

IBM Sterling Gentran:Server for Windows



ODBC User Guide

Version 5.3.1

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Note

Before using this information and the product it supports, read the information in "Notices" on page 37.

This edition applies to the 5.3.1 version of IBM Sterling Gentrans:Server for Microsoft Windows and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. Getting Started

ODBC with Sterling Gentran:Server

ODBC (Open Database Connectivity) provides the ability to specify several data sources so that the system can query or update multiple databases during translation. Map creation directly from a database schema saves time and ensures that your map is synchronized with the latest version of your database.

IBM® Sterling Gentran:Server® for Microsoft Windows enables you to manage ODBC (Open Database Connectivity) documents along with traditional electronic commerce messages in the same manner. This allows you to maintain a homogenous processing and data management environment, regardless of how the incoming and outgoing data is formatted (for example, ODBC, XML, proprietary message formats).

Sterling Gentran:Server enables you to:

- Specify data sources that the system uses to query for data or update data in multiple databases in a single translation session.
- Add data sources and then test the connection and edit the connection string.
- View a model of the database schema, including lists of tables and columns.
- Generate fields directly from your database schema.
- Check the consistency of your database.

Notes:

- If you use the ODBC syntax on both sides of a map, each side uses a separate set of data sources. One side cannot refer to the data sources belonging to the other side of the map.
- ODBC features cannot be inserted in any other type of map.
- Any ODBC map that uses an ODBC Output Record and is translating against a Microsoft database (Access or SQL Server) must turn on (activate) the "Use ANSI Quoted Identifiers" option in the ODBC DSN configuration.

Timestamp information

Sterling Gentran:Server will place a timestamp of 00:00:00.000 on the end of any date which is written to the Sterling Gentran:Server database without a timestamp, regardless of the type of database management system you are using.

Customer Support

If you are unable to resolve a problem, collect the following information before calling customer support:

- Name of the database to which you are mapping
- MDAC version
- Version of database including any service packs applied
- Table scripts with column, key, and index information
- Maps
- Data file

- Partner profile
- Exact error messages you received
- Date and time stamp on the MAPPER.EXE and TX32.EXE files in your GENSRVNT\Bin folder
- Description of how the map should function

About ODBC Maps

Sterling Gentran:Server uses a set of icons to represent ODBC map objects.



Types of maps






The following table describes the different map types.

Map Type	Description
Import	Used for outbound maps.
Export	Used for inbound maps.
Interchange break	Used in advanced mapping to separate interchanges.
Functional Acknowledgement Inbound	Used in advanced mapping to reconcile functional acknowledgements.
Functional Acknowledgement Outbound	Used in advanced mapping to generate functional acknowledgements.
System Import Header	Used to determine which trading relationship (established in Partner Editor) corresponds to each document in the application file, so the system knows which import translation object to use to process the document.
Turnaround	Used for EDI to EDI maps.
Transaction build	Used in advanced mapping to build transaction envelopes.
Transaction break	Used in advanced mapping to separate documents.
Functional group build	Used in advanced mapping to build functional group envelopes.
Functional group break	Used in advanced mapping to separate functional groups.
Interchange build	Used in advanced mapping to build interchange envelopes.

ODBC Map Objects

This table describes the map object icons that Sterling Gentran:Server uses to visually represent the ODBC file:

Icon	Description
	The ODBC File Format icon contains the ODBC data sources that Sterling Gentran:Server uses during translation, including the root element. It is a looping structure that contains groups, SQL statements, cursor operations, and input and output records that repeat in sequence until either the group data ends or the maximum number of times that the loop is allowed to repeat is exhausted.
	A group is a looping structure that contains related groups, statement records, cursor operations, and input and output records that repeat in sequence until either the group data ends or the maximum number of times that the loop is allowed to repeat is exhausted.

Icon	Description
	A statement record represents a unit of SQL. This includes a SQL query (which may or may not return a result set), a command (which does not return a result set), or a stored procedure invocation (which may or may not return a result set).
	A cursor operation record contains instructions for the translator on moving to a new record in a result set returned by a query. Each operation is associated with a single statement record that returns a result set. The cursor operation record is only allowed on the input side of the map.
	An input record contains a logical group of fields that are suitable to be mapped to the output format. The input record is only allowed on the input side of the map.
	An output record represents update, insert, or delete SQL statements, and contains fields. Output records may be created on both the input and output sides of a map.
	The field corresponds to a column in a database table and contains the attributes of that column. On the input side, the field receives data from a column of the current row of the open SQL query. On the output side, the field represents a column the system updates or inserts, or a key column. Additionally, you can create fields that are not related to a database table or result set of a query.

ODBC Map Creation Process

This topic describes the process that you follow to use ODBC with Sterling Gentran:Server.

Build the input and output sides of the map in the following sequence.

Stage	Description
1	Add data sources and test the connection.
2	If necessary, use the ODBC field generator to generate database fields.
3	If necessary, create map objects manually.
4	Verify the consistency of the database.

Considerations for ODBC Mapping

Review these considerations before beginning to create your ODBC map.

Import processing

For outbound processing, you need a way to determine which records in your database tables were processed. Therefore, you need to be able to mark records so that when you process the map you can select only the unprocessed records in your tables.

To mark records as processed or not processed, you need to designate a column in your database to contain a processing flag. This can be a process column that you insert into your database or you may select an unused column to perform this function. You need to incorporate this column into the SQL statement record in your map. Also, you need to update this column from the map to indicate that a data record was processed.

Note: Before adding a process column to your database or changing the function of an existing column, we recommend that you copy your data to separate work tables in your database, to ensure that your testing will not overwrite existing data.

Export processing

Sterling Gentran:Server enables you to export data directly to a database. To export a document to an ODBC compliant database (i.e., EDI to ODBC), you must register an export translation object for that transaction set, and you must set up that export translation object and an export file name in the inbound relationship record for that partner.

See the following topics in the *IBM Sterling Gentran:Server for Microsoft Windows User Guide*:

- Exporting a Document
- Registering a Translation Object
- Creating a New Inbound Relationship

Tips for Inbound Mapping

Inbound maps can use any format on the Input side and ODBC format on the Output side.

The following list contains general guidelines for inbound mapping.

- Any insert/update actions are not performed to the database until the Export process.
- If the export process contains any errors, the errors are notated in the Export Summary translator report located in the External Data browser, which is accessed from the Sterling Gentran:Server main window.
- If you are unable to determine why your map does not write to your database, you should run a database trace (not an ODBC trace) for the Export process only (not the process file).
- The database trace file supplies you with all the SQL statements built from the map by Sterling Gentran:Server, and also provides the rollback. If you need further details, you can execute the SQL statements through a query analyzer.

Tips for Outbound Mapping

Outbound maps use ODBC format on the Input side and can use any format on the Output side.

If your map is executing an infinite loop, you should verify the items in the following list.

- Determine whether the SQL Statement Record (located in the map) is checking for a specific value in a table column.
- Verify that you included an update record in the import map.
- Ensure that the update record contains the key columns for the table that is updated.

Creating an ODBC Map

The New Map Wizard enables you to quickly and easily select the format of the input and output files and create a map.

