IBM® DB2® OLAP Server™ 8.1

Integration Server Administration Guide

SC27-1227-00

Printed in the U.S.A.

Contents

Preface 7

Purpose 7

Audience 7

Document Structure 8

Related Documentation 9

Accessing Hyperion Documentation 10

Online Help 10

Online Guides 11

Conventions 11

Preface 13

Purpose 13

Audience 13

Document Structure 14

Related Documentation 15

Accessing Hyperion Documentation 16

Online Help 16

Online Guides 17

Conventions 17

Additional Support 18

Chapter 1: Using Essbase Integration Server 15

Introducing Essbase Integration Server 15

Starting Essbase Integration Server 16

- Essbase Integration Server Startup Switches 19
- Storing Startup Switch Information in eis.cfg 23

Shutting Down Essbase Integration Server 25

Viewing the Essbase Integration Server Log 26

Chapter 2: Working with Users, Locks, and Permissions 29

Working with Users 29
Working with Locks 30
Using Standard Access Mode 30
Using Exclusive Access Mode 31
Correcting Problems with Locks 31
Viewing Essbase Integration Services Users with Locks 32
Deleting Locks for Essbase Integration Services Users 34
Working with Permissions 34
Viewing Permissions for OLAP Models 35
Viewing Permissions for Metaoutlines 37

Chapter 3: Troubleshooting ODBC and Connections 39

Common Connection Problems 40
Database-Specific Problems 42
About ODBC and Connection Problems 43
Isolating Connection Problems 44
Testing the Database Client Connection to the RDBMS 46
Testing the ODBC Connection to the RDBMS 48
Testing the Essbase Integration Server Connection to the RDBMS 54
Testing the Essbase Integration Services Console Connection to the RDBMS 56
Testing the Essbase Integration Server Connection to Essbase OLAP Server 58
Testing the Essbase Integration Services Console Connection to Essbase OLAP Server 59
Correcting Connection Problems 61
User Name and Password Problems 62
Correcting RDBMS Problems 63
Correcting Database Client Problems 65
Correcting ODBC Problems 66
Correcting Essbase Integration Server Problems 68
Correcting Essbase Integration Services Console Problems 70
Using ODBC Tracing 71
Using ODBC Tracing on Windows Systems 71
Using ODBC Tracing on UNIX Systems 72

Chapter 4: Tables in OLAP Metadata Catalog 75

About OLAP Metadata Catalog 76
Tables Relating to the OLAP Model 77
Tables Relating to the Metaoutline 79
Tables Relating to Drill-Through 82
Tables Relating to Hybrid Analysis 83
Miscellaneous Tables 84

Chapter 5: Using Essbase Integration Services Shell 85

Starting Essbase Integration Services Shell 86
About Essbase Integration Services Shell 87
  Using SET and LOAD Commands 88
  Using Informational Commands 89
  Using Command Syntax and Execution 90
  Recording Member and Data Load Scripts 90
  Running Essbase Integration Services Shell Script and Batch Files 91
  Running OLAP Command Script Files 92
Using Essbase Integration Services Shell Commands 93
  LOGIN 94
  STATUS 94
  VERSION 95
  SETSOURCE 95
  SETTARGET 96
  SETCATALOG 96
  LOADMEMBER 97
  LOADDATA 101
  LOADALL 103
  LOGOUT 107
  SHUTDOWN 107
  EXIT 108
Loading Dimensions and Members Using Essbase Integration Services Shell 108
Loading Data Using Essbase Integration Services Shell 109

Appendix A: Essbase Integration Server Error Messages 111

Member Load Error Messages 111

Data Load Error Messages........ 115
Drill-Through Report Error Messages........ 115
Miscellaneous Error Messages........ 117

Glossary........ 121

Index........ 135

Preface

Purpose

This guide provides you with the information that you need to configure and maintain Essbase® Integration Services and OLAP Metadata Catalog and to use Essbase Integration Services Shell on all supported platforms.

Audience

This guide is for Essbase Integration Services database administrators who are responsible for implementing, configuring, and managing Essbase Integration Services.

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

- Knowledge of where the data for your business resides (for example, in a relational database).
- A fundamental understanding of Microsoft Windows and basic Microsoft Windows terminology, such as dialog box, list box, and button.

  See Microsoft Windows documentation for more information on these terms.
- For UNIX system users, a fundamental understanding of UNIX system administration, such as directory navigation, environment variables, login scripts, and text file editing.

  See the documentation for the UNIX system you are using for more information.
- A fundamental understanding of database administration, such as database tables, columns and records, user management, operation of database client utilities, and executing SQL commands.

Document Structure

This document contains the following information:

- Chapter 1, "Using Essbase Integration Server," describes how to start and stop the server and view the server error log.
- Chapter 2, "Working with Users, Locks, and Permissions," describes how to view information about users, OLAP models and OLAP metaoutlines, and how to manage access to documents within an OLAP Metadata Catalog.
- Chapter 3, "Troubleshooting ODBC and Connections," describes how to diagnose and resolve problems with database and software component connections, including Open Database Connectivity (ODBC) problems.
- Chapter 4, "Tables in OLAP Metadata Catalog," describes the structure and content of the OLAP Metadata Catalog.
- Chapter 5, "Using Essbase Integration Services Shell," describes the basic operation and commands for the Essbase Integration Services Shell.
- Appendix A, "Essbase Integration Server Error Messages," details the error messages generated by Essbase Integration Server.
- Glossary, a list of key Essbase Integration Services terms and their definitions.
- Index, a list of Essbase Integration Services terms and their page numbers. In the online version, select an index entry to view that page.

Related Documentation

The following documents contain additional related information:

- Essbase Integration Services documents:
  - *Essbase Integration Services Installation Guide,* for information about installation procedures, instructions for connecting relational data sources to OLAP Metadata Catalog, and information about Essbase Integration Services directories and files.
  - *Essbase Integration Services Data Preparation Guide*, for information about understanding and defining your business needs and about properly preparing the data sources that you have available. This guide also discusses basic online analytical processing (OLAP) and multidimensional modeling concepts.
- Hyperion® Essbase OLAP Server documents:
  - *Essbase Database Administrator's Guide,* for more information about basic multidimensional concepts and how to design, create, and maintain an Essbase database.
  - *Essbase Installation Guide*, for information about how to install Essbase software components on all supported platforms.
  - *Essbase SQL Interface Guide*, in online PDF format in the `\essbase\docs` directory, for information about how to use Essbase SQL Interface to load data from SQL, relational, and flat-file data sources into an Essbase OLAP Server database.
  - *Essbase Spreadsheet Add-in User's Guide*, in online PDF format in the `\essbase\docs` directory, for information about how to use Essbase Spreadsheet Add-in with Microsoft Excel and Lotus 1-2-3 for Windows.
  - The online *Quick Technical Reference*, in the `\essbase\docs` directory, for a complete listing and description of functions, calculation commands, report commands, and file settings.
  - The online *API Reference* in the `\essbase\docs` directory, for a complete listing and description of functions available through the Essbase Application Programming Interface (API).

Accessing Hyperion Documentation

All Essbase Integration Services documentation is accessible from the following locations:

- You can access the Information Map (`essdocs.htm`) from the DB2 OLAP Server V8.1 folder.
- Online help is accessible from the product that it documents. Start the product and click the Help button or menu command.
- All the books for DB2 OLAP Server are located on the Web at: www.ibm.com/software/db2/db2olap/library.html.

Online Help

➤ To access online help, click Help in any dialog box or select Help > Help Topics.

➤ To print an online help topic, display the topic and select File > Print or click the Print button.

Online Guides

The online guides are an electronic version of the printed documentation.

➤ To display an online guide, select Start > Hyperion Solutions > Essbase Integration Services > Online Documentation and select a title from the list of documentation.

Conventions

Table i shows the conventions used in this document.

Table i: Conventions Used in this Document

Item	Meaning
➤	Arrows indicate the beginning of a procedure, consisting of sequential steps.
Brackets []	In certain examples, brackets indicate that the enclosed elements are optional. In other examples, brackets indicate required section headings or command line elements.
Bold	Bold in procedural steps highlights major user interface elements.
CAPITAL LETTERS	Capital letters denote commands and various IDs. (Example: LOADALL command)
`Example text`	Courier font indicates that the material shown is a code or syntax example.
Ctrl + 0	Keystroke combinations shown with the plus symbol (+) indicate that you should press the first key and hold it while you press the next key. Do not type the + symbol.
`Courier italics`	Courier italic text indicates a variable field in command syntax. Substitute a value in place of the variable shown in Courier italics.
Ellipses (…)	Ellipsis points indicate that text has been omitted from an example.
Italics	Italics in a product-related term indicates that the term is also included in the glossary of the book.

Table i: Conventions Used in this Document (Continued)

Item	Meaning
Mouse orientation	This document provides examples and procedures using a right-handed mouse. If you are using a left-handed mouse, adjust the procedures accordingly.
Menu options	Options in menus are shown in the following format: *Menu name* > *Menu command* > *Extended* menu command For example: Edit > Properties > Table
n, x	The variable *n* indicates that you must supply a generic number; the variable *x* indicates that you must supply a generic letter.

Note: The term right-click, used throughout this guide, means to click the secondary mouse button to open a pop-up menu.

Chapter

1

Using Essbase Integration Server

This chapter describes Essbase Integration Server, how to start it, how to shut it down, and how to view its log file. This chapter contains the following topics:

- "Introducing Essbase Integration Server" on page 15
- "Starting Essbase Integration Server" on page 16
- "Shutting Down Essbase Integration Server" on page 25
- "Viewing the Essbase Integration Server Log" on page 26

Introducing Essbase Integration Server

Essbase Integration Server is a multithreaded server that serves as the bridge between the relational data source, OLAP Metadata Catalog, and Essbase OLAP Server. Essbase Integration Server performs the following tasks:

- Retrieves information about OLAP models and metaoutlines from OLAP Metadata Catalog
- Generates SQL statements
- Retrieves data from the external data source
- Loads members and data into the Essbase database

Essbase Integration Server must be running if you want to use Essbase Integration Services Console (the graphical user interface) or Essbase Integration Services Shell (the command line interface).

Starting Essbase Integration Server

Before you start Essbase Integration Server, make sure that the following programs are running. These programs can reside on network server computers and need not be on your local computer to be available to Essbase Integration Server.

- The relational database management system (RDBMS) with the relational data source that contains the OLAP Metadata Catalog where the metadata is stored
- One or more RDBMSs that contain the relational data sources you want to use to create or modify an OLAP model or a metaoutline

Essbase OLAP Server also must be running if you need to create, change, or load data into an Essbase database or if you want to preview an Essbase database outline.

You can start Essbase Integration Server by using one of the following methods:

- From a command prompt
- From the Windows Desktop Start menu
- As a Windows service

Note: To start the server as a Windows service, you must first enable the Windows service for Essbase Integration Server. See the *Essbase Integration Services Installation Guide* for more information.

➤ To start Essbase Integration Server from the command line:

1. Type the executable name on the command line; for example, type

   ```
   olapisvr
   ```

   Note: If Essbase Integration Server does not start when `olapisvr` is executed from the command line, the operating system path may not be updated correctly. For more information, see the *Essbase Integration Services Installation Guide*.

2. If you want to change any default startup switches, type the command syntax after the `olapisvr` command or add the switches to the `eis.cfg` file (see “Storing Startup Switch Information in eis.cfg” on page 23 for information).

The values for startup switches that you type at the command line override any startup switch values you have stored in the `eis.cfg` file.

When entering parameters for startup switches at the command line, enclose path names that contain spaces in quotation marks (`""`). The following example illustrates the syntax for passing the -E and -M options:

```
olapisvr -E"c:\my logs\eislog" -M"c:\ess 65\bin\essbase.mdb"
```

➤ To start Essbase Integration Server from the Windows Desktop Start menu:

1. On the Windows Desktop, click **Start**.
2. Select **Programs > Hyperion Solutions > Essbase Integration Services > Essbase Integration Server** to display the Essbase Integration Server window.

   If you have stored startup switch settings in `eis.cfg`, those settings override the default settings when starting Essbase Integration Server from the Windows Desktop **Start** menu.

➤ To start Essbase Integration Server as a Windows service:

1. Access the **Services** dialog box.
   - On Windows NT, select **Start > Settings > Control Panel**, and double-click Services.
   - On Windows 2000, select **Start > Settings > Control Panel**, double-click **Administrative Tools**, and then double-click **Services**.
   - On Windows XP, select **Start > Control Panel**. In the **Control Panel**, select **Performance & Maintenance**, and then **Administrative Tools**. In the **Administrative Tools** window, double-click **Services**.

   The **Services** dialog box is displayed with **Essbase Integration Server** in the list of services.
2. Select, but do not double-click, **Essbase Integration Server**.
3. If you want to change any default startup switches:
   - On Windows NT, enter the startup switches in the **Startup Parameters** text box.
   - On Windows 2000, select **Action > Properties** and enter the startup switches in the **Startup Parameters** text box, and then click **Start**.

- On Windows XP, right-click **Essbase Integration Server** and select **Properties**, enter the startup switches in the **Start parameters** text box, and then click **Start**.

Note: Any startup switch information that you enter in this step overrides the startup switch information you may have added to the `eis.cfg` file. (see “Storing Startup Switch Information in eis.cfg” on page 23 for information). You must input startup switch settings each time you start Essbase Integration Server as a Windows service.

When typing the syntax for startup switches in the **Startup Parameters** text box on Windows NT and 2000, or the **Start parameters** text box on Windows XP, replace any single backslash (\) within a path name with two backslashes (\\). The following example illustrates the syntax for passing the -E parameter on the Windows platform:

```
-Ec:\\temp\\myserver
```

Additionally, on Windows NT and 2000, enclose path names that contain spaces with `\"`. The following example illustrates the syntax for passing the -M option on the Windows NT and 2000 platforms:

```
-M\"c:\\Program Files\\ess 65\\bin\\essbase.mdb\"
```

On Windows XP, enclose path names that contain spaces with quotation marks (`" "`). The following example illustrate the syntax for passing the -M options on the Windows XP platform:

```
-M"c:\\Program Files\\ess 65\\bin\\essbase.mdb"
```

4. Start the service for Essbase Integration Server.

- On Windows NT, click the **Start** button.
- On Windows 2000, select **Action > Start**. (If you changed any startup switches as described in Step 3, skip this step.)
- On Windows XP, click **Start**. (If you changed any startup switches as described in Step 3, skip this step).

The **Service Control** message box is displayed. After a few seconds it disappears, and the **Status** field entry for Essbase Integration Server is changed to **Started**.

