

**Infonaut**

---

# Table Of Contents

|  |    |
|--|----|
| InfoNaut - The CONNX Query Tool .....  | 1  |
| InfoNaut® Basics .....   | 1  |
| To use InfoNaut.....   | 2  |
| To open a connection without a data source name .....                            | 9  |
| To open a connection using the CONNX OLE DB Provider .....                       | 10 |
| To view a list of previous connections .....                                     | 11 |
| To change the size of the query text box .....                                   | 13 |
| To enable read/write access to data .....  | 14 |
| To trace ODBC calls .....  | 15 |
| To enable Benchmark Mode .....   | 16 |
| To modify a CDD through InfoNaut (Available in InfoNaut Professional only) ..... | 17 |
| To open the CONNX Data Dictionary Viewer .....                                   | 18 |
| To create a view (Available in InfoNaut Professional only).....                  | 19 |
| To enable text wrap.....   | 21 |
| To tab through columns .....   | 22 |
| To show system tables.....   | 23 |
| To change the way DateTime data is shown in the results grid. ....               | 24 |
| To display the version number of InfoNaut .....                                  | 25 |
| To view a uniform SQL statement.....   | 26 |
| To view relational database SQL statements in InfoNaut.....                      | 28 |
| To refresh a CDD when executing a query.....                                     | 30 |
| Working with Transactions .....  | 32 |
| To start and commit a transaction in InfoNaut .....                              | 32 |
| To rollback a transaction in InfoNaut .....                                      | 33 |
| Query Builder .....  | 34 |
| Getting started.....   | 34 |
| Opening the Query Builder.....   | 35 |
| Adding an object to the query .....  | 37 |
| Editing object properties.....   | 40 |
| Joining tables .....   | 42 |
| Selecting output fields .....  | 46 |
| Sorting output fields .....  | 48 |
| Defining expression criteria.....  | 49 |
| Grouping output fields .....   | 50 |
| Adding a sub-query .....   | 51 |
| Adding a derived table .....   | 53 |
| Working with unions .....  | 55 |
| Union sub-query bracket operations.....  | 56 |
| Union operations.....  | 57 |

|   |     |
|---|-----|
| Navigating the query tree .....                                       | 62  |
| Working with Queries .....  | 63  |
| To open queries in InfoNaut.....                                      | 63  |
| To open CONNX InfoNaut Queries and SQL Script files.....              | 65  |
| To open SQL statements in InfoNaut (InfoNaut Professional only) ..... | 67  |
| To save queries (InfoNaut Professional only) .....                    | 69  |
| To view a query execution plan in InfoNaut.....                       | 70  |
| To assign a maximum number of rows in a query .....                   | 72  |
| To view recently executed queries.....                                | 73  |
| To adjust columns .....   | 75  |
| To assign grouping to a query .....                                   | 76  |
| To add parameters to a query.....                                     | 82  |
| To filter a query from within the More... pane .....                  | 85  |
| InfoNaut Report Writer .....  | 87  |
| Introduction .....  | 87  |
| Creating a Report with InfoNaut Report Writer .....                   | 88  |
| To open the InfoNaut Report Writer .....                              | 88  |
| To view a preview of a report in InfoNaut Report Writer .....         | 90  |
| Using the InfoNaut Report Writer Formatting Tools .....               | 92  |
| The Basics.....   | 92  |
| Report Writer Window.....   | 92  |
| Working with Field Objects in InfoNaut Report Writer .....            | 95  |
| Introduction to Field Objects .....                                   | 95  |
| Summary (Aggregate) Fields Property .....                             | 96  |
| To include a SummaryDistinctField in a report .....                   | 97  |
| To include a SummaryFunc in a report.....                             | 98  |
| To include a SummaryGroup in a report.....                            | 99  |
| To include a SummaryRunning in a report .....                         | 100 |
| To include a SummaryType in a report.....                             | 101 |
| Formatting Report Headers .....                                       | 102 |
| Report Headers.....   | 102 |
| To change the name of a report header .....                           | 103 |
| To change the font size used in a report header .....                 | 105 |
| To change the font color .....  | 106 |
| To change the back color.....   | 108 |
| To change the alignment of text.....                                  | 109 |
| To rotate text in a report header .....                               | 111 |
| To add a graphic .....  | 113 |
| To add graphical lines .....  | 115 |
| To change the line color .....  | 116 |
| To add and change the color of a border.....                          | 118 |
| Group Header Section.....   | 119 |

|   |     |
|---|-----|
| Group Headers.....  | 119 |
| To insert a group header.....                                       | 120 |
| Detail Section .....  | 122 |
| Page Headers .....  | 122 |
| To change the labels in a page header.....                          | 123 |
| To change the font, font size, and font color in a page header..... | 125 |
| To relocate and align fields .....                                  | 127 |
| To resize labels in a page header.....                              | 128 |
| To set a default font .....   | 129 |
| Detail Basics .....   | 130 |
| To change the fields.....   | 131 |
| To add Rich Text.....   | 132 |
| Group Footer Section .....  | 134 |
| Group Footers .....   | 134 |
| To create a group footer that includes an aggregate function .....  | 135 |
| Page Footer Section.....  | 137 |
| Page Footers.....   | 137 |
| To change the default page format.....                              | 138 |
| To add the time to a page footer.....                               | 139 |
| To add page numbers to a report .....                               | 140 |
| To add a page total to a footer.....                                | 141 |
| Report Footer Section .....   | 142 |
| Report Footers .....  | 142 |
| To add a grand total to the report footer .....                     | 143 |
| To add a checkbox to the page footer .....                          | 145 |
| Report Preview Tab.....   | 147 |
| Report Previews.....  | 147 |
| To remove the ruler from the Report Preview tab.....                | 148 |
| To move from the beginning to the end of the report.....            | 149 |
| To save the report to a file .....                                  | 150 |
| To use the Find tool .....  | 151 |
| To view single or multiple pages.....                               | 152 |
| To use the Zoom tool .....  | 153 |
| To print the report.....  | 154 |
| Starting Over .....   | 155 |
| To reset the report layout.....                                     | 155 |
| Printing .....  | 156 |
| To view a single or multiple pages.....                             | 156 |
| To use the zoom tool.....   | 158 |
| To move from the beginning to the end of the data .....             | 160 |
| To print the results of an executed query.....                      | 162 |
| Technical Support .....   | 164 |

|                                |     |
|--------------------------------|-----|
| Technical Support .....        | 164 |
| Trademarks and Copyrights..... | 165 |
| Trademarks and Copyright.....  | 165 |
| Index.....                     | 175 |



## InfoNaut - The CONNX Query Tool

### InfoNaut® Basics

---

InfoNaut and InfoNaut Professional were designed to meet the needs of CONNX customers who wish to access information simply and quickly. Unless specifically designated as features and functions solely of InfoNaut Professional, all features and functions described in this chapter are available in both InfoNaut versions.

The list of features and functions include:

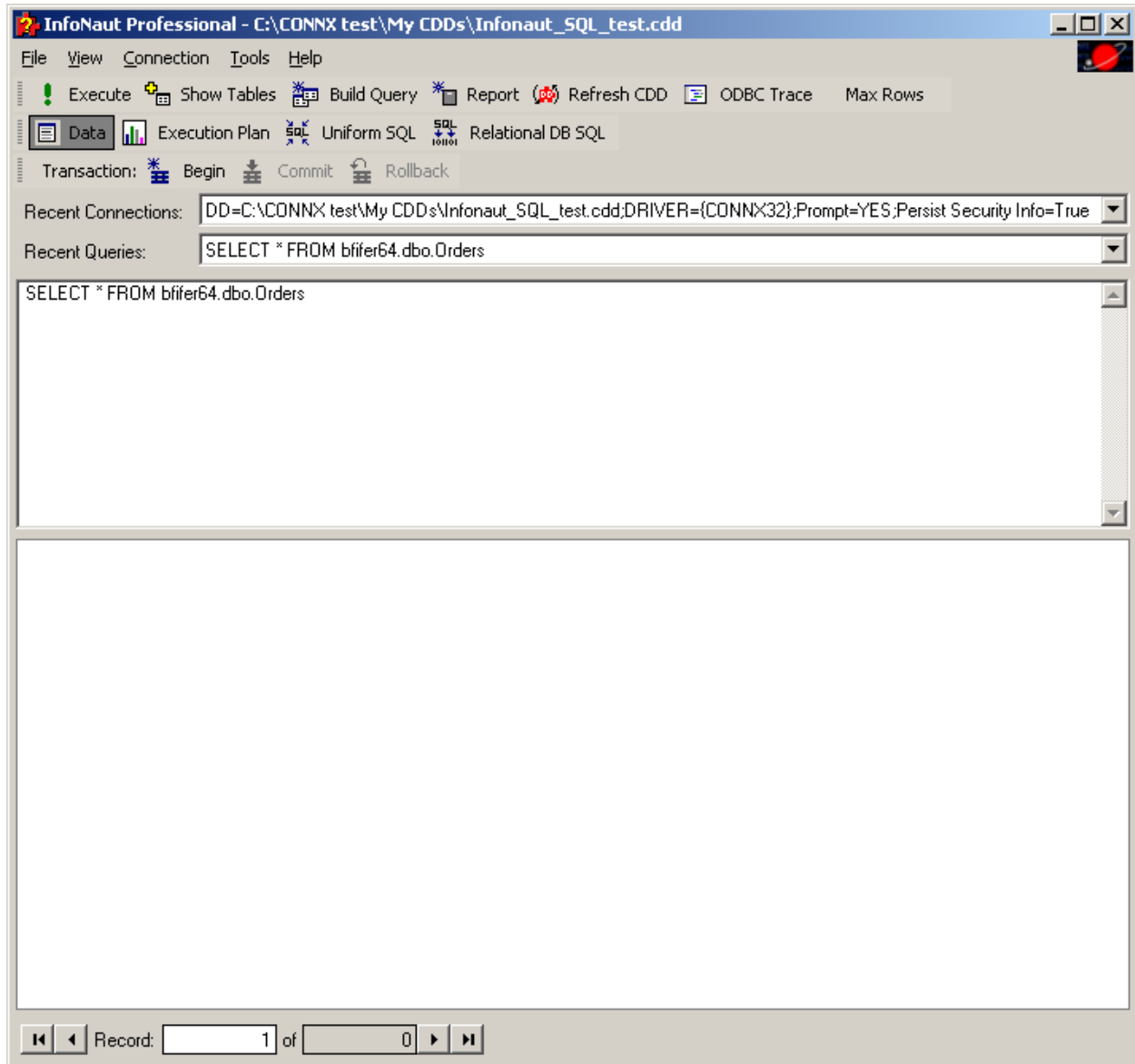
- Query memory, which enables users to recall queries executed.
- [Connection memory](#), which automatically prompts to reconnect to the last used data source upon startup.
- Asynchronous execution, which enables the data source connection and query execution to occur asynchronously.
- [Read/write capability](#), which enables users to query and update data directly on the grid.
- [CDD modification](#) capability. Only available in InfoNaut Professional.
- Ability to create [views](#). Only available in InfoNaut Professional.
- Results can be saved as Active Server Pages, Excel files, HTML pages, comma- or tab-separated files. Only available in InfoNaut Professional.
- [Benchmark mode](#), which enables users to perform queries multiple times and to view the average execution time.
- [Report generation](#). Only available in InfoNaut Professional.

In addition to the above list of features and functions, both InfoNaut and InfoNaut Professional lets users test their queries quickly before beginning extensive development efforts in other applications.

This application is a Windows-based tool.

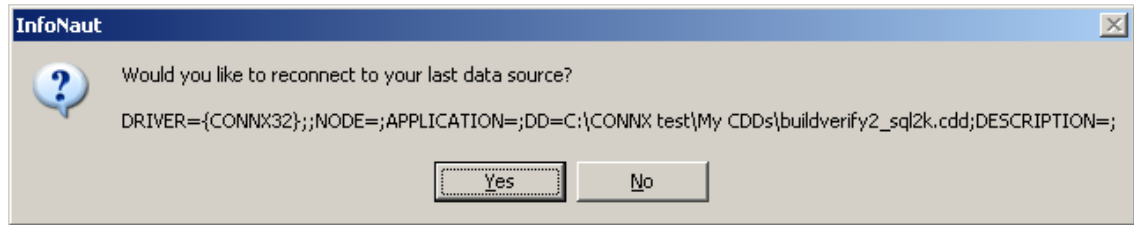
## To use InfoNaut

1. Click the **Start** button, and then point to **All Programs**. Point to **CONNX Driver**, and then click **InfoNaut - The CONNX Query Tool**. The main InfoNaut window opens. If you have licensed InfoNaut Professional, it is noted in the title bar.



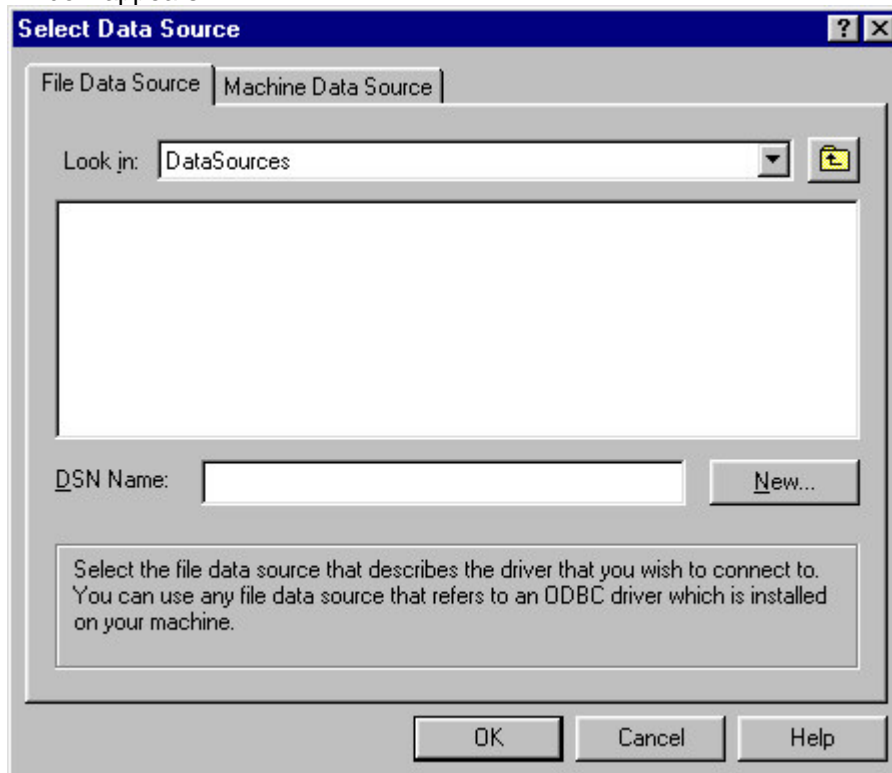
If you connected to a data source in a previous session of InfoNaut, a prompt appears asking whether you want to reconnect.



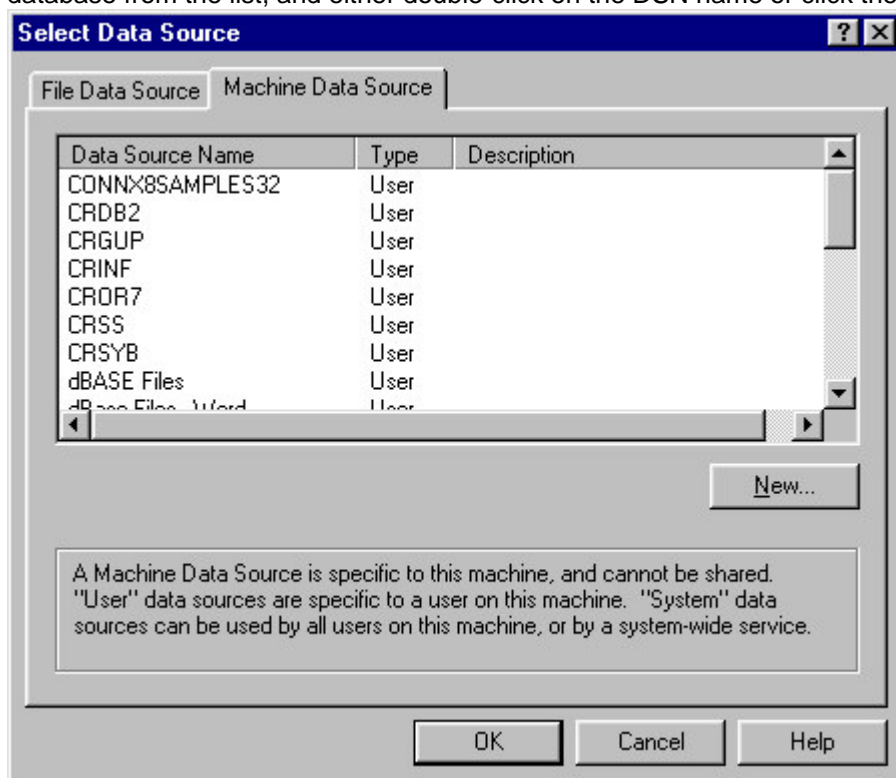


Click the **Yes** button to reconnect, and then proceed to Step 4.

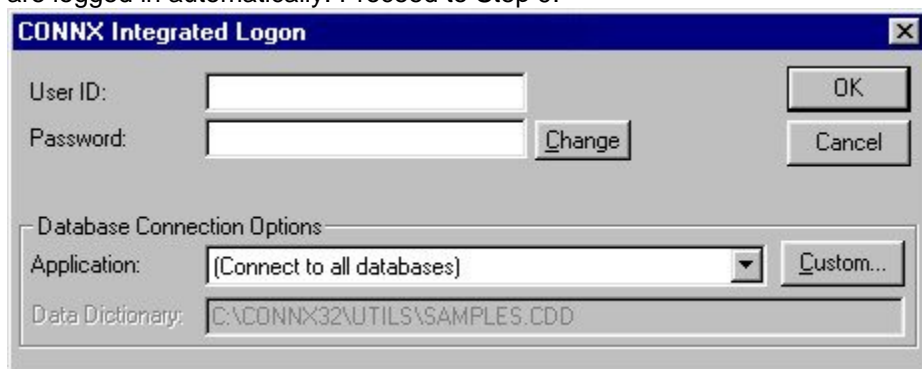
2. Select **Connection** from the menu bar, and then click **Add New Connection**. The Select Data Source window appears.



3. Click the **Machine Data Source** tab to view user and system DSNs. Select a DSN for your CONNX database from the list, and either double-click on the DSN name or click the **OK** button.



4. The **CONNX Integrated Logon** window appears. If you are using Windows NT Integrated Security, you are logged in automatically. Proceed to Step 9.

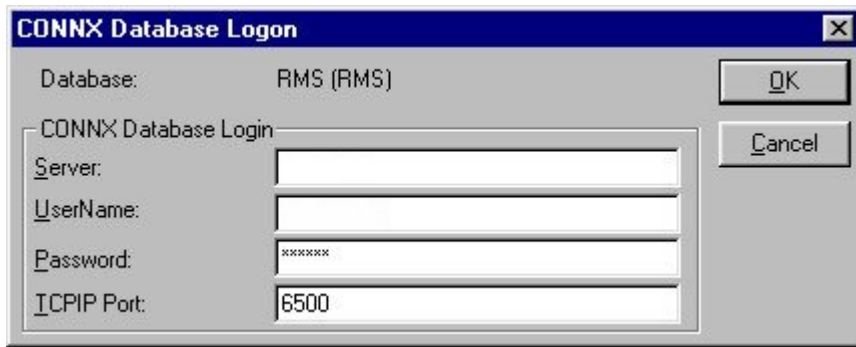


5. Type a CONNX user name in the **User Name** text box.

6. Type a CONNX password in the **Password** text box.

7. The default selection for the Application list box is a connection to all applications. If you want to change the default, enter the application type from the **Application** list box. See Managing Applications for a description of how to set up applications and application security.

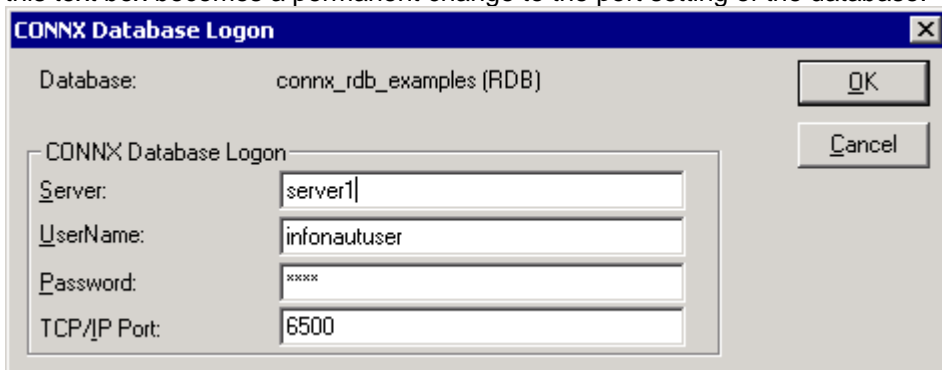
If you are using RMS or VSAM databases, the CONNX Database Logon dialog box appears. Type the **server name**, a **user name**, and a **password** in the corresponding text boxes on the **Logon Information** tab. Port 6500 is listed in the TCPIP Port text box by default. Any change made to the port setting in this text box becomes a permanent change to the port setting of the database.



8. Click the **OK** button to establish a connection to your data. The **Connection Established** message box appears.

9. If you have not previously connected to a database, the CONNX Database Logon dialog box appears. If you have a previous connection, proceed to Step 11.

1. Type the server name, a user name, and password in the corresponding text boxes on the **Logon Information** tab.
2. Port 6500 is listed in the TCP/IP Port text box by default. Any change made to the port setting in this text box becomes a permanent change to the port setting of the database.

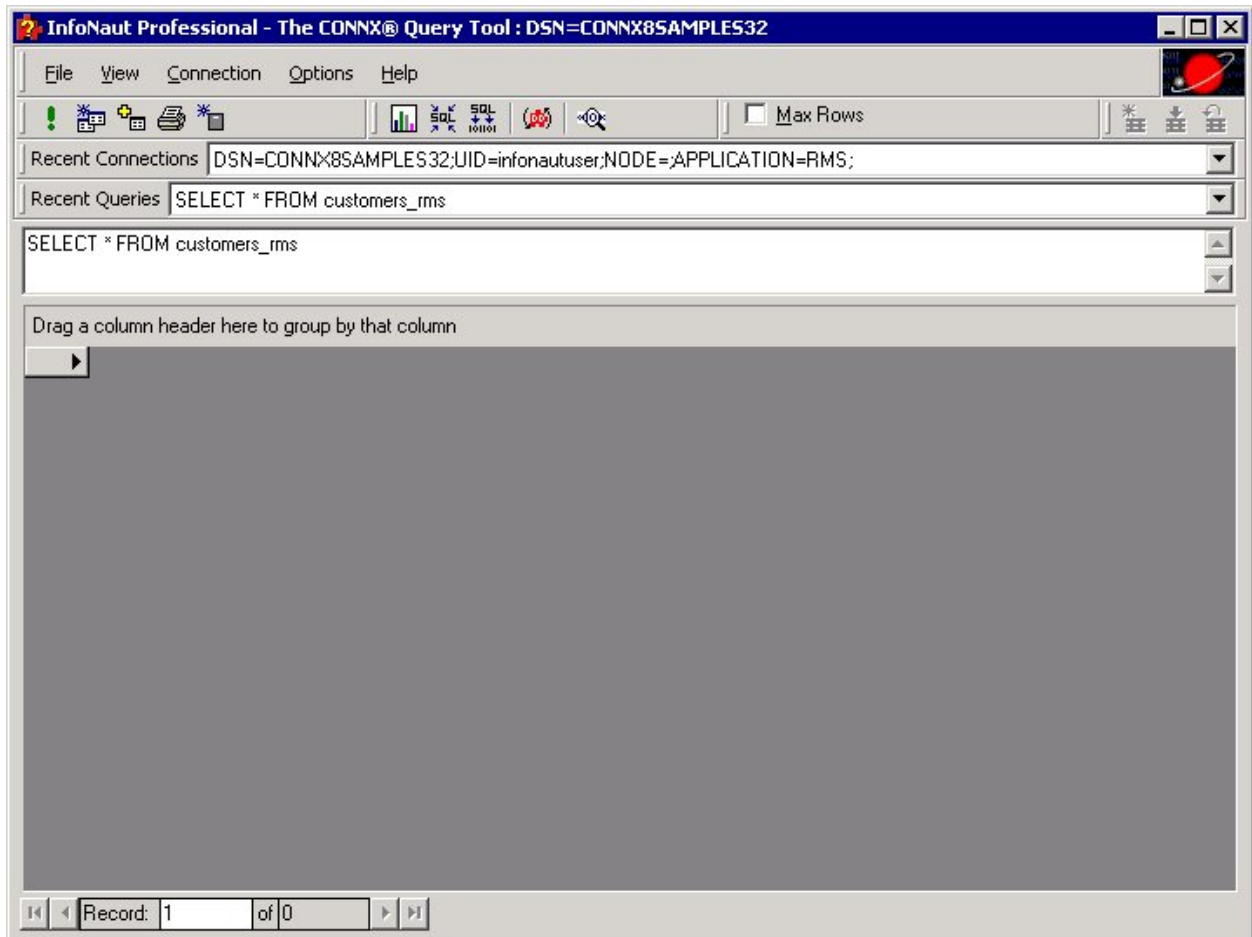


10. Click the **OK** button to establish a connection to your data.

11. To view the tables in the selected database to which you have access, click the **Show Tables** button in the InfoNaut window. The Tables window opens with a list of your tables. Double-click on a table to create a query that selects all data from the table.



12. The query `SELECT * FROM <TABLENAME>` is inserted into the query text box on the main form.

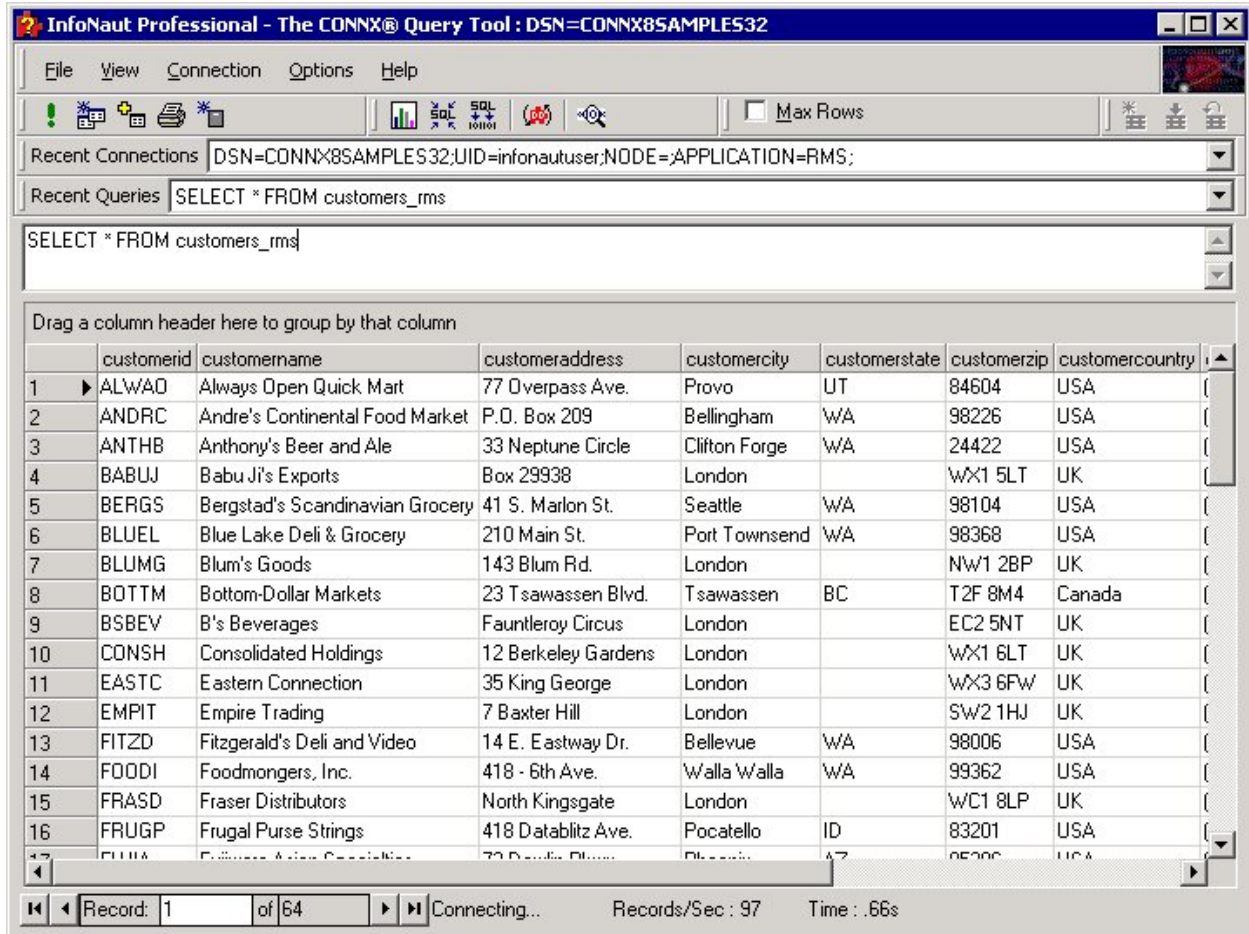


13. On the File menu, select **Execute query** or click the **Execute query** button to run the query and view the results.



### Execute query button

Returned data appears in the lower pane. See "Chapter 2: CONNX Security" in the CONNX User Reference Online Guide or the Security and Administration Guide for more information on database and application management.



To run a new query against the same database, type a query in the **Query** text box. The **Query** button is enabled if you have an established connection to a data source.

14. To create a query graphically, click the **Build query** button to open the Query Builder window.



### Build query button

See InfoNaut Query Builder for more information.

15. Click the **Execute query** button to execute the query. Click the **Execute query** button again to cancel lengthy queries.

16. To open another data source, click on the **Connection** menu, and then click **Add Connection**. The current data source is closed before a new data source is opened.

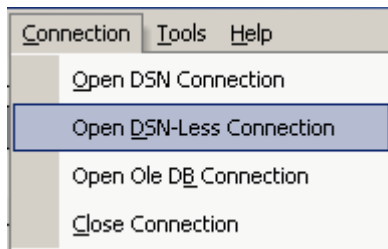
17. To close the current data source, click on the **Connection** menu, and then click **Close Connection**. The current data source is closed, and a new data source can be opened by clicking **Add Connection** on the **Connection** menu.

18. Click the **Exit** button to close the application.

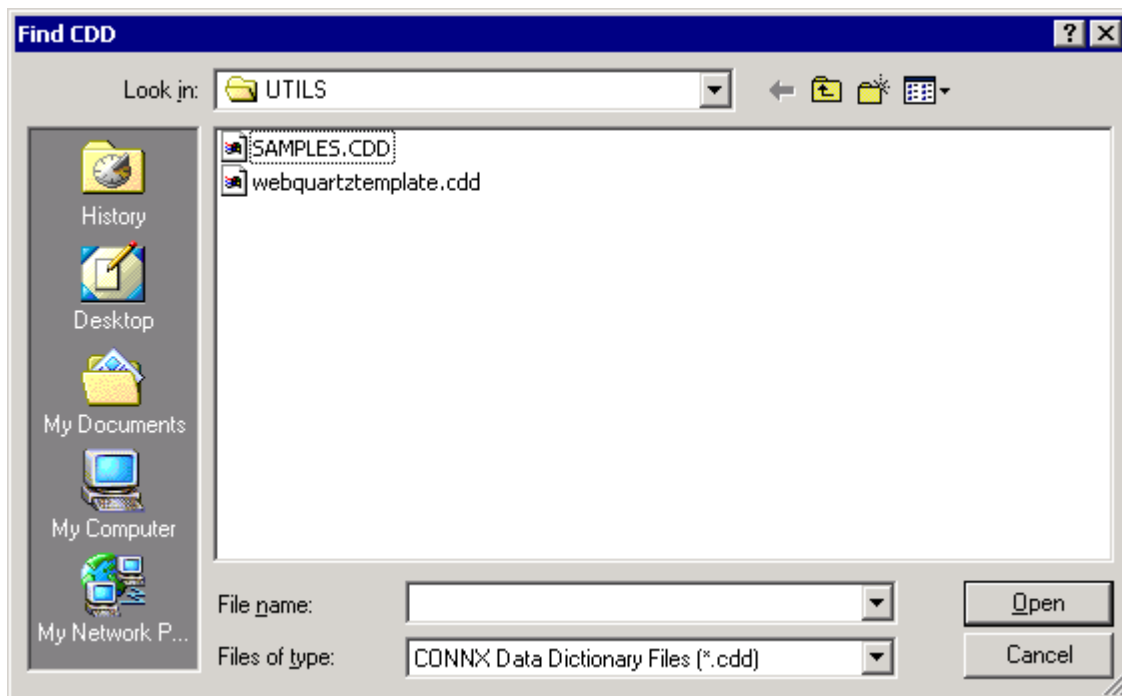
**To open a connection without a data source name**

---

1. On the **Connection** menu, select **Open DSN-Less Connection**.



2. The **Find CDD** dialog box appears.

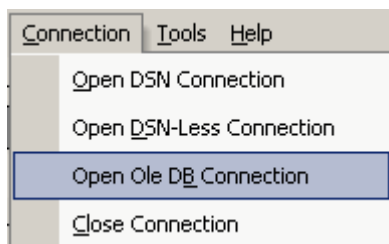


3. Browse to select a .cdd file, and then click the **Open** button.
4. The **CONNX Integrated Logon** dialog box appears. Log on to the selected databases, and then click the **OK** button.

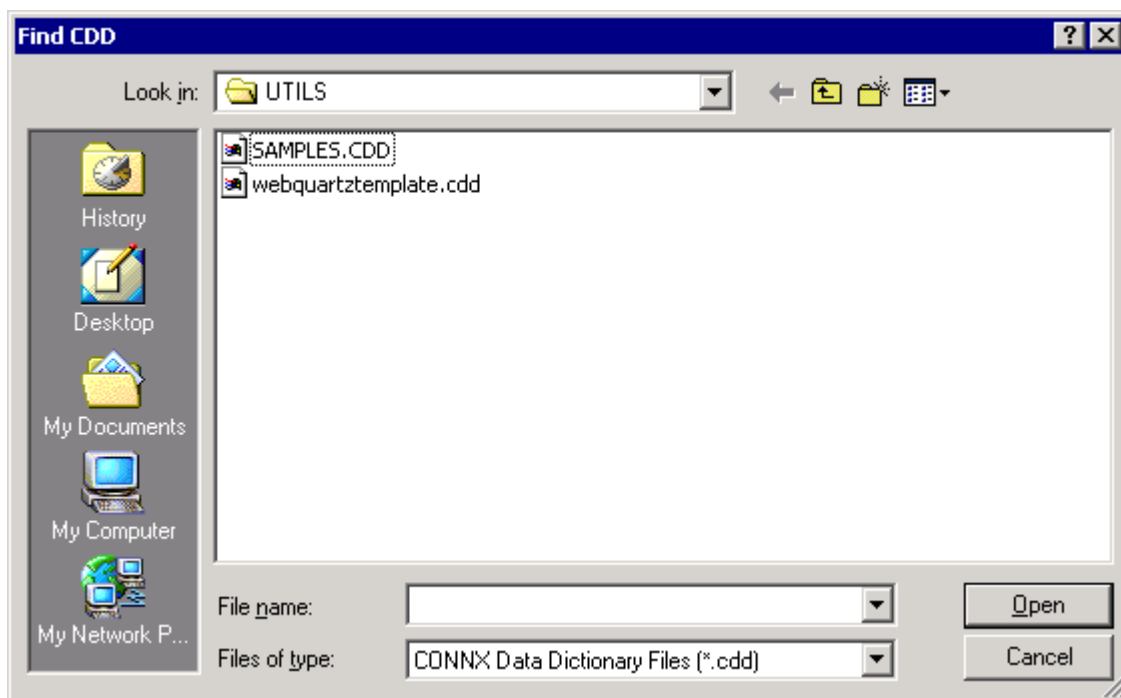
## To open a connection using the CONNX OLE DB Provider

---

1. On the **Connection** menu, select **Open OLE DB Connection**.



2. The **Find CDD** dialog box appears.

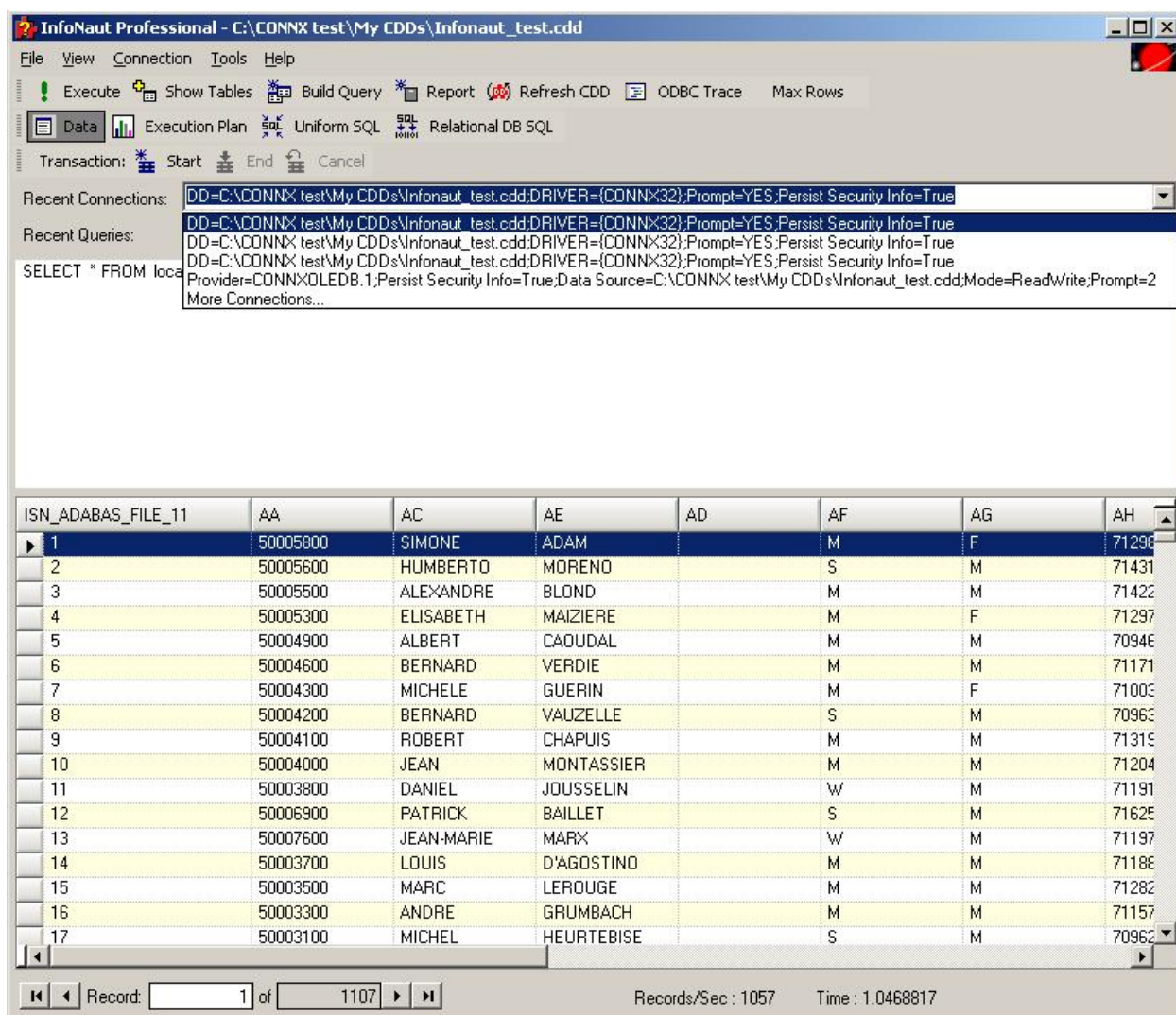


3. Browse to select a .cdd file, and then click the **Open** button.
4. The **CONNX Integrated Logon** dialog box appears. Log on to the selected databases, and then click the **OK** button.

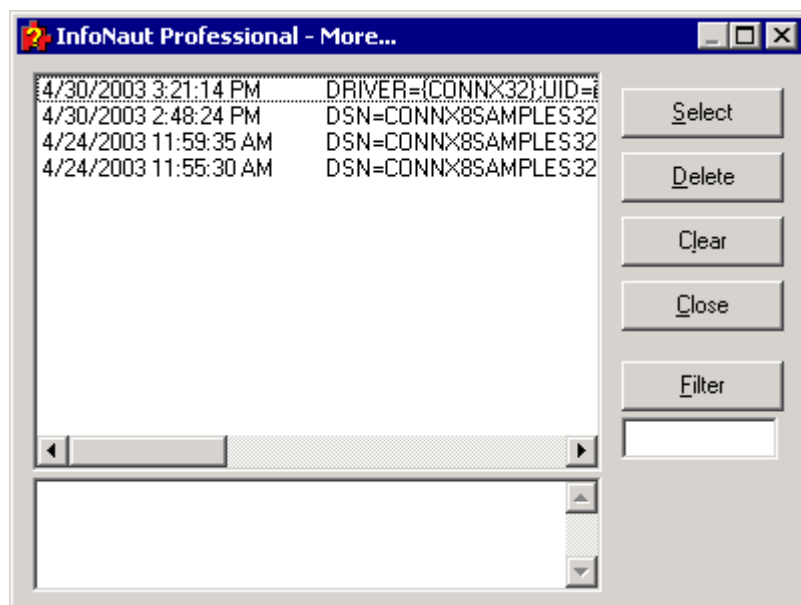


**To view a list of previous connections**

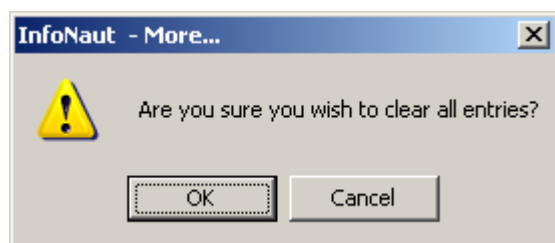
1. The most recent connections are listed in the Recent Connections list box. Select the down arrow to view the list. To see the complete list of connections, select **Recent Connections**.



2. To see additional connections, select **More Connections...** from the drop-down list The Infonaut - More... window appears. A list of all previous connections is displayed.



3. Click the **Select** button to change your current connection. You can choose from any of the connections listed to automatically change your connection in the InfoNaut window.
4. Select one of the connections listed and then click the **Delete** button to delete the connection. This removes the connection from the log file.
5. Click the **Clear** button to erase the entire log file. The following appears:

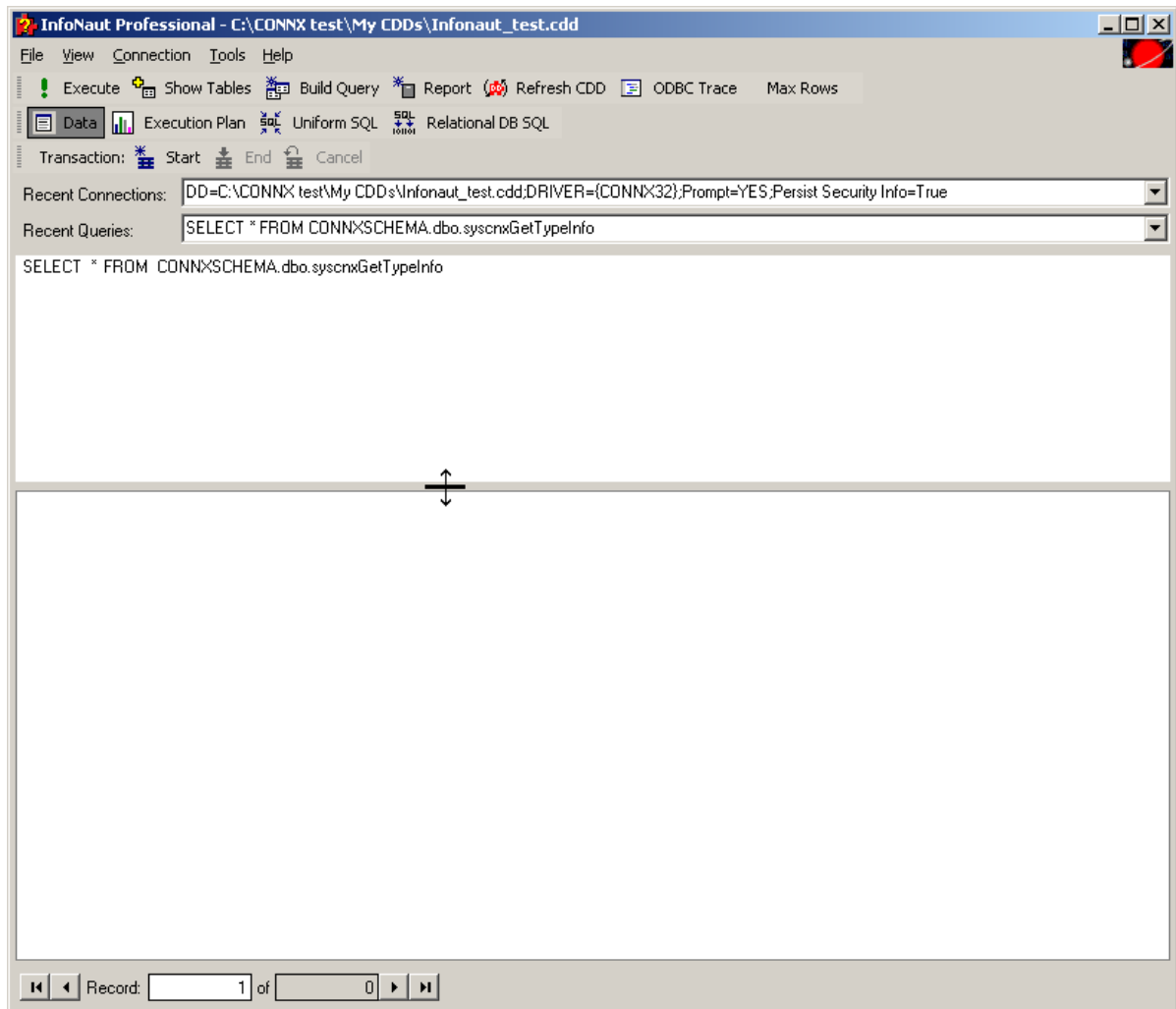


Click OK to erase the log file.

6. Click **Close** to return to the InfoNaut window.

**To change the size of the query text box**

1. Place the cursor over the frame above the lower query pane. The cursor changes to a double-pointed arrow.



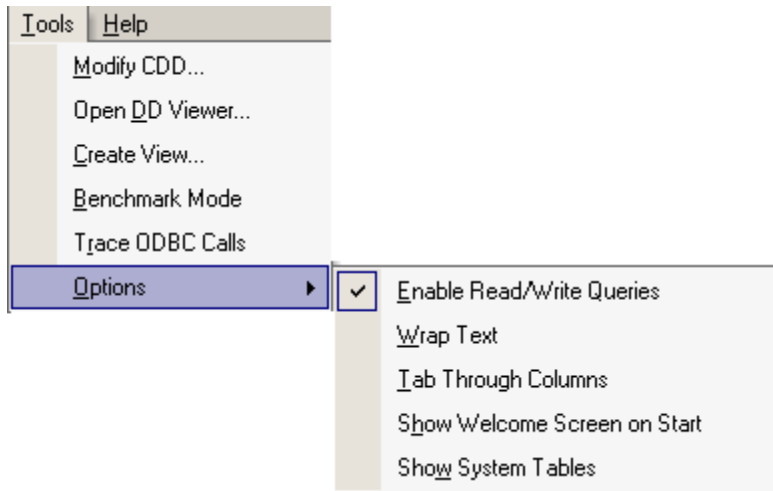
2. Left-click on the frame and slide the arrow up or down to raise or lower the height of the lower pane.

### To enable read/write access to data

By default, InfoNaut has read-only capabilities designed to protect end users from making changes to the data source. To modify values that are returned in the results pane, select Enable Read/Write Queries on the Options menu. Once selected, all future queries have read/write access.

- On the **Options** menu, select **Enable Read/Write Queries**.

**Note:** Existing values cannot be modified without re-executing the query.

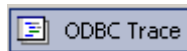
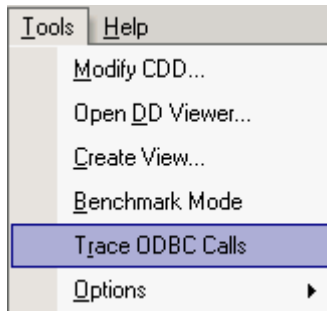


## To trace ODBC calls

---

ODBC calls can be traced in InfoNaut for

- On the Options menu, select **Trace ODBC Calls** or click the **Trace** button on the toolbar.

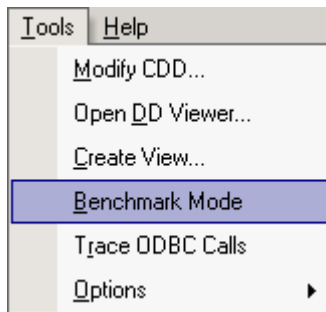


All subsequent ODBC calls are written to the log file specified by the ODBC registry settings in Windows. To stop further tracing, click the **Trace** button or Trace menu.

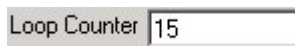
### To enable Benchmark Mode

---

1. On the **Tools** menu, select **Benchmark Mode**.



2. The **Loop Counter** text box appears below the toolbar..



3. Enter the number of times you want to execute the current query in the **Loop Counter** text box and then click the **Execute** button.



4. The query is executed the number of times stated in the Loop Counter text box. When complete, a message box appears stating the total time it took to execute the query and the average time of execution.



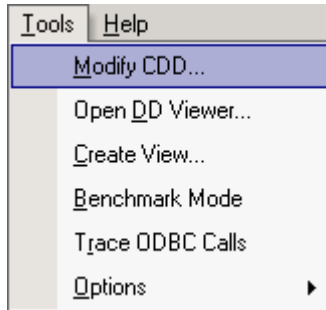
5. On the **Options** menu, clear **Benchmark Mode** to return the **Query** button default.

**To modify a CDD through InfoNaut (Available in InfoNaut Professional only)**

---

CDDs may be modified with in the CONNX Data Dictionary Manager window using the InfoNaut connection.

1. On the **Tools** menu, select **Modify CDD**.



2. If you installed the CDD Administrator, the current data dictionary to which you are connected will be opened for editing. Once you have made changes and closed the CONNX Data Dictionary Manager window, the CDD is automatically refreshed.

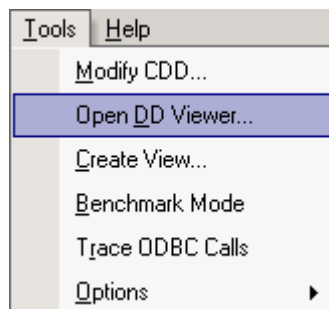
**Note:** Any structural changes made to the database (add/delete columns) will not be refreshed. Close your connection and reconnect to your CDD to refresh the structural changes.

### To open the CONNX Data Dictionary Viewer

---

The CONNX Data Dictionary Viewer, which can be used to view data dictionary information, can be opened from within InfoNaut.

1. On the **Tools** menu, select **Open DD Viewer**.



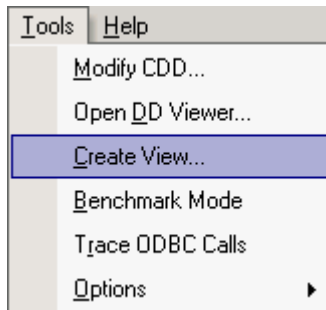


**To create a view (Available in InfoNaut Professional only)**

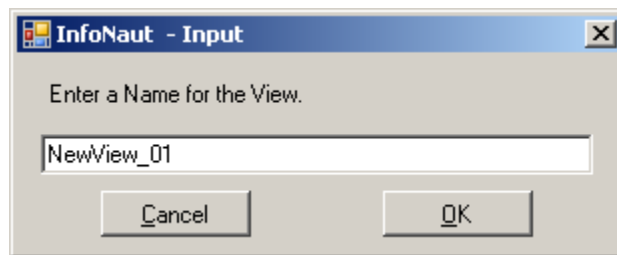
---

Views can be created within InfoNaut and saved in the CONNX Data Dictionary Manager window.

1. On the **Tools** menu, select **Create View**.

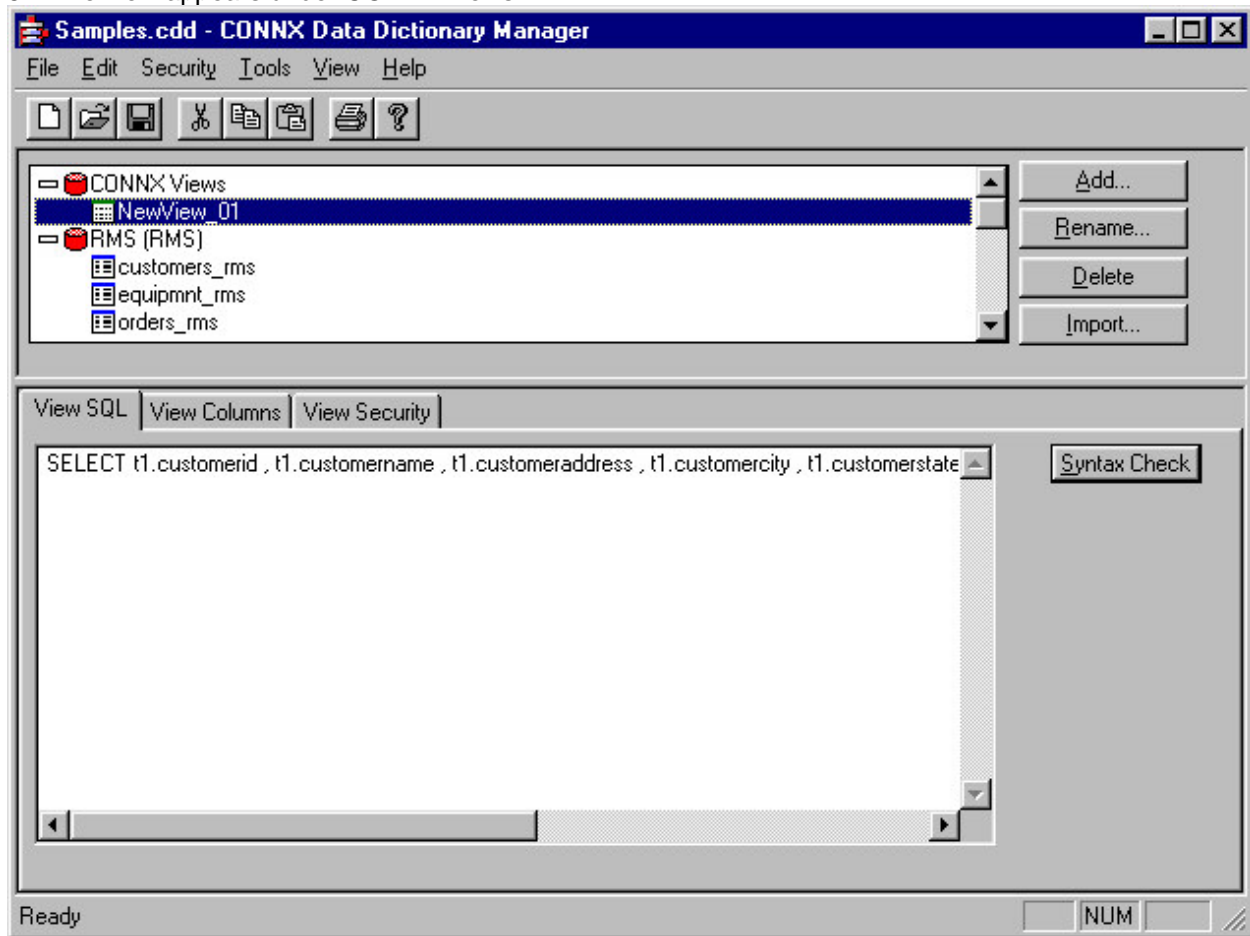


2. The **Input** text box appears. Type a name for the view in the text box, and then click **OK**.



3. A message appears stating the view was created successfully.
4. To verify the view, open the CONNX Data Dictionary Manager window.

5. The view appears under CONNX views.



**Important:** To use this feature, the Allow "Create View" SQL Statements option must be selected in the CONNX Data Dictionary Manager window. See CONNX Security for more information.

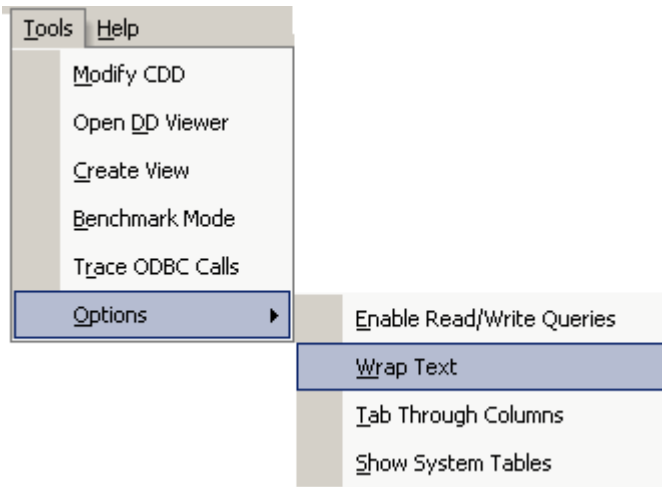
**Note:** Some menu options are enabled only if you are connected to a data source and have created a query.

**To enable text wrap**

---

Text contained within any row can be adjusted to wrap within the cell.

1. On the **Tools** menu, select **Options** , and then select **Wrap Text**.



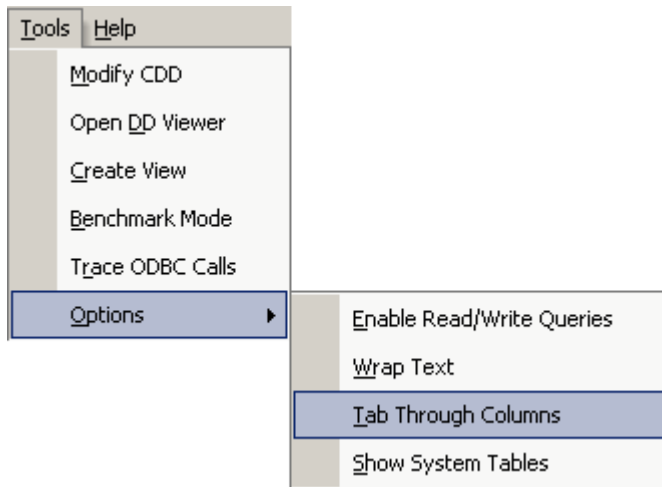
2. With the menu option enabled, text that does not fit in the dimensions of the current cell is wrapped to the next line in the cell. The text may not be visible if the height of the row is inadequate. You can change the height of each row by dragging the lower border of the row downward until the row reaches a desired height and the text is visible.

