
Hyperion Essbase™

Version 5

SQL Interface Guide

HYPERION®

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Introduction

Welcome to the *SQL Interface Guide*. To help you get started, this introduction provides the following information:

- What you'll find in this book
- How it's organized, with a brief description of each chapter
- What you won't find in this book
- What you should know to use Hyperion Essbase™ SQL Interface
- All about the sample files referred to in this book
- The formatting conventions for this book
- Where to find other sources of Hyperion Essbase information

Who Should Read This Guide

This guide is primarily for database administrators who install SQL Interface, configure ODBC drivers, and load relational data into Hyperion Essbase.

What's in This Guide

The *SQL Interface Guide* describes how to load data from SQL, relational, and flat-file data sources into an Essbase database. Use this guide to learn how to:

- Prepare data for loading into an Essbase database.
- Troubleshoot common relational database server connections and transfer problems.
- Construct a data load rules file to map the data source to the Essbase database.
- Select and configure the correct database driver to ensure a fast and smooth data load.

This guide also briefly describes what's new in Version 5.0.2 of SQL Interface.

Note: For a high-level list of steps for using SQL Interface and the supporting documentation, see "About Loading SQL Data" on page 2.

What's in Each Chapter

The chapters in this guide are organized as follows:

- Chapter 1, *Introducing SQL Interface*, provides a conceptual overview of data loading using SQL Interface.
- Chapter 2, *Configuring Your Data Source*, describes how to use the ODBC Administrator Utility to choose your INTERSOLV ODBC driver and point it to its data source.
- Chapter 3, *Preparing Multiple-Table Data for Loading*, describes two ways to prepare multiple-table data for loading, and when to choose each one.
- Chapter 4, *Loading SQL Data*, describes how to load data from a relational data source into an Essbase database.
- Chapter 5, *Using Non-INTERSOLV ODBC Drivers*, describes how to configure Non-INTERSOLV drivers and data sources.

What's Not in This Guide

This guide doesn't describe the following:

- Procedures for installing the Hyperion Essbase OLAP Server and SQL Interface. For this information, see the *Installation Notes*.
- Detailed information on each of the INTERSOLV ODBC drivers tested with Essbase. For this information, see the *INTERSOLV DataDirect Connect ODBC Reference*, which is provided with SQL Interface. This reference is in the `ARBORPATH\ODBCDOCS` (`ARBORPATH\odbcdocs` on UNIX) directory in .PDF format for online viewing and printing in Adobe Acrobat Reader (Version 3.0.1 or higher). Adobe Acrobat Reader is provided on the Essbase CD-ROM, or you can download Acrobat Reader from WWW.ADOBE.COM.
- Basic data retrieval. For this information, you need to use the spreadsheet environment. See the Hyperion Essbase *Spreadsheet Add-in User's Guide*.

This guide describes data loading and data load rules only in the context of loading data from SQL, relational, and flat-file sources. For a complete discussion of rules files and data loading techniques, see the *Database Administrator's Guide*, online help available in the Hyperion Essbase Application Manager, and online HTML documentation provided with the Application Manager.

What You Should Know Before You Start

To use the information in this book, you need the following:

- An understanding of relational databases and ODBC drivers
- A knowledge of Essbase database outlines

Sample Applications

This book provides examples based on:

- An application called Sample, which is provided with the Essbase server software
- A dBASE file called BUDGET.DBF (budget.dbf on Unix platforms), which is provided with the SQL Interface software

The individual who installs the server is responsible for making Sample available to end users. Sample contains three databases: Basic, Interntl, and Xchgrate. If, when you connect to the Essbase server, any of the following problems occur, contact the Essbase System Administrator.

- You cannot find the Sample application.
- You don't have adequate access to the Sample application.
- You don't see any data in the Sample databases.

Documentation Conventions

This book uses several formatting styles to indicate actions you should take or types of information that you need. The following table lists each document convention.

Table i, Document Conventions

Type	Description
1, 2, 3	Numbered items indicate procedures to follow in a specific order.
•	Bulleted items indicate a list of related items.
Product	Dimension names and member names are in this font.
<i>italics</i>	Introduces new terms that you may not be familiar with, and occasionally for emphasis. Titles of books are also in italics.
bold	Names of dialog boxes and their controls, such as buttons, text boxes, and list boxes, appear in boldface.
UPPERCASE	Indicates the name of a file or directory. For operating environments that use case-sensitive file names, the correct capitalization is used in information specific to those environments.
monospace	Syntax examples, directories, specific text that you must type, and results that you receive.
<i>monospaced italics</i>	Names that are placeholders for values that you specify (for example, <i>filename</i>).
vertical bar ()	Indicates a menu followed by an individual menu command in that menu (for example, File Open). Or, it indicates an OR separator to delineate items.
brackets []	Indicates optional items (for example, SELECT [DISTINCT]). In the example, DISTINCT is an optional keyword.
braces { }	Indicates that you must select one item (for example, {yes no}). In the example, you must specify either yes or no.

This book uses the following terminology:

- The term *ODBC.INI* refers to the ODBC .INI file format as defined by the Microsoft ODBC specification.
- The suffix *.DLL* refers to a dynamic link library file. Your operating system might use the term shared object or shared library files instead.

Environment-Specific Information

This book supports users of the Windows NT, AIX, Solaris, and HP-UX operating environments. Wherever it provides information that is not applicable to all environments, the following symbols are used to identify that information:

Symbol	Environment
	Information specific to the Microsoft Windows NT environment is identified by the Windows symbol and the letters “NT.”
	Information specific to the UNIX environment (Solaris, AIX, and HP-UX platforms) is identified by the UNIX symbol.

This manual shows dialog boxes that are specific to Windows NT. The dialog boxes that you see in other platforms may differ slightly from the NT versions.

Additional Sources of Documentation

If you don't find what you need in this book, refer to the following documentation:

- The *Installation Notes*, which show you how to install SQL Interface, and how to install and configure the Essbase server, Spreadsheet Add-in, Application Manager, and sample applications
- The *INTERSOLV DataDirect Connect ODBC Reference* in your ODBC DOCS directory, provides detailed driver-specific information
- The *Start Here* booklet, which provides late-breaking information, a summary of platform support, and the most important migration and features information for this version of Essbase
- The *Database Administrator's Guide*, which explains the architecture of Essbase, how to design databases, how to design calculations, how to set up Essbase security, how the database is stored, and how to optimize Essbase
- The Application Manager online help file, which describes the Application Manager user interface
- The online *Technical Reference* in your DOCS directory, which contains a list and description of Essbase functions, macros, calculation commands, report commands, ESSCMD commands, and configuration file settings

- The online *API Reference* in your DOCS directory, which contains a complete list and description of functions available through the Hyperion Essbase API
- The *SQL Drill-Through Guide*, which contains information about accessing detail-level data stored in a remote SQL database. This guide is provided in the \ESSBASE\DOCS\CLIENT directory in .PDF format for online viewing and printing in Adobe Acrobat Reader (Version 3.0.1 or higher). Adobe Acrobat Reader is provided on the Essbase CD-ROM, or you can download Acrobat Reader from WWW.ADOBE.COM.

Hyperion Essbase also includes these sources of documentation:

- The *Spreadsheet Add-in User's Guide for Excel*, in your DOCS\CLIENT directory, explains how to use the Essbase spreadsheet features with Microsoft Excel for Windows
- The *Spreadsheet Add-in User's Guide for 1-2-3*, in your DOCS\CLIENT directory, explains how to use the Essbase spreadsheet features with Lotus 1-2-3 for Windows
- The Essbase Spreadsheet Add-in online help files, which explain how to use the Spreadsheet Add-in, and provide all the spreadsheet macros and VBA functions

What's New in Version 5.0.2

Hyperion Essbase SQL Interface Version 5.0.2 supports INTERSOLV DataDirect ODBC drivers Version 3.10 on Windows NT, and INTERSOLV drivers Version 3.02. on UNIX.

SQL Interface Version 5.0.2 runs on HP-UX, as well as on AIX, Solaris, and Windows NT.

For information on the data sources qualified for use with Hyperion Essbase on Windows NT and UNIX platforms, see the *Start Here* booklet or the README .TXT file.

Notes:

- You can also load spreadsheet and text file data directly, using the Hyperion Essbase Application Manager. See the *Database Administrator's Guide*.
- With the release of Hyperion Essbase 5.0.2, the OS/2 version of Hyperion Essbase SQL Interface is no longer provided on the product CD. If you want to use OS/2, use the Hyperion Essbase 5.0.1 CD or an earlier product CD.

Chapter 1

Introducing SQL Interface

This chapter provides a conceptual overview of Hyperion Essbase SQL Interface and includes the following topics:

- “What Is SQL Interface?” on page 1
- “What Is SQL Drill-Through?” on page 2
- “About Loading SQL Data” on page 2

What Is SQL Interface?

Using SQL Interface, you can load summary-level data from a number of popular SQL, relational and flat-file database servers. You can also load summary-level data from flat files that are in ASCII text format. When you load the data, you can also optionally build Hyperion Essbase dimensions dynamically.

Note: You can load data from spreadsheets using Hyperion Essbase Application Manager. You do not need to use SQL Interface. See the *Database Administrator’s Guide*.

SQL Interface does the following:

1. Passes SQL statements from the Application Manager to the SQL or relational database server. (For non-SQL data sources, SQL Interface converts SQL statements to requests for data that the source understands.)
2. Interprets the records received from the SQL, relational, or flat-file database server using the rules defined in the data load rules file. (For more information on data load rules files, see Chapter 4, Loading SQL Data.)
3. Loads the interpreted, summary-level data into the Hyperion Essbase database.