Essbase Integration Server Startup Switches

Use the switches specified in Table 1 to change the default settings in these instances:

- When starting Essbase Integration Server from the command line or as a Windows service
- When storing startup switch information in the `eis.cfg` file (as described in "Storing Startup Switch Information in eis.cfg" on page 23)

Table 1: Essbase Integration Server Switches

Switch	Description
-?	To view a list of available switches for starting Essbase Integration Server, type `-?` when you start Essbase Integration Server; for example, type `olapisvr -?`
-B	To set the fetch size that Essbase Integration Server uses when transferring rows from the data source to the Essbase database, type `-B`*`numberOfRows`* when you start Essbase Integration Server. The default number is 100 rows; the range is from 0 to 32767 rows. To maximize performance, estimate the size in bytes of the rows being loaded from the relational data source. Divide 64,000 by that estimated size to determine the optimal number of rows to fetch. The goal is to generate blocks of data that are as close to 64 KB as possible, without exceeding that amount. If the size of a block of rows exceeds the 64 KB threshold, the load will fail. For example, to set the number of rows to 150, type `olapisvr -B150`

Table 1: Essbase Integration Server Switches (Continued)

Switch	Description
-C	To set the number of records that Essbase Integration Server commits to Essbase during a data load, type `-C`*`number of records`* when you start Essbase Integration Server. This setting specifies the number of records to be committed to Essbase after all records are sent. The default setting is all records. The -C switch may be used concurrently with the -N switch. The recommended setting for testing purposes is 5,000 to 10,000 records. After you have completed data load testing, shut down the server to reset the number of records to the default setting of all records. If you have included a setting for testing purposes for this startup switch in `eis.cfg`, be sure to edit the file to clear the setting back to all records. Setting a smaller number of records during testing, such as after every 5,000 or 10,000 records have been transferred to Essbase, enables you to see data load errors incrementally. Viewing the errors provides you an opportunity to correct data source problems before continuing and waiting for an entire data load to complete before you can take any corrective actions. Resetting the number of records to the default of all records results in faster performance, but error records are viewable only at the completion of the data load. The number of records that Essbase Integration Server can transfer to Essbase during a data load is limited to a range of 1 to 1,000,000,000. Essbase can use all available memory resources allocated to it. However, if you experience memory problems during a data load, set -C to a smaller value. For example, to set the number of records that Essbase Integration Server incrementally transfers to Essbase during a data load, type `olapisvr -C5000` **Note:** This setting does not apply to member loads.

Table 1: Essbase Integration Server Switches (Continued)

Switch	Description

-E	To give the log file a different name, type `-E`*`log_file_name`* when you start Essbase Integration Server. The `.log` extension is added automatically. The default name and location is *`ISHOME`*`\log\olapisvr.log`.
	For example, to name the log file `myserver.log` and put it in the `temp` directory on Windows, type
	`olapisvr -Ec:\temp\myserver`
	Do not type the `.log` file extension. The `.log` extension is automatically appended to the name you type for the log.
	Enclose path names that contain spaces with quotation marks (`" "`); for example, type
	`olapisvr -E"c:\program files\eis\myserver"`

-L	To set the level of detail of the messages that Essbase Integration Server logs, type `-L`*`level`* when you start Essbase Integration Server. The default level is 2. For example, to use the highest level of logging, type `olapisvr -L0` You can specify the following levels: 0 to log all debug messages and the ODBC SQL generated by Essbase Integration Server 2 to log all informational messages and some of the ODBC SQL generated by Essbase Integration Server 3 to log all warnings 4 to log all non-critical errors 7 to log all critical errors where Essbase Integration Server terminates the command 8 to log all critical server errors The recommended level settings are 2 or 3.

Table 1: Essbase Integration Server Switches (Continued)

Switch	Description

-M	To specify the location of the Essbase message database file if it has been moved to a new location, type `-M`*`path`*`\`*`essbase.mdb`* when you start Essbase Integration Server. The default location is *`ARBORPATH`*`\bin\essbase.mdb`.
	For example, to specify the new location of `essbase.mdb` if you moved the Essbase message database file to `essbase65\bin`, type
	`olapisvr -Mc:\essbase65\bin\essbase.mdb`
	Enclose path names that contain spaces with quotation marks (`" "`); for example, type
	`olapisvr -M"c:\ess 65\bin\essbase.mdb"`

-N	To specify the number of threads for executing SQL, retrieving data, transforming it, and sending it to Essbase during a data load, type `-N`*`number_of_threads`* when you start Essbase Integration Server. The default setting is 1 thread. The -N switch may be used concurrently with the -C switch. The number of threads allocated to the Essbase Integration Server data load optimization process is controlled by the -N switch. For optimal data load performance, a thread can be allocated to each task in the data load process: executing the SQL statements, retrieving data, transforming data, and transferring data to Essbase. For example, to set the number of threads to 3, type `olapisvr -N3` The recommended setting is eight times the number of processors in the computer containing the server component of Essbase Integration Services.

Table 1: Essbase Integration Server Switches (Continued)

Switch	Description
-P	To set the TCP port number at which Essbase Integration Server listens, type `-P`*`portNumber`* when you start Essbase Integration Server. The default port number is 3388. This switch is for debugging purposes only. If you set the port number to a value other than the default, Essbase Integration Services Console will be unable to connect to Essbase Integration Server. For debugging purposes, this switch may be set to a value other than the default. To access a port other than 3388, use olapicmd and specify `-P`, using the same value as specified for olapisvr.
-T	To set the number of network listeners that Essbase Integration Server starts, type `-T`*`number`* when you start Essbase Integration Server. The default number is 10. The recommended setting is 10. Network listeners receive requests from Essbase Integration Services Console. The server automatically adds and subtracts listeners as needed, so the number of listeners set at startup does not limit the number of users that can connect to an Essbase Integration Server. For example, to set the number to 17, type `olapisvr -T17`

Storing Startup Switch Information in eis.cfg

The `eis.cfg` file is used for two purposes:

- As an environment for Teradata and Oracle users to configure the required JDBC drivers, as discussed in the *Essbase Integration Services Installation Guide*.
- As a means for passing startup parameters, other than the defaults, when launching Essbase Integration Server

The `eis.cfg` file is a text file which resides in the `\bin` directory on both Windows and UNIX platforms. When you start Essbase Integration Server from the command line (in DOS or UNIX) or as a Windows service, the startup routine first checks the contents of `eis.cfg` for any startup switch information. After the check of `eis.cfg` contents, one of the following situations occurs, and then one of the following situations occurs:

- If you added startup switch syntax to the `eis.cfg` file, the default settings for those switches (see Table 1) are overridden by the settings for the switches that you added.
- If you did not add startup switch information to `eis.cfg`, the default settings (see Table 1) are used to start Integration Server.
- If `eis.cfg` contains startup switch syntax and you enter startup switch overrides at the command line or when starting the server as a Windows service, any switches that you enter override both the settings contained in the `eis.cfg` file and the default settings.

➤ To store startup switch settngs in the `eis.cfg` file:

1. Open the `eis.cfg` file in any text editor.
2. Add the startup switch that you want to store by typing the startup switch letter in brackets; for example:

   ```
   [B]
   ```

3. Add the new information for startup switches in the following format; for example:

   ```
   [L]=0
   [E]=c:\temp\myserver
   [N]=40
   [M]=c:\ess 65\bin\essbase.mdb
   ```

   To enter the above overrides at the command line, type

   ```
   olapisvr -L0 -Ec:\temp\myserver -N40 -M"c:\ess 65\bin\essbase.mdb"
   ```

4. Save and close `eis.cfg`.

Shutting Down Essbase Integration Server

When you finish using Essbase Integration Server, shut it down by using any of the following methods.

Note: Always close Essbase Integration Services Console before shutting down Essbase Integration Server.

➤ To stop Essbase Integration Server from the command line, either close the Essbase Integration Server window, or use Essbase Integration Services Shell.

- On Windows platforms, close the Essbase Integration Server window.
- Issue the SHUTDOWN command in the Essbase Integration Services Shell.

  For more information, see "Using Essbase Integration Services Shell Commands" on page 93.

➤ To stop Essbase Integration Server from the Windows desktop:

1. Right-click the button representing Essbase Integration Server in the Windows task bar.
2. Select **Close**.

➤ To stop Essbase Integration Server as a Windows service:

1. Select **Start > Settings > Control Panel**.
2. Open the **Services** dialog box.
   - On Windows NT, double-click **Services**.
   - On Windows 2000, double-click **Administrative Tool**s, and then double-click **Service**s.
3. Locate Essbase Integration Services in the list of services.

4. Select, but do not double-click, Essbase Integration Services.
5. Stop the service.

    - On Windows NT, click **Stop** and then click **Yes** at the prompt to confirm that you want to shut the Windows service for Essbase Integration Services.
    - On Windows 2000, select **Action > Stop**.

    The **Service Control** message box is displayed. After a delay, it disappears and the **Status** field for Essbase Integration Services is changed.

Viewing the Essbase Integration Server Log

By default, the Essbase Integration Server log file is named `olapisvr.log` and is located in the *`ISHOME`*`\log` directory. You can view it from Essbase Integration Services Console by selecting the Tools > View Log File command to launch the Server Log file dialog box. You can also view the log by opening `olapisvr.log` in any text editor. To create the log file with a different location or name, use the -E switch. For more information, see Table 1.

The following items are logged in the Essbase Integration Server log file, depending on the logging level that you set when you start the server:

- All error messages
- The settings for switches used to start Essbase Integration Server from the command line or as a Windows service
- Two copies of each SQL statement generated to access the relational data source as follows:
    - The first SQL statement is in the SQL dialect understood by the ODBC driver and is generated by the Essbase Integration Server.
    - The second SQL statement is generated by the ODBC driver and is translated by the driver in the dialect of SQL understood by the RDBMS being accessed.
- The Essbase Integration Services Shell commands used to perform an action
- Connection information

- Notification of the success or failure of a load
- The name, if applicable, of the metaoutline that is running
- Other informational messages

For more information on setting the logging level, see Table 1.

Essbase error message text is located in `ISHOME\bin\message.txt` on Windows systems; `$ISHOME/bin/message.txt` on UNIX.

Chapter

2

Working with Users, Locks, and Permissions

This chapter describes how to view information about users, OLAP models, and metaoutlines in OLAP Metadata Catalog. It also describes how to clear locks and change permissions on OLAP models and metaoutlines.

This chapter contains the following topics:

- "Working with Users" on page 29
- "Working with Locks" on page 30
- "Working with Permissions" on page 34

For more information about OLAP Metadata Catalog, see Chapter 4, "Tables in OLAP Metadata Catalog."

Working with Users

When working with Essbase Integration Services, you must manage access for three types of users:

- Essbase Integration Services users: these users can access OLAP models and metaoutlines stored in OLAP Metadata Catalogs. Essbase Integration Services users are the database users defined in the relational database that contains the OLAP Metadata Catalog you are using.
- Essbase users: these users can access the Essbase database that you create from a metaoutline.
- Source database users: source database users are defined in the relational database management system (RDBMS) that manages the source database. These users can access the tables and views in the relational source database.

Use the tools provided with each relational database to manage each set of users. Consult the relational database documentation if you are not sure how to perform any of the following tasks:

- Create new users
- View a list of available users
- Change the permissions for users
- Delete current users
- Disconnect users

Working with Locks

You can use either of two methods for opening an OLAP model or metaoutline in Essbase Integration Services Console: standard access mode (the default mode) and exclusive access mode. The locks that are established by these different modes are specific to Essbase Integration Services and are completely separate from the locking performed by the RDBMS.

Tip: If you plan only to view an OLAP model or metaoutline, use standard access mode. If you plan to edit an OLAP model or metaoutline, use exclusive access mode.

Using Standard Access Mode

When you open an OLAP model in standard access mode, Essbase Integration Services gives you a read lock on that OLAP model. When you open a metaoutline in standard access mode, Essbase Integration Services gives you a read lock on that metaoutline and a read lock on the OLAP model on which the metaoutline is based. Multiple users can have read locks on the same OLAP model or metaoutline at the same time.

When you save an OLAP model or metaoutline in standard access mode, Essbase Integration Services upgrades the read lock to a write lock for the duration of the save. After Essbase Integration Services saves the changes to the OLAP model or metaoutline, the lock reverts back to a read lock. However, if other users have the OLAP model or metaoutline open, your changes are not updated for the other users until they reopen the document. In addition, if other users have the OLAP model or metaoutline open at the same time as you do, they can edit and save it, thereby overwriting your changes. Using exclusive access mode prevents users from overwriting your changes. For more information, see “Using Exclusive Access Mode” on page 31.

➤ If you have opened and edited an OLAP model or metaoutline in standard access mode, and are concerned that other users may overwrite your changes, perform one of the following steps:

- Save the OLAP model or metaoutline using a different name. For more information, see the Essbase Integration Services Console Help.
- If you have not yet started editing the document or have entered only a few changes, close the OLAP model or metaoutline; then reopen it using exclusive access mode and reapply the changes.
- Contact the users with read locks and ask them to close the OLAP model or metaoutline. To view a list of users with read locks, see “Viewing Essbase Integration Services Users with Locks” on page 32.

Using Exclusive Access Mode

Opening an OLAP model or metaoutline in exclusive access mode eliminates the risk of other users overwriting your changes. When you open an OLAP model in exclusive access mode, Essbase Integration Services gives you a write lock on that OLAP model that remains in effect until you close the model. When you open a metaoutline in exclusive access mode, Essbase Integration Services gives you a write lock on that metaoutline and a read lock on the OLAP model on which the metaoutline is based that remains in effect until you close the metaoutline. While you have an OLAP model or metaoutline open in exclusive access mode, other users can open and view the documents, but they cannot save them.

Correcting Problems with Locks

Due to the complex nature of Essbase Integration Services and the other software components with which it interacts, you may experience problems that result in locks not being released from OLAP models or metaoutlines. Unreleased locks can result in an inability to save, even if no other users are on the system. Unreleased locks can also prevent you from opening an OLAP model or metaoutline.

If you suspect that unreleased locks remain from previous sessions, delete the locks by selecting Servers > OLAP Metadata Catalog > Delete Locks. Deleting locks from the menu removes only your locks; it does not delete locks held by other users.

If you suspect that unreleased locks remain from other user sessions, check to see which users have locks. For more information, see “Viewing Essbase Integration Services Users with Locks” on page 32. If you are convinced that some or all of the locks are from terminated user sessions, delete them. For more information, see “Deleting Locks for Essbase Integration Services Users” on page 34.

