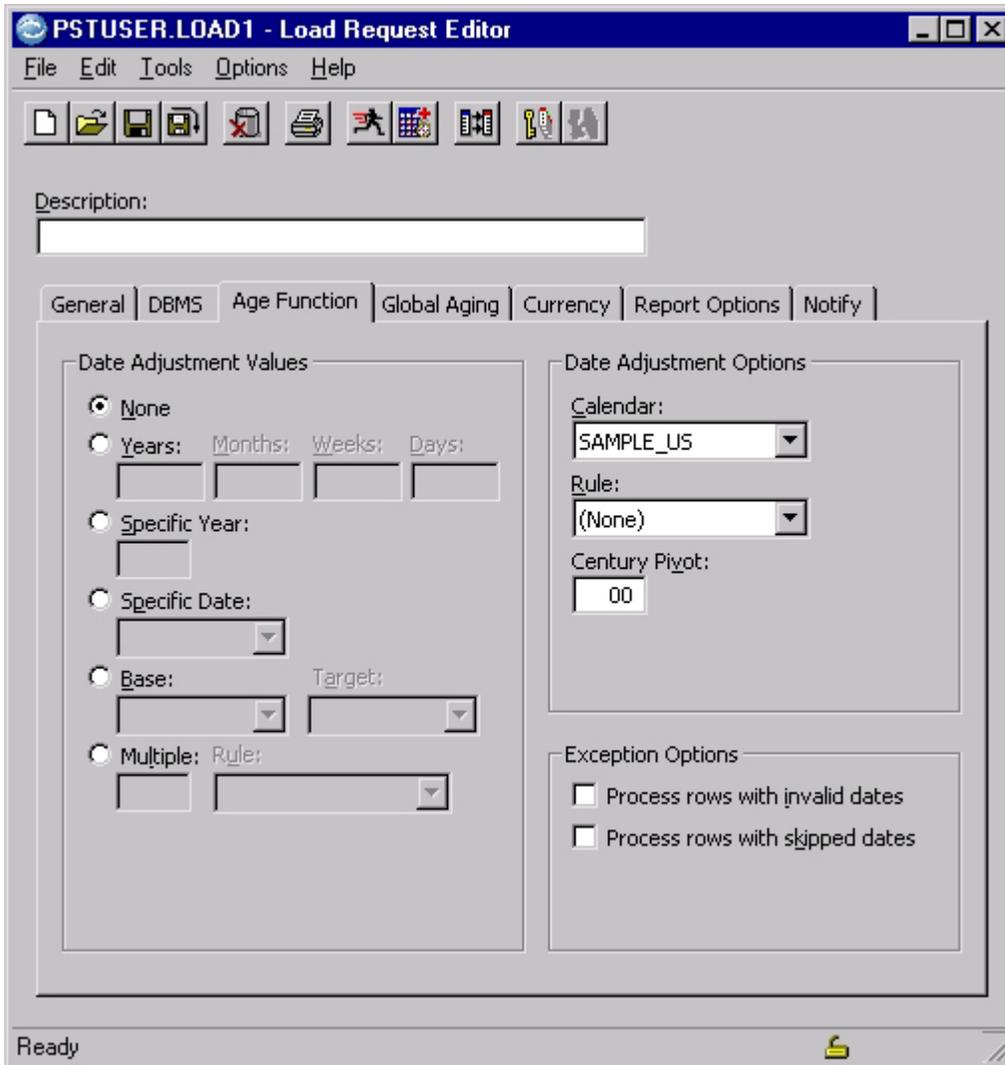
The Viewing File dialog displays the generated JCL for review. Click **OK** to submit the job. If you click **Cancel**, the job is not submitted; however, the transmitted files remain on the z/OS machine, and you can run the job manually.



Age Function Tab

Use the **Age Function** tab to specify parameters for aging data when using the Age function in a Column Map.

These values are applied to columns for which you specify the Age function as **AGE(DEF)** or **AGE(RU=DEF)**. These values are also used to complete the specifications for date adjustment values in columns defined with the Age function when the specifications are incomplete.



Date Adjustment Values

None Specifies that an aging increment is not used.

Years, Months, Weeks, Days

Adjusts dates incrementally by a specified number of years, months, weeks, and/or days. Use a minus (-) sign to decrement the date. The plus (+) sign is not required to increment the date.

Years Number of years (-2500 to +1581) to adjust the date.

Months

Number of months (-30000 to +30000) to adjust the date.

Weeks Number of weeks (-30000 to +30000) to adjust the date.

Days Number of days (-99999 to +99999) to adjust the date.

Specific Year

Adjusts the date to a specific four-digit year (1582 to 3999).

Specific Date

Adjusts the date to a specific date. To select a date from a perpetual calendar, click on the down arrow. Click the arrow buttons to set the month and year. Click on a day to set the day of the month.

Note: If you do not specify a date, the system (current) date displays. The date format is based on the Regional Settings on the Control Panel of your computer.

Base/Target

Adjusts the date incrementally by a calculated aging amount. The aging amount is the number of days between the **Base** date and the **Target** date. To select a base or target date from a perpetual calendar, click on the down arrow. Click the arrow buttons to set the month and year. Click on a day to set the day of the month.

Base Specify an explicit start date for calculating the aging amount.

Target Specify an explicit end date for calculating the aging amount.

Multiple/Rule

Adjusts the date by applying the specified date aging rule the specified number of times. For example, if the rule is defined as NEXTPAYDAY and you specify 4 as the multiple, the date is adjusted from the source date to the fourth NEXTPAYDAY.

Multiple

Number of times (1 to 30000) to apply the specified rule for date aging.

Rule Name of the rule to use.

Date Adjustment Options

Calendar

Enter the name of the calendar to use by default. To select from a list of available calendars, click the down arrow.

Rule Enter the name of the rule to use by default. To select from a list of available rules, click the down arrow.

Note: Define calendars and rules by clicking **Utilities > Calendar**. For details on defining calendars and rules, see the *Common Elements Manual*.

Century Pivot

Enter the value to use to determine the appropriate century when a date value is defined with a two-digit year. If you do not specify a value, 65 is used by default. For example, if you specify 55 as the Century Pivot, then:

- All two-digit years equal to or greater than 55 are assumed to be in the 20th century.
- All two-digit years less than 55 are assumed to be in the 21st century.

Exception Options

Select the following exception options to handle special date values when aging data. Rather than treat these dates as errors, the dates are moved directly from the source to the destination if the column attributes are identical.

- **Process rows with invalid dates** — If you select this check box, rows with columns that contain invalid dates are processed and the results are written to the destination. If you clear the check box, the rows are discarded and are noted in the Control File.
- **Process Rows with skipped dates** — If you select this check box, rows with columns formatted as skipped dates are processed and the results are written to the destination. If you clear the check box, the rows are discarded and are noted in the Control File.

At times, special values called skipped dates are used to indicate special handling or unique conditions. To determine whether or not to skip a date, the date aging function evaluates each date for the following:

- If a date column contains all spaces, hexadecimal zeros (low values), or hexadecimal 'FF' (high values), the date is skipped.

- If a date column contains a skipped date value, the value is parsed based on the specified date format or exit routine.

The date aging function recognizes the following as skipped dates:

Date Format	Skipped Date Value	Date Format	Skipped Date Value
Y/M/D	1999/99/99	Y/M	1999/999
	9999/99/99		9999/999
	9999/12/31		1900/0
	1900/0/0		2000/0
	2000/0/0		0/0
	0/0/0		Y
	1/1/1	0	
Y/J	1999/999	M/D	99/99
	9999/999		0/0
	1900/0	M	99
	2000/0/0		0/0
	0/0		D
		0/0	

This list is intended to be as comprehensive as possible. If you require additional skipped dates, contact Technical Support.

Global Aging Tab

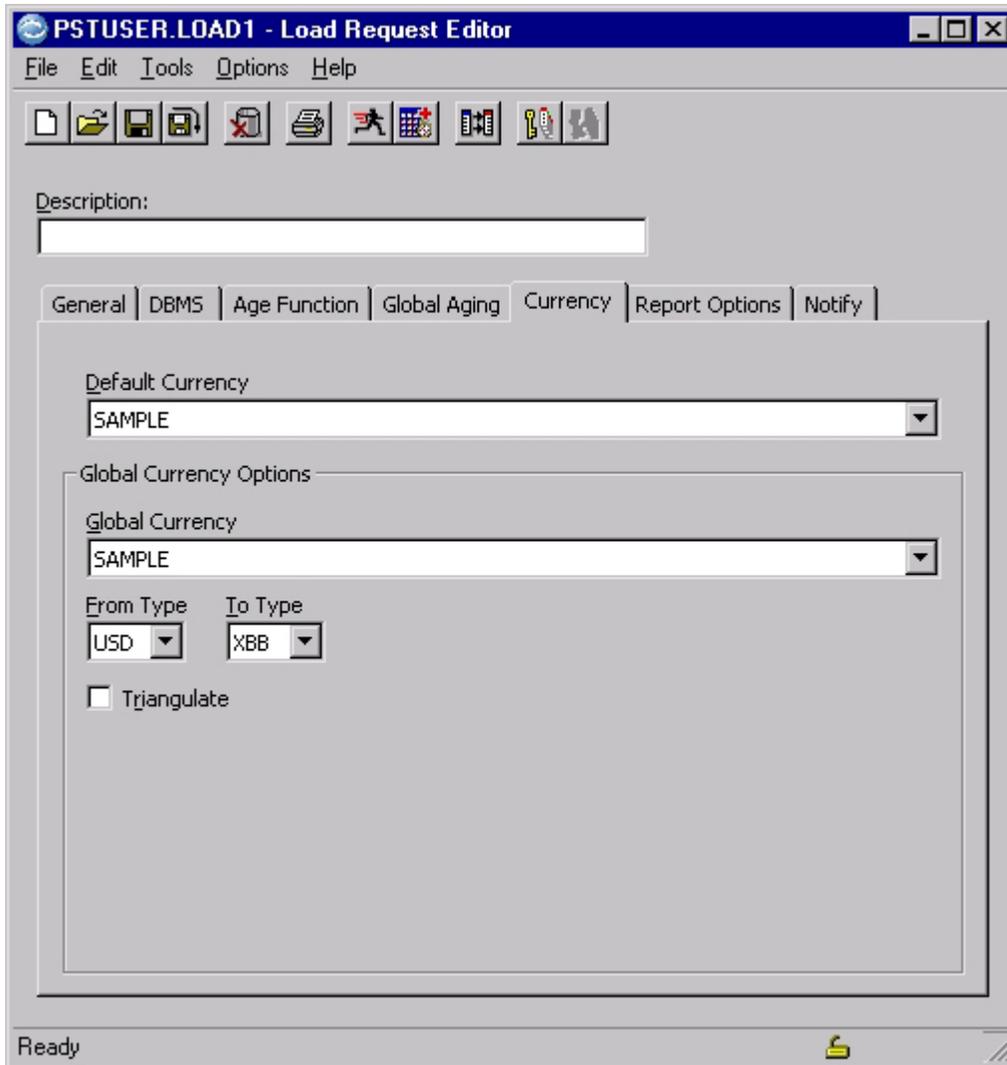
Use the **Global Aging** tab to specify parameters for aging data in columns defined with a native date data type. Global Aging parameters apply to all date columns not specifically defined by an Age function in a Column Map.