## To tab through columns

---

You can use the tab function to move quickly through columns displayed in the lower pane.

1. On the **Tools** menu, select **Options** , and then select **Tab Through Columns**.



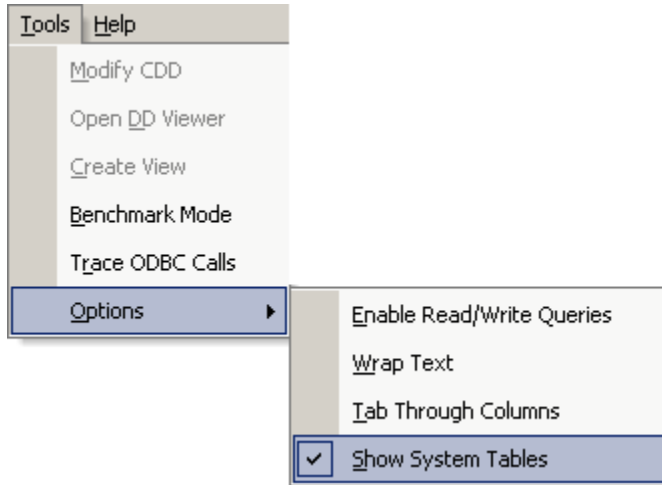
2. With the menu option enabled, you can press the **<Tab>** key to move through the data contained within the columns. With this option disabled, pressing the **<Tab>** key while in the grid will move the cursor to the next control in the tab order.

## To show system tables

---

You can see the table metadata by showing system tables.

1. On the **Tools** menu, select **Options** , and then select **Show System Tables**.



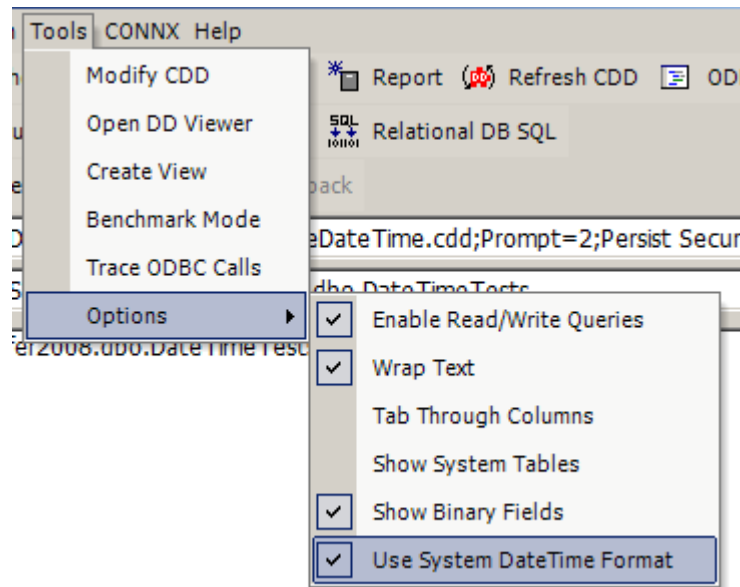
2. With the menu option enabled, you can press the **<Tab>** key to move through the data contained within the columns. With this option disabled, pressing the **<Tab>** key while in the grid will move the cursor to the next control in the tab order.

### To change the way DateTime data is shown in the results grid.

---

You can change the display format for datetime data in the results grid with an option.

1. On the **Tools** menu, select **Options** , and then select **Use System DateTime Format**.



2. When checked, this will use the System DateTime format which can be configured. The system settings can be changed by opening "Control Panel" --> "Regional and Language Options" --> "Customize this format..." .
3. This option will be unchecked by default, if unchecked it will use the internal datetime format that InfoNaut has been using.

### **To display the version number of InfoNaut**

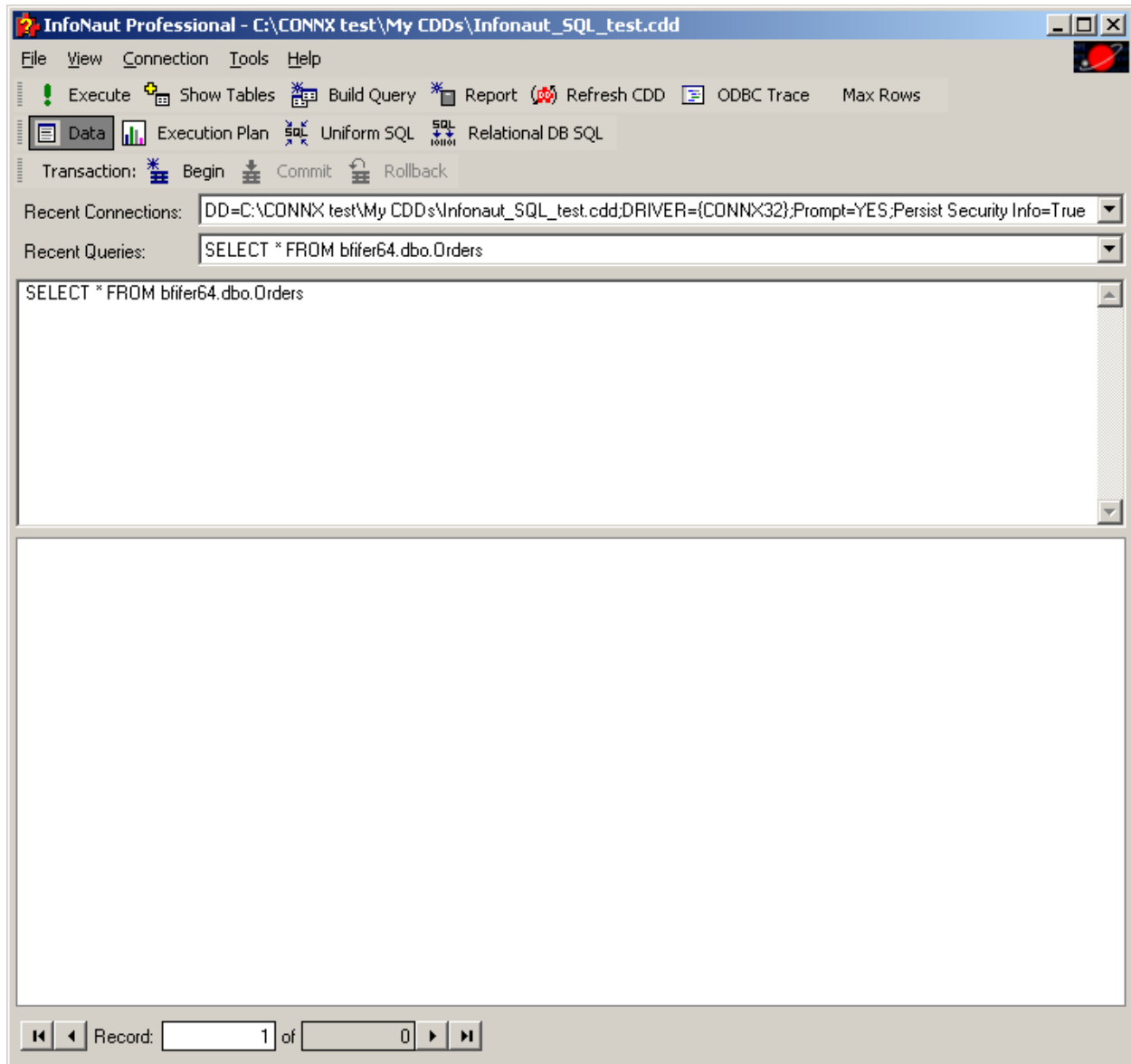
---

When performing an InfoNaut upgrade, from InfoNaut to InfoNaut Professional, for example, you can review exactly which InfoNaut version and build is currently installed.

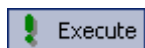
1. On the **Help** menu, select **About**.
2. The **InfoNaut** splash screen appears with InfoNaut version and build numbers displayed.

## To view a uniform SQL statement

1. Click the **Start** button, and then point to **All Programs**. Point to **CONNX Driver**, and then click **InfoNaut - The CONNX Query Tool**. The main InfoNaut window opens.



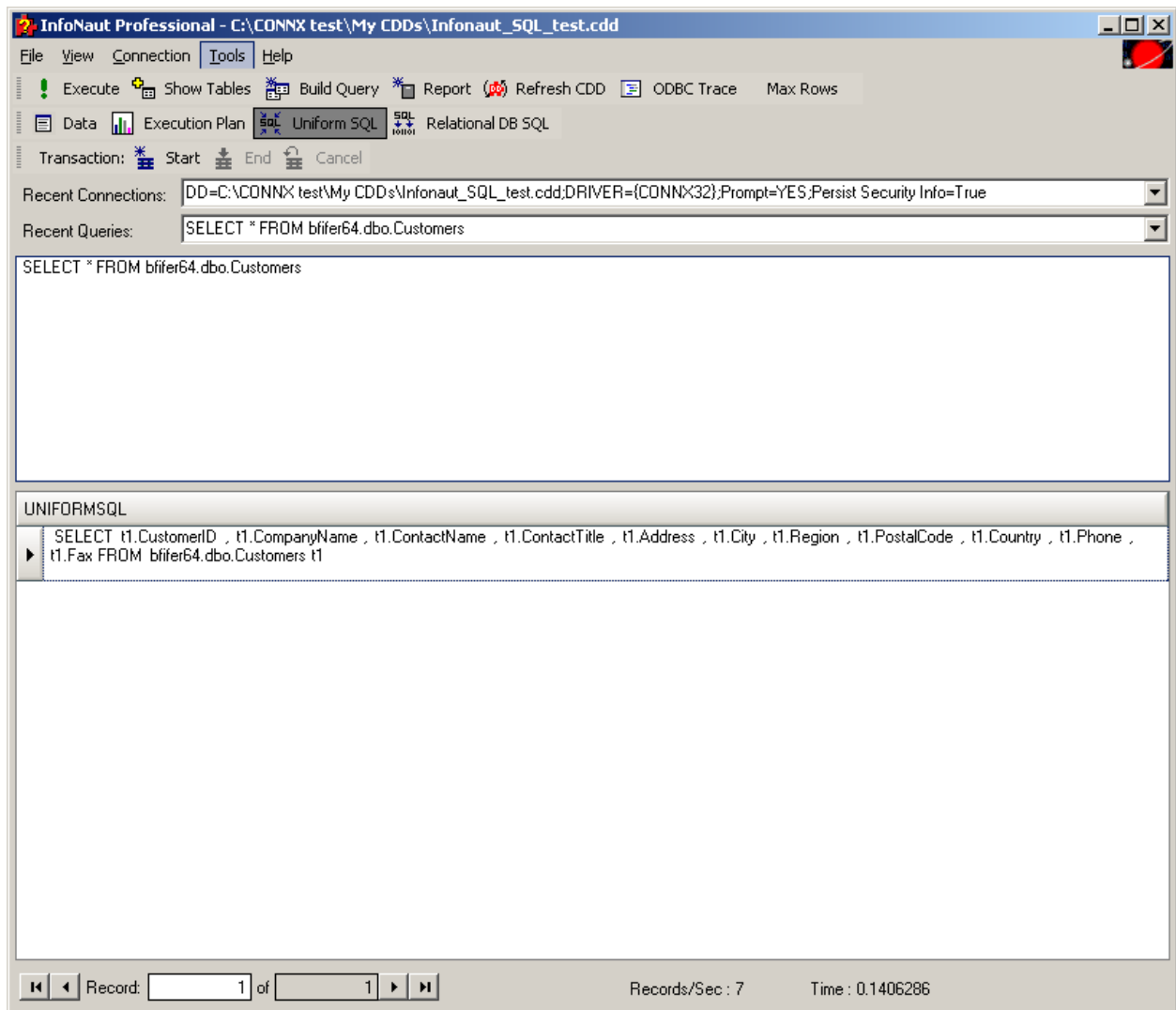
2. Add a connection to a data source.
3. Create a query. Click the **Uniform SQL** button, and then click the **Execute** button to view the uniform SQL statement.



Execute query button



4. The uniform SQL statement appears in the lower pane.

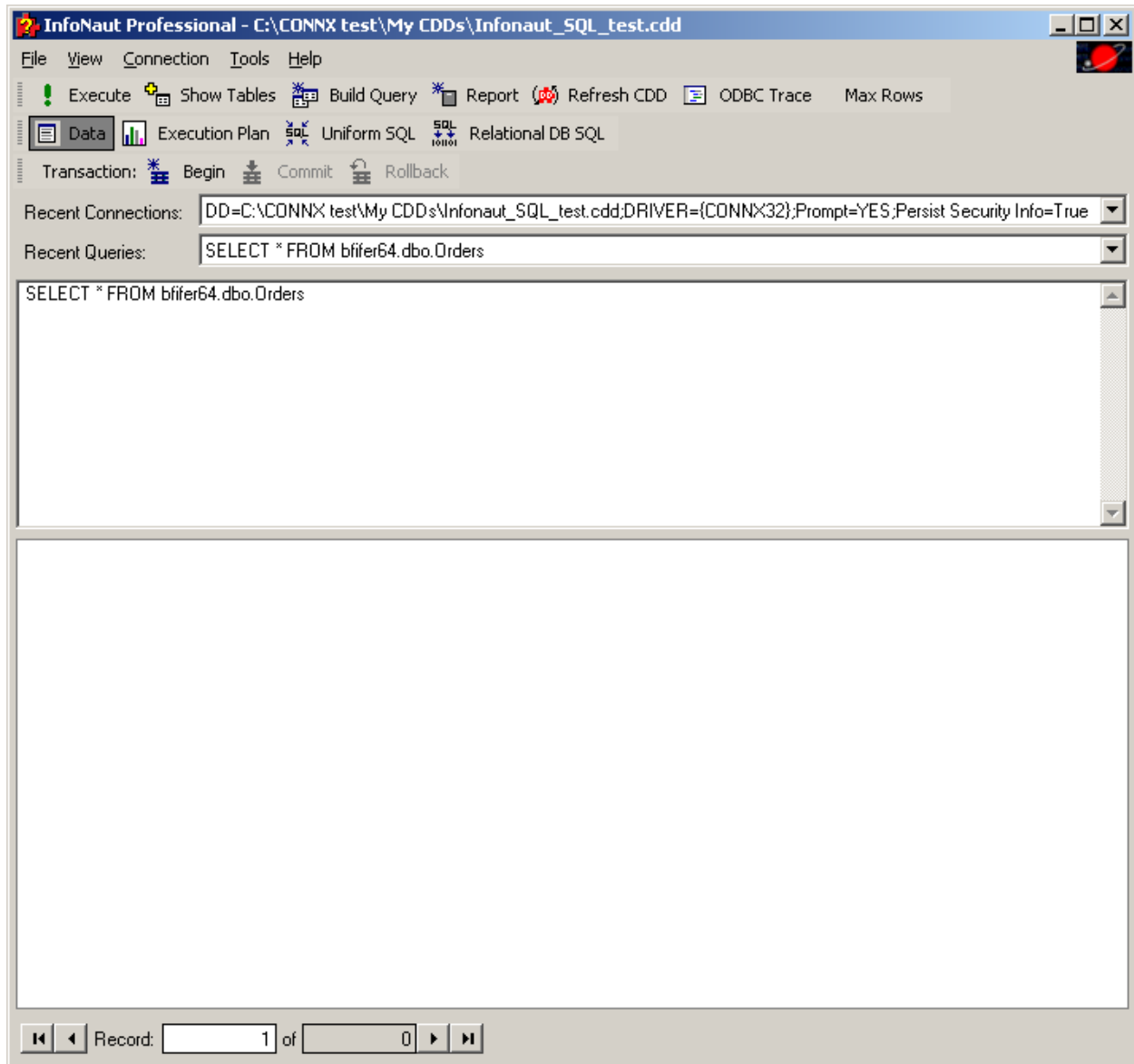


5. Click the **Uniform SQL** button and the **Execute query** button again in order to return to viewing the contents of the database.

## To view relational database SQL statements in InfoNaut

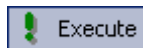
Relational databases that can be used with InfoNaut include Oracle, Oracle Rdb, IBM DB2, Microsoft SQL Server, Sybase, and Informix, although there are others available through the CONNX OLE DB and ODBC Desktop and Enterprise adapters.

1. Click the **Start** button, and then point to **All Programs**. Point to **CONNX Driver**, and then click **InfoNaut - The CONNX Query Tool**. The main InfoNaut window opens.

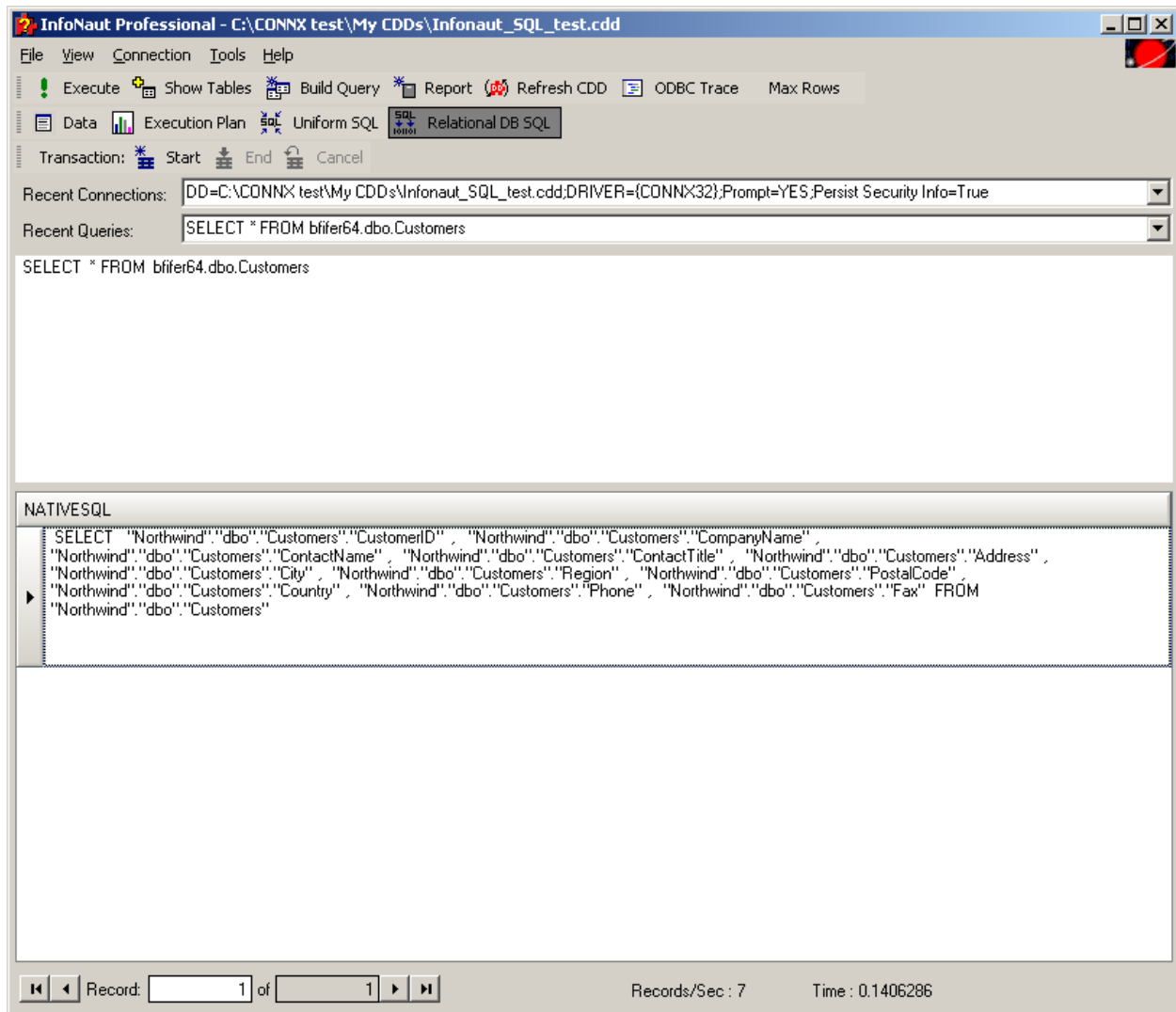


2. Add a connection to a data source.
3. Create a query. Click the **Relational Database SQL** button, and then click the **Execute** button to view the relational database SQL statement.

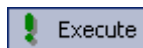
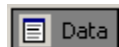




4. The SQL statement appears in the lower pane.



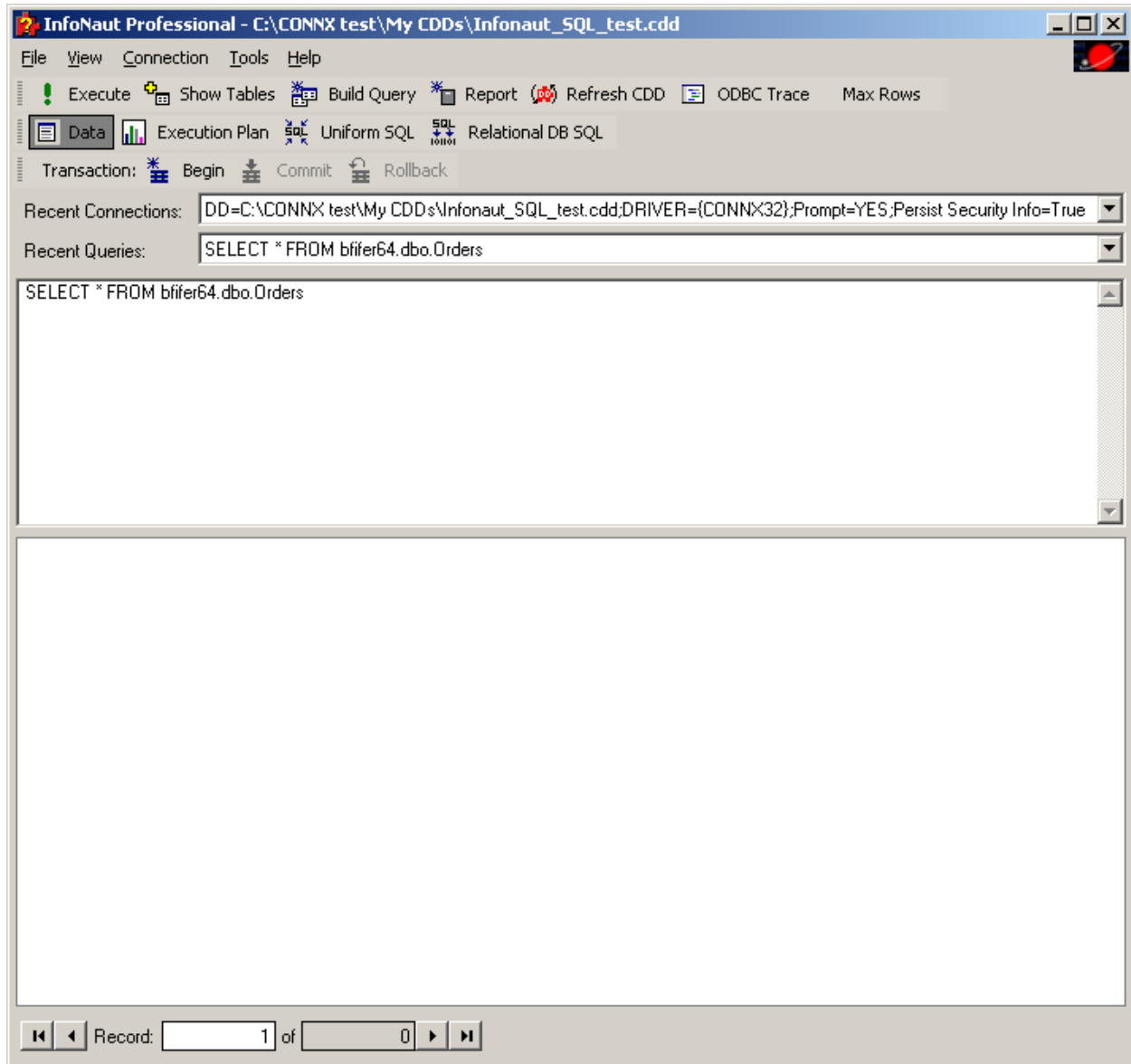
5. Click the **Data** button and the **Execute** button again in order to return to viewing the contents of the database.



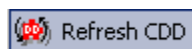
## To refresh a CDD when executing a query

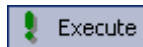
Refresh the CDD if the CDD has been modified outside of this Infonaut session ( for example, by a concurrent user).

1. Click the **Start** button, and then point to **All Programs**. Point to **CONNX Driver**, and then click **InfoNaut - The CONNX Query Tool**. The main InfoNaut window opens.



2. Add a connection to a data source. See [To use InfoNaut](#).
3. Create a query. See [To build a query using Query Builder](#).
4. Click the **Refresh CDD** button, and then click the **Execute** button.





5. InfoNaut retrieves the current copy of the CDD and loads it into memory.

**InfoNaut Professional - C:\CONNX test\My CDDs\Infonaut\_SQL\_test.cdd**

File View Connection Tools Help

Execute Show Tables Build Query Report Refresh CDD ODBC Trace Max Rows

Data Execution Plan Uniform SQL Relational DB SQL

Transaction: Start End Cancel

Recent Connections: DD=C:\CONNX test\My CDDs\Infonaut\_SQL\_test.cdd;DRIVER={CONNX32};Prompt=YES;Persist Security Info=True

Recent Queries: SELECT \* FROM bfifer64.dbo.Customers

SELECT \* FROM bfifer64.dbo.Customers

| CustomerID | CompanyName        | ContactName       | ContactTitle    | Address           | City         | Region | PostalCode |
|------------|--------------------|-------------------|-----------------|-------------------|--------------|--------|------------|
| ALFKI      | Jambalayas stuff   | Last              | ACEO            | Obere Str. 57     | Berlin       |        | 12209      |
| ANTON      | Antonio Moreno     | Antonio Moreno    | Owner           | Mataderos 2312    | México D.F.  |        | 05023      |
| AROUT      | Around the Horn    | Thomas Hardy      | Sales           | 120 Hanover Sq.   | London       |        | WA1 1DP    |
| BERGS      | Berglunds          | Christina         | Order           | Berguvsvägen 8    | Luleå        |        | S-958 22   |
| BLAUS      | Blauer See         | Hanna Moos        | Sales           | Forsterstr. 57    | Mannheim     |        | 68306      |
| BLONP      | Blondesddsl père   | Frédérique        | Marketing       | 24, place Kléber  | Strasbourg   |        | 67000      |
| BOLID      | Bólido Comidas     | Martín Sommer     | Owner           | C/ Araquil, 67    | Madrid       |        | 28023      |
| BONAP      | Bon app'           | Laurence Lebihan  | Owner           | 12, rue des       | Marseille    |        | 13008      |
| BOTTM      | Bottom-Dollar      | Elizabeth Lincoln | Accounting      | 23 T sawassen     | T sawassen   | BC     | T2F 8M4    |
| BSBEV      | B's Beverages      | Victoria Ashworth | Sales           | Fauntleroy Circus | London       |        | EC2 5NT    |
| CACTU      | Cactus Comidas     | Patricio Simpson  | Sales Agent     | Cerrito 333       | Buenos Aires |        | 1010       |
| CENTC      | Centro comercial   | Francisco Chang   | Marketing       | Sierras de        | México D.F.  |        | 05022      |
| CHOPS      | Chop-suey          | Yang Wang         | Owner           | Hauptstr. 29      | Bern         |        | 3012       |
| COMMI      | Comércio Mineiro   | Pedro Afonso      | Sales Associate | Av. dos Lusíadas, | Sao Paulo    | SP     | 05432-043  |
| CONSH      | Consolidated       | Elizabeth Brown   | Sales           | Berkeley Gardens  | London       |        | WX1 6LT    |
| DRACD      | Drachenblut        | Sven Ottlieb      | Order           | Walsertweg 21     | Aachen       |        | 52066      |
| DUMON      | Du monde entier    | Janine Labrune    | Owner           | 67, rue des       | Nantes       |        | 44000      |
| EASTC      | Eastern            | Ann Devon         | Sales Agent     | 35 King George    | London       |        | WX3 6FW    |
| ERNSH      | Ernst Handel       | Roland Mendel     | Sales Manager   | Kirchgasse 6      | Graz         |        | 8010       |
| FAMIA      | Familia Arquibaldo | Aria Cruz         | Marketing       | Rua Orós, 92      | Sao Paulo    | SP     | 05442-030  |
| FISSA      | FISSA Fabrica      | Diego Roel        | Accounting      | C/ Moralzarzal,   | Madrid       |        | 28034      |
| FOLIG      | Folies             | Martine Rancé     | Assistant Sales | 184, chaussée de  | Lille        |        | 59000      |
| FOLKO      | Folk och få HB     | Maria Larsson     | Owner           | Åkergatan 24      | Bräcke       |        | S-844 67   |

Record: 1 of 91

Records/Sec : 324 Time : 0.2812572

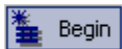
## Working with Transactions

### To start and commit a transaction in InfoNaut

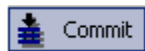
---

If the database you are using supports transactions, where transactions can be started, committed, and canceled or rolled back, you can also use this feature within InfoNaut. For more information on transactions and rollbacks in CONNX, see "Record Locking and Transactions" in the CONNX User Reference Guide. *Note:* Transactions are disabled for connections that contain at least one database that does not support transactions.

1. Create a query with data from databases that support transactions.
2. Click the **Begin** transaction button.



3. The transaction is started and all subsequent data modifications are contained in this transaction.
4. To commit the transaction, click the **Commit** transaction button.



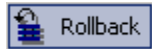
5. All modifications in the transaction are committed to the database.

### **To rollback a transaction in InfoNaut**

---

Canceling a transaction begins a rollback procedure that returns the transaction to its original state.

1. Create a query with data from databases that support transactions.
2. Click the **Rollback** transaction button  
button.



3. The transaction is canceled and all changes made to the database are rolled back.

## **Query Builder**

### **Getting started**

---

Query Builder allows you to build complex SQL queries via an intuitive visual interface.

Query Builder will help you to write correct SQL code without technical details. To work with Query Builder, you need to know basic SQL concepts; if you do not understand SQL principles you may not get the desired results.

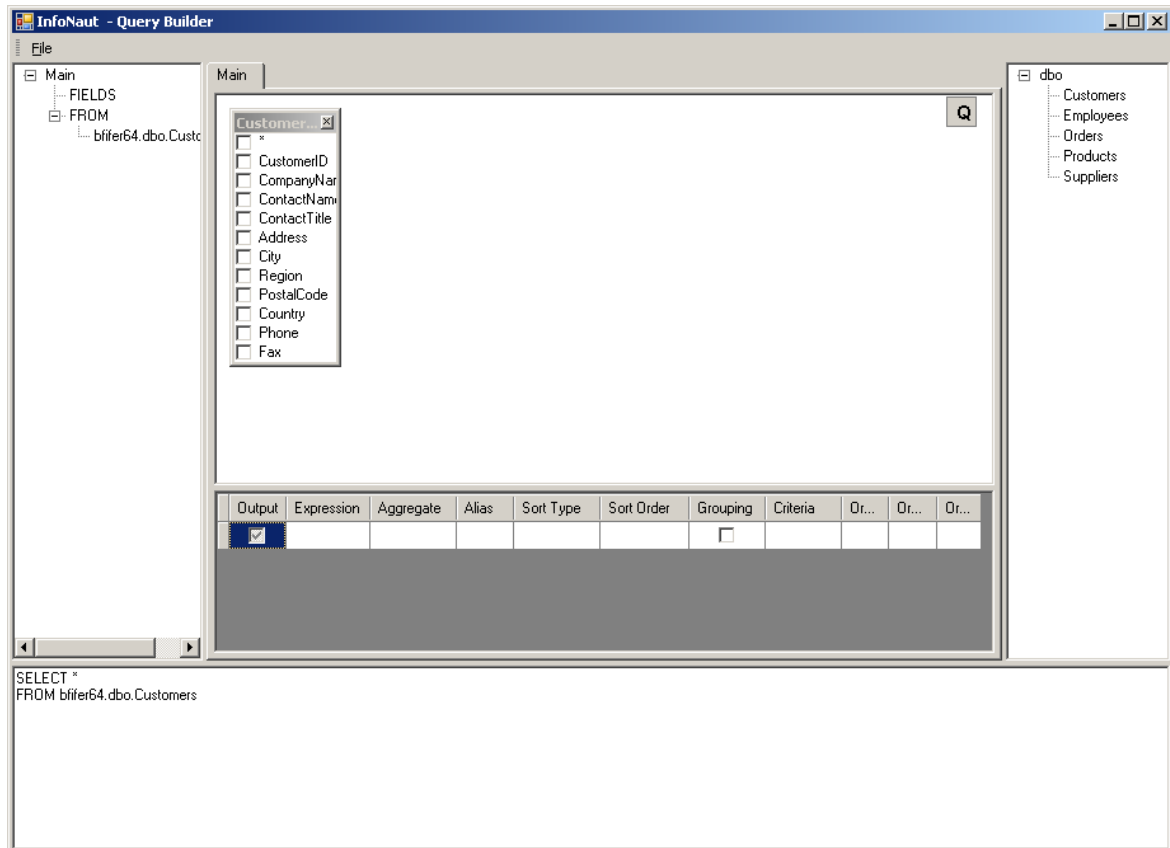


## Opening the Query Builder

1. Click the Build Query button



2. The Query Builder opens in a new window.



The main window can be divided into the following parts:

- The **Query Building Area** is the main area where the visual representation of query will be displayed. This area allows you to define source database objects and derived tables, define links between them and configure properties of tables and links.
- The **Columns Pane** is located below the query building area. It is used to perform all necessary operations with query output columns and expressions. Here you can define field aliases, sorting and grouping, and define criteria.
- The **Query Tree Pane** is located to the left of the query building area. Here you may browse your query and quickly locate any part of it.
- The **Table List Pane** is located to the right of the query building area. It contains a list of all the tables available for query building.

The page control above the query building area allows you to switch between the main query and sub-queries.

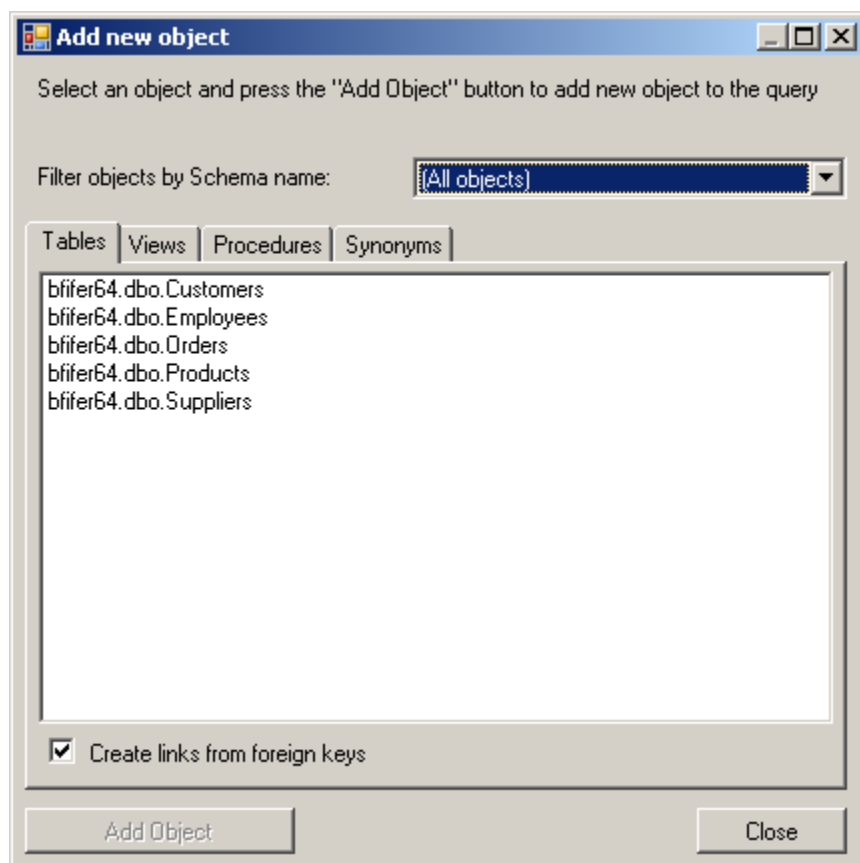
The small area in the corner of the query building area with the "Q" letter is the union sub-query handling control. Here you may add new union sub-queries and perform all necessary operations with them.

\* **Note**, when opening the query builder with an existing sql statement it cannot always show a graphical representation of the SQL Statement. If the query was originally created with the query builder it will likely show the graphical representation without errors. However if the query was not originally created by the query builder and it is very complex or contains sql that does not conform to the general ansi92 sql syntax, it may not be displayed. Another cause for a query to not be shown graphically is if the cdd has the option "Enable CONNX Database Catalog Support" checked, which means it is looking for three part table names. If the sql only uses one part table names it will not be able to be displayed.

### **Adding an object to the query**

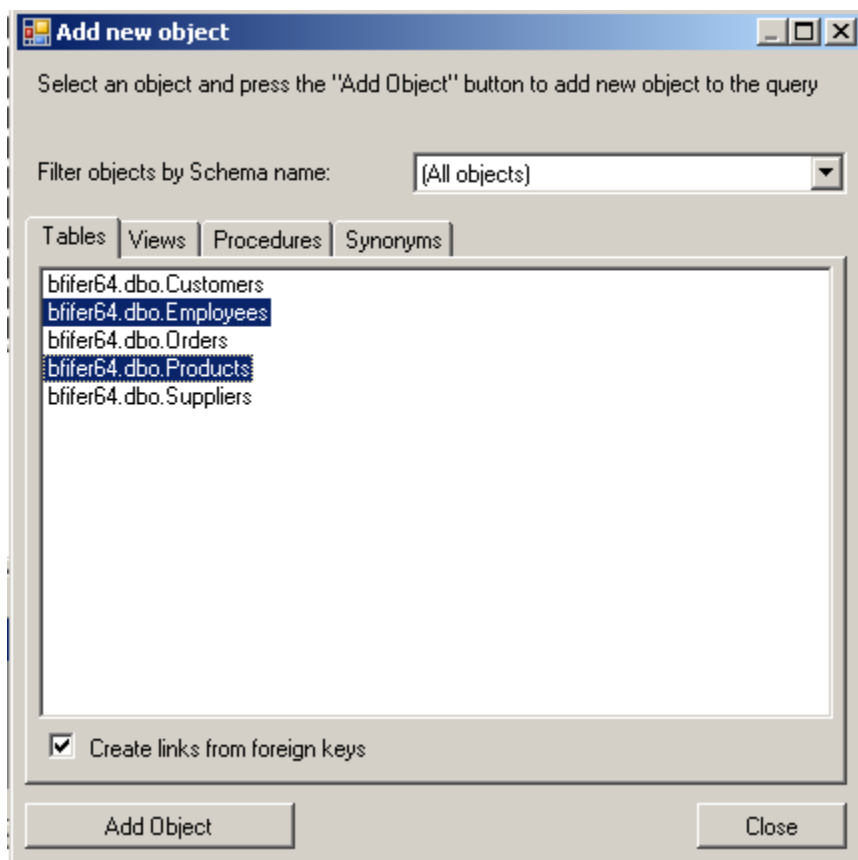
---

To add an object to the query, right click the query building area and select **Add Object**.



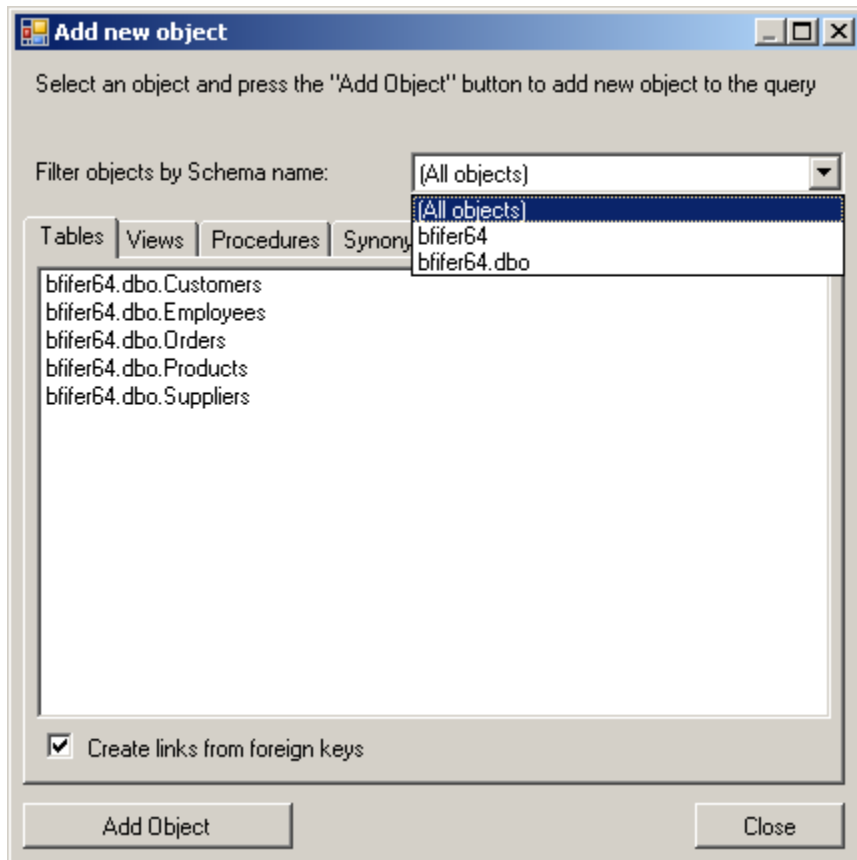
The **Add New Object** window allows you to add as many objects as you wish at once.

The objects are grouped according to their type by four tabs: **Tables**, **Views**, **Procedures** (functions) and **Synonyms**. To select multiple objects to add to the query, hold the **Ctrl** key down, click the object name, and then click **Add Object**. You may repeat this multiple times. After you finish adding objects, click **Close** to hide this window.



To remove an object from the query, select it and click the **Delete** key or simply click **Close** in the object header.

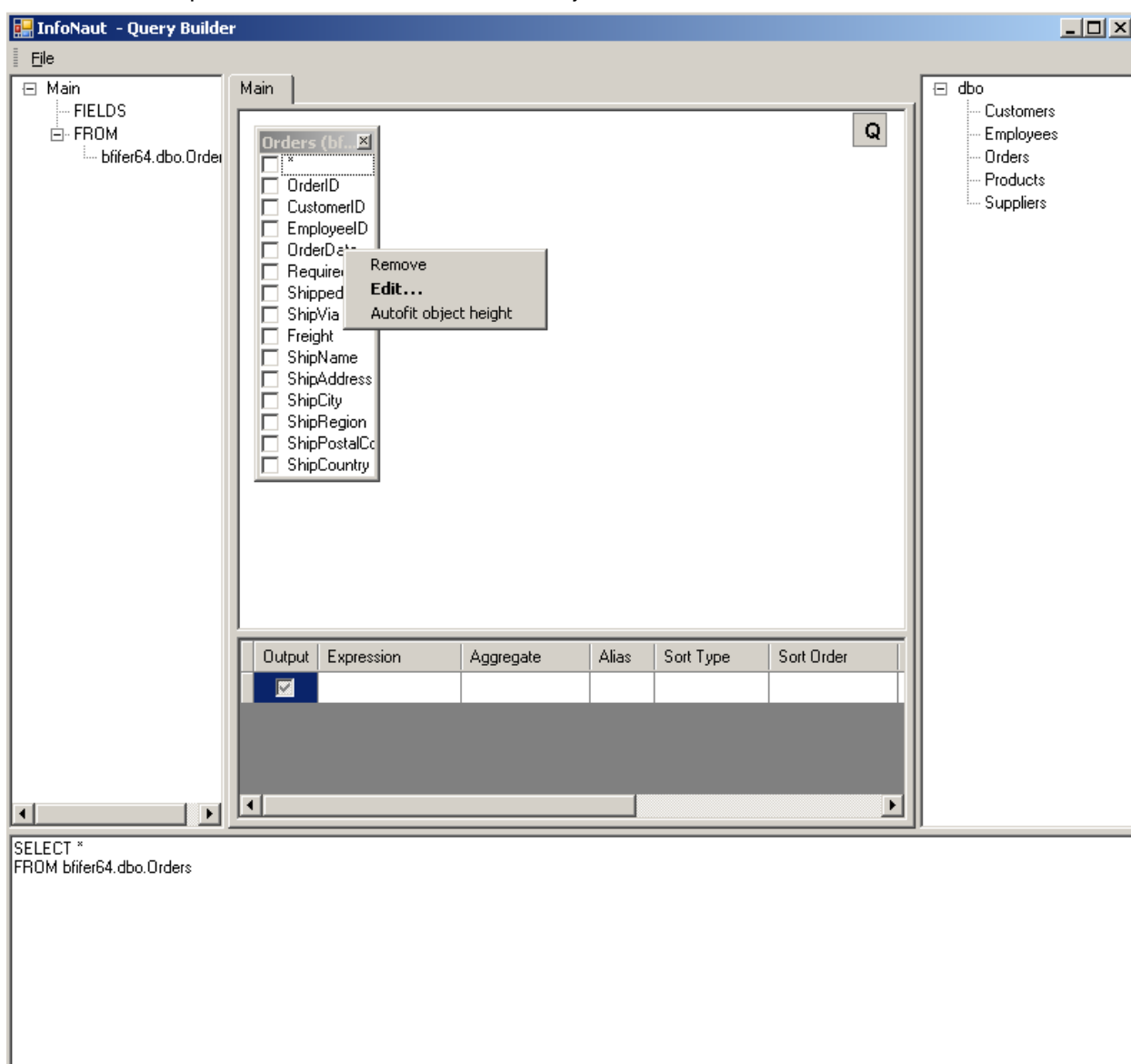
For those servers that have schemas or allow selection of objects from different databases, you may filter objects by database or schema name by selecting the necessary schema or database from **Filter objects by Schema name**.



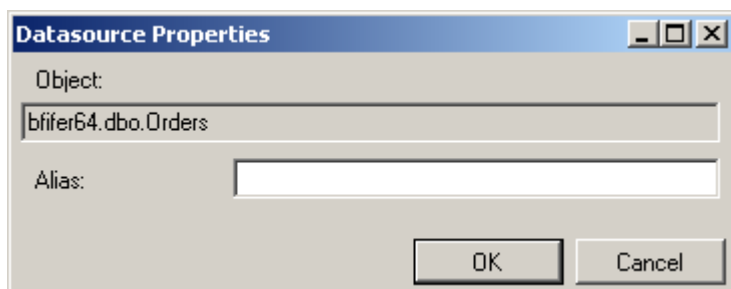
Query Builder can establish links between tables based on the information about foreign keys in the database. This ability is turned on by default. To turn it off, clear **Create links from foreign keys**.

## Editing object properties

To change the properties of each object added to the query, right click the object name and select **Edit...** item from the drop-down menu or double-click the object header.



The **Datasource Properties** window appears.

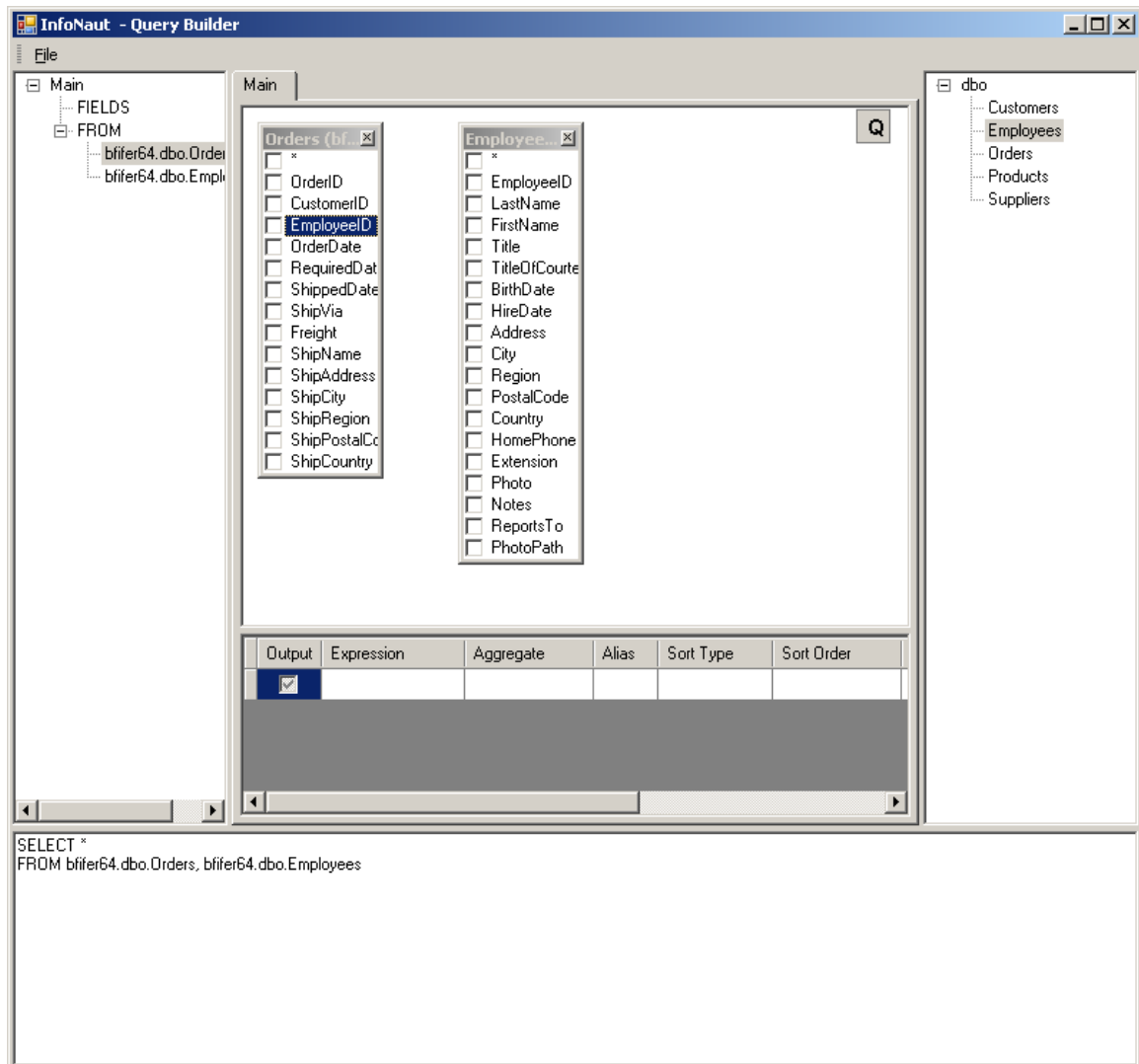


The **Datasource Properties** dialog may vary from server to server, but the **Alias** property is the same for all database servers.

## Joining tables

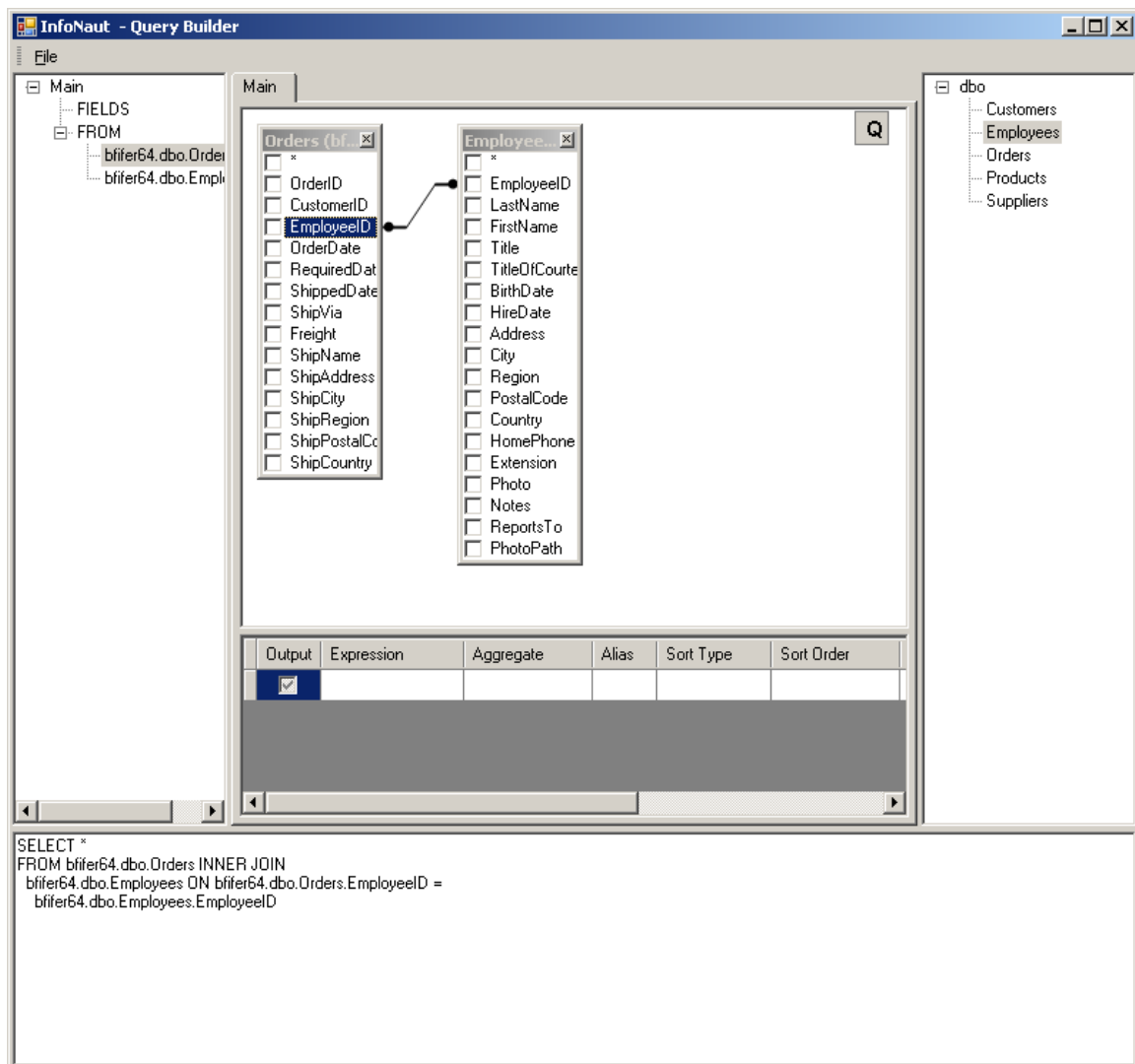
To join tables, create a link between an object in each of the tables.

1. In the Query Builder window, open at least two tables.
2. In the first table, select the field that you want to link and drag it to the corresponding field of the other object.



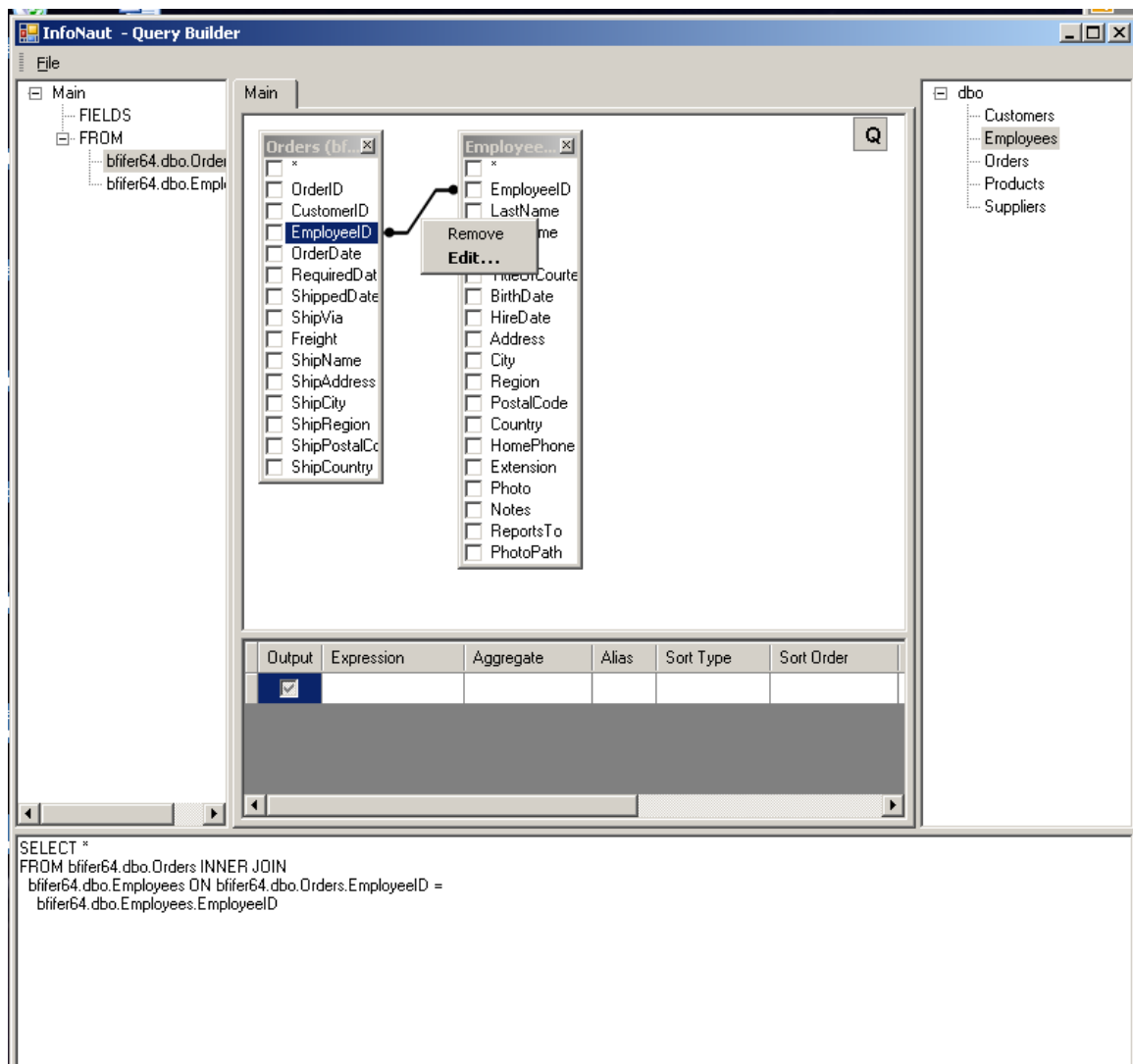
3. After you finish dragging, a line connecting the linked fields appears.