Viewing Essbase Integration Services Users with Locks

The CB_CONCURRENCY table in OLAP Metadata Catalog contains information about the users who access OLAP models and metaoutlines. This table contains the following columns:

- CB_USER_NAME: the name of the user accessing the OLAP model or metaoutline; for example, `sa`.
- CB_USER_SESSION_ID: a system-generated reference number that uniquely identifies an editing session
- CB_OBJECT_ID: an OLAP model or metaoutline number
- CB_OBJECT_TYPE: a type reference that indicates whether the user is accessing an OLAP model or a metaoutline
  - The number 1 represents an OLAP model.
  - The number 2 represents a metaoutline.
- CB_OBJECT_LOCK: a lock reference number that indicates whether the user has a read or write lock
  - The number 1 represents a read lock.
  - The number 2 represents a write lock.
- CB_LOCK_TIMESTAMP: the date and time that the user acquired the lock

➤ To determine which users are accessing a specific OLAP model or metaoutline:

1. Enter the following SELECT statement in the OLAP Metadata Catalog database, using the tools for the relational database you are using:

   ```
   SELECT CB_USER_NAME, CB_OBJECT_ID, CB_OBJECT_TYPE,
          CB_OBJECT_LOCK, CB_LOCK_TIMESTAMP
   FROM CB_CONCURRENCY
   ```

2. View the results.

   In the following example, the sa user is the only user currently accessing an OLAP model or metaoutline. The sa user has two read locks on one OLAP model and one read lock each on two different metaoutlines.

```
CB_USER_NAME CB_OBJECT_ID CB_OBJECT_TYPE CB_OBJECT_LOCK CB_LOCK_TIMESTAMP
------------ ------------ -------------- -------------- -----------------
sa           889844639        1                1         Apr 9 2001 4:43PM
sa           889845263        2                1         Apr 9 2001 4:43PM
sa           889844639        1                1         Apr 9 2001 5:20PM
sa           892167813        2                1         Apr 9 2001 5:20PM
                                                       (4 row(s) affected)
```

You can determine the following information from the sample CB_CONCURRENCY table shown in the preceding list:

- The first row of the results tells you that the sa user (CB_USER_NAME = sa) has a read lock (CB_OBJECT_LOCK = 1) on an OLAP model (CB_OBJECT_TYPE = 1) with an ID of 889844639.
- The second row of the results tells you that the sa user (CB_USER_NAME = sa) has a read lock (CB_OBJECT_LOCK = 1) on a metaoutline (CB_OBJECT_TYPE = 2) with an ID of 889845263.
- The third row of the results tells you that the sa user (CB_USER_NAME = sa) has a read lock (CB_OBJECT_LOCK = 1) on an OLAP model (CB_OBJECT_TYPE = 1) with an ID of 889844639.
- The fourth row of the results tells you that the sa user (CB_USER_NAME = sa) has a read lock (CB_OBJECT_LOCK = 1) on a metaoutline (CB_OBJECT_TYPE = 2) with an ID of 892167813.

When you open a metaoutline, you receive a read lock on the metaoutline and on the OLAP model on which it is based; therefore, you can assume that the sa user is working on two different metaoutlines based on the same OLAP model.

Deleting Locks for Essbase Integration Services Users

If you are certain that the other users who have read or write locks on an OLAP model or a metaoutline that you want to save do not need their locks, delete their locks from the CB_CONCURRENCY table.

CAUTION: Make sure the users do not need their locks before you delete the locks.

➤ To delete read and write locks on OLAP models or metaoutlines:

1. Determine which users have locks.

   See "Viewing Essbase Integration Services Users with Locks" on page 32.

2. Delete the rows containing the unwanted locks.

   For example, to delete all locks held by the `sa` user, issue the following DELETE statement in the OLAP Metadata Catalog database, using the tools for the relational database:

   ```
   DELETE FROM CB_CONCURRENCY WHERE CB_USER_NAME = 'sa'
   ```

Working with Permissions

When you save an OLAP model or metaoutline for the first time, you determine what read or write permissions other users have. Essbase Integration Services supports the following kinds of permissions:

- Allow read/write access for other users. This setting permits all other users to read and write to the OLAP model or metaoutline. This setting is the default.
- Allow read access for other users. This setting permits all other users to read but not write to the OLAP model or metaoutline; that is, other users cannot save changes to the OLAP model or metaoutline.
- Disallow all access for other users. This setting denies all other users read or write permission to the OLAP model or metaoutline. You are the only user who can read or write to it.

➤ To change the permissions of an OLAP model or metaoutline, take one of the following actions:

- Change the OLAP model properties in Essbase Integration Services Console. For more information, see the Essbase Integration Services Console Help.
- Save the metaoutline with a different name by selecting File > Save As. For more information, see the Essbase Integration Services Console Help.
- To edit tables containing the permissions for the OLAP model or metaoutline, use the tools provided with the relational database that contains OLAP Metadata Catalog. For more information on the tables to edit, see "Viewing Permissions for OLAP Models" on page 35 or "Viewing Permissions for Metaoutlines" on page 37.

Viewing Permissions for OLAP Models

Information about the permissions that are set for OLAP models and metaoutlines is stored in OLAP Metadata Catalog. View this information by selecting the appropriate columns from tables in OLAP Metadata Catalog.

The OM_INFO table in OLAP Metadata Catalog contains information about OLAP models, including the following columns which are relevant to permissions:

- MODEL_ID: a system-generated reference number.
- MODEL_NAME: the name of the OLAP model; for example, TBC Model.
- MODEL_DESCRIPTION: a description of the OLAP model. If you do not enter a description when you save the model, this column is blank.
- MODEL_DATA_SOURCE: the name of the Open Database Connectivity (ODBC) data source on which the OLAP model is based; for example, TBC.
- MODEL_OWNER: the login name of the OLAP model owner; for example, `sa`. The login name is specified in the relational database that contains the OLAP Metadata Catalog.

- MODEL_ACCESS_CODE: a reference number that indicates what level of access users, other than the owner, have to the OLAP model.
  - The number 0 represents no permissions—other users can neither read nor write to the OLAP model.
  - The number 1 represents read access—other users can read the OLAP model but cannot write to it.
  - The number 2 represents read and write access—other users can both read and write to the OLAP model; this is the default.

➤ To view access permissions for all OLAP models in OLAP Metadata Catalog:

1. Issue the following SELECT statement in the OLAP Metadata Catalog database, using the tools for the relational database.

```
SELECT MODEL_NAME,MODEL_OWNER,MODEL_ACCESS_CODE
       FROM OM_INFO
```

2. View the results.

   In the following example, TBC Model gives read and write permissions to other users (MODEL_ACCESS_CODE = 2). TBC_Mod_Archive gives read permissions to other users (MODEL_ACCESS_CODE = 1). TBC_Mod_Mine gives neither read nor write permissions to other users (MODEL_ACCESS_CODE = 0).

```
MODEL_NAME           MODEL_OWNER   MODEL_ACCESS_CODE
----------           -----------   -----------------
TBC Model            sa            2
TBC_Mod_Archive      sa            1
TBC_Mod_Mine         sa            0
(3 row(s) affected)
```

Viewing Permissions for Metaoutlines

OLAP Metadata Catalog stores information about the permissions set for OLAP models and metaoutlines. View this information by selecting the appropriate columns from tables in OLAP Metadata Catalog.

The MO_INFO table in OLAP Metadata Catalog contains information about metaoutlines, including the following columns which are relevant to permissions:

- MO_ID: a system-generated reference number for the metaoutline.
- MODEL_ID: a system-generated reference number for the OLAP model on which the metaoutline is based.
- MO_NAME: the name of the metaoutline; for example, TBC Metaoutline.
- MO_DESC: a description of the metaoutline. If you do not enter a description when you save the metaoutline, this column is blank.
- MO_CHANGE_DATE: the date on which changes were last made to the metaoutline.
- MO_OWNER: the login name of the metaoutline owner; for example, `sa`. The login name is specified in the database that contains the associated OLAP Metadata Catalog.
- MO_ACCESS_CODE: a reference number that indicates what level of access users, other than the owner, have to the metaoutline.
  - The number 0 represents no permissions—other users can neither read nor write to the metaoutline.
  - The number 1 represents read access—other users can read the metaoutline but cannot write to it.
  - The number 2 represents read and write access—other users can both read and write to the metaoutline; this setting is the default.

➤ To determine the access permissions for all metaoutlines in OLAP Metadata Catalog:

1. Issue the following SELECT statement in the OLAP Metadata Catalog database, using the tools for the relational database.

   ```
   SELECT MO_NAME,MO_OWNER,MO_ACCESS_CODE
          FROM MO_INFO
   ```

2. View the results.

   In the following example, TBC Metaoutline gives read and write permissions to other users (MO_ACCESS_CODE = 2). TBC_Archive gives read permissions to other users (MO_ACCESS_CODE = 1). TBC_Mine gives neither read nor write permissions to other users (MO_ACCESS_CODE = 0).

   ```
   MO_NAME               MO_OWNER    MO_ACCESS_CODE
   -------               --------    --------------
   TBC Metaoutline       sa          2
   TBC_Archive           sa          1
   TBC_Mine              sa          0
   (3 row(s) affected)
   ```

Chapter

3

Troubleshooting ODBC and Connections

Essbase Integration Services requires several layers of software components to connect to relational databases and load data into Essbase databases. Each of the components must be configured properly to run and communicate with each other. Consequently, diagnosing and correcting connection problems in the system can be challenging.

This chapter assists you in isolating and correcting connection problems that can occur during the operation of Essbase Integration Services. The first topic of this chapter lists common causes for connection problems. The subsequent topics outline a strategy for isolating and correcting connection problems not addressed by the common problems list.

This chapter assumes that you know how to perform basic database administration tasks, such as using a database client utility program to connect to a database server, navigating directories using a command prompt, and editing configuration files.

This chapter contains the following topics:

- "Common Connection Problems" on page 40
- "Database-Specific Problems" on page 42
- "About ODBC and Connection Problems" on page 43
- "Isolating Connection Problems" on page 44
- "Correcting Connection Problems" on page 61
- "Using ODBC Tracing" on page 71

Common Connection Problems

If you have problems connecting to OLAP Metadata Catalog or to the external data source with Essbase Integration Services Console, review the following list of common problems:

- Are you using the correct user name and password?
  - Does the user name you used have the correct privileges to access both OLAP Metadata Catalog and the data source at the database level?
  - If you are trying to connect to OLAP Metadata Catalog, did you use the same user name and password as the user who created the tables in OLAP Metadata Catalog?

    If you create an OLAP Metadata Catalog when logged in as one user name, you cannot access the tables in OLAP Metadata Catalog using a different user name unless you create an *alias* for the user name (for Sybase and Microsoft SQL Server) or synonyms for the tables (for DB2 and Oracle). For more information, see the *Essbase Integration Services Installation Guide*.
- Are all of the following required components up and running?
  - Essbase Integration Server
  - The relational database management system (RDBMS) listener for OLAP Metadata Catalog and the data source
  - The database servers that manage OLAP Metadata Catalog and the data source databases
- Is the database client software installed and configured on the computer where Essbase Integration Server is installed?
  - Do the database client software utility programs, such as the command-line SQL utility, run? Can you connect to databases with them?
  - Does the user who starts Essbase Integration Server have the correct environment variables set and the necessary access privileges to run the database client software?

  - Are the required environment variables for the database client software, such as the path (and the library path on UNIX), configured on the computer where Essbase Integration Server is installed?

    On UNIX, use `ivtestlib` located in the `ISHOME/bin` directory to confirm that the library path contains all files required by the Open Database Connectivity (ODBC) driver.

  - If necessary, is the `bin` directory for each database in the operating system path of the user who is running Essbase Integration Server?
  - Does the ODBC Data Source Name (DSN) configuration identify the name of the relational database management system (RDBMS) client?

    On UNIX, use the `odbcconfig` utility to check the path and environment variable, and to test connectivity to ODBC.

- Are OLAP Metadata Catalog and the data source configured as (ODBC) data sources on the Essbase Integration Server computer? For information on configuring ODBC data sources, see the *Essbase Integration Services Installation Guide*.
- Are you using the ODBC data source names for OLAP Metadata Catalog and the data source databases as configured on the Essbase Integration Server computer? Do not assume that the RDBMS database name is the same as the ODBC data source name for that database.
- Are you experiencing time-out problems when connecting to the external data source?

  Wait and retry the action when the RDBMS is less busy. To avoid the problem, increase the ODBC driver time-out limit using ODBC Administrator on Windows systems. For more information, see the ODBC documentation.

- Did you create tables in OLAP Metadata Catalog? For information on creating tables for the catalog, see the *Essbase Integration Services Installation Guide*.
- Are you having problems related to ODBC while you are creating an Essbase outline? If so, turn on tracing, perform the action again, and analyze the results in the tracing log file. For more information, see “Using ODBC Tracing” on page 71.

If you experience problems connecting to the RDBMS, view the log for the data source for information about why the connection failed. For more information, see the documentation for the RDBMS you are using.

If none of the above steps help, review the list of database-specific problems in "Database-Specific Problems" on page 42.

Database-Specific Problems

If you have problems connecting to OLAP Metadata Catalog or to the external data source with Essbase Integration Services Console, review the following list of common problems for specific RDBMSs:

- **DB2:** You may be required to bind the database client software utilities to a DB2 server that is managing the databases you want. For more information, see the DB2 installation documentation.
- **Oracle:** In configuring Oracle products to work with ODBC on UNIX systems, you must configure the database names in a `tnsnames.ora` file on the computer that runs Essbase Integration Server. For more information, see the Oracle installation documentation.
- **SQL Server:** If you try to access an SQL Server database with the Microsoft native ODBC driver when you do not have access permission, SQL Server connects you to the default database and does not notify you. Configure the ODBC DSN to use the database that you want to access. For more information, see the SQL Server documentation.
- **Sybase:** To use Essbase Integration Services with Sybase, you must have execute permission for `sp-fkeys` in `Sybsystemprocs`. For more information, see the Sybase documentation.

If none of the previous suggestions help, proceed to "About ODBC and Connection Problems" on page 43 for an overview of connection problems, then see "Isolating Connection Problems" on page 44.

About ODBC and Connection Problems

There are three layers of software components that Essbase Integration Services Console must pass through to contact an RDBMS: Essbase Integration Server, ODBC, and the database client software. Failure within or between any of these components can cause a lack of communication between the console and the RDBMS.

Diagnosing and correcting connection problems with Essbase Integration Services can prove difficult, because different connection problems often have similar symptoms. In most cases, the errors received in Essbase Integration Services Console are not sufficient to diagnose and resolve the problem, and you must go to the server system to get more information and find a resolution.

The three main categories of problems that break the lines of communication between Essbase Integration Services Console and the RDBMS are:

- Software component problems:
  - The components of Essbase Integration Services or the RDBMS are not installed or are installed on the wrong computer.
  - The components do not run because they are not set up properly.
  - The components stopped running or were never started.
  - The components are not compatible with the operating system.
  - The versions of the different components are not compatible with each other.
- Configuration and communication problems:
  - The software components are not properly configured to communicate with each other.
  - User names, passwords, and permissions are configured or used inconsistently across the components and computers.
  - The communication interfaces of the software components are incompatible with each other.
  - Changes to components, databases, users, or permissions have put the software components out of sync with each other.