Note: The parameters shown on the **Global Aging** tab are the same as those shown on the **Age Function** tab. For information about each parameter, see “Age Function Tab” on page 183.

Currency Tab

Use the **Currency** tab to specify the default Currency Table to use when the Currency function is defined in a Column Map.

Specify global parameters for currency conversions in columns that have a native currency data type.



Default Currency

Specify the Currency Table to use when the Currency function is specified in a Column Map.

Global Currency Options

Global Currency Definition

Specify the default Currency Table to use for currency conversions in columns that have a native currency data type.

From Type To Type

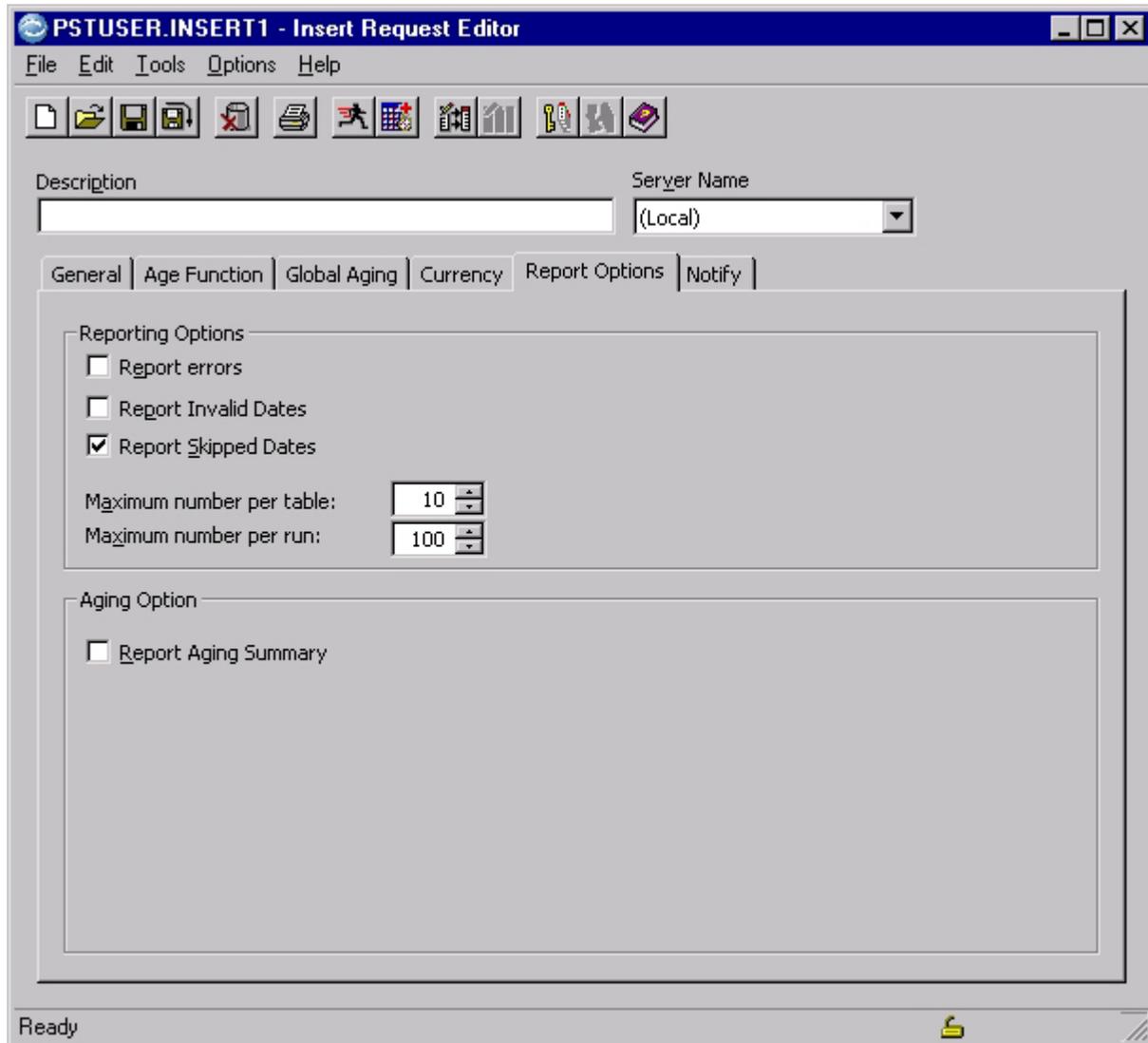
Enter specific currency types for the source and destination currency when converting currency values in columns that have a native currency data type.

Triangulate

Select this check box to convert the specified source currency to the euro dollar, then convert the euro dollar value to the specified destination currency.

Report Options Tab

Use the **Report Options** tab to specify what information you want included in the Load Process Report.



Reporting Options

Report errors

Select this check box to include a list of errors in the Load Process Report.

Report Invalid Dates

Select this check box to include rows with invalid dates in the Load Process Report when you select the corresponding Exception Option on the **Age Function** or **Global Aging** tab.

Report Skipped Dates

Select this check box to include rows with skipped dates in the Load Process Report when you select the corresponding Exception Option on the **Age Function** or **Global Aging** tab.

Maximum number per table

Specify the maximum number of errors per table to include in the Load Process Report.

Maximum number per run

Specify the maximum number of errors per run to include in the Load Process Report.

Aging Option

Report Aging Summary

Select this check box to include a summary of aging parameters in the Load Process Report. A report that includes the Aging Summary can be printed in landscape mode only.

Notify Tab

Use the **Notify** tab to specify options and addresses for automatic e-mail notification of the success or failure of the process. The process report generated when the process completes is automatically sent as an attachment.

Process a Load Request

You can process a Load Request at any time, but if you create a new Load Request and want to reuse it, you must save the request.

You can either run a Load Request immediately or schedule it to run at some later time.

Note: Depending on how Optim is configured at your site, you may encounter a logon prompt during processing. See the *Common Elements Manual* for information about the DB Alias Connection Logon dialog and Optim Directory Connection Logon dialog.

Schedule a Load Request

To schedule a Load Process to run once or repeatedly at a specified future time, save the Load Request, and then click **File > Schedule**.

- Processing is initiated at the scheduled time; you do not review the process as it is performed.
- If warning conditions exist, processing continues without prompting, depending on the **Stop on Error** parameter you specified on the **Steps** tab of the Scheduling Job dialog.
- During processing, if an error occurs, processing stops.

For details on scheduling, see the *Common Elements Manual*.

Run a Load Request

To process a Load Request immediately, click **File > Run**. It is not necessary to save the Load Request before it is run.

- Before processing begins, the request is verified. If warning conditions exist, you can review the details in the Warnings dialog and choose to continue or cancel processing.
- During processing, if an error occurs, processing stops.

A progress dialog and status messages provide information while the request is processing. When processing completes, or stops because of an error, you can review the details in the Process Report. You can also browse the Control File to review process details.