About this task

Note: If you use the ODBC syntax for both sides of the map, each side uses a separate set of data sources and one side cannot refer to the data sources that belong to the other side of the map.

Use this procedure to create an ODBC map.

Procedure

1. From the **Start** menu, select **Programs > Gentran Server > Application Integration**.

The system displays the Application Integration subsystem.

2. Select **File > New**.

The system displays the New Map Wizard.

3. Enter the following information and click **Next**.

- Select the type of map you want to create.
- Enter the unique name of the map. The system adds the .MAP extension.
- Type your name if it differs from the user name prompted by the system.

The system displays the New Map Wizard - Input Format dialog box.

Note: You need to complete the format of the Input side of the map. This is the format of the data that is translated by the Sterling Gentran:Server system.

4. For the input side of the map, do one of the following:

- To create a new data format using a syntax that you define, select one of the input format options. Continue with step 5.
- To load the data format from a saved definition, select **Load the data format from a saved definition**. Either enter the path and filename or navigate to the saved definition.

5. For the output side of the map, do one of the following:

- To create a new data format using a syntax that you define, select one of the input format options.
- To load the data format from a saved definition, select **Load the data format from a saved definition**. Either enter the path and file name or navigate to the saved definition.

6. Click **Finish** to begin editing the map. (This may take a few seconds).

The system displays the new map in the Application Integration Window.

What to do next

After you finish creating and saving a new map, you need to define the Input and Output sides of the map.

Additional Steps for Import Maps

For outbound processing with many partners, we recommend you create an ODBC import map (such as ODBC to positional) because it is much easier than creating a system import map for this task.

See the Importing Documents topic in the *IBM Sterling Gentran:Server for Microsoft Windows User Guide* for more information.

This table describes an example of the process for creating an ODBC import map for use with many partners in Sterling Gentran:Server.

Stage	Description
1	Create an import map (such as ODBC.MAP, with a description of "ODBC Import"). See Creating an ODBC Map for more information.
2	On the input side of the map, define a 3-field alternate key to look up partner information (as if you were creating a system import map). Note: This import map will contain the functionality of both an import map and a system import map. See the "How to Define the Alternate Key" section in the <i>IBM Sterling Gentran:Server for Microsoft Windows Application Integration User Guide</i> for more information.
3	Create an empty file (such as ODBC.IN). Note: You can use a text editor to create the dummy file. The dummy file is used to trigger the import process.
4	On the System Configuration program Imports tab, associate the compiled import translation object with the empty file. Note: This instructs the system to use the import map instead of a system import map when the dummy file is imported into the system. When the import is performed, the system runs all the ODBC translation specified by the map. See the Defining a New Import Specification topic in the <i>IBM Sterling Gentran:Server for Microsoft Windows Administration Guide</i> for more information.

The Generate Fields Function

The Generate Fields function is a wizard that enables you to quickly and easily generate fields for an input or output record. The functionality differs slightly depending on whether the record is input or output.

Note: Before using this function, you should test your SQL queries. See ODBC File Format Object for more information on testing queries.

Generating Input Record Database Fields

The Generate Fields function is a wizard that enables you to quickly and easily generate fields for an input record.

About this task

Use this procedure to generate input record database fields.

Procedure

1. Right-click an input record and select **Generate Fields**.
The system displays the ODBC Field Generator Wizard.
2. From the Queries list, select the defined queries and click **Next**.

Note: The system only displays the queries for which you generated a result set.

3. From the Columns list, select the desired result columns and click **Finish**.

Note: Click **Choose All** to select all columns. Click **Clear** to deselect all columns.

The system adds the specified result columns to the record and automatically generates all the validation settings.

Generating Output Record Database Fields

The Generate Fields function is a wizard that enables you to quickly and easily generate fields for an output record.

About this task

Use this procedure to generate output record database fields.

Procedure

1. Right-click an output record and select **Generate Fields**.
The system displays the ODBC Field Generator Wizard.
2. If the output record is not already associated with a data source, select the desired data source.
3. If the output record is not already associated with a table, select the desired database table.
4. Select the table operation and click **Next**.
5. From the Columns list, select the desired result columns and click **Finish**.

Note: Click **Choose All** to select all the columns. Click **Clear** to deselect all columns.

The system adds the specified result columns to the record and automatically generates all the validation settings.

Moving from Test to Production

If your ODBC data source name (DSN) is different on the test and production controllers, you will need to change the ODBC DSN for the maps you are using in production.

Before you begin

When you move from a test to a production environment, you must verify that the following items are identical on both the development (test) controller and the production server.

- MDAC version
- Database name (if the database name is different on the production controller, you must change the name in the map)
- Data source names (if the database name is different on the production controller, you must change the name on the ODBC File Properties dialog box in the map)

About this task

Use this procedure to change the ODBC data source name when you move from test to production.

Procedure

1. In each map that you are moving from test to production, right-click the ODBC File icon and select **Properties**.

The system displays the ODBC File Properties dialog box.

2. Select the **Data Sources** tab to access the data source options.

3. In the DSN box, type the ODBC data source name for your production database.

The system changes the DSN for this map.

4. Click **OK**.

The system closes the ODBC File Properties dialog box.

Chapter 2. Working with ODBC Map Objects

About Creating Map Objects

The map objects that you can create depends on which map object is currently selected.

This table describes the available options. N/A indicates that no map object can be created when the specified object is selected.

If the currently-selected object is a...	Then you can create...
ODBC File Format	<ul style="list-style-type: none">• Group• Statement Record• Cursor Operation Record (input only)• Input Record (input only)• Output Record
Group	<ul style="list-style-type: none">• Group• Statement Record• Cursor Operation Record (input only)• Input Record (input only)• Output Record
Statement Record (Query/Command)	N/A
Cursor Operation Record	N/A
Input Record	Field
Output Record	Field
Field	N/A

The Create Sub and Insert functions

You use two different Sterling Gentran:Server functions to create the necessary map objects—Create Sub and Insert.

- Use Insert when you want to create a map object at the same level (equal) as the selected map object.
- Use Create Sub when you want to create a map object that is subordinate to the selected map object (a child object).

ODBC File Format Object

The ODBC File Format object represents the ODBC data sources that Sterling Gentran:Server is mapping, including the root element.

This object is created automatically by Sterling Gentran:Server and enables you to define ODBC data sources, connection parameters, and extended rules.

Note: The ODBC File Format object cannot be referenced by standard rules or links.

Important: Any ODBC map that uses an ODBC Output Record and is translating against a Microsoft database (Access or SQL Server) must turn on (activate) the "Use ANSI Quoted Identifiers" option in the ODBC DSN configuration.

ODBC File Format Properties - Name Tab

This table describes the ODBC File Format Properties Name tab.

Part	Function
Name	Identifies the ODBC file.
Description	Describes the ODBC file. This box is used to differentiate the ODBC file from similar files.

ODBC File Format Properties - Data Sources Tab

This table describes the ODBC File Format Properties Data Sources tab.