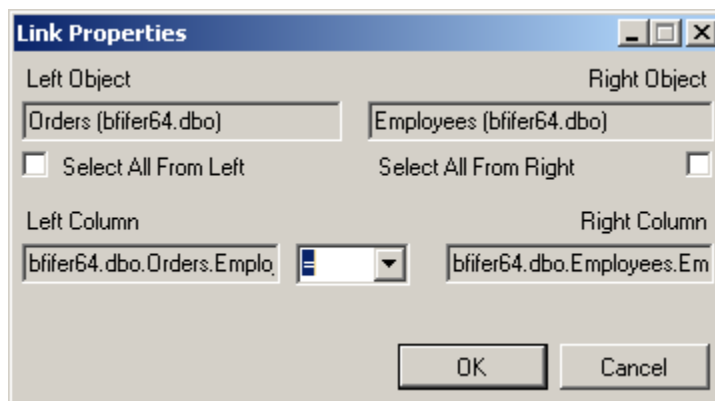


The default join type is INNER JOIN; only matching records of both tables will be included in the resulting dataset.

4. To define other types of joins, right click the link and select **Edit...** or double-click the link.



5. The **Link Properties** dialog box appears.



Using **Link Properties**, you can define join type and other link properties.

6. To remove a link between objects, right-click the link line and select **Remove**.

## Selecting output fields

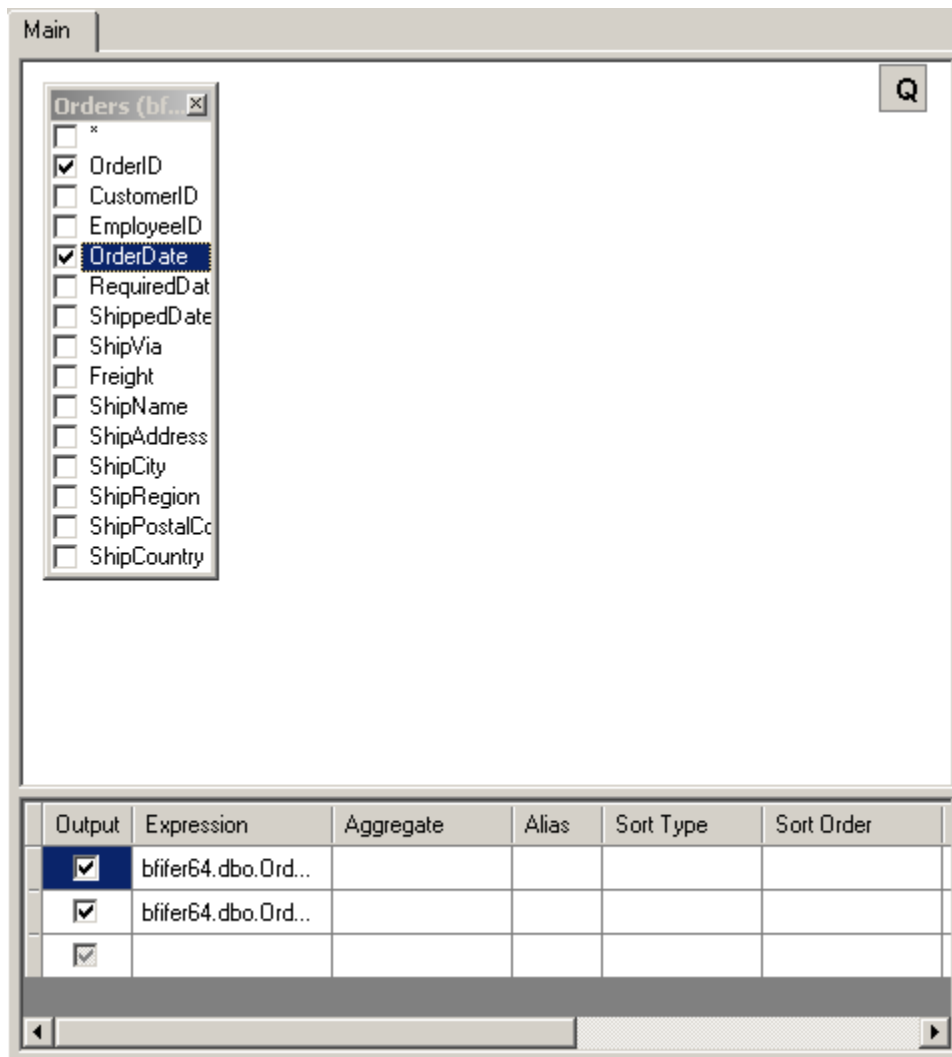
There are several ways to add a field to the query output field list:

- In the Query Building Area select the field name. To include all the fields of the object, select the list item with an asterisk in the field name area.
- In the Columns Pane, select a field name from the Expression column drop-down list.
- in the Columns Pane, enter a valid expression in the Expression column .

There are two way to remove a field from the list of query output fields:

- In the Query Building Area, clear the checkbox at the left of the field name
- Clear the Output column checkbox.

Using the drop-down menu, you can remove lines from the Columns Pane or re-order output by right clicking on the leftmost gray column.

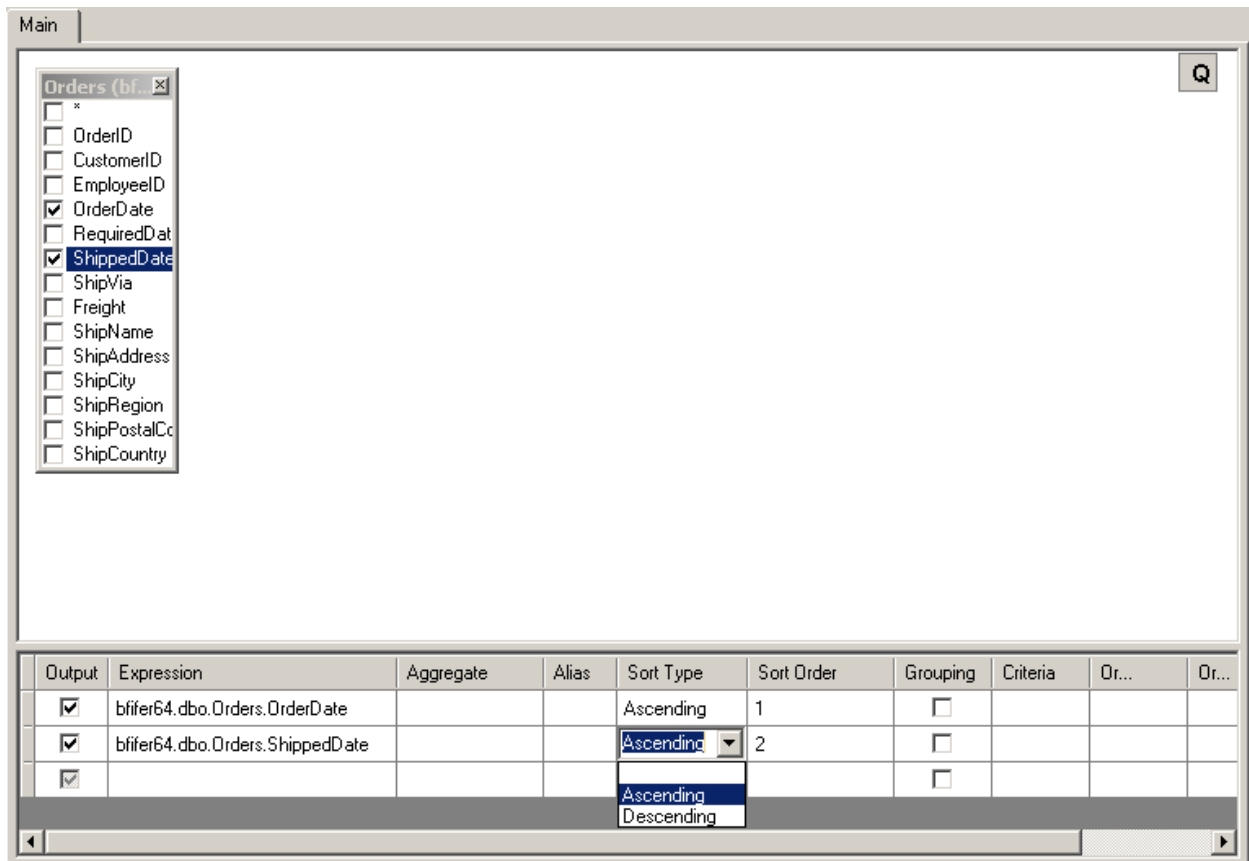


Define any output field aliases in the Alias column of the Columns Pane.

| Output                              | Expression             | Aggregate | Alias | Sort Type | Sort Order | Grouping                 | Criteria |
|-------------------------------------|------------------------|-----------|-------|-----------|------------|--------------------------|----------|
| <input checked="" type="checkbox"/> | bifer64.dbo.Orders.... |           | OID   |           |            | <input type="checkbox"/> |          |
| <input checked="" type="checkbox"/> | bifer64.dbo.Orders.... |           | ODate |           |            | <input type="checkbox"/> |          |
| <input checked="" type="checkbox"/> |                        |           |       |           |            | <input type="checkbox"/> |          |

## Sorting output fields

Use the **Sort Type** and **Sort Order** columns in the Columns Pane to sort the output query fields.



Use the **Sort Type** column to specify if the field will be sorted in ascending or descending order.

The **Sort Order** column specifies the order when multiple field are sorted.

If you don't want to sort by a field, clear it's **Sort Type** column.

## Defining expression criteria

Use the **Criteria** column to define query criteria for the expression listed in the **Columns Pane**.

| Output                              | Expression          | Aggregate | Alias | Sort Type | Sort Order | Grouping                 | Criteria | Or... | Or... | Or... |
|-------------------------------------|---------------------|-----------|-------|-----------|------------|--------------------------|----------|-------|-------|-------|
| <input checked="" type="checkbox"/> | bfifer64.dbo.Ord... |           |       |           |            | <input type="checkbox"/> |          |       |       |       |
| <input checked="" type="checkbox"/> | bfifer64.dbo.Ord... |           |       |           |            | <input type="checkbox"/> |          |       |       |       |
| <input checked="" type="checkbox"/> | bfifer64.dbo.Ord... |           |       |           |            | <input type="checkbox"/> |          |       |       |       |
| <input checked="" type="checkbox"/> |                     |           |       |           |            | <input type="checkbox"/> |          |       |       |       |

In the **Criteria** column, enter the criterion omitting the expression itself.

If you want to select the those expressions that are greater than or equal to 10 but less than or equal to 20:

```
WHERE (field >= 10) AND (field <= 20)
```

enter

```
>= 10 AND <= 20
```

in the **Criteria** column.

If you have multiple criteria for a single expression, enter each additional criterion in the **Or...** columns. These criteria will be concatenated in the query using the **OR** operator.

## Grouping output fields

---

To setup grouping by some of the fields and/or to define aggregate functions on grouped rows you may use the **Group by** column.

You may select one of the following values for this column from the drop-down list:

- **Expression** and **Where**: These values are used when no grouping is specified. **Expression** is set when this expression is used as an output expression in the SELECT clause and nothing else. **Where** is set automatically when you define a criterion to this expression that results in including this expression to the WHERE clause. Normally you shouldn't care about the value of the **Group By** column when you don't want to define grouping.
- **Group by** and **Having**: These values are similar to **Expression** and **Where**, but used when you want to define grouping in your query. In this case, you should set **Group by** for all columns you want to group by. Specifying criteria for the grouped columns will include these criteria in the HAVING clause. If you want to include an expression ONLY in the HAVING clause you should set the **Having** value in the **Group By** column for this expression.
- Aggregate functions (Count, Sum, etc): By selecting one of these values, you will create an aggregate expression for the value indicated in the **Expression** column.

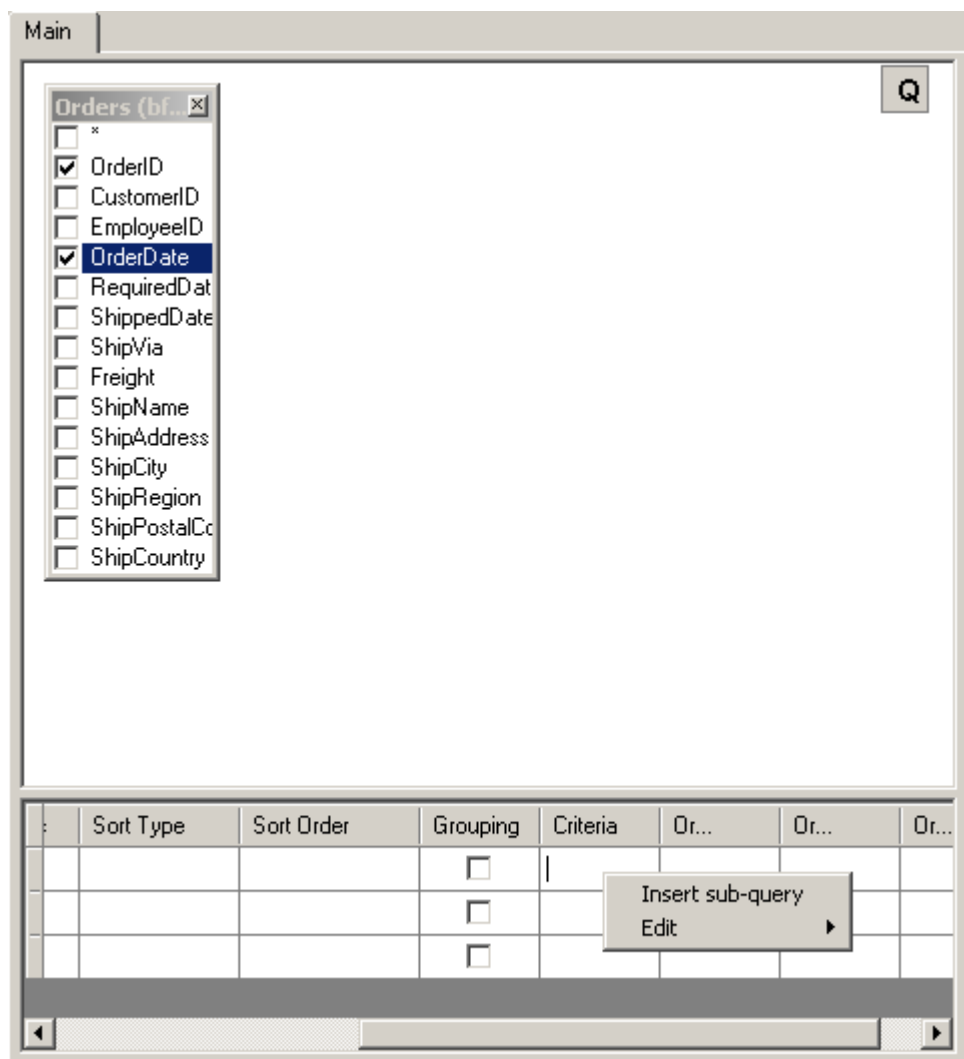
Grouping output fields



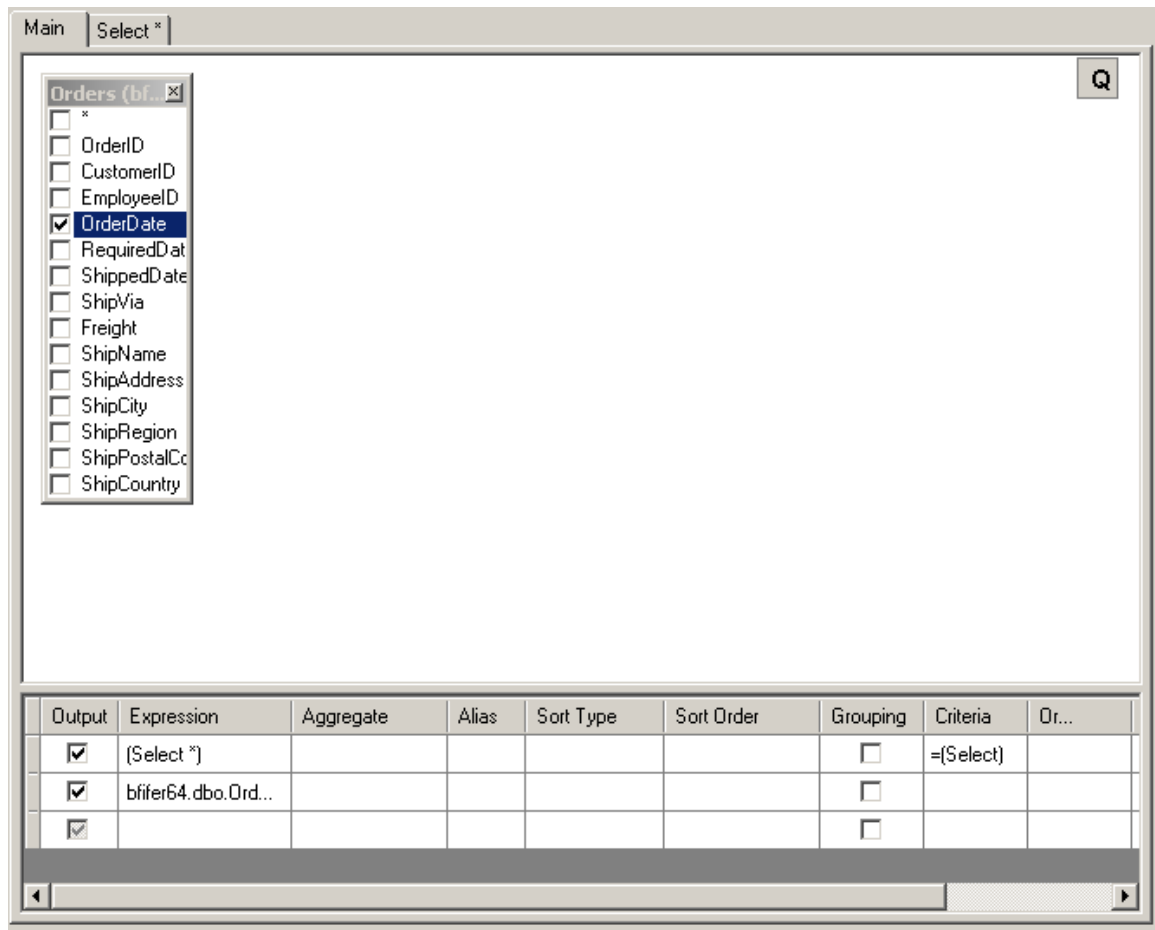
## Adding a sub-query

There are two ways to add a sub-query.

1. In the Columns Pane, right click on the Expression or Criteria column. From the drop-down menu, select **Insert SubQuery**.



2. Type "(Select)" in the Expression column and type either "= (Select)", "In (Select)", or any other valid sub-query expression, in the Criteria column.



CONNX creates a new sub-query tab. Switch to the sub query tab to visually edit the sub-query the same way you edit the main query.

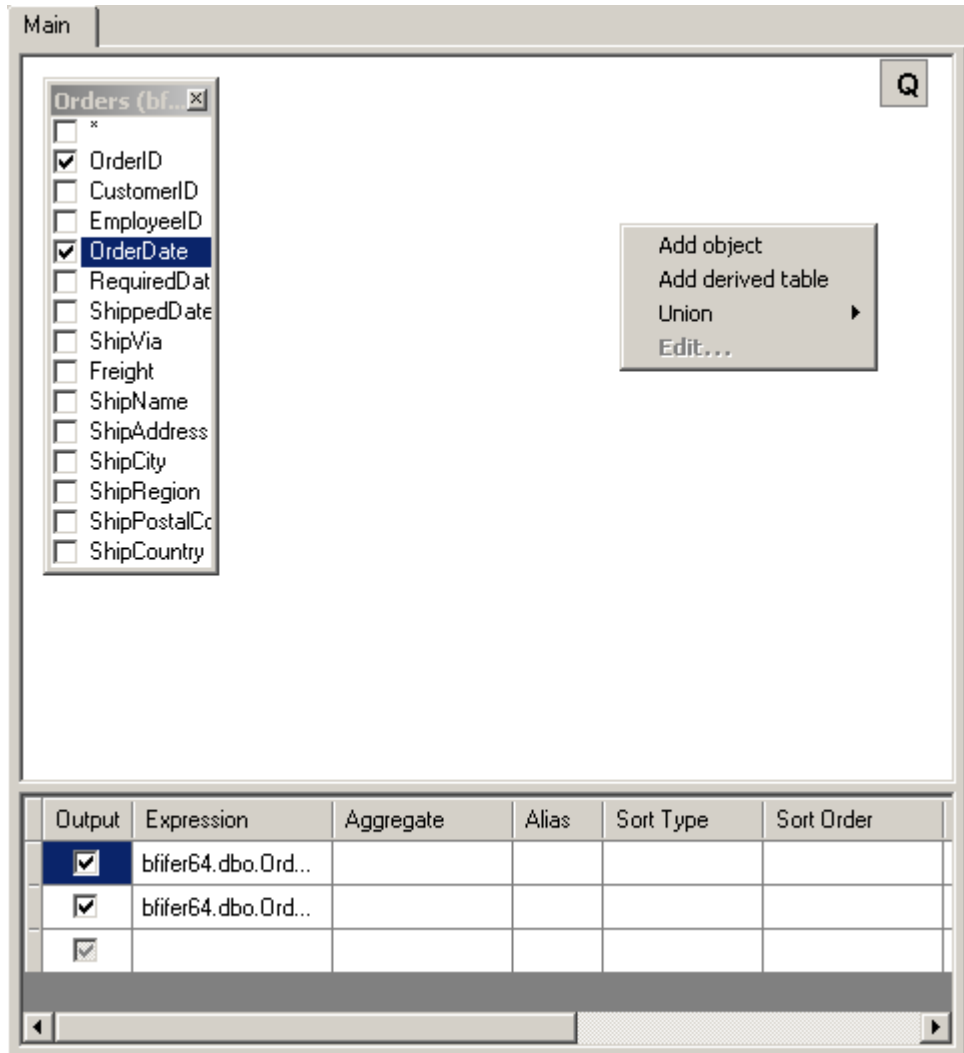
There are two ways to switch to the sub-query tab:

- Click the sub-query tab.
- In the sub-query cell, click the ellipsis button. If the cell contains more than one sub-query, a drop-down menu appears. Select the sub-query you want.

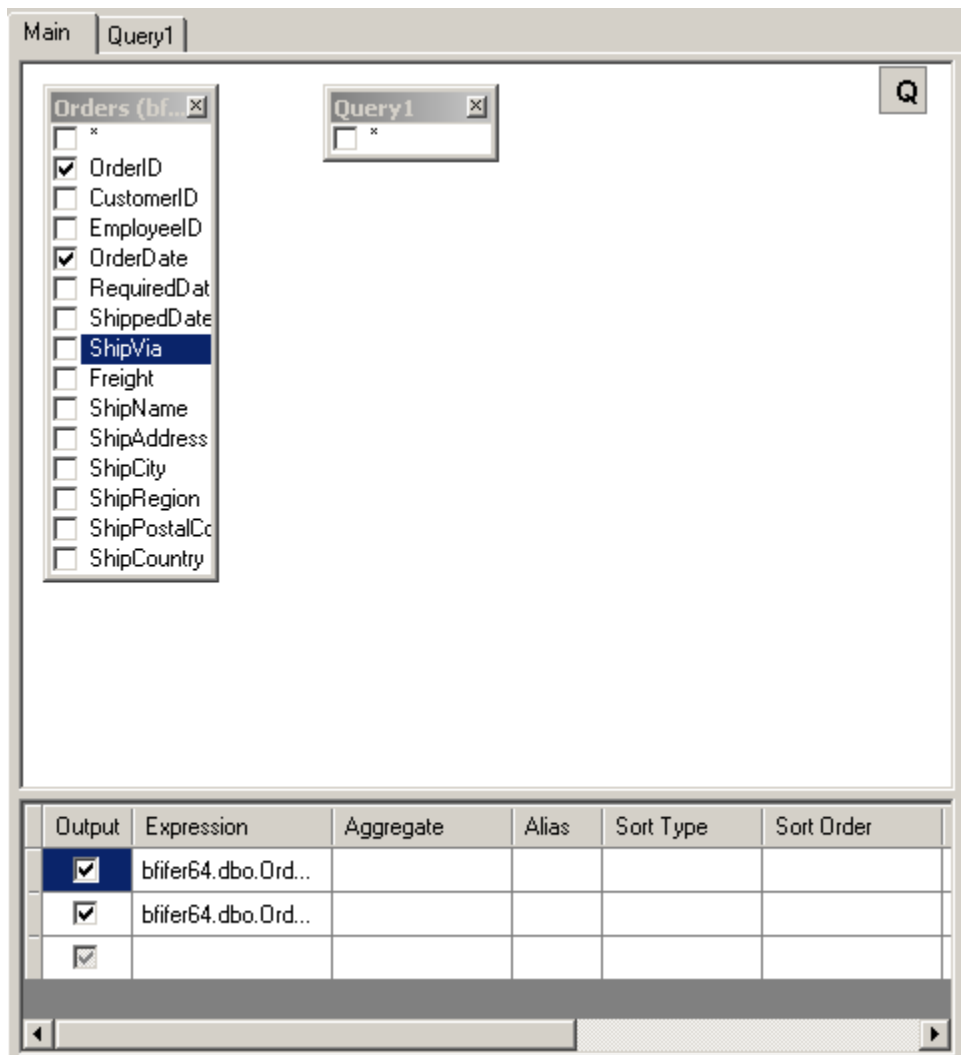
### Adding a derived table

Derived tables are a sub-query used in the FROM clause.

To add a sub-query, right click on the Query Building Area and select **Add Derived Table**.



The query building area now contains a object and a corresponding tab representing the newly created derived table. This tab allows you to edit the sub-query the same way as you edit the main query.

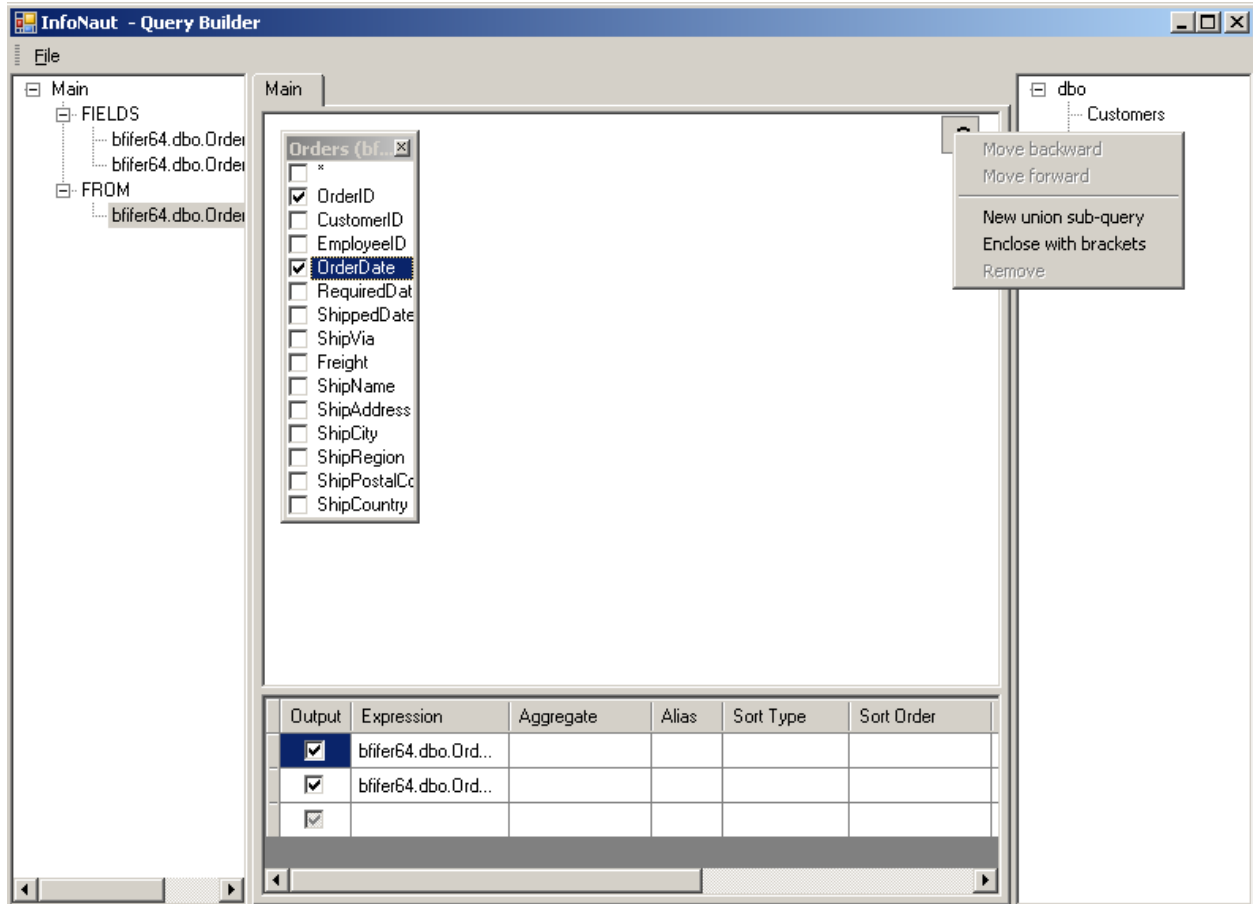


Another way to switch to the sub-query tab is to press the derived table's maximize button.

## Working with unions

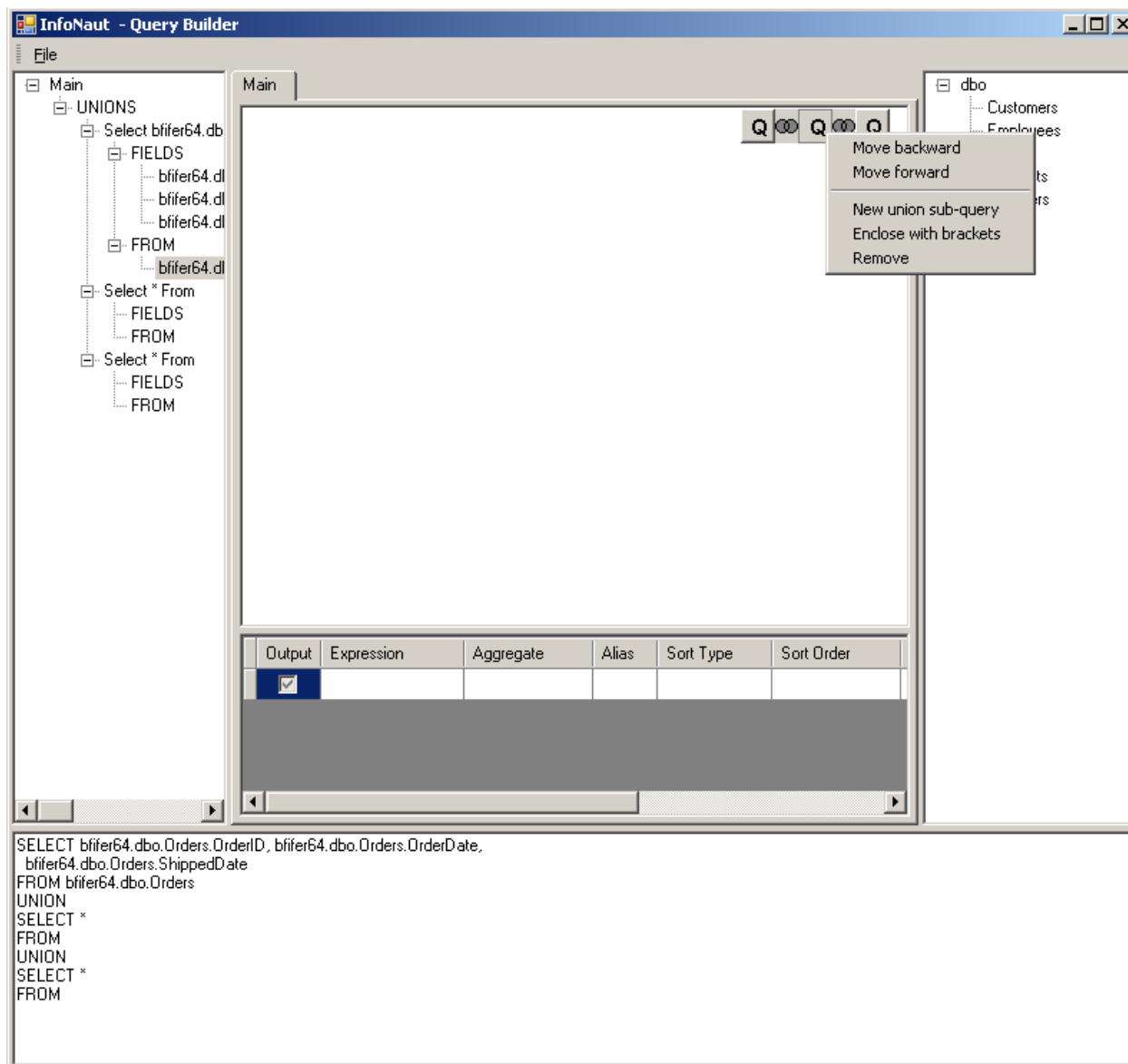
You can work with union sub-queries using the small panel in the top-right corner of the Query Building Area. Initially there is only one union sub-query labeled with the letter **Q**.

To begin working with union sub-queries, right-click the **Q**.



To add a new union sub-query, right-click the **Q** and select **New union sub-query**.

When there are multiple union sub-queries, when you right-click the **Q**, the choices change.



To move the sub-query or bracket to the top of the query (the topmost sub-query is the left one), right-click the **Q** and select **Move Backward**.

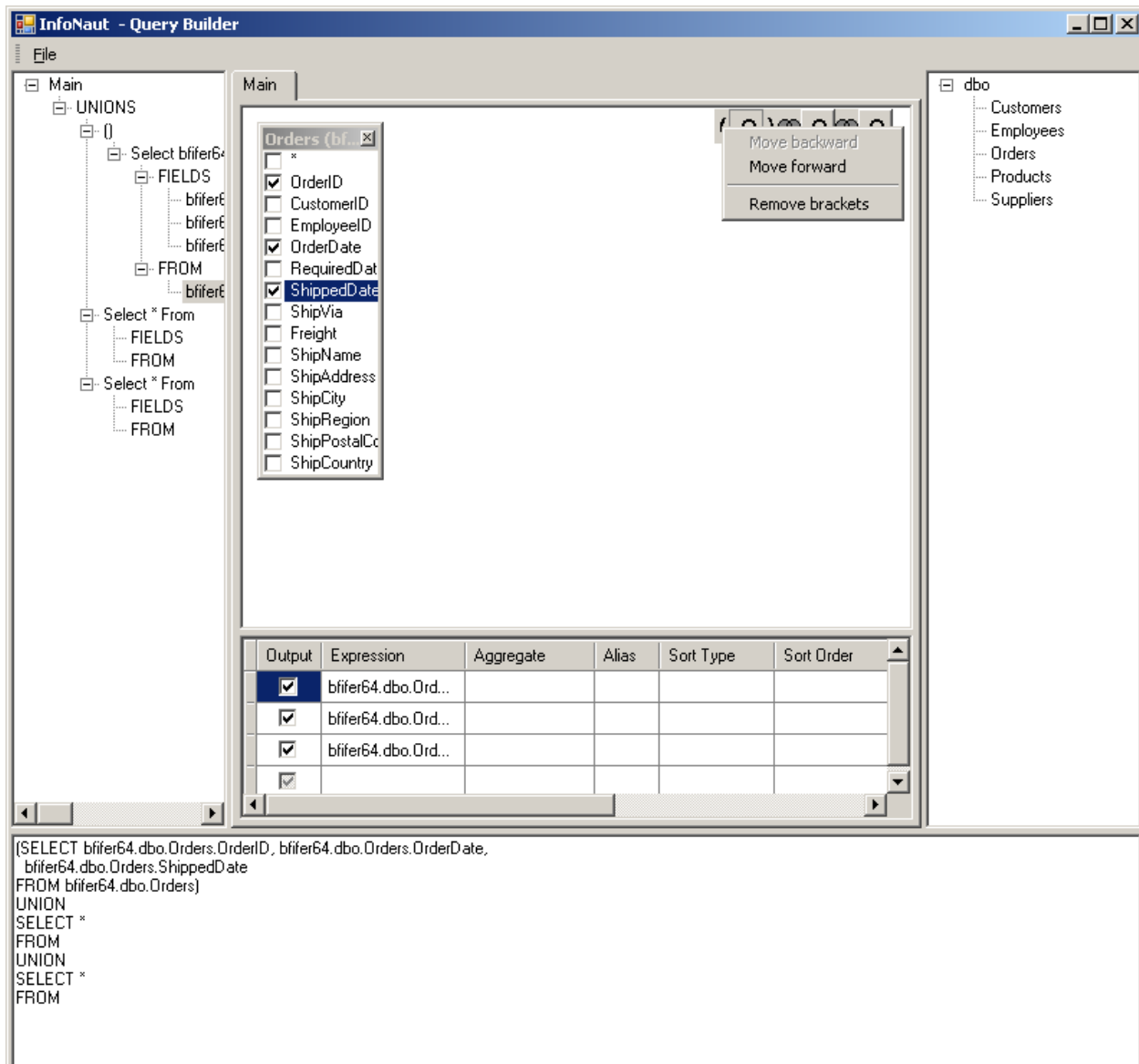
To move the sub-query or bracket to the bottom of the query, right-click the **Q** and select **Move Forward**.

To remove the sub-query, right-click the **Q** and select **Remove**.

### **Union sub-query bracket operations**

To enclose the sub-query in brackets right-click the **Q** and select **Enclose with brackets**.

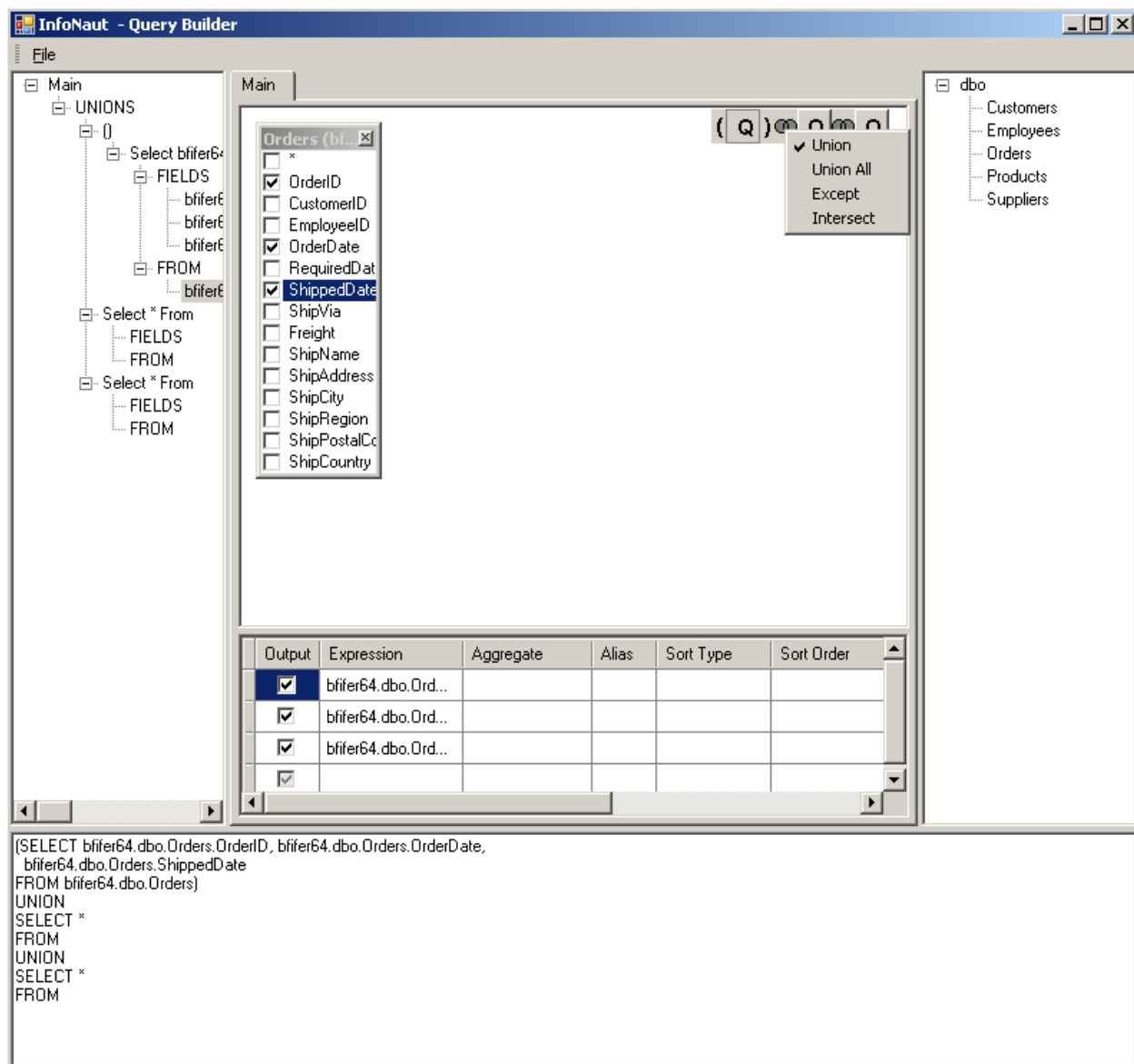
To remove the brackets from a sub-query, right click on the query bracket and select **Remove brackets**.



## Union operations

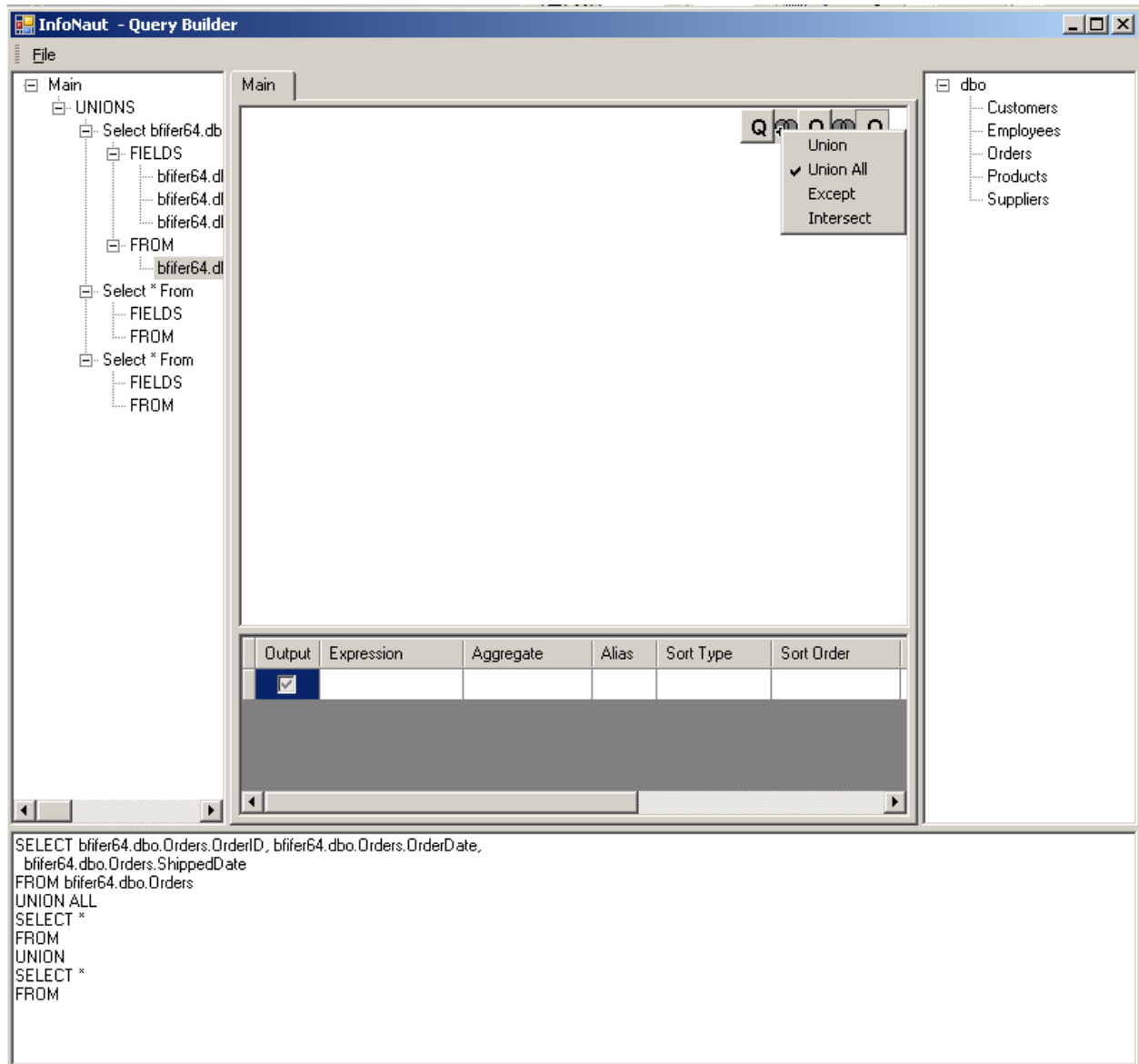
To change a union operand, right-click on the union button uniting the two queries you want to modify.



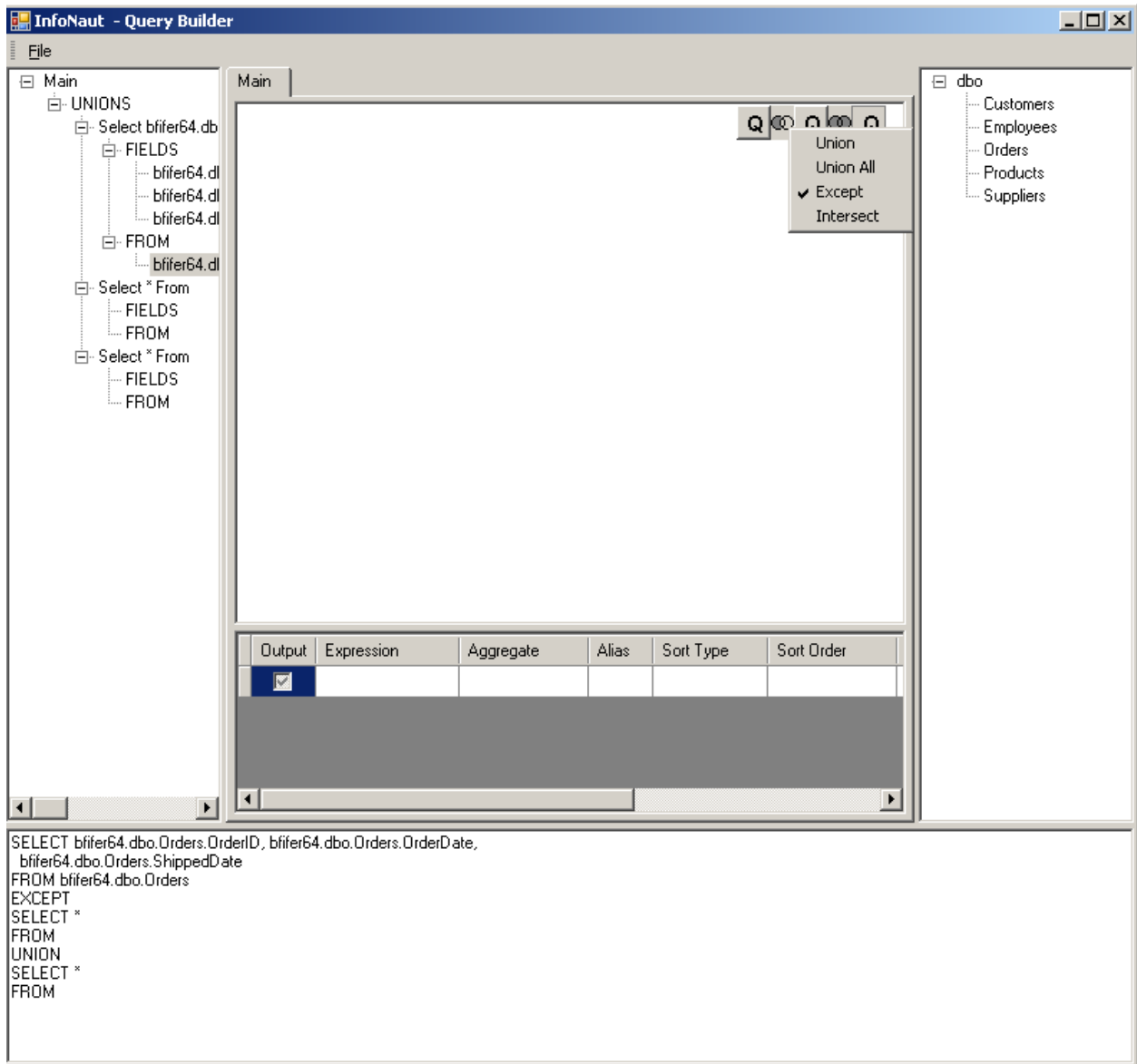


Right-click on **Union All** to change the selected Union operand to Union All.

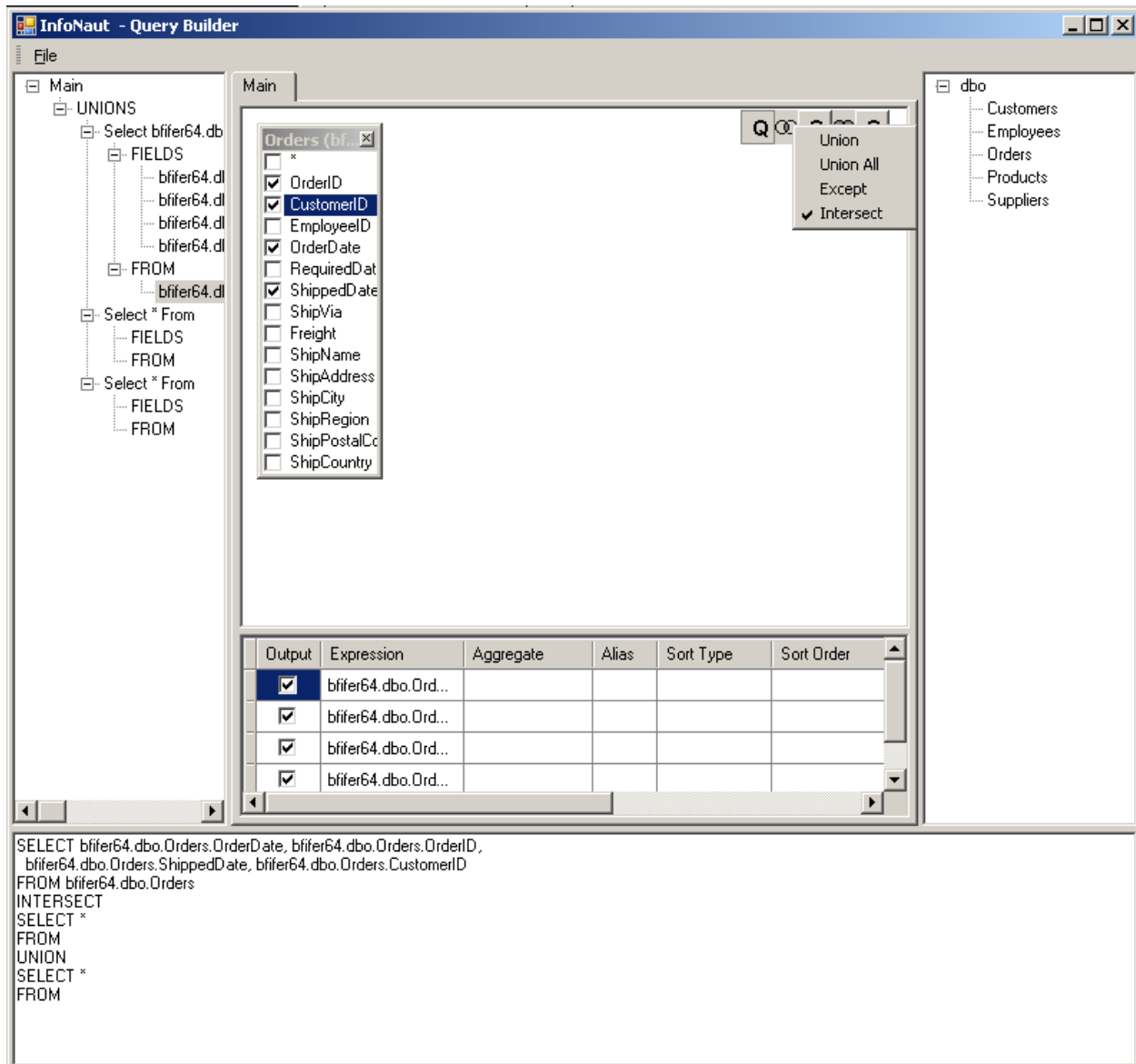




Right-click on **Except** to change the selected Union operand to Except.



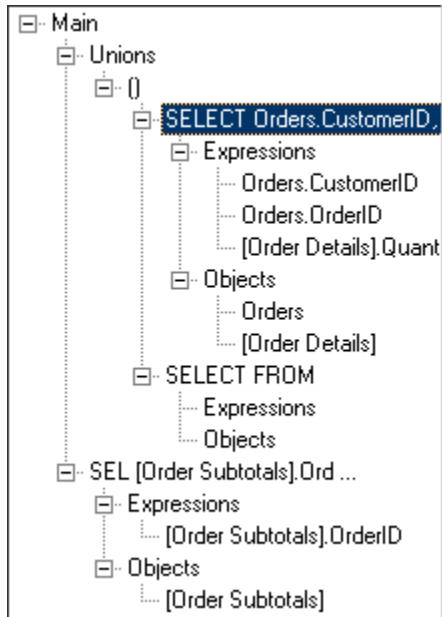
Right-click on **Intersect** to change the selected Union operand to Intersect.



## Navigating the query tree

---

The Query Tree Pane allows you to browse the compact tree-like representation of the entire query. This is useful if the query is complex.



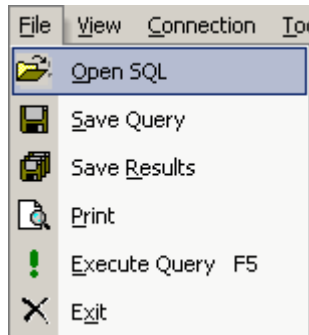
You can expand or contract the query tree. When you click on any entry, the Query Builder displays that part of the query.

## Working with Queries

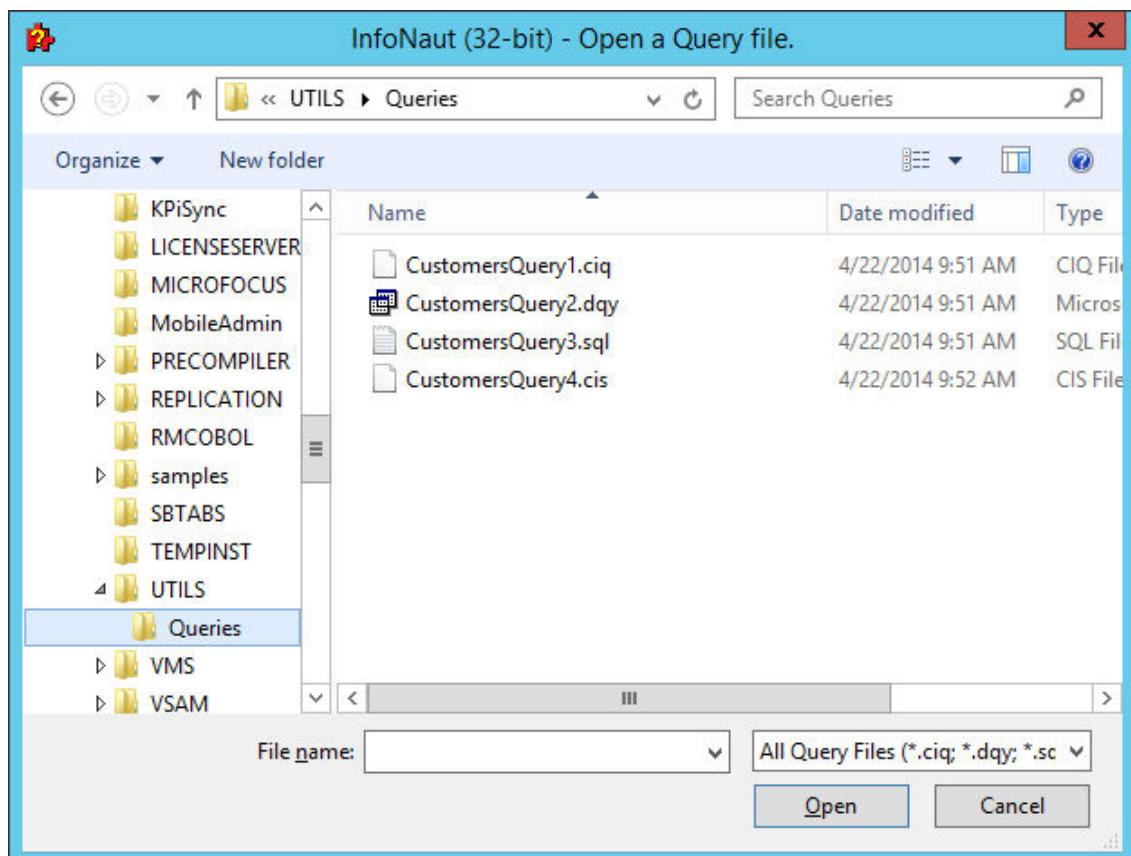
### To open queries in InfoNaut

Any queries created as a Microsoft Query file with the file name suffix .dqy can be opened within InfoNaut.

1. Click the **File** button, and then click **Open SQL**.



2. The **Open a Query file** dialog box appears.



3. Select a query to load from the file list box, and then click **Open**.
4. The current open connection is closed. A new connection is made with the information provided in the .dqy file. The SQL statement appears in the query text box.

The screenshot shows the Infonaut (32-bit) application window with the title bar "InfoNaut (32-bit) - C:\SalesAndInventory.cdd". The menu bar includes File, View, Connection, Tools, CONNX, and Help. The toolbar contains icons for Execute, Show Tables, Build Query, Report, Refresh CDD, QDBC Trace, Get Query Schema, and Max Rows. Below the toolbar, there are buttons for Transaction (Begin, Commit, Rollback) and a text area for Recent Connections and Recent Queries. The Recent Queries text area contains the query: "SELECT \* FROM SQL2008R2X64.dbo.Customers\_sqlserver WHERE CUSTOMERSTATE='WA'". The main query editor also contains this query. Below the query editor, there is a table with 6 columns: CUSTOMERID, CUSTOMERNAME, CUSTOMERADDRESS, CUSTOMERCITY, CUSTOMERSTATE, and CUSTOMERZIP. The table contains 8 rows of data. At the bottom, there is a status bar showing "Record: 1 of 13", "Records/Sec : 78", and "Time : 0.1659988".