Fast Load Confirmation

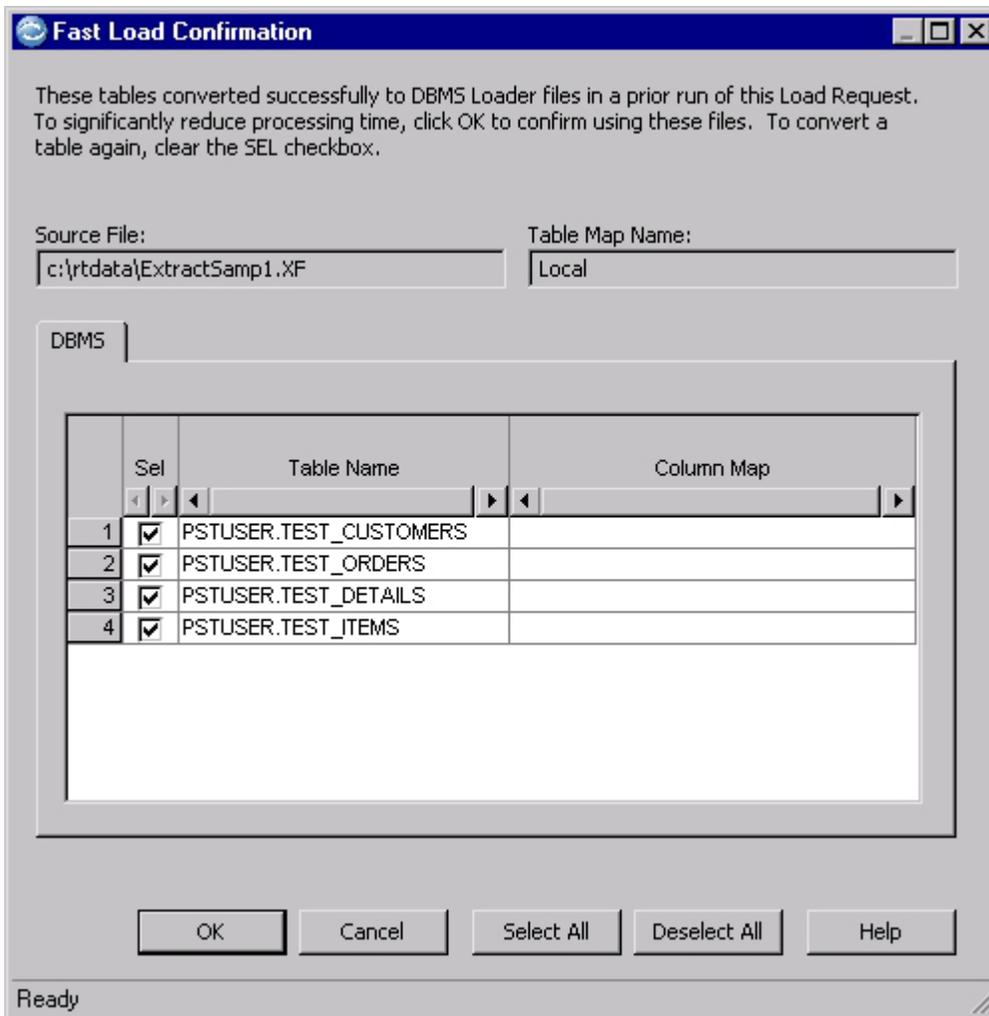
Fast Load significantly reduces processing time when you run a Load Request that has run before. When you run the Load Request again, the Fast Load Confirmation dialog displays if these conditions are met:

- The names of the Load Request, Source File, and Table Map (named or local) that originally generated the DBMS loader files are the same.
- The content of the Source File has not changed since it was used to generate the DBMS loader files.
- Any Column Maps are still assigned to the same tables.
- All DBMS loader files for each table are located on the same drive and directory as when the files were generated.

If the Load Request, Source File, and Table Map names have changed, or the content of the Source File has changed, Optim cannot perform Fast Load for any table in the Load Request, and the Fast Load Confirmation dialog is not displayed.

If a Column Map name or the drive and directory for the DBMS loader files for a given table change, Optim cannot perform Fast Load for the table, and the table does not appear in the Fast Load Confirmation dialog.

Note: If you select **Delete files if successful** or **Delete files if failure** on the **DBMS** tab in the Load Request Editor, Fast Load is not available.



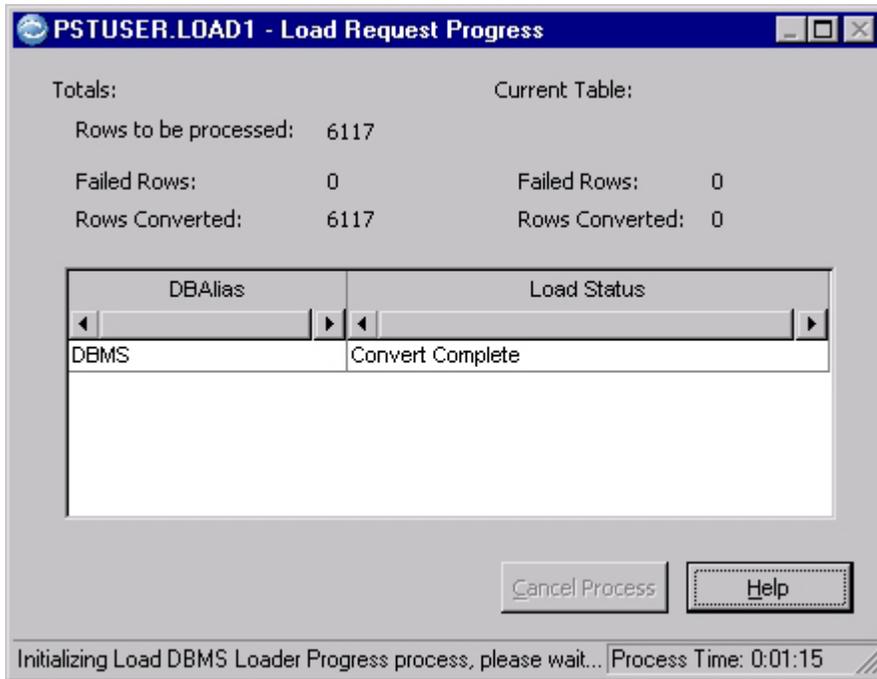
The Fast Load Confirmation dialog displays the Source file name, Table Map name or Local, and a list of the converted tables. If tables are included from more than one DB Alias, a separate tab is displayed for each DB Alias.

Use the Fast Load Confirmation dialog to review the list of converted tables. To reuse all DBMS loader files for the tables listed, click **OK**. To create new DBMS loader files for any table, clear the check box for the table and click **OK**. Click **Cancel** to stop processing and return to the Load Request Editor.

Note: You can right-click in the grid and select commands from the shortcut menu to select or deselect all tables for the corresponding DB Alias. You can also use the **Select All** or **Deselect All** buttons to select or deselect all tables for all DB Alias tabs.

Load Request Progress Dialog

When the Load Process begins, the Load Request Progress dialog will display status information about the Load Process.



Totals

Rows to be processed

Total number of rows in the Source File to be loaded.

Failed Rows

Total number of rows that could not be converted and were discarded.

Rows Converted

Total number of rows that were converted.

The totals in the Load Request Progress dialog are revised after a number of rows (specified on the **Actions** tab in Personal Options) are loaded for each table, and when the load for one table completes and the process begins for the next table. (See the *Common Elements Manual* for more information.)

Current Table

Failed Rows

Number of rows from the current table that could not be converted and were discarded.

Rows Converted

Number of rows from the current table that were converted.

Grid Details

DB Alias

Lists DB Aliases corresponding to tables to be loaded.

[Convert or Load] Status

Indicates the status of the process for each database involved in the load process. Processing proceeds through the following steps:

- Convert in Progress
- Convert Complete
- Validating Table Map
- Now Processing: *creatorid.tablename*
- Complete

Command Button

Cancel Process

To stop processing during conversion, click **Cancel Process**. A confirmation dialog opens. Click **Yes** to stop processing and return to the Load Request Editor, or click **No** to continue processing. You cannot cancel processing during loading.

Status Bar

Describes the action being performed and indicates the name of the table being processed, as applicable.

Process Time

Lists the elapsed process time for the Load Process.

Cascading Delete/Update Confirmation

Optim performs a cascading delete/update check during processing of a Load Request, and displays the Cascading Delete/Update Confirmation dialog if the conditions described in this topic are true.

- The **Warn on Cascade Delete/Update** option in either Product or Personal Options must be set to **Runtime** or **Always**. (See the *Installation and Configuration Guide* and the *Common Elements Manual*.)
- The Replace mode (or Truncate mode for Oracle) and the Perform Load option must be selected on the **DB Alias** tab of the Load Request Editor.
- The cascade delete or update must affect at least one table that is not explicitly included in the Load Process.