Part	Function
Currently Defined Data Sources	Displays the currently defined data sources.
DSN	Specifies the data source name, as identified by ODBC. Note: Each DSN must be unique.
UID	Specifies the user ID, if necessary. Note: Complete if you use a DSN that requires a connection.
PWD	Specifies the password, if necessary. Note: Complete if you use a DSN that requires a connection.
DATABASE	Specifies the database name.
User supplied name for this data source	Indicates how you want to refer to the data source name. Note: Complete if this name is different from the ODBC DSN. This is the DSN, as known by the map which the system propagates to all applicable Properties dialog boxes.
Connect to data source to build table schema and test SQL statements	Indicates that the system connects to this data source and uses that information to build the database table schema and test the SQL queries (thus generating a result set).
Use Transaction	Indicates that the translator performs all the operations on the data source in a transaction. Note: If there is a database error during translation, the system rolls the database back to a previous state that does not contain errors.
ODBC Data Sources	Accesses the Select Data Source dialog box, which enables you to create a data source or select one that was previously created.
Clear Selected Data Source	Clears the parameter boxes to allow you to add another data source.
Test Connection	Tests the connection of the selected ODBC data source.

Part	Function
Update/Add	Rebuilds the database schema for the selected data source if you specified Test Connection. After the system rebuilds the schema, it automatically checks all the objects in the file format that depend on that schema. If possible, the system also modifies the data-type and validation information for those objects to match the new schema. Then, the system performs a consistency check and fixes those inconsistencies. Note: If you do not select a data source or there are no data sources in the list, the system displays Update as Add, which allows you to add a data source you previously created to the Currently Defined Data Sources list. See Checking Database Consistency for more information.
Remove	Deletes the selected data source from the list, which invalidates (clears) all fields or records that reference it. Note: You are prompted to remove the selected data source (from the list, not from the machine). Click OK to do so.

ODBC File Format Properties - Loop Extended Rules Tab

This table describes the ODBC File Format Properties dialog box Loop Extended Rules tab.

Part	Function
On Begin	Specifies that the extended rule is executed before the system processes the map object.
On End	Specifies that the extended rule is executed after the system concludes processing the map object.
Full Screen	Maximizes the dialog box.
Compile	Compiles the extended rule. Any warnings or errors are displayed in the Errors list. Note: This function gives you immediate feedback about the accuracy of your rule. The rule is compiled when you compile the entire translation object.
Extended rule	Defines the extended rule.
Errors	Displays any errors generated when you clicked Compile to compile the extended rule.

Modifying ODBC File Format Properties About this task

Use this procedure to modify the properties of an ODBC file.

Procedure

1. Right-click the ODBC file icon and select **Properties**.
The system displays the ODBC File Properties dialog box.
2. To create an ODBC data source, select the **Data Sources** tab.
See Creating an ODBC Data Source for more information.
3. To specify an extended rule for the ODBC file select the **Loop Extended Rules** tab to define the rule.

See the *IBM Sterling Gentran:Server for Microsoft Windows Application Integration User Guide* for more information on extended rules.

4. Click **OK**.

The system saves your changes and closes the ODBC File Properties dialog box.

Creating an ODBC Data Source

About this task

Use this procedure to create an ODBC data source.

Procedure

1. Right-click the ODBC file icon and select **Properties**.

The system displays the ODBC File Properties dialog box.

2. Select the **Data Sources** tab to access the data source options.

3. Click **ODBC Data Sources**.

The system displays the Select Data Source dialog box.

4. To select a machine data source, select the **Machine Data Source** tab and do the following:

- Select the machine data source and click **OK**.
- Verify the login information and click **OK**.

Note: Sterling Gentran:Server does not support File Data Sources.

5. On the ODBC File Properties Data Sources tab, complete the following items and click **Add**:

- DSN (required)
- Database (optional)
- Password (optional)
- User defined name for this Data Source (optional)

The system adds the data source to the list and prompts you that it is building the schema for that data source.

6. To test the connection to a data source, select the data source and click **Test Connection**.

Note: If you click Test Connection, the system attempts to rebuild the schema whenever you perform an update or check database consistency, and it tests all queries running against that data source.

The system tests the connection of the selected data source and prompts you with a dialog box containing the results of the test. Click **OK** to exit the dialog box.

7. Click **OK**.

The system closes the ODBC File Properties dialog box.

Groups

Group Properties - Name Tab

A group contains related groups, SQL statements, cursor operations, and input and output records that repeat in sequence until either the group data ends or the maximum number of times that the loop is allowed to repeat is exhausted. The group object cannot be referenced by standard rules or links.

This table describes the parts of the Group Properties Name tab.

Part	Function
Name	Identifies the group name. Note: Do not use spaces or dashes (-) in the group name. You can use the underscore (_) to separate words.
Description	Describes the group to differentiate it from other similar groups.

Group Properties - Looping Tab

A group contains related groups, SQL statements, cursor operations, and input and output records that repeat in sequence until either the group data ends or the maximum number of times that the loop is allowed to repeat is exhausted. The group object cannot be referenced by standard rules or links.

This table describes the parts of the Group Properties Looping tab.

Part	Function
Minimum Usage	Specifies the minimum number of times the loop must be repeated. For a conditional loop, the minimum usage should always be "0" (zero).
Maximum Usage	Specifies the maximum number of times the loop can be repeated.
Promote records to parent	Indicates that when the group is compiled, the subordinate records and groups will be extracted from the loop and located in the parent group. This function is valid for single iteration subgroups only.

Group Properties - Loop Extended Rules Tab

A group contains related groups, SQL statements, cursor operations, and input and output records that repeat in sequence until either the group data ends or the maximum number of times that the loop is allowed to repeat is exhausted. The group object cannot be referenced by standard rules or links.

This table describes the parts of the Group Properties Loop Extended Rules tab.

Part	Function
On Begin	Specifies that the extended rule is executed before the system processes the map object.
On End	Specifies that the extended rule is executed after the system concludes processing the map object.
Full Screen	Maximizes the dialog box.
Compile	Compiles the extended rule. Any warnings or errors are displayed in the Errors list.
Extended rule	Defines the extended rule.
Errors	Displays any errors generated when you clicked Compile to compile the extended rule.

Creating a Group

About this task

Use this procedure to create a group.

Procedure

1. Right-click a map object and select either **Create Sub > Group** or **Insert > Group**.
See About Creating Map Objects for more information on the Create Sub and Insert functions.
The system displays the Group Properties dialog box.
2. On the **Name** tab, enter a unique group name and description (if applicable).
3. Select the **Looping** tab.
4. In the Minimum Usage box, type the minimum number of times the loop must be repeated.

Note: For a conditional loop, the minimum usage should always be "0" (zero). For a mandatory loop, the minimum usage should be "1" or greater.

5. In the Maximum Usage box, type the maximum number of times the loop can be repeated.
6. If this is a single iteration group and you want the subordinate records and groups to be located in the parent group, select **Promote records to parent**.
7. To specify an extended rule for this group, select the **Loop Extended Rules** tab.
See the *IBM Sterling Gentran:Server for Microsoft Windows Application Integration User Guide* for more information on extended rules.
8. Click **OK**.
The system saves the element and closes the Group Properties dialog box.