Drag a column header here to group by that column.

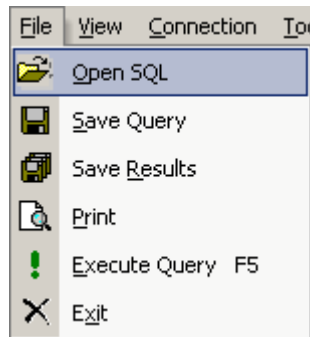
| CUSTOMERID | CUSTOMERNAME | CUSTOMERADDRESS         | CUSTOMERCITY          | CUSTOMERSTATE | CUSTOMERZIP |
|------------|--------------|-------------------------|-----------------------|---------------|-------------|
| 1          | ANDRC        | Andre's Continental     | P.O. Box 209          | Bellingham    | 98226       |
| 2          | ANTHB        | Anthony's Beer and Ale  | 33 Neptune Circle     | Clifton Forge | 24422       |
| 3          | BERGS        | Bergstad's Scandinavian | 41 S. Marlon St.      | Seattle       | 98104       |
| 4          | BLUEL        | Blue Lake Deli &        | 210 Main St.          | Port Townsend | 98368       |
| 5          | FITZD        | Fitzgerald's Deli and   | 14 E. Eastway Dr.     | Bellevue      | 98006       |
| 6          | FOODI        | Foodmongers, Inc.       | 418 - 6th Ave.        | Walla Walla   | 99362       |
| 7          | GARCA        | Garcia's All-Day Food   | 401 Rodeo Dr.         | Auburn        | 98002       |
| 8          | LAPLA        | La Playa Mini Mart      | 2044 Seahorse Bay Rd. | Port Townsend | 98368       |

Record: 1 of 13 Records/Sec : 78 Time : 0.1659988

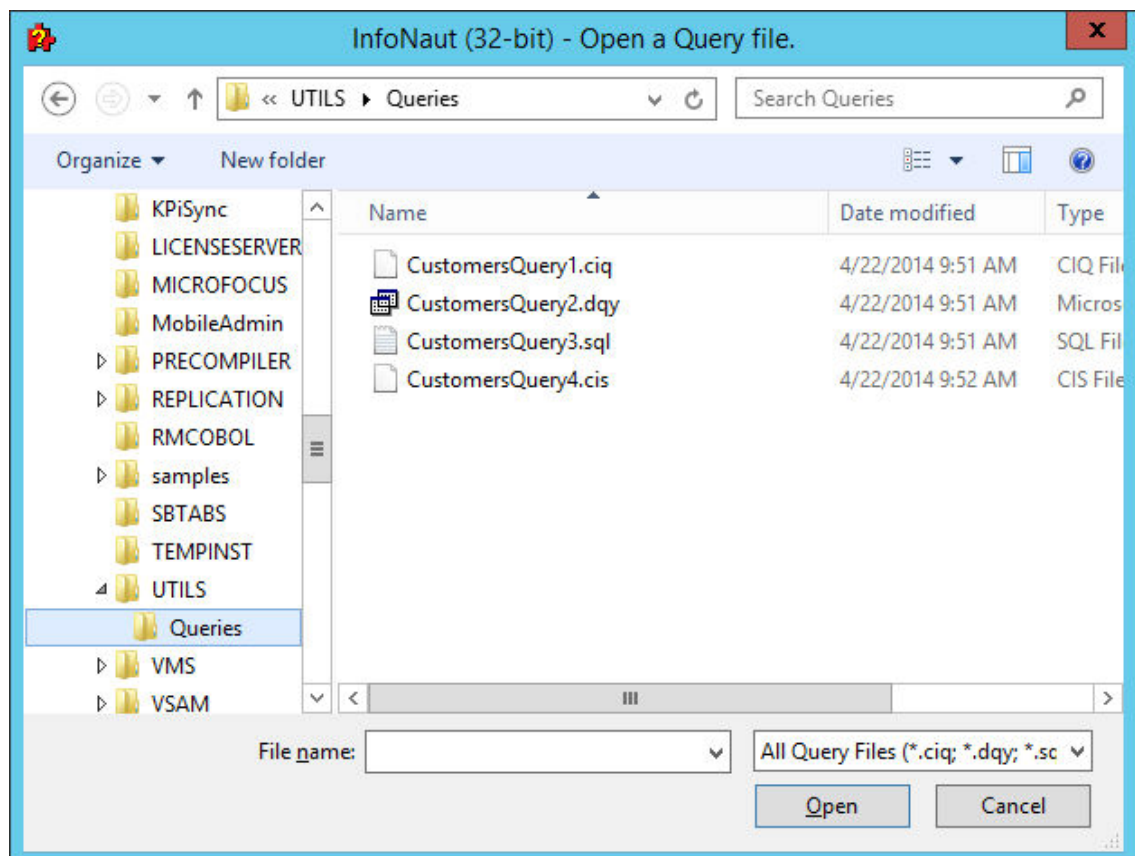
### To open CONNX InfoNaut Queries and SQL Script files

Any queries saved as CONNX InfoNaut Queries or CONNX InfoNaut SQL Scripts with the file name suffix .ciq or .cis can be opened within InfoNaut. The difference between a .ciq file and a .cis file is that a .ciq file uses the connection information stored in it to open a new connection when used, a .cis file does not open a new connection, it uses the connection that is already open.

1. Click the **File** button, and then click **Open SQL**.



2. The **Open a Query file** dialog box appears.



3. Select a query to load from the file list box, and then click **Open**.
4. If it is a .ciq file, the current open connection is closed. A new connection is made with the information provided in the .ciq file. The SQL statement appears in the query text box.

InfoNaut (32-bit) - C:\SalesAndInventory.cdd

File View Connection Tools CONNX Help

Execute Show Tables Build Query Report Refresh CDD ODBC Trace Get Query Schema Max Rows

Data Execution Plan Uniform SQL Relational DB SQL

Transaction: Begin Commit Rollback

Recent Connections: DD=C:\SalesAndInventory.cdd;Prompt=2;Persist Security Info=True;APPLICATION=ALL;

Recent Queries: SELECT \* FROM SQL2008R2X64.dbo.Customers\_sqlserver WHERE CUSTOMERSTATE='WA'

SELECT \* FROM SQL2008R2X64.dbo.Customers\_sqlserver WHERE CUSTOMERSTATE='WA'

Drag a column header here to group by that column.

|   | CUSTOMERID | CUSTOMERNAME            | CUSTOMERADDRESS       | CUSTOMERCITY  | CUSTOMERSTATE | CUSTOMERZ |
|---|------------|-------------------------|-----------------------|---------------|---------------|-----------|
| 1 | ANDRC      | Andre's Continental     | P.O. Box 209          | Bellingham    | WA            | 98226     |
| 2 | ANTHB      | Anthony's Beer and Ale  | 33 Neptune Circle     | Clifton Forge | WA            | 24422     |
| 3 | BERGS      | Bergstad's Scandinavian | 41 S. Marlon St.      | Seattle       | WA            | 98104     |
| 4 | BLUEL      | Blue Lake Deli &        | 210 Main St.          | Port Townsend | WA            | 98368     |
| 5 | FITZD      | Fitzgerald's Deli and   | 14 E. Eastway Dr.     | Bellevue      | WA            | 98006     |
| 6 | FOODI      | Foodmongers, Inc.       | 418 - 6th Ave.        | Walla Walla   | WA            | 99362     |
| 7 | GARCA      | Garcia's All-Day Food   | 401 Rodeo Dr.         | Auburn        | WA            | 98002     |
| 8 | LAPLA      | La Playa Mini Mart      | 2044 Seahorse Bay Rd. | Port Townsend | WA            | 98368     |

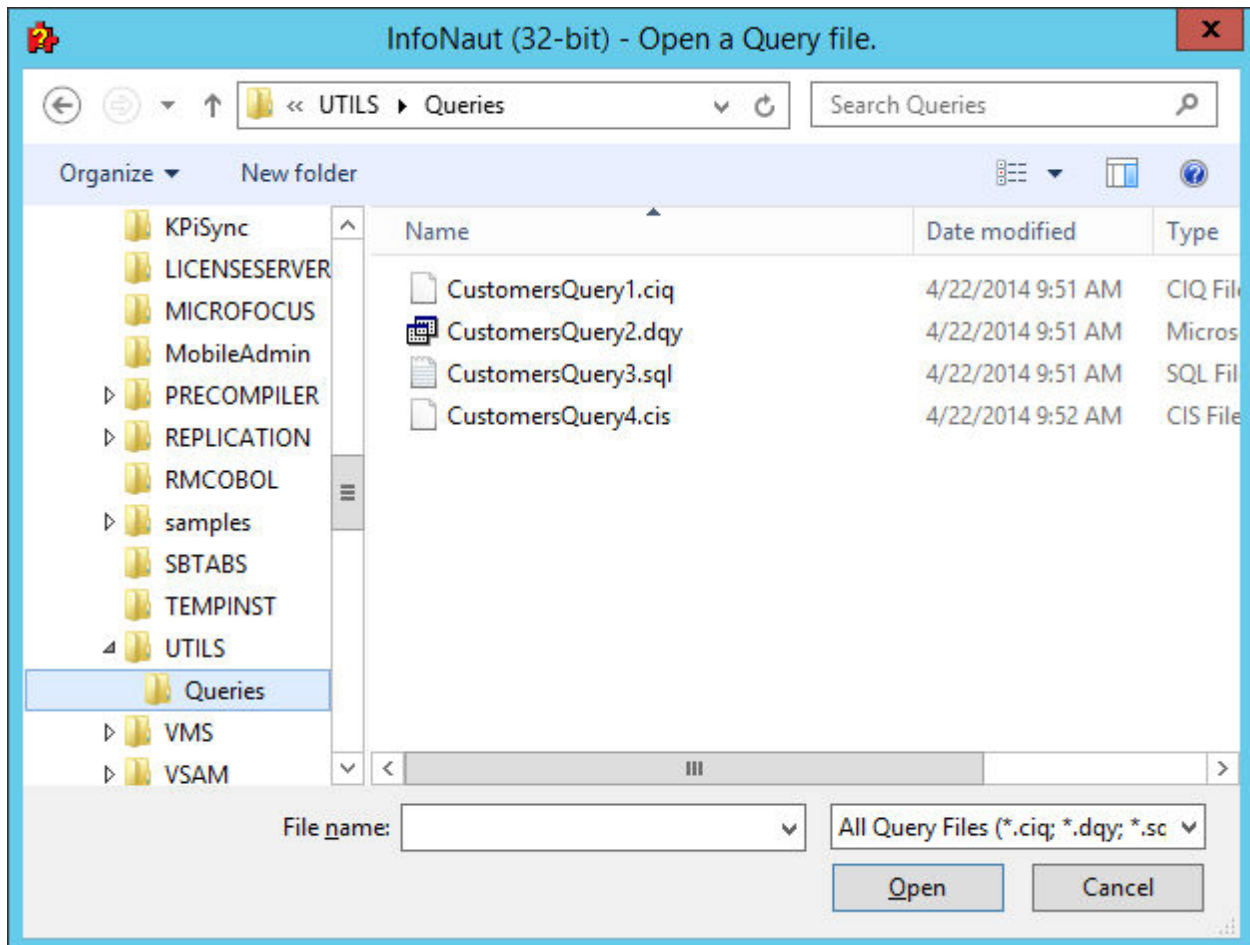
Record: 1 of 13 Records/Sec : 78 Time : 0.1659988



### To open SQL statements in InfoNaut (InfoNaut Professional only)

SQL script files can be opened and processed by InfoNaut Professional. SQL commands contained inside will be executed and results will be returned in the InfoNaut grid.

1. After creating and saving a SQL statement, click **Open SQL** on the **File** menu. The **Open SQL Script File** dialog box appears.



2. Select a SQL file, and then click the **Open** button.
3. Once InfoNaut opens the SQL file it will automatically Execute the statements contained in the .SQL file. The Query in the text window will not be overwritten by the text from the .SQL file. The results grid will show one entry for each SQL Statement processed, along with query statistics, Start Time, End Time, and any errors.

**Infonaut Professional - C:\cdd\MSSQLtest5.cdd**

File View Connection Tools CONNX Help

Execute Show Tables Build Query Report Refresh CDD ODBC Trace Get Query Schema Max Rows

Data Execution Plan Uniform SQL Relational DB SQL

Transaction: Begin Commit Rollback

Recent Connections: DRIVER={CONNX32};;NODE=;;APPLICATION=;;DD=C:\cdd\MSSQLtest5.cdd;DESCRIPTION=;;Prompt=2

Recent Queries: SELECT \* FROM SQL2005\_32BIT.dbo.ADABAS\_FILE\_11

SELECT count(\*) FROM SQL2005\_32BIT.dbo.customers\_rms

Drag a column header here to group by that column.

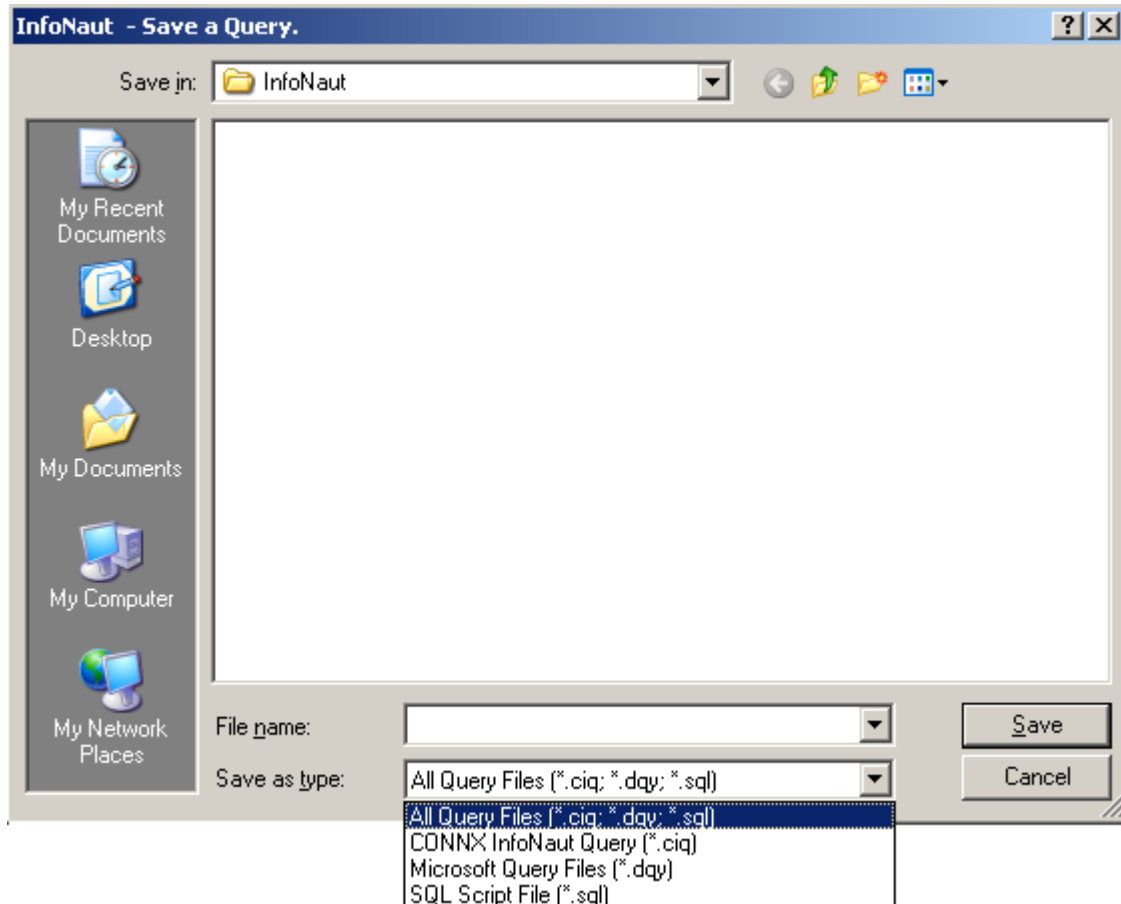
| Pass number |  | Start Time       | End Time        | Total Rows | Total Time | Records/Sec | ReturnCode | Error Text |
|-------------|--|------------------|-----------------|------------|------------|-------------|------------|------------|
| 1           | SELECT * FROM SQL2005_32BIT.dbo.ADABAS_FILE_11 | 02/16/2011 03... | 02/16/2011 0... | 1109       | 0:0:0.22   | 50404       | 1          |            |
| 2           | SELECT * FROM SQL2005_32BIT.dbo.ADABAS_FILE_11 | 02/16/2011 03... | 02/16/2011 0... | 1109       | 0:0:0.16   | 69306       | 1          |            |
| 3           | SELECT * FROM SQL2005_32BIT.dbo.ADABAS_FILE_11 | 02/16/2011 03... | 02/16/2011 0... | 1109       | 0:0:0.16   | 69306       | 1          |            |

Record: 0 of 0

**To save queries (InfoNaut Professional only)**

Queries created and run in InfoNaut can be saved in a variety of formats.

1. After creating and running a query, on the **File** menu, click **Save Results**. The **Save Results** dialog box appears.

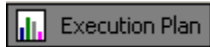


2. Specify a location in which to save the query in the **Save In** list box, and then type the name of the query in the **File Name** text box.

3. Click the **Save** button to save the query as a Microsoft Query .dqy file. The SQL statement that appears in the query text box is saved, along with the connection information.

## To view a query execution plan in InfoNaut

1. Click the **Start** button, and then point to **All Programs**. Point to **CONNX Driver**, and then click **InfoNaut - The CONNX Query Tool**. The InfoNaut window opens.
2. Add a connection to a [data source](#).
3. Create a query, and then click the **Execute Plan** button and the **Execute** button to view the query execution plan.

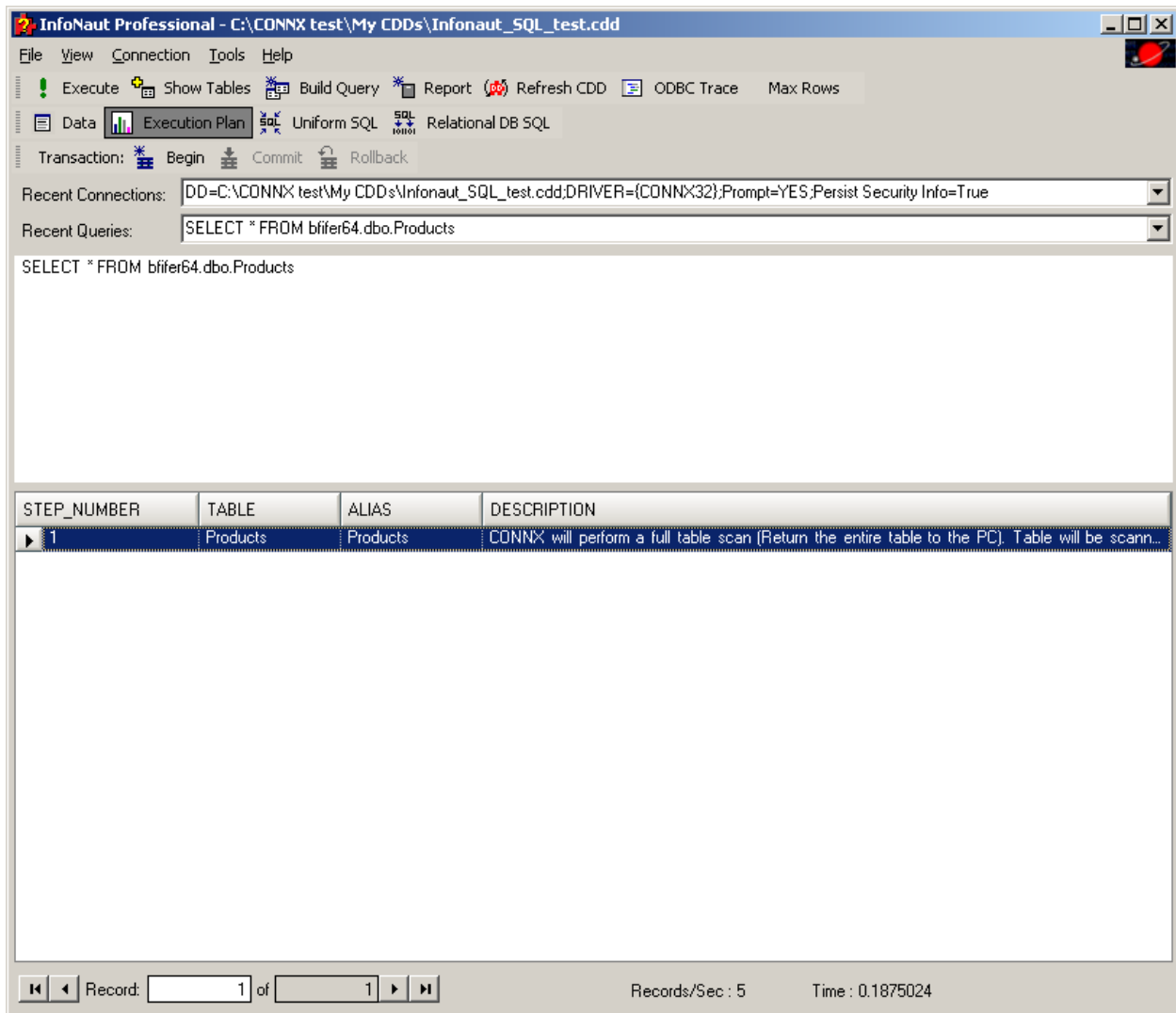


**Statistics button**



**Execute button**

The query execution plan appears in the lower pane.



4. Click the **Execute Plan** button and then click the **Execute** button again to return to viewing the contents of the database, or in the **File** menu, click **Exit** to exit the application.



## To assign a maximum number of rows in a query

**Note:** Using this feature enables you to test query logic by returning a limited result set.

1. Create a query, and then click **Max Rows**. An entry box appears. Enter a number for the maximum number of rows to return.

Max Rows

2. Click the **Execute** button. The query appears with the maximum number of rows displayed.

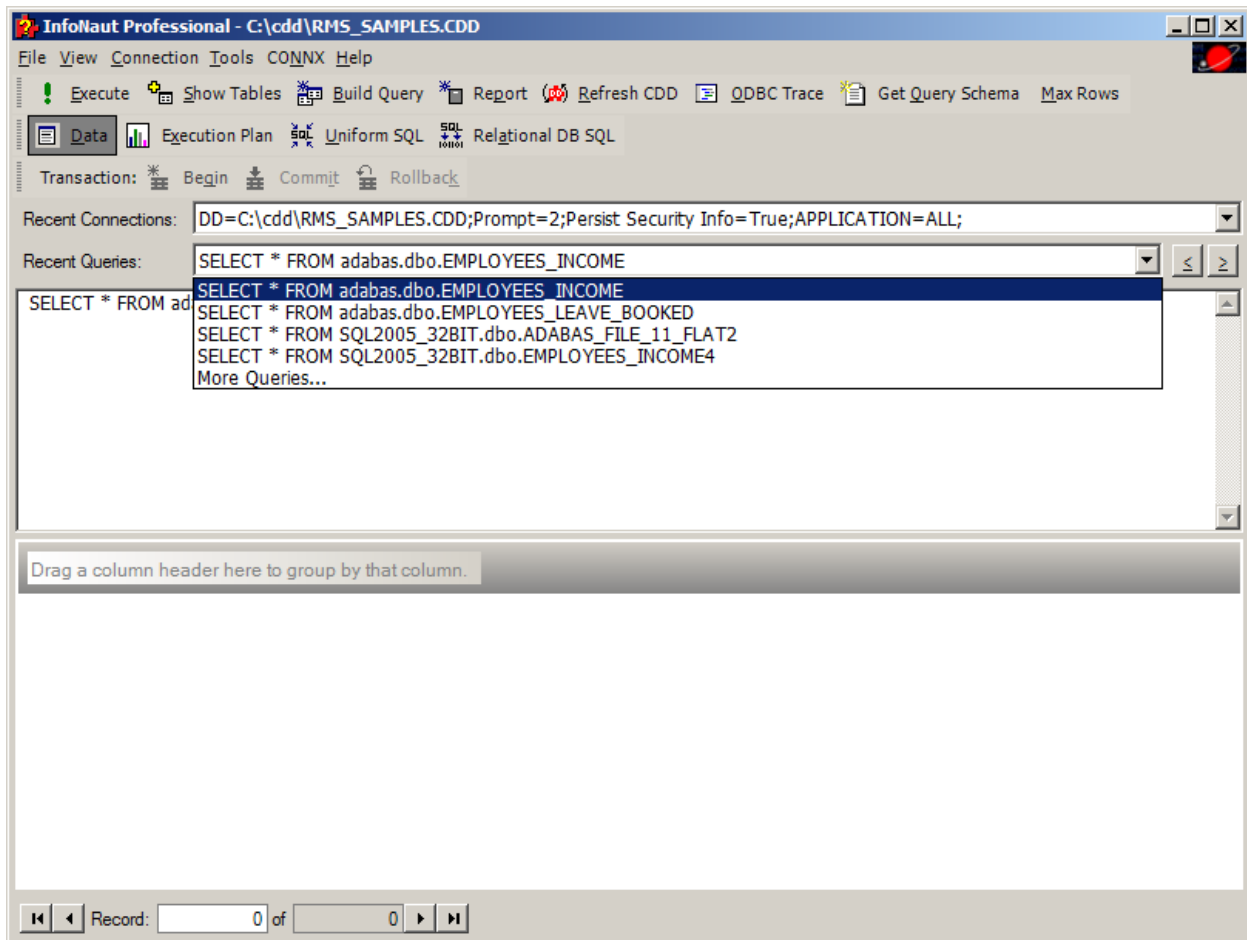
The screenshot shows the InfoNaut Professional application window. The title bar reads "InfoNaut Professional - C:\CONNX test\My CDDs\Infonaut\_SQL\_test.cdd". The menu bar includes File, View, Connection, Tools, and Help. The toolbar contains buttons for Execute, Show Tables, Build Query, Report, Refresh CDD, ODBC Trace, and a Max Rows input field set to 5. Below the toolbar, there are tabs for Data, Execution Plan, Uniform SQL, and Relational DB SQL. The Data tab is active, showing a transaction window with buttons for Begin, Commit, and Rollback. Below this, there are fields for Recent Connections and Recent Queries. The Recent Queries field contains the SQL statement: "SELECT \* FROM bfifer64.dbo.Products". The main area of the window displays the results of this query as a table with 5 rows and 9 columns: ProductID, ProductName, SupplierID, CategoryID, QuantityPerUnit, UnitPrice, UnitsInStock, UnitsOnOrder, and ReorderLevel. The table data is as follows:

| ProductID | ProductName         | SupplierID | CategoryID | QuantityPerUnit     | UnitPrice | UnitsInStock | UnitsOnOrder | ReorderLevel |
|-----------|---------------------|------------|------------|---------------------|-----------|--------------|--------------|--------------|
| 1         | Chai                | 3          | 1          | 10 boxes x 20 ba... | 18.0000   | 39           | 0            | 10           |
| 2         | Chang               | 1          | 1          | 24 - 12 oz bottles  | 19.0000   | 17           | 40           | 25           |
| 3         | Anisee'd Syrup      | 1          | 2          | 12 - 550 ml bottles | 10.0000   | 13           | 70           | 25           |
| 4         | Chef Anton's Caj... | 2          | 2          | 48 - 6 oz jars      | 22.0000   | 53           | 0            | 0            |
| 5         | Chef Anton's Gu...  | 2          | 2          | 36 boxes            | 21.3500   | 0            | 0            | 0            |

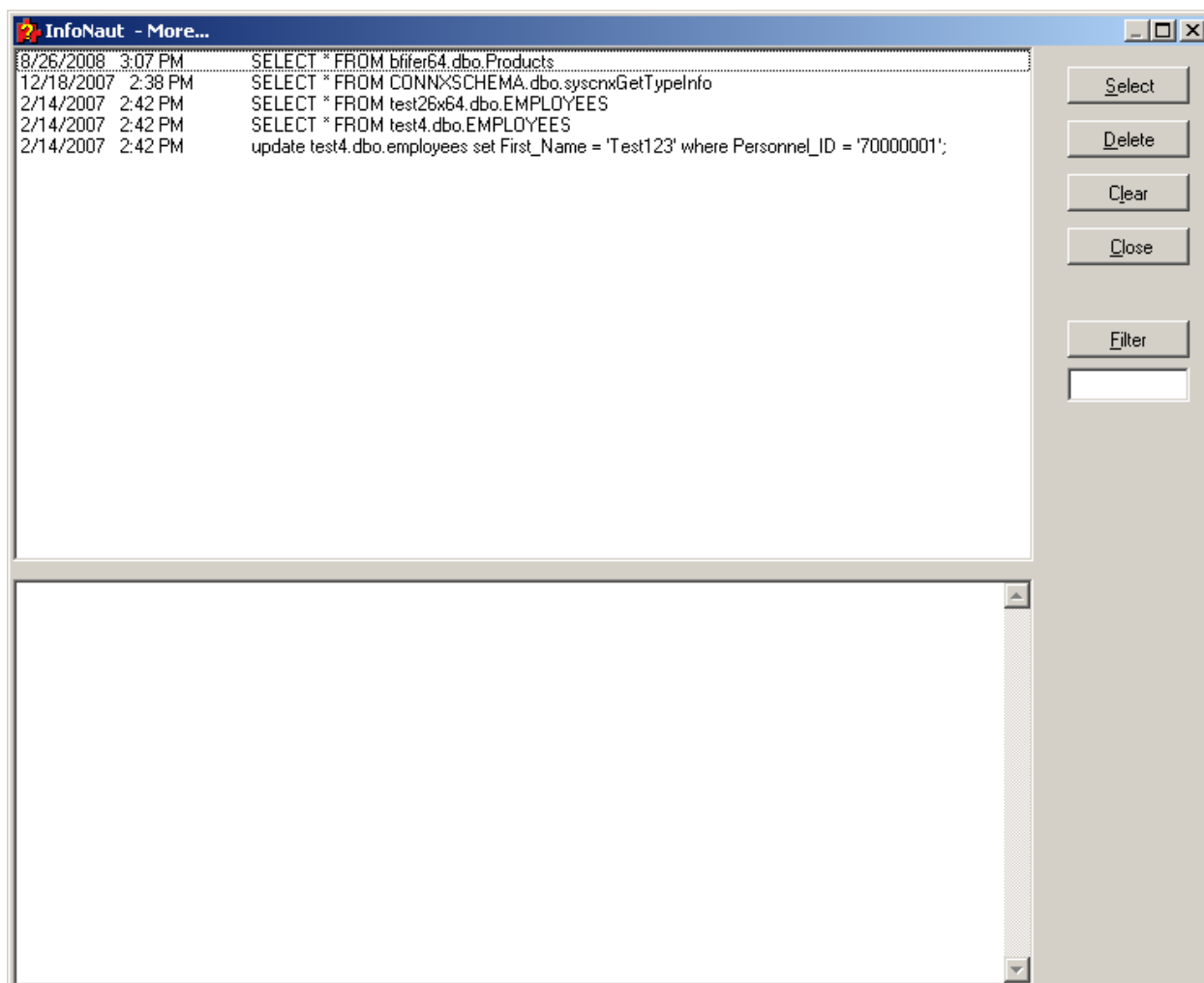
At the bottom of the window, there is a status bar showing "Record: 1 of 5" and "Records/Sec : 27 Time : 0.1875024".

### To view recently executed queries

1. Select **Recent Queries** to view the list of recently created or run queries. The number of queries that are retained in the menu can be configured through **Regedit**.
2. To view the entire list of queries, in **Recent Queries**, select **More Queries....**
3. All the queries can be searched through by selecting the arrow buttons next to the Recent Queries drop down list. The "<" button goes to the previous query in the history list, the ">" button goes to the next more recent query in the list. These buttons can also be accessed with hotkeys: "<" and "," for previous and ">" and "." for next.



4. The **InfoNaut - More...** window opens with a list of previously processed queries.



5. Select your query and press **Select** to change the query currently displayed in the InfoNaut window. Once you have selected a query, you may modify or execute it from the main InfoNaut window.
6. Select one of the queries listed and then click **Delete** to delete the query from the log file.
7. Click **Clear** to erase the entire log file.
8. Click **Close** to return to the InfoNaut window.



**To adjust columns**

---

1. Right-click on the column header to open the **Column** options menu.
2. To reset a column, select **Reset Columns**. The columns are reset to their original position.

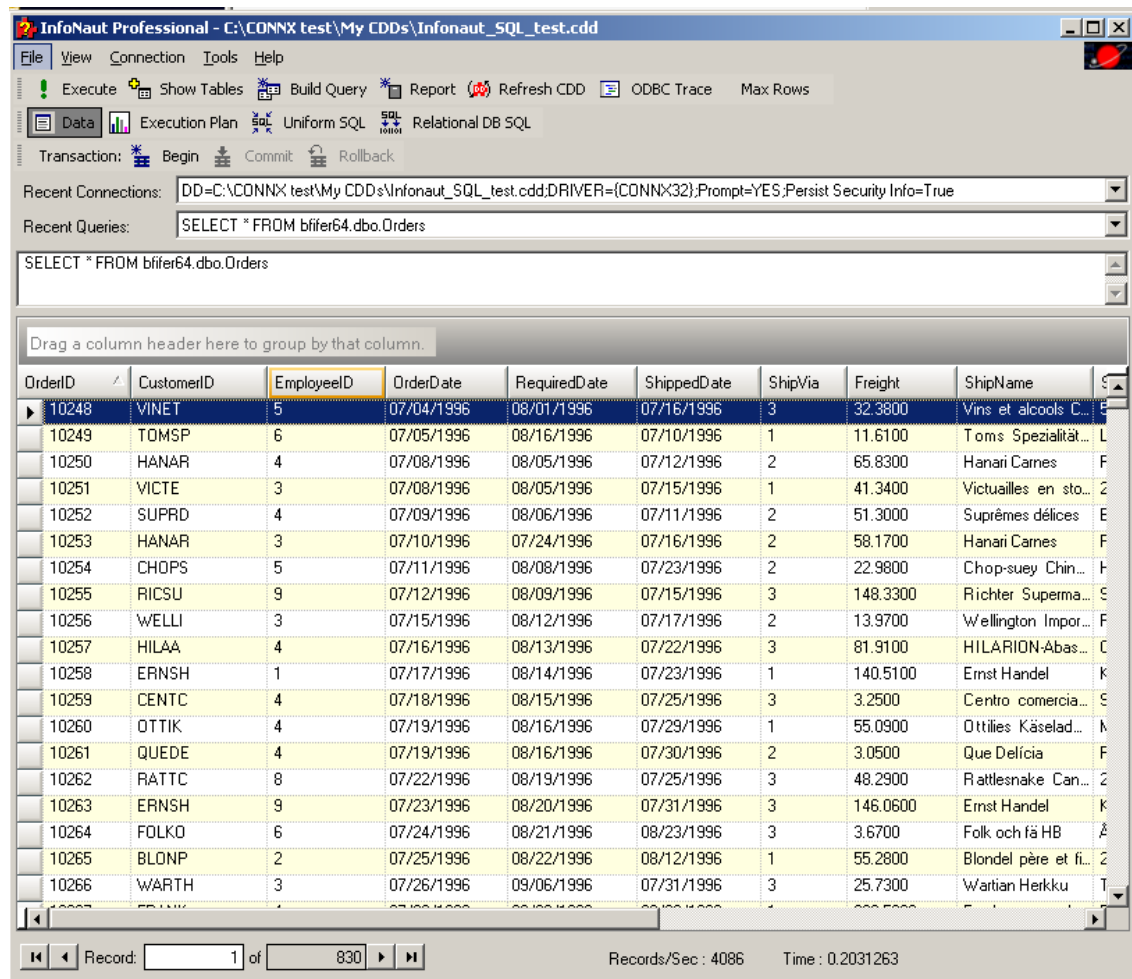


3. To freeze a column in its current position, select **Freeze Column**. This ensures that the column is always visible when scrolling through the result set.
4. To unfreeze a column once frozen, select **Unfreeze Column**.
5. To unfreeze all frozen columns, select **Unfreeze All Columns**.
6. To hide a column, select **Hide Column**.
7. To reveal hidden columns, select **Unhide All Columns**.

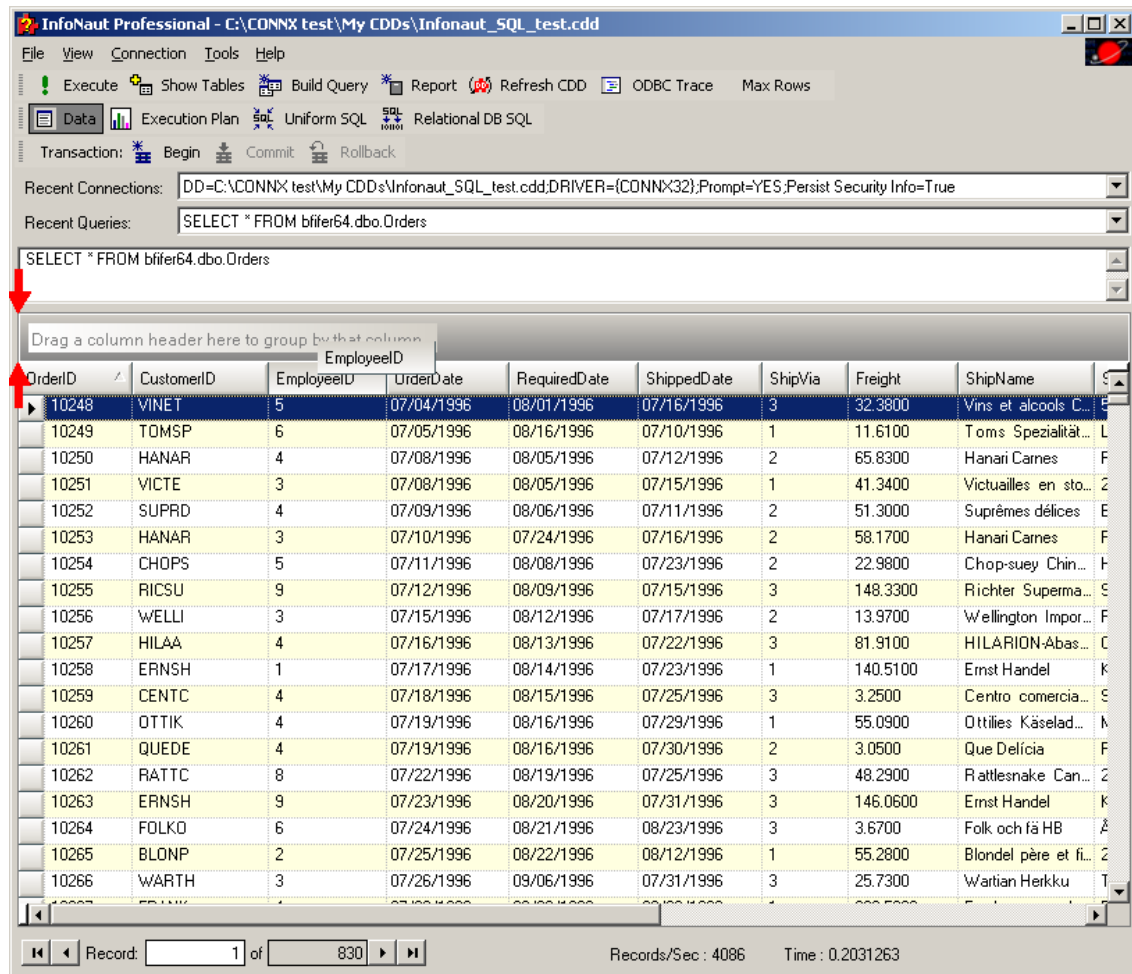
## To assign grouping to a query

Grouping within a query can be accomplished by moving column headers within the query table.

1. Select a column to group by.



2. Drag the column to the **Drag a column header here to group by that column** pane located above the table grid.



3. Drop the column into the place.

InfoNaut Professional - C:\CONNX test\My CDDs\Infonaut\_SQL\_test.cdd

File View Connection Tools Help

Execute Show Tables Build Query Report Refresh CDD ODBC Trace Max Rows

Data Execution Plan Uniform SQL Relational DB SQL

Transaction: Begin Commit Rollback

Recent Connections: DD=C:\CONNX test\My CDDs\Infonaut\_SQL\_test.cdd;DRIVER={CONNX32};Prompt=YES;Persist Security Info=True

Recent Queries: SELECT \* FROM bifer64.dbo.Orders

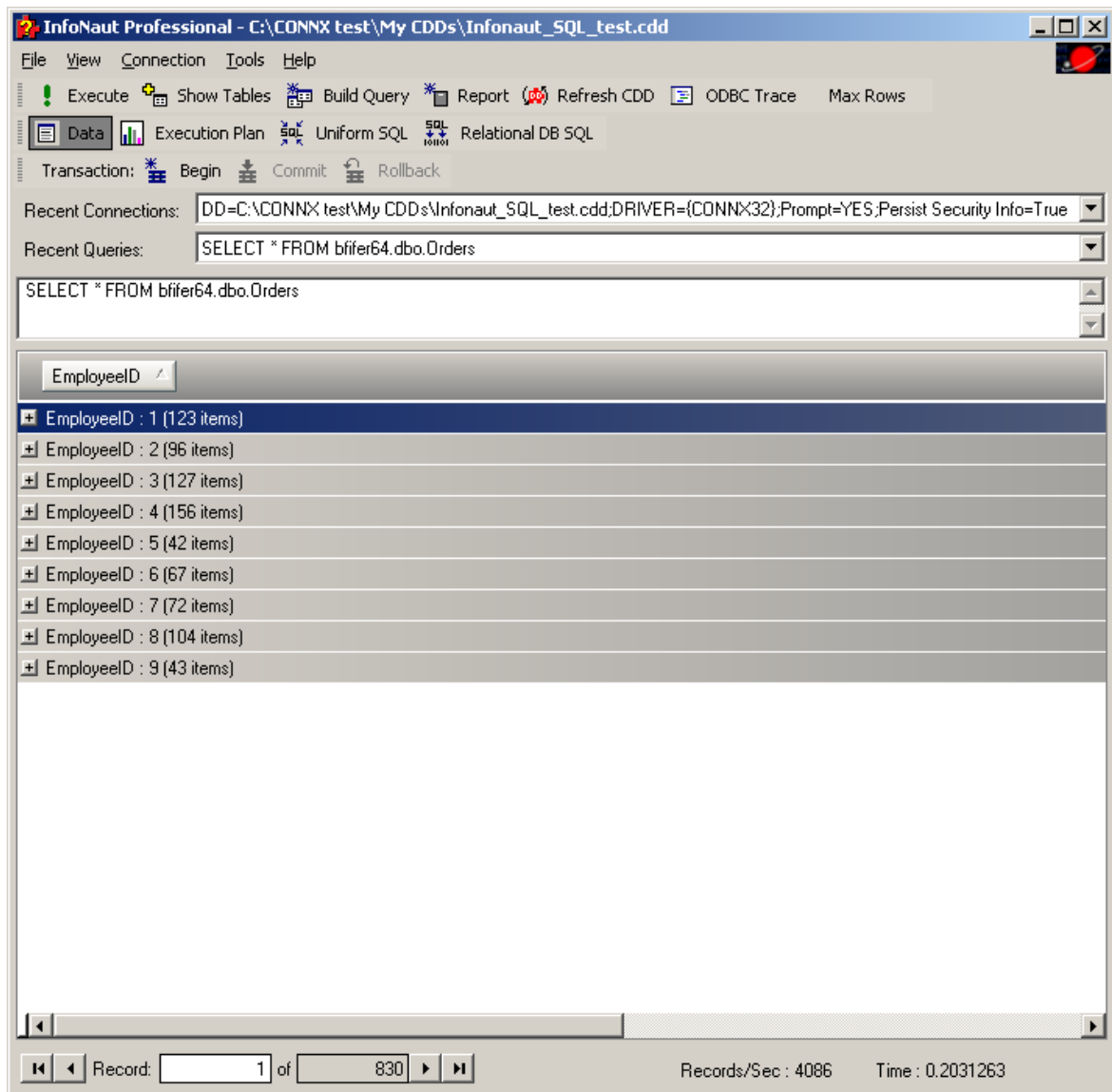
SELECT \* FROM bifer64.dbo.Orders

Drag a column header here to group by that column. EmployeeID

| OrderID | CustomerID | EmployeeID | OrderDate  | RequiredDate | ShippedDate | ShipVia | Freight  | ShipName              |
|---------|------------|------------|------------|--------------|-------------|---------|----------|-----------------------|
| 10248   | VINET      | 5          | 07/04/1996 | 08/01/1996   | 07/16/1996  | 3       | 32.3800  | Vins et alcools C...  |
| 10249   | TOMSP      | 6          | 07/05/1996 | 08/16/1996   | 07/10/1996  | 1       | 11.6100  | Toms Spezialität...   |
| 10250   | HANAR      | 4          | 07/08/1996 | 08/05/1996   | 07/12/1996  | 2       | 65.8300  | Hanari Carnes         |
| 10251   | VICTE      | 3          | 07/08/1996 | 08/05/1996   | 07/15/1996  | 1       | 41.3400  | Victualles en sto...  |
| 10252   | SUPRD      | 4          | 07/09/1996 | 08/06/1996   | 07/11/1996  | 2       | 51.3000  | Suprêmes délices      |
| 10253   | HANAR      | 3          | 07/10/1996 | 07/24/1996   | 07/16/1996  | 2       | 58.1700  | Hanari Carnes         |
| 10254   | CHOPS      | 5          | 07/11/1996 | 08/08/1996   | 07/23/1996  | 2       | 22.9800  | Chop-suey Chin...     |
| 10255   | RICSU      | 9          | 07/12/1996 | 08/09/1996   | 07/15/1996  | 3       | 148.3300 | Richter Superma...    |
| 10256   | WELLI      | 3          | 07/15/1996 | 08/12/1996   | 07/17/1996  | 2       | 13.9700  | Wellington Impor...   |
| 10257   | HILAA      | 4          | 07/16/1996 | 08/13/1996   | 07/22/1996  | 3       | 81.9100  | HILARION-Abas...      |
| 10258   | ERNSH      | 1          | 07/17/1996 | 08/14/1996   | 07/23/1996  | 1       | 140.5100 | Ernst Handel          |
| 10259   | CENTC      | 4          | 07/18/1996 | 08/15/1996   | 07/25/1996  | 3       | 3.2500   | Centro comercia...    |
| 10260   | OTTIK      | 4          | 07/19/1996 | 08/16/1996   | 07/29/1996  | 1       | 55.0900  | Ottiles Käselad...    |
| 10261   | QUEDE      | 4          | 07/19/1996 | 08/16/1996   | 07/30/1996  | 2       | 3.0500   | Que Delicia           |
| 10262   | RATTC      | 8          | 07/22/1996 | 08/19/1996   | 07/25/1996  | 3       | 48.2900  | Rattlesnake Can...    |
| 10263   | ERNSH      | 9          | 07/23/1996 | 08/20/1996   | 07/31/1996  | 3       | 146.0600 | Ernst Handel          |
| 10264   | FOLKO      | 6          | 07/24/1996 | 08/21/1996   | 08/23/1996  | 3       | 3.6700   | Folk och få HB        |
| 10265   | BLONP      | 2          | 07/25/1996 | 08/22/1996   | 08/12/1996  | 1       | 55.2800  | Blondel père et fi... |
| 10266   | WARTH      | 3          | 07/26/1996 | 09/06/1996   | 07/31/1996  | 3       | 25.7300  | Wartian Herkku        |

Record: 1 of 830 Records/Sec: 4086 Time: 0.2031263

4. 4. The query is grouped by the contents of that column.



5. To view the group records, click on the plus sign to the left of the column name.

InfoNaut Professional - C:\CONNX test\My CDDs\Infonaut\_SQL\_test.cdd

File View Connection Tools Help

Execute Show Tables Build Query Report Refresh CDD ODBC Trace Max Rows

Data Execution Plan Uniform SQL Relational DB SQL

Transaction: Begin Commit Rollback

Recent Connections: DD=C:\CONNX test\My CDDs\Infonaut\_SQL\_test.cdd;DRIVER={CONNX32};Prompt=YES;Persist Security Info=True

Recent Queries: SELECT \* FROM bfifer64.dbo.Orders

SELECT \* FROM bfifer64.dbo.Orders

EmployeeID

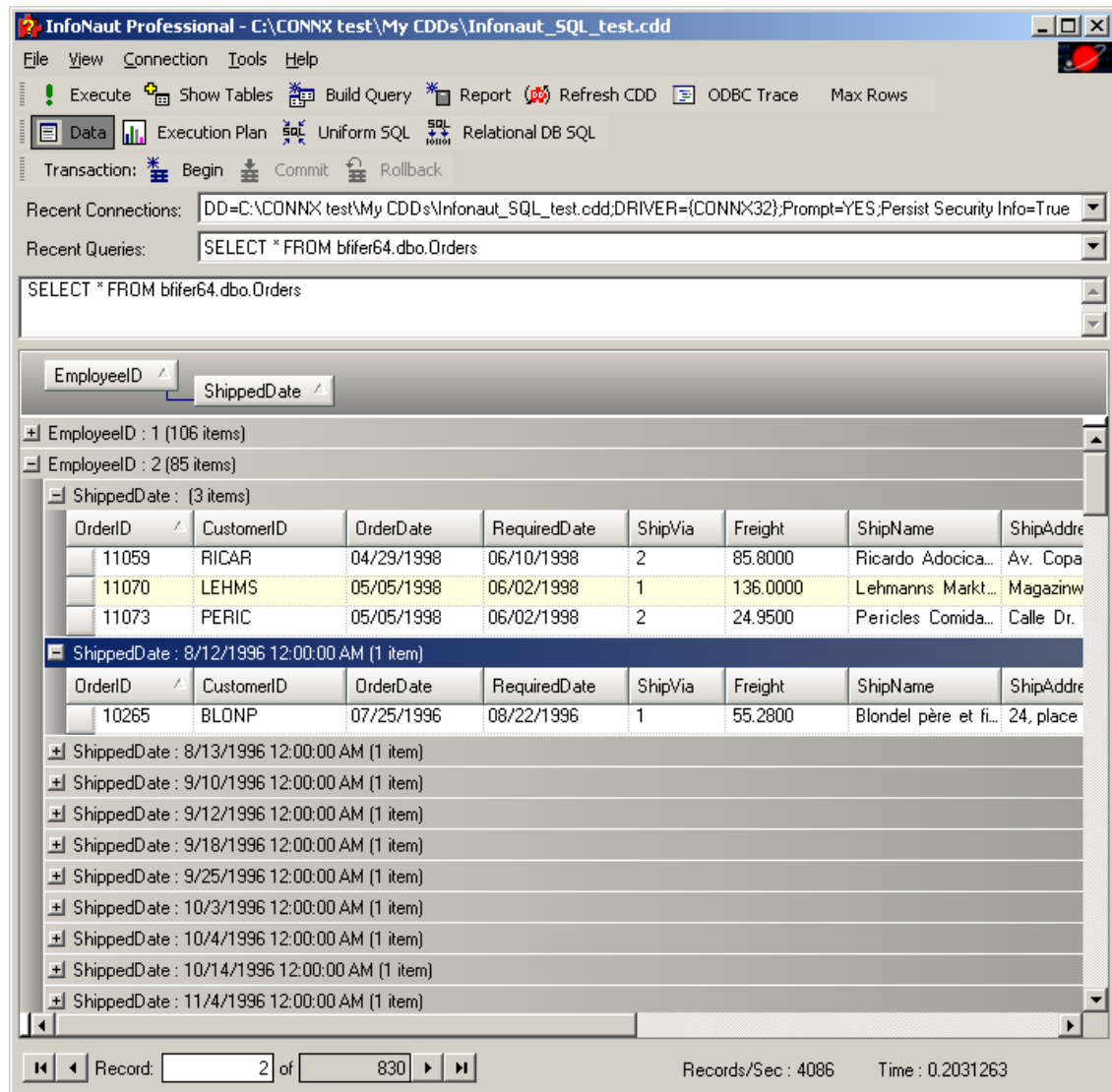
EmployeeID : 1 (123 items)

EmployeeID : 2 (96 items)

| OrderID | CustomerID | OrderDate  | RequiredDate | ShippedDate | ShipVia | Freight  | ShipName        |
|---------|------------|------------|--------------|-------------|---------|----------|-----------------|
| 10265   | BLONP      | 07/25/1996 | 08/22/1996   | 08/12/1996  | 1       | 55.2800  | Blondel père e  |
| 10277   | MORGK      | 08/09/1996 | 09/06/1996   | 08/13/1996  | 3       | 125.7700 | Morgenstern C   |
| 10280   | BERGS      | 08/14/1996 | 09/11/1996   | 09/12/1996  | 1       | 8.9800   | Berglunds sna   |
| 10295   | VINET      | 09/02/1996 | 09/30/1996   | 09/10/1996  | 2       | 1.1500   | Vins et alcools |
| 10300   | MAGAA      | 09/09/1996 | 10/07/1996   | 09/18/1996  | 2       | 17.6800  | Magazzini Alir  |
| 10307   | LONEP      | 09/17/1996 | 10/15/1996   | 09/25/1996  | 2       | 0.5600   | Lonesome Pin    |
| 10312   | WANDK      | 09/23/1996 | 10/21/1996   | 10/03/1996  | 2       | 40.2600  | Die Wandend     |
| 10313   | QUICK      | 09/24/1996 | 10/22/1996   | 10/04/1996  | 2       | 1.9600   | QUICK-Stop      |
| 10327   | FOLKO      | 10/11/1996 | 11/08/1996   | 10/14/1996  | 1       | 63.3600  | Folk och få HB  |
| 10339   | MEREP      | 10/28/1996 | 11/25/1996   | 11/04/1996  | 2       | 15.6600  | Mère Paillarde  |
| 10345   | QUICK      | 11/04/1996 | 12/02/1996   | 11/11/1996  | 2       | 249.0600 | QUICK-Stop      |
| 10368   | ERNSH      | 11/29/1996 | 12/27/1996   | 12/02/1996  | 2       | 101.9500 | Ernst Handel    |
| 10379   | QUEDE      | 12/11/1996 | 01/08/1997   | 12/13/1996  | 1       | 45.0300  | Que Delicia     |
| 10388   | SEVES      | 12/19/1996 | 01/16/1997   | 12/20/1996  | 1       | 34.8600  | Seven Seas Ir   |
| 10392   | PICCO      | 12/24/1996 | 01/21/1997   | 01/01/1997  | 3       | 122.4600 | Piccolo und me  |
| 10398   | SAVEA      | 12/30/1996 | 01/27/1997   | 01/09/1997  | 3       | 89.1600  | Save-a-lot Mai  |
| 10404   | MAGAA      | 01/03/1997 | 01/31/1997   | 01/08/1997  | 1       | 155.9700 | Magazzini Alir  |

Record: 2 of 830 Records/Sec : 4086 Time : 0.2031263

This can be done for multiple groups.



To close up the group view, click on the minus sign to the left of the column name.

5. To ungroup columns, drag the column from the group pane and drop it back onto the grid.

## To add parameters to a query

A parameterized query is a query that contains variables, also known as parameters, whose values can vary at run time. The parameters replace literal values in an SQL statement.

1. Create a query in the main **InfoNaut** query pane.

The screenshot shows the InfoNaut Professional application window. The title bar reads "InfoNaut Professional - C:\CONNX test\My CDDs\Infonaut\_SQL\_test.cdd". The menu bar includes File, View, Connection, Tools, and Help. The toolbar contains icons for Execute, Show Tables, Build Query, Report, Refresh CDD, ODBC Trace, and Max Rows. Below the toolbar, there are tabs for Data, Execution Plan, Uniform SQL, and Relational DB SQL. The "Recent Connections" box shows a connection string: "DD=C:\CONNX test\My CDDs\Infonaut\_SQL\_test.cdd;DRIVER={CONNX32};Prompt=YES;Persist Security Info=True". The "Recent Queries" box shows a query: "SELECT \* FROM bfifer64.dbo.Orders". The main query pane contains the text: "Select \* from <%Enter table name%> where EmployeeID=<%Enter EmployeeID|4%>". Below the query pane, a table of data is displayed with columns: OrderID, CustomerID, EmployeeID, OrderDate, RequiredDate, ShippedDate, ShipVia, Freight, and ShipName. The table contains 17 rows of data. At the bottom, there is a status bar showing "Record: 1 of 830", "Records/Sec : 2415", and "Time : 0.3437544".

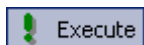
| OrderID | CustomerID | EmployeeID | OrderDate  | RequiredDate | ShippedDate | ShipVia | Freight  | ShipName              |
|---------|------------|------------|------------|--------------|-------------|---------|----------|-----------------------|
| 10248   | VINET      | 5          | 07/04/1996 | 08/01/1996   | 07/16/1996  | 3       | 32.3800  | Vins et alcools C...  |
| 10249   | TOMSP      | 6          | 07/05/1996 | 08/16/1996   | 07/10/1996  | 1       | 11.6100  | Toms Spezialität...   |
| 10250   | HANAR      | 4          | 07/08/1996 | 08/05/1996   | 07/12/1996  | 2       | 65.8300  | Hanari Carnes         |
| 10251   | VICTE      | 3          | 07/08/1996 | 08/05/1996   | 07/15/1996  | 1       | 41.3400  | Victuailles en sto... |
| 10252   | SUPRD      | 4          | 07/09/1996 | 08/06/1996   | 07/11/1996  | 2       | 51.3000  | Suprêmes délices      |
| 10253   | HANAR      | 3          | 07/10/1996 | 07/24/1996   | 07/16/1996  | 2       | 58.1700  | Hanari Carnes         |
| 10254   | CHOPS      | 5          | 07/11/1996 | 08/08/1996   | 07/23/1996  | 2       | 22.9800  | Chop-suey Chin...     |
| 10255   | RICSU      | 9          | 07/12/1996 | 08/09/1996   | 07/15/1996  | 3       | 148.3300 | Richter Superma...    |
| 10256   | WELLI      | 3          | 07/15/1996 | 08/12/1996   | 07/17/1996  | 2       | 13.9700  | Wellington Impor...   |
| 10257   | HILAA      | 4          | 07/16/1996 | 08/13/1996   | 07/22/1996  | 3       | 81.9100  | HILARION-Abas...      |
| 10258   | ERNSH      | 1          | 07/17/1996 | 08/14/1996   | 07/23/1996  | 1       | 140.5100 | Ernst Handel          |
| 10259   | CENTC      | 4          | 07/18/1996 | 08/15/1996   | 07/25/1996  | 3       | 3.2500   | Centro comercia...    |
| 10260   | OTTIK      | 4          | 07/19/1996 | 08/16/1996   | 07/29/1996  | 1       | 55.0900  | Ottiles Käselad...    |
| 10261   | QUEDE      | 4          | 07/19/1996 | 08/16/1996   | 07/30/1996  | 2       | 3.0500   | Que Delícia           |
| 10262   | RATTC      | 8          | 07/22/1996 | 08/19/1996   | 07/25/1996  | 3       | 48.2900  | Rattlesnake Can...    |

**Note:** If you create the query anywhere besides the main **InfoNaut** query pane (such as the **Recent Queries** box), the query will not be executed

2. Substitute the literal value for the table name, in this example, the parameterized marker **<%Enter table name%>**.

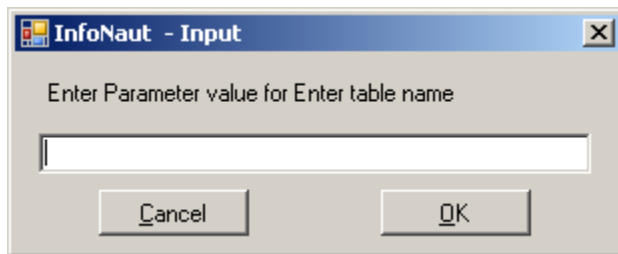
3. To replace a literal column name in a WHERE statement (in this case, EmployeeID) substitute the column name with the parameterized marker **<%Enter EmployeeID|4%>**. The pipe between "EmployeeID" and "4" in the parameter sets the default Employee ID to 4.