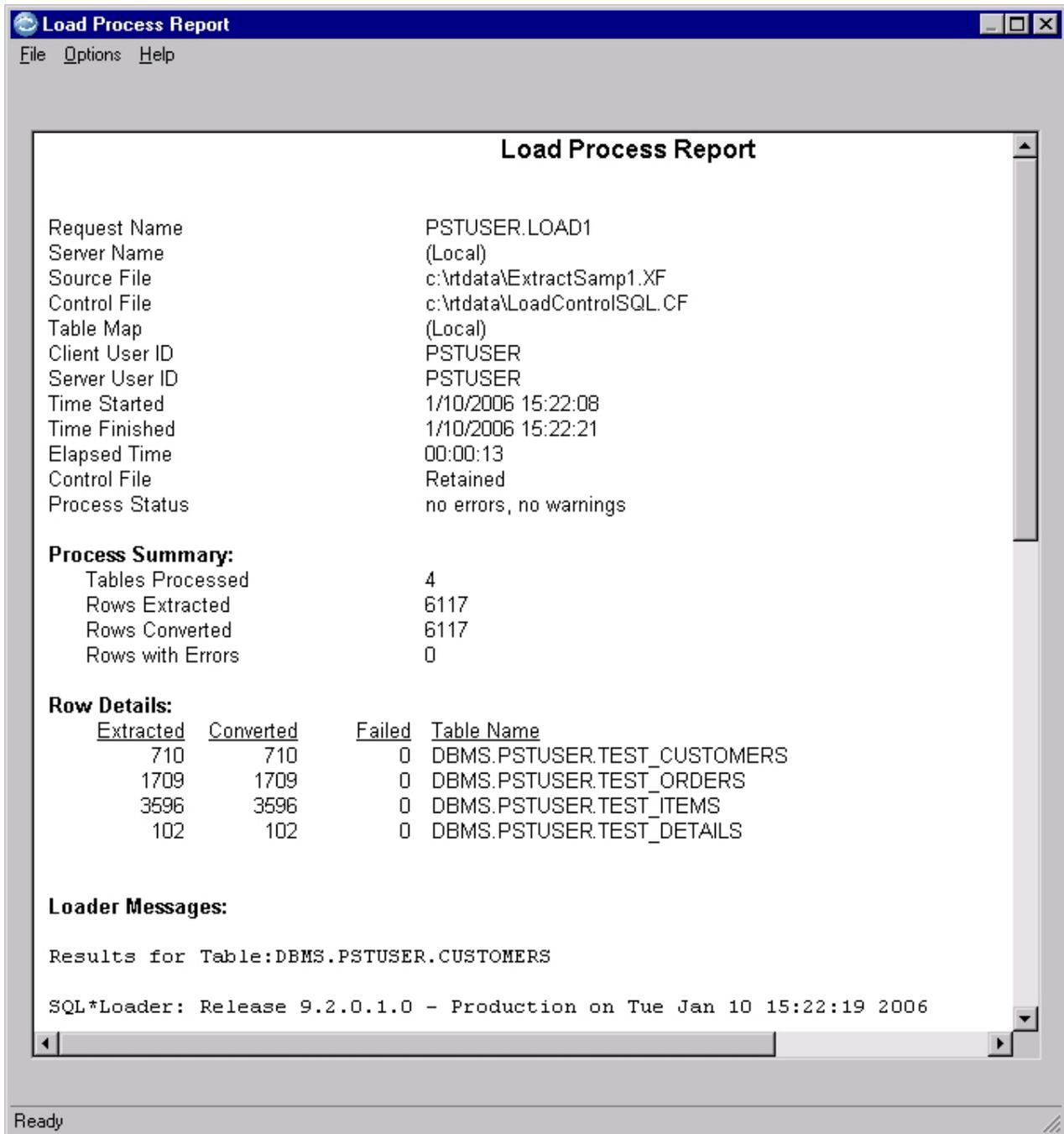
Click **OK** to continue processing the Load Request, or click **Cancel** to stop processing and return to the Load Request Editor.

For details on the Cascading Delete/Update Confirmation dialog, see the *Common Elements Manual*.

Load Process Report

The Load Process generates a Load Process Report that provides general information and statistics about the Load Process.

Here is an example of the Load Process Report.



The Load Process Report displays the following information:

- Name of the Load Request (or “Untitled” if not saved).
- Name of the Server or Local, for client workstation.
- Directory path and name of the Source File used as input to the process.
- Directory path and name of the Control File specified in the Load Request.
- Name of the Table Map or LOCAL, as specified in the Load Request.
- User IDs of the user requesting the Load Process.
- Date and time the process started.
- Date and time the process finished.

- Elapsed time for the Load Process to complete.
- The status of the Load Process.

Note: The Time Started, Time Finished, and Elapsed Time refer to the conversion phase of the process only.

Errors

If any errors or warnings occur during processing, a list of the errors or warnings is provided. Review the list of errors that caused processing to stop. For example, an internal error condition exists when the process exceeds the discard row limit or if you are not authorized to access a particular database table.

Load Process Informational Messages

Informational messages are displayed in the Load Process Report if you specified FTP options on the **DB Alias** tab for the MVS S390 loader. Each message includes the name of the dataset transmitted to the S390, whether the dataset was transmitted successfully, and the table(s) for which the dataset was transmitted. For example:

'PSTDJH.LOAD02.fulldemo.X001' was successfully sent to FTP Server S390QA for table PSTDSNY.PSTDJH.CUSTOMERS.

The last qualifier of the transmitted dataset indicates the type of dataset:

- .Xnnn** A file in TSO Transmit/Receive format.
- .Snnn** A file containing the Load SQL statement to load the table.
- .Innn** A file in DB2 IXF format, received by the TSO Receive command.
- .JCL** A file containing the JCL to submit to the S390. The JCL receives, loads, and deletes the transmitted datasets. This message also indicates the job number.

Process Summary

Statistics are provided for data preparing to load:

- Total number of Tables Processed.
- Total number of Rows Extracted.
- Total number of Rows Converted.
- Total number of Rows with Errors.

Row Details

Information is provided for each table:

- Number of extracted rows.
- Number of converted rows.
- Number of failed rows.
- List of tables used in the Load Process. The tables are listed in the same order as in the Source File. If a table was selected on the Fast Load Confirmation dialog, the table name is underscored.

Save the Report

To save the report to a file, click **File > Save As** to open the Windows Save dialog.

Print the Report

To print the report, click **File > Print** to open the Windows Print dialog.

Redisplay the Report

If you close the report and want to refer to it again, click **File > Redisplay Results**, and then click **Current** to redisplay the report from the last Load Process run, or click **All** to display a list of all retained Load Process reports. For details about retaining process reports, see the *Common Elements Manual*.

Appendix. Command Line Interface

Optim provides a command line interface that allows you to run an Extract, Insert, Load, or Convert Process, run one or more processes from a file, or run a scheduled job, without opening the graphical user interface.

The command line interface can be run from the command line, or automatically—in a batch file, or from another program.

Command Line Tasks

Use the command line interface to:

- Browse an Extract or Control File.
- Run an Extract, Insert, Load, or Convert Process.
- Run a scheduled job that includes several action requests.
- Run multiple processes from a file.
- Override original specifications for a process.
- Restart or retry an Insert Process.

The following sections explain and describe how to perform each type of task. Process return codes are listed in the last section of this chapter.

Guidelines

The typical command begins with `PR0CMND` followed by command-line keywords and associated arguments. The following guidelines apply:

- Command-line keywords can be specified in any order, separated by one or more spaces without commas.
- Keywords can be specified in mixed case. (Most keywords are shown in this chapter using bold and uppercase for emphasis.)
- Command-line keywords and associated arguments must be separated with an equal sign (=) or a colon (:).
- An override keyword must be separated from the associated argument with a blank space.
- The first operation argument must be prefixed by a forward slash (/) or dash (-).
- A command-line keyword may be prefixed by a forward slash (/) or a dash (-). Example: `PST`, `/PST`, and `-PST` are equal keywords.
- An argument associated with a command-line keyword that includes spaces must be enclosed in single or double quotes.
- Use double quotes to enclose a command-line keyword argument that includes a macro.
- You can include all keywords and arguments in a parameter file and then specify the parameter file on the command line.
- In a parameter file, command-line keywords corresponding to a process request can be entered on one or multiple lines. You can include several process requests in the file; each must begin with the `TYPE` parameter.
- Use override keywords and arguments to override specifications in a process request.
- When overrides are specified for a process defined in a parameter file, the `OV` keyword must follow other command-line keywords and precede the override parameters. The first override keyword and

associated argument must begin on the following line, and each additional override must be on a separate line. The override keyword END must follow the last override, and must also be on a separate line.

- If you use a keyword that is inappropriate for the type of processing requested, a fatal conflicting-parameter error may result.
- The following relational operator symbols and mnemonics are acceptable for use in selection criteria overrides: =, <, >, <=, >=, !=, !<, !>, <>, ^=, ^<, ^>, EQ, NE, LT, GT, LE, GE, BETWEEN, LIKE, IN, IS, NOT, NULL.
- Comments in a parameter or override file must begin on a separate line and start with two forward slashes (//).

Syntax Conventions

The syntax conventions used to describe these statements are:

KEYWORD

Keywords are shown in uppercase for emphasis, but can be specified in lower or mixed case.

text Variable text is shown in lowercase italics.

() Statement delimiter to group a series of qualifiers for a parameter.

[] Indicates an optional parameter.

{ } Indicates a choice of two or more settings from which only one must be selected.

| Separates options.

Extract, Insert, Load, and Convert Process Syntax

Use the following syntax for command line processing:

General

PROCMD /R

```
{ JOB=jobname | @parameterfilename
  TYPE=requesttype REQUEST= identifier.name
  [ OUTPUT=filename ] [ QUIET{ + | - } ] [ MONITOR{ + | - } ]
  [ STOP={ N | I | W | F } ] [ SERVER=servername ]
  [ PST=pstdirectory] [ OV={ overridefilename | * } ] }
```

Note: The argument for the **OV** keyword must be a text file name (**OV=overridefilename**) when used on the command line. If command-line parameters are defined in a parameter file, the **OV** keyword can be a text file name, or an asterisk to indicate the parameters follow (**OV=***). See "Override Keywords" on page 202 for additional information.