What Is SQL Drill-Through?

Using SQL Drill-Through, you can read detail-level data stored in relational data sources. As an add-in to a spreadsheet, SQL Drill-Through enables the Essbase System Administrator to map Essbase multidimensional attributes to relational column data. Users can then use a Hyperion Essbase Spreadsheet Add-in to drill through from a multidimensional cell to detailed data in a relational data source.

The data source can be accessed in the following ways:

- Through the Hyperion Essbase OLAP Server and SQL Interface

The relational data source file must be accessible to the Essbase server. It can be on the server machine or on the network. You must establish a working SQL Interface environment before attempting to drill from the spreadsheet.

- Directly by the Spreadsheet Add-in. In this case, you need a properly configured ODBC driver installed on the client machine.

The relational data source file must be accessible to the Spreadsheet Add-in. It can be on the client machine or on the network

For more information, see the *SQL Drill-Through Guide* in your `DOCS\CLIENT` directory.

About Loading SQL Data

To load SQL, relational, or flat-file data, you must complete these basic steps:

1. Install SQL Interface on your Essbase server machine. See the *Installation Notes*.
2. Configure the relevant data source, which means to choose your ODBC driver and point it to its data source. See Chapter 2, *Configuring Your Data Source*.
3. If your data is in multiple tables, prepare your data for loading by doing either of the following:
 - Create one table or view in your SQL database before using SQL Interface.
 - Join the tables during the data load by entering a SELECT statement in the Application Manager.

See Chapter 3, *Preparing Multiple-Table Data for Loading*.

4. Check that you can connect to the data source by using the Data Prep Editor in the Application Manager to open the SQL source file. See Chapter 4, *Loading SQL Data*.

5. Create a data load rules file to tell SQL Interface how to interpret and load the SQL data into your Essbase database, then load the data. See Chapter 4, Loading SQL Data.

Chapter 2

Configuring Your Data Source

Before you can access data using Hyperion Essbase SQL Interface, you need to tell Hyperion Essbase what data sources are available and which drivers it must use. On Windows NT, do this using the ODBC Administrator. See “Configuring the Data Source on UNIX” on page 8 for UNIX-specific information.

Note: For detailed, driver-specific information on each of the INTERSOLV drivers, see the *INTERSOLV DataDirect Connect ODBC Reference* in your DOCS\CLIENT directory.

This chapter contains the following topics:

- “Configuring the Data Source on Windows NT” on page 3
- “Configuring the Data Source on UNIX” on page 8

Configuring the Data Source on Windows NT

On Windows NT, you use the ODBC Administrator, an executable file, to configure the data source. This file is located in the BIN directory of the Essbase server machine. If you installed Essbase in the default directory, this directory is C:\ESSBASE\BIN. Complete the following steps:

1. Do one of the following:

- To start the ODBC Administrator on Windows NT, run ODBCAD32.EXE. At the Windows NT command prompt, type:

```
C:\ESSBASE\BIN\ODBCAD32.EXE
```

- If you installed Essbase in a different directory than the default, type the appropriate path (for example, D:\ESSBASE\BIN\ODBCAD32.EXE).

2. Choose a driver, then enter the required information about the data source.

For detailed information, see the appropriate driver chapter in the *INTERSOLV DataDirect Connect ODBC Reference* (for example, *Connect ODBC for dBASE*, or *Connect OCBC for Oracle*). For an example of configuring a dBASE data source on Windows NT, see “Configuring a dBASE Data Source on Windows NT” on page 4.



Configuring a dBASE Data Source on Windows NT

To configure the dBASE data source, complete the following steps:

1. Start the ODBC Administrator to display the **ODBC Data Source Administrator** dialog box.

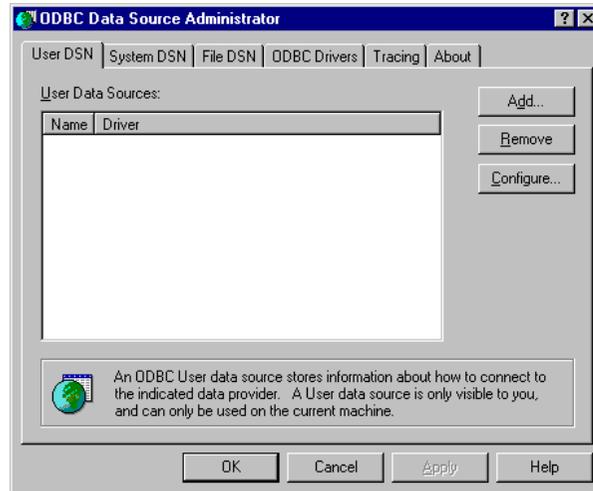


Figure 2-1, User DSN Page of the ODBC Data Source Administrator Dialog Box

- Click the **Add** button on the **User DSN** page.

The **Create New Data Source** dialog box is displayed.

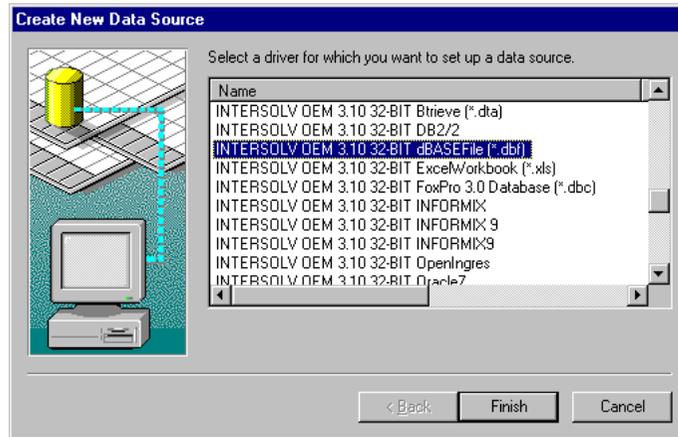


Figure 2-2, Create New Data Source Dialog Box

- From the list box, select **INTERSOVLV OEM 3.10 32-bit dBASEFile (*.dbf)** for Windows NT and click the **Finish** button to display the **General** tab of the **ODBC dBASE Driver Setup** dialog box.

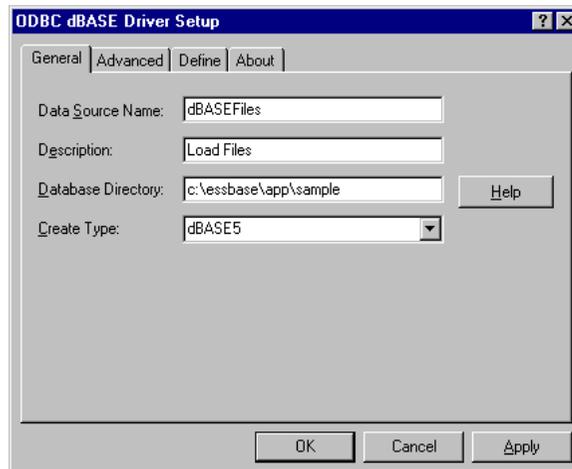


Figure 2-3, General Page of the ODBC dBASE Driver Setup Dialog Box

4. Type the following information on the **General** page:
 - a. Type `dBASEFiles` in the **Data Source Name** text box.
 - b. Type `Load Files` in the **Description** text box.
 - c. Type `C:\ESSBASE\APP\SAMPLE` in the **Database Directory** text box and click **OK**. If you installed Essbase in the default directory, `C:\ESSBASE`, Essbase stores `BUDGET.DBF` in this subdirectory.

The **User DNS** tab of the **ODBC Data Source Administrator** dialog box reappears with `dBASEFiles` listed in the **User Data Sources** list box.

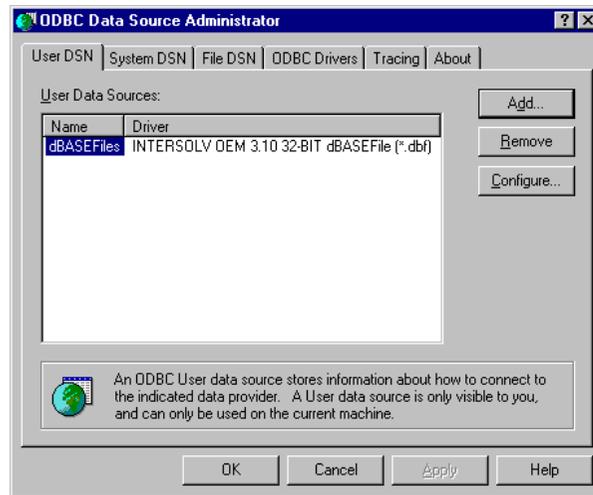


Figure 2-4, User DNS Page with `dBASEFiles` Listed

5. Click **OK** to close the **ODBC Data Source Administrator** dialog box.

You have configured the `dBASE` data source. Now you need to create a data load rules file to tell Essbase how to load the data from `BUDGET.DBF`.