Statement Records

The statement record represents a SQL query (which returns data and can be used later in the map) or command. Each statement record is associated with a single data source. If the schema for that data source already exists, the system displays all the tables for your reference.

To use a statement record, you first select a data source. If a schema was generated for the selected data source, the system displays a list containing all the tables and views.

Then, you can type a SQL statement, test its validity, and generate a result set of columns returned from the query or stored procedure. This result set is used in the ODBC field generator for input records. Then you can connect to the data source and test it.

If you specify the name of a stored procedure instead of a SQL statement, you must select the stored procedure option.

Note: The statement record cannot be referenced by standard rules, extended rules, or links.

ODBC Statement Record Properties - Name Tab

This table describes the parts of the ODBC Statement Record Properties Name tab.

Part	Function
Name	Defines the statement record name.
Description	Describes the statement record.

ODBC Statement Record Properties - SQL Tab

This table describes the parts of the ODBC Statement Record Properties SQL tab.

Part	Function
Data Source	Contains a list of all the data sources associated with this side of the map.
SQL Statement	Enables you to type SQL. Note: This box also accepts C-style comments. For example: /*This is a comment*/
Full Screen	Maximizes the SQL statement list.
Returns a Result Set	Indicates that the system should generate and return a result set for the specified SQL.
SQL statement is a stored procedure	Indicates that the entry in the SQL Statement list is a stored procedure instead of a query or command.
Test SQL	Tests the statement in the SQL Statement list.
Tables	Contains a list of database tables and views associated with the selected data source.
Column Info	Contains the column information from the selected database table. Note: The data type displayed is the Sterling Gentrax:Server data type of the column, not the actual database data type.

Creating a Statement Record

About this task

Use this procedure to create a statement record.

Procedure

1. Right-click a map object and select either **Create Sub > Query/Command** or **Insert > Query/Command** from the shortcut menu.
See About Creating Map Objects for more information on the Create Sub and Insert functions.
The system displays the ODBC Statement Record Properties dialog box.
2. On the **Name** tab, enter a unique statement record name and description (if applicable).
3. Select the **SQL** tab to access the statement options.
4. From the Data Source list, select the data source you want to use for this statement.
5. In the SQL Statement list, type the SQL statement or stored procedure.
6. If necessary, select **SQL statement is Stored Procedure**.

7. If you want the system to return a result set when you test the statement, select **Returns a Result Set** and click **Test SQL**.

Note: This function is only valid if you selected Test Connection on the ODBC File Format Properties dialog box.

See ODBC File Format Object for more information.

The system tests the statement and, if specified, returns a result set.

8. Click **OK**.

The system saves the statement record and closes the ODBC Statement Record Properties dialog box.

Cursor Operation Records

The cursor operation record contains instructions for the translator on moving through the result set to a new record. Each cursor operation record is associated with a single ODBC statement record.

Note: Cursor operation records are only allowed on the input side of a map.

The system performs cursor operations when they are encountered by the translator as it processes the map.

Note: The cursor operation record cannot be referenced by standard rules, extended rules, or links.

ODBC Cursor Operation Record Properties - Name Tab

This table describes the parts of the ODBC Cursor Operation Record Properties Name tab.

Part	Function
Name	Defines the cursor operation record name.
Description	Describes the cursor operation record.

ODBC Cursor Operation Record Properties - Cursor Operation Tab

This table describes the parts of the ODBC Cursor Operation Record Properties Cursor Operation tab.

Part	Function
Query Record Association	Contains the statement record of type "query" with which you associate the cursor operation. Note: The statement record must return a result set.

Part	Function
Cursor Operation	<p>Contains the operation that the translator performs on the result set. Valid selections are as follows.</p> <ul style="list-style-type: none"> • No Op - Performs no operation and enables you to test the effect of removing a cursor operation without actually removing the object. • Move First - Move the cursor to the First row of the result set returned by the Associated Query selected. • Move Next - Move the cursor to the Next row of the result set returned by the Associated Query selected. • Move Last - Move the cursor to the Last row of the result set returned by the Associated Query selected. • Move Previous - Move the cursor to the previous row of the result set returned by the Associated Query selected. • Close - Close the cursor opened for the Associated Query selected.

Creating a Cursor Operation Record

About this task

Use this procedure to create a cursor operation record.

Procedure

1. Right-click a map object and select either **Create Sub > Cursor Operation** or **Insert > Cursor Operation**.

See About Creating Map Objects for more information on the Create Sub and Insert functions.

The system displays the ODBC Cursor Operation Record Properties dialog box.

2. On the **Name** tab, enter a unique cursor operation record name and description (if applicable).
3. Select the **Cursor Operation** tab.
4. From the Query Record Association list, select the query that the system uses to obtain a result set that is then moved to the record.
5. Select the cursor operation.
6. Click **OK**.

The system saves the cursor operation record and closes the ODBC Cursor Operation Record Properties dialog box.

Input Records

An input record contains a logical group of fields that are suitable to be mapped to the output format.

For example:

The input side of the map is ODBC and the output file format is Positional, and you need to generate a record using information from two separate queries. You can create an ODBC input record that contains fields which obtain data from the appropriate columns of both queries. Then you can link those fields directly to the corresponding positional fields.

Note: The input record cannot be referenced by standard rules or links.

Key field functionality

Input records support the standard Sterling Gentran:Server key field constant and code list functionality. Additionally, the system provides you with the ability to match against fields that appear earlier in the map. If you choose to match against an earlier mapped field, you are allowed up to three key fields.

This additional key field functionality is very useful when you are mapping from a join of master-detail records to an equivalent hierarchy, because this allows the translator to detect when the keys in the detail level no longer match the keys in the master level.

Auto get next cursor operation

If the fields of an input record all belong to the same query, you can specify that the system automatically perform an auto get next cursor operation as the input record loops.

Note: You specify the "Automatically get next row from Statement record" option on the Looping tab of the ODBC Input Record Properties dialog box.

ODBC Input Record Properties - Name Tab

This table describes the parts of the ODBC Input Record Properties Name tab.

Part	Function
Name	Defines the name of the input record. Note: Do not use spaces or dashes (-) for the name. You can use the underscore (_) to separate words.
Description	Describes the input record to differentiate it from other similar records.

ODBC Input Record Properties - Key Field Tab

This table describes the parts of the ODBC Input Record Properties Key Field tab.

Part	Function
None, Use constant, Use codelist, Use Field	Indicates the type of information that the system uses to match this record. Note: Selecting Use constant or Use codelist activates the middle section of the dialog box. Selecting Use Field activates the bottom section of the dialog box.
Match record when key does not match	Indicates that the system should (if selected) match the record if the Key Field does not have the value specified. Note: This gives you the ability to further recognize an ambiguous record definition.
Key Field	Contains the field that the system verifies to check if it does or does not (depending on which you specify) match the constant, code list, or field value or values.
Constants/Edit	Contains a list of defined constants. The system will match the selected constant against the key field. To add or change a constant, click Edit to access the Translation Object Constants dialog.