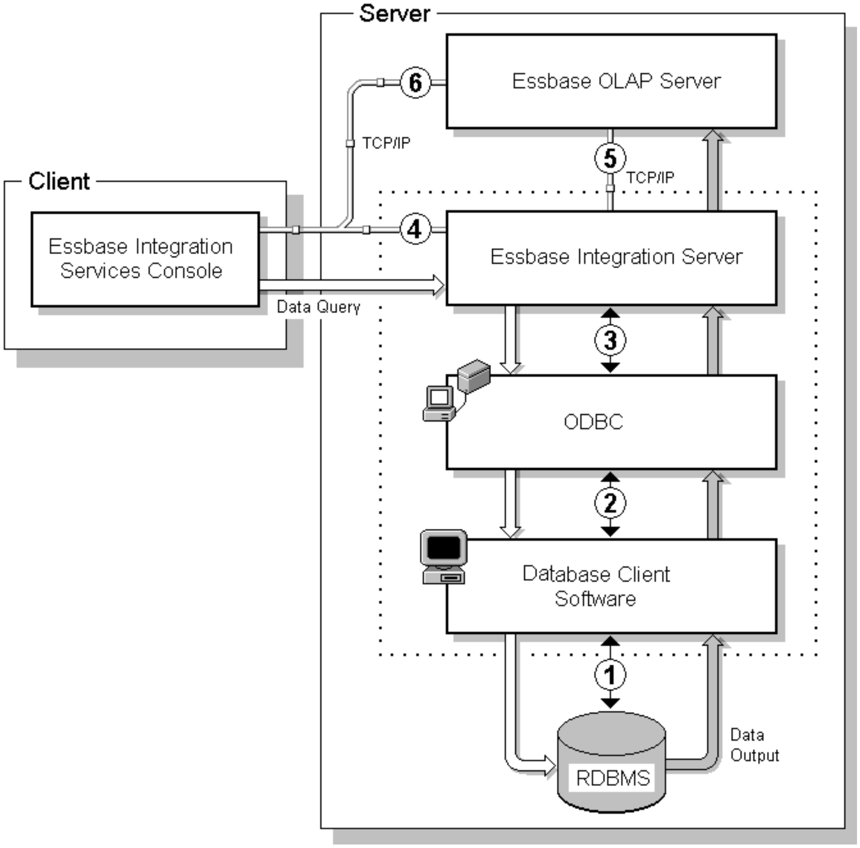
- Network and security problems:
  - A physical network path does not exist between the computers that must communicate with each other.
  - One or both computers attempting to communicate do not have the TCP/IP network protocol installed or configured.
  - The computer attempting to contact another computer does not have access to addressing information, such as a domain name server (DNS).
  - Security systems prevent all communication or certain types of communication between the computers that must talk with each other. For example, this is the case when client and server computers are separated by a firewall.

Isolating Connection Problems

If the list of problems provided in “Common Connection Problems” on page 40 and your own knowledge fail to resolve the connection problem, the recommended strategy for diagnosing the problems is to test the components and connections starting at the RDBMS and backtracking through the connections to Essbase Integration Services Console.

The client software must pass through three layers of components to connect to the RDBMS containing OLAP Metadata Catalog and the data source, as illustrated in Figure 1.

Figure 1: Essbase Integration Services Components and Connections



The numbers in Figure 1 identify the general diagnostic steps that you should take to isolate connection problems. Follow these steps as indicated, starting with the connection between the database client software and the RDBMS (1) and working backwards through the system to isolate connection problems. After you isolate a problem, refer to the appropriate components topic in “Correcting Connection Problems” on page 61.

➤ To isolate connection problems:

1. Attempt to connect to the RDBMS databases using a database client utility program. For more information, see "Testing the Database Client Connection to the RDBMS" on page 46.
2. Attempt to connect to the RDBMS databases using ODBC. For more information, see "Testing the ODBC Connection to the RDBMS" on page 48.
3. Attempt to connect to the RDBMS databases using Essbase Integration Server. For more information, see "Testing the Essbase Integration Server Connection to the RDBMS" on page 54.
4. Attempt to connect to the RDBMS databases using Essbase Integration Services Console. For more information, see "Testing the Essbase Integration Services Console Connection to the RDBMS" on page 56.
5. Attempt to connect to Essbase OLAP Server using Essbase Integration Server. For more information, see "Testing the Essbase Integration Server Connection to Essbase OLAP Server" on page 58.
6. Attempt to connect to Essbase OLAP Server using Essbase Integration Services Console. For more information, see "Testing the Essbase Integration Server Connection to Essbase OLAP Server" on page 58.

Testing the Database Client Connection to the RDBMS

Attempting to connect the database client software to the RDBMS you are using is the first step toward isolating connection problems in Essbase Integration Services. Once you have verified that these components are communicating properly, you have a good base from which to test the remainder of the connection chain.

The most likely cause of a connection failure at this point is that the database client software environment variables are not included in the login script for the user who runs the Essbase Integration Server program.

➤ To test the database client connection to the RDBMS:

1. Log on to the computer running Essbase Integration Server as the user who starts the Essbase Integration Server program (typically, hyperion).

   Note: Logging on as a different user, such as an administrative user, may fail to reveal problems in the configuration.

2. Start a database client utility program with which you can use SQL statements to connect to and query databases, such as a command-line SQL utility.

   If the database client utility does not start, check to make sure the client software is installed and the required environment variables are set. For more information, see "Correcting Database Client Problems" on page 65.

3. Connect to the OLAP Metadata Catalog database in the RDBMS using a valid database user account.

   If the connection fails, try to connect as a user who you know has access permission, such as an administrative user. If the administrative connection succeeds, check the other user accounts and permissions in the RDBMS for the OLAP Metadata Catalog database, and carefully check user accounts with connection problems. For more information see, "Correcting RDBMS Problems" on page 63.

4. Execute an SQL select statement against a table in the OLAP Metadata Catalog database; for example, if you are connected to the sample OLAP Metadata Catalog, type

   ```
   SELECT * FROM TBC.OV_INFO
   ```

   If the select statement fails, check the permissions for the user name you are using to connect to the RDBMS. For more information, see "Correcting RDBMS Problems" on page 63. Also, check that the version of the database client software you are using is compatible with the version of the RDBMS. For more information, see "Correcting Database Client Problems" on page 65.

5. After you have successfully completed the preceding steps, try connecting to OLAP Metadata Catalog from Essbase Integration Services Console.

   For more information, see “Testing the Essbase Integration Services Console Connection to the RDBMS” on page 56. If the connection fails, proceed to “Testing the ODBC Connection to the RDBMS” on page 48.

   If you still cannot complete a connection and select statement with the user who runs Essbase Integration Server, contact technical support for the RDBMS.

6. Repeat Step 3 through Step 5 for the data source database.

   After you have successfully connected to OLAP Metadata Catalog, you can rule out setup and environment problems on the Essbase Integration Server computer and concentrate on problems specific to the data source database, including required database server names, database names, user names, passwords, and access permissions.

Testing the ODBC Connection to the RDBMS

After you have established that the database client software and RDBMS are communicating properly, the next step in isolating connection problems is to test the ODBC connection to the RDBMS databases.

On Windows NT, Windows 2000, and Windows XP, use ODBC Administrator to test connections to the RDBMS databases. In UNIX, use the `odbcconfig` utility to verify ODBC configuration, manually inspect the ODBC configuration files using `ivtestlib` provided with Essbase Integration Services or by using `DemoODBC` (available from Hyperion Solutions Technical Support), or use third-party or RDBMS-provided utilities.

On UNIX systems, the most likely causes for problems in the ODBC component are that the environment variables for ODBC have not been set up or that the `odbc.ini` file has not been configured properly.

ODBC tracing can also be used to track down connection problems. For more information, see “Using ODBC Tracing” on page 71.

Testing ODBC on Windows Systems

➤ To test ODBC connections to the RDBMS databases:

1. On the Windows desktop, select **Start > Settings > Control Panel** to open the **Control Panel** window.
2. In the **Control Panel** window, perform one of the following steps:
   - On Windows NT, double-click the **ODBC Data Sources** icon.
   - On Windows 2000 and XP, double-click the **Administrative Tools** icon, and then double-click the **Data Sources (ODBC)** icon.
3. In the **ODBC Data Source Administrator** dialog box, click the **System DSN** tab.
4. In the **System Data Sources** list, select the data source created for the OLAP Metadata Catalog or the data source database, and click **Configure**.

   A data source configuration dialog box is displayed. Depending on the RDBMS and the driver you are using, you may be asked to log on to the database immediately, or you may be asked to review all the settings before testing the connection. In either case, after attempting to log on to the database, observe the resulting message boxes to determine if you connected to the RDBMS successfully.

   Note: To be accessible from other computers, ODBC data sources must be configured as System DSNs, not User DSNs.

5. If you cannot connect to the database, check the server name, database name, user name, and password information for accuracy, and make sure that you are using the correct ODBC driver for the RDBMS.

   For more information, see “Correcting ODBC Problems” on page 66.

6. After you have successfully completed the preceding steps, try connecting to the RDBMS from Essbase Integration Services Console.

   For more information, see “Testing the Essbase Integration Services Console Connection to the RDBMS” on page 56.

   If the connection from Essbase Integration Services Console fails, proceed to “Testing the Essbase Integration Server Connection to the RDBMS” on page 54.

Testing ODBC on UNIX Systems

On UNIX systems, you use the `odbcconfig` utility to verify, add, or delete ODBC connections. You can use `odbcconfig` to perform preliminary testing. You must inspect the configuration files for ODBC manually or use an RDBMS utility to perform more thorough testing. These configuration files include the login scripts that set the environment variables for ODBC and the `odbc.ini` file. For more information about ODBC utilities on UNIX systems, see the documentation for the RDBMS or the ODBC driver.

DB2: To use the `odbcconfig` utility with DB2, the environment variable INSTHOME must be set to the DB2 installation directory name, and exported.

Teradata: To use the `odbcconfig` utility with Teradata, the environment variable TDODBC must be set to the Teradata installation directory name, and exported.

➤ To verify and add an ODBC connection using the `odbcconfig` utility:

1. Log in to the computer that runs Essbase Integration Server as the user who starts the Essbase Integration Server software.

2. Start the `odbcconfig` utility.

   Verify that the environment settings displayed by the `odbcconfig` utility are correct.

   To edit and test the ODBC data sources, the available options are: List, Add, Delete, Test, and Exit.

3. To list available DSNs, type 1 and press **Enter**.

   Verify that the DSN exists.

   If necessary, proceed to Step 4 to add it.

4. To add a DSN, type 2 and press **Enter**.

   At the prompts, type a database type, data source name, and a description. You may also be prompted for additional information depending on the RDBMS platform of the DSN you are adding, such as servername, hostname, or database name.

5. To verify addition of a DSN, type 1 and press **Enter**.

   Verify that the DSN you just added is included in the list.

6. Type 5 and press **Enter** to exit the utility.

Note: You can delete DSNs by typing 3 at the starting `odbcconfig` utility window. Use the List option (1) to verify that the DSN has been deleted.

➤ To test an ODBC connection using the `odbcconfig` utility:

1. Log in to the computer that runs Essbase Integration Server as the user who starts the Essbase Integration Server software.

2. Start the `odbcconfig` utility.

   The utility lists the available options: List, Add, Delete, Test, and Exit.

3. To test the ODBC connection, type 4 and press **Enter**.

4. At the prompts, type a data source name, user name, and password.

   If no errors are returned, the connection is valid.

   In the event of errors, proceed to Step 5 to add corrected DSN information.

5. To add a DSN, type 2 at the starting `odbcconfig` utility window.

   The `odbcconfig` utility does not permit editing of DSN information. You must add new DSN entries and delete any incorrect entries.

   At the prompts, type a data source name, user ID, and password.

6. Type 1 and press **Enter** to list DSNs and verify that the DSN you just added is included in the list.

7. Type 4 and press **Enter** to test the new ODBC connection.

   If no errors are returned, the connection is valid.

8. Repeat the steps in this section until the connection tests return no errors.

9. Type 5 and press **Enter** to exit the utility.

➤ To inspect the login script files:

1. Log on to the computer that runs Essbase Integration Server as the user who starts the Essbase Integration Server software.
2. In the current home directory, find the main login script file (typically, `.profile` for Korn Shell and Bourne Shell users, `.login` for C Shell users) and open it in a text editor.

   Note: The primary login script file may be named differently, depending on the UNIX operating system and the system administrator.
3. Check the main login script file for the inclusion of the Essbase Integration Services script (`is.sh` or `is.csh`).

   If one of these scripts is included in the main login script, make sure that the inclusion of the script file name follows the syntax for executing a script file within another script, and that the script file is specified with a complete directory path. For more information, see "Correcting ODBC Problems" on page 66.

   Note: If you make a change to the login scripts, log out and then log back on to reset the environment variables.
4. After completing the preceding steps, test the connection by following the steps listed in "Testing the Essbase Integration Services Console Connection to the RDBMS" on page 56.

   If you cannot make a connection, proceed to "Testing the Essbase Integration Server Connection to the RDBMS" on page 54.

➤ To inspect the `odbc.ini` file:

1. Log on to the computer that runs Essbase Integration Server as the user who starts the Essbase Integration Server software.
2. To determine the location of the `odbc.ini` file, type

   ```
   echo $ODBCINI
   ```

   If this command does not display a file name and directory location, then you have not included the Essbase Integration Services script in the login script for the user. For more information, see "Correcting Essbase Integration Server Problems" on page 68.

3. Move to the directory specified by $ODBCINI and open the `odbc.ini` file with a text editor.

   Ensure that you are using the exact file name and directory that you have set. For example, type `vi $ODBCINI` to display the file name and path of the $ODBCINI environment variable.

4. Check that the name of the data sources you are using with Essbase Integration Services are listed in the ODBC Data Sources section; for example

   ```
   [ODBC Data Sources]
   TBC_MD=Essbase Integration Serveices sample catalog
   TBC=Essbase Integration Services sample database
   ```

5. For each data source, check that there is a section starting with the name listed in the ODBC Data Sources section, enclosed in brackets; for example

   For Oracle:

   ```
   [myoracle]
   Driver=
     /home/hyperion/essintegration/odbc/merant40/lib/ARor815.so
   Description=my oracle source
   ServerName=mytnsServerName
   ```

   For DB2:

   ```
   [TBC_MD]
   Driver=/home/db2inst1/sqllib/lib/db2.so
   Description=DB2 database for sample testing
   ```

6. Within the section for each data source, verify that an ODBC driver file is specified.

   Make sure that the driver file exists by exiting the text editor and attempting to get a directory listing for that file; for example

   ```
   ls /home/db2inst1/sqllib/lib/db2.so
   ```

   If the file is listed, use `ivtestlib` to check the actual name and location of the driver, then make the appropriate changes to the `odbc.ini` file.

   Tip: Copy the directory and file name for the driver from the `odbc.ini` file and paste it into an `ls` command.

7. Within the section for each data source, verify that the database name, computer name, and other required information are specified.

   For more information, see “Correcting ODBC Problems” on page 66.