Note: Online help explains the configuration procedure more fully. For example, clicking the Help button on the **General** tab of the **ODBC dBASE Driver Setup** dialog box (in step 3) brings up the following Help screen:

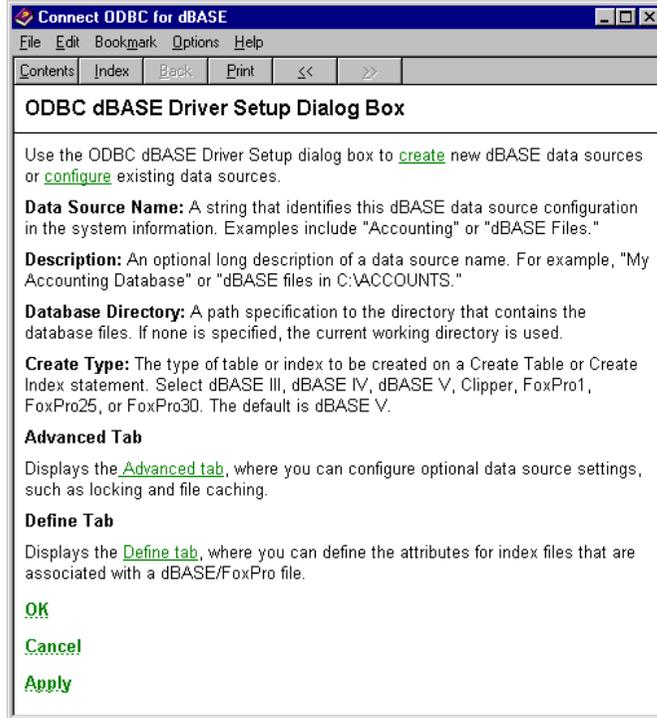


Figure 2-5, Help Screen for the ODBC dBASE Driver Setup Dialog Box

Configuring the Data Source on UNIX



The ODBC Administrator is not available on UNIX platforms. SQL Interface generates the `.odbc.ini` file upon installation, and you do not need to do any further configuration to use the `budget.dbf` file.

The `.odbc.ini` file contains the ODBC connection and configuration information, such as data source name and driver product name. Specific information varies among platforms.

Because the `.odbc.ini` file maps data source names to driver products, you must edit the `.odbc.ini` file if you add a new driver product or data source, or change driver products or data sources.

Here is the entry you make in the `.odbc.ini` file for the Oracle 7 driver.

```
[ARor7]
Driver=/home/essbase/dlls/ARor712.so
Description=INTERSOLV Oracle driver
ServerName=Poplar
LogonID=Henry
```

For more information about the `.odbc.ini` file, see the *INTERSOLV DataDirect Connect ODBC Reference* in your `DOCS\CLIENT` directory.

Chapter 3

Preparing Multiple-Table Data for Loading

This chapter tells you how to prepare relational data in multiple tables for loading into Hyperion Essbase. The following topics in this chapter describe two methods and explain when to choose them:

- “About Preparing Multiple-Table Data” on page 9
- “Preparing Data in Your SQL Database” on page 10
- “Loading SQL Data by Joining Tables in the Application Manager” on page 11
- “Choosing the Method to Prepare Your Data” on page 12

Note: If all your data is in one table, skip to Chapter 4, Loading SQL Data.

About Preparing Multiple-Table Data

If data is in multiple tables, you need to create a single table or a view of the data. You can do this in one of the following two ways:

- Create one table or view in the SQL database before using Hyperion Essbase SQL Interface, as illustrated in Figure 3-1.
- Join the tables by entering a SELECT statement in the Hyperion Essbase Application Manager during the data load, as illustrated in Figure 3-2.

The following sections describe these two methods.

Note: The SQL data source file must always be accessible to the Essbase server. It can be on the server machine or on the network.

Preparing Data in Your SQL Database

When you create a single physical or virtual table based on data from multiple tables in the source database, you need the appropriate security privileges on your SQL database server. You need privileges to create a table or view, and to read from all the tables that contain relevant data. Figure 3-1 illustrates the process of loading SQL data from a single table or view.

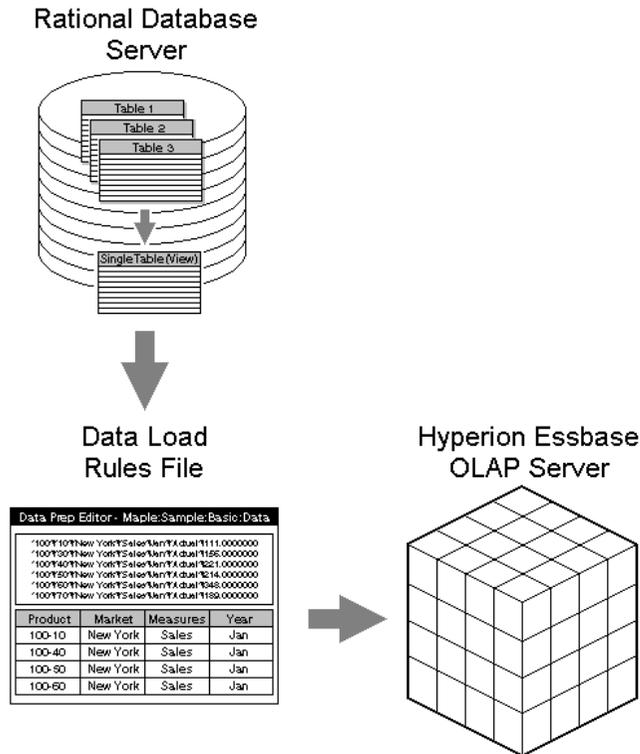


Figure 3-1, Loading SQL Data from a Single Table or View Created in the SQL Database

Preparing Data in the Application Manager

If you have data in multiple tables, you can tell Essbase to join the tables during the data load by entering a SELECT statement in the Application Manager, as illustrated in Figure 3-2. Essbase passes the SELECT statement to the SQL server, without verifying the syntax.

To join multiple tables, do the following:

1. Identify the tables and columns (or fields) containing the data that you want to load into Essbase.
2. Choose File | Open SQL in the Application Manager Data Prep Editor to display the **Define SQL** dialog box. For more information, see “Opening the Data Prep Editor” on page 15.
3. Write a SELECT statement that joins the tables. For more information, see “Selecting the SQL Data Source” on page 16 and “More About SQL Queries” on page 18.

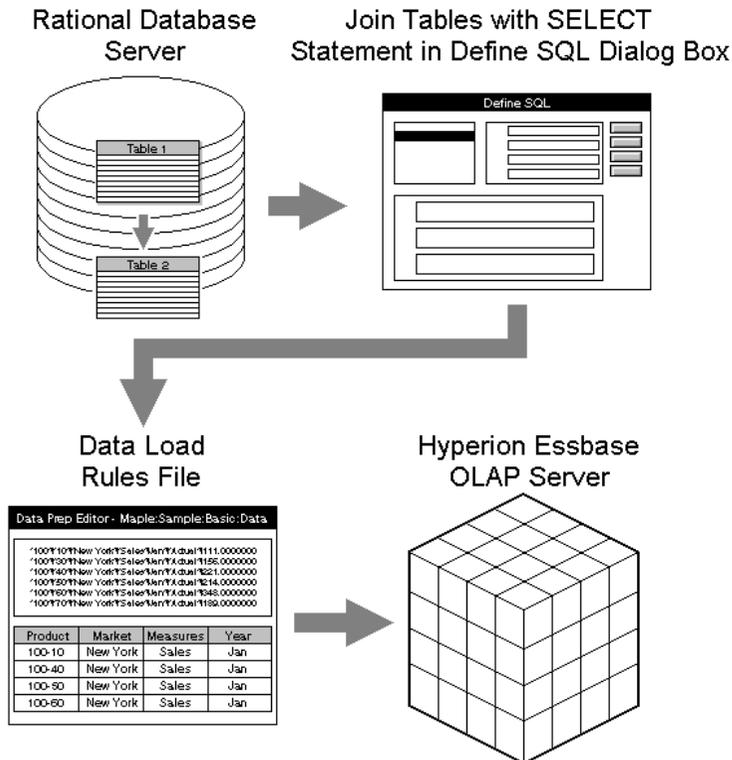


Figure 3-2. Loading SQL Data by Joining Tables in the Application Manager

Choosing the Method to Prepare Your Data

Creating a single table or view in the source database before you use SQL Interface is usually the most efficient method. Because an SQL database server reads from a single table and maintains a single view more efficiently than it processes a multiple-table SELECT statement, creating a single table or view before you use SQL Interface greatly reduces the amount of processing time the SQL server needs.

You need CREATE access privileges in the SQL database to create a single table or view. If you do not have CREATE privileges, you can use the **Define SQL** dialog box of the Data Prep Editor in the Application Manager to join tables during the data load. (Alternatively, you can ask the SQL Database Administrator to provide you with the appropriate CREATE privileges.)

Note: For either method, you need SELECT access privileges to all tables containing the relevant data.

This chapter describes how to load SQL data into the Hyperion Essbase OLAP Server using the Hyperion Essbase Application Manager. It explains how to create a data load rules file and load data from a dBASE file into the Essbase server.

The example is based on the Sample Basic database and the dBASE data file `BUDGET.DBF` (`budget.dbf` on UNIX platforms), which is installed with SQL Interface. This file contains budget data for the West and the East regions of a fictitious company. For more information on the sample applications, see “Sample Applications” on page vii.

This chapter contains the following topics:

- “About Loading Data” on page 13
- “Creating a Data Load Rules File” on page 14
- “Loading the Data” on page 28

About Loading Data

After you have configured the data source and prepared the multiple-table data for loading, you need to do the following:

1. Create a data load rules file.
2. Load the dBASE data into the Essbase database.

Creating a Data Load Rules File

To load SQL data into the Essbase database, you must create and use a data load rules file.

Data load rules are a set of operations that Essbase performs on data when it loads it into an Essbase database. The operations are stored in a rules file that tells Essbase how to load the SQL data and map it to your Essbase database outline. The rules file can also reject invalid records in the data source.