Part	Function
Code Lists/Edit	Contains a list of defined code lists. The system will match the selected code list against the key field. To add or change a code list, click Edit to access the Code Lists dialog.
Key Field 1	Specifies the first key field. Note: Contains all the active fields from this record.
Use Key Field 1	Specifies that the system should use this value. Note: Contains all the active fields from the preceding records (not including this record).
Key Field 2	Specifies the second key field, if necessary. Note: Contains all the active fields from this record.
Use Key Field 2	Specifies that the system should use this value. Note: Contains all the active fields from the preceding records (not including this record).
Key Field 3	Specifies the third key field, if necessary. Note: Contains all the active fields from this record.
Use Key Field 3	Specifies that the system should use this value. Note: Contains all the active fields from the preceding records (not including this record).

ODBC Input Record Properties - Looping Tab

This table describes the parts of the ODBC Input Record Properties Looping tab.

Part	Function
Min Usage	Specifies the minimum amount of times the loop must repeat. Note: If the Min Usage box contains a "0" (zero), the record is "conditional." If the Min Usage box contains a "1" or greater, the record is "mandatory".
Max Usage	Specifies the maximum amount of times the loop can repeat.
Normal, Loop Start, Loop End	Indicates the type of loop. Valid values are: <ul style="list-style-type: none"> • Normal (This record is in the loop but is not the beginning or ending record) • Loop Start (This record marks the beginning of the loop) • Loop End (This record marks the end of the loop)
Automatically get next row from Statement record	Indicates that the system performs a movement operation as the input record loops.

ODBC Input Record Properties - Loop Extended Rules Tab

This table describes the parts of the ODBC Input Record Properties Loop Extended Rules tab.

Part	Function
On Begin	Specifies that the extended rule is executed before the system processes the record.
On End	Specifies that the extended rule is executed after the system concludes processing the record.
Full Screen	Maximizes the dialog box.

Part	Function
Compile	Compiles the extended rule. Any warnings or errors are displayed in the Errors list. Note: This function gives you immediate feedback about the accuracy of your rule. The rule is compiled when you compile the entire translation object.
Extended rule	Defines the extended rule.
Errors	Displays any errors generated when you clicked Compile to compile the extended rule.

Creating an Input Record

About this task

Use this procedure to create an input record.

Procedure

1. Right-click a map object and select either **Create Sub > Input Record** or **Insert > Input Record**.

See About Creating Map Objects for more information on the Create Sub and Insert functions.

The system displays the ODBC Input Record Properties dialog box.

2. On the Name tab, enter a unique input record name and description (if applicable).
3. Select the **Key Field** tab and select the appropriate options to define the key field.
4. Select the **Looping** tab.
5. In the Maximum usage box, type the number of times the record can repeat (loop).
6. If necessary, specify that the system automatically gets the next row from the statement record order/join.
7. If the record repeats (loops) and you want to specify an extended rule for this input record, select the **Loop Extended Rules** tab and define the rule.
See the *IBM Sterling Gentran:Server for Microsoft Windows Application Integration User Guide* for more information on extended rules.
8. Click **OK**.

The system saves the input record and closes the ODBC Input Record Properties dialog box.

Output Records

An output record represents an update, insert, or delete SQL statement, and contains database output fields. You specify the name of the table the system modifies and whether to insert, update, or delete.

The fields contained within an output record represent the columns the system is updating or inserting and the key to the affected row or rows. Output records may be created on both the input and output sides of a map.

Note: The output record cannot be referenced by standard rules or links.

Important: Any ODBC map that uses an ODBC Output Record and is translating against a Microsoft database (Access or SQL Server) must turn on (activate) the "Use ANSI Quoted Identifiers" option in the ODBC DSN configuration.

Key field functionality

Output records support the standard Sterling Gentran:Server key field constant and code list functionality. Additionally, the system provides you with the ability to match against fields that appear earlier in the map. If you choose to match against an earlier mapped field, you are allowed up to three key fields.

This additional key field functionality is very useful when you are mapping from a join of master-detail records to an equivalent hierarchy, because this allows the translator to detect when the keys in the detail level no longer match the keys in the master level.

Auto get next cursor operation

If the fields of an output record all belong to the same query, you can specify that the system automatically perform an auto get next cursor operation as the output record loops.

Note: You specify the "Automatically get next row from Statement record" option on the Looping tab of the ODBC Output Record Properties dialog box.

ODBC Output Record Properties - Name Tab

This table describes the parts of the ODBC Output Record Properties Name tab.

Part	Function
Name	Defines the name of the output record. Note: Do not use spaces or dashes (-) for the name. You can use the underscore (_) to separate words.
Description	Describes the output record to differentiate it from other similar records.

ODBC Output Record Properties - SQL Operations Tab

This table describes the parts of the ODBC Output Record Properties SQL Operations tab.

Part	Function
Data Source	Contains a list of the associated data sources.
Table	Contains a list of the database tables for the selected data source.
Insert, Update, Delete	Indicates which operation the system performs against the table.

Part	Function
On failure, automatically switch selected operation and retry Inserts as Updates or Updates as Inserts	Indicates (if selected) that if the operation fails then the system will automatically switch the operation type (that is, update to insert or insert to update) and retry the operation. Note: When the Delete option is selected, this check box is inactive because it does not apply to the delete operation. Important: If you have upgraded from a previous version of Sterling Gentran:Server and you are using the retry feature, you must update your ODBC maps by selecting this checkbox for every output record in the map.

ODBC Output Record Properties - Key Field Tab

This table describes the parts of the ODBC Output Record Properties Key Field tab.

Part	Function
None, Use constant, Use codelist, Use Field	Specifies the type of information that the system uses to match this record. Note: Selecting Use constant or Use code list activates the middle section of the dialog box. Selecting Use Field activates the bottom section of the dialog box.
Match record when key does not match	Indicates that the system should (if selected) match the record if the Key Field does not have the value specified. Note: This gives you the ability to further recognize an ambiguous record definition.
Key Field	Contains the field that the system verifies to check if it does or does not (depending on which you specify) match the constant, code list, or field value or values.
Constants/Edit	Contains a list of defined constants. The system will match the selected constant against the key field. To add or change a constant, click Edit to access the Translation Object Constants dialog.
Code Lists/Edit	Contains a list of defined code lists. The system will match the selected code list against the key field. To add or change a codelist, click Edit to access the Code Lists dialog.
Key Field 1	Specifies the first key field. Note: Contains all the active fields from this record.
Use Key Field 1	Specifies that the system should use this value. Note: Contains all the active fields from the preceding records (not including this record).
Key Field 2	Specifies the second key field, if necessary. Note: Contains all the active fields from this record.
Use Key Field 2	Specifies that the system should use this value. Note: Contains all the active fields from the preceding records (not including this record).
Key Field 3	Specifies the third key field, if necessary. Note: Contains all the active fields from this record.
Use Key Field 3	Specifies that the system should use this value. Note: Contains all the active fields from the preceding records (not including this record).

ODBC Output Record Properties - Looping Tab

This table describes the parts of the ODBC Output Record Properties Looping tab.