Testing the Essbase Integration Server Connection to the RDBMS

After verifying the connections between the ODBC, the database client, and the RDBMS, the next step in isolating a connection problem is to connect to the RDBMS databases from Essbase Integration Server. Test this connection by running Essbase Integration Services Shell on the same computer that runs Essbase Integration Server. For more information on the use and syntax of Essbase Integration Services Shell commands, see Chapter 5, “Using Essbase Integration Services Shell.”

Note: The following procedure uses the sample OLAP Metadata Catalog and sample database. For your tests, substitute the OLAP Metadata Catalog and data source information you are using.

This test uses the LOADMEMBER command to test connections. When the loadmember starts a load, it attempts to make connections in the following order:

1. Data source, using ODBC
2. OLAP Metadata Catalog, using ODBC
3. Essbase server, using TCP/IP

In this test, you set up these connections one at a time and execute a loadmember command each time. By examining the errors each time, you can determine which connections are successful.

➤ To test the Essbase Integration Server connection to the RDBMS:

1. Verify that Essbase Integration Server is running.

   If the server software is not running, start the server. If the server will not start, check that the Essbase Integration Services environment variables are set. For more information, see “Correcting Essbase Integration Server Problems” on page 68.

2. On the same computer that is running Essbase Integration Server, start Essbase Integration Services Shell at a command prompt by typing

   ```
   olapicmd
   ```

   If Essbase Integration Services Shell does not start, make sure that the software is installed and that the Essbase Integration Services environment variables are set. For more information, see “Correcting Essbase Integration Server Problems” on page 68.

3. At the Essbase Integration Services Shell command prompt, use the login command to connect to the Essbase Integration Server computer; for example, type

   ```
   login cypress
   ```

4. Check the release of Essbase Integration Services by typing

   ```
   version
   ```

   Make sure that the version of the product you are using is compatible with the ODBC drivers and the version of Essbase you are using. For information on component compatibility, see the *Essbase Integration Services Installation Guide*.

5. Set the data source to the sample data source by typing

   ```
   setsource "DSN=TBC;UID=TBC;PWD=password"
   ```

   The DSN parameter requires the ODBC data source name, which may be different from the database name in the RDBMS.

6. Test the connection to the data source database. Attempt to perform a member load by typing

   ```
   loadmember "APP=OLAP_TBC;DBN=Basic;OTL=TBC Metaoutline;"
   ```

7. Check the status of the preceding command by typing

   ```
   status
   ```

   During a member load, Essbase Integration Services Shell connects to the data source first, then to OLAP Metadata Catalog. If the connection to the catalog is unsuccessful, the message “IS Error: Unable to login to Catalog” is displayed. If the connection to the data source fails, the message “IS Error: Unable to login to Datasource” is displayed.

   If the connection to the data source failed, verify the ODBC data source name, user name, and password. If the connection continues to fail, see “Correcting Essbase Integration Server Problems” on page 68 and “Correcting ODBC Problems” on page 66. Repeat Step 4 to Step 6 of this procedure to retest the connection. When you successfully connect to the data source, continue to the next step.

8. Set OLAP Metadata Catalog to the sample OLAP Metadata Catalog by typing

   ```
   setcatalog "DSN=TBC_MD;UID=TBC;PWD=password"
   ```

   The DSN parameter requires the ODBC data source name, which may be different from the OLAP Metadata Catalog database name in the RDBMS.

9. Test the connection to the OLAP Metadata Catalog database. Attempt to perform a member load by typing

   ```
   loadmember "APP=OLAP_TBC;DBN=Basic;OTL=TBC Metaoutline;"
   ```

10. Check the status of the preceding command by typing

    ```
    status
    ```

    During a member load, Essbase Integration Services Shell connects to OLAP Metadata Catalog and then to the Essbase server. If the connection to OLAP Metadata Catalog is successful, the message “IS Error: Unable to login to Essbase Server” is displayed. If the connection to OLAP Metadata Catalog fails, the message “IS Error: Unable to login to Catalog” is displayed.

    If the connection to OLAP Metadata Catalog failed, verify the ODBC data source name, user name, and password. If the connection continues to fail, see “Correcting Essbase Integration Server Problems” on page 68 and “Correcting ODBC Problems” on page 66. Repeat Step 7 to Step 9 of this procedure to retest the connection. When you successfully connect to OLAP Metadata Catalog, continue to the next step.

11. Test the connection from Essbase Integration Services Console to the RDBMS by proceeding to “Testing the Essbase Integration Services Console Connection to the RDBMS” on page 56.

Testing the Essbase Integration Services Console Connection to the RDBMS

After you have corrected problems with the components that enable Essbase Integration Services Console to connect to the RDBMS, attempt a connection from the console to an OLAP Metadata Catalog and a data source database in the RDBMS to prove the corrections are successful. To isolate possible computer-to-computer connection problems, run Essbase Integration Services Console on a different computer than the one running Essbase Integration Server.

➤ To test the Essbase Integration Services Console connection to the RDBMS:

1. Verify that Essbase Integration Server is running.

   If the server software is not running, start the server. If the server will not start, check that the Essbase Integration Services environment variables are set. For more information, see "Correcting Essbase Integration Server Problems" on page 68.

2. On a computer other than the one running Essbase Integration Server, start Essbase Integration Services Console.

3. Connect to the Essbase Integration Server computer and OLAP Metadata Catalog; for example, cypress and TBC_MD.

   If the connection fails, verify that you have specified the correct ODBC data source name for the OLAP Metadata Catalog database and the correct Essbase Integration Server computer name. Also verify that you specified the correct user name and password for the OLAP Metadata Catalog database on the RDBMS. For more information, see "Correcting Essbase Integration Services Console Problems" on page 70.

4. After connecting to OLAP Metadata Catalog, open an OLAP model and connect to the data source for the OLAP model.

   If the connection fails, verify that you have specified the correct ODBC data source name for the data source and the correct Essbase Integration Server computer name. Also verify that you specified the correct user name and password for the data source database on the RDBMS. For more information, see "Correcting Essbase Integration Services Console Problems" on page 70.

Testing the Essbase Integration Server Connection to Essbase OLAP Server

When isolating connection problems between Essbase Integration Server and Essbase OLAP Server, use Essbase Integration Services Shell to establish a connection to a data source and OLAP Metadata Catalog, and then attempt to load members into an Essbase database.

➤ To test the Essbase Integration Server connection to an Essbase OLAP Server:

1. Verify that Essbase Integration Server is running.

   If the server software is not running, start the server. If the server will not start, check to ensure that the Essbase Integration Services environment variables are set. For more information, see "Correcting Essbase Integration Server Problems" on page 68.

2. Verify that the Essbase OLAP Server is running.

3. At a command prompt, start Essbase Integration Services Shell by typing

   ```
   olapicmd
   ```

   If Essbase Integration Services Shell does not start, make sure that the software is installed and that the Essbase Integration Services environment variables are set. For more information, see "Correcting Essbase Integration Server Problems" on page 68.

4. At the Essbase Integration Services Shell command prompt, use the login command to connect to Essbase Integration Server; for example, type

   ```
   login cypress
   ```

5. Set the data source to the sample data source by typing

   ```
   setsource "DSN=TBC;UID=TBC;PWD=password"
   ```

   The DSN parameter requires the ODBC data source name, which may be different from the database name in the RDBMS.

6. Set OLAP Metadata Catalog to the sample OLAP Metadata Catalog by typing

   ```
   setcatalog "DSN=TBC_MD;UID=TBC;PWD=password"
   ```

   The DSN parameter requires the ODBC data source name, which may be different from the OLAP Metadata Catalog database name in the RDBMS.

7. Set the Essbase OLAP Server to which you want to connect by typing

   ```
   settarget "DSN=sequoia;UID=TBC;PWD=password;"
   ```

   Note: If you are using Essbase Integration Services Console on a client computer that is outside the firewall for your network, and you require access to an Essbase Integration Server and Essbase OLAP Server located inside the firewall for your network, be sure to use a name or an IP address for the OLAP Server that is accessible from both sides of the firewall.

8. Test the connection to the Essbase OLAP Server by attempting to perform a member load by typing

   ```
   loadmember "APP=OLAP_TBC;DBN=Basic;OTL=TBC Metaoutline;"
   ```

9. Check the status of the preceding command by typing

   ```
   status
   ```

   If the connection failed, the message **IS Error: Unable to login to Essbase Server** is displayed. Make sure that the Essbase OLAP Server is running. Verify the name of the metaoutline in Essbase. Also verify the name of the test application and database in Essbase. Repeat Step 7 to Step 8 of this procedure to retest the connection.

   After you can connect successfully to the Essbase OLAP Server, proceed to “Testing the Essbase Integration Services Console Connection to Essbase OLAP Server” on page 59.

Testing the Essbase Integration Services Console Connection to Essbase OLAP Server

When isolating the connection problems between Essbase Integration Services Console and Essbase OLAP Server, connect to OLAP Metadata Catalog and a data source, and then attempt to load members into an Essbase database.

Note: The following procedure uses the sample application, including the sample database, OLAP Metadata Catalog, OLAP model, and metaoutline. For your tests, substitute the application and databases you are using.

➤ To test the Essbase Integration Services Console connection to an Essbase OLAP Server:

1. Verify that Essbase Integration Server is running.
2. Verify that Essbase OLAP Server is running.
3. Start Essbase Integration Services Console.
4. From Essbase Integration Services Console, connect to the Essbase Integration Server computer and OLAP Metadata Catalog; for example, cypress and TBC_MD.
5. After connecting to OLAP Metadata Catalog, open a metaoutline and connect to the data source for the metaoutline; for example, TBC Metaoutline and TBC.
6. Start a member load by selecting **Outline > Member Load**.
7. If prompted, provide the name of the Essbase OLAP Server, user name, and password.

   If the **Essbase Application and Database** dialog box is displayed, the connection is successful. If the connection failed, verify that you have entered the correct computer name for the Essbase OLAP Server and the correct user name and password. For more information, see the Essbase documentation.

   If the Essbase OLAP Server is located on a large network, you may need to provide a more specific server name address, such as "cypress.hyperion.com" rather than simply "cypress."

   Note: If you are using Essbase Integration Services Console on a client computer that is outside the firewall for your network, and you require access to an Essbase Integration Server and Essbase OLAP Server located inside the firewall for your network, be sure to use a name or an IP address for the OLAP Server that is accessible from both sides of the firewall.

Correcting Connection Problems

In correcting connection problems with Essbase Integration Services, consider both component-level and system-level problems. The following topics list possible problems and areas for investigation within the software components that comprise a Essbase Integration Services system.

To correct system-level problems which can occur across software components, review the following issues:

- Are all user names and passwords being used consistently across all the components and computer user accounts? For more information, see "User Name and Password Problems" on page 62.
- Do all of the user accounts used in the system have the appropriate permissions and privileges?

  System administrators typically use highly privileged administrative accounts when setting up and testing a system. After the system is set up, users with fewer privileges may be unable to use the system successfully. Check permissions on the following components:

  - User account on the client computer
  - User account on the server computer
  - OLAP Metadata Catalog database
  - Data source database
  - User account for the Essbase OLAP Server
- Are the software components using adequate addressing to identify the computers to which they are connecting?

  Depending on the size and configuration of the computer network, it may be necessary to use a fully-qualified host address to connect to a particular computer. For example, instead of the host name "cypress," the complete host name "cypress.mydivision.mycompany.com" may be required. Alternatively, you might need to use the IP address number for the server computer; for example, 127.0.0.1.

- Is the user who starts Essbase Integration Server (for example, hyperion) configured to run all the required software?

  The user (for example, hyperion) must have all required environment variables set and permissions to run all of the following software components:

  - Essbase Integration Server
  - ODBC software
  - Database client software
  - RDBMS server (this may not be required)

User Name and Password Problems

Consistent use of user names and passwords is often a problem in installing, configuring, and using Essbase Integration Services, because of the numerous software components and computers that make up the system.

Tip: During installation, configuration, and testing, keep a list of all the user names and passwords you use to create or modify the system, including the applications with which they are associated and their purpose.

In a smaller, single-server implementation of Essbase Integration Services, where Essbase Integration Server, Essbase OLAP Server, and the RDBMS are all run on a single computer, you must manage five user name and password sets and use them consistently:

- User account on the Essbase Integration Services client computer
- User account on the computer that runs all of the server software
- OLAP Metadata Catalog database in the RDBMS
- Data source database in the RDBMS
- Essbase server software

In a fully distributed, three-server implementation, where Essbase Integration Server, Essbase OLAP Server, and the RDBMS are all run on separate computers, you must manage seven user name and password sets and use them consistently:

- User account on the Essbase Integration Services client computer
- User account on the computer that runs Essbase Integration Server
- User account on the computer that runs the RDBMS
- OLAP Metadata Catalog database in the RDBMS
- Data source database in the RDBMS
- User account on the computer that runs Essbase OLAP Server
- Essbase server software

Adding aliases or synonyms to the RDBMS databases adds to the number of user name and password sets you must manage. For more information about database user aliases and synonyms, see the *Essbase Integration Services Installation Guide*.

Tip: During installation and connection testing, use a single set of user names and passwords to avoid confusion. Add user aliases or synonyms after the system is configured and running.

Correcting RDBMS Problems

To correct problems connecting to the RDBMS, investigate the following possible causes:

- Is the RDBMS server computer and software running? Has the server locked up, stopped, or failed?
- Is the RDBMS software installed? Are all of the components required for ODBC connections installed?

  Some RDBMSs may require additional software components beyond the basic server software to enable ODBC connections. The database client software is usually required on the computer that connects to the RDBMS server using ODBC and also may be required on the RDBMS server computer.

- Do the OLAP Metadata Catalog and data source databases to which you are trying to connect exist? Have the tables for OLAP Metadata Catalog been created?

  You can create the OLAP Metadata Catalog tables either automatically or by using the creation scripts provided with Essbase Integration Services. For more information, see the *Essbase Integration Services Installation Guide*.

- What are the exact names of the OLAP Metadata Catalog and data source databases? Are the names case-sensitive?

- Does the user name that you are using to connect to the RDBMS have adequate permissions to access the database? Does the user have read and write permissions?

  For the OLAP Metadata Catalog database, users need full read and write permissions. For the data source database, users need read-only permissions.

  Sybase: To use Essbase Integration Server on Sybase, you must have execute permission for `sp-fkeys` in `Sybsystemprocs`.

- If the RDBMS server is on a computer by itself, is there a corresponding user account on the computer for the user names you are using to connect to the databases?

  To allow connections to the database server from other computers, you may need to set up user accounts on the RDBMS server computer, separate from the database users you create.

- Does the RDBMS require any addressing beyond the name of the database if you are using the database client software or ODBC to connect?

  Some RDBMSs may have specific naming requirements for connecting to their databases, including different naming conventions for third-party applications (such as Essbase Integration Services). For more information, see the documentation for the RDBMS.