You can reuse a rules file with any data source that needs the same set of data load rules.

Summary of Steps to Create a Data Load Rules File

To create a data load rules file for the sample dBASE file, `BUDGET.DBF` (`budget.dbf` on UNIX platforms), follow these steps:

1. Open the Data Prep Editor.
2. Select `BUDGET.DBF` as the SQL data source (`budget.dbf` on UNIX platforms).
3. Define the data load rules in a rules file.
4. Associate the data load rules file with the Sample Basic database outline.
5. Validate the data load rules file.
6. Save the data load rules file.

Each of these steps is described in detail in the following sections.

Opening the Data Prep Editor

To open the Data Prep Editor:

1. Start the Application Manager and connect to your server.
The Application Desktop window is displayed.

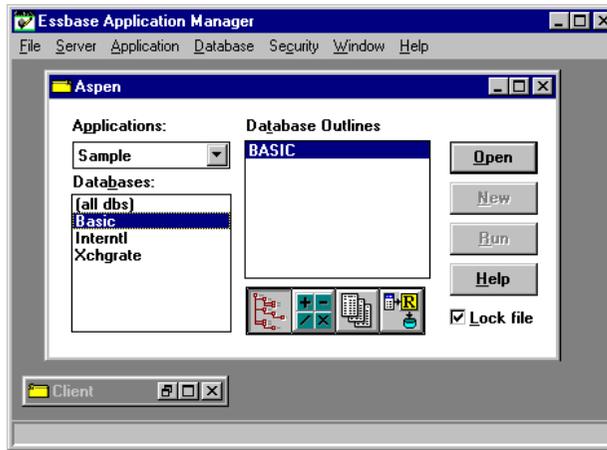


Figure 4-1. Application Desktop Window

2. Choose Sample from the **Applications** list box and Basic from the **Databases** list box.
3. Click the **Data Load Rules** button, .
4. Click **New** to display the Data Prep Editor.

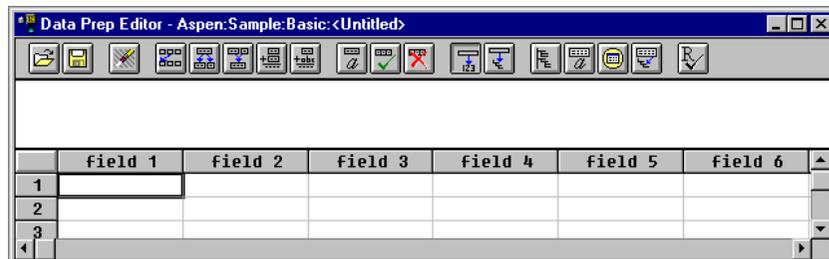


Figure 4-2. Data Prep Editor

Now you are ready to select and view the SQL data source.

Selecting the SQL Data Source

To select the dBASE file, BUDGET.DBF (budget.dbf on UNIX platforms):

1. Choose File | Open SQL.

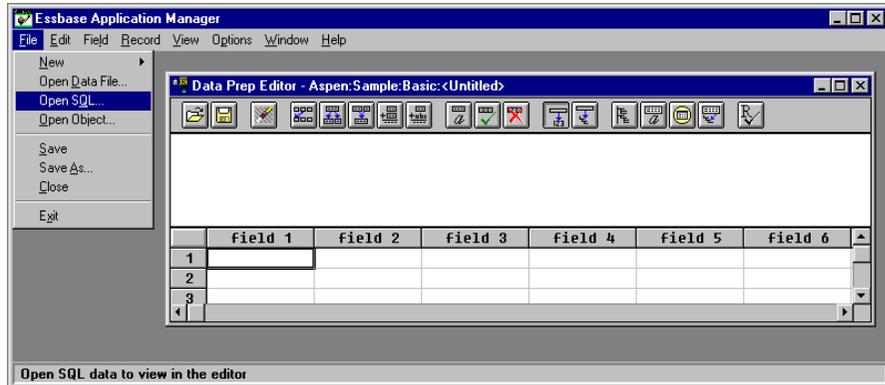


Figure 4-3, Choosing File | Open SQL with the Data Prep Editor Active

The **Select Server, Application and Database** dialog box is displayed. The Sample Basic database is selected.

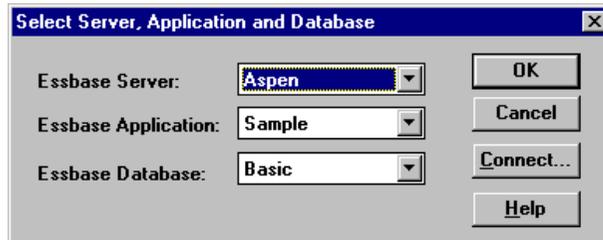


Figure 4-4, The Select Server, Application and Database Dialog Box

- Click **OK** to display the **Define SQL** dialog box.

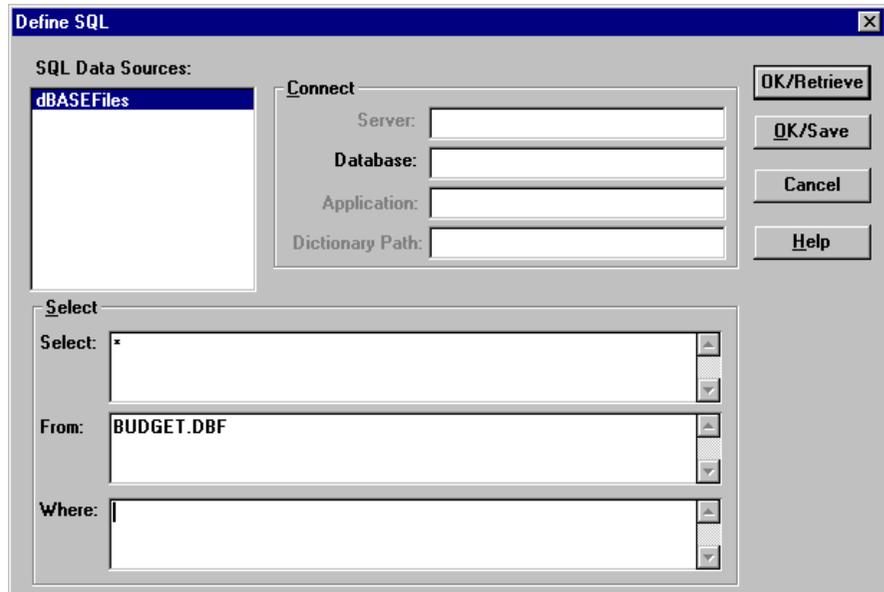


Figure 4-5, The Define SQL Dialog Box with BUDGET.DBF Selected

In the **SQL Data Sources** list box, dBASEFiles is selected. This is the SQL source that you configured in Chapter 2, Configuring Your Data Source.

The wildcard character (*) appears in the **Select** text box. This loads all the fields from the dBASE file.

- Type BUDGET.DBF in the **From** text box (budget.dbf on UNIX platforms).

You defined the path for this file in Chapter 2, Configuring Your Data Source, so you need not define it here.

Leave the **Where** text box empty to load all the rows from the dBASE table.

4. Click **OK/Retrieve**.

Essbase opens the dBASE file in the Data Prep Editor. See “Defining the Data Load Rules” on page 19 for more information.

Note: The BUDGET.DBF file (budget.dbf on UNIX platforms) must be stored on the Essbase server, not on the client machine.

On UNIX platforms, if you have defined the path for the SQL source file in the .odbc.ini file, the path appears in the **Database** text box. You can either use that path or enter a different path.

If you have not defined the path for the SQL source file (in the ODBC Administrator on Windows NT, or in the .odbc.ini file on UNIX platforms), you can type the path in the **Database** text box of the **Define SQL** dialog box. If you do not define a path, Essbase looks for the SQL source file in the directory from which you are running the Essbase servers.

More About SQL Queries

The **Define SQL** dialog box has **Select**, **From**, and **Where** text boxes. The example in the previous section uses the wildcard character (*) in the **Select** text box to load data from all the fields in the dBASE file. Alternatively, you can type the names of all the fields:

```
VERSION , PRODNO , STATE , ACCOUNT , MONTH , MEASURE
```

Or, you can type only the names of the fields that you want to load:

```
PRODNO , STATE , MONTH
```

This example uses the name of a single dBASE file (BUDGET.DBF) in the **From** text box, and leaves the **Where** text box empty. If you are loading data from two tables, you can join the tables by specifying both the table names, separated by a comma (,) in the **From** text box, and specifying the common (key) fields in the **Where** text box, separated by an equal sign (=).

For example, to load data from two tables, TABLE1.DBF and TABLE2.DBF, where the Key_No field of TABLE1.DBF contains the same data as the Key_Code field of TABLE2.DBF, type the following text in the **From** text box:

```
TABLE1.DBF , TABLE2.DBF
```

In the **Where** text box, type the following text:

```
TABLE1.Key_No = TABLE2.Key_Code
```

You can also use the **Where** text box to choose a subset of rows to load from the SQL source files. For example, if you want to load only those rows for January into the Sample Basic database, in the **Where** text box type:

```
MONTH = "Jan"
```

Note: See the *INTERSOLV DataDirect Connect ODBC Reference* for more information about SQL statements for your specific driver.

Defining the Data Load Rules

When you click **OK/Retrieve** in the **Define SQL** dialog box, Essbase displays the dBASE fields in the Data Prep Editor. Notice that the field names differ from the Sample Basic dimension names.