Overrides - Extract Process

```
[ ADNAME identifier.adname ]
[ DEFQUAL dbalias.creatorid ]
[ PNSFILE pnsfilename.pns ]
[ ROWLIMIT n ]
[ SEL [ [ dbalias. ]cid. ]tablename columnname operator value ]
[ SQL [ [ dbalias. ]cid. ]tablename sqlwhereclause ]
[ TABEVERYTH [ [ dbalias. ]cid. ]tablename value ]
[ TABROWLIM [ [ dbalias. ]cid. ]tablename value ]
[ STARTTAB [ [ dbalias. ]cid. ]tablename ]
[ VAR variablename value ]
[ XFFILE xffile.xf ]
```

Overrides - Insert Process

```
[ XFFILE xffile.xf ]
[ CFFILE cffile.cf ]
[ TMNAME identifier.tablemapname ]
[ COMMFREQ n ]
[ PROCTYPE { INS | UPDINS } ]
[ LOCKTABS { Y | N } ]
[ DISROWLIM n ]
[ COLMAPID identifier ]
[ COLMAP [ [ dbalias. ]cid. ]tablename [ identifier. ]colmap ]
[ DESTQUAL dbalias.creatorid ]
[ DESTTABNAME srctabname [ [ dbalias. ]cid. ]desttablename]
```

Overrides - Load Process

```
[ XFFILE xffile.xf ]
[ CFFILE cffile.cf ]
[ TMNAME identifier.tablemapname ]
[ COLMAPID identifier ]
[ COLMAP [ [ dbalias. ]cid. ]tablename [ identifier. ]colmap ]
[ DESTQUAL dbalias.creatorid ]
[ DESTTABNAME srctabname [ [ dbalias. ]cid. ]desttablename]
[ MODE dbalias mode ]
[ PERFLOWLOAD dbalias { Y | N } ]
[ DELONSUCCESS dbalias { Y | N } ]
[ DELONFAILURE dbalias { Y | N } ]
[ WORKPATH dbalias path ]
[ SERVPATH dbalias path ]
```

```
[DESTDELIMITER dbalias X'FF']
[SOURCEEMPTY dbalias { Y | N } ]
[TRIGMODE dbalias { NEVER | ALWAYS | PROMPT } ]
[CONSMODE dbalias { NEVER | ALWAYS | PROMPT } ]
[COMMITFREQ dbalias n
```

Overrides - Convert Process

```
[ SRCXFFILE xffile.xf ]
[ DSTXFFILE xffile.xf ]
[ CFFILE cffile.cf ]
[ TMNAME identifier.tablemapname ]
[ DISROWLIM n ]
[ COLMAPID identifier ]
[ COLMAP [ [ dbalias. ]cid. ]tablename [ identifier. ]colmap ]
[ DESTQUAL dbalias.creatorid ]
[ DESTTABNAME srctabname [ [ dbalias. ]cid. ]desttablename]
```

Extract, Insert, Load, and Convert Process Command-line Keywords

This topic discusses Extract, Insert, Load, and Convert Process command-line keywords.

General

PROCMND

Type PROCMND to initiate command-line processing. Note: the character following PR is the number 0 (zero).

/R Command to run the specified job, process(es) specified in a parameter file, or process specified on the command line. Specify **/R** or **-R**.

JOB Use the JOB keyword to run a scheduled job from the command line. A scheduled job can include one or more action requests and corresponding overrides. Use the Scheduling Editor to define the parameters for a scheduled job.

Note: See the *Common Elements Manual* section on the Scheduling Editor for additional information.

jobname

Name or description of the job (30 character maximum).

@parameterfilename

Specify @ followed by the fully qualified path and name of a text file containing the parameters for the process(es) to be run.

parameters

Specify parameters for the process on the command line.

Parameters

Use the following parameters, whether in a parameter file or specified on the command line, as needed:

TYPE=

Specify the type of process request. Specify TYPE= and one of the following:

requesttype

The type of process request: **Extract**, **Insert**, **Load**, or **Convert**.

REQUEST=

Name of the action request (*identifier.name*).

identifier.name

The qualifier and name of the Extract, Insert, Load, or Convert Request.

OUTPUT=

Name of the output file for the process report. Specify **OUTPUT=** followed by a file name. To append the report to an existing file, place a plus sign (+) after the file name.

- If you do not use this keyword, the report displays automatically after each process completes. You must close the report dialog before the next process can begin.
- If you do not specify a full directory path, the file is saved in your default Data Directory (specified in Personal Options).
- For a UNIX or Linux environment, if this keyword and value are not specified, the output is displayed to the console.

Note: The **OUTPUT** file is used for all processes in a parameter file. If you use the keyword more than once, the last file specified is used.

filename

The output file name.

QUIET

Indicator for prompts or error dialogs during a process. Specify **QUIET** directly followed by a plus (+) or minus (-) sign. (Do not insert a space.)

The **QUIET** indicator applies to all process requests in a parameter file. If you use the keyword more than once, the last specification is used.

Note: For a UNIX or Linux environment, the **QUIET** keyword is ignored, because prompts and error dialogs are unavailable.

- + Do not display prompts or error dialogs (default).
- Display prompts and error dialogs. (Invoke privilege is required to run a process that requires the display of editor interfaces. For example, Invoke Create privilege is required to run an Insert or Load Process that requires creating destination database tables.)

MONITOR

Indicator for the display of the Progress dialog during a process. Specify **MONITOR** directly followed by a plus (+) or minus (-) sign. (Do not insert a space.)

The **MONITOR** indicator applies to all process requests in a parameter file. If you use the keyword more than once, the last specification is used.

Note: For a UNIX or Linux environment, the **MONITOR** keyword is ignored, because the Progress dialog is unavailable.

- + Display the Progress dialog.
- Do not display the Progress dialog (default).

RST For a load process only, produces a Resource Estimation Report showing calculated amount of storage needed to load each object in the Load Request. Specify **RST** directly followed by a plus (+) or minus (-) sign. (Do not insert a space.) For information on the Resource Estimation Report, see “Resource Estimation” on page 139. The **RST** indicator applies to all load process requests in a parameter file. If you use the keyword more than once, the last specification is used.

- + Create a Resource Estimation Report.
- Do not create a Resource Estimation Report (default).

STOP=

Error processing indicator. Specify **STOP=** followed by the type of error. The **STOP** keyword can be used only in a parameter file, not on the command line. The error code is applied immediately *after* a process runs, before the next process, if any, begins.

Note: The **STOP** keyword does not apply to scheduled jobs, and if specified, is ignored.

N (None)

Continue processing, regardless of errors (default).

I (Information)

Stop processing if an informational, warning, or fatal error occurs (return code of 4 or greater).

W (Warning)

Stop processing if a warning or fatal error occurs (return code of 8 or greater).

F (Fatal)

Stop processing if a fatal error occurs (return code 12).

SERVER=

Override for the server on which to process the specified job, all request(s) specified in a parameter file, or a request specified on the command line. A value assigned to the **SERVER** command-line keyword overrides any server specification in the action request(s). This keyword cannot be used unless the Optim Server option is installed.

servername

Name of the Optim Server on which the job is processed.

PST= Specify the Optim Directory for the action request(s). If you do not use this keyword, the current (default) Optim Directory is used.

pstdirectory

Name of the Optim Directory for the request.

OV= Indicates that process overrides are specified. The argument for the **OV** command-line keyword can be a text file name (**OV=overridefilename**) or, when the process is defined in a parameter file, an asterisk (**OV=***). When the **OV** keyword is used in a parameter file, the asterisk is used to indicate that override parameters follow on successive lines.

overridefilename

Specify the name of the text file containing the process override arguments.

- * Specify that the process overrides are defined in the successive lines of the parameter file.

Override Keywords

Process overrides allow you to modify certain parameters when running one or more processes from the command line.

The following guidelines apply:

- You can specify process overrides in an override file, or as part of a parameter file.
- An override file includes only the overrides, each on a separate line.
- When overrides are specified for a process defined in a parameter file, the command-line keyword indicating that overrides are used (**OV**) must follow other command-line keywords and precede the override parameters.
- In a parameter file, the argument for the **OV** command-line keyword can be a text file name (**OV=overridefilename**) or an asterisk (**OV=***). An asterisk indicates that override parameters follow. The first override (keyword and associated argument) must begin on the following line, and each additional override must be on a separate line.
- The keyword **END** must be on a separate line following the last override when overrides are specified in a parameter file using **OV=***.

Override Keywords: Convert Process

This topic lists the override parameters available for a Convert Process.

SRCXFFILE

Override of the Source File for a Convert Process.

xffile.xf

Name of the Extract File to be used as the source in the Convert Process. Provide the full path if the file is not in the default directory.

DSTXFFILE

Override of the Destination File for a Convert Process.

xffile.xf

Name of the Extract File to be used as the destination in the Convert Process. Provide the full path if the file is not in the default directory.

CFFILE

Override of the Control File for a Convert Process.

cffile.cf Name of the Control File to be used in the Convert Process. Provide the full path if the file is not in the default directory.

TMNAME

Override for the Table Map referenced by the Convert Process.

identifier.tablemap name

Two-part name of an existing Table Map.

DISROWLIM

Override for a numeric value to limit the number of rows discarded during an Convert Request.

n A numeric value to specify the maximum number of rows to extract from a table. Valid values are 1 through 999999.

COLMAPID

Override for the default identifier for the Column Maps included in the Table Map.

identifier

The 1 to 8 character identifier.

COLMAP

Override for the Column Map name for a specific table in the Table Map. (A named Column Map can override a local Column Map.)

[[*dbalias* .] *cid* .] *tablename*

One, two, or three-part tablename. If *tablename* is not fully qualified, the default qualifier is used.

[*identifier* .] *colmap*

One or two-part name of an existing Column Map.

DESTQUAL

Override for the default qualifier for the destination tables in a Table Map.

dbalias.creatorid

The two-part qualifier (DB Alias and Creator ID) for the destination tables.

DETTABNAME

Override for the Source 1 and Source 2 tables in a Table Map.

srctabname

The source table name.

[[*dbalias* .] *cid* .] *desttablename*

One, two, or three-part destination table name. If the table name is not fully qualified, the default qualifier is used.

Override Keywords: Extract Process

This topic lists the override parameters available for an Extract Process.

ADNAME

Override for the Access Definition. A named Access Definition overrides a local or named Access Definition in the Extract Request.

identifier.adname

Two-part name of an existing Access Definition.

DEFQUAL

Override for the default qualifier for tables named in the Access Definition.

dbalias. [*creatorid*]

The one or two-part qualifier (DB Alias and Creator ID) for the tables in the Access Definition.