4. Click **Execute**.

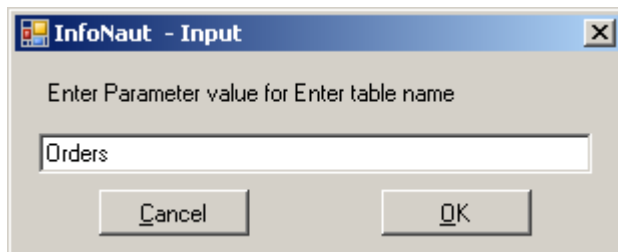




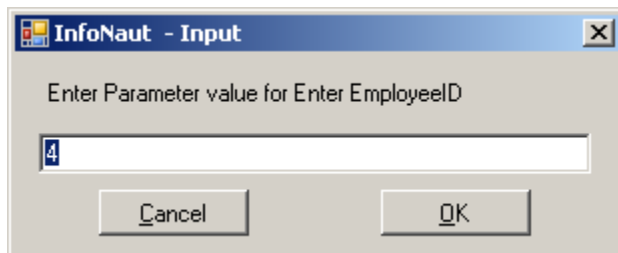
5. The **Input** dialog box appears.



Enter the name of the table, and then click the **OK** button.



6. The **Enter Parameter** dialog box appears. Enter the Employee ID, and then click **OK**.



7. The query results, containing only those records for EmployeeID = "4" appear in the lower pane.

InfoNaut Professional - C:\CONNX test\My CDDs\Infonaut\_SQL\_test.cdd

File View Connection Tools Help

Execute Show Tables Build Query Report Refresh CDD ODBC Trace Max Rows

Data Execution Plan Uniform SQL Relational DB SQL

Transaction: Begin Commit Rollback

Recent Connections: DD=C:\CONNX test\My CDDs\Infonaut\_SQL\_test.cdd;DRIVER={CONNX32};Prompt=YES;Persist Security Info=True

Recent Queries: Select \* from <%Enter table name%> where EmployeeID=<%Enter EmployeeID4%>

Select \* from <%Enter table name%> where EmployeeID=<%Enter EmployeeID4%>

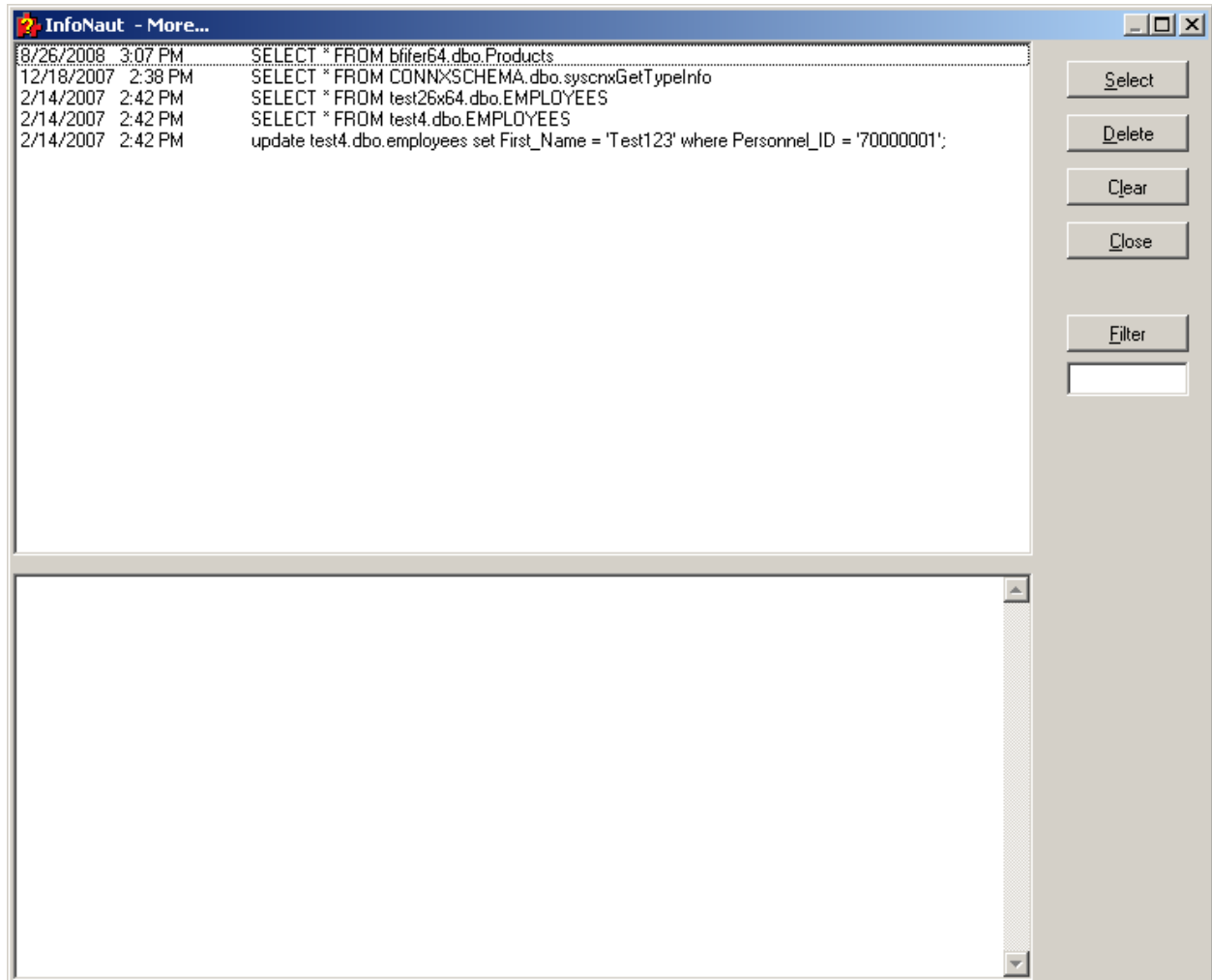
| OrderID | CustomerID | EmployeeID | OrderDate  | RequiredDate | ShippedDate | ShipVia | Freight  | ShipName            |   |
|---------|------------|------------|------------|--------------|-------------|---------|----------|---------------------|---|
| 10250   | HANAR      | 4          | 07/08/1996 | 08/05/1996   | 07/12/1996  | 2       | 65.8300  | Hanari Carnes       | F |
| 10252   | SUPRD      | 4          | 07/09/1996 | 08/06/1996   | 07/11/1996  | 2       | 51.3000  | Suprêmes délices    | E |
| 10257   | HILAA      | 4          | 07/16/1996 | 08/13/1996   | 07/22/1996  | 3       | 81.9100  | HILARION-Abas...    | C |
| 10259   | CENTC      | 4          | 07/18/1996 | 08/15/1996   | 07/25/1996  | 3       | 3.2500   | Centro comercia...  | S |
| 10260   | OTTIK      | 4          | 07/19/1996 | 08/16/1996   | 07/29/1996  | 1       | 55.0900  | Ottilies Käselad... | M |
| 10261   | QUEDE      | 4          | 07/19/1996 | 08/16/1996   | 07/30/1996  | 2       | 3.0500   | Que Delicia         | F |
| 10267   | FRANK      | 4          | 07/29/1996 | 08/26/1996   | 08/06/1996  | 1       | 208.5800 | Frankenversand      | E |
| 10281   | ROMEY      | 4          | 08/14/1996 | 08/28/1996   | 08/21/1996  | 1       | 2.9400   | Romero y tomillo    | C |
| 10282   | ROMEY      | 4          | 08/15/1996 | 09/12/1996   | 08/21/1996  | 1       | 12.6900  | Romero y tomillo    | C |
| 10284   | LEHMS      | 4          | 08/19/1996 | 09/16/1996   | 08/27/1996  | 1       | 76.5600  | Lehmans Markt...    | M |
| 10288   | REGGC      | 4          | 08/23/1996 | 09/20/1996   | 09/03/1996  | 1       | 7.4500   | Reggiani Caseifici  | S |
| 10294   | RATTC      | 4          | 08/30/1996 | 09/27/1996   | 09/05/1996  | 2       | 147.2600 | Rattlesnake Can...  | 2 |
| 10299   | RICAR      | 4          | 09/06/1996 | 10/04/1996   | 09/13/1996  | 2       | 29.7600  | Ricardo Adocica...  | A |
| 10302   | SUPRD      | 4          | 09/10/1996 | 10/08/1996   | 10/09/1996  | 2       | 6.2700   | Suprêmes délices    | E |
| 10315   | ISLAT      | 4          | 09/26/1996 | 10/24/1996   | 10/03/1996  | 2       | 41.7600  | Island Trading      | C |

Record: 1 of 156 Records/Sec: 555 Time: 0.2812536

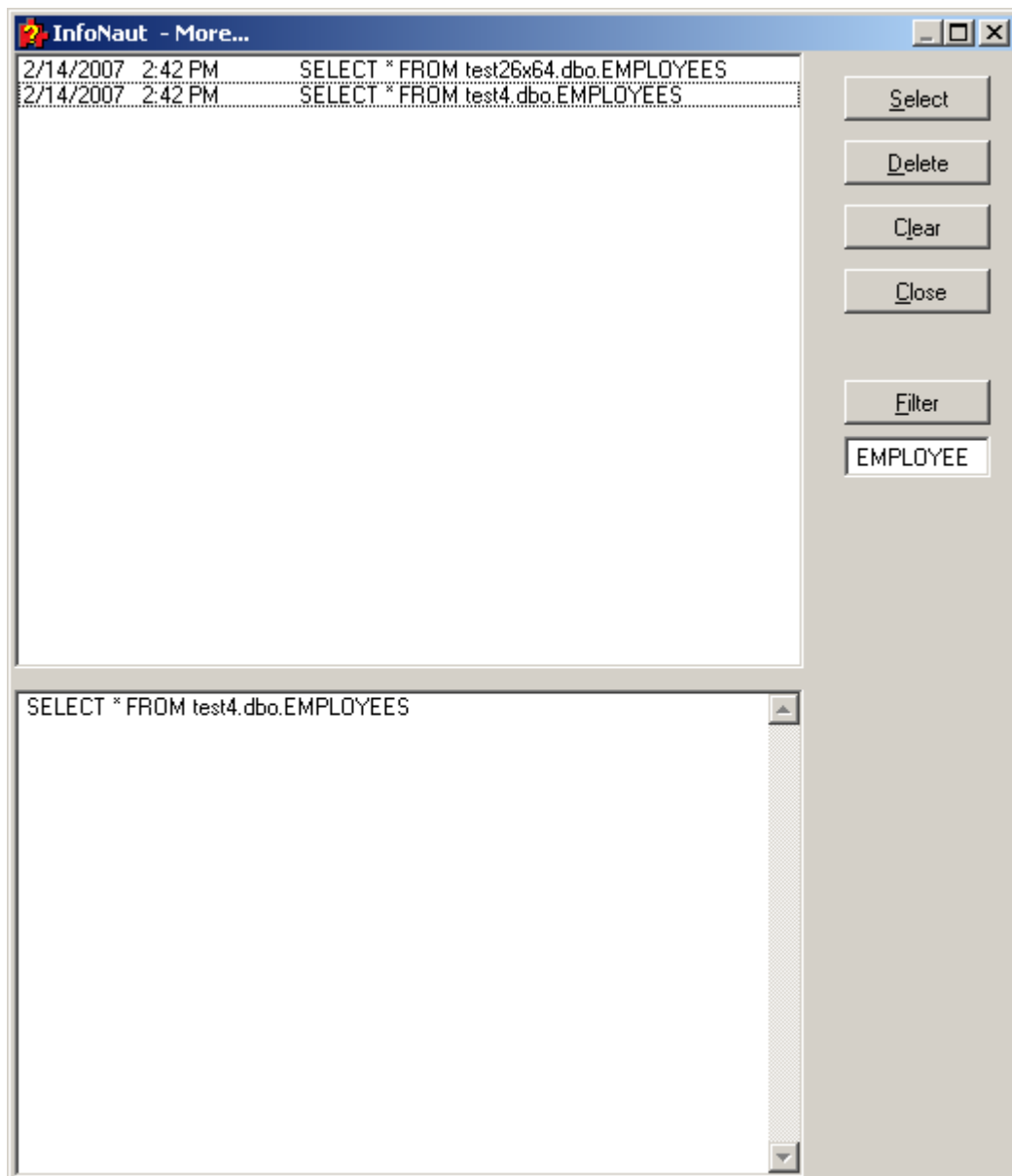
The parameterized query appears in the upper pane. The values you entered have replaced the parameterized marker; the original parameterized query is included in the Recent Queries list box.

**To filter a query from within the More... pane**

1. In the **InfoNaut More...** pane, select a query to filter.



2. The query appears in the bottom filter pane.
3. Enter a filter in the **Filter** text box, and then click the **Filter** button.



4. The list of queries that are displayed are limited to those that contain the filter string. To restore the complete list of queries, filter with an empty string. Doing so will enable you to select portions of existing queries to test new query logic.

## InfoNaut Report Writer

### Introduction

---

The InfoNaut Report Writer enables InfoNaut Professional users to create a report from table information or queries created in InfoNaut. Reports can be used for simple or formal presentations and can be quickly customized using the wide range of formatting tools available.

Reports created with the InfoNaut Report Writer can be saved as Adobe Acrobat .pdf files, HTML pages, Microsoft Excel spreadsheets, Rich Text format files, .tif files, .csv files, and .txt files.

Before beginning, you should decide on the content and purpose of your report. Doing so beforehand will save you time as you arrange the various elements of the report. This is especially important if you are using a grouped query; depending on how the query is grouped and whether or not you need a group header or footer in your report.

**Note:** The InfoNaut Report Writer is a feature of InfoNaut Professional and requires an InfoNaut Professional license.

#### Creating a Report with InfoNaut Report Writer

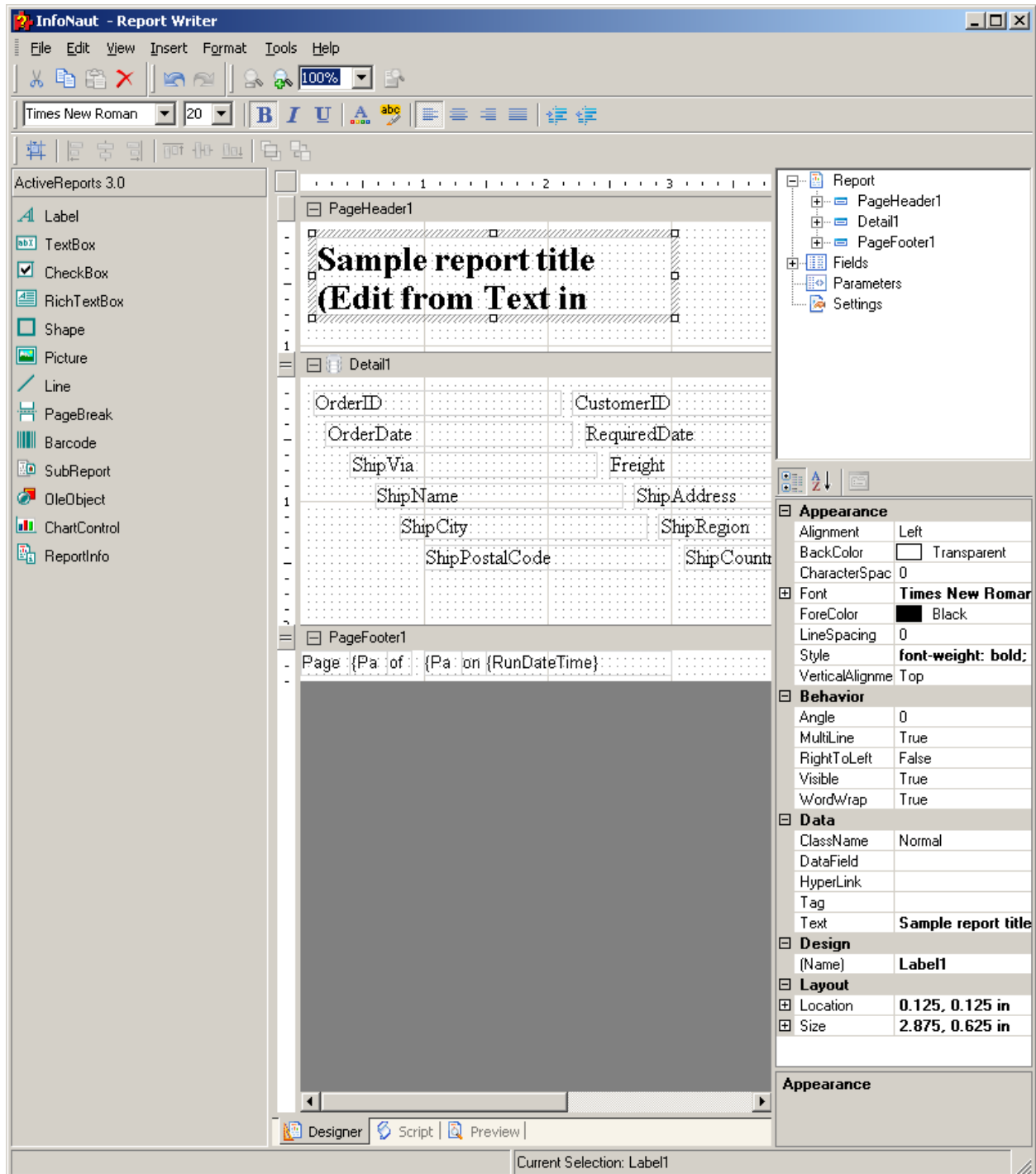
##### To open the InfoNaut Report Writer

---

1. Click the **Start** button, and then point to **All Programs**. Point to **CONNX Driver**, and then click **InfoNaut - The CONNX Query Tool**. The InfoNaut window opens.
2. Add a connection to a [data source](#).
3. You must have information in the grid or have an existing report in order to open the InfoNaut Report Writer. You can create a new query or use an existing query by clicking **File**, then **Open SQL** and selecting a .dqy file.
4. Click the **Report** button, or select **Report Writer** from the **View** menu.



5. The **Report Writer** window opens. The fields from the query or table shown in the InfoNaut grid appear in the Header pane in the order in which they appear in the grid.

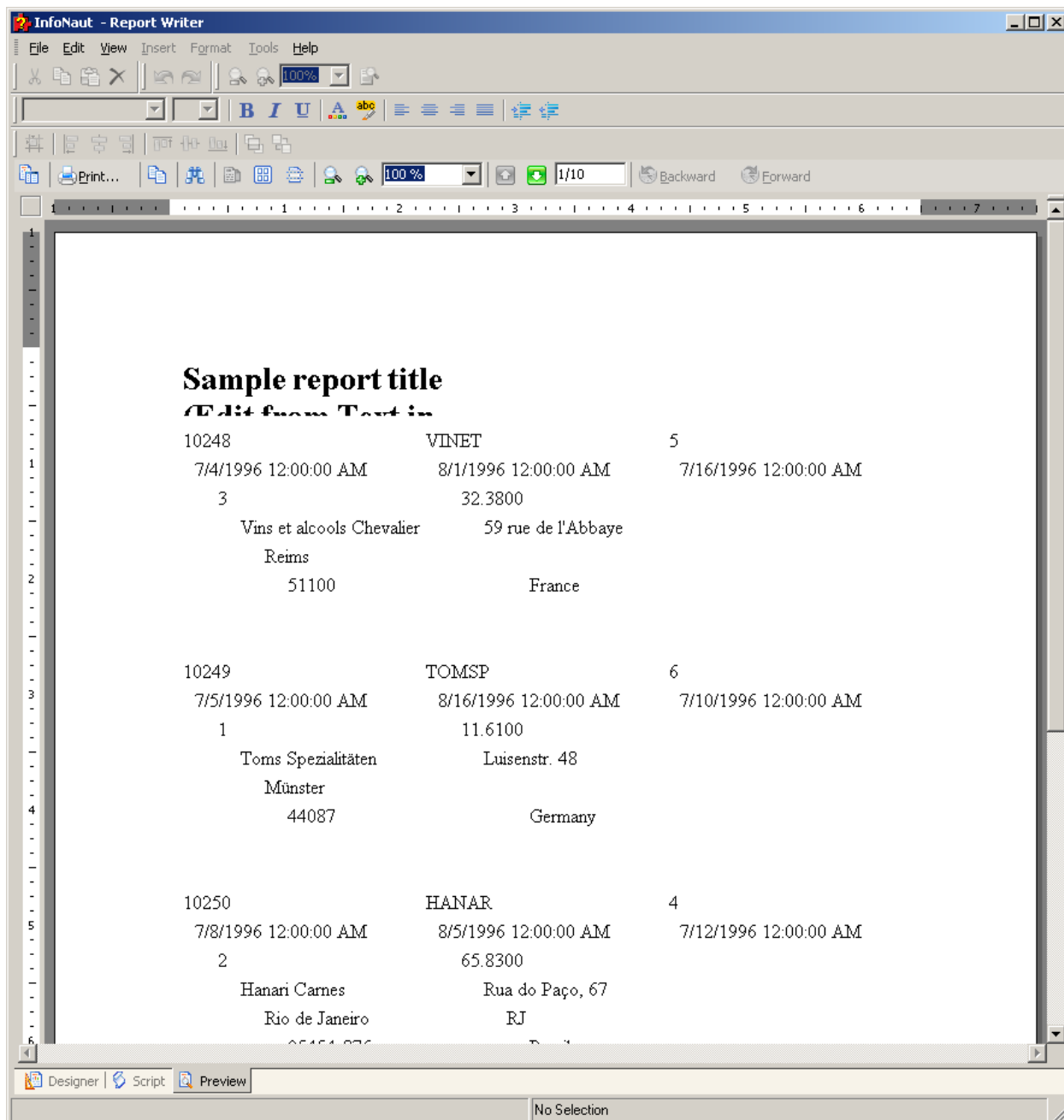


## To view a preview of a report in InfoNaut Report Writer

1. In the Report Writer window, click the **Preview** tab.



2. The report appears as it will print or as it will appear once converted to any of the available formats.



3. To return to the design grid, click the **Designer** tab.





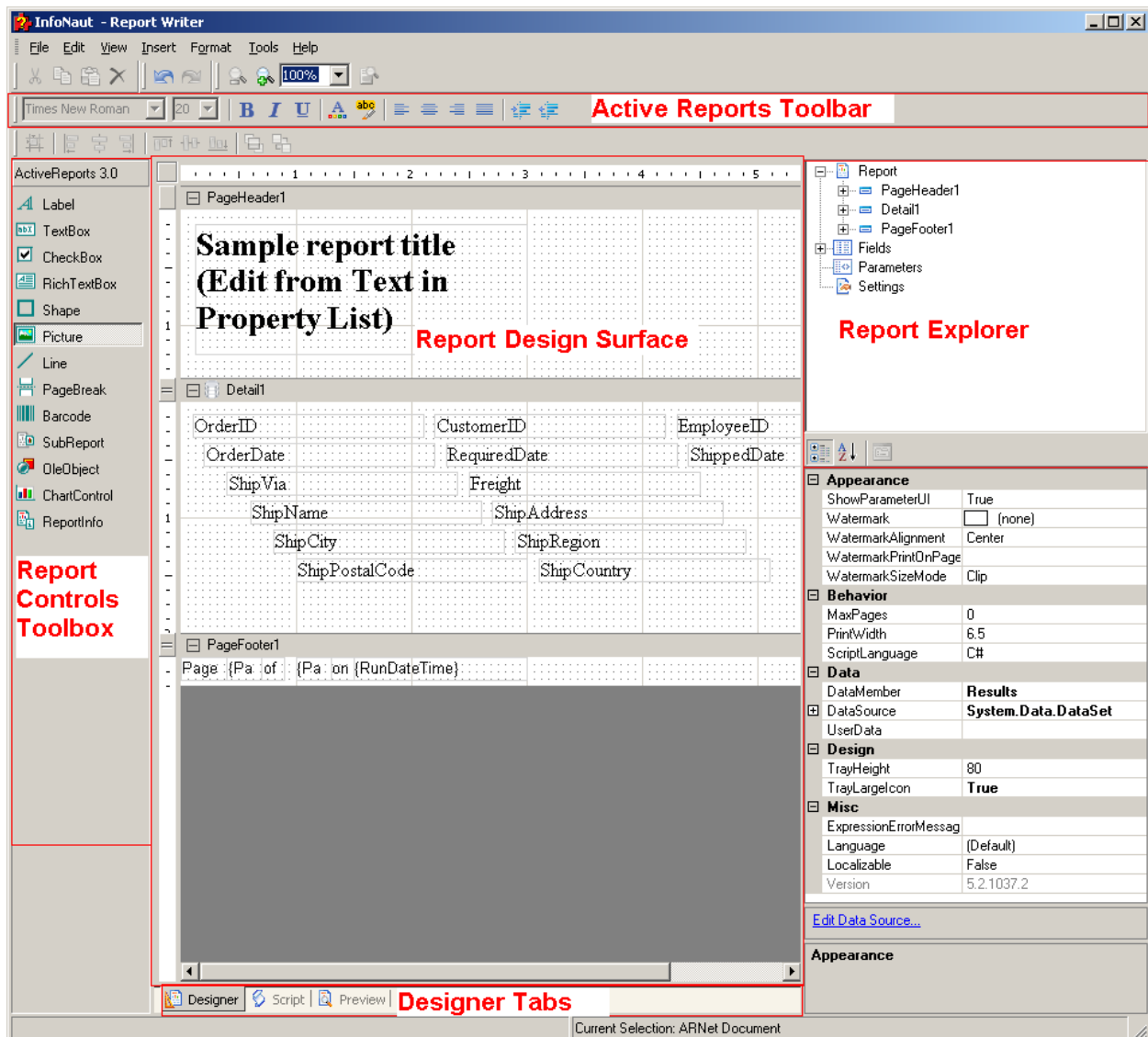


## Using the InfoNaut Report Writer Formatting Tools

### The Basics

The InfoNaut Report Writer has a wide range of formatting features. Each section can be resized, fonts can be adjusted by size and color, borders or lines can be added for emphasis or to separate different types of information. Labels can also be added to any of the fields used in the associated query or table. Fields can be aligned by left or right edge, top, middle, or bottom. They can also be altered to an identical size, with the properties locked to read only status.

### Report Writer Window



The InfoNaut Report Writer window consists of the following parts:

- Design Surface
- Designer Tabs

- Report Explorer
- Report Menu
- Toolbars
- Toolbox

## Design Surface

The InfoNaut Report Writer design surface is made up of the following base components:

- PageHeader section--This section can be used to print column headers, page numbers, page titles, or any information that needs to be printed once at the top of each page. Bound controls in the PageHeader or PageFooter are not supported. The data in such controls may not be in synch with the data displayed in other sections on the page.
- Detail section--This section is the body of the report that prints once for each record in the data source.
- DataSource icon--This control can be used to connect the report's data source settings to an existing data source
- PageFooter section--This section can be used to print page totals, page numbers or any other information that needs to be printed once at the bottom of each page.
- Designer/Script/Preview tabs--The Designer and Script tabs can be clicked to toggle between design and script views, while the Preview tab allows for a fully functional design-time preview of how a report will look and behave at run time.

## Designer Tabs

The InfoNaut Report Writer has three tabs, the Designer tab, the Script tab, and the Preview tab.

- Designer Tab: By default, when you create or open an ActiveReport the designer tab is selected. While in this tab of the ActiveReport, you can perform all design-time and run-time functions associated with your report, such as creating a layout, binding to data sources, creating event-handling methods, and more.
- Script Tab: By selecting the Script tab, you open the script editor, which gives you the ability to easily and quickly add scripting to your report. The script editor contains two comboboxes that allow you to select any section of the ActiveReport and all events associated with that section. When you select a section and an event, the script editor generates a method stub for the event.
- Preview Tab: The Preview tab allows you to quickly view what your report looks like at run time without needing to actually run your project. This makes it easy to quickly see the run-time impact of changes you make in the designer or the code-behind. To gain a report preview, toggle from the Designer or Script tab to the Preview tab.

## Report Explorer

The Report Explorer serves as the information focal point for your report. From it, you can gain a quick overview of the elements that comprise the report, remove individual controls, add parameters and calculated fields, change report settings, bind data fields to textbox controls, and modify properties and report behavior via the Properties grid.

## Toolbar

The ActiveReports toolbar is made up of the following components:

- Font--Sets the typeface of the selected label, checkbox, or textbox control
- Size--Sets the font size of the selected label, checkbox, or textbox control

- **Bold**--Sets the bold typeface on or off
- **Italic**--Sets the italic typeface on or off
- **Underline**--Sets the underline typeface on or off
- **Color**--Sets the text color
- **Highlight**--Sets the text highlighting color
- **Align Left**--Aligns the text left in the control area
- **Align Center**--Aligns the text centered in the control area
- **Align Right**--Aligns the text right in the control area
- **Justify**--Justifies the text in the control area
- **Increase Indent**--Increases the indent of the text in the RichText control area
- **Decrease Indent**--Decreases the indent of the text in the RichText control area

## **Toolbox**

The ActiveReports toolbox contains the same components as the **Insert** Menu:

- **Label**--Allows you to insert a new static label control
- **TextBox**--Allows you to insert a textbox, bound to a database field or unbound Toolbox
- **CheckBox**--Allows you to insert a checkbox, bound to a database field or unbound
- **RichTextBox**--Allows you to insert an ActiveReports RichTextBox control
- **Shape**--Allows you to insert a rectangle, circle or square shape
- **Picture**--Allows you to insert an image loaded from a file
- **Line**--Allows you to insert a line control
- **PageBreak**--Allows you to insert a page break within a selection
- **Barcode**--Allows you to insert an ActiveReports Barcode control
- **SubReport**--Allows you to insert a Subreport control to link to another report
- **OleObject**--Allows you to insert an OLE object, bound to a database field or unbound
- **CharControl**--Allows you to insert a chart in any of a variety of styles
- **ReportInfo**--Allows you to display report info in a number of format strings such as {PageNumber} of {PageCount}

## Working with Field Objects in InfoNaut Report Writer

### Introduction to Field Objects

---

Field objects are some of the most important tools used in creating a report with InfoNaut Professional. Field objects allows us to display data from our query in our report. Field objects also allow us to add dynamic expressions to our reports, as well as to create subtotals and grand totals. They can be added anywhere within the report to add data wherever it is needed.

The InfoNaut Report Writer Field objects include Data Fields and Aggregate or Summary Fields, which include the following:

- SummaryDistinctField, which identifies the field used to calculate a total,
- SummaryFunc, which specifies the type of total,
- SummaryGroup, which specifies the group to which the summary applies,
- SummaryRunning, which enables the selection of the summary information, and
- SummaryType, which specifies the timing of the calculation of the summary. SummaryType fields include GrandTotal SummaryType, PageTotal Summary Type, SubTotal SummaryType, and PageCount SummaryType.

To format results, use the OutputFormat Field object which enables a range of Field displays, including currency (dollar (\$) sign and decimal points), date (from 2-digit to 4-digit year), time, percentage, and a customizable display. The OutputFormat Field object is described in To change the date format in the page footer.

### **Summary (Aggregate) Fields Property**

---

Summary Fields enable the user to add totals to a report and give specific control over how the totals are calculated.

The first property, **SummaryDistinctField**, specifies the field that is distinctly identified in the total. For instance, to find out how many distinct customers placed orders in the last six months, select the CustomerID field from the SummaryDistinctField dropdown.

The second property, **SummaryFunc**, specifies the type of total. There are several choices, including SUM, COUNT, AVE, MIN, and MAX. There are two versions of each function, one for distinct totals, and one for indistinct. For example, to list the number of companies that placed orders in the last six months, select the ddSFDCOUNT function. To list the number of customers who placed orders, use the ddSFCOUNT function.

The third property is the **SummaryGroup**, which identifies the group to which we want the summary to apply.

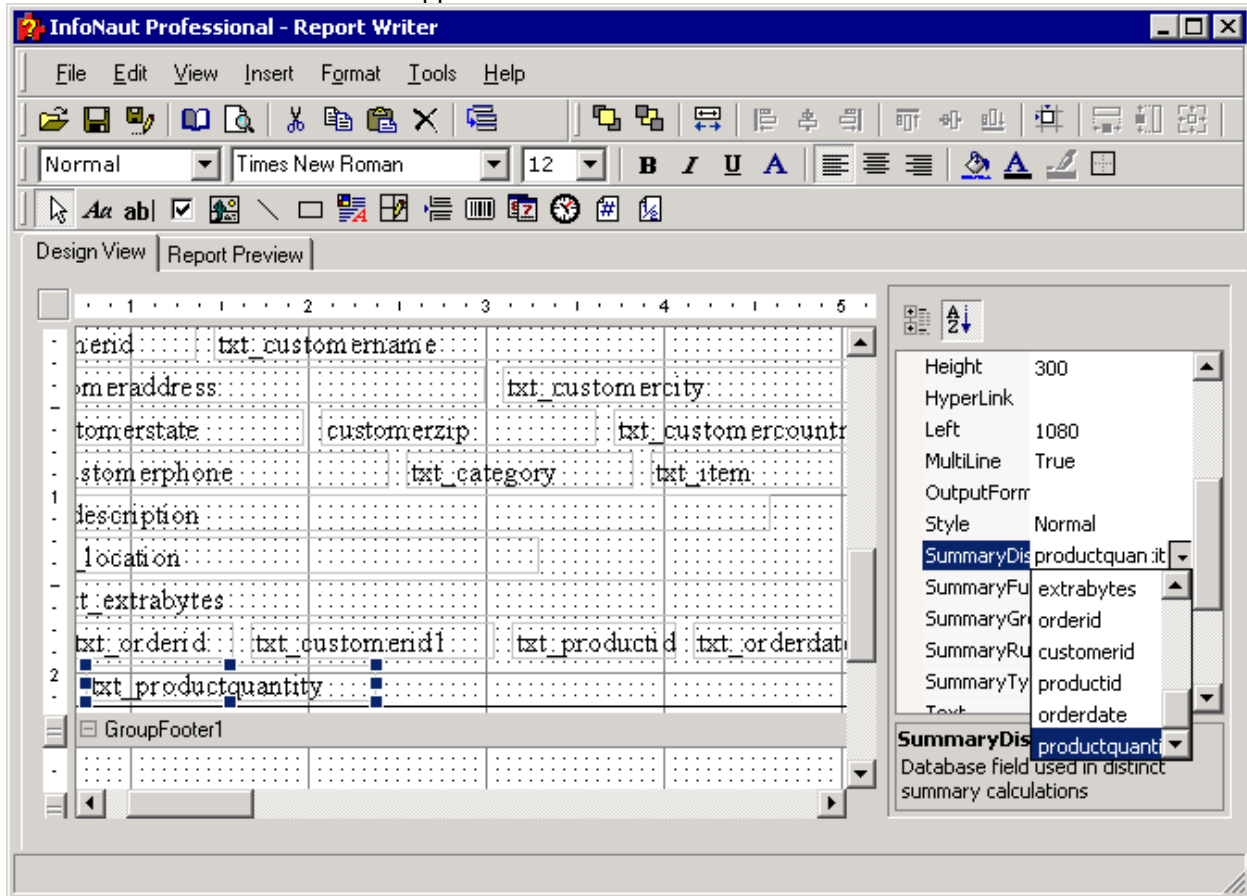
The fourth property, **SummaryRunning**, enables the selection of what to summarize. For example, to summarize a specific group, select ddSRGroup from the SummaryRunning list box. This inserts a subtotal for a specific group within the Field text box. The other option, ddSRSummaryAll, inserts a running total through the whole report.

The last property, **SummaryType**, specifies when you want the summary calculated. There are four choices, as described in the following table:

| <b>SummaryType</b> | <b>Property Description</b>   |
|--------------------|---|
| ddSMGrandTotal     | Calculated at the report level, includes all records in the query.    |
| ddSMPageTotal      | Calculated on each page and automatically resets on each page.        |
| ddSMSSubTotal      | Calculated at the group level and automatically reset for each group. |
| ddSMPageCount      | Counts the number of pages.   |

### To include a SummaryDistinctField in a report

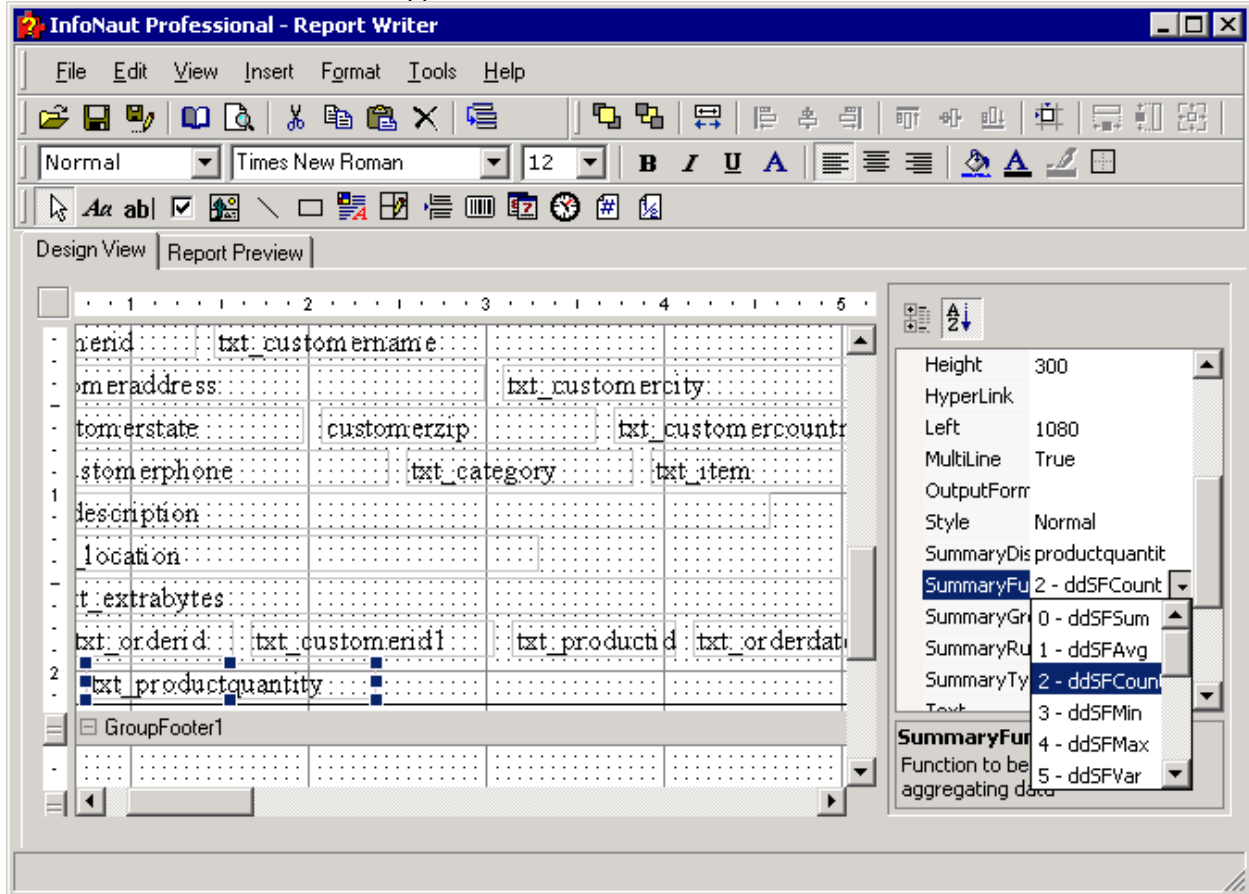
1. Create a field within the report.
2. Click the down arrow to the right of the **SummaryDistinctField** property label.
3. The list of available data fields appears.



4. Select a field that is used to distinctly identify the records to be totalled.

## To include a SummaryFunc in a report

1. Create a field within the report.
2. Click the down arrow to the right of the **SummaryFunc** property label.
3. The list of available functions appears.

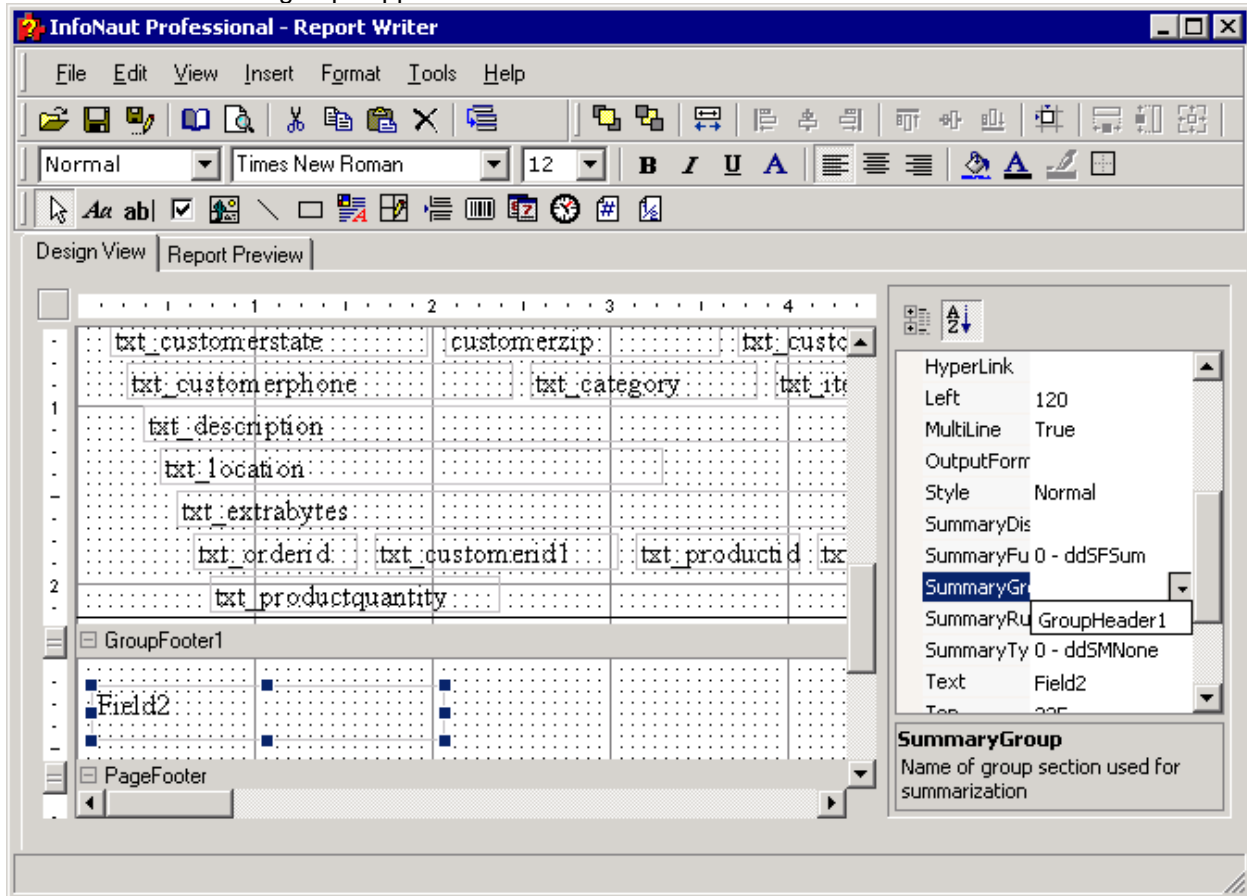


4. Select a function.
5. The field defines a specific type of total.



### To include a SummaryGroup in a report

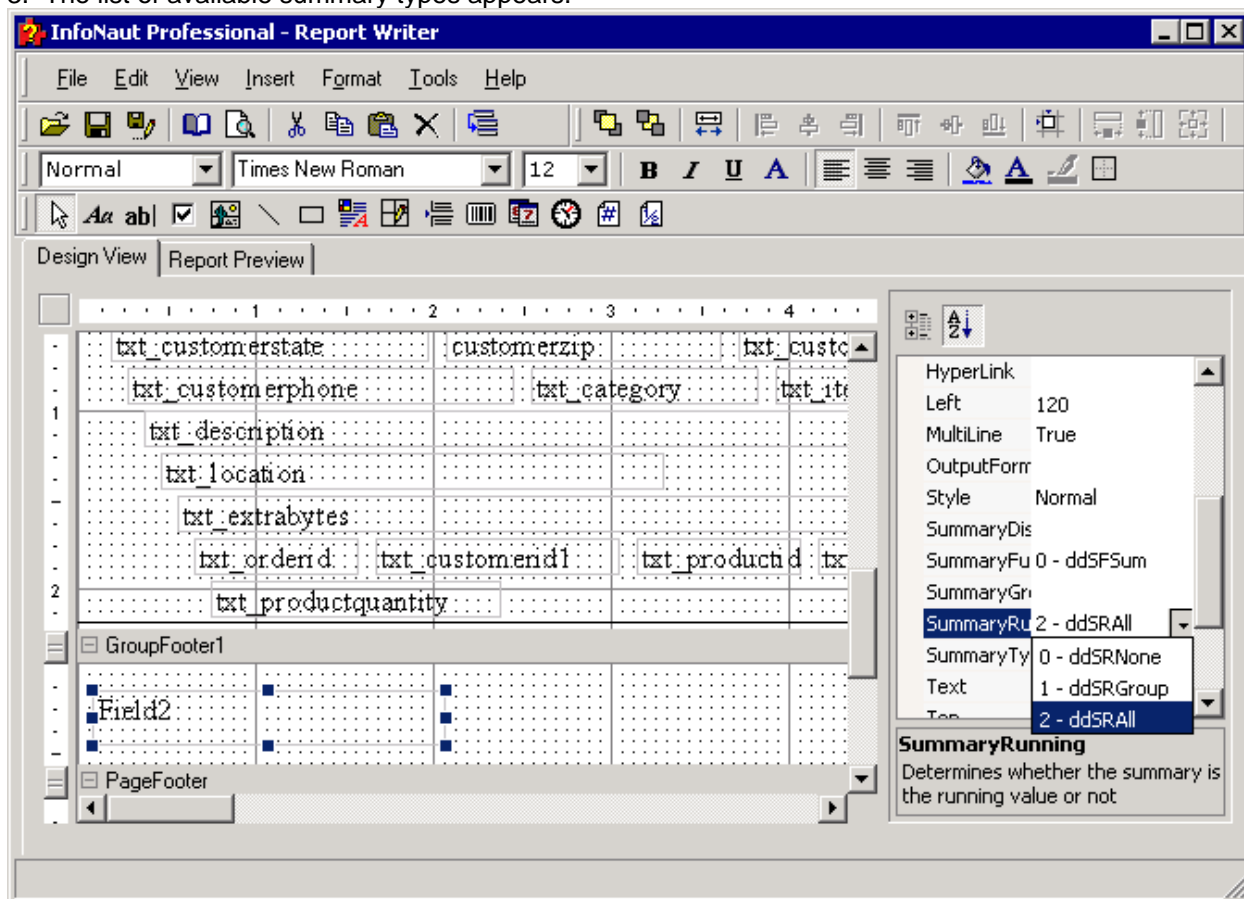
1. Create a field within the report.
2. Click the down arrow to the right of the **SummaryGroup** property label.
3. The list of available groups appears.



4. Select a group.
5. The field identifies the group to which the summary applies.

## To include a SummaryRunning in a report

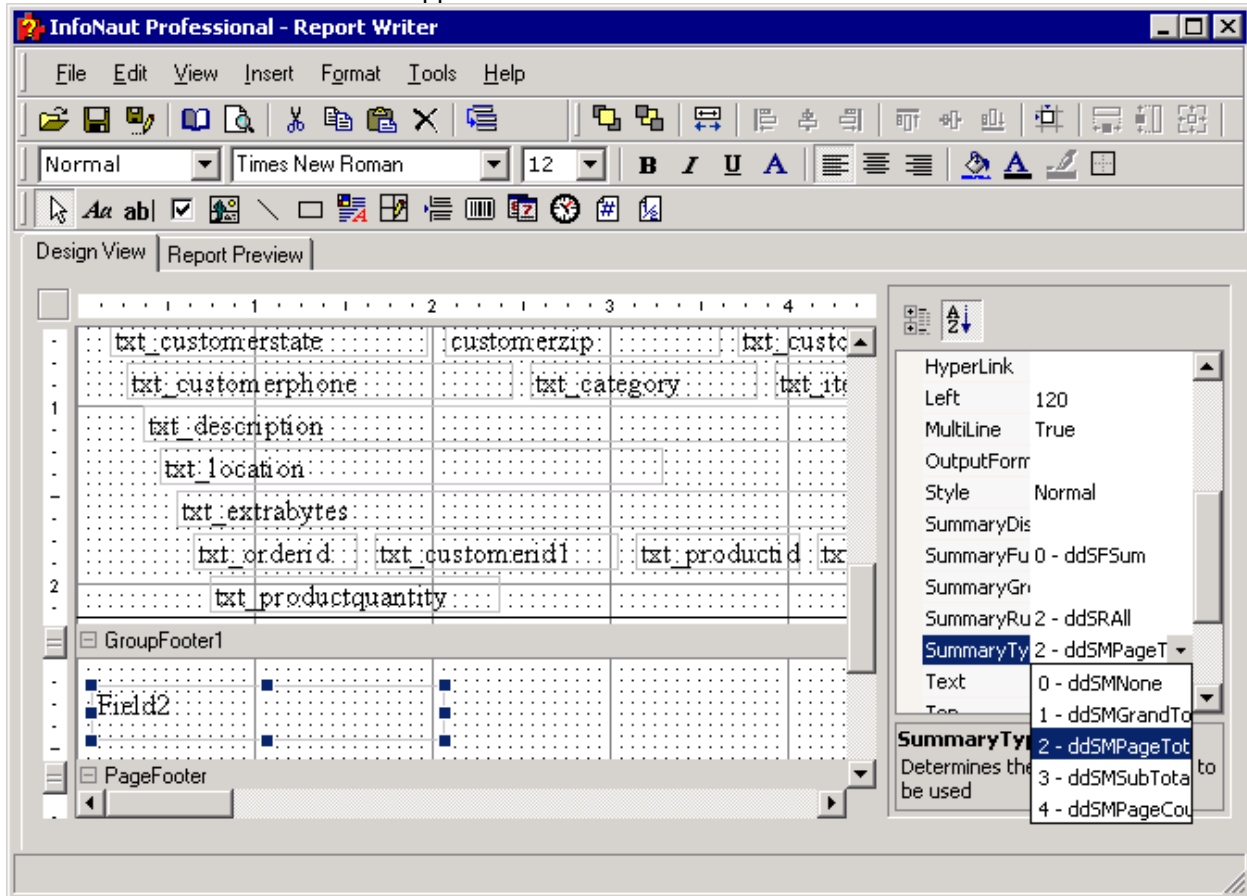
1. Create a field within the report.
2. Click the down arrow to the right of the **SummaryRunning** property label.
3. The list of available summary types appears.



4. Select a summary type.

### To include a SummaryType in a report

1. Create a field within the report.
2. Click the down arrow to the right of the **SummaryType** property label.
3. The list of available data fields appears.



4. Select a field for insertion into the report.
5. The field defines how the summary has been calculated.

#### Formatting Report Headers

### Report Headers

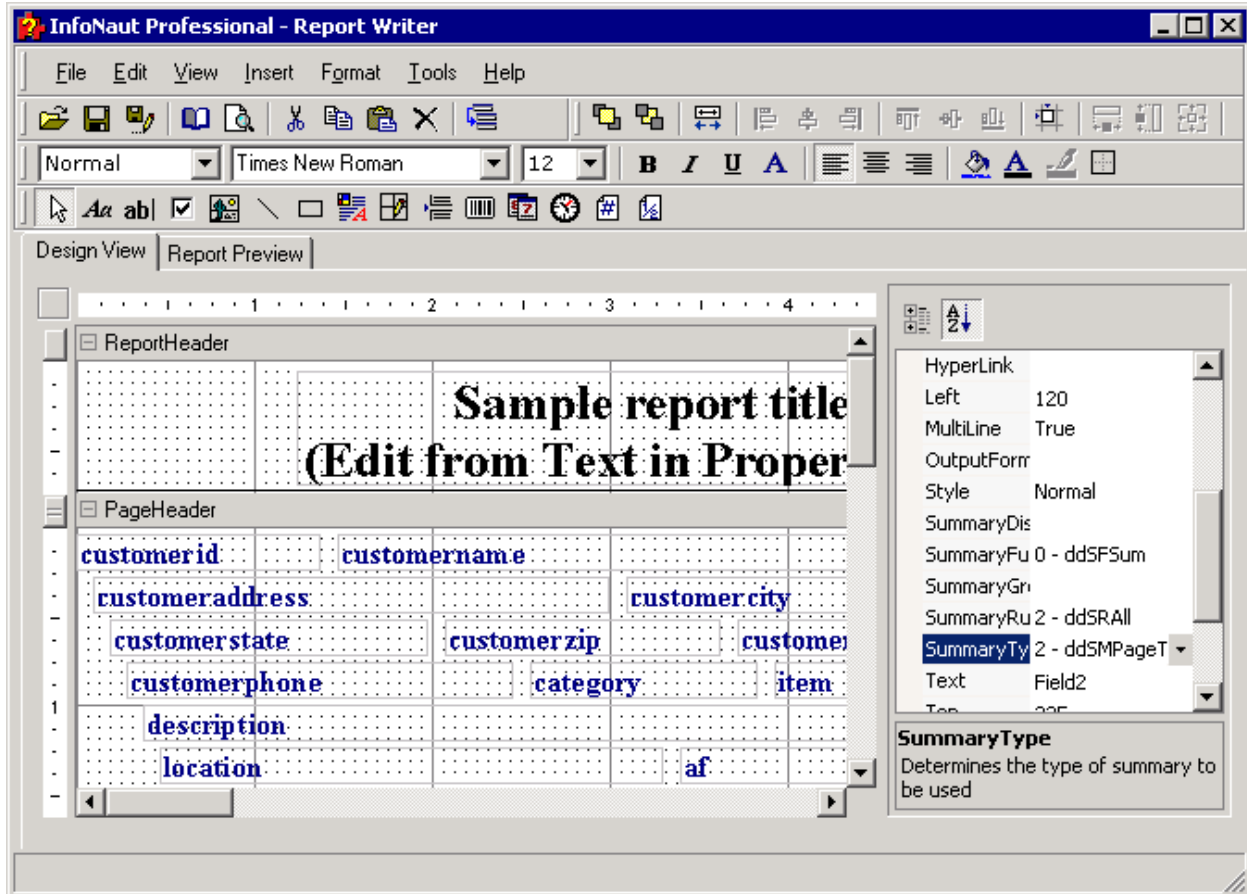
---

Report headers in InfoNaut Report Writer appear on the first page of the report. The report header can contain the title of the report, a company logo, a summary of the report, or any other pertinent information.

***Important:*** *The formatting instructions can be applied to any of the other sections in the report.*

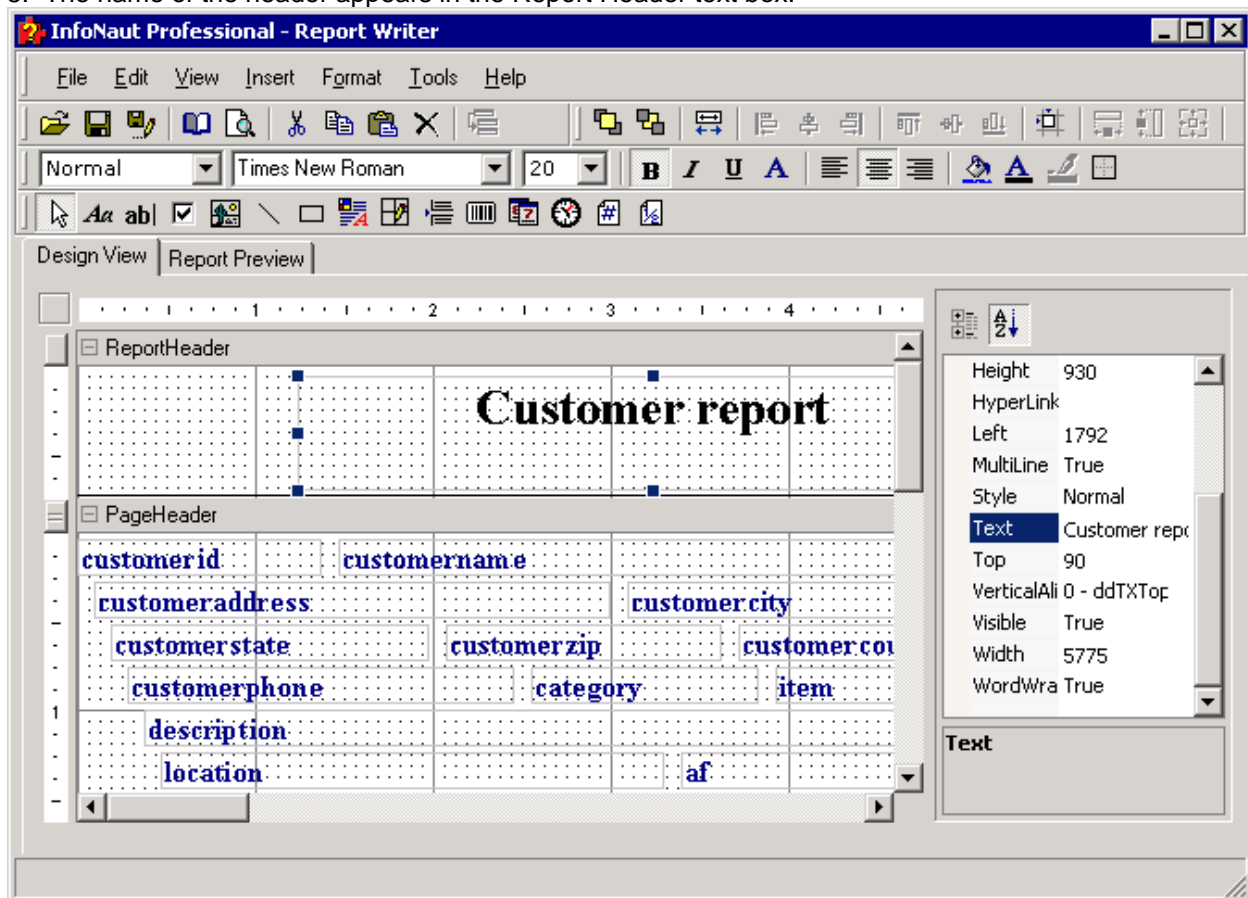
## To change the name of a report header

1. Open the InfoNaut Report Writer. Select the text box in the report header. You can increase the height of the Report Header section by dragging the elevator between it and the Page Header section downward. Dark blue boxes should appear on all four corners and at the midway points of all four sides. These are the text box handles.