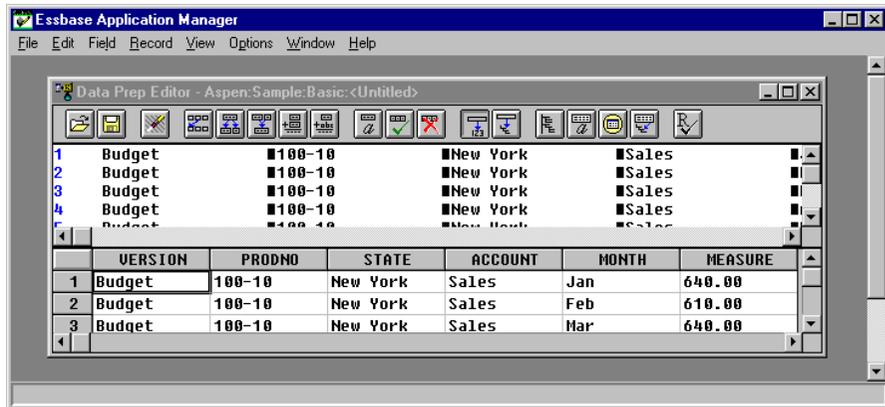


Figure 4-6, Data Prep Editor Displaying BUDGET.DBF

Changing Field Names

To change the field names to match the Sample Basic dimension names, do the following:

1. Select the first cell in the VERSION field and choose Field | Attributes from the Application Manager menu.

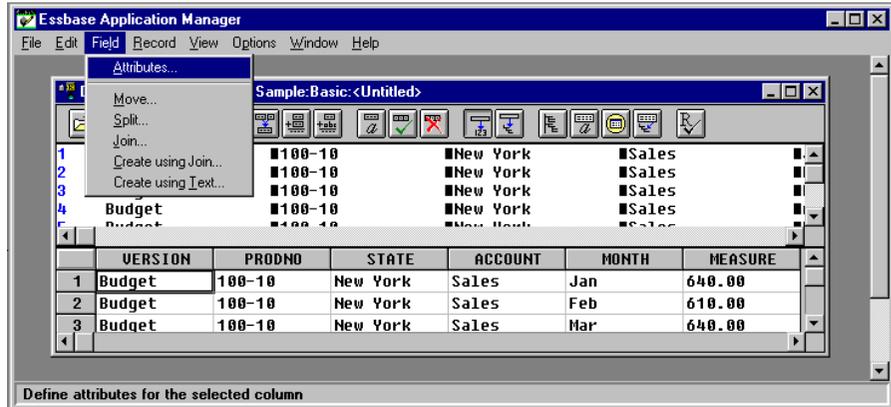


Figure 4-7, Choosing Field | Attributes with the Data Prep Editor Active

The **Field Attributes** dialog box is displayed.

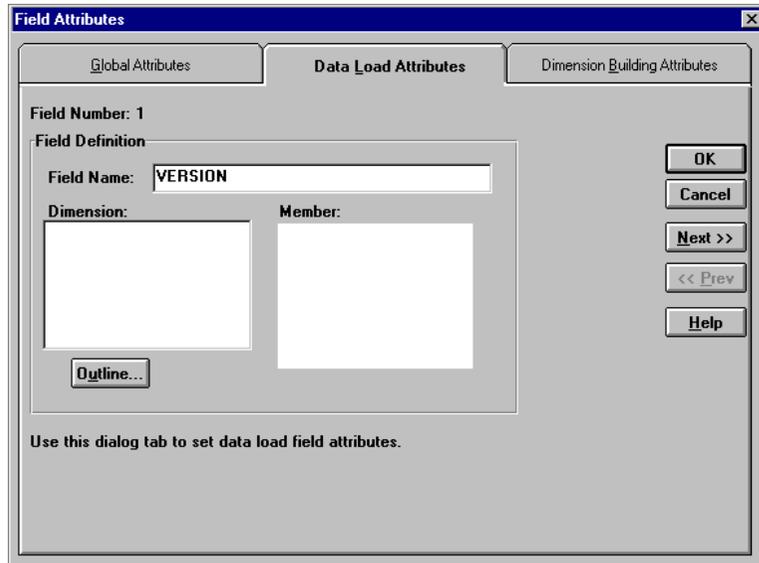


Figure 4-8, Field Attributes Dialog Box Showing Data Load Attributes

2. Click the **Data Load Attributes** tab.

The data load attributes for **Field Number 1** are displayed.

3. In the **Field Name** text box, type Scenario over the existing name (VERSION) and click the **Next>>** button.

The data load attributes for **Field Number 2** are displayed.

4. Type Product over the existing name (PRODNO) and click the **Next>>** button.

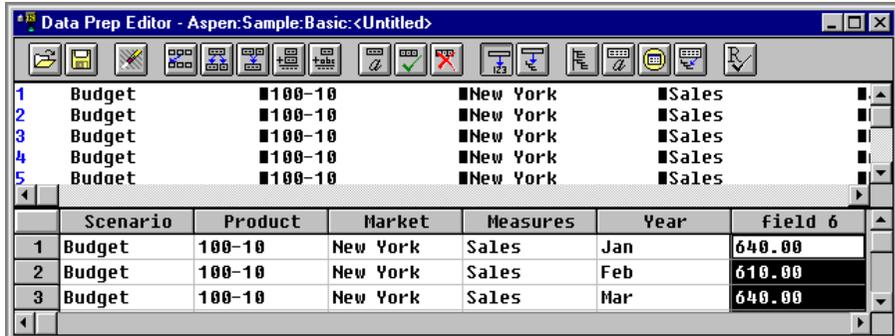
The data load attributes for **Field Number 3** are displayed.

5. Type Market over the existing name (STATE) and click the **Next>>** button.

The data load attributes for **Field Number 4** are displayed.

6. Type **Measures** over the existing name (ACCOUNT) and click the **Next>>** button.
The data load attributes for **Field Number 5** are displayed.
7. Type **Year** over the existing name (MONTH) and click the **Next>>** button.
The data load attributes for **Field Number 6** are displayed. This is the last field in BUDGET.DBF. It contains data values. Because you have fully specified each dimension, you do not match this field to a dimension name.
8. Delete the existing name (MEASURE) in the **Field Name** text box, and leave the box blank.
9. Click **OK** to save all your changes.

The Data Prep Editor is displayed again with the fields renamed. Notice that the last column has a temporary name of field 6.



	Scenario	Product	Market	Measures	Year	field 6
1	Budget	100-10	New York	Sales	Jan	640.00
2	Budget	100-10	New York	Sales	Feb	610.00
3	Budget	100-10	New York	Sales	Mar	640.00

Figure 4-9, Data Prep Editor with the Fields Renamed

Changing Field Attributes

The fields in the dBASE file contain unnecessary leading and trailing white spaces. To ensure that Essbase deletes these white spaces in each of the fields when it loads the data, do the following:

1. Select the first cell in the **Scenario** field and choose **Field | Attributes** to display the **Field Attributes** dialog box (see Figure 4-11).



Figure 4-10, Choosing Field | Attributes with the First Scenario Cell Selected

2. Click the **Global Attributes** tab.

3. Check the **Drop leading/trailing whitespace** check box, as shown in Figure 4-11.

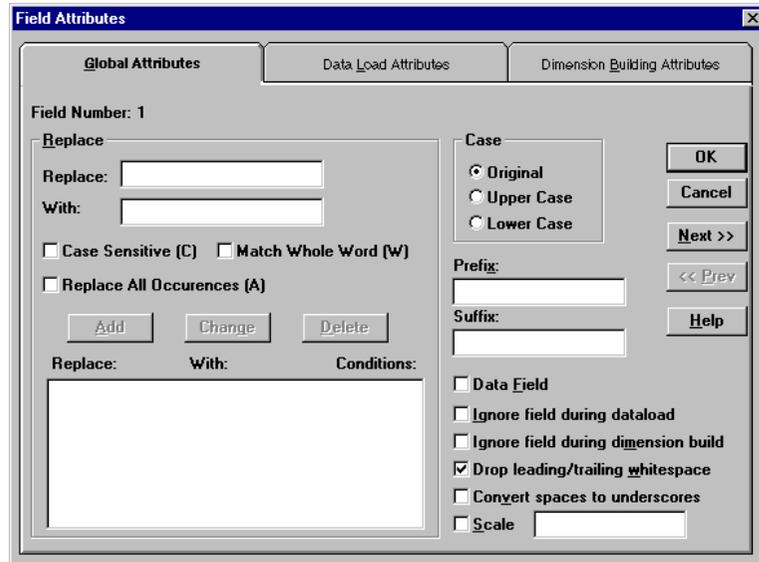


Figure 4-11, Global Attributes Page with Drop Leading/Trailing Whitespace Checked

4. Click the **Next>>** button and check **Drop leading/trailing whitespace** for all six fields.
5. When you reach Field 6, check the **Data Field** check box, as shown in Figure 4-12, to tell Essbase that this field contains data values.

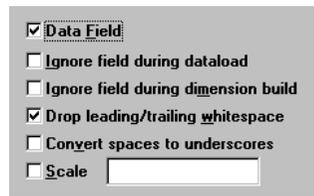


Figure 4-12, Global Attributes Page with Data Field Also Selected

6. Click **OK** to close the **Field Attributes** dialog box.

You have defined the data load rules for the dBASE file. For more information on creating data load rules files, see the *Database Administrator's Guide*.

Now you need to associate the rules file with the database outline into which you are loading the data.