Part	Function
Min Usage	Specifies the minimum amount of times the loop must repeat. Note: If the Min Usage box contains a "0" (zero), the record is "conditional." If the Min Usage box contains a "1" or greater, the record is "mandatory".
Max Usage	Specifies the maximum amount of times the loop can repeat.
Normal, Loop Start, Loop End	Indicates the type of loop. Valid values are : <ul style="list-style-type: none">• Normal (This record is in the loop but is not the beginning or ending record)• Loop Start (This record marks the beginning of the loop)• Loop End (This record marks the end of the loop)
Automatically get next row from Statement record	Indicates that the system performs a movement operation as the output record loops.

ODBC Output Record Properties - Loop Extended Rules Tab

This table describes the parts of the ODBC Output Record Properties Loop Extended Rules tab.

Part	Function
On Begin	Specifies that the extended rule is executed before the system processes the record.
On End	Specifies that the extended rule is executed after the system concludes processing the record.
Full Screen	Maximizes the dialog box.
Compile	Compiles the extended rule. Any warnings or errors are displayed in the Errors list. Note: This function gives you immediate feedback about the accuracy of your rule. The rule is compiled when you compile the entire translation object.
Extended rule	Defines the extended rule.
Errors	Displays any errors generated when you clicked Compile to compile the extended rule.

Creating an Output Record

About this task

Use this procedure to create an output record.

Procedure

1. Right-click a map object and select either **Create Sub > Output Record** or **Insert > Output Record**.

See About Creating Map Objects for more information on the Create Sub and Insert functions.

The system displays the ODBC Output Record Properties dialog box

2. On the Name tab, enter a unique output record name and description (if applicable).
3. Select the **SQL Operation tab** to access the output options.
4. Select the appropriate data source.
5. Select the table you want to modify.
6. Select the appropriate table operation.
7. If necessary, select the option to automatically switch the specified operation (for example, insert to update or update to insert) and retry the operation again.
8. Select the **Key Field** tab and select the appropriate options to define the key field.
9. Select the **Looping** tab.
10. In the Maximum usage box, enter the number of times the record can repeat (loop).
11. If the record repeats (loops) and you want to specify an extended rule for this output record, select the **Loop Extended Rules** tab and define the rule.
See the *IBM Sterling Gentran:Server for Microsoft Windows Application Integration User Guide* for more information on extended rules.
12. Click **OK**.
The system saves the output record and closes the ODBC Output Record Properties dialog box.

Fields

A field behaves differently depending on whether it is located in an input or output record.

Note: A field does not have to be associated with a query.

The system automatically selects the field type if you previously generated schema or result set information. If you did not generate a schema or result set, you must specify the field type manually.

Note: When a field has an operation performed against it (link, standard rule, or as an extended rule storage field), the system displays a red checkmark over the field icon.

Field in an input record

If the field is located in an input record, the field receives data from a column in the current row of a result set of a query. You associate the field with a column returned by a query.

Note: Column names are not available if you do not test the selected query. Instead, you must select a column number.

Field in an output record (output side of map)

If the field is located in an output record on the output side of the map, the field represents a column the system updates or inserts, or a key column. You specify the name of the column and indicate if it is a key. The system uses key columns automatically to build a "where" clause for update and delete statements.

Note: If the field is contained in an output record, the validation information is set from the column to which it is mapped.

Field in an output record (input side of map)

If the field is located in an output record on the input side of a map, you can specify both where the column is from and where the column data is going to in the target table.

Note: If the field is contained in an output record, the validation information is set from the columns information.

Field Properties - Name Tab

This table describes the parts of the Field Properties Name tab.

Part	Function
Name	Defines the name of the field. Note: Do not use spaces or dashes (-) for the name. You can use the underscore (_) to separate words.
Description	Describes the field to differentiate it from other similar fields.

Field Properties - Query Tab

This table describes the parts of the Field Properties Query tab.

Part	Function
Associated Statement Record	Contains a list of statement records.
Query SQL	Displays the SQL for the currently selected statement record.
Name	Contains a list of column names in the result set of the currently selected statement record. Note: This is only applicable if you specified to connect to the database and tested the SQL.
Number	Contains a list of column numbers in the result set of the currently selected statement record. Note: <ul style="list-style-type: none"> This is only applicable if you specified to connect to the database and tested the SQL. This list uses a one-based index.
Nulls Allowed	Indicates whether nulls are allowed in the column selected from the Name list. Note: For informational purposes only.
Clear	Disassociates this field from any query.

Field Properties - Column Tab

This table describes the parts of the Field Properties Column tab.

Part	Function
Name	Contains a list of column names in the table which is associated with the parent output record.

Part	Function
Number	Contains a list of column numbers in the table which is associated with the parent output record.
Nulls Allowed	Indicates whether the system will fill in a blank field with nulls during insert and update SQL statement operations to the column selected from the Name list.
Table Key	Indicates that this field will be used in a where clause. Note: This enables the system to format "where" clauses used in an update or delete (not applicable for insert operations).
Clear	Disassociates this field from any query.

Field Properties - Validation Tab

This table describes the parts of the Field Properties Validation tab.

Part	Function
Mandatory	Indicates whether the field is mandatory (must appear).
Minimum	Specifies the minimum length of the field.
Maximum	Specifies the maximum length of the field.
Data-type	Specifies the type of data. Valid values are: <ul style="list-style-type: none"> • String (alphanumeric element) • Number (numeric or real element) • Date/Time (date or time element)
Format	Specifies how the field is formatted. Note: Depending on which Data-type you selected, you can either select the data format from a list (if you choose Number or Date/Time in the Type field), or enter a Syntax Token to denote that this field must be formatted as the specified Syntax Token dictates. When you installed Sterling Gentran:Server, you assigned a default format to the string fields. This format serves as the basis for character validation. Most U.S. users use a default format that corresponds to ASCII characters (for example, the X syntax token). Most users of Asian or European languages and encoded character sets should use the Free Format (0x01-0xFF).

Field Properties - Standard Rule Tab

This table describes the parts of the Field Properties Standard Rule tab.

Part	Function
Standard rule	Specifies a standard rule that will affect this field or element during processing. Each of the rules are mutually exclusive. See the <i>IBM Sterling Gentran:Server for Microsoft Windows Application Integration User Guide</i> for more information on standard rules.

Field Properties - Extended Rule Tab

This table describes the parts of the Field Properties Extended Rule tab.

Part	Function
Full Screen	Maximizes the dialog box.
Compile	Compiles the extended rule. Any warnings or errors are displayed in the Errors list. Note: This function gives you immediate feedback about the accuracy of your rule. The rule is compiled when you compile the entire translation object.
Extended rule	Defines the extended rule.
Errors	Displays any errors generated when you clicked Compile to compile the extended rule.

Creating a Field

About this task

Note: See the *IBM Sterling Gentran:Server for Microsoft Windows Application Integration User Guide* for more information on standard and extended rules.

Use this procedure to create a field.

Procedure

1. Right-click a map object and select either **Create Sub > Field** or **Insert > Field**.
See About Creating Map Objects for more information on the Create Sub and Insert functions.
The system displays the Field Properties dialog box.
2. On the Name tab, enter a unique field name and description (if applicable).
3. If this field is on the input side of the map, select the **Query** tab and do the following:
 - a. Select the record with which this field is associated.
 - b. Select the table name.