2. Locate the **Text** on in the **Properties** list box to the right of the grid.
3. Select the default text, and then press **<Delete>**.
4. Type the name of the header in the **Text** text box, and then press **<Enter>**.

- The name of the header appears in the Report Header text box.



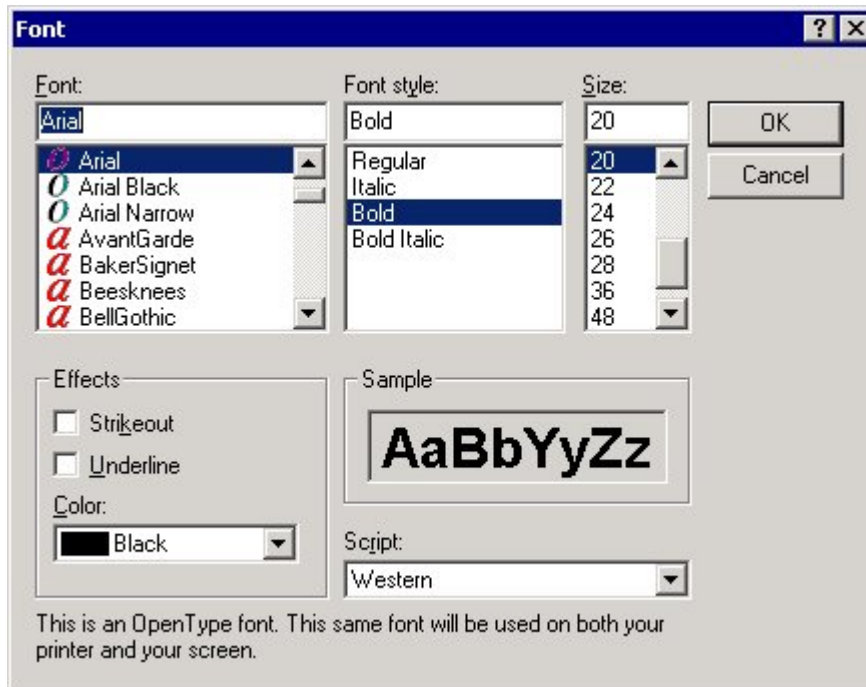
### To change the font size used in a report header

1. Select the text box in the report header.
2. Click the **Font Settings** button on the **Format** tool bar.



#### Font Settings button

3. The Font window opens.



4. Select a font and font style from the list, and then select a size for the font. Click the **OK** button.
5. The header label is changed to the new font. If the text box is too small for the new label, drag one of the handles to the right or left, or up or down, to resize the box. The pointer arrow changes to a double-headed arrow when placed over a handle. Hold the cursor down and drag to resize the frame. Notice that the text automatically centers itself within the frame by default.

### To change the font color

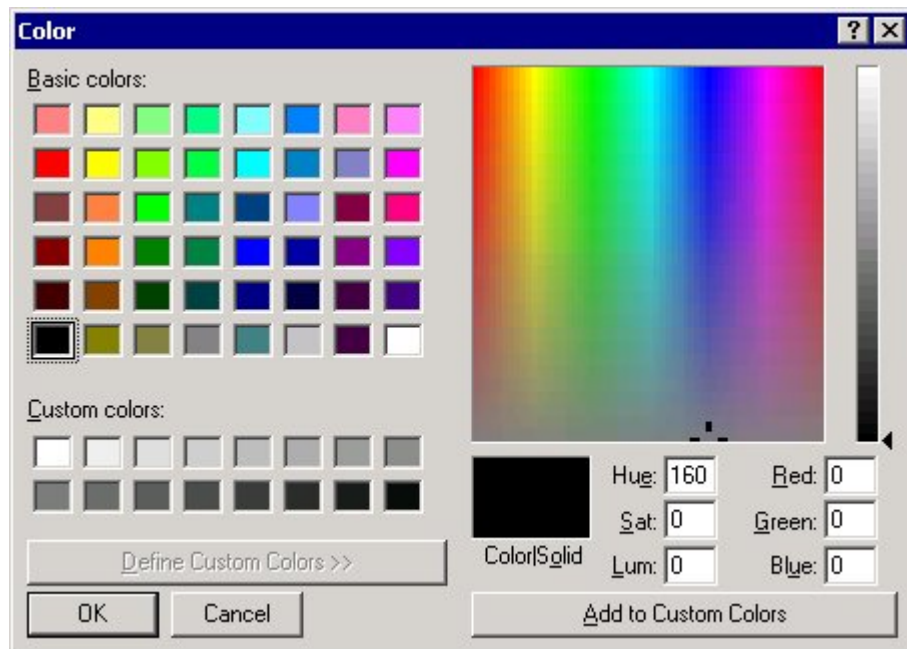
---

1. Select the frame surrounding the report header.
2. Click the **Text Color** button on the formatting toolbar.



#### Text Color button

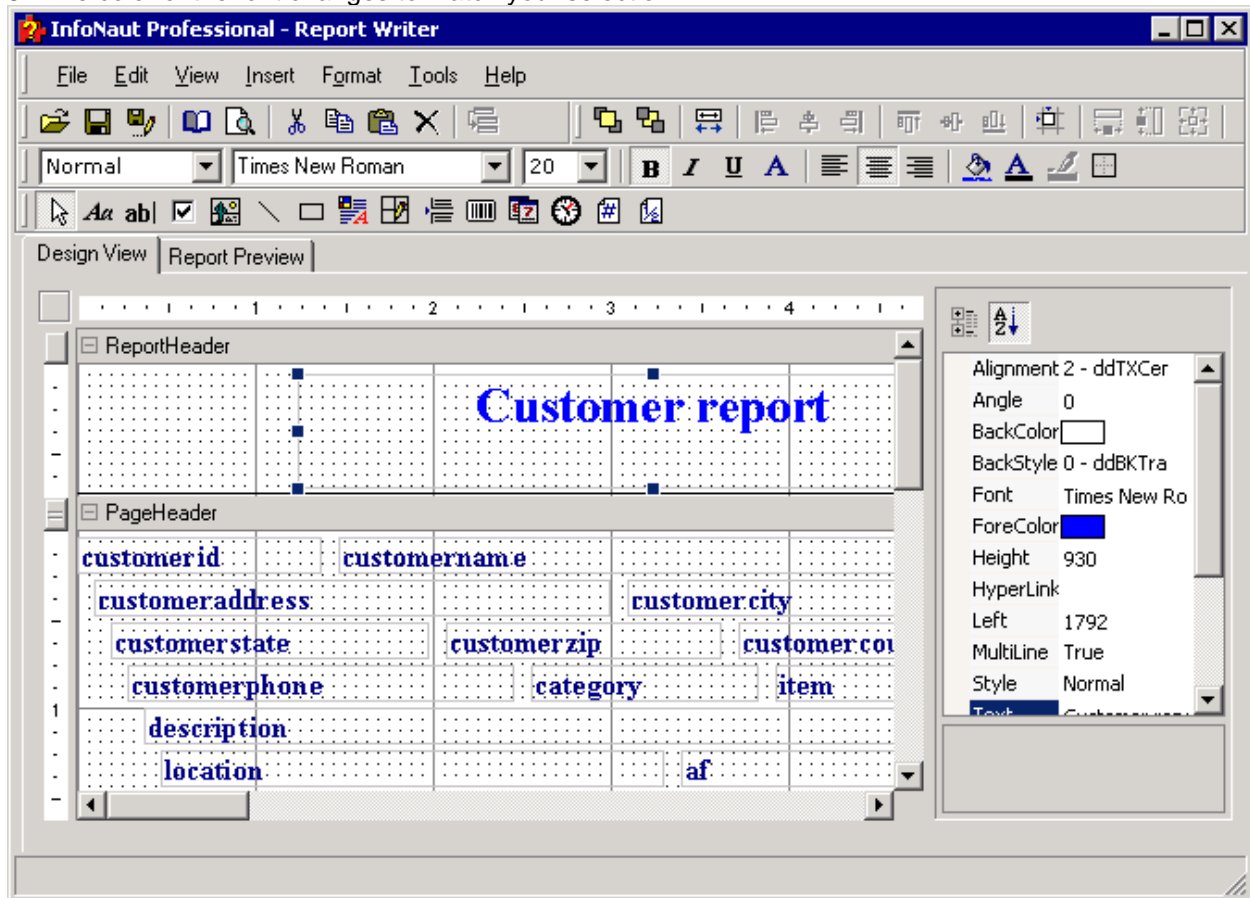
3. The Colors dialog box opens. Select one of the colors offered or create a custom color by clicking the **Define Custom Colors** button.



4. Select a color for the font, and then click the **OK** button.



5. The color of the font changes to match your selection.



### To change the back color

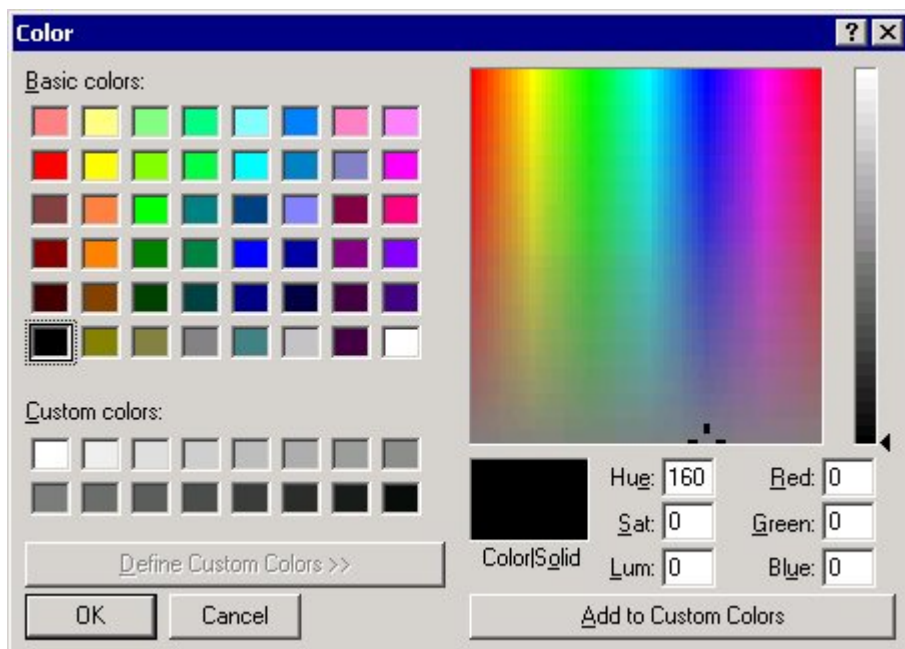
---

1. Select the frame surrounding the report header.
2. Click the **Back Color** button on the formatting toolbar.



#### Back Color button

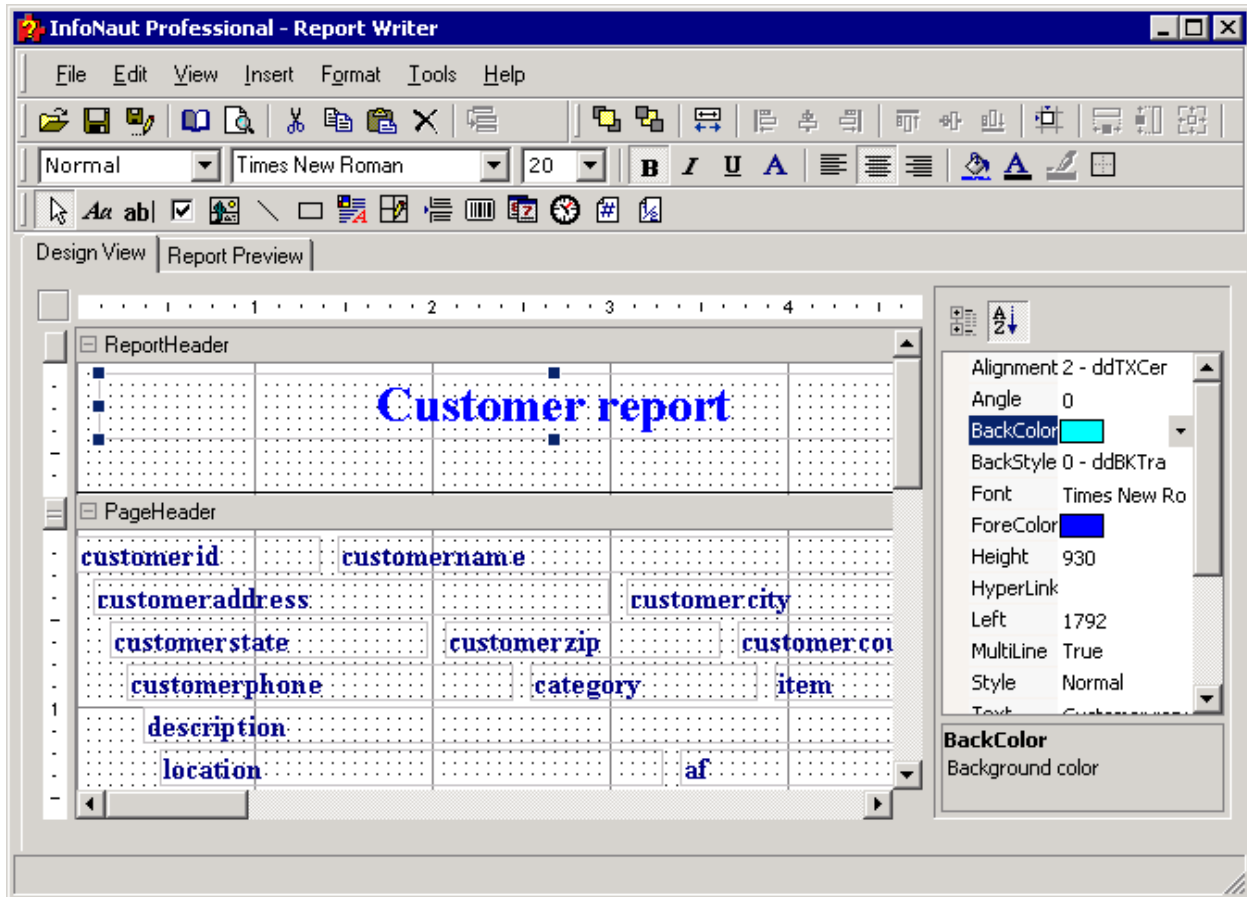
3. The **Colors** dialog box opens. Select one of the colors offered or create a custom color by clicking the Define Custom Colors button.



4. Select a color for the font, and then click the **OK** button.
5. The back color changes to match your selection.

## To change the alignment of text

1. Place the cursor over the text frame. The cursor changes to a white hand. Drag the cursor to relocate the frame.

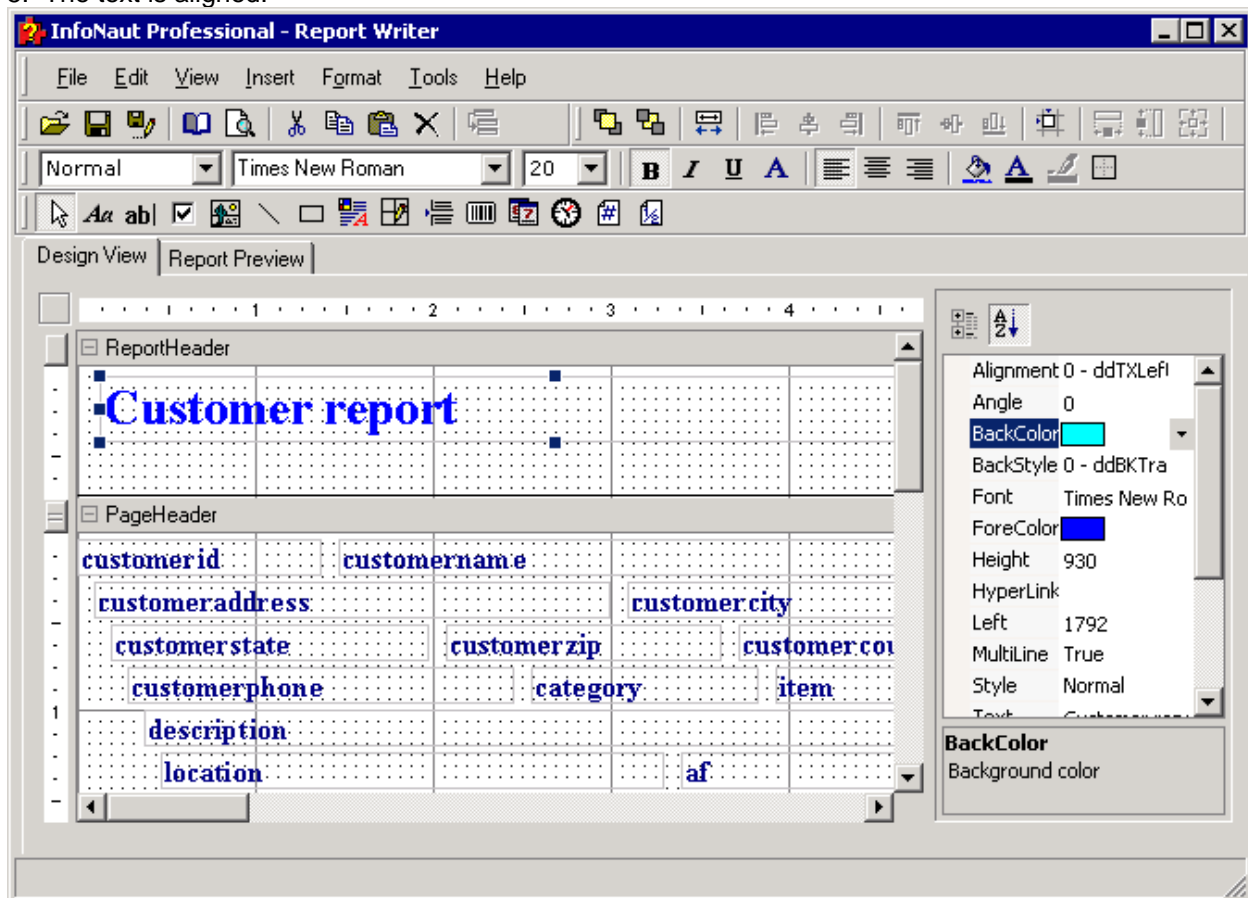


2. Select the handles of the frame surrounding the text to enlarge the text frame.
3. Drag the handle of the frame to enlarge the text frame.
4. Click the **Left Align** button to move the text to the left. Click the **Right Align** button to move the text to the right. Click the **Center Align** button to center the text.



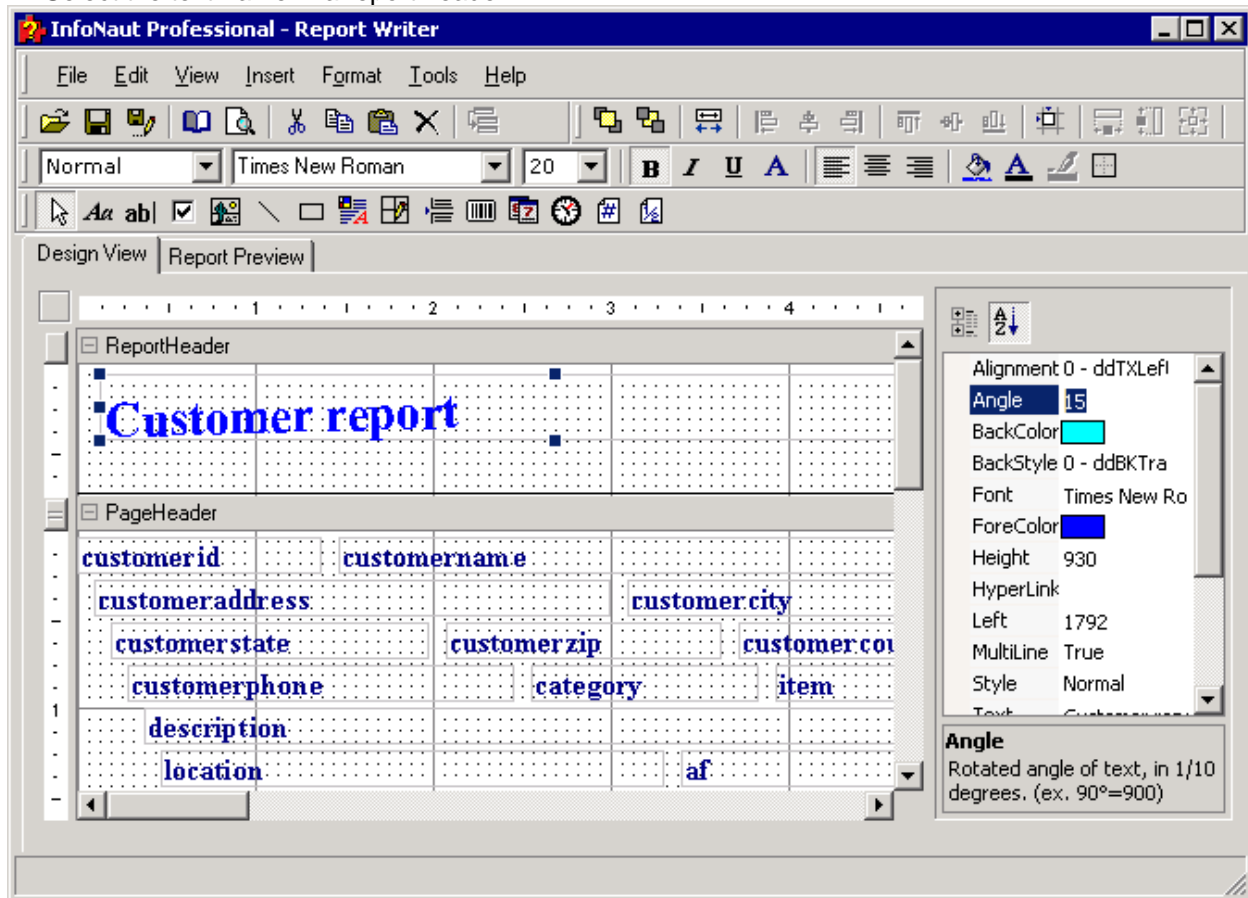
Alignment buttons

5. The text is aligned.



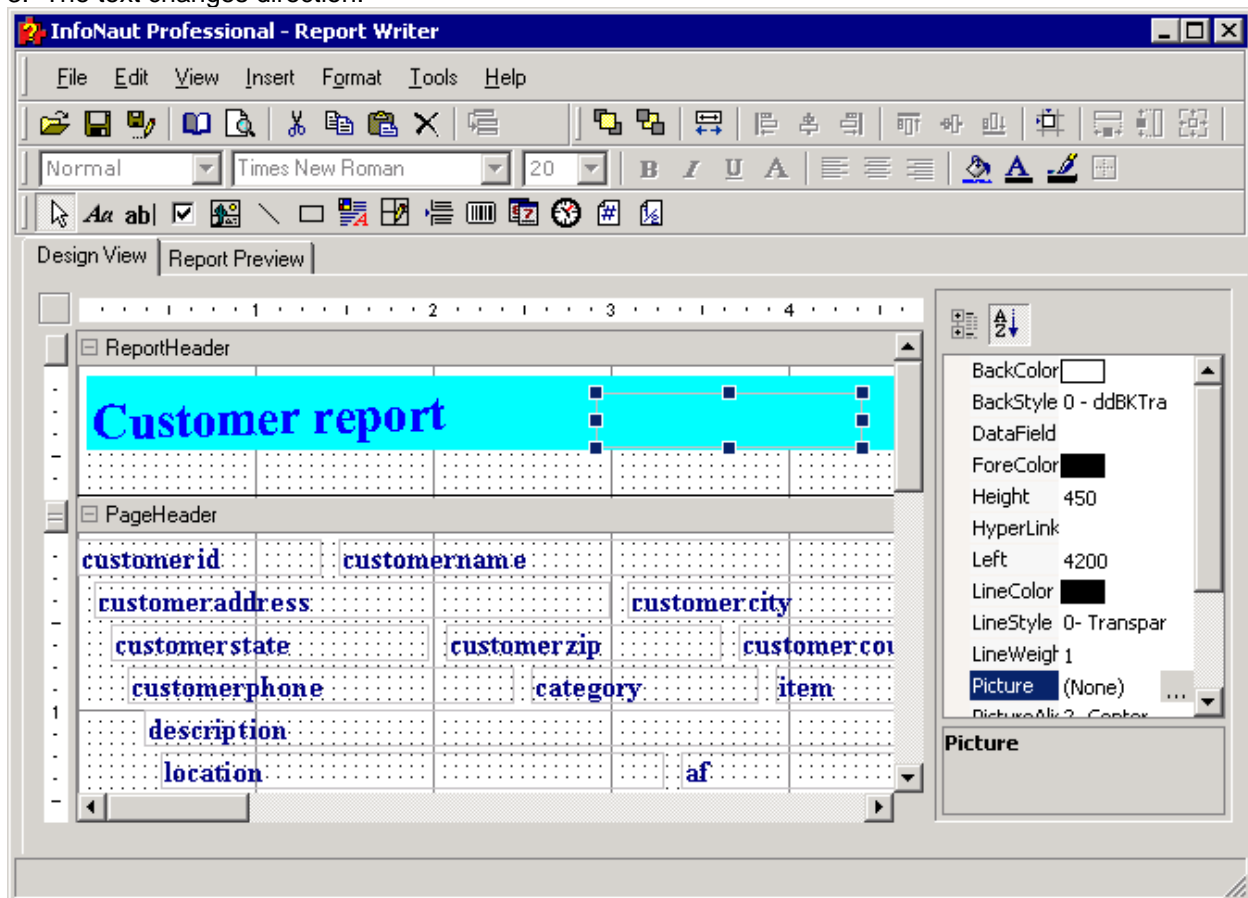
## To rotate text in a report header

1. Select the text frame in a report header.



2. Select **Angle** in the Properties list box. Enter a number for the angle of text in the box, and then press <Enter>. (Measurements are in 1/10th of a degree.)

3. The text changes direction.



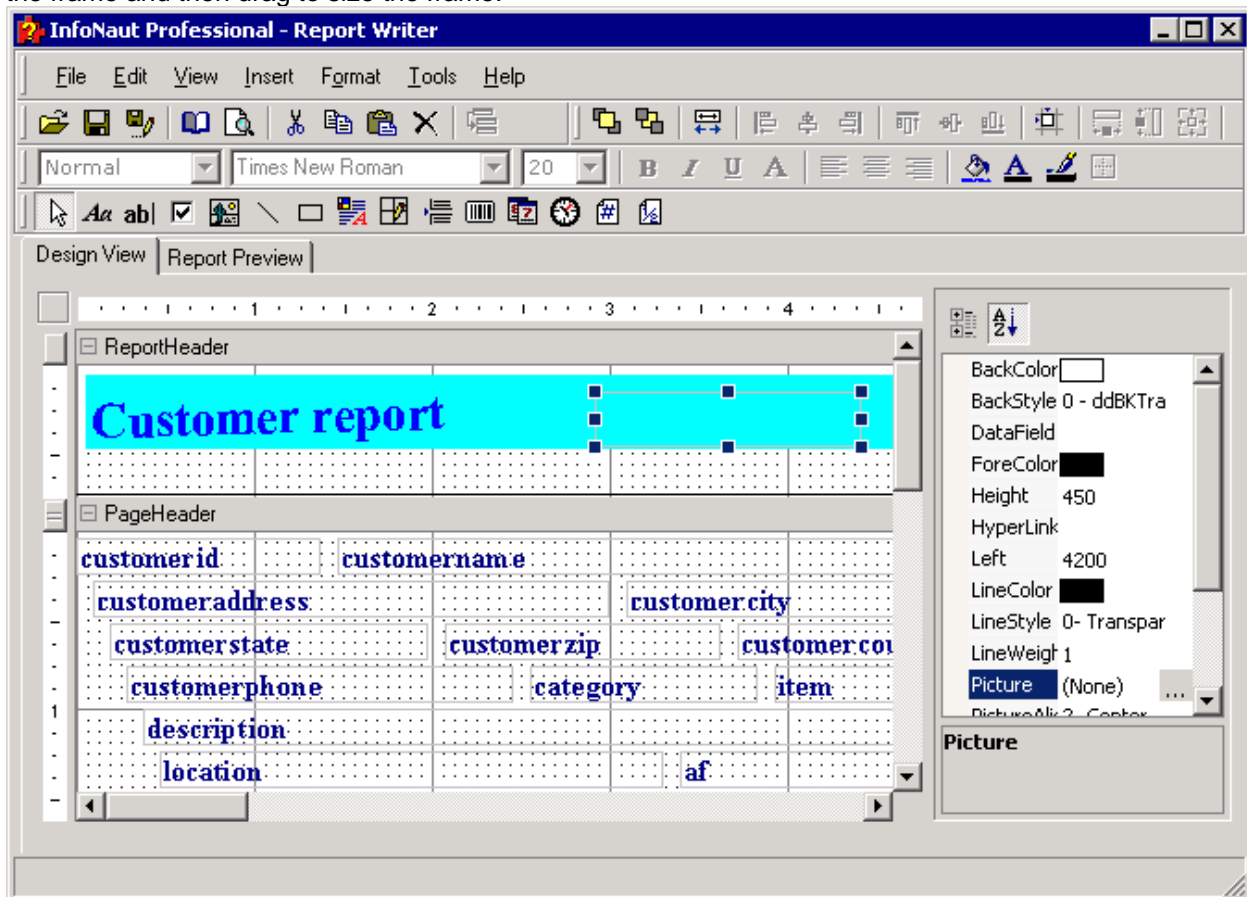
## To add a graphic

1. Click the **Image** button.



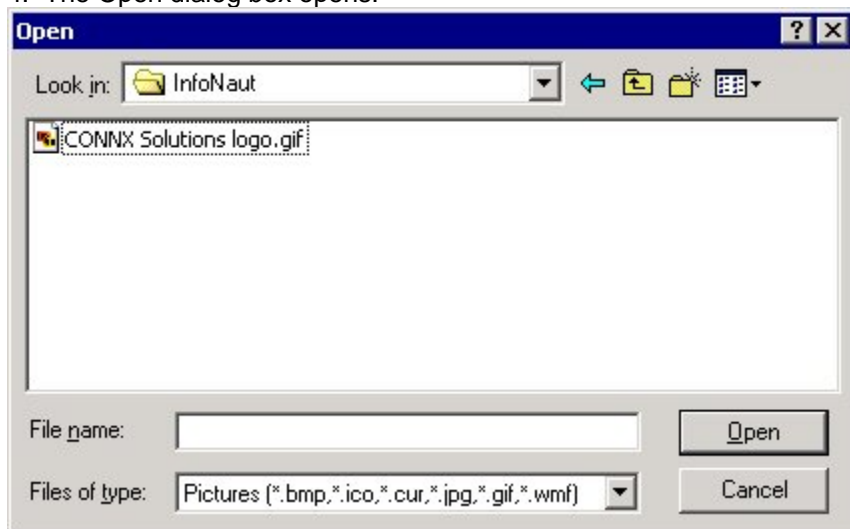
### Image button

2. Select a location within the header section of your report. Left-click to position the upper left corner of the frame and then drag to size the frame.



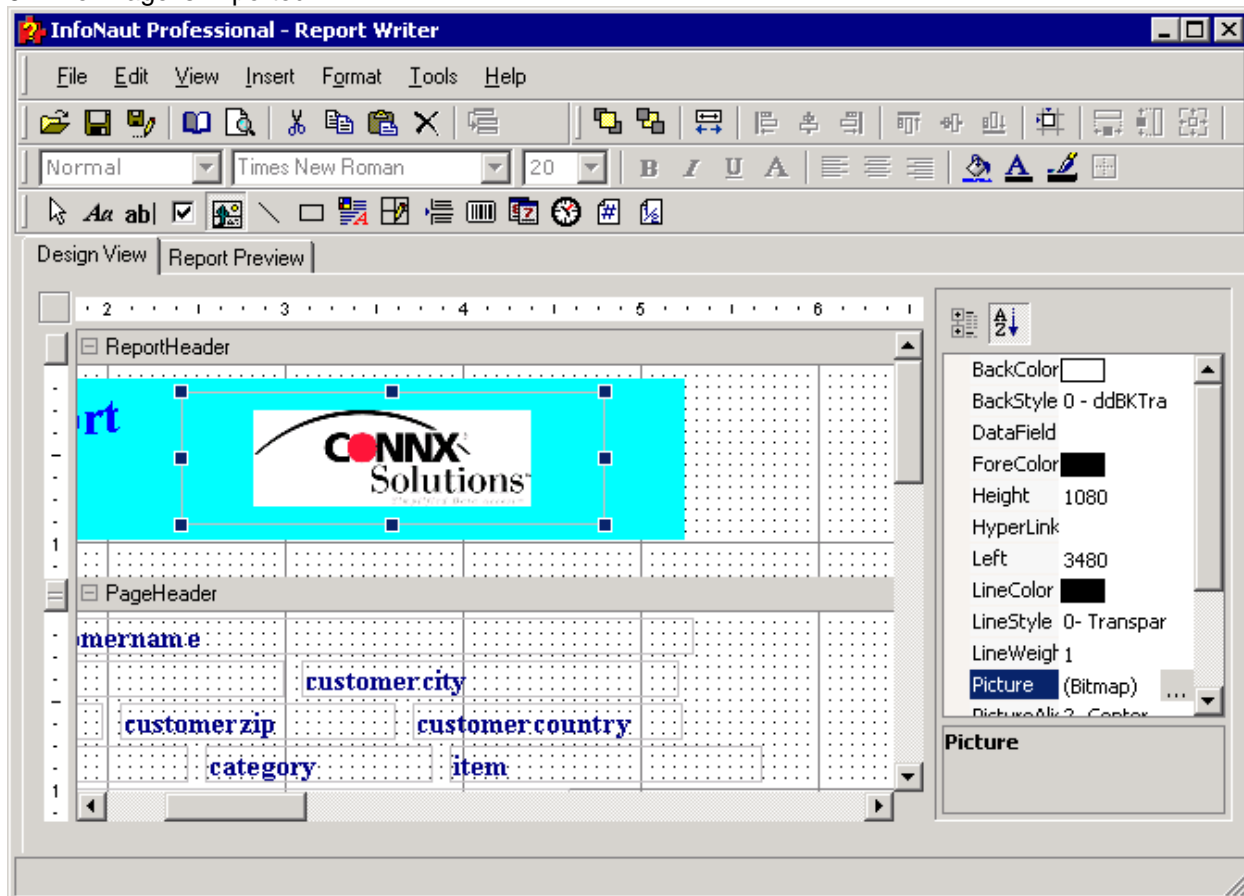
3. Select **Picture** in the Properties list box, and then click the **Build** button.

4. The Open dialog box opens.



5. Select an image to import, and then click the **Open** button.

6. The image is imported.





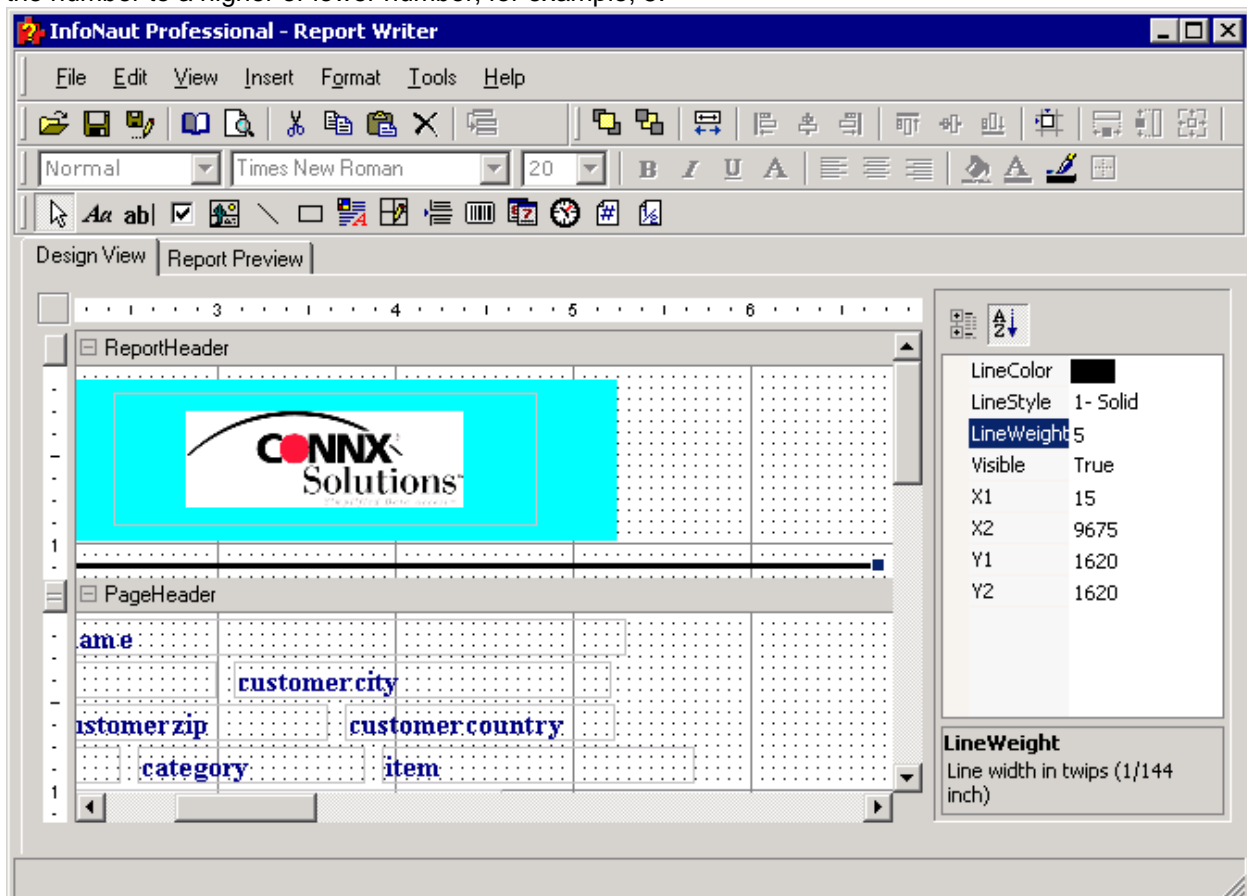
## To add graphical lines

1. Select the **Line** button on the Format toolbar.



### Line button

2. The cursor changes to a crosshair.
3. Select a location within the header section of your report. Left-click to position one handle of the line and then drag to the opposite end position.
4. To change the thickness or weight of the line, select **LineWeight** in the Properties list box, and change the number to a higher or lower number, for example, 5.



5. The line weight changes in the report.

## To change the line color

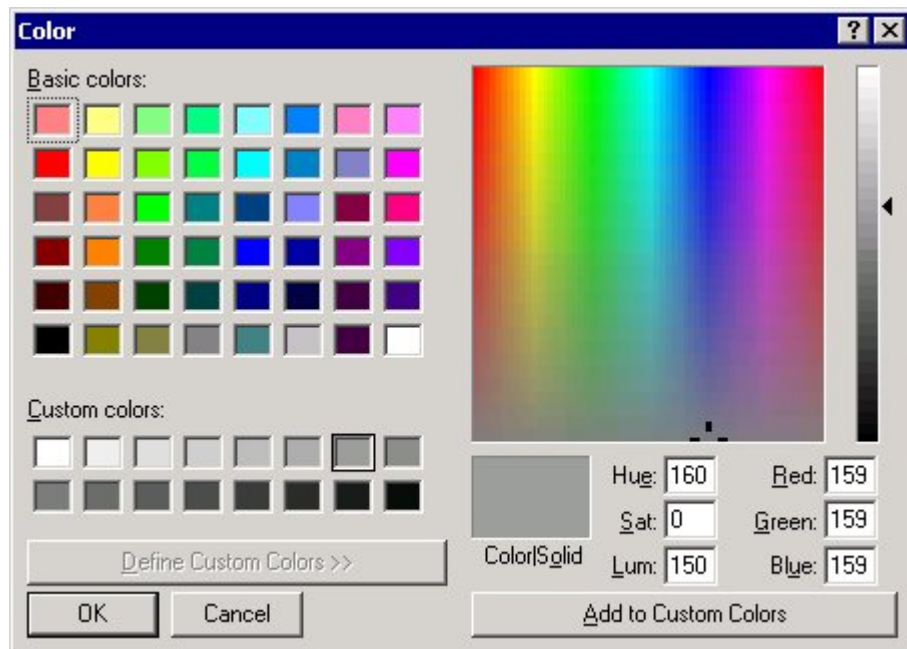
---

1. Select a line, and then select the **Line Color** button on the Format toolbar.

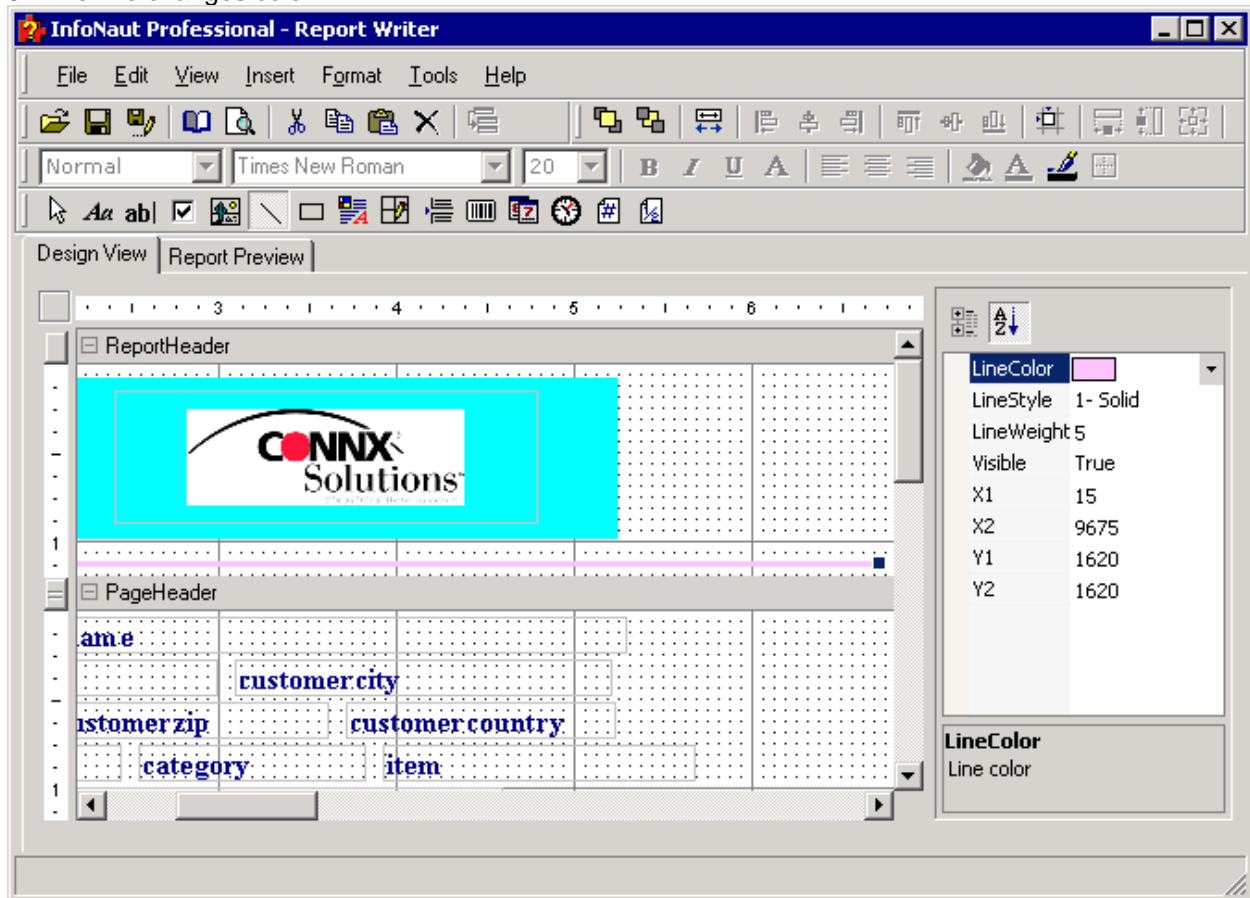


### Line Color button

2. The Color dialog box opens. Select a color and then click the **OK** button.



3. The line changes color.



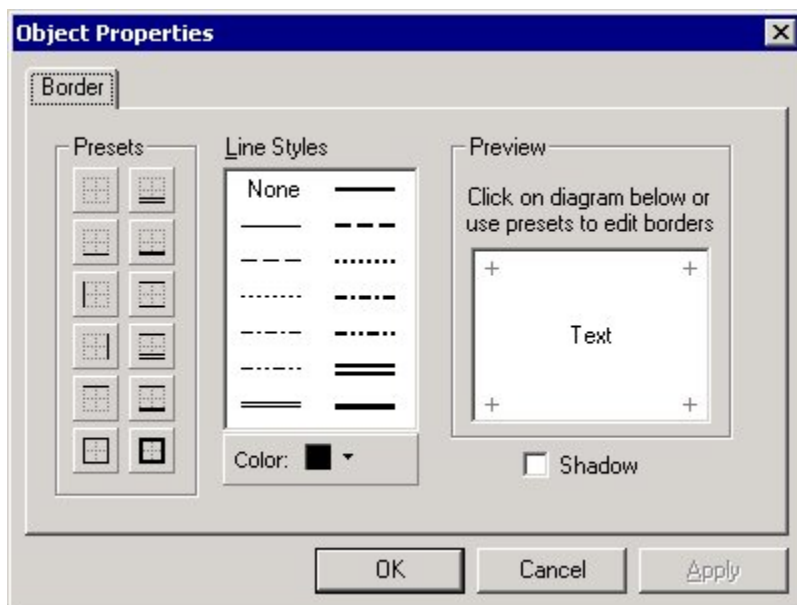
## To add and change the color of a border

1. Select the frame around the report header. Eight resizing handles should appear.
2. Click the **Border** button on the formatting toolbar.



### Border button

3. The Object Properties dialog box opens.



4. Select a border property by clicking one of the preset border properties. Click the **Apply** button to apply the property to the report header, and then click the **OK** button.
5. To change the color of a border in a report header, select the border surrounding a report header frame.
6. Click the **Border** button on the formatting toolbar.
7. The Object Properties dialog box appears.
8. Click the **Color** button on the Borders tab.



### Color button

9. The color selection panel appears.
10. Select a color, and then click the **OK** button.
11. Once you have chosen a color, you can use one of the preset border types to create a new border of that type and color. Additionally, you can select a line style and click one of the edges in the Preview window to create a border with the custom style and/or color.

## Group Header Section

### Group Headers

---

You can insert group headers into an InfoNaut Report Writer report by using the Group Header section. Multiple nested groups can be added, with each group having both header and footer sections. The group header appears before the Detail section in the report. The group footer appears after all the Detail sections in the group.

The number of times the grouped data appears depends on how the data source is grouped. A new group containing a header, detail section, and footer will appear for each grouping of the data.

**Note:** *The data source must first be sorted by the grouped field.*

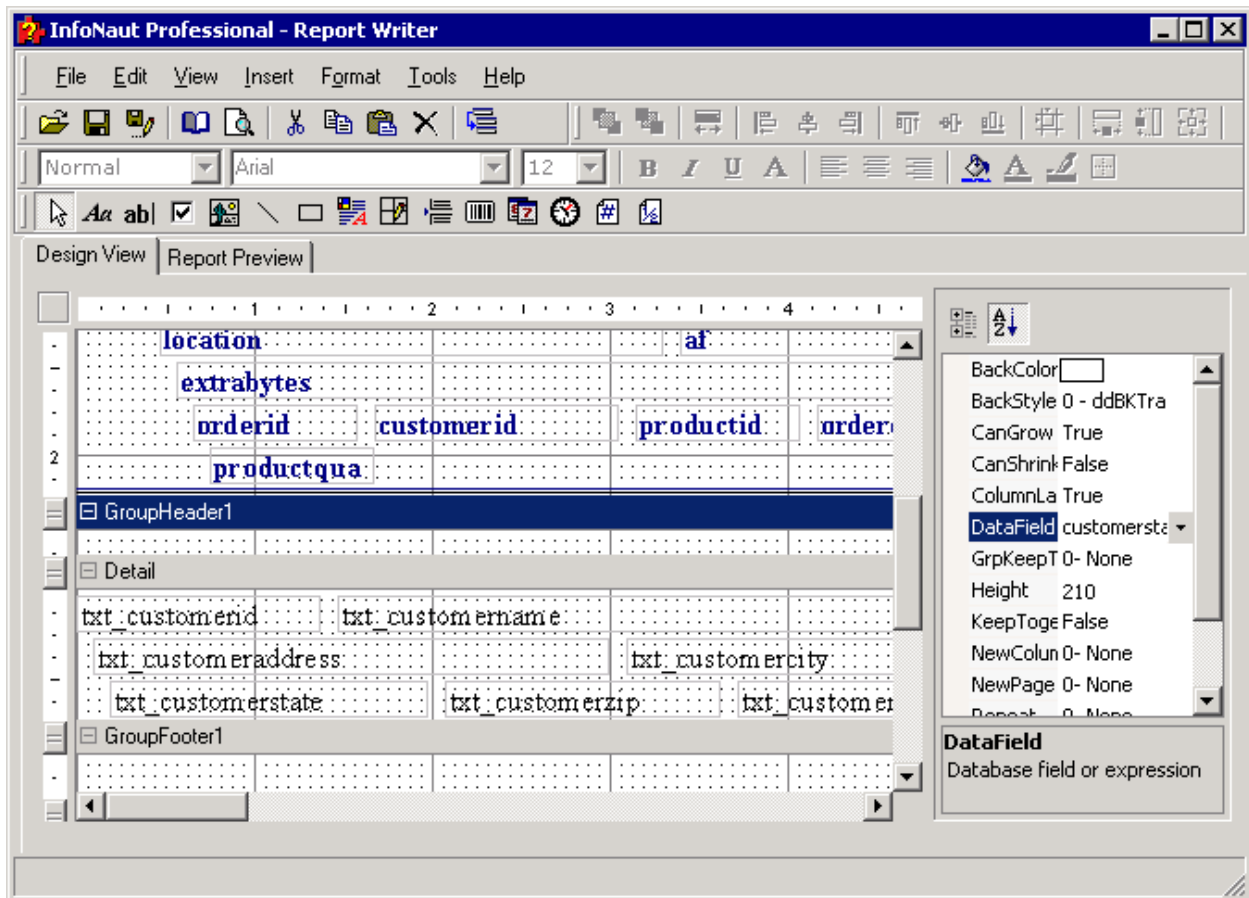
**All of the formatting features available in the report header section can be used in the Group Header section.**

## To insert a group header

1. Select Insert on the menu bar. Click **Group Header/Footer**.
2. The **Group Options** dialog box appears. Select a field to group by from the list box.



2. Group Header and Group Footer sections are inserted in the report.

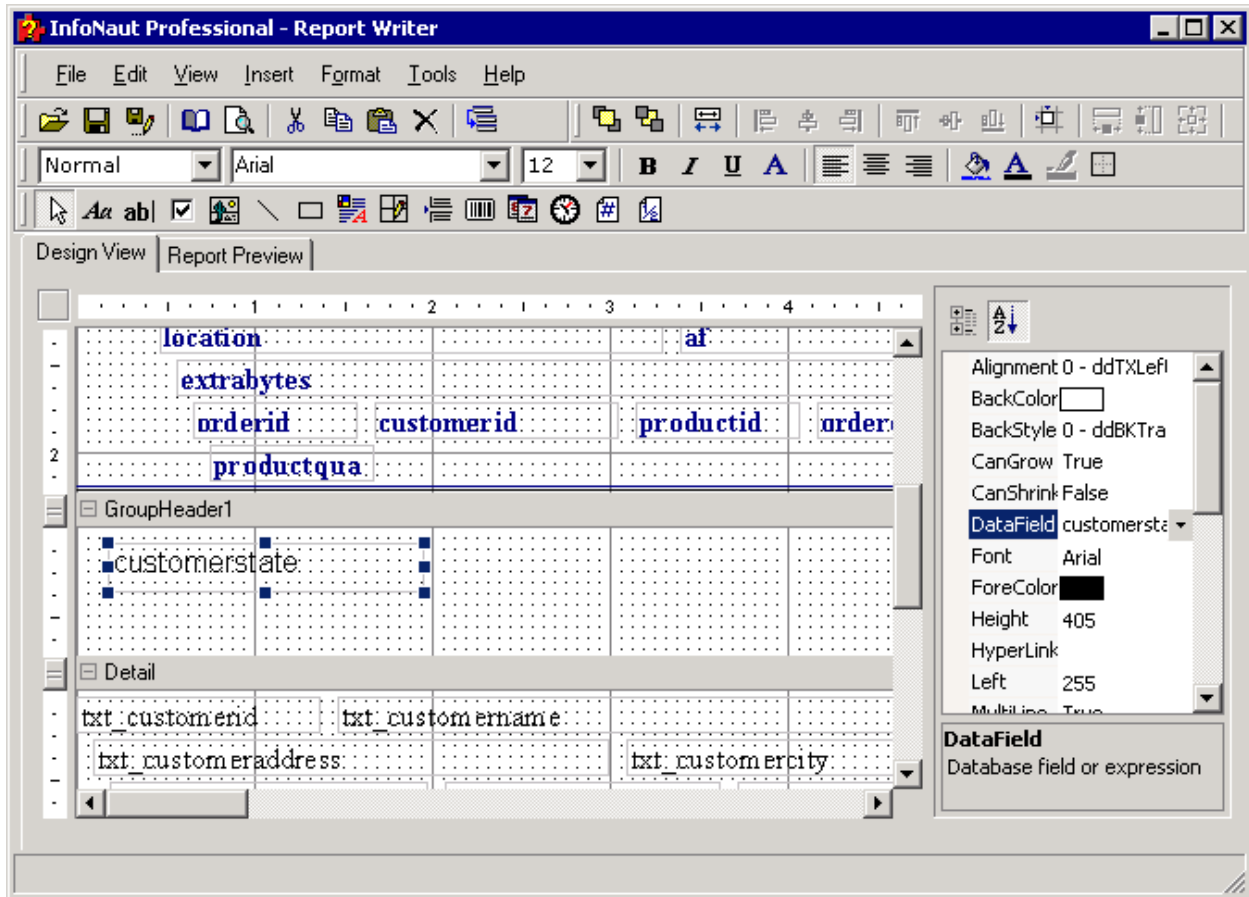


3. Once the group is inserted, the group field should be established. Select the group header and then select the appropriate field from the **DataField** property of the group header.
4. Click the **Field** button on the formatting toolbar. The cursor changes to a crosshair.



**Field button**

5. Click within the Group Header section to position the field and drag down and to the right to create a text box.
6. To select a field to be inserted in the text box, select a field from the **DataField** list box in the Properties list box, and then press **<Enter>**.



7. The field is entered in the field text box in the Group Header.

Detail Section

**Page Headers**

---

An InfoNaut Report Writer report can have a page header that appears at the top of each page, unless the report header has been programmed to appear in that location. The page header can contain column headers from the data source, page title, date, time, or any other relevant information.