PNSFILE

Override for the Point and Shoot file to use.

pnsfilename.pns

The name of the point and shoot file.

ROWLIMIT

Override for the maximum number of rows to extract.

n The maximum number of rows to be extracted.

The Row Limit for an Extract Process is a number from 1 to the maximum limit specified in Product Options.

SEL

Override for the selection criteria specified for a specific table. Selection criteria must conform to SQL syntax and must include a column name, a relational operator, and a value. You can specify multiple selection criteria, each on a separate line.

[[*dbalias* .] *cid* .] *tablename*

One, two, or three-part tablename. If *tablename* is not fully qualified, the default qualifier is used.

columnname

Name of column to which criteria applies.

operator

Logical operator appropriate for your DBMS.

value Value or list of values appropriate for the operator, expressed as literals or substitution variables (:*variablename*)

SQL Override for the SQL statement associated with a table in the Access Definition. Each statement must be on a separate line.

Note: The SQL statement must conform to SQL syntax.

[[*dbalias* .] *cid* .] *tablename*

One, two, or three-part tablename. If *tablename* is not fully qualified, the default qualifier is used.

sqlwhereclause

The SQL WHERE clause associated with the table.

TABEVERYNTH

Override for a numeric value to specify a sampling factor for a specified table in the Access Definition.

[[*dbalias* .] *cid* .] *tablename*

One, two, or three-part tablename. If *tablename* is not fully qualified, the default qualifier is used.

value A numeric value to specify a sampling factor for a table. Valid values are 1 through 9999.

TABROWLIM

Override for a numeric value to limit the number of rows extracted from a specified table in the Access Definition.

[[*dbalias* .] *cid* .] *tablename*

One, two, or three-part tablename. If *tablename* is not fully qualified, the default qualifier is used.

value A numeric value to specify the maximum number of rows to extract from a table. Valid values are 1 through 99999999.

STARTTAB

Override for the name of the Start Table associated with the Access Definition.

[[*dbalias* .] *cid* .] *tablename*

One, two, or three-part table name.

If the table name is not fully qualified, the default qualifier is used.

VAR Override for the value in substitution variable used in the process.

variablename

Name of the substitution variable.

value The corresponding value for the variable.

XFFILE

Override for the Extract File name in the Extract Request.

xffile.xf

The name of the Extract File. Provide the full path if the file is not in the default directory.

Override Keywords: Insert Process

This topic lists the override parameters available for an Insert Process.

XFFILE

Override for the Extract File referenced by the Insert Process.

xffile.xf

The name of the Extract File. Provide the full path if the file is not in the default directory.

CFFILE

Override for the Control File referenced by the Insert Process.

cffile.cf Name of the Control File. Provide the full path if the file is not in the default directory.

TMNAME

Override for the Table Map referenced by the Insert Request.

identifier.tablemap name

Two-part name of an existing Table Map.

COMMFREQ

Override for the frequency for committing processed rows to the database for the Insert Process.

n A numeric value to specify the maximum number of rows to extract from a table. Valid values are 1 through the maximum set in **Product Options**.

PROCTYPE

Override for the type of Insert Processing to use.

INS Insert new rows into the tables during the Insert Process.

UPDINS

Update and insert rows in tables during the Insert Process.

LOCKTABS

Override for the Lock Tables setting in the Insert Request.

Y Lock each table until all rows in the Extract File for that table are processed.

N Do not lock the tables.

DISROWLIM

Override for Discard Row Limit setting in the Insert Request.

n 0 (to impose no limit) or a number from 1 to 99999999 to stop processing after the specified number of rows are discarded and all rows in the array processed. You can Restart or Retry a process that stops because the limit is reached.

COLMAPID

Override for the default identifier for the Column Maps included in the Table Map.

identifier

The 1 to 8 character identifier.

COLMAP

Override for the Column Map name for a specific table in the Table Map.

Note: A named Column Map can override a local Column Map.

[[*dbalias* .] *cid* .] *tablename*

One, two, or three-part tablename. If *tablename* is not fully qualified, the default qualifier is used.

[*identifier* .] *colmap*

One or two-part name of an existing Column Map.

DESTQUAL

Override for the default qualifier for the destination tables in a Table Map.

dbalias.creatorid

The two-part qualifier (DB Alias and Creator ID) for the destination tables.

DESTTABNAME

Override for the Source 1 and Source 2 tables in a Table Map.

srctabname

The source table name.

[[*dbalias* .] *cid* .] *desttablename*

One, two, or three-part destination table name. If the table name is not fully qualified, the default qualifier is used.

Override Keywords: Load Process

This topic lists the override parameters available for a Load Process.

XFFILE

Override for the Extract File referenced by the Load Process.

xffile.xf

The name of the Extract File. Provide the full path if the file is not in the default directory.

CFFILE

Override for the Control File referenced by the Load Process.

cffile.cf Name of the Control File. Provide the full path if the file is not in the default directory.

TMNAME

Override for the Table Map referenced by the Load Process.

identifier.tablemap name

Two-part name of an existing Table Map.

COLMAPID

Override for the default identifier for the Column Maps included in the Table Map.

identifier

The 1 - 8 character identifier.

COLMAP

Override for the Column Map name for a specific table in the Table Map. (A named Column Map can override a local Column Map.)

[[*dbalias* .] *cid* .] *tablename*

One, two, or three-part tablename. If *tablename* is not fully qualified, the default qualifier is used.

[*identifier* .] *colmap*

One or two-part name of an existing Column Map.

DESTQUAL

Override for the default qualifier for the destination tables in a Table Map.

Note: If you change the DB Alias portion of the destination qualifier, you must make the same change to all other DB Alias-specific Load-type overrides, including: MODE, PERFLOAD, DELONSUCCESS, DELONFAILURE, WORKPATH, and SERVPATH.

dbalias.creatorid

The two-part qualifier (DB Alias and Creator ID) for the destination tables.

DESTTABNAME

Override for the Source 1 and Source 2 tables in a Table Map.

srctabname

The source table name.

[[*dbalias* .] *cid* .] *desttablename*

One, two, or three-part destination table name. If the table name is not fully qualified, the default qualifier is used.

MODE

Override for the Loader processing mode for the database referenced by the *dbalias*.

dbalias Specification used to access a particular database.

mode Option for the Oracle Loader to insert, replace, append, or truncate data during the Load Process.

Append

Load rows from the Source File into the destination table. Append is only available when the DBMS is Oracle.

Insert Insert rows from the Source File into empty destination tables.

Replace

Delete all rows from the destination tables and load rows from the Source File.

Truncate

Delete all rows from the destination tables and load rows from the Source File. Truncate is only available when the DBMS is Oracle.

PERFLOAD

Override for performing the load for the database.

dbalias Specification used to access a particular database.

Y Run the loader immediately after file conversion processing is complete.

N The Load Process prepares the data in the appropriate format and creates the BAT file to run the loader, but does not initiate the loader.

DELONSUCCESS

Override to delete files for the database if the Load Process completes successfully.

dbalias Specification used to access a particular database.

Y Delete the data files after the loader completes successfully.

N Do not delete the data files after the loader completes successfully.

DELONFAILURE

Override to delete files for the database referenced by the *dbalias*, if the Load Process fails.

dbalias Specification used to access a particular database.

Y Delete the data files if the loader does not complete successfully.

N Do not delete the data files, if the loader does not complete successfully.

RSM Override to estimate resources necessary to process this Load Request.

Y Estimate the resources needed to process this Load Request. If you specify RSM Y, Optim creates a Resource Estimation Report for each object in the Load Request. The Load Request is not processed. For additional information see "Resource Estimation" on page 139.

N Do not estimate resources for this Load Request. This is the default.

WORKPATH

Override for the workstation path to store temporary Oracle loader files.

dbalias Specification used to access a particular database.

path Directory path for storing temporary Oracle Loader files.

SERVPATH

Override for the server path to store temporary UDB loader files.

dbalias Specification used to access a particular database.

path Directory path for storing temporary UDB Loader files.

DESTDELIMITER

Override for specification to exclude or include delimiters in character data columns from being scanned by Optim while generating the loader file.

X'01', X'02', X'03', X'04', X'05'

Use any of these values to exclude delimiters from scanning.

X'FA' X'FB' X'FC' X'FD' X'FE' X'FF'

Use any of these values to include delimiters in scanning.

SOURCEEMPTY

Override for the option to perform the load if a table to be loaded contains no rows. Specify:

TRIGMODE

Override for disabling database triggers. Specify:

Never

Do not disable database triggers for the loader.

Always

Disable database triggers during the Load Process and then re-enable the triggers after the process completes.

Prompt

Display the Disabling Trigger/Constraint Confirmation dialog. This dialog displays a list of tables with all associated triggers. You can right-click to enable or disable triggers during the Load Process for each table. You can also select whether to enable or disable the triggers after the Load Process completes.

CONSMODE

Override for disabling or enabling constraints. Specify:

Never Do not disable referential integrity constraints for the loader.

Always

Disable referential integrity constraints during the Load Process and then reenables the constraints after the process completes

Prompt

Display the Disabling Trigger/Constraint Confirmation dialog. This dialog displays a list of tables with all associated constraints. You can right-click to enable or disable constraints during the Load Process for each table. You can also select whether to enable or disable the constraints after the Load Process completes.

COMMITFREQ

Override for commit frequency. Specify the number of rows after which the loader commits changes to the database, up to the limit specified in Product Options. Refer to the *Installation and Configuration Guide* section on Product Options.

Restart or Retry a Process

You can use the RESTARTRETRY command to restart or retry an Insert or Delete Process that did not complete successfully.