Note: If the Name list is not available, this indicates that you did not test the SQL query. Instead, select a number from the Number box.
 - c. To allow nulls, select **Nulls Allowed**.
4. If this field is on the output side, select the **Column** tab and do the following:
 - a. For the output side of the map, on the **Column** tab, select the column name.

Note: If the Name list is not available, this indicates that you did not select to connect to a data source to build a table in the ODBC File Properties dialog box. Instead, select a number from the Number box.
 - b. To allow nulls, select **Nulls Allowed**.

Note: This option is only applicable for fields in an output record.
 - c. If this field will be used in a where clause, select **Table Key**.
5. On the **Validation** tab, specify the following:
 - whether or not the field is required
 - minimum length

- maximum length
 - type of data
 - how the data is formatted
6. To specify a standard rule for this field, select the **Standard Rule** tab and define the rule.
 7. To specify an extended rule for this field, select the **Extended Rule** tab and define the rule.
 8. Click **OK**.
- The system saves the field and closes the Field Properties dialog box.

Checking Database Consistency

The Check Database Consistency function compares the definitions of each query, output record, and field with the associated data source, and returns a list of any inconsistencies. This function alerts you to inconsistencies in your database, but does not fix your map components.

About this task

Note: The system also checks database consistency when you update the data source (on the Data Source tab of the ODBC File Format Properties dialog box) and as the first action of compiling the map. For example: An inconsistency occurs if a field tries to extract data from a query column that is not returned by the data source.

Use this procedure to check database consistency.

Procedure

1. Right-click an ODBC file format object and select **Check Database Consistency**.
The system verifies the consistency of the selected side of the map and displays the File Format Consistency Check dialog, which displays any inconsistencies.
2. Click **OK**.
The system closes the File Format Consistency Check dialog box.

Outbound ODBC Mapping when No Partner is Found

This section describes the setup of outbound ODBC maps when a valid partner relationship is not found during partner lookup.

The translator does not know when a row of data in the database has been processed. You must write SQL queries to pull data based on a certain column containing a specific value and then update a new value back to the column in the import map. This status column indicates if a row has been processed or not.

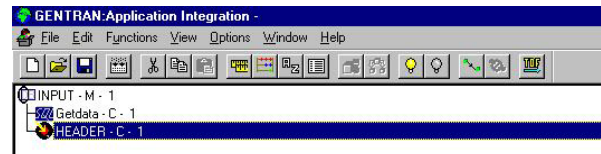
If a valid partner relationship is not found, the Import map will not be invoked and the column will not get the updated value. This means that the translator will be stuck in an infinite loop on that particular row of data. An update must be added to the system import header map to prevent the infinite loop.

You need to modify the system import header map and the outbound/import map to avoid this problem. You need to have more than just two values for the status column to tell Sterling Gentran:Server that a particular row has been processed.

For this example, we will use the values 1 - 4.

- 1 = Unprocessed. This is the value that the system import header map looks for in the SQL statement.
- 2 = Processed by system import map. This does not indicate that a partner has been found.
- 3 = Partner relationship found and processed by the import map.
- 4 = No partner found by system import header map.

The following shows a typical system import header map before any modifications that accommodate not finding a partner relationship.



System Import Header Map Changes

For this example, we made the following changes to the system import header map:

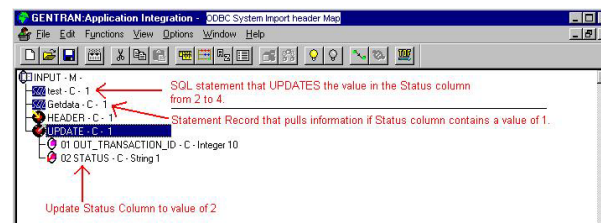
1. Add a query Statement Record directly under the ODBC file format object (INPUT level). This SQL Statement will update the value 2 to 4 to prevent the import map from processing a row of data that does not have an associated partner relationship in Sterling Gentran:Server.

Example SQL statement:

```
UPDATE Table SET STATUS = 4 Where STATUS = 2
```

2. Add an update record at the end of the INPUT side that updates the STATUS column to 2.
 - a. Include the table key(s) in the update record and mark them as **Table Key** on the Column tab.
 - b. Associate the columns in the update record with the statement record. This will populate the fields with data.
 - c. Place a standard or extended rule on the status column that updates the value to 2.

The map now looks like this:

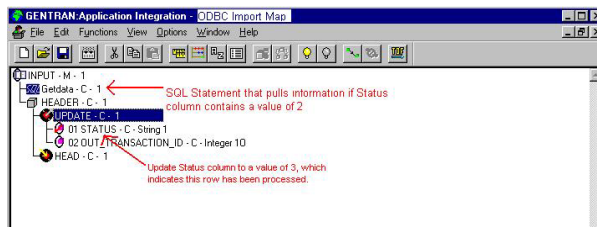


Import Map Changes

We then made the following changes to the system import header map:

1. Change the SQL statement to pull data based on the status column being equal to . This is the value that the system import header map will update. (The Import map will not be invoked if a partner relationship is not found.)
2. Change the update record to update the status column to 3.

The map now looks like this:



Results

The following are the results of the modifications to the maps:

- The system import map pulls data based on the status column being equal to 1. The system import map will update this column to 2 if it finds a partner or not.
- If the system import header map finds a partner relationship:
 1. The import map is invoked and pulls data based on the status column being equal to the value of 2.
 2. The status column is updated to a value of 3.
- If the system import header map does not find a partner relationship:
 1. The import map is never invoked.
 2. The system import head map is invoked a second time.
 3. Any status column that contains a 2 is updated to 4.
 4. Any status column that contains a 1 is updated to 2.

Note: You should never see the status column with a value of 2 in the database, unless you are checking it during translation.

Chapter 3. ODBC Map Tutorial

About the ODBC Tutorial

The following topics contain a tutorial for the Sterling Gentran:Server Application Integration subsystem, using ODBC. In this tutorial, you will create an import map with ODBC as the input format and Positional as the output format.

To access reference information, see the *IBM Sterling Gentran:Server for Microsoft Windows Application Integration User Guide*. For additional information on the various tasks described, refer to the *IBM Sterling Gentran:Server for Microsoft Windows User Guide*.

Before you Begin

In the Pubs database, add the following column to the Sales_tb file:

```
processed TinyInt NotNULL default value=1
```

Also, create a DSN called PubsDB (case does not matter) and point it to the Pubs database.

Note: Open the map and update the schema to make sure it can see the database. If it states that the columns are not linked to the database, it is because you have a different MDAC installed. The mapper will generate the fields differently depending on what version of MDAC you have.

Outbound Map

Creating a Query into the Database

About this task

In this task, you will do the following:

- Connect the map to the database (steps 1 - 4).
- Create a query that will retrieve the necessary information from the database (steps 5 - 12).