Associating the Rules File with an Outline

To associate the rules file with the Sample Basic outline:

1. Choose Options | Associate Outline.

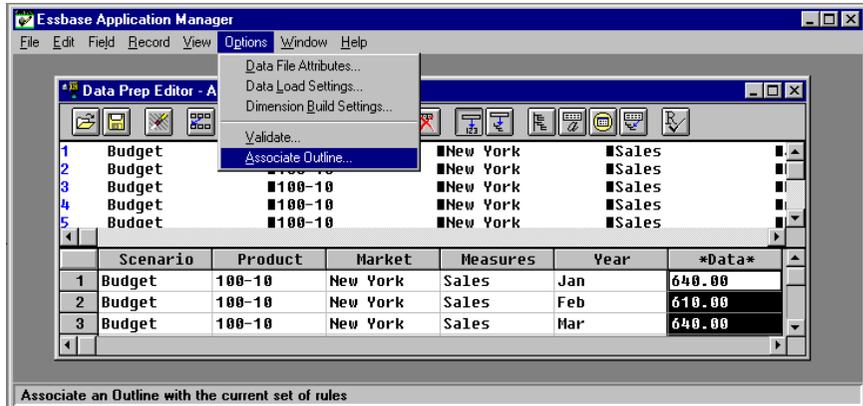


Figure 4-13, Choosing Options | Associate Outline with the Data Prep Editor Active

The Associate Server Outline Object dialog box is displayed.

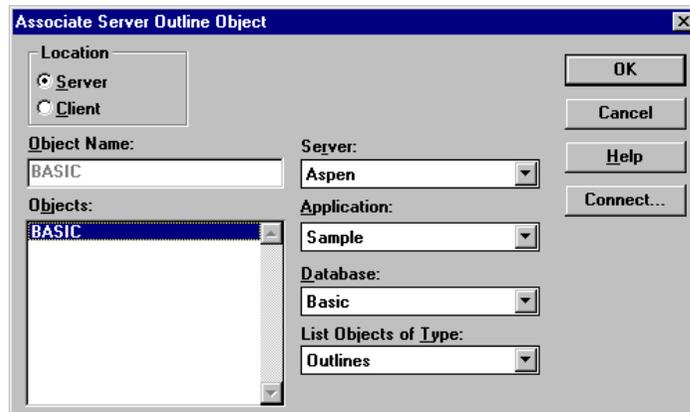


Figure 4-14, Associate Server Outline Object Dialog Box

2. Choose the BASIC outline from the **Objects** list box and click **OK**.

You are now ready to validate the rules file.

Validating the Rules File

To validate the rules file against the Sample Basic outline:

1. Choose Options | Validate.



Figure 4-15, Choosing Options | Validate with the Data Prep Editor Active

If the rules files have no problems, Essbase displays the **Verify** message box.



Figure 4-16, Verify Message Box.

2. Click **OK** to close this message box.

If there are validation problems, Essbase displays the problems in a **Validate Rules** dialog box. If a field has validation problems, ensure that the field name is correct. For more information on validating rules files, see the *Database Administrator's Guide*.

You can now save, then use the rules file to load data.

Saving the Rules File

To save the rules file:

1. Choose File | Save.

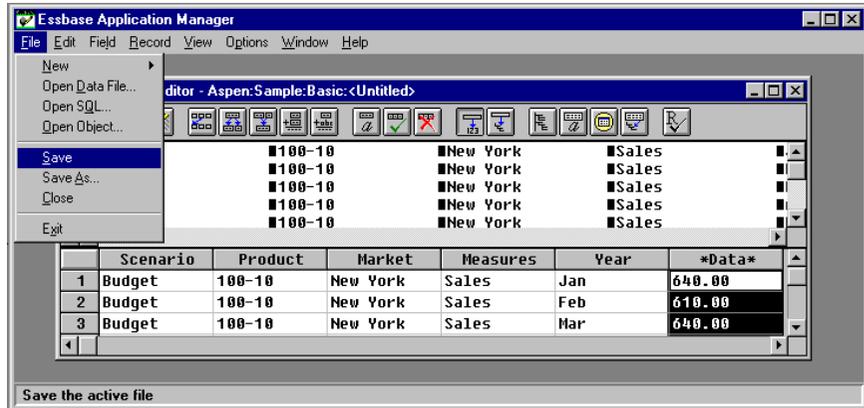


Figure 4-17, Choosing File | Save with the Data Prep Editor Active

The Save Server Object dialog box is displayed.

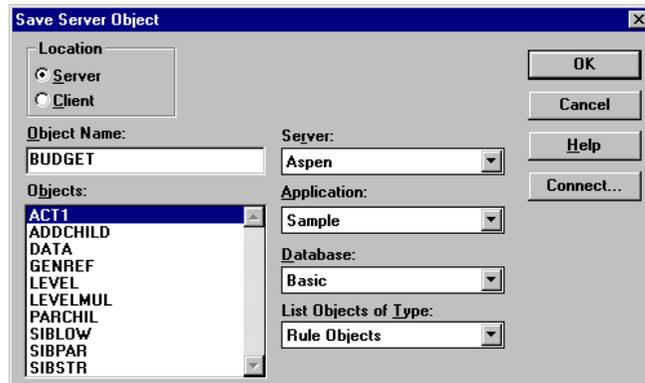


Figure 4-18, Save Server Object Dialog Box.

2. Type BUDGET in the **Object Name** text box.

This gives the rules file the name BUDGET .RUL.

3. Click **OK**.
4. When you see the Data Prep Editor, choose File | Close to close it.

You can now use the BUDGET rules file to load the data from the dBASE file into the Sample Basic database.

Loading the Data

To load the data into Sample Basic:

1. In the Application Desktop Window, select the Sample application and the Basic database.

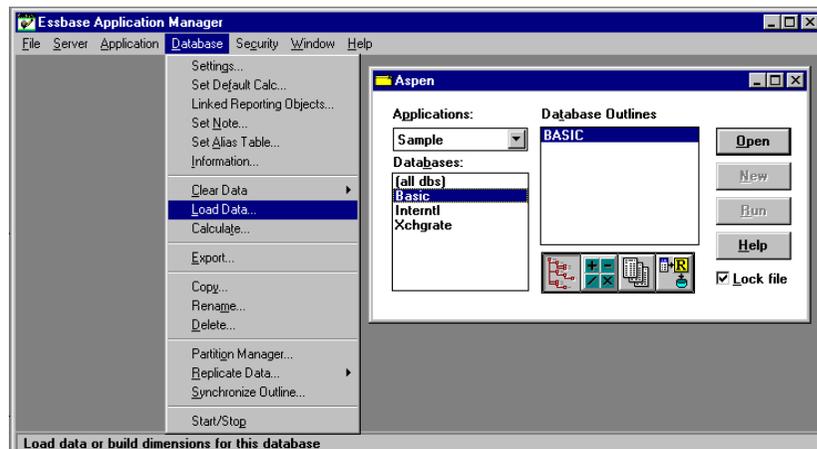


Figure 4-19, Choosing Database | Load Data

2. Choose Database | Load Data to display the **Data Load** dialog box (see Figure 4-21).
3. Select the **SQL** option in the **Type** group.
4. Select the **Use Rules** check box.

- Click the **Find** button to display the **Open Server Rules Object** dialog box.

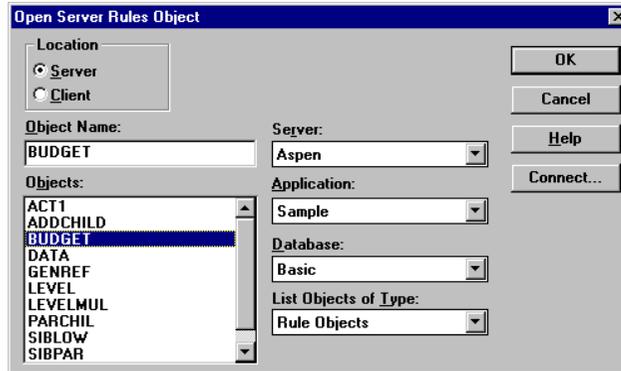


Figure 4-20. Open Server Rules Object Dialog Box

- Ensure that the Sample application and Basic database are selected.
- Choose the BUDGET rules file from the **Objects** list box.
- Click **OK** to display the **Data Load** dialog box again.
- Click the **Load Data** and **Abort On Error during dataload** check boxes in the **Options** group as shown in Figure 4-21, and ensure that all other options in the group are unchecked.

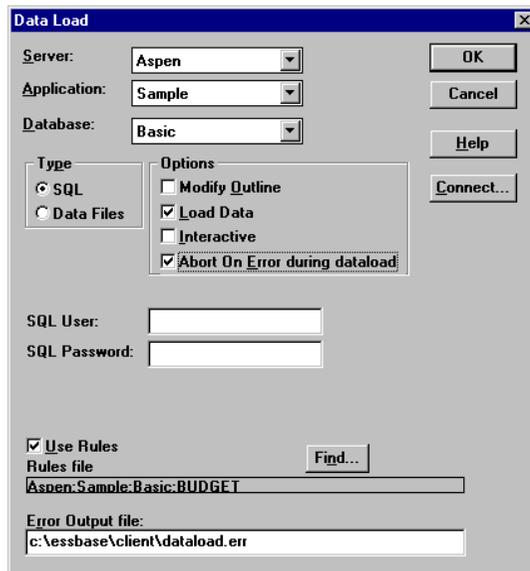


Figure 4-21. Data Load Dialog Box

10. Click **OK** to load the data.

Note:

You may need to type in an SQL user name and SQL password when you connect to some SQL databases (for example, when you connect to an Oracle database). You do not need to enter a user name and password when you connect to a dBASE database.