- If an Insert Process ends abnormally, the command **restarts** the process from the last commit point.
- If an Insert Process ends normally, but a number of rows could not be processed, the command **retries** the process for those rows only.

Syntax

Use the following command line syntax to restart or retry an Insert Process.

```
PR0CMND /RESTARTRETRY CONTROL=controlfilename
  [ SERVER=servername ] [ PST=pstdirectory ]
  [ OUTPUT=filename ] [ DISCARD=n ] [ COMMIT=n ]
  [ QUIETx{ + | - } ] [ MONITORx{ + | - } ]
```

Command-line Keywords

This topic discusses command-line keywords.

PR0CMND

Type PR0CMND to initiate command line processing. Note that the character following PR is the number 0 (zero).

/RESTARTRETRY

Command to run the restart/retry request. Specify /RESTARTRETRY or -RESTARTRETRY.

CONTROL=*controlfilename*

Name of the Control File (*controlfilename*) specified for the Insert Process. The Control File identifies the Insert Request to be restored or retried. If the file is not in the default Data Directory, provide the full directory path, exactly as specified in the original process request.

SERVER=*servername*

Machine on which the process was executed. If omitted, a local machine is assumed.

PST=*pstdirectoryname*

Name of the Optim Directory for the Insert Request. If you do not use this keyword, the current (default) Optim Directory is used.

OUTPUT=*filename*

Name of the output file for the process report. Specify OUTPUT= followed by a file name. To append the report to an existing file, place a plus sign (+) after the file name.

- If you do not use this keyword, the report displays automatically after each process completes. You must close the report dialog before the next process can begin.
- If you do not specify a full directory path, the file is saved in your default Data Directory (specified in Personal Options).
- For a UNIX or Linux environment, if this keyword and value are not specified, the output is displayed to the console.

DISCARD=*n*

Maximum number of rows (0 to 99999999) that can be discarded when you restart/retry a process. (This value overrides the discard row limit specified in the Insert Request.)

COMMIT=*n*

Frequency for committing processed rows to the database when you restart or retry a process. Specify any number between 1 and the maximum set in Product Options. (This value overrides the commit frequency specified in the Insert Request.)

QUIETx

Indicator for prompts or error dialogs during a process. Specify QUIET directly followed by a plus (+) or minus (-) sign. (Do not insert a space.)

The QUIET indicator applies to all process requests in a parameter file. If you use the keyword more than once, the last specification is used.

Note: For a UNIX or Linux environment, the QUIET keyword is ignored, because prompts and error dialogs are unavailable.

QUIET+

Do not display prompts or error dialogs (default).

QUIET-

Display prompts and error dialogs. (Invoke privilege is required to run a process that requires the display of editor interfaces. For example, Invoke Create privilege is required to retry an Insert Process that requires creating destination database tables.)

MONITORx

Indicator for the Progress dialog during a process. Specify **MONITOR** directly followed by a plus (+) or minus (-) sign. (Do not insert a space.)

The **MONITOR** indicator applies to all process requests in a parameter file. If you use the keyword more than once, the last specification is used.

Note: For the UNIX or Linux environment, the **MONITOR** keyword is ignored, because the Progress dialog is unavailable.

MONITOR+

Display the Progress dialog.

MONITOR-

Do not display the Progress dialog (default).

Return Codes

In a batch file, you can direct the processing that follows the PROCMDND processing, using the return code in the following statement:

IF ERRORLEVEL *n* GOTO *x*.

The following list explains the meaning of possible return codes:

- 0 No errors.
- 4 In all of the requests, the highest return code was Informational.
- 8 In all of the requests, the highest return code was Warning.
- 12 In all of the requests, the highest return code was Fatal.
- 16 There was a syntax error on the command line. A pop-up window also displays, unless you specified Quiet+.
- 24 Could not open the output file specified in the Output= parameter.

Since the return code value is evaluated as equal to or greater than, query each ERRORLEVEL in reverse order:

```
PROCMDND /R TYPE=EXTRACT REQUEST=identifier.name
```

```
IF ERRORLEVEL 24 GOTO Badout
```

```
IF ERRORLEVEL 16 GOTO Syntax
```

```
IF ERRORLEVEL 12 GOTO Fatal
```

```
IF ERRORLEVEL 8 GOTO Warning
```

```
IF ERRORLEVEL 4 GOTO Info
```

For example:

```
:Badout  
echo The Output File could not be opened.
```

GOTO End
...
:End

Examples

Example 1 - Run a Process Directly from the Command Line

Use this task to run a process directly from the command line.

To run a process directly from the command line, specify the following:

PROCMD /R **TYPE=type** **REQUEST=identifier.name**

PROCMD

Type **PROCMD** to begin the command line sequence. Note that the character following PR is the number 0 (zero).

/R Specify **/R** or **-R** to run the process.

TYPE=type

Enter the command-line keyword **TYPE=** and follow with **EXTRACT**, **INSERT**, **LOAD**, or **CONVERT**.

REQUEST=identifier.name

Enter the command-line keyword **REQUEST=** followed by the name of the process request.

- To run an Extract Request named **MARKET.YTD** and display results, specify:

```
PROCMD /R PST=PSTDEMO TYPE=EXTRACT REQUEST=MARKET.YTD
```

- To run an Extract Request named **SALES.MONTHLY** and add the results to an existing output file named **PLAN.TXT**, specify:

```
PROCMD /R TYPE=EXTRACT REQUEST=SALES.MONTHLY OUTPUT=PLAN.TXT+
```

- To run an Insert Request named **MARKET.REFRESH**, display prompts and error dialogs during the process, and write results to an output file named **RESULTS.TXT**, specify:

```
PROCMD /R TYPE=INSERT REQUEST=MARKET.REFRESH OUTPUT=RESULTS.TXT Q-
```

Example 2 - Run a Scheduled Job from the Command Line

Use this task to run a scheduled job from the command line.

Note: Scheduled jobs, containing one or several action requests, can be created using the **Scheduler**. See the *Common Elements Manual* for details.

To run a scheduled job using the command line, specify:

PROCMD /R **JOB='jobname'**

PROCMD

Type **PROCMD** to begin the command line sequence. Note that the character following PR is the number 0 (zero).

/R Specify **/R** or **-R** to run the specified job.

JOB='jobname'

Specify **JOB=** followed by the name of the scheduled job, as saved in the **Scheduler**.

Note: Specify the job name enclosed in double or single quotes.

- To run a job named **CUSTDATA** and write the results to an output file named **CUSTOUT.TXT**, specify:

```
PROCMD /R JOB='CUSTDATA' OUTPUT=C:\CUSTOUT.TXT
```

- To run the same job and display prompts and error dialogs during the process, specify:

```
PROCMD /R JOB='CUSTDATA' OUTPUT=C:\CUSTOUT.TXT QUIET-
```

- To run a job named PAYROLL and display information dialogs during the process, specify:

```
PROCMD /R JOB='PAYROLL' OUTPUT=PAY.TXT MONITOR+
```

Example 3 - Run One or More Processes Using a Parameter File

Use this task to run one or more processes from an ASCII or text file.

To run one or more processes from an ASCII or text file, specify:

```
PROCMD /R @filename
```

PROCMD

Type **PROCMD** to begin the command line sequence. Note that the character following PR is the number 0 (zero).

/R Specify **/R** or **-R** to run the process parameters specified in the parameter file.

@filename

Enter the @ sign followed by the name of the file that contains the parameters for the process(es) (required). If the parameter file is not in the default Data Directory, you must specify the full directory path.

File Format

See the command line syntax in “Extract, Insert, Load, and Convert Process Syntax” on page 198 when formatting process parameters in a text file. You can include several action requests or scheduled jobs in the file. The following guidelines apply:

- Specify each action request or scheduled job on a separate line in the file. Begin each action request with the **TYPE** parameter.
- You can specify an optional command-line keyword to stop processing on error. Use the **STOP=errorcode** command-line keyword for each process request in the input file.
- You can also run a scheduled job. Use the **JOB=jobname** command-line keyword. (The **STOP=errorcode** command-line keyword does not apply to scheduled jobs.)

For example, consider a parameter file named STATS.TXT containing the following:

```
TYPE=EXTRACT REQUEST=MONTHLY.SALES STOP=WARNING TYPE=EXTRACT REQUEST=MONTHLY.QUOTAS TYPE=INSERT  
REQUEST=SALES.YTD STOP=FATAL
```

To run the requests, specify:

```
PROCMD /R @C:\STATS.TXT
```

Example 4 - Use Overrides in Addition to the Process Parameters

The following examples contain overrides in addition to the process parameters.

- Run an Extract Request named SALES.CUST from the command line, but apply the following overrides:
 - Change the default qualifier to ORACLE1.TELEM.
 - Change the Start table to CUSTOMERS.
 - Assign a row limit of 600 rows.
 - Enter an SQL WHERE statement to select only rows containing a particular state and zip code.

For this example, create an override file named CHANGES.TXT that contains the following override keywords and values:

```
DEFQUAL ORACLE1.TELEM  
STARTTAB CUSTOMERS  
ROWLIMIT 600  
SQL CUSTOMERS ST='NJ' AND ZIP='08540'
```

To run this request from the command line, specify:

```
PROCMD /R TYPE=EXTRACT REQUEST=SALES.CUST OV=CHANGES.TXT
```

- Specify command-line and override keywords in a parameter file named LEADS.TXT, to run an Extract Request named SALES.CUST from the command line, but apply the following overrides:
 - Change the default qualifier to ORACLE1.TELEM.
 - Change the Start table to CUSTOMERS.
 - Assign a row limit of 600 rows.