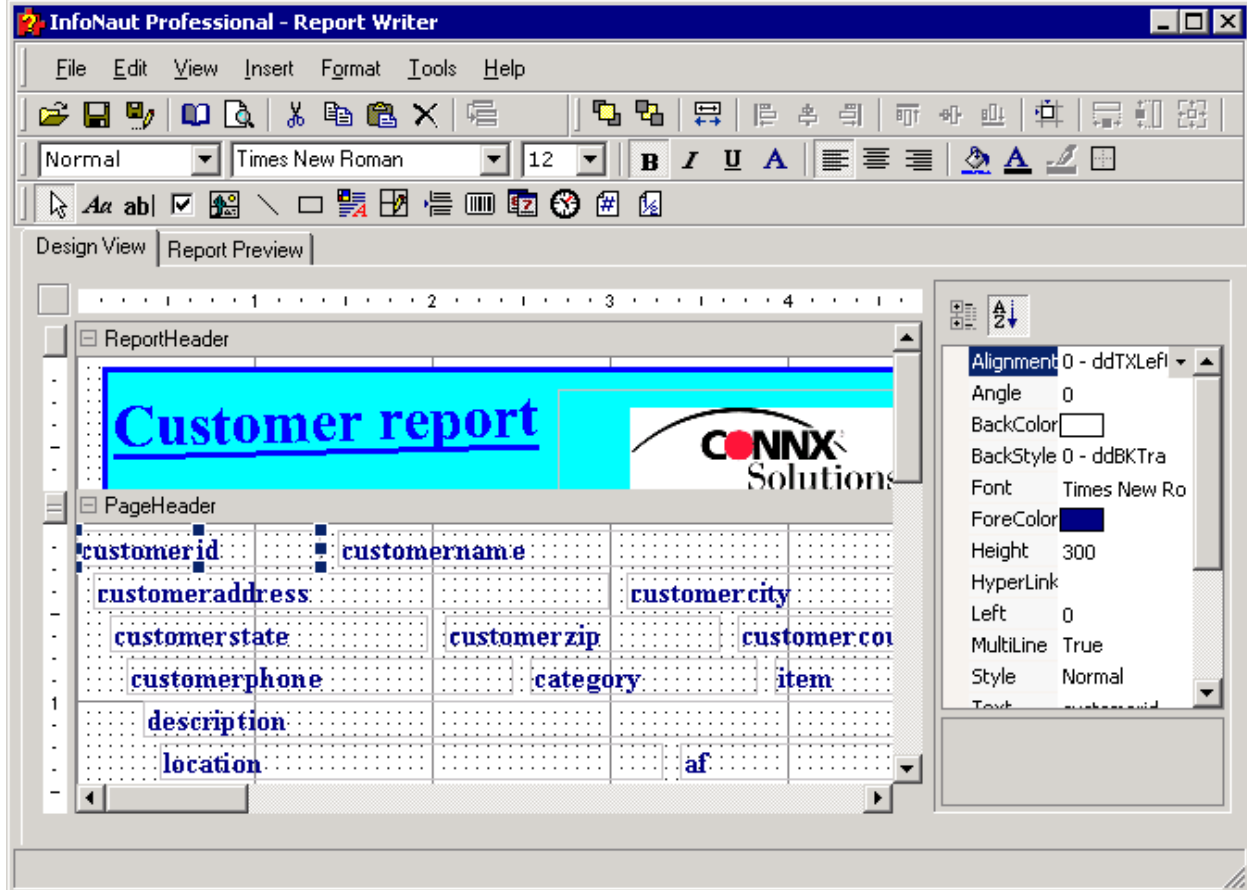
**All of the formatting features available in the report header section can be used in the Page Header section.**



## To change the labels in a page header

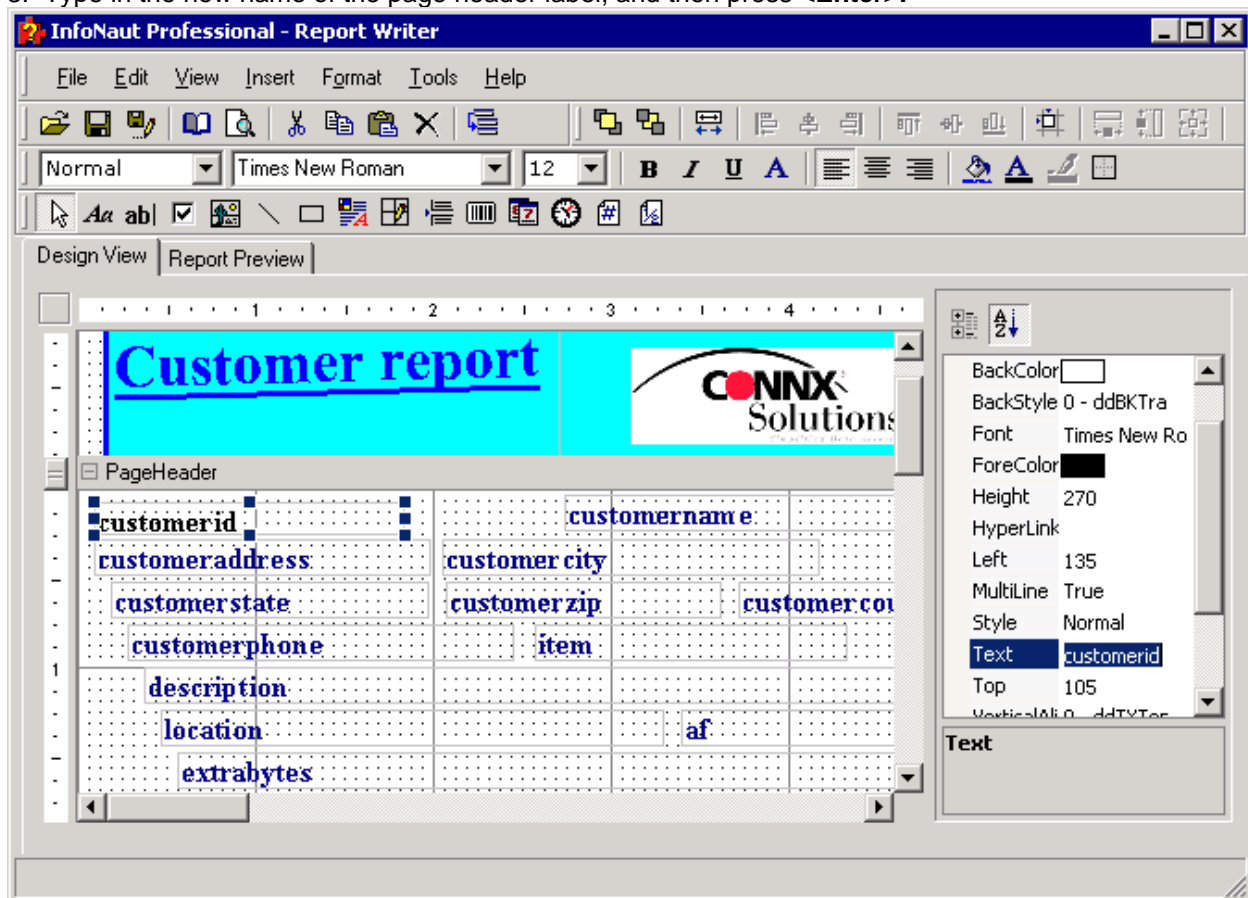
Page header labels are brought into the Report Writer exactly as they appear in the source table in InfoNaut. You may want to change the spelling or appearance of the page header labels, depending on the type of presentation.

1. Select a label in the page header.



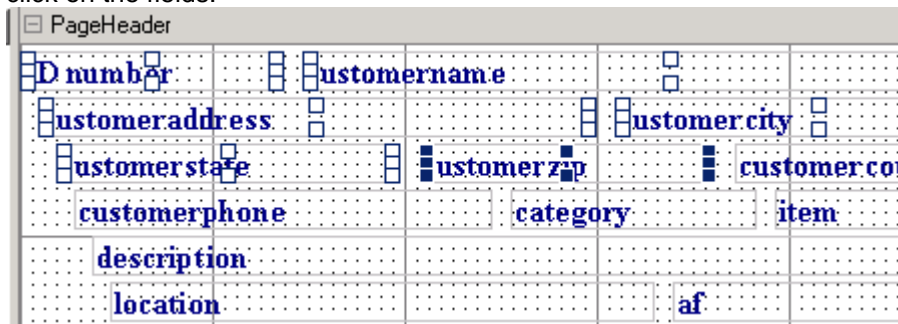
2. Select the **Text** property in the Properties list box.

3. Type in the new name of the page header label, and then press **<Enter>**.

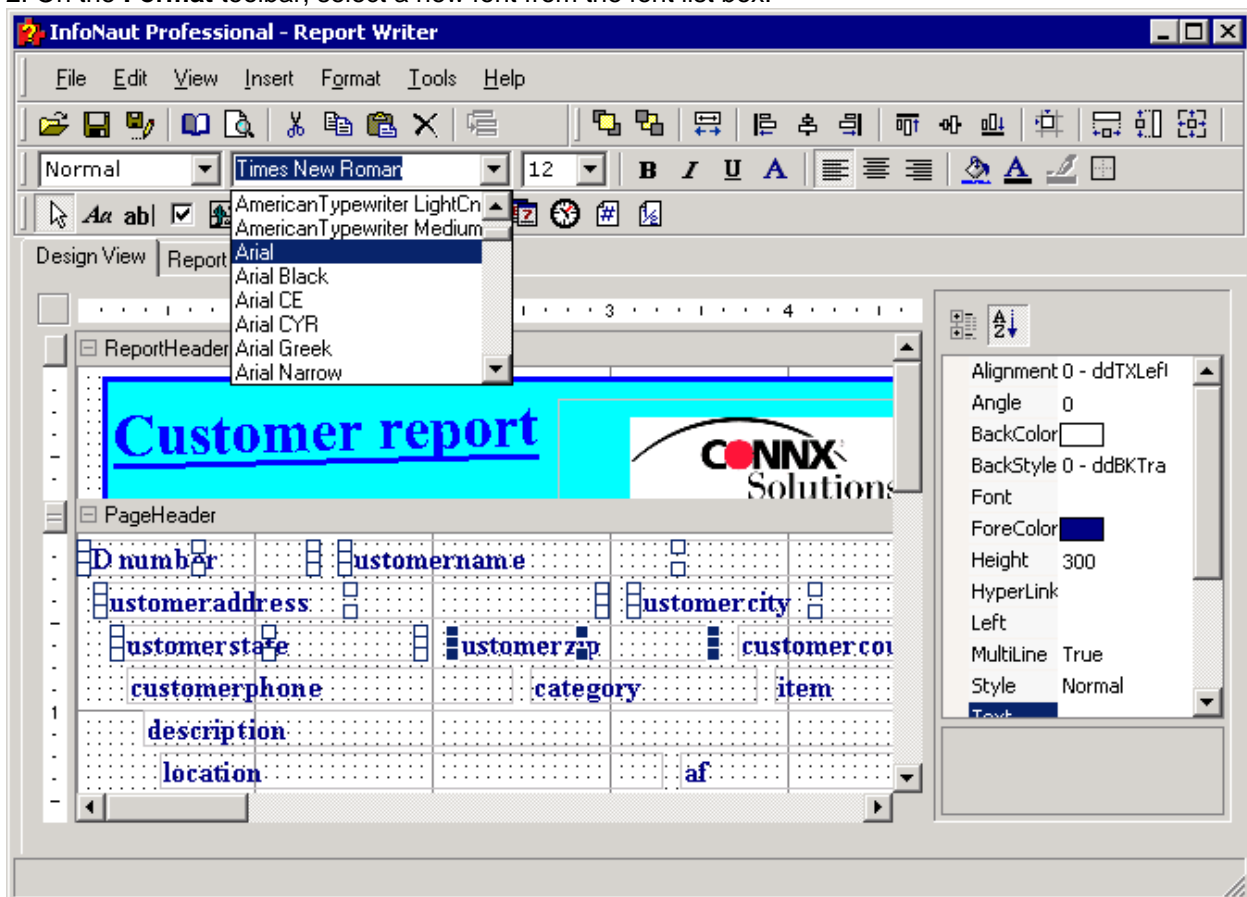


### To change the font, font size, and font color in a page header

1. Select a field or multiple fields in a page header. To select multiple fields, hold down the **Shift** key and click on the fields.



2. On the **Format** toolbar, select a new font from the font list box.

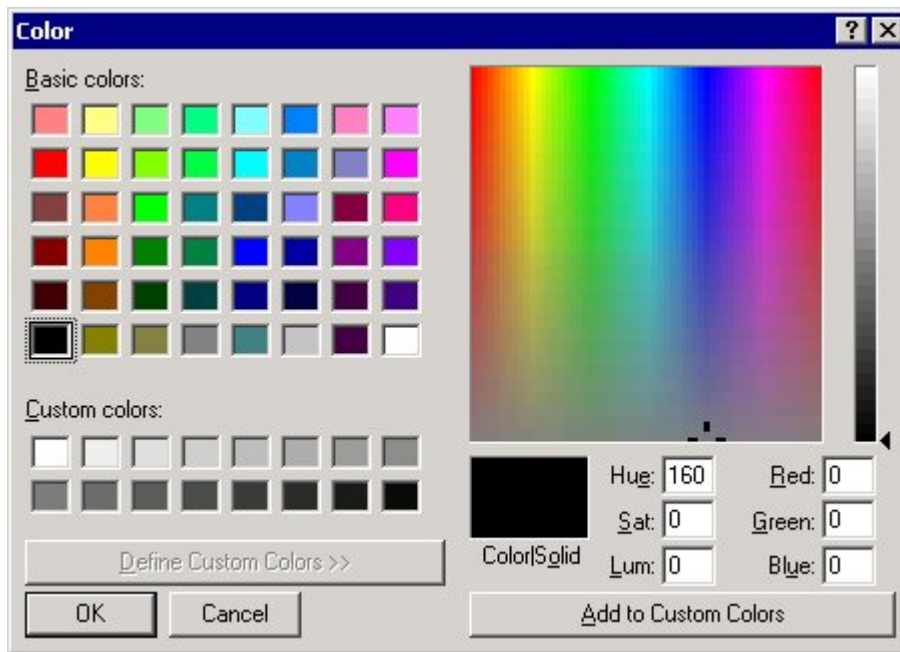


3. To change the font size, select a new size from the font size list box.
4. To change the font color, click the **Text Color** button. The Color dialog box opens.



**Text Color button**

5. Select a color from the **Colors** palette, and then click the **OK** button.



### To relocate and align fields

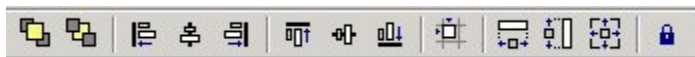
---

1. Click on a field to relocate. The cursor changes to a white hand.
2. Drag the field to the relocate position.
3. To align relocated fields, select multiple fields by holding down the **Shift** key and clicking on several fields. To left-align several fields, click the **Align Left** button on the formatting toolbar.



#### Align Left button

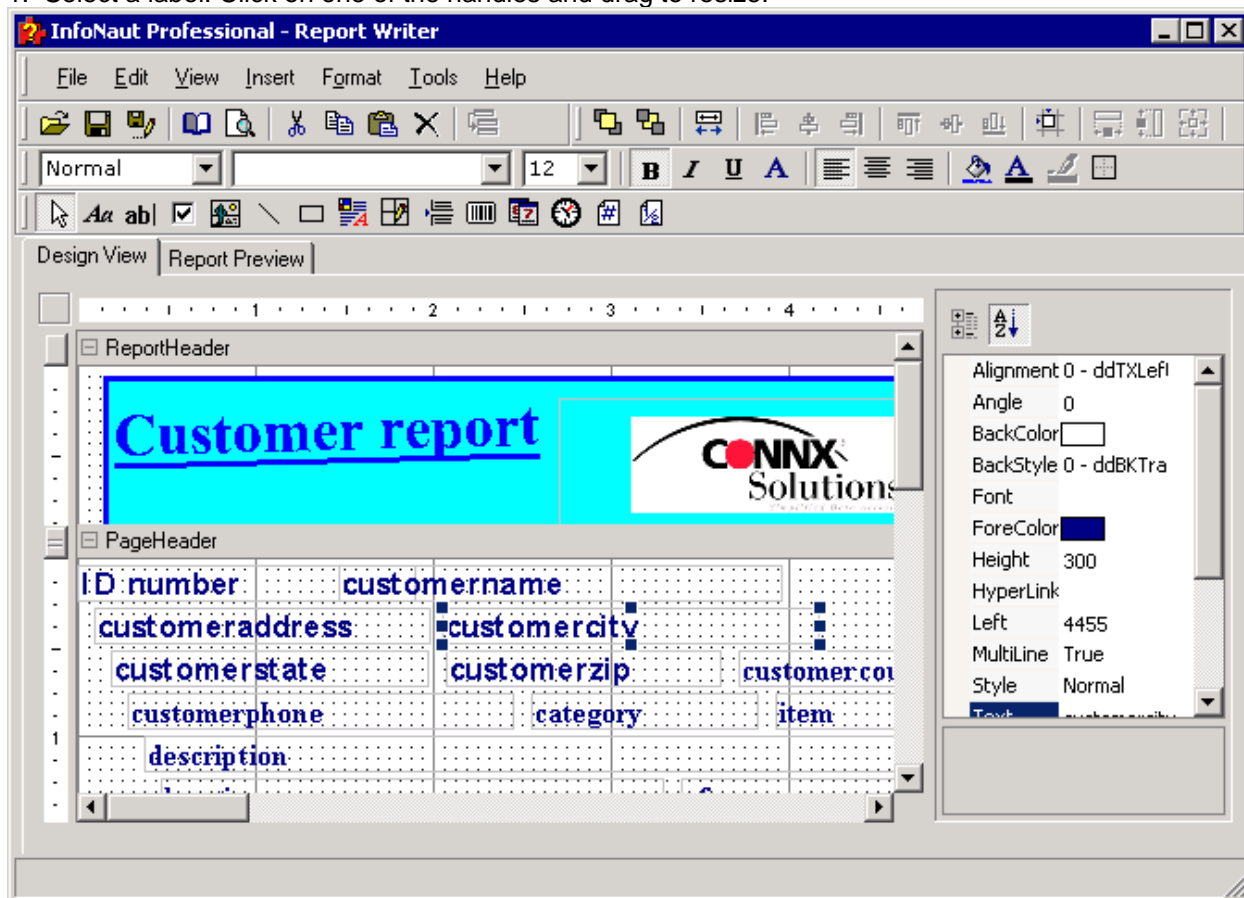
4. Fields can be aligned in several ways by using the other buttons on the Alignment toolbar.



#### Alignment toolbar

## To resize labels in a page header

1. Select a label. Click on one of the handles and drag to resize.

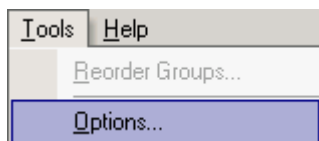


2. After resizing, labels can be realigned.

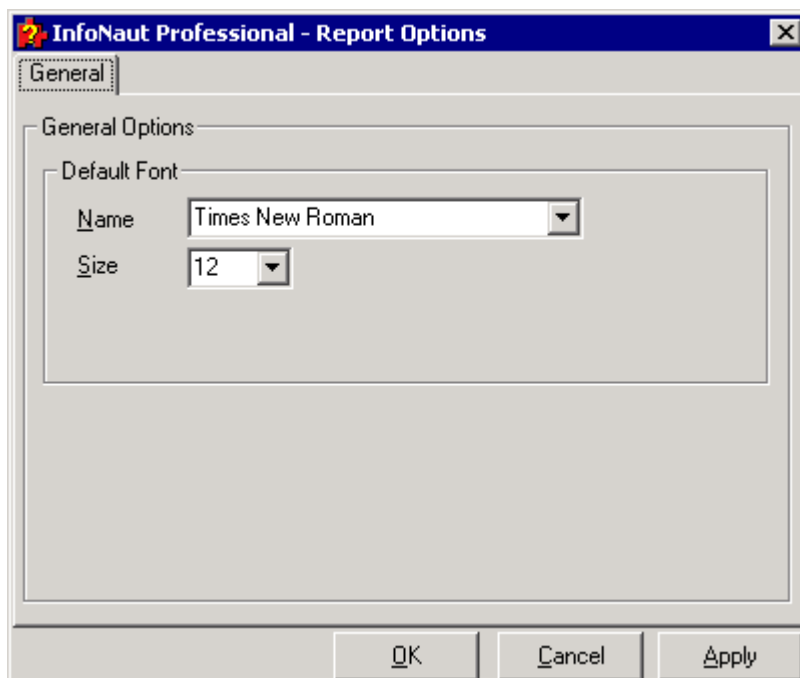
### To set a default font

---

1. On the **Tools** menu, select **Options**.



2. The **InfoNaut Professional - Report Options** dialog box appears. Select a default font from the list box, and then click the **Apply** button to set the default font.



3. Click the **OK** button to return to the main InfoNaut window.
4. All new fields and text are converted to the new default font. Existing fields and text are not affected by the change.

## **Detail Basics**

---

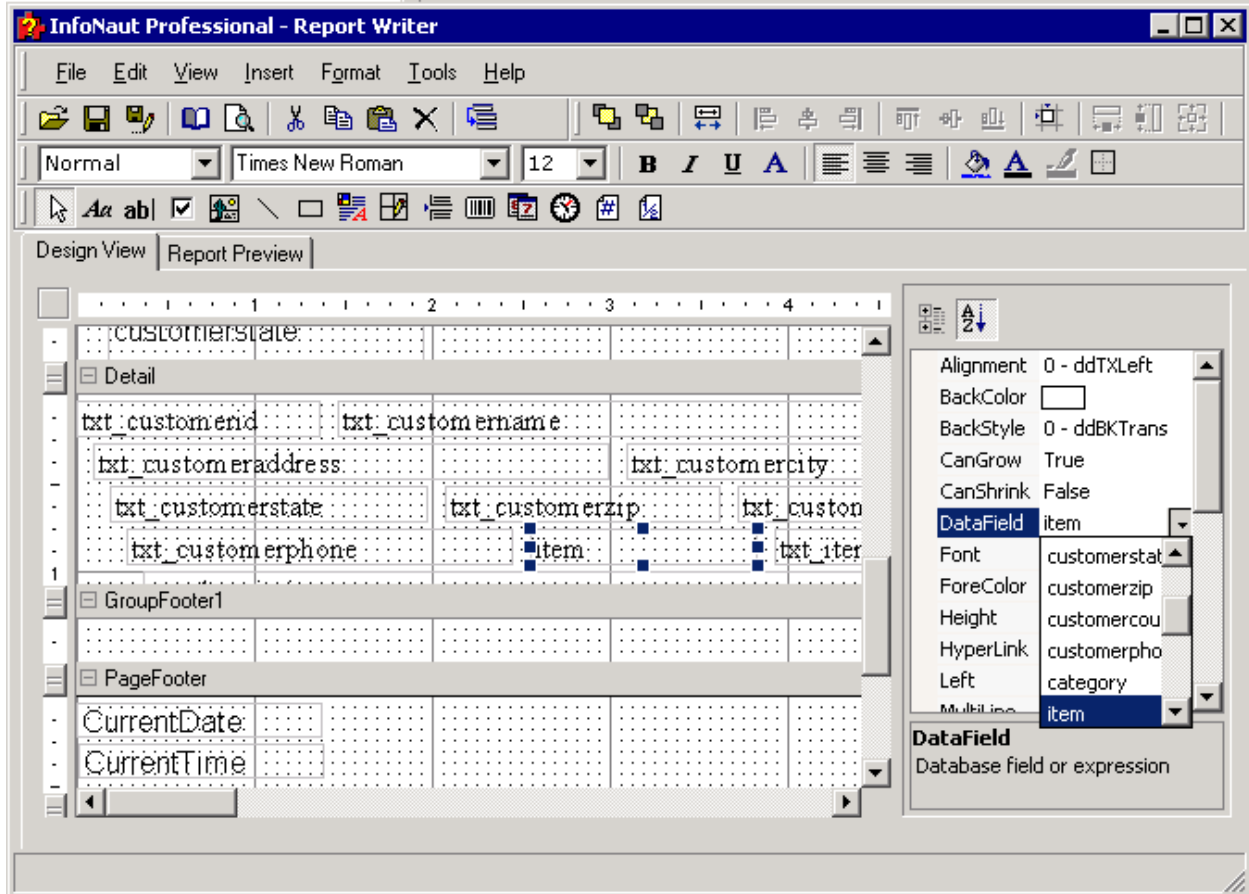
The Detail section of a report contains information from the data source that matches the fields inserted in the Page Header section and comprises the main body of the report. You can use the same techniques used in the Report Header to place, size, align, highlight, etc., any of the elements used in the report. Any of the fields in your report can be changed to suit your requirements.

**All of the formatting features available in the Report Header section can be used in the Detail section.**



### To change the fields

1. Select a field to change in the Detail section of your report.
2. Select the **DataField** property in the Properties list box. Select a new field from the list and then press **<Enter>**. The list of fields shown represent the fields available in the query or data source.



3. The name of the new field appears in the Detail section.

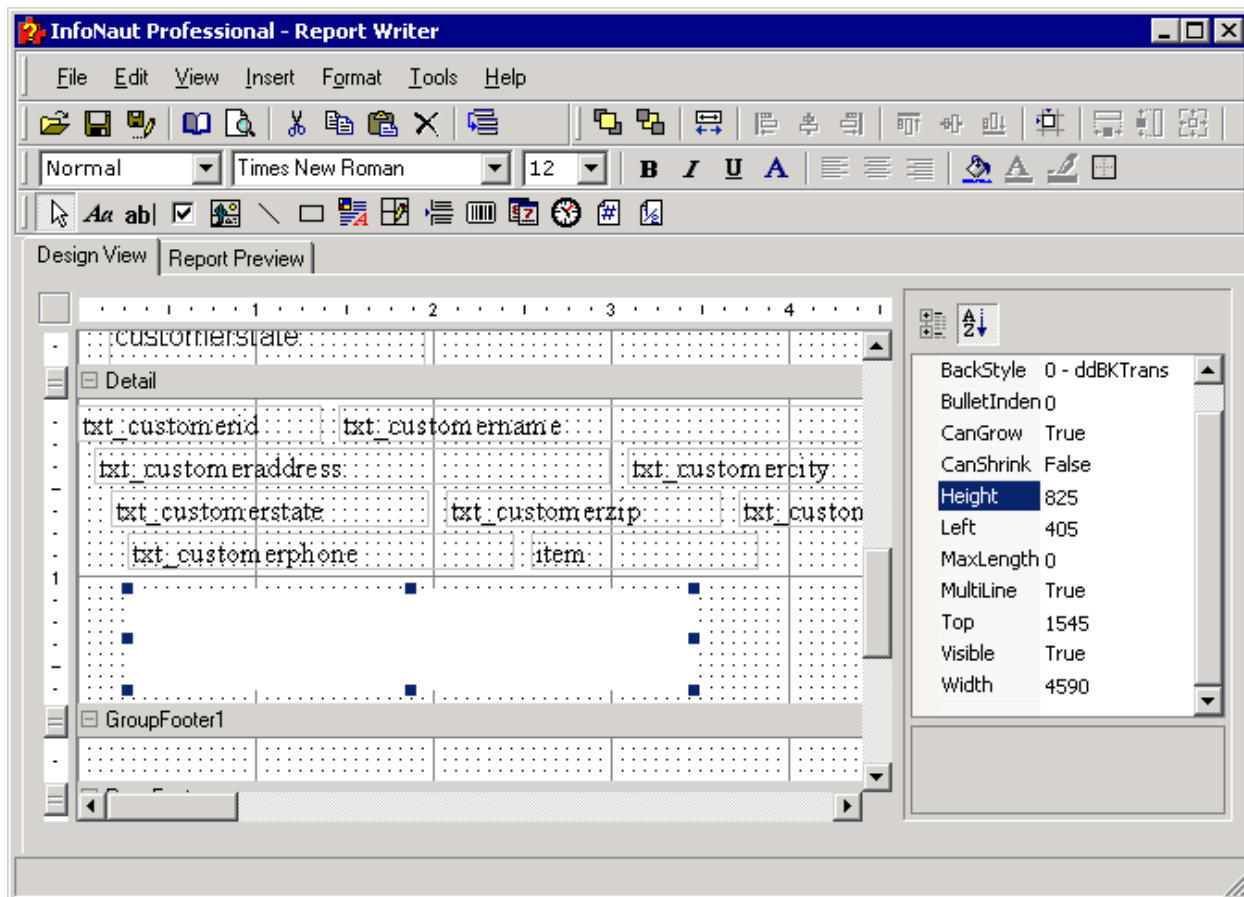
## To add Rich Text

1. Click the **Rich Text** button.

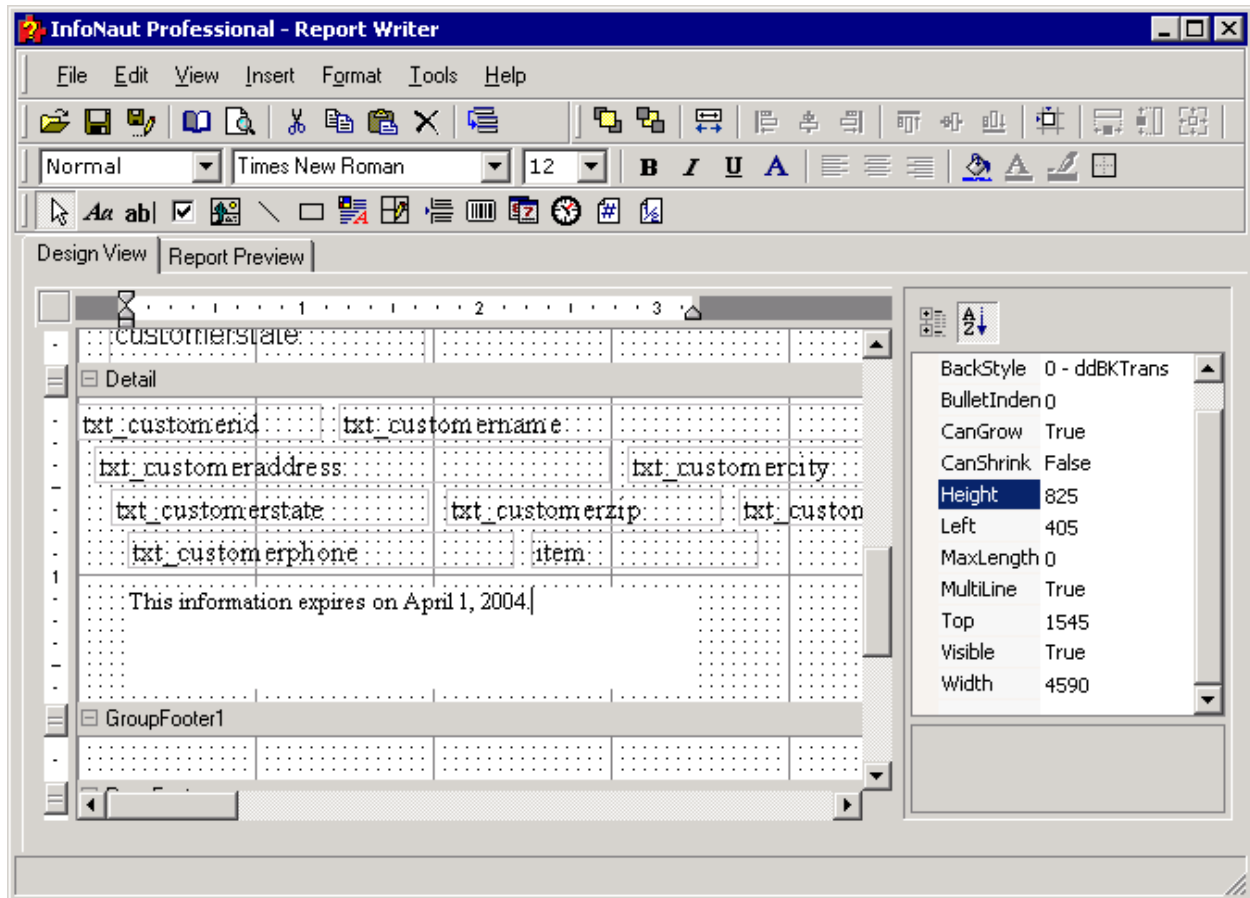


### Rich Text button

2. Select a location within the Detail section of the report. Left-click to position the upper left corner of the frame and then drag to size the frame.
3. A frame in which text can be inserted is imported.



4. Double-click the frame to turn on the editing function. Type the information you would like to add to the report within the frame. Any text added can be formatted using the tools on the formatting toolbar.



#### Group Footer Section

### Group Footers

---

You can insert group footers into an InfoNaut Report Writer report by using the Group Footer section. The group footer appears after all the Detail sections in the group.

Aggregate functions, summary functions, group summaries, or running summary functions are all available in the Report Writer in the Group Footer section.

See [Group Headers](#) for more information.

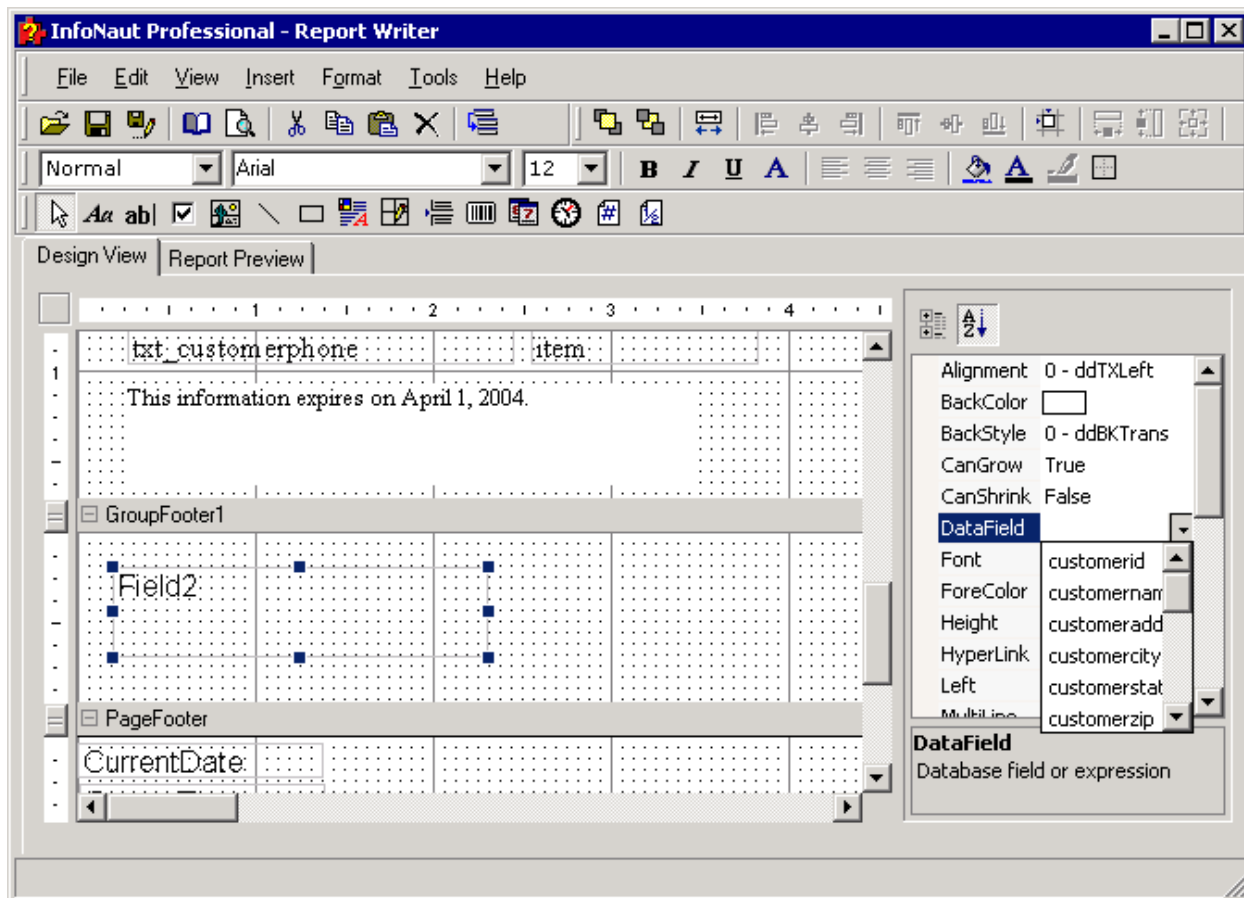
**All of the formatting features available in the Report Header section can be used in the Group Footer section.**

### To create a group footer that includes an aggregate function

1. Select **Group Header/Footer** on the Insert menu.
2. Click the **Field** button on the formatting toolbar and drag a field to the Group Footer section.

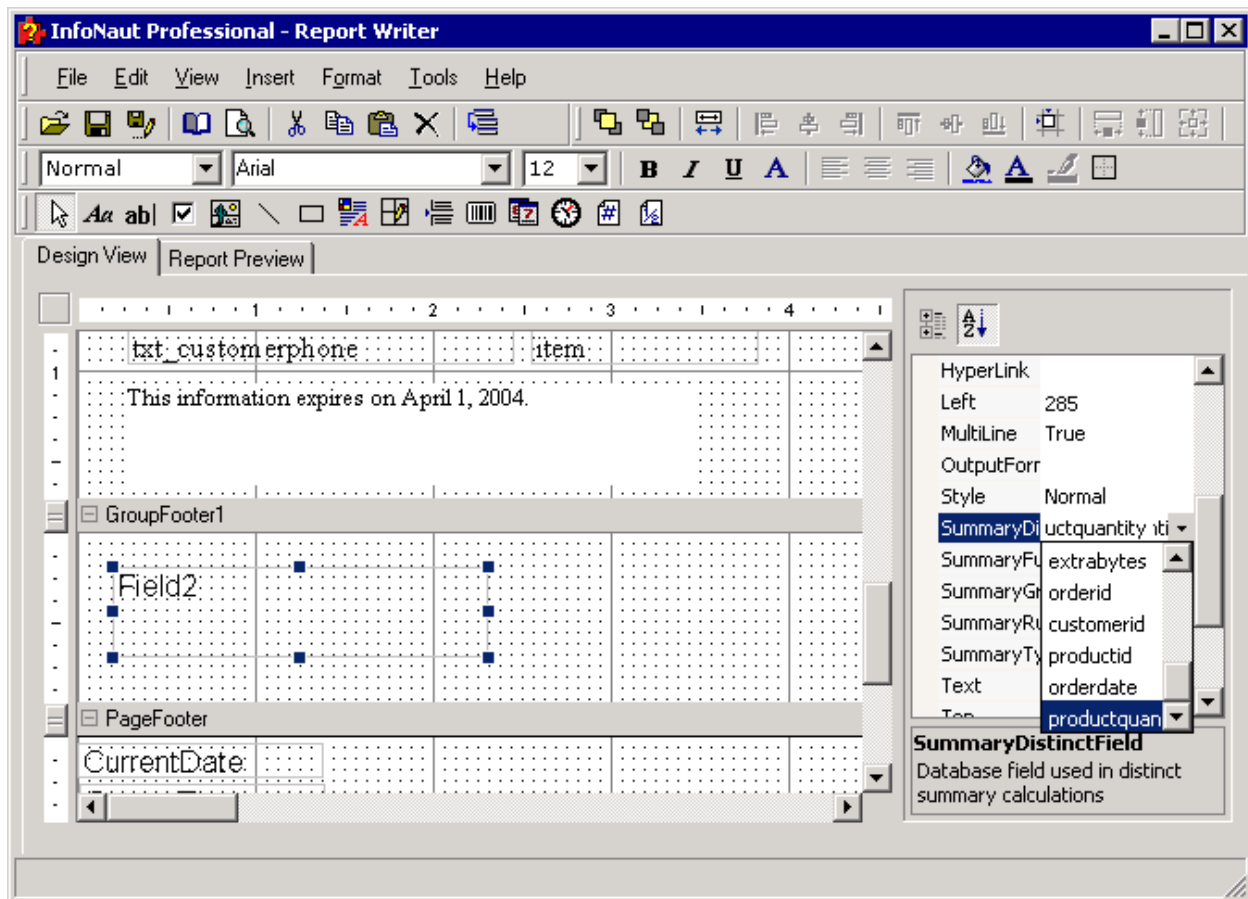


Field button



3. Set the **DataField** property of the field to calculate.
4. Select a function from the list available in the **SummaryFunc** property list box.
5. Select a group header from the **SummaryGroup** property list box.

6. Select the summary type from the **SummaryType** property list box.



7. Add a label to the group footer. See [To change the labels in a page header](#).

**Page Footer Section****Page Footers**

---

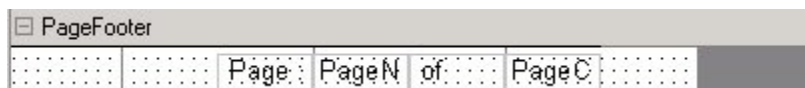
The InfoNaut Report Writer Page Footer section prints a page number at the bottom of each page of the report. Page totals, page numbers, and any other pertinent information can be included in the page footer. Page numbering in the "Page x of y" format is included in the InfoNaut Report Writer Page Footer by default. It also has a current date entered in "MM/DD/YYYY" format.

**Formatting features available in the Report Header section can be used in the Page Footer section.**

## To change the default page format

---

1. Select the label with the caption "Page" in the page footer.
2. Press **<Delete>**.
3. Change the "of" label to a forward slash.
4. Resize the label frame by dragging the right and left handles.
5. Realign the page numbers in their frames by selecting the frames and using the **Left Align** and **Right Align** buttons.



### Alignment buttons

6. The page number format changes to x/y format.



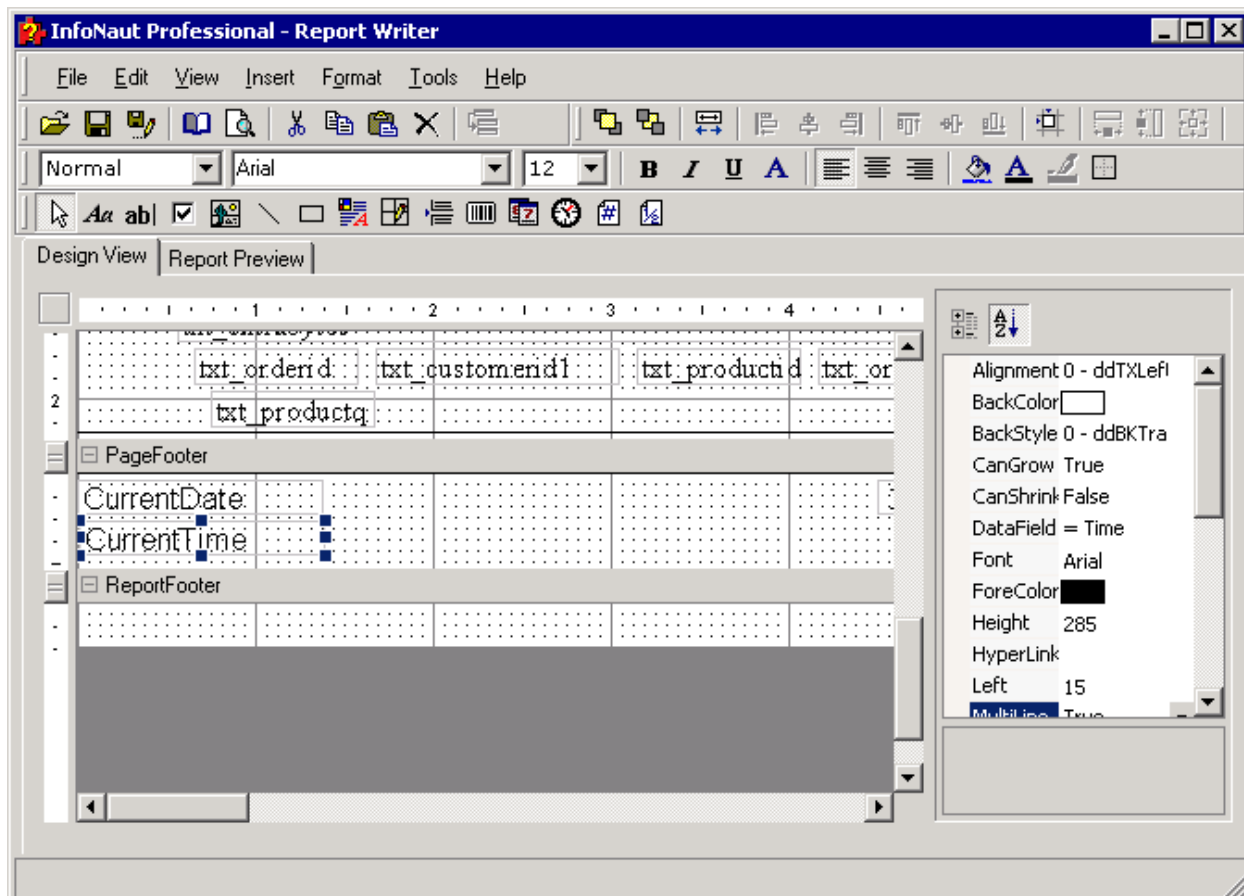


### To add the time to a page footer

1. Click the **Time** button in the **Toolbox** toolbar.



2. Draw a text box in the **Page Footer** or **Report Footer**.
3. The current time will appear in the designated area in the completed report.

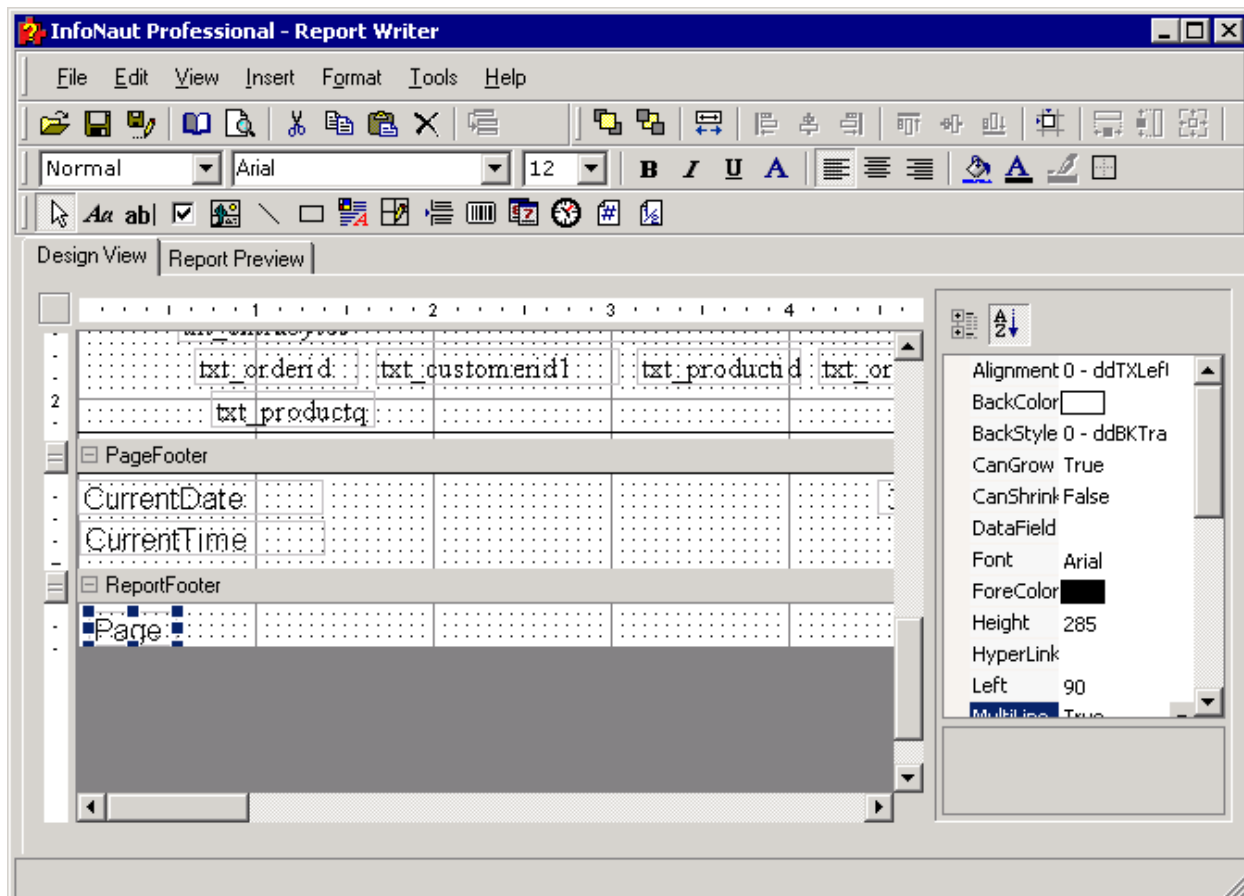


## To add page numbers to a report

1. Click the **Page Number** button in the **Toolbox** toolbar.



2. Draw a text box in the **Page Footer** or **Report Footer**.
3. The page number will appear in the designated area in the completed report.

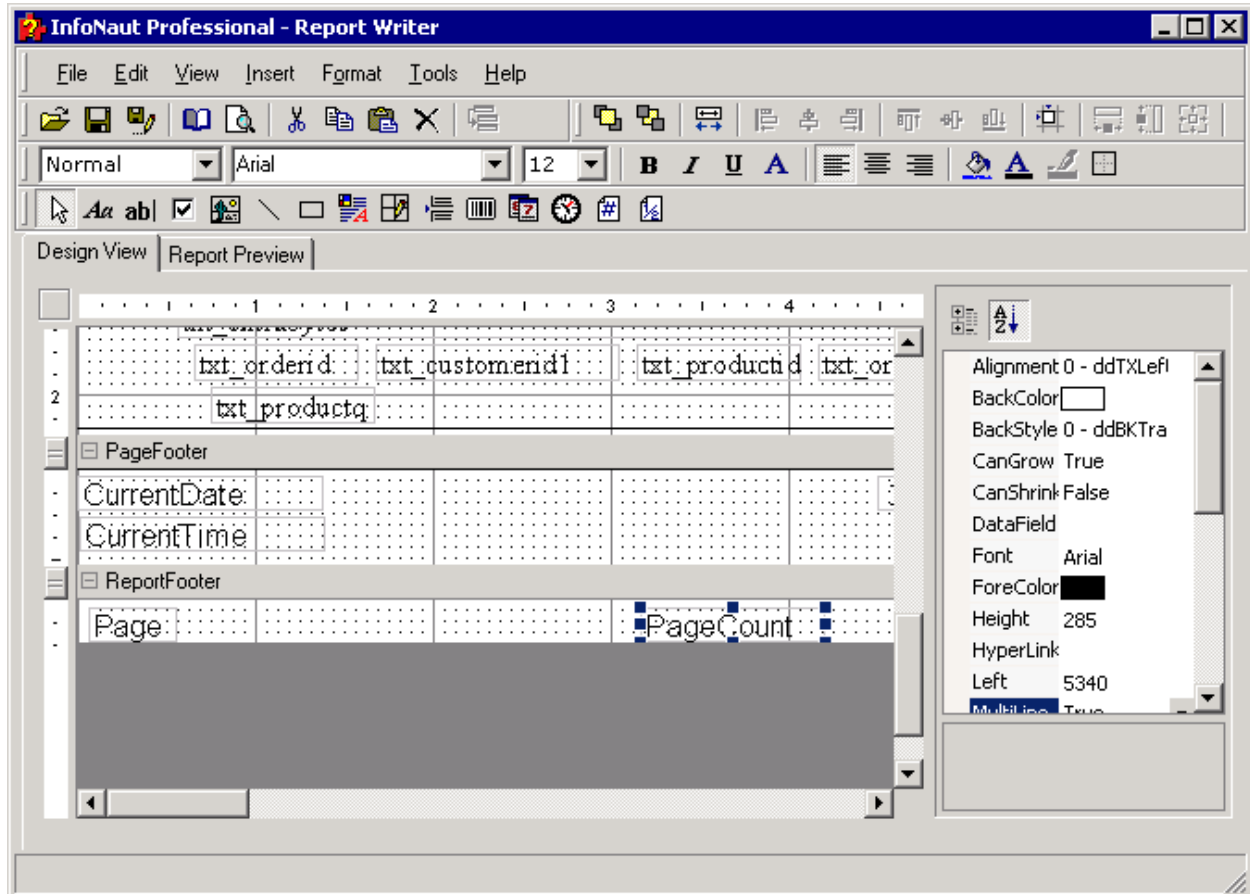


### To add a page total to a footer

1. Click the **Page Total** button in the **Toolbox** toolbar.



2. Draw a text box in the **Page Footer** or **Report Footer**.
3. The page numbers appear in the designated area in the completed report.



#### Report Footer Section

### **Report Footers**

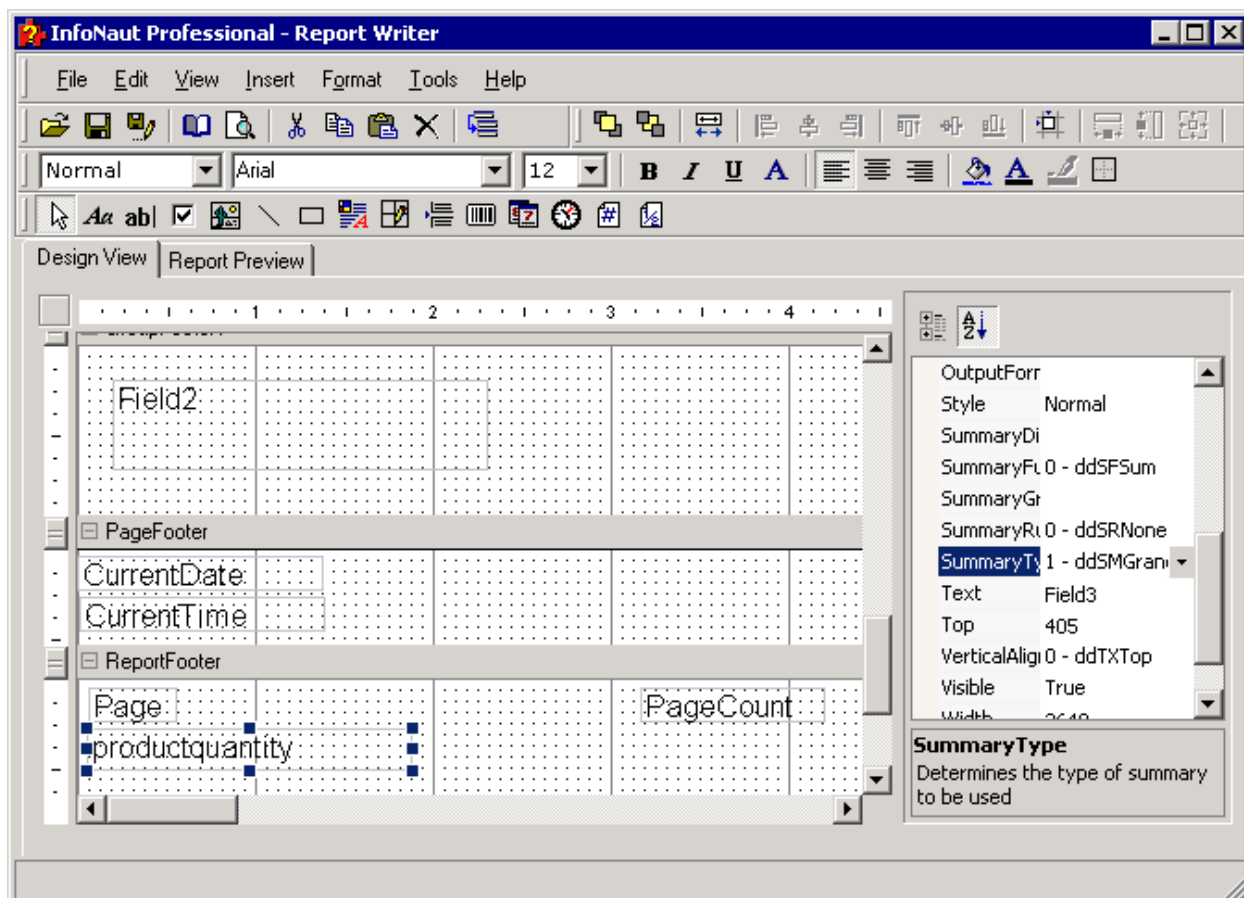
---

Items added to the report footer in the InfoNaut Report Writer appear only on the last page of the report. It can be used to display a grand total or report summary.

**Formatting features available in the Report Header section can be used in the Report Footer section.**

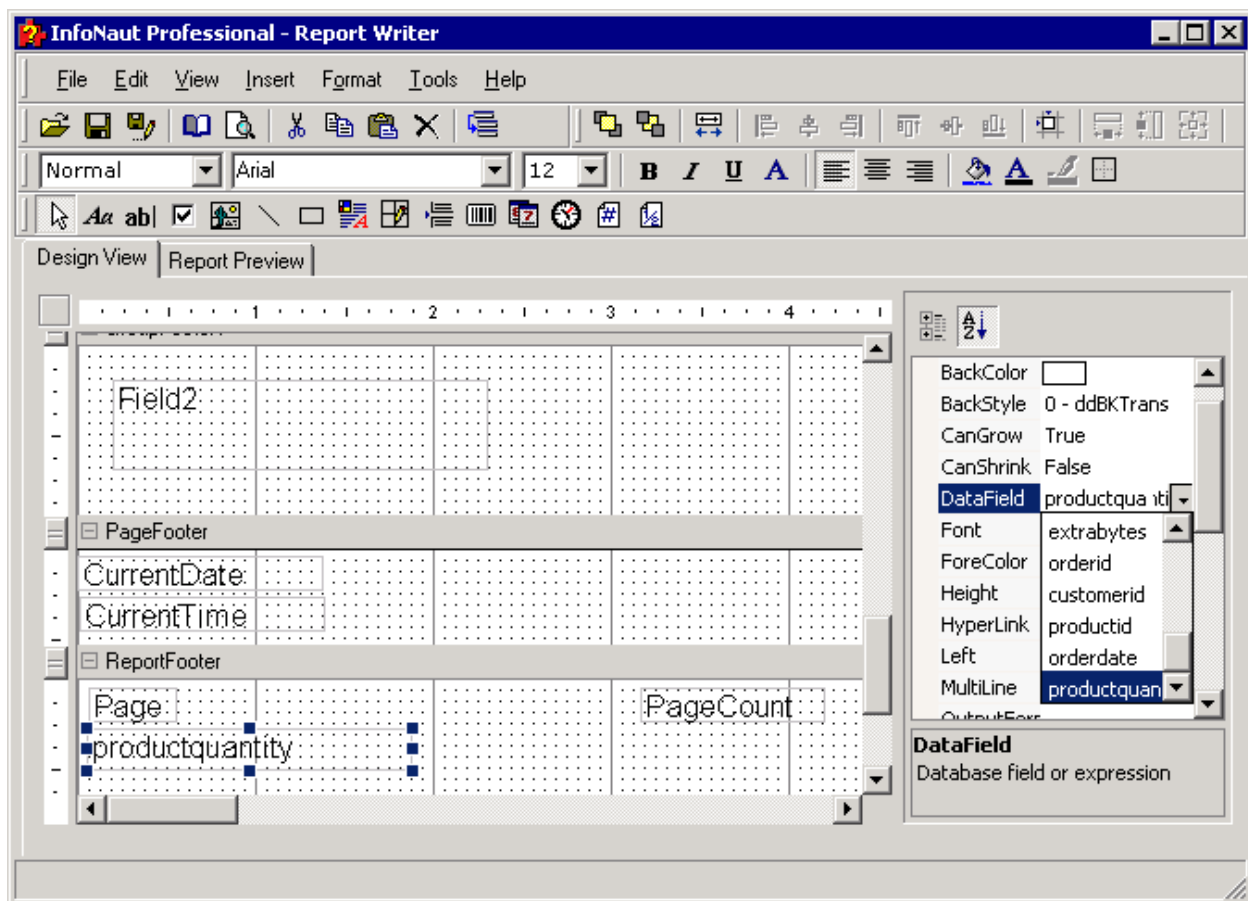
## To add a grand total to the report footer

1. Add a field to the report footer. See [To insert a group header](#) for more information.



2. Select a field to total from the **DataField** property list box.
3. Select a summary function from the **SummaryFunc** property list box.
4. Select **SummaryType** in the Properties list box.

5. Click the drop down button. Choose **1 - ddSMGrandTotal** from the list, and then press **<Enter>**.



6. The words **= Grand Total** appear in the frame and the grand total for the group appears on the last page of the report.