When Essbase has loaded the data, a message box tells you that the load was successful.



Figure 4-22, SQL Dataload Complete Message Box.

11. Click **OK** to close the message box.

Essbase loads the SQL data into the Sample Basic database. The dBASE file contains budget data for the West and the East regions. Essbase loads the data into member combinations for these regions. If you have problems loading the data, see the *Database Administrator's Guide* for more information on data loading or troubleshooting.

Chapter 5

Using Non-INTERSQLV ODBC Drivers

You can use ODBC database drivers with Hyperion Essbase other than the INTERSQLV drivers provided with SQL Interface. For example, you can use a Microsoft ODBC driver to connect to Microsoft Access, or an IBM ODBC driver to connect to IBM DB2/6000. Some non-INTERSQLV ODBC drivers are tested with Essbase. For more information on tested and supported drivers and data sources, see the *Start Here* booklet or the `README.TXT` file.

To use a non-INTERSQLV driver, you need to:

1. Configure the driver.
2. Configure the data source.

This chapter contains the following topics that describe how to use non-INTERSQLV ODBC drivers:

- “Configuring a Non-INTERSQLV Driver” on page 31
- “Configuring Non-INTERSQLV Data Sources” on page 37
- “Support for Non-INTERSQLV Drivers” on page 42

Configuring a Non-INTERSQLV Driver

When you configure an INTERSQLV driver, Essbase recognizes the basic configuration information for the driver. For example, Essbase recognizes the name of the driver and whether the name and password are case-sensitive. However, when you use a non-INTERSQLV driver, you must give Essbase the configuration information for the driver that you use.

You give Essbase the configuration information for your non-INTERSQLV driver by creating a driver configuration file called `ESSSQL.CFG` (`esssql.cfg` on UNIX platforms), which is an ASCII text file. Place this file in your `ARBORPATH\BIN` directory on your Essbase server. This is `C:\ESSBASE\BIN` if you installed Essbase in the default directory (`/home/essbase/bin` on UNIX platforms).

Note: If you do not create a configuration file, Essbase uses its own default values. You may not be able to connect to the SQL database using the default values.

Creating a Configuration File

The configuration file must contain at least some of the following configuration values for each non-INTERSOLV ODBC driver that you use. Which values are required varies from driver to driver. See online Help for each driver or documentation for specific information.

At a minimum, your configuration file must contain at least the *DriverName* for every non-INTERSOLV ODBC driver that you use. Surround all values for each driver with brackets ([]). Leave one or more spaces between the configuration keyword and its corresponding value.

```
[
Description           "Description of Driver"
DriverName            DriverName
UserId                Value
Password              Value
Database              Value
Server                Value
Application           Value
Dictionary            Value
Files                 Value
SingleConnection     Value
UpperCaseConnection  Value
IsQEDriver            Value
]
```

Description of Driver is your description of the driver. Enclose the description in quotation marks (" "). The default value is " ".

DriverName is the file name of the non-INTERSOLV ODBC driver and is required.



On Windows NT, you can use the ODBC Administrator to see the name of the driver. To display the name:

1. At the Windows NT command prompt, type:

```
C:\ESSBASE\BIN\ODBCAD32.EXE
```

to display the **User DSN** screen of the **ODBC Data Source Administrator** dialog box.

(If you installed Essbase SQL Interface in a different directory than the default, type the appropriate path; for example, D:\ESSBASE\BIN\ODBCAD32.EXE.)

Data sources that you have configured are in the **User Data Sources** list box.

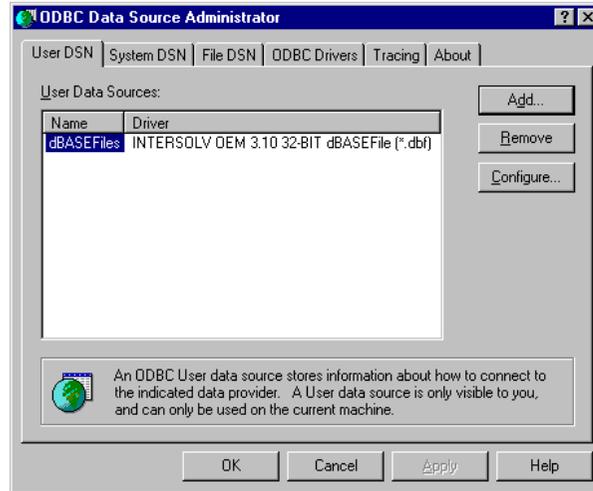


Figure 5-1, User DSN Page of the ODBC Data Source Administrator Dialog Box

Note: Drivers that have not been properly configured may also be in the **User Data Sources** list box. Ignore them.

2. Select the **ODBC Drivers** tab to display the **ODBC Drivers** screen.

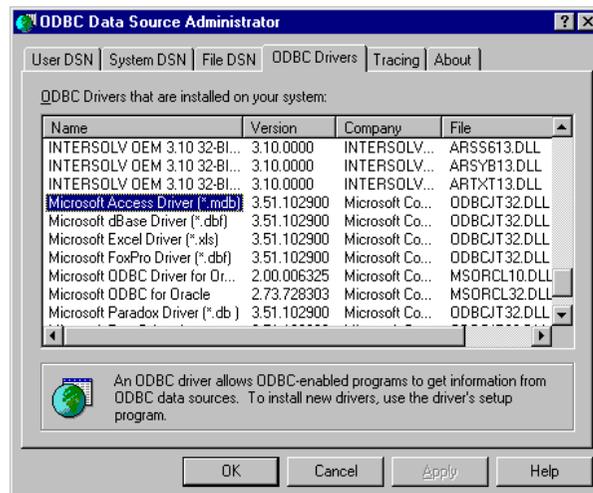


Figure 5-2, ODBC Drivers Page of the ODBC Data Source Administrator Dialog Box

3. Obtain the file name of the driver by scrolling left to right across the installed **ODBC Drivers** list box.

For example, the file name for the Microsoft Access Driver is `ODBCJT32.DLL`.

4. Click **OK** when you have selected the driver.

For more information on the ODBC Administrator, see “Configuring a Microsoft Access Data Source on Windows NT” on page 37.



On UNIX, the driver's name is in the `.odbc.ini` file. For more information on the `.odbc.ini` file, see “Configuring the Data Source on UNIX” on page 8.

For all other configuration keywords, set *Value* to be either 1 or 0, according to the following table. The defaults apply if you do not specify the value for the driver. These are different from the Essbase default values that apply if you do not create an `ESSSQL.CFG` file.

UserId	1	User ID required
	0	User ID not required. Default: 0
Password	1	Password required
	0	Password not required. Default: 0
Database	1	Database name required
	0	Database name not required. Default: 0
Server	1	Server name required
	0	Server name not required. Default: 0
Application	1	Application name required
	0	Application name not required. Default: 0
Dictionary	1	Dictionary name required
	0	Dictionary name not required. Default: 0
Files	1	Files name required
	0	Files name not required. Default: 0
SingleConnection	1	Driver not thread-safe. One active connection allowed.
	0	Driver thread-safe. Multiple active connections allowed. Default: 1 Recommendation for INTERSOLV drivers: 1 Warning: Specifying 0 (multiple active connections allowed) for INTERSOLV or non-INTERSOLV drivers may lead to instability.
UpperCaseConnection	1	Driver not case-sensitive. Connection information is converted to uppercase.
	0	Driver case-sensitive. Default: 1
IsQEDriver	1	Driver is an INTERSOLV driver. You can specify configuration information for INTERSOLV drivers (for example, if you have the latest version of an INTERSOLV driver, which Essbase does not yet support).
	0	Driver is a non-INTERSOLV driver. Default: 0

Include configuration information for all the non-INTERSOLV drivers in one configuration file. Enclose the values for each driver in brackets ([]) as follows:

```
[
Description  "Description of Driver"
DriverName   DriverName
...
]

[
Description  "Description of Driver"
DriverName   DriverName
...
]
```

Creating a Configuration File for the Microsoft Access Driver on Windows NT



The driver name for the Microsoft Access driver on Windows NT is ODBCJT32.DLL. This driver requires a database name, server name, application name, and dictionary (directory path). This driver is not an INTERSOLV driver. Therefore, enter its configuration values in an ASCII-text ESSSQL.CFG file as follows:

```
[
Description  "Microsoft Access Driver (*.MDB)"
DriverName   ODBCJT32.DLL
Database     1
Server       1
Database     1
Application  1
Dictionary   1
IsQEDriver   0
]
```

Note: See "Configuring a Microsoft Access Data Source on Windows NT" on page 37.



Creating a Configuration File for the IBM DB2/6000 Driver on AIX

The driver name for the IBM DB2/6000 driver on AIX is DB2.0. This driver requires a user ID, password, and database name, but not a server name. This driver is thread-safe and case-sensitive. It is not an INTERSOLV driver. Therefore, enter its configuration values in an ASCII-text `esssql.cfg` file as follows:

```
[
Description          "IBM DB2/6000 ODBC Driver"
DriverName           DB2.0
UserId               1
Password             1
Database             1
SingleConnection    0
UpperCaseConnection 0
IsQEDriver           0
]
```

Note: See “Configuring an IBM DB2/6000 Data Source on AIX” on page 42.