Procedure

1. Right-click the ODBC file format (Input) and select **Properties**.
2. Click the **Data Sources** tab.
3. Click **ODBC Data Sources** and select the DSN for your Pubs database (PubsDB).
4. After ensuring that all information is correct, click **Add** and then click **Test Connection**.
Select dbo.sales and dbo.stores.
5. Right-click on **ODBC File Format** and select **Create Sub > Query/Command**.
6. Name the query GetInfo.
7. Click the **SQL** tab.
8. Select the appropriate data source.
9. Enter the following SQL statement:

```
Select * from stores, sales
Where stores.stor_id = sales.stor_id
And processed = 1
```

10. Click **Test SQL** to check the validity of the statement.
11. Select **Returns a Result Set** and click **OK**.

Populating the Map with Data from the Stores Table

About this task

In this task, you will do the following:

- Create the structure to hold the data from the Stores table (steps 1 - 7).
- Create the Output Record to update the column in the database (steps 8 - 18).

Procedure

1. Right-click the **GetInfo** query and select **Insert > Group**.
2. Name the group **SalesINFO** with a maximum repeat of 100.
3. Right-click the **SalesINFO** group and select **Create Sub > Input record**.
4. Name the record **StoreInfo** with a maximum repeat of 1.
5. Right-click the **StoreInfo** input record and select **Generate Fields**.
6. Select the **GetInfo** query.
7. Select all fields from the Stores table and click **Finish**.
8. Right-click the **StoreInfo** input record and select **Insert > Output record**.
9. Name the record **UpdateTable**.
10. Right-click the **UpdateTable** input record and select **Properties**.
11. Click the **SQL Operation** tab and do the following:
 - Select the data source.
 - Select **dbo.Sales** as the table/view.
 - Select **Update**.
12. Right-click the **UpdateTable** output record and select **Generate Fields**.
13. Select the **GetInfo** query and select **Sales.stor_id** and **Sales.processed** columns and click **Finish**.
14. In the **UpdateTable** output record, right-click the **stor_id** field and select **Properties**.
15. On the **Query** tab, select **GetInfo** as the Associated Statement Record.
16. On the **Column** tab, select **Table Key**.
17. In the **UpdateTable** output record, right-click the **processed** field and select **Properties**.
18. On the **Query** tab, select **GetInfo** as the Associated Statement Record.
19. On the **Extended Rules** tab, enter the following:

```
#processed = 2;
```

Populating the Map with Data from the Sales Table

About this task

In this task, you will do the following:

- Create the structure to hold the data from the Sales table (steps 1 - 7).
- Set up the key fields (steps 8 - 9).

Procedure

1. Right-click the **UpdateTable** output record and select **Insert > Input record**.
2. Name the group **Sales**.
3. Right-click the **Sales** record and select **Properties**.
4. On the **Looping** tab, enter a maximum repeat of 100.
5. Select **Automatically get next row from Statement record GetInfo**.
6. Right-click the **Sales** input record and select **Generate Fields**.
7. Select the **GetInfo** query.
8. Select all fields from the **Sales** table (except the **Processed** column) and click **Finish**.
9. Right-click the **Sales** input record and select **Properties**.
10. Click the **Key Field** tab and do the following:
 - Select **Use Field**.
 - For Key Field 1, select **sales_stor_id**.
 - For Use Field 1, select **stores_stor_id**.

Creating the Output Side of the Map

About this task

The positional output file has been provided for you.

Procedure

1. Right-click on the output file format object and select **Open File Format Definition**.
2. A warning will appear asking if you really want to do this, click **Yes**.
3. Navigate to the `\\Gensrvnt\ODBC Exercises` directory and select the `PubsOutput.ddf` file.
4. Link the associated input fields to the output.

Note: You will not link any fields in the **UpdateTable** output record to the output side.

5. Save and compile the map.

Creating the System Import Map

Procedure

1. Do a **Save as** on the Import map.
The new mapped saved will be the system Import map.
2. Change the map description to **System ODBC Map**.
3. Change the type to **System Import Header**.
4. Remove all links and delete the Update Record.
5. Create a field at the bottom of the **Stores** input record and name it **Partner**, string of 10.
6. Under the **SalesINFO** group and **StoreInfo** record, right-click the `store_stor_id` field and add the following extended rule:

```
Update Document set appfield1 = "1.0";
Update Document set appfield2 = "SALORD";
#Partner = "PubsTest";
```
7. On the **Partner** field just created, add the **Select Partner by Alternate Code** Standard Rule.

8. Save and compile the map.

Processing the Outbound Map

Procedure

1. Register the system import map and the import map.
2. Register I_NoBld.tpl and T_NoBld.tpl.
3. Import the partner profile.
4. Create a file called Fake.txt in the \\gensrvnt\imports directory.
5. Open Sterling Gentrans:Server configurations and select the **Imports** tab.
6. Create a new entry and point the file path directly to the fake file.
7. From the desk, open the Workspace.
8. Click **Import** and navigate to the fake.txt file and select **Open**.
9. If the map is processed **OK**, post and send the document.
If the map is processed **NotOk**, debug the errors and reprocess the file.

Inbound Map

Creating the ODBC Output Format

Create an export map with EDI as the input format and ODBC as the output format.

About this task

In this task, you will do the following:

- Connect the map to the database (steps 1 - 4).
- Create the structure to obtain data from database (steps 5 - 17).

Procedure

1. Right-click the ODBC file format and select **Properties**.
2. Click the **Data Sources** tab.
3. Click **ODBC Data Sources** and select the DSN for your Pubs database (PubsDB).
4. After ensuring that all information is correct, click **Add** and then click **Test Connection**.
5. Right-click the ODBC file format and select **Create Sub > Group**.
6. Name the group SalesInfo with a maximum repeat of 1000.
7. Right-click the **SalesInfo** group and select **Create Sub > Output record**.
8. Name the record Stores.
9. Click the **ODBC Output Record** tab and do the following:
 - Select the Pubs data source.
 - Select **dbo.stores** as the table/view.
 - Select **Insert**.
10. Right-click the **Stores** input record and select **Generate Fields**.
11. Select all fields from the Stores table and click **Finish**.
12. Right-click the **Stores** output record and select **Insert > Output record**.
13. Name the record Sales with a maximum repeat of 1000.
14. Click the **ODBC Output Record** tab and do the following:

- Select the Pubs data source.
 - Select **dbo.Sales** as the table/view.
 - Select **Insert**.
15. Right-click the **Sales** output record and select **Generate Fields**.
 16. Select all columns from the Sales table and click **Finish**.
 17. On the **Extended Rules** tab, enter the following to the **processed** field:
 Processed = 1;

Creating the Input Side of the Map

About this task

The DDF for the input side has been provided for you.

Procedure

1. Right-click the input file format object and select **Open File Format Definition**.
2. A warning will appear asking if you really want to do this, click **Yes**.
3. Navigate to the \\Gensrvnt\ODBC Exercises directory and select PubsInput.ddf.
4. Link all corresponding fields to the output side.
5. Save and compile the map.

Processing the Inbound Map

Procedure

1. Register the export map.
2. Process the ODBC_Export.txt file.
3. If the map is processed **OK**, export the file and enter any filename for the export.

Note: It will not create the file, Sterling Gentran:Server only needs a filename to kick off translator.

If the map is processed **NotOK**, debug the errors and reprocess the file.

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