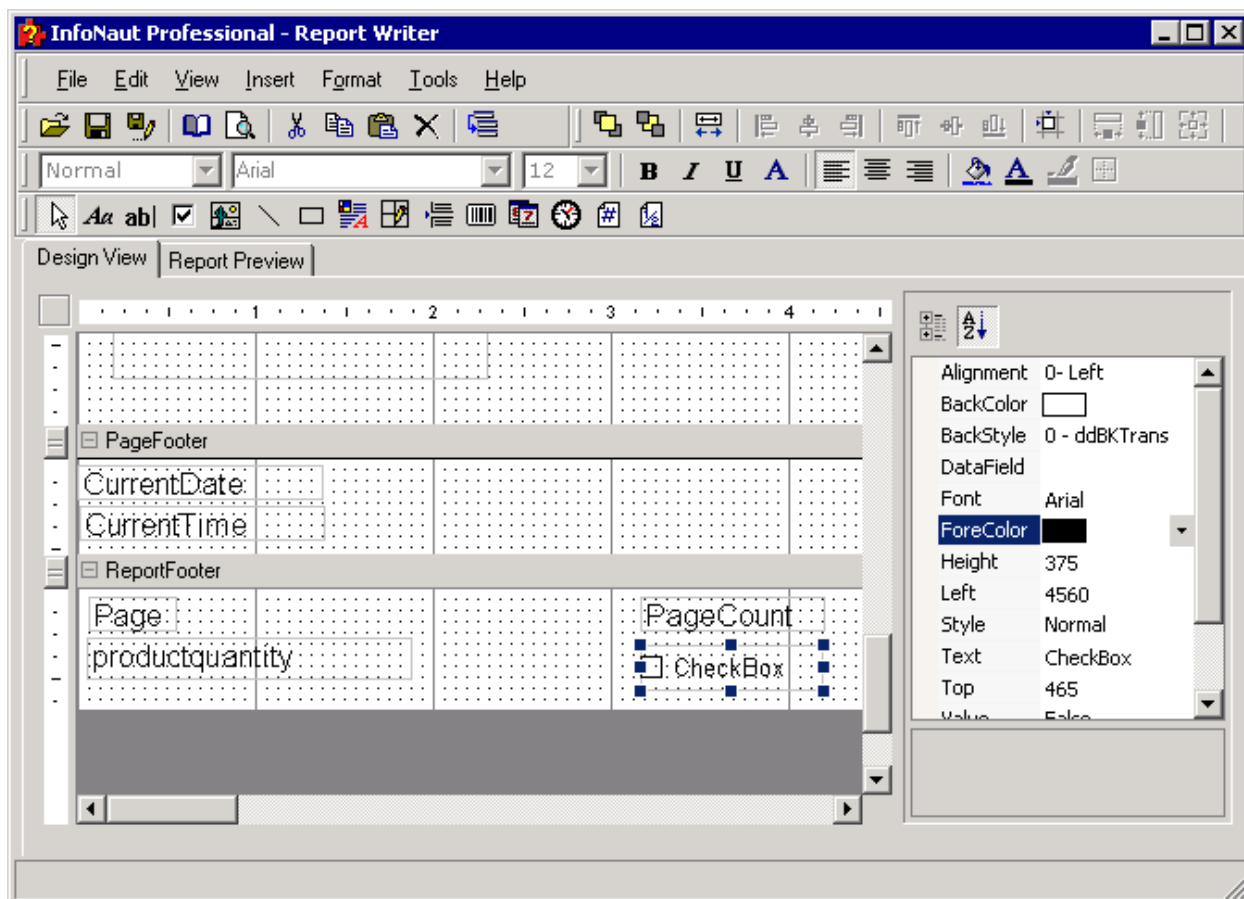
### To add a checkbox to the page footer

1. Select the **Checkbox** button on the Toolbox toolbar.

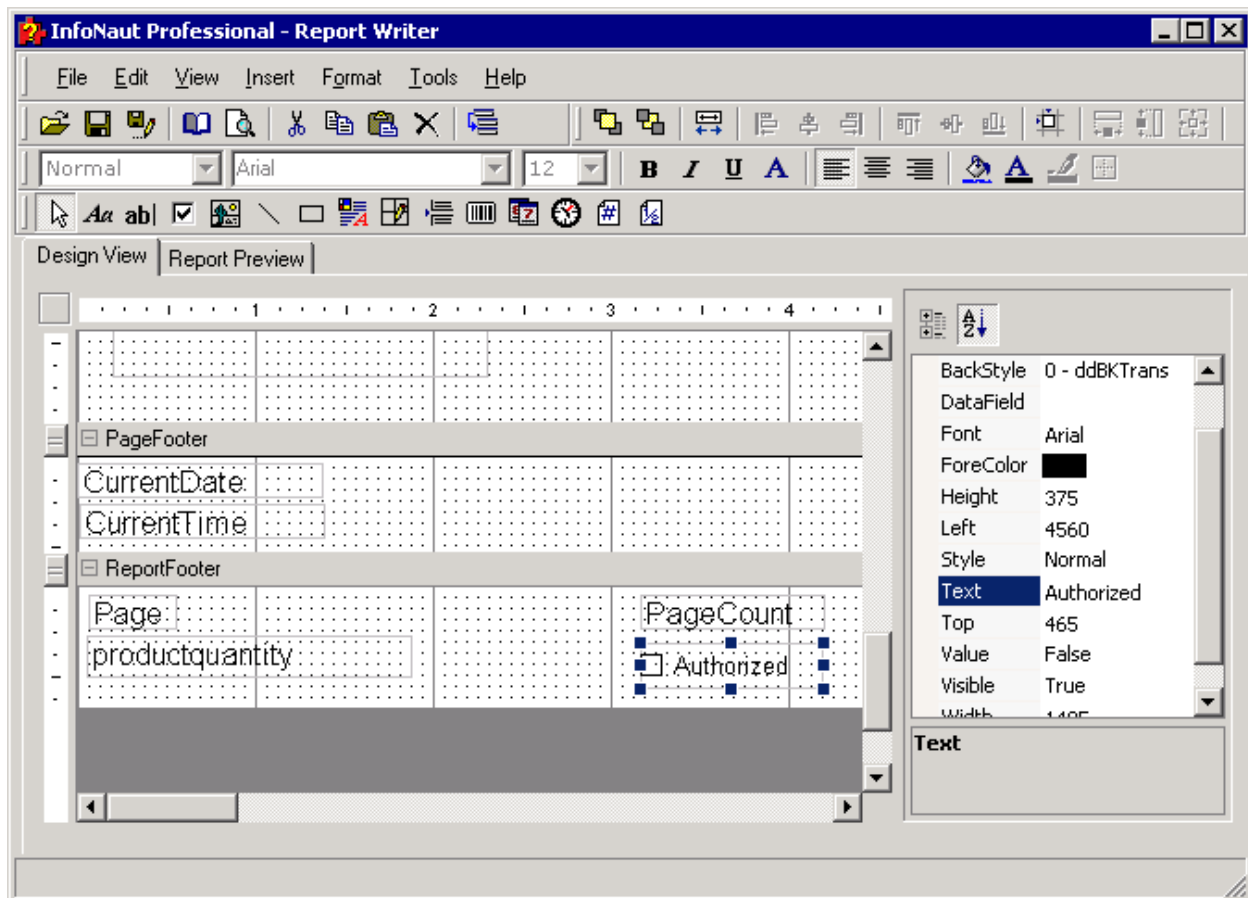


#### Checkbox button

2. The cursor changes to a crosshair. Place the cursor in the page footer and drag down and to the right to insert a checkbox and label.



3. To change the label of the checkbox, select **Caption** in the Properties list box. Change the name of the label or delete it.



4. Resize the frame surrounding the checkbox, if necessary.



#### Report Preview Tab

### **Report Previews**

---

The Report Preview Tab displays the report as it appears in print format. During development of your report, you can switch back and forth from the Design View tab to the Report Preview tab to check your work.

### **To remove the ruler from the Report Preview tab**

---

1. In Report Preview mode, click the **Ruler** button.



#### **Ruler button**

2. The rulers disappear from the top and left side of the frame.

### To move from the beginning to the end of the report

---

1. In Report Preview, click the **First Page** button.



**First Page button**

2. The first page of the report appears. To move to the end of the report, click the **Last Page** button.



**Last Page button**

3. To move to a specific page in the report, type the page number in the **Page Number** text box, and then press **<Enter>**.
4. To move forward or backward one page at a time, click the **Previous Page** button or the **Next Page** button.



**Previous Page button**



**Next Page button**

### To save the report to a file

---

In Report Preview,

1. Select **Export** from the **File** menu.
2. The Save As dialog box opens.
3. Select the desired file type in the Save as Type list box, type a file name in the **File Name** text box, and then click the **Save** button to save the file.

Supported file types are:

- Excel Files (\*.XLS)
- Acrobat (\*.PDF)
- Rich Text Format (\*.RTF)
- HTML (\*.HTML)
- TIFF files (\*.TIF)
- Comma Separated Variable (\*.CSV)
- Tab Separated (\*.TXT)

### To use the Find tool

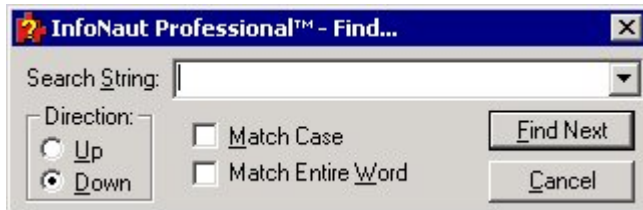
---

1. In Report Preview, type the name of the item for which you are searching in the **Find** text box, and then click the **Find** button.



### Find text box and Find button

2. If the Find text box is empty, click the **Find** button again to open the **Find** dialog box.



3. Type a search string in the **Search String** text box.
4. Under **Direction**, select the **Up** or **Down** button to alter the direction of your search.
5. Select the **Match Case** checkbox to match case.
6. Select the **Match Entire Word** checkbox to match the entire word.
7. Click the **Find Next** button to continue the search.
8. Click the **Cancel** button to return to the Report Preview window.

### **To view single or multiple pages**

---

1. In Report Preview, click the **View Single Page** button to view the report at 100 percent, with one page only onscreen.



#### **View Single Page button**

2. To view multiple pages, click the **View Multi Pages** button.



#### **View Multi Pages button**

3. To resize the current page, change the percentage value in the list box, either by typing in a new value or by selecting a value from the list.
4. The page automatically resizes.

### To use the Zoom tool

---

1. In Report Preview, click the **Zoom In** button to enlarge the report.



#### **Zoom In button**

2. To make the report smaller, click the **Zoom Out** button.



#### **Zoom Out button**

## To print the report

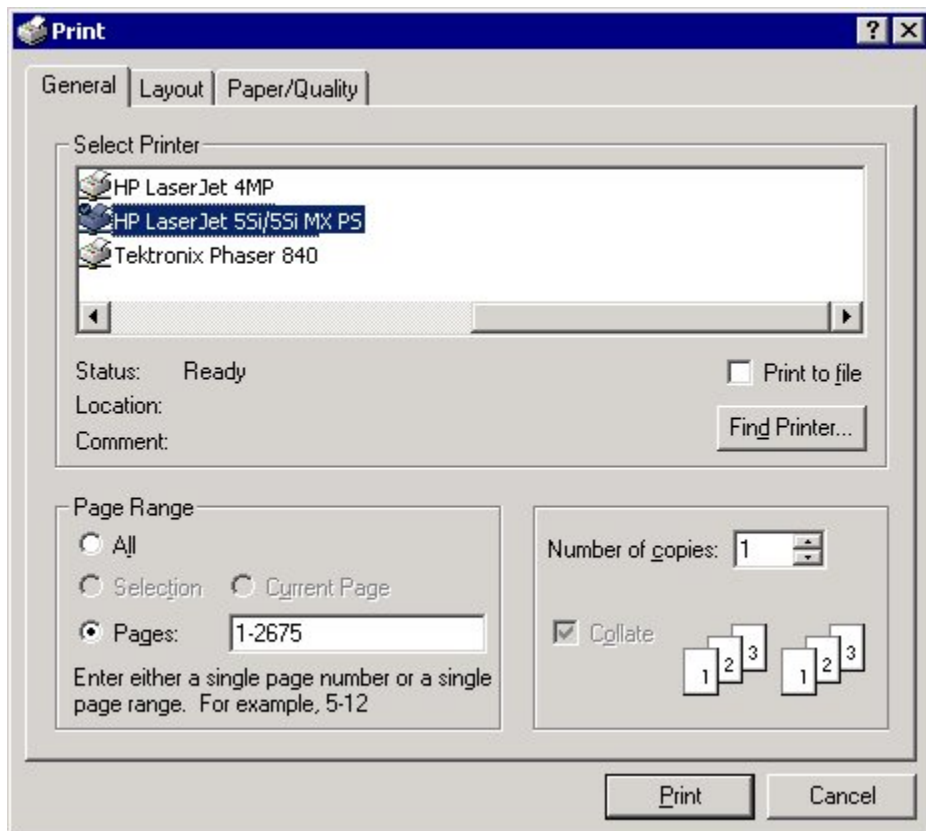
---

1. In Report Preview, click the **Print** button.



### Print button

2. The Print dialog box opens.



3. Use the **General** tabs to select a printer, page range, and number of copies.
4. Use the **Layout** tab to define paper orientation, duplex printing, and page order.
5. Use the **Advanced** button on the Layout tab to select print quality, print tray, and other document options.
6. Use the **Paper/Quality** tab to select a print tray and media (color, transparencies, etc.).
7. Click the **Print** button to print.



### Starting Over

#### To reset the report layout

---

You can reset the report layout while making changes in Report Writer so you can redo your design.

1. On the **File** menu, click **Reset Layout**.

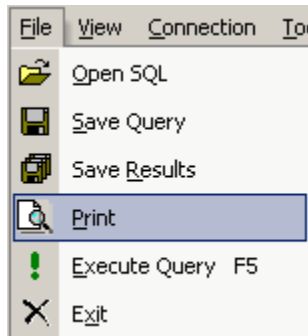


2. The report design changes are nullified and the layout returns to its original state.

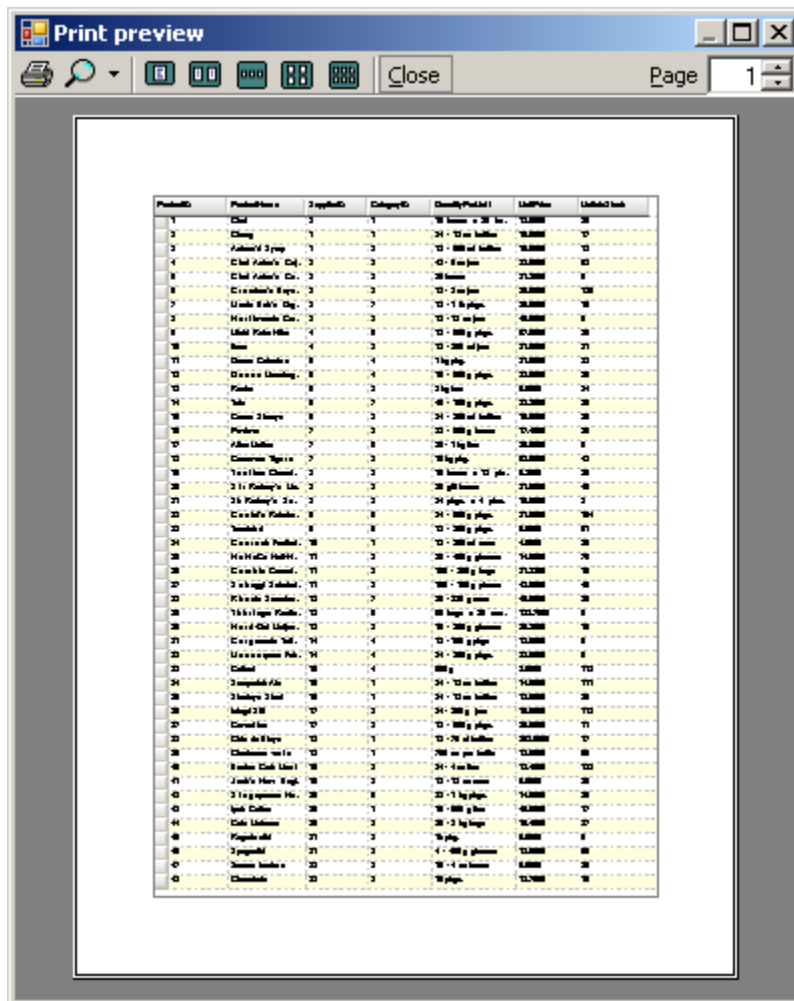
## Printing

### To view a single or multiple pages

1. Click the **File** button, and then click **Print**.



2. The **Print preview** window opens.

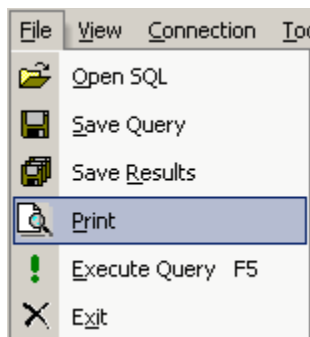


3. The single, double, triple, quadruple and sextuple buttons allow you to view one, two, three, four or up to six pages at the same time in one window.

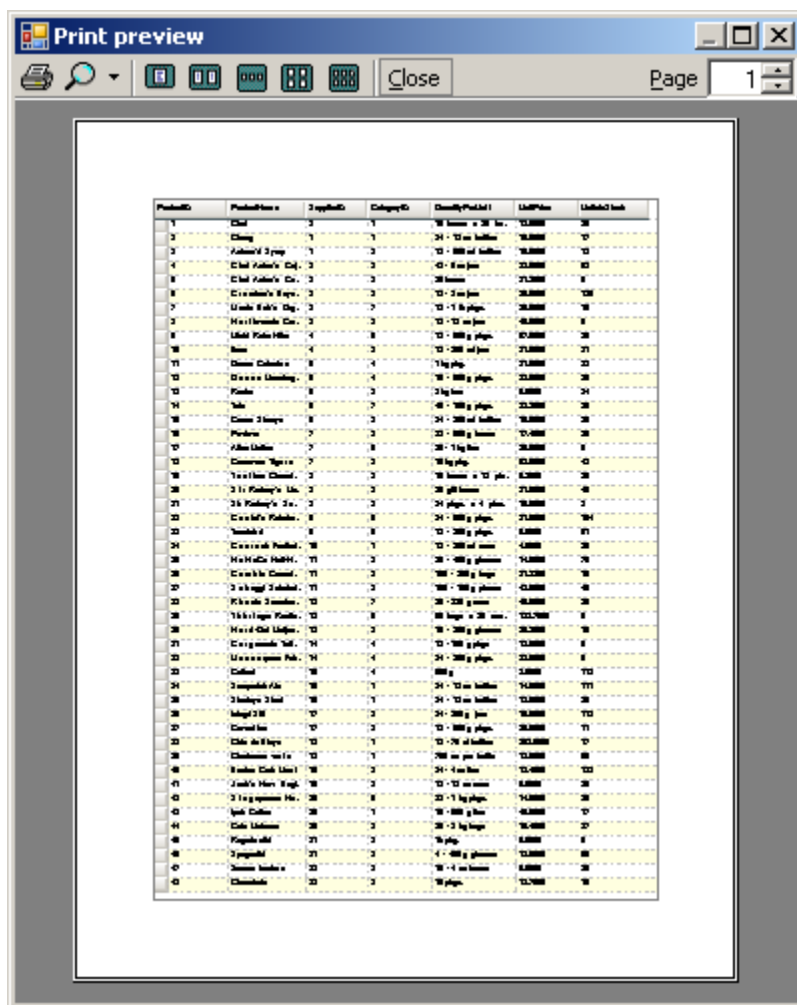


## To use the zoom tool

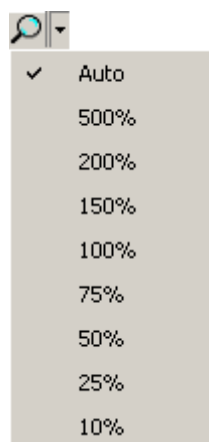
1. Click the **File** button, and then click **Print**.



2. The **Print preview** window opens.



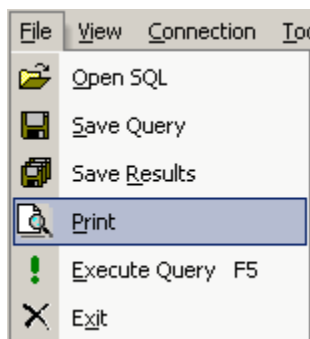
The drop-down box displays the percentage of the original image size.



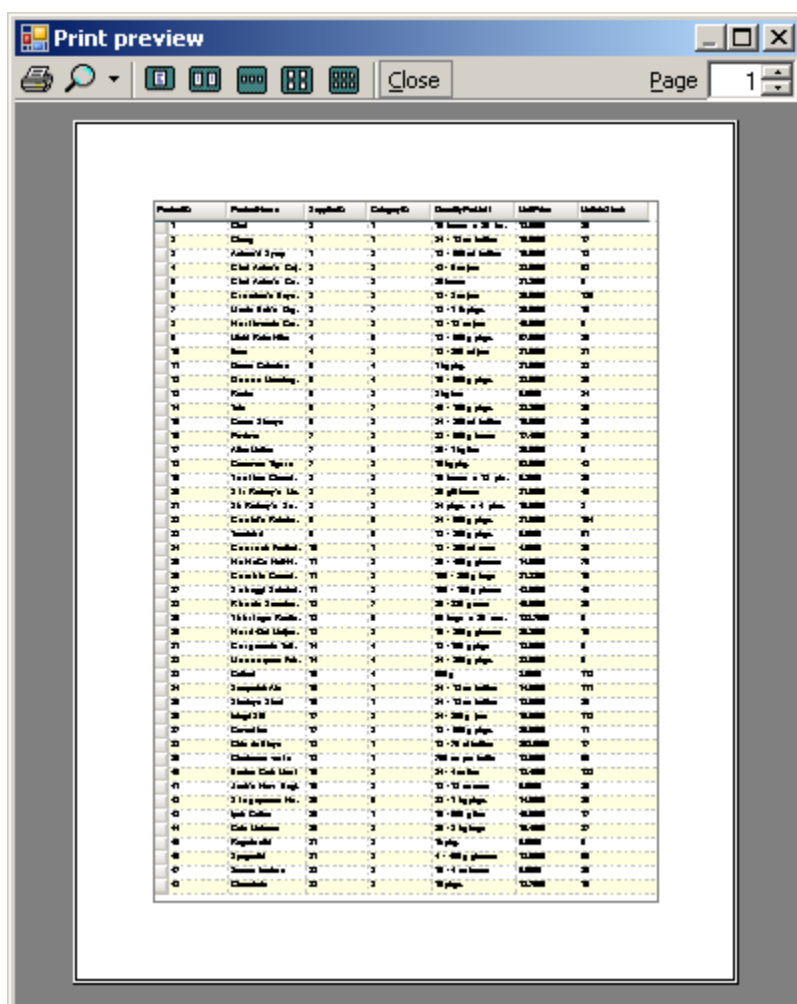
3. You can select any of the listed percentage change and InfoNaut will display an image of that size.

## To move from the beginning to the end of the data

1. Click the **File** button, and then click **Print**.



2. The **Print Preview** window opens.



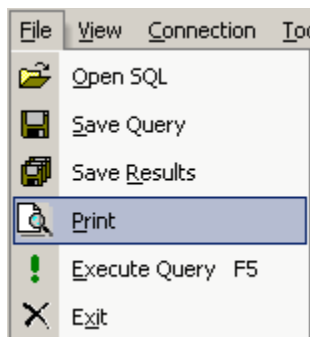
3. The current page number is displayed in the **Page** box. Depending on the viewed page, you can move forward or backward through the document.



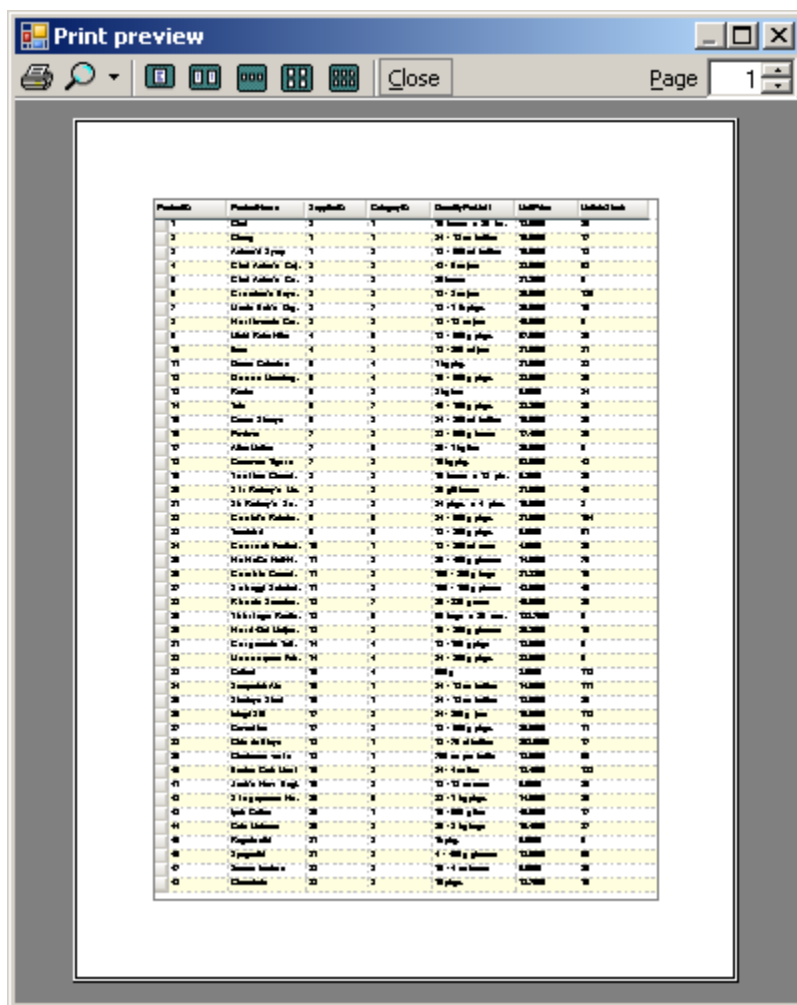
## To print the results of an executed query

The results of a query can be printed from within the Print Preview window.

1. Click the **File** button, and then click **Print**.



2. The **Print Preview** window opens.



3. Click the **Print** button.





4. The Print window appear. Select the appropriate printing options and click **Print**.

## Technical Support

### Technical Support

---

CONNX products, including InfoNaut Professional, can only be installed only as licensed by CONNX Solutions. Software cannot be transferred from one computer to another or to another portion of your network before registration procedures are completed and without the written consent of CONNX Solutions.

This guide assumes that you are familiar with the operating procedures of your computer and with the Microsoft® Windows® environment. For information about your file system and the Microsoft® Windows® environment, refer to the Windows documentation.

If you encounter problems with the installation or operation of InfoNaut, contact an authorized InfoNaut reseller or InfoNaut Technical Support as follows:

Telephone: (888) 930-2727 (For users with a Maintenance Support Contract.)

Telephone: (425) 519-6600 (For international inquiries.)

Fax for all users: (425) 519-6601

E-mail: [support@connx.com](mailto:support@connx.com)

If you purchased InfoNaut through a value-added reseller (VAR), please contact them for support.

InfoNaut technical support personnel are available Monday through Friday, between 6:00 a.m. and 5:00 p.m., Pacific Time. If you have questions regarding your maintenance support, see your InfoNaut or CONNX contract for details.

It is important that you register your copy of InfoNaut either by completing the registration card supplied with the CD-ROM or by visiting the CONNX Web site at [www.connx.com](http://www.connx.com)

Proper registration ensures receipt of Service Pack notices, tips and hints for CONNX operation, related CONNX and InfoNaut information, and uninterrupted technical support.

## **Trademarks and Copyrights**

### **Trademarks and Copyright**

---

#### **Legal Notices**

This notice is valid for all products of the Adabas®, Bolero®, EntireX®, Natural® and Tamino® (the "Product") product line and associated Software AG products.

#### **IMPORTANT: PLEASE READ BEFORE INSTALLING THE SOFTWARE**

You are not allowed to install or use the Product without a corresponding license agreement.

If you have entered into a license agreement with one of Software AG's subsidiaries or distributors (the "License Agreement") the installation and use of the Product is subject to your acceptance of additional terms which are provided for you in the section Additional Terms.

If you have not entered into a License Agreement you must execute the license agreement with Software AG which is provided for you in the section Software AG License Agreement for Trial Versions of Software AG Software ONLY.

---

#### **Copyright Notice**

Adabas®, Bolero®, EntireX®, Natural® and Tamino® are Products of Software AG, a German corporation with its principal place of business at Uhlandstrasse 12, 64297 Darmstadt.

Software AG is the sole owner of all industrial property rights and copyright to the Products and accompanying user documentation or has the respective distribution rights. References made in or on the Products to the copyright or to other industrial property rights must not be altered, deleted or obliterated in any manner.

© Copyright 1998-2016 CONNX Solutions, Inc. All Rights Reserved.

© Copyright 2017-2020 Software AG, Uhlandstrasse 12, 64297 Darmstadt, Germany 2016. All rights reserved.

#### **Trademark Notice**

The name Software AG and/or all Software AG Products are either trademarks or registered trademarks of Software AG. Other product and company names mentioned herein may be the trademarks of their respective owners.

CONNx, FTL, InfoNaut, InfoNaut Professional, and CONNX Data Synchronization are trademarks or registered trademarks of Software AG, in the USA and other countries.

Detailed information on trademarks and patents owned by Software AG and/or its subsidiaries is located at <http://softwareag.com/licenses>.

This software may include portions of third-party products. For third-party copyright notices, license terms, additional rights or restrictions, please refer to "License Texts, Copyright Notices and Disclaimers of Third Party Products". For certain specific third-party license restrictions, please refer to section E of the Legal Notices available under "License Terms and Conditions for Use of Software AG Products / Copyright and Trademark Notices of Software AG Products". These documents are part of the product documentation, located at <http://softwareag.com/licenses> and/or in the root installation directory of the licensed product(s).

Use, reproduction, transfer, publication or disclosure is prohibited except as specifically provided for in your License Agreement with Software AG.

The following are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries: Microsoft, Microsoft Access, Microsoft Excel, Microsoft Internet Information Server,

Microsoft .NET, Microsoft SQL Server, Microsoft Visual Basic, Microsoft Visual C++, Microsoft Visual FoxPro, Microsoft Visual Studio, Microsoft Windows.

The following are either registered trademarks or trademarks of their respective companies or organizations in the United States and/or other countries: Adabas - Software AG; Extra!, Attachmate - Attachmate Corporation; Borland C++ - Inprise Corporation; Crystal Reports - Seagate Software; DataFlex - Data Access Corporation; DB2, AIX, AS/400, C-ISAM, OS/2, OS/390, OS/400, IBM Communications Server, IBM Personal Communications, IBM eNetwork Personal Communications, IBM eNetwork Communications Server - International Business Machines Corporation; Dharma ODBC Integrator - Dharma Systems, Inc.; FOCUS -- IBI, Inc.; HP-UX -- Hewlett-Packard Company; Impromptu - Cognos Incorporated; Itanium - Intel Corporation; JetForm - JetForm Corporation; Linux - Linus Torvalds; NetWare for SAA, Novell - Novell, Inc.; Micro Focus -- Micro Focus International Limited; Oracle, Oracle Rdb, Oracle CODASYL DBMS, Oracle Developer, Form Builder, and Report Builder - Oracle Corporation; Paradox - Corel Corporation; Pathworks, Network File Transfer, RMS, DECnet, VMS, OpenVMS, VAXServer, AlphaServer - Compaq Computer Corporation; PowerBuilder - Sybase, Inc.; POISE (People Oriented Information Systems for Education) -- Campus America/Jenzabar; POWERflex - POWERflex Corporation; RUMBA, Wall Data - NetManage, Inc.; SCO -- Caldera Systems, Inc.; SCT, Plus2000 - Systems and Computer Technology Corporation; SIS - University of California Berkeley; Solaris, Sun - Sun Microsystems, Inc.; Unix - The Open Group.

Portions of the **PostgreSQL Data Base Management System** are copyrighted © 1996-2002, PostgreSQL Global Development Group

Portions Copyright © 1994-7 Regents of the University of California

Permission to use, copy, modify, and distribute this software and its documentation for any purpose, without fee, and without a written agreement is hereby granted, provided that the above copyright notice and this paragraph and the following two paragraphs appear in all copies.

IN NO EVENT SHALL THE UNIVERSITY OF CALIFORNIA BE LIABLE TO ANY PARTY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS, ARISING OUT OF THE USE OF THIS SOFTWARE AND ITS DOCUMENTATION, EVEN IF THE UNIVERSITY OF CALIFORNIA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

THE UNIVERSITY OF CALIFORNIA SPECIFICALLY DISCLAIMS ANY WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE SOFTWARE PROVIDED HEREUNDER IS ON AN "AS IS" BASIS, AND THE UNIVERSITY OF CALIFORNIA HAS NO OBLIGATIONS TO PROVIDE MAINTENANCE, SUPPORT, UPDATES, ENHANCEMENTS, OR MODIFICATIONS.

### **SAS Institute Inc.**

SAS/C OnlineDocTM, Release 7.00, Cary, NC: SAS Institute Inc., 2001.

SAS/C OnlineDocTM, Release 7.00, April 2001

SAS/C OnlineDocTM, Release 7.50, April 2004

Copyright © 2001 by SAS Institute Inc., Cary, NC, USA.

All rights reserved. Produced in the United States of America.

U.S. Government Restricted Rights Notice

Use, duplication, or disclosure of this software and related documentation by the U.S. government is subject to the Agreement with SAS Institute and the restrictions set forth in FAR 52.227-19, Commercial Computer Software - Restricted Rights (June 1987).

SAS Institute Inc., SAS Campus Drive, Cary, North Carolina 27513.

April 2001

SAS® and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration.

### **dbCrypto**

Copyright (c) 2002, Dr Brian Gladman, Worcester, UK.

All rights reserved.

#### **LICENSE TERMS**

The free distribution and use of this software in both source and binary form is allowed (with or without changes) provided that:

1. distributions of this source code include the above copyright notice, this list of conditions and the following disclaimer;
2. distributions in binary form include the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other associated materials;
3. the copyright holder's name is not used to endorse products built using this software without specific written permission.

ALTERNATIVELY, provided that this notice is retained in full, this product may be distributed under the terms of the GNU General Public License (GPL), in which case the provisions of the GPL apply INSTEAD OF those given above.

#### **DISCLAIMER**

This software is provided 'as is' with no explicit or implied warranties in respect of its properties, including, but not limited to, correctness and/or fitness for purpose.

#### **SIS**

Copyright (c) 1989-1994, 2017 The Regents of the University of California.

All rights reserved.

Permission is hereby granted, without written agreement and without license or royalty fees, to use, copy, modify, and distribute this software and its documentation for any purpose, provided that the above copyright notice and the following two paragraphs appear in all copies of this software.

IN NO EVENT SHALL THE UNIVERSITY OF CALIFORNIA BE LIABLE TO ANY PARTY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS SOFTWARE AND ITS DOCUMENTATION, EVEN IF THE UNIVERSITY OF CALIFORNIA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

#### **ICU Library**

##### **COPYRIGHT AND PERMISSION NOTICE**

Copyright (c) 1995-2005 International Business Machines Corporation and others

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, provided that the above copyright notice(s) and this permission notice appear in all copies of the Software and that both the above copyright notice(s) and this permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS

FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION

WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

### **Hiredis**

Copyright (c) 2009-2011, Salvatore Sanfilippo <antirez at gmail dot com>

Copyright (c) 2010-2011, Pieter Noordhuis <pcnoordhuis at gmail dot com>

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of Redis nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR

ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

### **OCILib**

Licensed under Apache 2.0

### **SAFMQ**

Copyright 2004-2007 Matthew J. Battey, Omaha, NE

Licensed under the Apache License, Version 2.0 (the "License");

you may not use this file except in compliance with the License.

You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software

distributed under the License is distributed on an "AS IS" BASIS,

WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and

limitations under the License.

## FreeTDS

Copyright (C) 1998-1999 Brian Bruns

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Library General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Library General Public License for more details. You should have received a copy of the GNU Library General Public License along with this library; if not, write to the Free Software Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA.

## ACE Library

Copyright and Licensing Information for ACE(TM), TAO(TM), CIAO(TM), DAnCE(TM), and CoSMIC(TM)

ACE(TM), TAO(TM), CIAO(TM), DAnCE(TM), and CoSMIC(TM) (henceforth referred to as "DOC software") are copyrighted by Douglas C. Schmidt and his research group at Washington University, University of California, Irvine, and Vanderbilt University, Copyright (c) 1993-2009, all rights reserved. Since DOC software is open-source, freely available software, you are free to use, modify, copy, and distribute--perpetually and irrevocably--the DOC software source code and object code produced from the source, as well as copy and distribute modified versions of this software. You must, however, include this copyright statement along with any code built using DOC software that you release. No copyright statement needs to be provided if you just ship binary executables of your software products.

You can use DOC software in commercial and/or binary software releases and are under no obligation to redistribute any of your source code that is built using DOC software. Note, however, that you may not misappropriate the DOC software code, such as copyrighting it yourself or claiming authorship of the DOC software code, in a way that will prevent DOC software from being distributed freely using an open-source development model. You needn't inform anyone that you're using DOC software in your software, though we encourage you to let us know so we can promote your project in the DOC software success stories.

The ACE, TAO, CIAO, DAnCE, and CoSMIC web sites are maintained by the DOC Group at the Institute for Software Integrated Systems (ISIS) and the Center for Distributed Object Computing of Washington University, St. Louis for the development of open-source software as part of the open-source software community. Submissions are provided by the submitter ``as is" with no warranties whatsoever, including any warranty of merchantability, noninfringement of third party intellectual property, or fitness for any particular purpose. In no event shall the submitter be liable for any direct, indirect, special, exemplary, punitive, or consequential damages, including without limitation, lost profits, even if advised of the possibility of such damages. Likewise, DOC software is provided as is with no warranties of any kind, including the warranties of design, merchantability, and fitness for a particular purpose, noninfringement, or arising from a course of dealing, usage or trade practice. Washington University, UC Irvine, Vanderbilt University, their employees, and students shall have no liability with respect to the infringement of copyrights, trade secrets or any patents by DOC software or any part thereof. Moreover, in no event will Washington University, UC Irvine, or Vanderbilt University, their employees, or students be liable for any lost revenue or profits or other special, indirect and consequential damages.

DOC software is provided with no support and without any obligation on the part of Washington University, UC Irvine, Vanderbilt University, their employees, or students to assist in its use, correction, modification, or enhancement. A number of companies around the world provide commercial support for DOC software, however. DOC software is Y2K-compliant, as long as the underlying OS platform is Y2K-compliant. Likewise, DOC software is compliant with the new US daylight savings rule passed by Congress as "The Energy Policy Act of 2005," which established new daylight savings times (DST) rules for the United States that expand DST as of March 2007. Since DOC software obtains time/date and calendaring information from operating systems users will not be affected by the new DST rules as long as they upgrade their operating systems accordingly.

The names ACE(TM), TAO(TM), CIAO(TM), DAnCE(TM), CoSMIC(TM), Washington University, UC Irvine, and Vanderbilt University, may not be used to endorse or promote products or services derived from this source without express written permission from Washington University, UC Irvine, or Vanderbilt University. This license grants no permission to call products or services derived from this source ACE(TM), TAO(TM), CIAO(TM), DAnCE(TM), or CoSMIC(TM), nor does it grant permission for the name Washington University, UC Irvine, or Vanderbilt University to appear in their names.

### **UMac**

Copyright (c) 1999-2000 Ted Krovetz (tdk@acm.org)

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee, is hereby granted, provided that the above copyright notice appears in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the names of the University of California and Ted Krovetz not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission.

The Regents of the University of California and Ted Krovetz disclaim all warranties with regard to this software, including all implied warranties of merchantability and fitness. In no event shall the University of California or Ted Krovetz be liable for any special, indirect or consequential damages or any damages whatsoever resulting from loss of use, data or profits, whether in an action of contract, negligence or other tortious action, arising out of or in connection with the use or performance of this software.

### **Gigabase**

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the Software), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHOR OF THIS SOFTWARE BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### **System.Net.FtpClient**

Copyright (c) 2013 J.P. Trosclair

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:



The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### **SharpSSH**

Copyright (c) 2002-2015 Atsuhiko Yamanaka, JCraft, Inc.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. The names of the authors may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED ``AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL JCRAFT, INC. OR ANY CONTRIBUTORS TO THIS SOFTWARE BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

### **Mentalis**

Copyright © 2002-2007, The Mentalis.org Team

All rights reserved.

<http://www.mentalis.org/>

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Neither the name of the Mentalis.org Team, nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER

CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

## **NLog**

Copyright (c) 2004-2016 Jaroslaw Kowalski <jaak@jkwalski.net>, Kim Christensen, Julian Verdurmen  
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

- \* Neither the name of Jaroslaw Kowalski nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR

CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

## **MariaDB ODBC Driver**

The MariaDB client libraries for C, Java and ODBC are distributed under the LGPL license, version 2.1 or later. The LGPL license allows you to distribute these MariaDB client libraries freely with any application.

## **About Software AG, Inc.**

Based in Reston, Va., Software AG, Inc. is a wholly owned subsidiary of Software AG headquartered in Darmstadt, Germany. Founded in 1969, Software AG continues to be Europe's largest and a leading global provider of system software and services enabling enterprise data integration and management. Software AG's products control the central IT processes of thousands of renowned companies worldwide including Lufthansa, Siemens, Citibank, Merck, DaimlerChrysler, Sony, BP and Telefonica. Software AG develops products and solutions that support the XML (Extensible Markup Language) standard. XML simplifies the exchange of documents and data as well as the integration of cutting-edge Web applications into traditional IT architectures. In 2003, the corporation achieved 422 million euros in total revenue. Software AG has representation in 59 countries worldwide, and currently employs a staff of approximately 2,600.

Software AG and/or all Software AG products are either trademarks or registered trademarks of Software AG.

All other product and company names mentioned herein are used for identification purposes only, and may be the trademarks or service marks of their respective owners.





## Index

### A

About .....26  
Add Connection .....2  
Add DSN-Less Connection .....10, 11  
Add graphical lines .....125  
Add New Connection .....2  
Add page numbers .....150  
    report .....150  
Add Rich Text .....142  
Add/delete columns .....18  
Addition .....1  
Adjust columns .....81  
Advanced button .....164  
Aggregate .....105  
Aggregate functions .....144, 145  
Align .....101, 119, 137, 140, 148  
Align Left button .....137  
    formatting toolbar .....137  
Alignment .....119  
    change .....119  
Alignment buttons .....119, 148  
Alignment toolbar .....101, 137  
    buttons .....137  
Alignment toolbars .....101  
Allow .....20  
Applicable .....175  
Application list box .....2  
    default selection .....2  
Application type .....2  
    enter .....2  
Applied .....105, 106, 109, 112, 128, 139, 175  
Arrange .....93  
    various elements .....93  
Assets .....175  
Assumed .....174, 175  
Asynchronously .....1  
AVE .....106  
Average .....1, 17

### B

Back color .....118

    change .....118

Back Color button .....118  
    formatting toolbar .....118  
Back color changes .....118  
Basics .....1, 101, 140  
Bellevue .....175  
Benchmark .....1, 17  
Benchmark Mode .....17  
    return .....17  
Border .....22, 101, 128  
    row downward .....22  
    Select .....128  
Border button .....128  
    formatting toolbar .....128  
Borders .....101  
Borders tab .....128  
    Color button .....128  
Build button .....123  
Build numbers displayed .....26  
Build Query button .....2

### C

Calculated .....105, 106, 111, 145  
Calculation .....105  
Cancel button .....161  
    return .....161  
Capability .....1, 15  
Caption .....133, 148, 155  
    Select .....133  
Caption option .....113  
    Locate .....113  
Caption text box .....113  
CDD .....18, 33  
    copy .....33  
    refresh .....18  
CDD Administrator .....18  
    installed .....18  
Center .....115, 119  
    Center Align button .....119  
Change ...14, 113, 115, 116, 118, 119, 126, 128,  
    133, 135, 141, 148

|                              |  |  |   |
|------------------------------|--|--|---|
| alignment .....              | 119  | Security .....                             | 20  |
| default .....                | 148  | Technical Support .....                    | 174   |
| fields .....                 | 141  | CONNX contract .....                       | 174   |
| labels .....                 | 133  | details .....                              | 174   |
| name .....                   | 113  | CONNX Data Dictionary (CDD) .....          | 1, 18   |
| size .....                   | 14   | CONNX Data Dictionary Manager window ..... | 18, 20  |
| Charts .....                 | 93   | CONNX database .....                       | 2   |
| Check .....                  | 77, 157  | CONNX Database Logon dialog .....          | 2   |
| Clear button .....           | 79   | CONNX Integrated Login window .....        | 2   |
| Clear File button .....      | 12   | CONNX Integrated Logon dialog .....        | 10, 11  |
| Clicking .....               | 2, 116, 118  | CONNX password .....                       | 2   |
| Add Connection .....         | 2  | CONNX Security .....                       | 2, 20   |
| Define .....                 | 118  | CONNX Solutions .....                      | 174, 175  |
| Define Custom .....          | 116  | CONNX User Reference Online Guide .....    | 2   |
| Close Connection .....       | 2  | CONNX Web site .....                       | 174   |
| Color .....                  | 101, 116, 118, 126, 128, 135, 164, 172                     | Contact .....                              | 174, 175  |
| change .....                 | 128  | authorized InfoNaut reseller .....         | 174   |
| font changes .....           | 116  | Convert .....                              | 98, 139   |
| Select .....                 | 116, 118, 126, 128, 135                                    | Copyright Page .....                       | 175   |
| Color button .....           | 116, 118, 128  | COUNT .....                                | 106   |
| Borders tab .....            | 128  | Countries .....                            | 175   |
| Color changes .....          | 118  | Create Report button .....                 | 94  |
| match .....                  | 118  | CREATE VIEW .....                          | 20  |
| Colors palette .....         | 135  | Criteria .....                             | 53  |
| Column .....                 | 18, 23, 81, 82, 88, 132                                    | crosshair .....                            | 125, 130, 155   |
| Drag .....                   | 82   | cursor changes .....                       | 125, 130, 155   |
| Drop .....                   | 82   | Cursor .....                               | 14, 23, 115, 119, 125, 130, 137, 155  |
| Select .....                 | 82   | Drag .....                                 | 119   |
| Column header .....          | 81, 82   | Hold .....                                 | 115   |
| Drag .....                   | 82   | move .....                                 | 23  |
| Command .....                | 72   | Place .....                                | 14, 119, 155  |
| Commit .....                 | 36   | Custom color .....                         | 116, 118  |
| transaction .....            | 36   | create .....                               | 116, 118  |
| connection .....             | 10   | Custom Colors button .....                 | 118   |
| open .....                   | 10   | Customized .....                           | 93  |
| Connection Established ..... | 2  | <b>D</b>                                   |   |
| Connection menu .....        | 2, 10, 11  | Data ..                                    | 1, 2, 10, 15, 18, 19, 20, 23, 27, 30, 33, 36, 37, 105, 107, 111, 129, 132, 140, 141, 170, 175 |
| connection using .....       | 11   | enable read/write access .....             | 15  |
| open .....                   | 11   | Data Access Corporation .....              | 175   |
| CONNX ..                     | 1, 2, 10, 11, 18, 19, 20, 27, 30, 33, 36, 75, 94, 174, 175 | Data Dictionary Viewer .....               | 19  |
| hints .....                  | 174  |  |   |

- data source name .....10
- Data Sources ... 1, 2, 10, 15, 20, 27, 30, 33, 129, 132, 140, 141, 175
- Database ..... 2, 10, 11, 18, 27, 30, 36, 37, 75
- DataField ..... 130, 141, 145, 153
- DataFlex .....175
- Default .....148
  - change .....148
- default font .....139
- DELETE .....113
- Delete button .....12, 79
- Design View tab .....98, 157
- Detail .....129, 144
- Detail Basics .....140
- Detail sections ..... 129, 140, 141, 142, 144
- Display ..... 12, 23, 26, 77, 79, 105, 152, 157
- Dqy file .....68, 74, 94
- DSN name .....2
- DSNs .....2
- E**
- E-mail .....174
- End Time .....72
- Enlarge .....119, 163, 168
- Enterprise .....30
- Excel .....1, 93
- Execute .. 1, 2, 17, 27, 30, 33, 72, 75, 77, 79, 88, 94, 172
- Expressions .....53, 105
- F**
- Fields ..... 94, 101, 105, 106, 107, 108, 109, 110, 111, 129, 130, 135, 137, 139, 140, 141, 145, 153
  - change .....141
- Fields Property .....106
- Find button .....161
- Find CDD dialog .....10, 11
- Find Next button .....161
- Find text box .....161
- Find tool .....161
- First Page button .....159
- Font ..... 101, 115, 116, 118, 135, 139
- Footer .....151
- Format .....93, 98, 101, 105, 115, 116, 118, 125, 126, 128, 130, 132, 135, 137, 140, 142, 144, 145, 147, 148, 152, 157
- Format toolbar .....101, 116, 118, 125, 126, 128, 130, 135, 137, 142, 145
- Formats .....98, 101, 112, 129
- Formatting features ..... 101, 129, 132, 140, 144, 147, 152
- Formatting toolbar ..116, 118, 128, 130, 137, 145
- Freeze Column .....81
- Functions .....1, 106, 108, 142, 144, 145
- G**
- Grand total ..... 153
  - add ..... 153
- GrandTotal SummaryType ..... 105
- Graphic .....72, 123
- Graphs .....93
- Group footer ..... 129, 130, 144, 145
  - create ..... 145
  - label ..... 145
- Group Header .....93, 129, 130, 145
  - insert ..... 130
  - Select ..... 130, 145
- Group Header/Footer .....130, 145
- Group Options dialog ..... 130
- Group pane .....82
- Group summaries ..... 144
- Groups .....82, 93, 105, 106, 109, 129, 130, 144, 145, 153, 175
  - field identifies ..... 109
- H**
- Header 82, 93, 94, 112, 113, 115, 123, 125, 129, 132
- Header label ..... 115
- Header pane .....94
- Help menu .....26
- Hide Column .....81
- HTML ..... 1, 93
- I**
- Image ..... 123
- Import ..... 123, 142
- Inc ..... 175
- Industries ..... 175

InfoNaut.. 1, 2, 12, 15, 16, 17, 18, 19, 20, 26, 27, 30, 33, 36, 37, 68, 72, 74, 75, 79, 88, 93, 94, 98, 101, 105, 112, 113, 129, 132, 133, 139, 144, 147, 152, 174, 175

InfoNaut Professional 1, 2, 18, 20, 26, 72, 74, 75, 93, 105, 139, 174, 175

InfoNaut™ Basics ..... 1

Informix.....30

Insert menu .....145

Integrated Security .....2

Internet .....175

## L

Last Page button .....159

Layout.....164, 165

    Use .....164

Left Align .....119, 148

Licensing policies .....175

Line button .....125

Line color.....126

LineWeight .....125

Listed.... 1, 2, 12, 68, 79, 88, 106, 107, 108, 109, 110, 111, 113, 115, 121, 123, 125, 130, 133, 135, 139, 141, 145, 153, 155, 162, 166

Literals.....88

Load .....33, 68

loaded CDD.....33

LOCATE .....113

Location..... 74, 123, 125, 132, 142

Log file.....12, 16, 79

Logged ..... 2, 10, 11, 12, 16, 79

Logo .....112

Logon Information tab .....2

Loop Counter text box.....17

## M

Machine Data Source tab.....2

Maintenance Contract.....175

Maintenance Support Contract .....174

Match Case .....161

    Select.....161

Match Entire Word .....161

Mean .....175

Measurement .....121

Memory .....1, 33

Menu bar .....2, 94, 130

metadata .....175

Microsoft .....30, 68, 72, 74, 93, 175

Microsoft Query.....68, 74

Microsoft Windows 2000.....72

MIN .....106

MM/DD/YYYY .....147

Modes .....1, 17, 158

Modifications .....36

Modified .....15, 18, 79

Modify CDD.....18

More Connections.....12

More Queries. ....79

Move .....23, 82, 119, 159

move forward .....159

Multiple pages.....162, 166

## N

name .....113

    change.....113

Native SQL button.....30

Network.....174

number.....77

    rows.....77

## O

Object Properties dialog .....128

Objects.....105, 128

ODBC.....16, 30

ODBC Desktop .....30

OLE DB.....11, 30

OLE DB Provider .....11

onscreen .....162, 166

open .....10, 11, 19, 72, 94

    connection .....10

    connection using .....11

Open Query .....68

Open SQL statements .....72

Oracle .....30

Oracle Rdb.....30

OS/2.....175

OS/390.....175

OS/400.....175

OutputFormat.....105



- use ..... 105
- P**
- Pacific Time ..... 174
- Page ... 1, 93, 106, 112, 113, 132, 133, 135, 140, 147, 148, 150, 151, 152, 153, 155, 159, 162, 166, 172
- Page footer ..... 147, 148, 149, 150, 151, 155
- Page header ..... 113, 132, 133, 135, 138, 140
- Page numbers ..... 147, 148, 150, 159
- Page range ..... 164, 172
- Page totals ..... 147, 151
- PageCount SummaryType ..... 105
- PageTotal ..... 105
- Pane .... 2, 14, 15, 23, 27, 30, 72, 75, 82, 88, 101
- Paper/Quality tab ..... 164, 172
- Parameterized query ..... 88
- Parameters ..... 88
- Password ..... 2
- Pdf ..... 93
- Percentages ..... 105, 162, 166
- Point ..... 2, 27, 30, 33, 75, 94, 105, 113
- Port 6500 ..... 2
- Port setting ..... 2
- Preview ..... 98, 128, 157, 166, 168, 172
- Previous ..... 2, 12, 159
- Previous Page button ..... 159
- Print ..... 98, 147, 157, 164, 166, 168, 172
- Programs ..... 2, 27, 30, 33, 75, 94, 132
- Properties list 113, 121, 123, 125, 130, 133, 141, 153, 155
- Properties pane ..... 101
- Property Description ..... 106
- Q**
- Queries... 1, 2, 14, 15, 17, 20, 27, 30, 33, 36, 37, 68, 74, 75, 77, 79, 82, 88, 93, 94, 101, 105, 106, 141, 172
- Query 1, 2, 15, 17, 20, 27, 30, 33, 36, 37, 68, 74, 75, 77, 82, 93, 94, 141, 172
  - Create ..... 2, 27, 30, 33, 36, 37, 75, 77
  - created ..... 20
  - execute ..... 2, 17
  - executing ..... 33
  - name ..... 74
  - run ..... 74
  - Select ..... 68
- Query Builder ..... 2
- Query execution ..... 1, 75
- Query pane ..... 14, 88
- Query table ..... 82
- Query Tool ..... 27, 30, 33, 75
- R**
- Range ..... 93, 101, 105, 172, 175
- Realign ..... 148
  - page numbers ..... 148
- Realigned ..... 138, 148
- Recent Connections list ..... 12
- Reconnect ..... 1, 2, 18, 33
  - Yes button ..... 2
- Record Locking ..... 36
- Refresh ..... 18, 33
- Refresh CDD button ..... 33
- Registration ..... 174
- Relocate ..... 137
- Remove ..... 12, 158
- Replace ..... 88
- Report .... 1, 93, 94, 98, 101, 105, 106, 107, 108, 109, 110, 111, 112, 113, 115, 116, 118, 121, 123, 125, 128, 129, 130, 132, 133, 139, 140, 141, 142, 144, 147, 149, 150, 151, 152, 153, 157, 158, 159, 161, 162, 164, 166, 168
  - add page numbers ..... 150
- Report footer ..... 149, 150, 151, 152, 153
- Report generation ..... 1
- Report header ..... 112, 113, 115, 116, 118, 121, 128, 129, 132, 140, 144, 147, 152
- Report Options dialog ..... 139
- Report Preview 98, 157, 158, 159, 161, 162, 164
- Report Writer ..... 93, 94, 98, 101, 105, 112, 113, 129, 132, 133, 144, 147, 152
- Reseller ..... 174
- Reserved ..... 175
- Reset Columns ..... 81
- Resize ... 101, 115, 128, 138, 148, 155, 162, 166
- RESULTS ..... 1, 2, 33, 72, 172
- Rich ..... 93
- Rich Text button ..... 142

RIGHT ..... 107, 110, 130, 155  
     SummaryDistinctField.....107  
     SummaryRunning.....110  
 Right Align .....148  
 Right Align button.....119, 148  
 RMS .....2  
 Rollback.....36, 37  
 Rollbacks.....36, 37  
 Rotate text.....121  
 Row downward.....22  
 Rows .....22, 77  
     number.....77  
 Ruler.....158  
**S**  
 Security .....2  
 Service Packs .....174  
 Set..... 2, 77, 81, 88, 139, 145  
 Settings .....16, 19, 115  
 Shift key.....135, 137  
 Show Tables button .....2  
 SIS (Sequential Interactive Synthesis).....175  
 Size ..... 14, 101, 115, 123, 135, 140, 142  
 Slide .....14  
 Sorted.....129  
 Sources .....133, 175  
 SQL ..... 20, 27, 30, 68, 72, 74, 88, 175  
 Statistics.....75  
 Status .....101  
 SubTotal SummaryType .....105  
 SUM .....106  
 Summary..... 105, 106, 109, 110, 111, 112, 144, 145, 152, 153  
     Summary function .....153  
     Summary type .....105, 110, 145  
     SummaryDistinctField .....105, 106, 107  
     SummaryDistinctField dropdown .....106  
     SummaryFunc..... 105, 106, 108, 145, 153  
     SummaryGroup..... 105, 106, 109, 145  
     SummaryRunning .....105, 106, 110  
     SummaryRunning list.....106  
     SummaryType..... 105, 106, 111, 145, 153  
 SWITCH .....157

Sybase .....30  
**T**  
 Tab.....23, 98, 157, 158, 164  
 Tab function .....23  
 Tables .....2, 82, 88, 93, 94, 101, 106, 133  
 TCP/IP .....2  
 Technical Support.....174, 175  
 Techniques .....140  
 telecommunications .....175  
 Test query logic.....77  
 Text Color button .....116, 135  
 tif 93  
 Time ..1, 17, 72, 88, 93, 105, 129, 132, 149, 159, 174  
 Title .....2, 112, 132  
 Toll Free.....175  
 Toolbox .....101  
 Tools menu .....17, 19, 20, 139  
 Trace button.....16  
 Trace ODBC calls .....16  
 Trademarks.....175  
 Transaction .....36, 37  
 Transactions .....36, 37  
 Types ....2, 20, 74, 101, 105, 106, 108, 110, 113, 128, 133, 142, 145, 149, 159, 161, 162, 166, 170  
**U**  
 Under Direction.....161  
 Unfreeze Column .....81  
 Ungroup columns.....82  
 Unhide All Columns .....81  
 Uniform SQL button .....27  
 Uniform SQL statement .....27  
 UNIX .....175  
 USA.....175  
 User Name text.....2  
**V**  
 VAR.....174  
 Version number.....26  
 View menu .....94  
 View Multi Pages button .....162, 166  
 View Relational Database SQL button .....30

View Single Page button .....162, 166  
Views..... 1, 2, 12, 19, 20, 27, 30, 75, 79, 94, 98,  
157, 162, 166, 172, 175  
VSAM .....2  
**W**  
Windows.....16, 174  
Windows 95/98/NT/2000 environment.....174

Windows NT.....2  
Wrap Text .....22  
**Z**  
Zoom In button.....163, 168  
Zoom Out button .....163, 168  
Zoom tool .....163, 168

---