Configuring Non-INTERSOLV Data Sources

You configure a non-INTERSOLV data source in the same way that you configure an INTERSOLV data source. See Chapter 2, *Configuring Your Data Source* for more information. The following sections tell you how to configure a Microsoft Access data source on Windows NT and an IBM DB2/6000 data source on AIX.

Note: Before you configure a non-INTERSOLV *data source*, you must first configure the *driver* by creating an `ESSSQL.CFG` configuration file (`esssql.cfg` on UNIX platforms). See “Configuring a Non-INTERSOLV Driver” on page 31.

Configuring a Microsoft Access Data Source on Windows NT



The following example describes how to configure a Microsoft Access data source on a Windows NT Essbase server. Your data source and driver may differ, but the steps that you take to configure the data source are essentially the same. The example assumes:

- You have installed the Microsoft Access ODBC 32-bit database driver on the Essbase server.
- The Essbase server has access to a sample Microsoft Access (*.MDB) file.

On Windows NT, you use the ODBC Administrator, `ODBCAD32.EXE`, to configure a non-INTERSOLV data source, just as you use it to configure an INTERSOLV data source. This file is located in the BIN directory of the Essbase server machine, `C:\ESSBASE\BIN`, if you installed Essbase in the default directory.

This example uses the `ORDERS.MDB` file, which is installed with Microsoft Access, but you can use any `.MDB` file to test the data source configuration.

The Microsoft Access ODBC 32-bit database driver is also installed with Microsoft Access, but can be installed in other ways. For Microsoft Access, you need to specify the data source name and database. You can also provide a description. Other ODBC drivers may require other information. See the documentation for each driver and online Help for what is required.

To configure the Microsoft Access data source:

1. At the Windows NT command prompt, type:

```
C:\ESSBASE\BIN\ODBCAD32.EXE
```

to display the **User DSN** screen of the **ODBC Data Source Administrator** dialog box.

(If you installed Essbase in a different directory than the default, type the appropriate path; for example, `D:\ESSBASE\BIN\ODBCAD32.EXE`.)

Data sources that you have configured are in the **User Data Sources** list box.

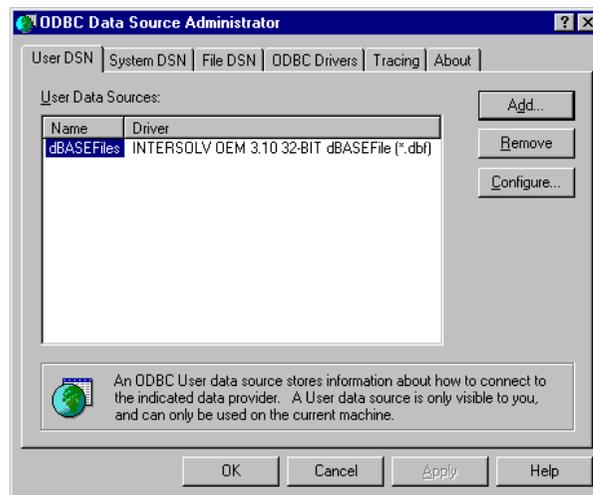


Figure 5-3, User DSN Page of the ODBC Data Source Administrator Dialog Box

Note: Drivers that have not been properly configured may also be in the **User Data Sources** list box. Ignore or remove them, and proceed with these instructions.

- Click the **Add** button to display the **Create New Data Source** dialog box.

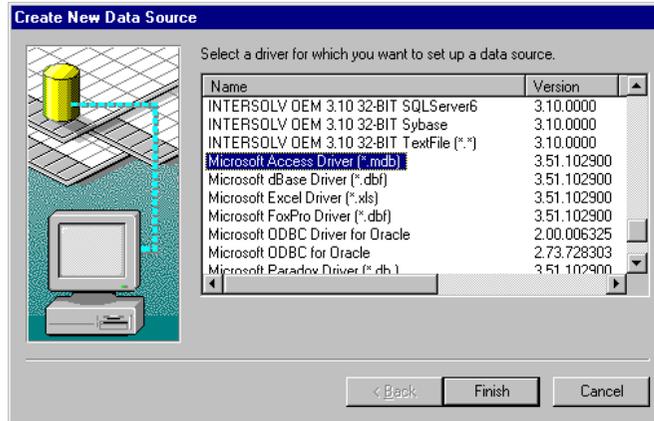


Figure 5-4. Create New Data Source Dialog Box with Microsoft Access Driver Selected

- Scroll down the list of available drivers and select **Microsoft Access Driver (*.mdb)**.
- Click **Finish** to display the **ODBC Microsoft Access 97 Setup** dialog box.

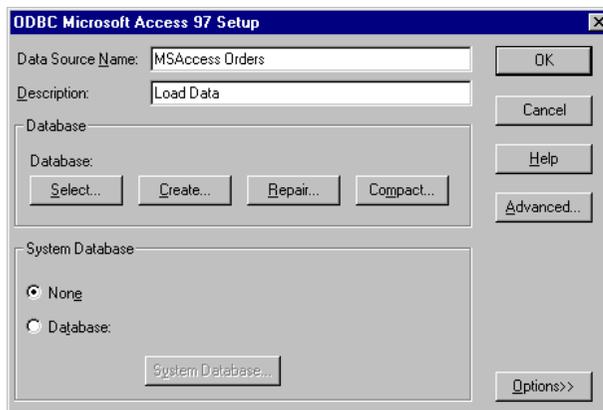


Figure 5-5. ODBC Microsoft Access 97 Setup Dialog Box

- Type **MSAccess Orders**, or any other name, in the **Data Source Name** text box.
- Type **Load Data** in the **Description** text box.

7. Click **Select** in the **Database** group to display the **Select Database** dialog box.
8. Locate and select **ORDERS.MDB** (or the name of your .MDB file if it is not **ORDERS.MDB**) and click **OK**.

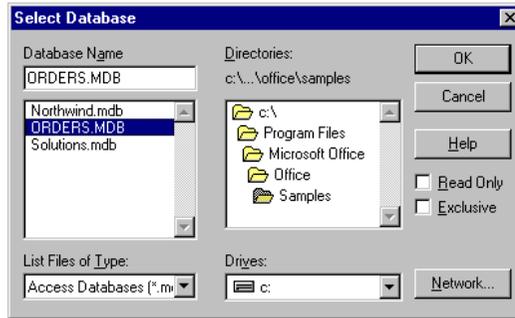


Figure 5-6, Select Database Dialog Box

The **ODBC Microsoft Access 97 Setup** dialog box is displayed with the path and file that you selected.

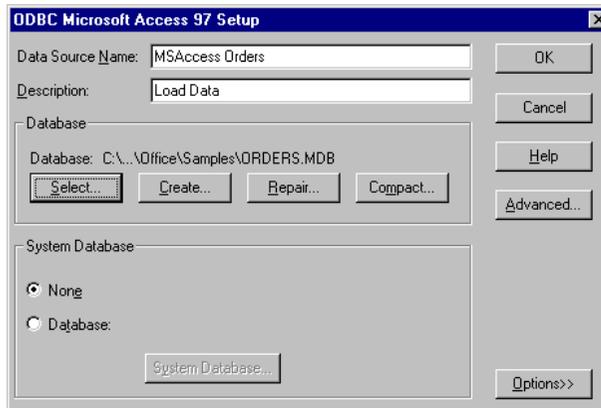


Figure 5-7, ODBC Microsoft Access 97 Setup Dialog Box with ORDERS.MDB Selected

9. Click **OK** to display the **ODBC Data Source Administrator** dialog box.

The Microsoft Access data source is in the **User Data Sources** list box, with other data sources that you may or may not have configured.

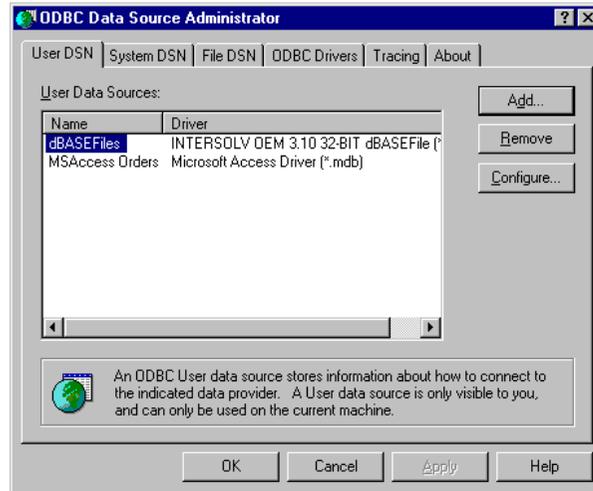


Figure 5-8, ODBC Data Source Administrator Dialog Box with Microsoft Access Listed

10. Click **OK**.

You can now load data from the Microsoft Access data source file that you chose into an Essbase database. For information on loading SQL data, see Chapter 4, Loading SQL Data. For general information on loading data, see the *Database Administrator's Guide*.

Note: Remember that source files must be accessible to the Essbase server. They can be on the server machine or on the network.

Configuring an IBM DB2/6000 Data Source on AIX



If you use AIX, you can connect to an IBM DB2/6000 data source using the IBM DB2/6000 ODBC driver. Consult the database administrator for information on configuration, authorization, binding, and other steps that may be required to connect to the data source.

Note: See “Creating a Configuration File for the IBM DB2/6000 Driver on AIX” on page 37.

Support for Non-INTERSOLV Drivers

Some non-INTERSOLV drivers are *not* tested or supported with Essbase. The driver that you choose might not be specifically tested to work with Essbase. For more information on qualified drivers and data sources, see the *Start Here* booklet, or the `README.TXT` file.

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