Correcting Database Client Problems

If you have problems connecting to the RDBMS from the database client software, investigate the following possible causes:

- Is the database client software installed? Are all database client components required for the ODBC connections installed?

  To enable ODBC connections, some database client software may require additional software components beyond the basic server software. The database client software usually is required on the computer that uses ODBC to connect to the RDBMS server and may also be required on the RDBMS server computer.

- Is the database client software compatible with the RDBMS?

  Newer or older versions of the database client software may not work with the RDBMS version you are running. For more information, see the RDBMS documentation.

- Do the database client software utilities, such as the command-line SQL interface, start? Do they start when you are logged on as the user who runs Essbase Integration Server?

  When you run the database client software, the user account must have the appropriate file access permissions and must have set the path and other environment variables. Verify that the user who runs Essbase Integration Server (typically, hyperion) is configured to run the database client software.

  On UNIX systems, a script file is usually provided by the RDBMS vendor to set the required environment variables and should be included in the main user login script. If you include one of these files in the main login script, make sure that you specify a complete directory path and that you follow the syntax for executing a script file within a script.

- Are the RDBMS server names, database names, user names, and passwords specified correctly?

  Make sure you are using the correct names, including the exact spelling, uppercase or lowercase letters, and any required RDBMS-specific identification syntax. For more information about correcting user name and password problems, see “Correcting RDBMS Problems” on page 63.

- Is the database client software configured correctly?

  File access permissions, path, and other environment variables must be set for the user who runs the database client software. Additional configuration steps also may be required for specific database clients.

  For more information on configuring database client software, see the installation documentation for the database client software.

  DB2: You may be required to bind the database client software utilities to the DB2 databases. For more information, see the DB2 installation documentation.

  Oracle: The database name for Oracle databases can be specified in a `tnsnames.ora` file, which must be configured by the database administrator. For more information, see the Oracle installation documentation.

  Informix: Ensure that the `sqlhosts` environment variable is properly set.

  In the `sqlhosts` file, you must specify a TCP protocol for your operating system as follows:

  - Windows NT, AIX, and HP-UX: onsoctcp
  - Solaris: ontlitcp

  Sybase: Use the dsedit utility (type `$SYBASE/bin/dsedit`) to view and edit server entries.

Note: MERANT Version 4.0 ODBC drivers are 32 bit. To connect the database client to Essbase Integration Server using MERANT ODBC drivers, the database client software that you use must be 32 bit.

Correcting ODBC Problems

To correct problems connecting to the RDBMS using ODBC, investigate the following possible causes:

- Is the ODBC software installed? Are all of the required ODBC components installed?

  On Windows systems, make sure the ODBC core components and any required drivers are installed. On UNIX systems, the Essbase Integration Services setup program installs the required ODBC core components if you choose to install the MERANT ODBC drivers.

- Is the ODBC driver compatible with the RDBMS? Is the driver compatible with the operating system?

  Verify that the ODBC driver you are using is supported by Essbase Integration Services by referring to the compatibility matrix provided in the *Essbase Integration Services Installation Guide*.

- Are the RDBMS server names, database names, user names, and passwords specified correctly in the ODBC data source?

  Make sure you are using the correct names, including the exact spelling, uppercase or lowercase letters, and any required RDBMS-specific identification syntax. On Windows systems, configure ODBC data sources by using ODBC Administrator. On UNIX systems, configure ODBC data sources either by using the `odbcconfig` utility or by editing the `odbc.ini` file manually.

  DB2: On Windows systems, the DB2 Client Configuation Assistant shows the ODBC DSN.

  For more information about correcting user name and password problems, see "Correcting RDBMS Problems" on page 63.

- On UNIX systems, have you specified the full path and file name of the ODBC driver for the data source in the `odbc.ini` file? Does the ODBC driver actually exist in the specified directory? Can `ivtestlib` load it?

  Try copying the driver path and file name from the `odbc.ini` file and pasting it into an ls command. If the file is not listed when you execute the command, check the accuracy of the driver path and file name in the `odbc.ini` file.

- Are any parameters missing in the ODBC data source configuration?

  On Windows systems, make sure you have filled in all required parameters for the data source in ODBC Administrator. On UNIX systems, the Essbase Integration Services installation provides a sample `odbc.ini` file, which may not include data source parameters required for the RDBMS that you are using. For more information on required RDBMS-specific ODBC driver parameters, see the ODBC documentation provided with Essbase Integration Services in Adobe Portable Document Format (PDF) in the `ISHOME/odbc/merant40/docs` directory. For examples of `odbc.ini` file configurations for the supported RDBMS platforms, see the *Essbase Integration Services Installation Guide*.

- Can other applications connect to the RDBMS by using ODBC?

  If you can identify another application that is successfully using ODBC to connect to databases on the RDBMS, analyze the configuration of the computer from which the connection is made and use it as a model for the computer connections you are trying to fix.

  Note: Most RDBMS vendors provide utilities to test ODBC connections. For information, see the documentation for the RDBMS.

If the preceding checks do not enable you to correct the problems connecting from ODBC to the RDBMS, try using ODBC tracing to isolate the problem. For more information, see “Using ODBC Tracing” on page 71.

Correcting Essbase Integration Server Problems

To correct problems connecting to the RDBMS from Essbase Integration Server, investigate the following possible causes:

- Is Essbase Integration Server installed? Are all the required Essbase Integration Server components installed?

  The following components must be installed to have a functional Essbase Integration Server:

  - Essbase Integration Server software.
  - Related base components. (On UNIX, these components are included as part of Essbase Integration Server software.)
  - MERANT ODBC drivers (unless ODBC and drivers are already installed).

- Is Essbase Integration Server running? Is it configured properly?

  Start Essbase Integration Server by opening a command prompt window and typing `olapisvr`.

If Essbase Integration Server does not start, review the following possible problems:

- Are the required environment variables set? Are they set for the correct user name?

  On Windows systems, if you decide not to let the setup program automatically update the environment variables, you must update them manually.

  On UNIX systems, a script file (`is.sh` or `is.csh`) that sets these variables must be included in the login script of the user who starts Essbase Integration Server. For more information, see the *Essbase Integration Services Installation Guide*.

- What version of Essbase is installed?

  If an incompatible version of Essbase is installed on the same computer as Essbase Integration Server and the `\essbase\bin` directory is in the current path, Essbase Integration Server does not start. For information on compatible versions of Essbase, see the *Essbase Integration Services Installation Guide*.

- Is port 3388 in use?

  Essbase Integration Server uses port 3388 to communicate with the Essbase Integration Services client software. If this port is being used by another program, the server software does not start.

- On UNIX, is more than one copy of `olapisvr` running? If so, all servers except one will hang indefinitely. To correct the problem, run the following command to display all programs that are currently running:

  ```
  ps -fe | grep olapisvr
  ```

Many of the problems related to Essbase Integration Server not working properly may be traced to manual configuration steps that you may have missed. For more information about manual configuration steps, see the *Essbase Integration Services Installation Guide*.

Correcting Essbase Integration Services Console Problems

If you have problems connecting to the RDBMS from Essbase Integration Services Console and have ruled out problems with the RDBMS, database client, ODBC, and Essbase Integration Server, the problem likely originates in the Essbase Integration Services Console component.

To correct problems connecting to the RDBMS from the console, investigate the following possible causes:

- Is Essbase Integration Services Console installed? Are all of the required components installed?

  The following components must be installed to have a functional Essbase Integration Services Console client:

  - Essbase Integration Services Console software
  - Related base components

- Is the Essbase Integration Services Console configured properly?

  Make sure the required environment variables are set. If you decide not to have the setup program update the environment variables, you must update them manually. For more information about manual configuration of variables, see the *Essbase Integration Services Installation Guide*.

- Are the Essbase Integration Server computer name, ODBC data source names, user names, and passwords specified correctly?

  For the Essbase Integration Server computer name, verify that you are using the correct spelling and uppercase and lowercase letters for the server name. For OLAP Metadata Catalog and the data source, make sure you are using an ODBC data source name, which may be different from the RDBMS database name.

  Note: The user names and passwords for the OLAP Metadata Catalog database may be different from the data source. Verify that you are using the correct login information for each database.

  For more information about correcting user name and password problems, see “Correcting RDBMS Problems” on page 63.

- Does the user account with which you are running Essbase Integration Services Console have permission to connect to the computer running Essbase Integration Server?

  You must have a user account and appropriate access permissions on the server computer running Essbase Integration Server.

- If you have Essbase Integration Server installed on more than one computer, have you specified the correct server name?

  A particular Essbase Integration Server may not be set up to access the same OLAP Metadata Catalogs and data sources used by other servers.

- Are you using adequate addressing to identify the Essbase Integration Server computer?

  Depending on the size and configuration of the computer network, it may be necessary to use a fully-qualified host address to connect to a particular computer. For example, instead of the host name “cypress,” the complete host name “cypress.mydivision.mycompany.com” may be required. Alternatively, you might need to use the IP address number for the server computer; for example, 127.0.0.1.

Using ODBC Tracing

If you do not have access to ODBC testing utilities or third-party applications that use ODBC, tracking down ODBC problems can be difficult. Using the tracing utility provided with ODBC can help identify and resolve connection problems.

Using ODBC Tracing on Windows Systems

On Windows systems, if you cannot connect to the relational data source or OLAP Metadata Catalog, use the tracing utility in ODBC Administrator to learn which ODBC call is failing.

➤ To use the tracing utility in ODBC Administrator:

1. Start **ODBC Administrator** on the computer running Essbase Integration Server.
2. Click the **Tracing** tab, specify a log file for the tracing utility, then click **Start Tracing Now**.

   Note: Tracing quickly creates a large log file. Disable tracing when you are finished: On the **Tracing** tab, click **Stop Tracing Now**.

3. Start Essbase Integration Server and Essbase Integration Services Console.
4. From Essbase Integration Services Console, select **Connections > OLAP Metadata Catalog > Connect**, and try to connect to OLAP Metadata Catalog.
5. If you can connect to OLAP Metadata Catalog, open an OLAP model and try to connect to a relational data source.
6. If either connection fails, see the file you specified as the log file in the root directory.

   If necessary, share the information in this log file with Hyperion Technical Support to help solve the connectivity problem.

Using ODBC Tracing on UNIX Systems

On UNIX systems, if you cannot connect to the relational data source or OLAP Metadata Catalog, use the tracing to learn which ODBC call is failing. On UNIX systems, you must edit the `odbc.ini` file to enable and disable ODBC tracing.

➤ To use ODBC tracing on UNIX systems:

1. On the computer running Essbase Integration Server, open the `odbc.ini` file by using a text editor such as vi.
2. Find the section starting with [ODBC], as shown in the following example:

```
[ODBC]
Trace=0
TraceFile=odbctrace.out
TraceDll=/export/home/users/hyperion/is/odbclib/odbctrac.so
InstallDir=/export/home/users/hyperion/is/odbclib
```

3. Set the Trace setting to 1 to enable ODBC tracing.

   Note: Tracing quickly creates a large log file. Disable tracing when you are finished by setting the Trace parameter to 0.

4. Start Essbase Integration Server and Essbase Integration Services Console.
5. From Essbase Integration Services Console, select **Connections > OLAP Metadata Catalog > Connect**, and try to connect to OLAP Metadata Catalog.
6. If you can connect to OLAP Metadata Catalog, open an OLAP model and try to connect to a relational data source.
7. If either connection fails, read the `odbctrace.out` file.

   If necessary, share the information in this log file with Hyperion Technical Support to help solve the connectivity problem.

Chapter

4

Tables in OLAP Metadata Catalog

OLAP Metadata Catalog is a relational database that contains OLAP models, metaoutlines, and the information necessary to retrieve the required data from the relational data source. You can install OLAP Metadata Catalog in any supported data source. See the *Essbase Integration Services Installation Guide* for a complete list of supported data sources.

This chapter describes the tables in OLAP Metadata Catalog. It contains the following topics:

- "About OLAP Metadata Catalog" on page 76
- "Tables Relating to the OLAP Model" on page 77
- "Tables Relating to the Metaoutline" on page 79
- "Tables Relating to Drill-Through" on page 82
- "Tables Relating to Hybrid Analysis" on page 83
- "Miscellaneous Tables" on page 84

About OLAP Metadata Catalog

OLAP Metadata Catalog contains a collection of related tables. The tables provide a place for you to store OLAP models and metaoutlines. When you load members or data into an Essbase database, Essbase Integration Services retrieves the information stored in OLAP Metadata Catalog to determine:

- What data to retrieve from the relational data source
- What operations to perform on the data
- How to load the data into the Essbase database

CAUTION: It is strongly recommended that you do not alter the table names or data in OLAP Metadata Catalog with tools other than Essbase Integration Services.

Regularly back up the database that contains OLAP Metadata Catalog so that you can restore OLAP Metadata Catalog from backups if it becomes corrupted. Use one of the procedures in Table 2, depending on what OLAP Metadata Catalog component you want to restore.

Table 2: OLAP Metadata Catalog Restore Procedures

Component To Restore	Procedure
OLAP Metadata Catalog as you installed it, without any OLAP models or metaoutlines that you might have created	Run a script to create the database tables. See the *Essbase Integration Services Installation Guide*.
OLAP Metadata Catalog, including the OLAP models and metaoutlines that you have created	Restore the database that contains OLAP Metadata Catalog from backups. See the documentation for the relational data source.

Tables Relating to the OLAP Model

Table 3 describes each table in OLAP Metadata Catalog that stores information about OLAP models. For information about the other tables in OLAP Metadata Catalog, see:

- "Tables Relating to the Metaoutline" on page 79
- "Tables Relating to Drill-Through" on page 82
- "Tables Relating to Hybrid Analysis" on page 83
- "Miscellaneous Tables" on page 84

Table 3: OLAP Model Tables

Table Name	Description
MB_FILTER	Contains information about filters in the OLAP model. This information includes the hierarchy filter and system-generated ID numbers for parts of the OLAP model.
MB_TX_RULE	Contains information about hierarchies in the OLAP model. This information includes transformations to perform on the hierarchy and system-generated ID numbers for parts of the OLAP model.
OA_INFO	Contains information about columns in a dimension table or a fact table. This information includes the column name, the column data type, the OLAP model it belongs to, the dimension or fact table it belongs to, the source table and column on which it is based, whether it is hidden in OLAP models and metaoutlines, whether it is used for Drill-Through, whether it is enabled for attributes, and how to create it if it is a user-defined column.
OD_DETAILS	Contains information about dimensions in the OLAP model. This information includes system-generated ID numbers for parts of the OLAP model.