Enter selection criteria to select CUSTOMERS with a Customer ID number greater than 1234.

Create a parameter file named C:\temp\LEADS.TXT that contains the following:

```
TYPE=EXTRACT REQUEST=SALES.CUST OV=*
DEFQUAL ORACLE1.TELEMSTARTTAB CUSTOMERS
ROWLIMIT 600
SEL CUSTOMERS CUST_ID>'12345'
END
```

To run this request from the command line, specify:

```
PROCMD /R @C:\temp\LEADS.TXT
```

- Specify command-line and override keywords in a parameter file named STATS.TXT to run an Extract Request named MARKET.SALES from the command line, stop processing if a Warning message results, write the process report to an output file named NEWSTATS.TXT, and apply the following overrides:
 - Run the request on a server named MKTSERV.
 - Change the Extract File name to Y:\XF\APRLDATA.XF.
 - Change the Access Definition to LISTS.APR98.
 - Change the default qualifier in the Access Definition to UDB.TELEM.
 - Enter the value 'New Jersey' for a variable named STATE defined in the Access Definition.
 - Assign a row limit of 400 rows.

Create a parameter file named C:\temp\STATS.TXT that contains the following:

```
TYPE=EXTRACT REQUEST=MARKET.SALES STOP=W OV=*
```

```
SERVER MKTSERV
XFFILE Y:\XF\APRLDATA.XF
ADNAME LISTS.APR98
DEFQUAL UDB98.TELEM
VAR STATE 'NJ'
//Other variables to use default values
ROWLIMIT 400
END
```

On the command line, specify:

```
PROCMD /R @c:\temp\STATS.TXT
OUTPUT=NEWSTATS.TXT
```

Example 5 - Restart a Process

Restart an Insert Process that ended abnormally. Use the following process parameters:

- Specify the Control File generated during Insert processing. In this example, use TEMP.CF.
- Write results to an output file named RESTART.TXT.
- Assign a discard row limit of 100 rows.
- Assign a commit frequency of 2000 rows.
- Display prompts and error dialogs during the process.

To run this request from the command line, specify:

```
PROCMD /RESTARTRETRY CONTROL=TEMP.CF OUTPUT=RESTART.TXT DISCARD=100 COMMIT=2000 QUIET-
```

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Index

A

- Access Definitions 5, 89, 97
 - table list 13
- Age Function
 - Convert Request 72, 75
 - Insert Request 127
 - Load Request 185
- Aging Amounts
 - Insert Request 126
 - Load Request 184
- Archive Files
 - Insert Request 113, 118
 - Load Request 137, 143

B

- Browse Extract and Control Files 24

C

- Calendar
 - Convert Request 74
 - description of 2
 - Insert Request 127
 - Load Request 185
- Cascade Delete/Update Option 133, 192
- Century Pivot
 - Convert Request 74
 - Insert Request 127
 - Load Request 185
- Column Map ID 46
- Column Maps 46
 - Editor 47
- Command Line Interface 197
 - restart/retry 208
 - return codes 210
 - run process request 211
 - run scheduled job 211
 - syntax guidelines 197
- Commit Frequency
 - Insert Request 123
- Compress Destination Extract File 59
- Control Files
 - Convert Request 57
 - Extract Request 118
 - Insert Request 118
 - Load Request 143
- Convert Processing
 - description of 51
 - monitor progress 79
 - overwrite Extract File 58
 - print/redisplay report 81
 - review process report 80
- Convert Request Editor
 - Age Function 72
 - Currency 76
 - Date Adjustment Options 74
 - Date Adjustment Values 73
 - destination Extract File 58
 - Exception Options 74

- Convert Request Editor (*continued*)

- Extract and Control Files 57
 - Global Aging 75
 - Invalid Dates 74
 - menu commands 55
 - Multiple/Rule 74
 - Report Options 77
 - Skipped Dates 74
 - Table Map options 58
- Convert Requests
 - Column Map 58
 - creating 52
 - editing 54
 - run 78
 - schedule 78
 - select 53
 - Table Map 51

- Create Utility
 - select objects 30

- Currency
 - Convert Request 76
 - Insert Request 128
 - Load Request 186

D

- Database Connections 90
- Date Adjustment Options
 - See Age Function 74
- Date Adjustment Values
 - See Age Function 73
- DB2
 - check pending status 152
 - copy options for load 154
 - directory paths for load 156
 - LOAD Process 149
 - log 180
- Delete Options
 - Insert Request 119
- Destination Table Names 27, 46
- Discard Row Limit 59, 123

E

- Email Notification
 - See Notify 78
- Environment v
- Error Messages
 - Extract processing 102
- Exception Options
 - See Age Function 74
- Exception Tables
 - in a Load Request 152
 - naming conventions 152, 160
- Extract Files
 - browsing 24
 - Convert Request 57
 - Extract Request 89
 - Insert Request 113, 118
 - Load Request 137, 143

- Extract Process Report 106, 111
 - statistical information 107, 111
- Extract Processing
 - cross-platform compatibility 84
 - description of 83, 101
 - error messages 102
 - monitor progress 104
 - print/redisplay report 111
 - review process report 106
 - statistical information 107, 111
 - warning messages 103
- Extract Request Editor
 - Access Definition options 90
 - always prompt for values 97
 - Convert Request options 100
 - Email notification 99
 - Extract Files 89
 - items to extract 90
 - limit rows to extract 90
 - menu commands 88
 - objects to extract 94
 - Point and Shoot options 95
 - substitution variables 96
- Extract Requests
 - create 85
 - description of 5
 - edit 87
 - Process Report 6
 - run 102
 - schedule 102
 - select 86
 - Start Table 95

F

- Fast Load Confirmation 189

G

- Global Aging
 - Convert Request 75
 - Insert Request 128
 - Load Request 186

I

- Informix
 - additional loader parameters 172
 - disable constraints 172
 - disable triggers 171
 - discard options for load 170, 171
 - load processing 170
- Insert Processing
 - description of 113
 - monitor progress 132
 - overwrite Control File 118
 - print/redisplay report 135
 - review process report 134
- Insert Request Editor
 - Age Function 125

- Insert Request Editor (*continued*)
 - Currency 128
 - Delete Options 119
 - Email Notification 131
 - Exception Options 127
 - Global Aging 128
 - menu commands 117
 - Process Options 120
 - Report Options 130
 - Source and Control Files 118
 - Table Map options 119
- Insert Requests
 - Commit Frequency 123
 - creating 114
 - description of 6
 - editing 116
 - Process Report 7
 - Progress dialog 29
 - run 131
 - schedule 131
 - select 115
- Invalid Dates
 - Convert Request 74
 - Insert Request 127
 - Load Request 185

L

- load processing 173
- Load Processing
 - description of 137
 - Fast Load 189
 - load versus insert 137
 - monitor progress 191
 - output files 137
 - print/redisplay report 195
 - review process report 192
- Load Request 139
 - storage estimate 139
- Load Request Editor
 - Age Function 183
 - Currency 186
 - DB2 Loader 149
 - Email Notification 189
 - Exception Options 185
 - Exception Table Options 152
 - Global Aging 186
 - Informix Loader 170
 - iSeries Load 173
 - loader options 148
 - menu commands 146
 - Oracle Loader 156
 - Report Options 188
 - SQL Server Loader 166
 - Sybase ASE Loader 161
 - Table Map options 143
 - Teradata Loader 175
 - z/OS Loader 180
- Load Requests
 - avoid long file names 138
 - creating 139
 - editing 142
 - run or schedule 138
 - run process immediately 189
 - schedule 189
 - select to edit 144
 - Source and Control Files 143

- Lock Tables
 - Insert Request 122
 - Long Object Names 113

M

- Multiple/Rule
 - Convert Request 74
 - Insert Request 127

N

- Notify
 - Convert Request 78
 - Extract Request 99
 - Insert Request 131
 - Load Request 189

O

- Optim Directory 1
- Oracle
 - additional loader parameters 161
 - compressed files 160
 - disable constraints 158
 - disable triggers 157, 162
 - discard options for load 160
 - exception tables 160
 - load commit frequency 161
 - load processing 156
 - method for load 157

P

- Point and Shoot
 - Extract Request 94
- PROCMND 197
- Processes
 - Convert 8
 - Create 8
 - Load 8
 - Reschedule 8
 - Restart 8
 - Retry 8
- Processing Flow 5

R

- Relationships 16
- Report Options
 - Convert Request 77
 - Insert Request 130
 - Load Request 188
- Rules
 - Convert Request 74
 - Insert Request 127

S

- Sample
 - Scenario
 - A Set of Customers 10
 - A Set of Items 34
- Sample Database 9

- Skipped Dates
 - Convert Request 74
 - Insert Request 127
 - Load Request 185
- Source Column 48
- Source File
 - Convert Request 57
 - Insert Request 118
 - Load Request 148
- SQL Server
 - additional loader parameters 167
 - disable constraints 163, 168
 - disable triggers 167
 - discard options for load 167
 - load processing 166
- Start Table 5
 - Extract Request 95
- Statistical Information
 - Extract Process Report 107, 111
- Status 49
- Sybase ASE
 - additional loader parameters 163
 - discard options for load 163
 - load processing 161

T

- Table Maps
 - always view 59, 144
 - Convert Request 58
 - Insert Request 119
 - always view 119
 - Load Request 143
- Teradata
 - additional loader parameters 179
 - load processing 175
- Traversal Path 16

U

- Update/Insert 6

V

- Variables
 - always prompt for values 97
 - default values 97
 - Extract Request 96
 - prompt string 96
 - SQL syntax 97

W

- Warning Messages
 - Extract Process 103

Z

- z/OS
 - load processing 180



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