Table 3: OLAP Model Tables (Continued)

Table Name	Description
OD_INFO	Contains information about dimensions in the OLAP model. This information includes the dimension name, the OLAP model the dimension belongs to, and whether the dimension is a measures dimension.
OM_INFO	Contains high-level information about an OLAP model: the name of the OLAP model, the description, the name of the data source on which the OLAP model is based, the owner, and access privileges.
OM_PROPERTIES	Contains property information for the OLAP model.
OMB_DETAILS	Contains information about hierarchies in the OLAP model. This information includes the position of each column in the hierarchy, the order in which to build the hierarchy, and system-generated ID numbers for parts of the OLAP model.
OMB_INFO	Contains information about hierarchies in the OLAP model. This information includes the hierarchy name, the OLAP model that it belongs to, and the dimension to which it belongs.
OV_INFO	Contains information about the dimension tables and the fact table in an OLAP model. This information includes the dimension or fact table name, the OLAP model it belongs to, its position in the right frame of the OLAP Model main window, and whether it is a dimension table or a fact table.
OVL_REL_DETAILS	Contains information about logical joins between dimension tables and fact tables. This information includes the name of the first column and the name of the column to which the first column is joined.
OVL_REL_INFO	Contains information about logical joins between dimension tables and fact tables. This information includes the name of the first dimension or fact table and the name of the dimension or fact table to which the first dimension is joined.

Table 3: OLAP Model Tables (Continued)

Table Name	Description
OVP_REL_DETAILS	Contains information about physical joins in the source tables. This information includes the name of the first source column and the name of the source column to which the first source column is joined.
OVP_REL_INFO	Contains information about physical joins in the source tables. This information includes the name of the first source table and the name of the source table to which the first source table is joined.
OM_DESCRIPTIONs	Contains descriptions for a model, its dimensions, its members, and its hierarchies. This information includes the system-generated ID number for each model, dimension, member, or hierarchy that is described.
JOIN_HINTS	Contains information about the database hints defined for a join. This information includes the type of join, the physical table to join, and the text of the join hint.

Tables Relating to the Metaoutline

Table 4 describes each table in OLAP Metadata Catalog that stores information about metaoutlines. For information about the other tables in OLAP Metadata Catalog, see:

- “Tables Relating to the OLAP Model” on page 77
- “Tables Relating to Drill-Through” on page 82
- “Tables Relating to Hybrid Analysis” on page 83
- “Miscellaneous Tables” on page 84

Table 4: Metaoutline Tables

Table Name	Description
MO_FILTERS	Contains information about metaoutline filters. This information includes the filter name and the actions the filter will perform.
MO_INFO	Contains high-level information about a metaoutline: the name of the metaoutline, its description, the date it was last changed, the OLAP model on which the metaoutline is based, its owner, its access privileges, and whether the spreadsheet user of Drill-Through reports must enter the Essbase Integration Server name and a user name and password for the external data source.
MO_PROPERTIES	Contains information about metaoutline properties. This information includes the name and value of metaoutline properties, the name of the source table and column that Essbase Integration Services uses to assign the properties, the numeric range that represents a range specified by the user, Global Settings properties, and sort order. Sort order is based on a column in the relational data source, including columns not present in the OLAP model or metaoutline. Sort order can be ascending or descending. Also contains information on association of attributes (by level or by name) to base dimensions.
MOD_ATTRIBUTES	Contains information about attribute dimensions, such as attribute dimension type, alias names, and transformation rules.
MOD_INFO	Contains information about dimensions in a metaoutline. This information includes the dimension name, the OLAP dimension with which it is associated (unless it is a user-defined dimension), the type of dimension (a user-defined dimension, a measures dimension, a standard dimension, or an attribute dimension), and how members are positioned within the dimension.

Table 4: Metaoutline Tables (Continued)

Table Name	Description
MS_INFO	Contains information about members in a metaoutline. This information includes the name of the member, the dimension to which it belongs, whether it is a user-defined member or a standard member, the OLAP table with which it is associated, the OLAP model column with which it is associated, the name of its parent, how it is positioned with its siblings, and the database measure with which it is associated (if it is a user-defined member).
MS_PREDICATES	Contains information about members in a metaoutline. This information includes member filters.
MS_TX_RULE	Contains information about members in a metaoutline. This information includes member transformation rules.
MSR_INFO	Contains information about database measures in a metaoutline. This information includes the name of the measure, the OLAP model table with which it is associated, the OLAP model column with which it is associated, and how it is positioned with its siblings.
MSR_PREDICATES	Contains information about database measures in a metaoutline. This information includes measure filters.
MSR_TX_RULE	Contains information about database measures in a metaoutline. This information includes the name and definition of measure transformation rules.
MO_DESCRIPTIONS	Contains descriptions for a metaoutline, its filters, its dimensions, and its members. This information includes the system-generated ID number for each metaoutline, filter, dimension, or member that is described.

Tables Relating to Drill-Through

Drill-through reports are created in the OLAP Metaoutline main window of the Essbase Integration Services Console (refer to online help for information on creating drill-through reports). These reports enable Essbase Spreadsheet Add-in users to view data in the relational database that is not stored in the Essbase database.

Table 5 describes each table in OLAP Metadata Catalog that stores information about drill-through reports. For information about the other tables in OLAP Metadata Catalog, see:

- "Tables Relating to the OLAP Model" on page 77
- "Tables Relating to the Metaoutline" on page 79
- "Tables Relating to Hybrid Analysis" on page 83
- "Miscellaneous Tables" on page 84

Table 5: Drill-Through Tables

Table Name	Description
DTR_ATTRIBUTES	Contains information about drill-through columns. This information includes the order in which Essbase Spreadsheet Add-in sorts and displays drill-through information.
DTR_INFO	Contains information about drill-through columns. This information includes the name of the drill-through column, whether the spreadsheet wizard is displayed, and the time or row query governor specified.
MO_INTERSECTION	Contains information about drill-through columns. This information includes system-generated ID numbers for the OLAP model, the drill-through column, and the intersection level on which the column is defined.

Tables Relating to Hybrid Analysis

You enable Hybrid Analysisis in the OLAP Metaoutline main window of the Essbase Integration Services Console (refer to online help for information on enabling Hybrid Analysis). Hybrid Analysis allows access to data to lower level data stored in a relational database. This relationally stored data, although not physically loaded into Essbase, is mapped to the appropriate Essbase hierarchies and is available to Essbase Spreadsheet Add-in users. Unlike drill-through data, Hybrid Analysis data appears seemlessly in Spreadsheet Add-in reports.

Table 6 describes the table in OLAP Metadata Catalog that stores information about Hybrid Analysis. For information about the other tables in OLAP Metadata Catalog, see:

- "Tables Relating to the OLAP Model" on page 77
- "Tables Relating to the Metaoutline" on page 79
- "Tables Relating to Hybrid Analysis" on page 83
- "Miscellaneous Tables" on page 84

Table 6: Hybrid Analysis Tables

Table Name	Description
MO_PROPERTIES	Contains information about Hybrid Analysis columns. This information includes system-generated ID numbers for the OLAP model, the Hybrid Analysis column, and the intersection level on which the column is defined.

Miscellaneous Tables

Table 7 describes tables in OLAP Metadata Catalog that store miscellaneous information about OLAP models and metaoutlines and about Essbase Integration Services. For information about the other tables in OLAP Metadata Catalog, see:

- "Tables Relating to the OLAP Model" on page 77
- "Tables Relating to the Metaoutline" on page 79
- "Tables Relating to Drill-Through" on page 82
- "Miscellaneous Tables" on page 84

Table 7: Miscellaneous Tables

Table Name	Description
CB_CONCURRENCY	Contains information about users accessing an OLAP model or metaoutline. This information includes the user name, the user session ID, the OLAP model or metaoutline that the user is accessing, whether the user is accessing an OLAP model or a metaoutline, whether the user has a read or read/write lock, and the date and time the user acquired the lock.
CB_VERSION	Contains information about the Essbase Integration Services software you have installed. This information includes the release number of Essbase Integration Services.

Chapter

5

Using Essbase Integration Services Shell

This chapter describes the commands supported by Essbase Integration Services Shell, the command-line tool provided with Essbase Integration Services. The majority of these commands provide the same functionality available through Essbase Integration Services Console. You use Essbase Integration Services Shell commands and scripts to create Essbase outlines and load Essbase databases.

If you schedule member or data loads using Essbase Integration Services Console, Essbase Integration Services automatically creates an Essbase Integration Services Shell batch file and a corresponding `.cbs` file in the `Batch` directory. You can modify and reuse the `.cbs` file for future member and data loads.

This chapter contains the following topics:

- "Starting Essbase Integration Services Shell" on page 86
- "About Essbase Integration Services Shell" on page 87
- "Using Essbase Integration Services Shell Commands" on page 93
- "Loading Dimensions and Members Using Essbase Integration Services Shell" on page 108
- "Loading Data Using Essbase Integration Services Shell" on page 109

For a list of all available Essbase Integration Services Shell commands, see "Using Essbase Integration Services Shell Commands" on page 93.

Starting Essbase Integration Services Shell

Before you start Essbase Integration Services Shell, make sure that the following programs are running. These programs can be on network server computers and do not need to be on your local computer to be available to Essbase Integration Services Shell:

- A relational database management system (RDBMS) with the relational database that contains the OLAP Metadata Catalog where the metadata is stored
- One or more RDBMSs that contain the relational data sources that you want to use to create OLAP models and metaoutlines
- Essbase Integration Server

  For more information, see “Starting Essbase Integration Server” on page 16.
- Essbase OLAP Server

  For more information, see the *Essbase Integration Services Installation Guide*.

➤ To start Essbase Integration Services Shell, use either of the following methods:

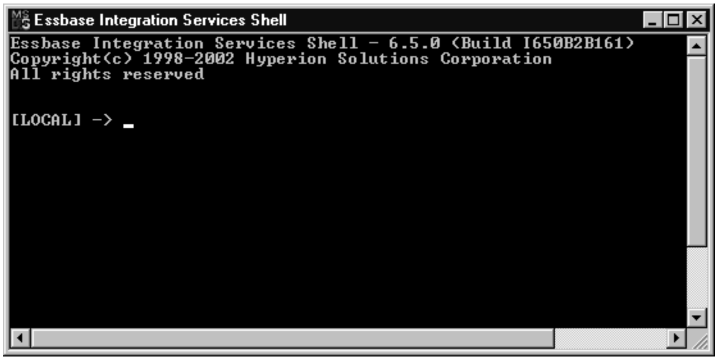
- From the Windows Start menu, select Programs > Hyperion Solutions > Essbase Integration Services > Essbase Integration Services Shell.
- Enter the executable name on the command line; for example, type

  ```
  olapicmd
  ```

  Note: If Essbase Integration Services Shell does not start when `olapicmd` is executed from the command line, the operating system path may not be updated correctly. For more information, see the *Essbase Integration Services Installation Guide*.

The Essbase Integration Services Shell window opens, as shown in Figure 2:

Figure 2: Essbase Integration Services Shell Window



```
Essbase Integration Services Shell - 6.5.0 (Build I650B2B161)
Copyright(c) 1998-2002 Hyperion Solutions Corporation
All rights reserved

[LOCAL] -> _
```

In the Essbase Integration Services Shell window, enter commands at the command prompt. For example, type the following commands:

- Type `login` *`machine_name`* to log on to a server running on the same machine.
- Type `shutdown` to stop the server.
- Type `exit` to stop Essbase Integration Services Shell.
- Type `help` to get a list of Essbase Integration Services Shell commands.

About Essbase Integration Services Shell

Essbase Integration Services Shell is a command-line tool that enables you to access Essbase Integration Server to perform operations on an Essbase outline and the data in an Essbase database.

With Essbase Integration Services Shell, you can perform server operations at the command line in either batch or interactive mode.

- Batch mode. To automate routine server maintenance and diagnostic tasks, write a script or batch file and run it from the command line.

  Batch mode is convenient if you use a particular series of commands frequently or if the task requires many commands.

- Interactive mode. To perform tasks interactively, enter OLAP commands at the command line.

  Interactive mode is convenient for short operations that require few commands, such as checking for information on the fly and error checking.

Tip: It can be difficult to enter commands correctly when using the command line. The easiest method is to use the Essbase Integration Services Console OLAP Metaoutline standard user interface to perform a data or member load, and then choose to create a script file. You can then edit the script file as needed. Run all the commands in a script file by redirecting the standard input to use your command file. For example, `olapicmd<`*`mycmd.cbs`*, or see “Running OLAP Command Script Files” on page 92.

Using SET and LOAD Commands

SET commands tell Essbase Integration Server which data sources are involved in a load operation. LOAD commands tell Essbase Integration Server to execute a load operation.

Note: To perform a successful member and data load, the SET commands must be executed before the LOAD commands.

SET commands provide Essbase Integration Server with the location of the source databases, Essbase server, and OLAP Metadata Catalog. The commands can be issued in any order, but you must issue all three SET commands before executing a LOAD command.

Use SET commands as follows:

SETSOURCE	Specifies the relational databases from which an Essbase outline is build
SETTARGET	Specifies the name of the Essbase server computer on which an Essbase outline for an Essbase application and database is built
SETCATALOG	Specifies the OLAP Metadata Catalog that you created to store OLAP models and metaoutlines

The STATUS command (see “STATUS” on page 94) does not check or validate the syntax for SET commands.

LOAD commands use the information from the SET commands to load members, data, or both. Use the LOAD commands as follows:

LOADMEMBER	Loads members into an Essbase outline. You must load members before you load data.
LOADDATA	Loads data into an Essbase database. You cannot load data without loading members.
LOADALL	Loads both members and data into an Essbase database.

LOAD commands for small outlines (fewer than 1000 members) take a few seconds to execute. Larger outlines (1000 or more members) take a few minutes to a few hours, depending on the amount of data being loaded, the configuration of the metaoutline, and the computer system capabilities. After executing LOAD commands, wait a few seconds until the command prompt (->) is displayed and then use the STATUS command to check the success or failure of the command execution.

See “Loading Dimensions and Members Using Essbase Integration Services Shell” on page 108 for a sample sequence of commands for loading members.

See “Loading Data Using Essbase Integration Services Shell” on page 109 for a sample sequence of commands for loading data.

Using Informational Commands

The STATUS and VERSION commands provide processing status and system release version information for you and can be used at any time in the sequence of command execution.

Using Command Syntax and Execution

Essbase Integration Services Shell commands are not case-sensitive, but named data sources, user IDs, and passwords might be case-sensitive, depending on the operating system and the RDBMS you are using. Enter the syntax exactly as shown in this chapter for each command. Keyword parameters can appear in any order.

The commands require semicolons and parameters such as data source name (DSN), user ID (UID), and password (PWD) to separate the command into statements that indicate what kind of information you are providing; for example:

```
SETSOURCE "DSN=database;UID=Smith;PWD=password;"
```

You must separate the statements with a semicolon. The final semicolon is optional. Do not use semicolons as part of data source names, because Essbase Integration Services Shell recognizes semicolons as field separators. It is recommended that you use double quotation marks around the parameters, as shown in the preceding example.

In this *Essbase Integration Services System Administrator's Guide*, all optional syntax parameters are indicated by their enclosure in brackets [ ]; however, do not type the brackets when you enter the commands.

Press Enter to execute the commands.

Note: If you are unsure of a specific syntax, use Essbase Integration Services Console to schedule member or data loads, or to create load scripts. An Essbase Integration Services Shell batch file and a corresponding `.cbs` file are created automatically in the *`ISHOME`*`\Batch` directory. You can reference, modify, and reuse the `.cbs` file for future member and data loads. In the Schedule Essbase Load dialog box, be sure to check the Save Script Only option instead of the Schedule option. For more information, see "Recording Member and Data Load Scripts" on page 90.

Recording Member and Data Load Scripts

If you are creating scripts to perform loads or other tasks, you may want a script generated by Essbase Integration Services to use as a model or to check your script syntax for Open Database Connectivity (ODBC) data source connection details. Record a load script with Essbase Integration Services by performing a load and recording it to a script file.

➤ To record a load script:

1. Start Essbase Integration Services Console and open a metaoutline.
2. Select **Outline >** and one of the following menu items:
   - **Member Load**
   - **Data Load**
   - **Member and Data Load**
3. In the **Essbase Application and Database** dialog box, type or select the appropriate application and database names.
4. Click **Next** to display the **Schedule Essbase Load** dialog box.
5. Save the load to a script file by clicking **Only Save Load Script** and then click **Save Scripts**.
6. In the **Save Script As** dialog box, type a name for the script that you want to save, and then click **OK**.
7. Click **Finish** to start the load or to complete scheduling of the load.

Running Essbase Integration Services Shell Script and Batch Files

If you use a series of commands frequently or you must enter many commands to complete a task, you can automate the task with a script or batch file. Both are text files.

- A script file (`.cbs` extension) contains Essbase Integration Services Shell commands. You can run a script file from the operating system command line or from within an operating system batch file.
- On Windows platforms, a batch file (`.bat` extension) is an operating system file that calls multiple Essbase Integration Services Shell scripts and is used to run multiple sessions of Essbase Integration Services Shell commands. You can run a batch file on the server from the operating system prompt.
- On UNIX, shell scripts are used in place of batch or script files.

When you run a script file, Essbase Integration Services Shell executes the commands in the order specified in the script until the program reaches the end of the file.

Running OLAP Command Script Files

Enter the following command at the command prompt to run a script file in Essbase Integration Services Shell:

```
olapicmd -fscriptFileName [> logFileName]
```

Replace *scriptFileName* with the name of the script file you are using. Replace *logFileName* with the name of the file where you want the feedback from the script to be recorded.

For example, the following sample script file, `olap_tbc.cbs`, was created in a text editor. This script connects to Essbase from the server console and generates outlines for a sample database. In the following example, the `status` command (see "STATUS" on page 94) is used to check the success or failure of each command. The `status` command returns the execution status in the Essbase Integration Services Shell window.

```
login labmachine1
status
settarget "DSN=labmachine1;UID=hyperion;PWD=password"
status
setcatalog "DSN=TBC_MD;UID=tbc;PWD=password"
status
setsource "DSN=TBC;UID=tbc;PWD=password"
status
loadall "OTL=TBC Metaoutline;APP=olaptbc;DBN=Tbf1;FLT_ID=1;
    CALC_SCRIPT=#DEFAULT#;"
status
loadall "OTL=TBC Metaoutline;APP=olaptbc;DBN=Tbf2;FLT_ID=2;
    OTL_CLEAR=Y;"
status
loadall "OTL=TBC Metaoutline;APP=olaptbc;DBN=Tbf3a;FLT_ID=3;
    OTL_CLEAR=N;CALC_SCRIPT=#DEFAULT#;"
status
loadall "OTL=TBC Metaoutline;APP=olaptbc;DBN=Tbf3ec;FLT_ID=3;
    OTL_CLEAR=N;ESSC_SCRIPT=mytest1"
status
exit
```

To execute the `olap_tbc.cbs` script file, type

```
olapicmd -folap_tbc.cbs
```

The following sample batch file, `olap_tbc.bat`, uses input from a script file named `olap_tbc.cbs` and saves the feedback in a file named `olap_tbc.log`:

```
olapicmd -folap_tbc.cbs > olap_tbc.log
```

Using Essbase Integration Services Shell Commands

The following subtopics describe each command and provide the syntax for entering the command. Each subtopic includes an example command entry for your reference.

The following commands are described in the subtopics:

- "LOGIN" on page 94
- "STATUS" on page 94
- "VERSION" on page 95
- "SETSOURCE" on page 95
- "SETTARGET" on page 96
- "SETCATALOG" on page 96
- "LOADMEMBER" on page 97
- "LOADDATA" on page 101
- "LOADALL" on page 103
- "LOGOUT" on page 107
- "SHUTDOWN" on page 107
- "EXIT" on page 108

Unless otherwise noted, you must be logged in to Essbase Integration Server to execute these commands.

The load commands in this topic are shown with an abbreviated syntax, which includes the syntax required for incremental loads. To see the full syntax for standard or incremental loads, use the Essbase Integration Services Console to record a script for a load. For more information on recording load scripts, see "Recording Member and Data Load Scripts" on page 90.

LOGIN

The LOGIN command connects you to the Essbase Integration Server computer. On a successful connection, the Essbase Integration Services Shell prompt changes to show the name of the Essbase Integration Server computer to which Essbase Integration Services Shell is connected. This command returns an error if you already are connected to the Essbase Integration Server computer.

Syntax

```
LOGIN IShost
```

IShost TCP/IP name or number of the computer where Essbase Integration Server is running

Example

```
LOGIN cypress
```

STATUS

The STATUS command displays the processing status of the most recently issued command. Use it to check the success or failure of all commands. After issuing a command, wait a few seconds until the command prompt (->) is displayed, and then enter the STATUS command.

The STATUS command does not check or validate the syntax for SET commands.

Syntax

```
STATUS
```

Example

Typing STATUS after issuing the LOADMEMBER command returns the following message in the Essbase Integration Services Shell window:

```
LOADMEMBER executed successfully, elapsed time is '22' seconds.
```

VERSION

The VERSION command returns the release number of the Essbase Integration Services software you are running.

Syntax

```
VERSION
```

Example

VERSION returns the release number for Essbase Integration Services software.

SETSOURCE

The SETSOURCE command enables you to identify one or more source databases for Essbase Integration Server to use with a load command.

Syntax

```
SETSOURCE "DSN=PrimaryODBCdatasource;UID=username;
PWD=password[;][DSN=SecondaryODBCdatasource;UID=username;
PWD=password][;]...[DSN=SecondaryODBCdatasource;
UID=username;PWD=password]"
```

PrimaryODBC datasource	The primary ODBC data source name configured on the computer where Essbase Integration Server runs—case-sensitive
username	The name for logging on to a primary or secondary ODBC data source—case-sensitive
password	The password for logging on to a primary or secondary ODBC data source—case-sensitive
SecondaryODBC datasource	The secondary ODBC data source name configured on the computer where Essbase Integration Server runs—case-sensitive

Example

```
SETSOURCE "DSN=TBC;UID=TBC;PWD=Password;DSN=TBC2;
UID=TBC;PWD=Password;DSN=TBC3;UID=TBC;PWD=Password"
```

SETTARGET

The SETTARGET command enables you to identify a target Essbase server computer for Essbase Integration Server to use with a load command.

Syntax

```
SETTARGET DSN=Essbasedataservername;UID=username;
PWD=password[;]
```

Essbase dataservername	The TCP/IP name or number of the computer where Essbase OLAP Server is running
username	The name for logging on to Essbase OLAP Server
password	The password for logging on to Essbase OLAP Server—case-sensitive

Example

```
SETTARGET "DSN=FIG;UID=TBC;PWD=Password"
```

SETCATALOG

The SETCATALOG command enables you to identify an OLAP Metadata Catalog database for Essbase Integration Server to use with a load command.

Syntax

```
SETCATALOG DSN=ODBCdatasource;UID=username;PWD=password[;]
```

ODBCdatasource	The ODBC data source name configured on the computer where Essbase Integration Server runs—case-sensitive
username	The name for logging on to the ODBC data source—case-sensitive
password	The password for logging on to the ODBC data source—case-sensitive

Example

```
SETCATALOG "DSN=TBC_MD;UID=Fred;PWD=Password"
```

LOADMEMBER

The LOADMEMBER command initiates a member load operation on Essbase Integration Server. The load environment must be set up properly before you invoke the LOADMEMBER command. To set up the load environment, issue the SET commands in any order. For more information, see “Using SET and LOAD Commands” on page 88.

To learn the status of the member load invoked by the LOADMEMBER command, wait until you see the command prompt (->), then use the STATUS command.

Syntax

```
LOADMEMBER "OTL=Metaoutline;APP=EssbaseApplication;
DBN=EssbaseDatabase;[FLT_NAME=Filtername;]
[FLT_ID=Filter_ID_Number;][ESSCMD_SCRIPT=EsscmdScriptname;]
[DELETE_DB=Delete_and_Restore_Database;]
[INCUPD=Incremental_Dimension_Update_Level;]
[INCUPD_MEMBER=Incremental_Member_Load_Update_Level;]
[OTL_CLEAR=Delete_All_Members_First;][@@USERS=EssbaseUsers;]
[ATTR_UPDATE_LEVEL=Attribute_Update_Level][;]"
```

Metaoutline — The name of the metaoutline—case-sensitive. This metaoutline is used to extract data and create a Essbase outline.

Essbase Application — The name of the Essbase application on the target Essbase OLAP Server computer where the Essbase outline is created.

Essbase Database — The name of the Essbase database on the target Essbase OLAP Server computer. Essbase Integration Server applies this name to the Essbase outline.

Filtername/
Filter ID_ Number — **Optional.** You can specify a filter name or filter ID to use when loading data. Because the filter name and filter ID are the same, do not specify both. If you do not specify either, the default name (*DEFAULT) is used. The default filter ID is 1; any additional filters are numbered sequentially, starting with the number 2. If the filter name contains a space, enclose it in double quotation marks. For information about creating filters, see the Essbase Integration Services Console Help.

Esscmd Scriptname

Optional. The name of an ESSCMD script. The script that you define instructs Essbase to perform specified actions on the Essbase database. These actions might include changing a member tag or loading data from a worksheet into user-defined members after you load the data from the relational data source. The ESSCMD script must be in the *`ISHOME`*`/esscript` directory.

Delete and Restore Database

Optional. The Delete and Restore Database parameter directs the Essbase Integration Server whether or not to delete all members in the Essbase database before performing a member load. When this option is selected (`DELETE_DB=Y`), the options Delete All Members First, Modify Essbase Users, and Incremental Update cannot be used.

Values are as follows:

Y = Delete and restore (recreate) the Essbase database during the member load process.

N = Do not delete and restore the Essbase database (this is the default).

Incremental Dimension Update Level

Optional. The level at which dimensions are updated during an incremental member load. The format is:

```
INCUPD=n-n,n-n,... n-n[;]
```

Values for incremental update are as follows:

- The first digit, *n*, represents the dimension ID of the dimension to which the incremental update applies.
- The second digit, *n*, represents the member ID of the level zero member of the hierarchy to which the incremental update applies.

Incremental Member Load Update Level

Optional. Specify 1, 2, 3, or 4. Member Load Update options set the parameters for restructuring the database during a member load. The option that you select affects any subsequent data loads.

Values are as follows:

1 = Preserve all data. Select to preserve all existing data that applies to the changed outline when restructuring occurs. This is the default (`INCUPD_MEMBER=1`).

2 = Discard all data. Select to clear all data from the database.

3 = Preserve level 0 data. Select to preserve data only for level zero members.

This is the optimal restructure option if you change the source database and need to recalculate the data, and if all data required for the calculation is in level zero members.

Selecting this option deletes all upper-level blocks before restructuring. This reduces the disk space for restructuring and improves calculation time when the database is recalculated. The upper-level blocks are re-created when you calculate the database.

4 = Preserve input data. Select to preserve only those blocks containing data that is loaded. Many applications contain data that is entered at parent levels. Selecting this option prevents deletion of any blocks that are created by data load, whether they are non-level zero or level zero (leaf member) blocks.

Delete all members first

Optional. Specify Y or N. Enter Y (Yes) for Essbase Integration Server to remove all members from the existing database and then recreate the database by using the members in the metaoutline. This process is slower than creating or updating an Essbase outline without deleting the members; therefore, do not delete all members first unless it is necessary. You should delete all members if, for example, you know that some members have been removed from the OLAP metaoutline and you want to build an Essbase outline containing a smaller set of members. The default is N (No).

EssbaseUsers	**Optional.** Lists all user IDs that can access the Essbase application and database into which you are loading the members. Commas separate user IDs. For example, `@@USERS="admin","ljones","ksmith"`.
AttributeUpdateLevel	The level at which attribute dimensions are updated. Values are as follows: 1 = Remove all existing attribute dimensions from the Essbase outline and use Global Settings from the OLAP metaoutline. 2 = Use Global Settings defined in the Essbase outline to add new attribute dimensions but do not update existing attribute dimensions. With this parameter, no new members are added to an existing attribute dimension. 3 = Use Global Settings from the OLAP metaoutline and perform updates to the existing attribute dimensions. Essbase reports error conditions for any invalid attribute members.

Example

```
LOADMEMBER "OTL=TBC Metaoutline;
APP=OLAP_TBC;DBN=Basic;FLT_NAME=Blue filter;
INCUPD=1-2,2-1,3-2,4-2,5-1,5-2,5-3;
INCUPD_MEMBER=1;"
```

LOADDATA

The LOADDATA command initiates a data load operation on Essbase Integration Server. The load environment must be set up properly before you invoke this command. To set up the load environment, issue the SET commands in any order. For more information, see “Using SET and LOAD Commands” on page 88.

LOADDATA takes a few seconds to execute. After executing LOADDATA, use the STATUS command to learn the status of the command execution.

Syntax

```
LOADDATA "OTL=Metaoutline;APP=EssbaseApplication;
DBN=EssbaseDatabase;[FLT_NAME=Filtername;]
[FLT_ID=Filter_ID_Number;][CALC_SCRIPT=CalcScriptname;]
[ESSCMD_SCRIPT=EsscmdScriptname;]
[INCUPD=Incremental_Dimension_Update_Level;]
[INCUPD_DATA=Incremental_Data_Load_Update_Level;]
[@@USERS=EssbaseUsers][;]"
```

Metaoutline The name of the metaoutline. Essbase Integration Server uses the specified metaoutline to extract data from the relational data source to create an Essbase outline.

EssbaseApplication The name of the Essbase application on the target Essbase OLAP Server computer where the Essbase outline is created.

EssbaseDatabase The name of the Essbase database on the target Essbase OLAP Server computer. Essbase Integration Server applies this name to the Essbase outline.

Filtername/ Filter_ID_ Number **Optional.** You can specify a filter name or filter ID to use when loading data. Because filter name and filter ID are the same, do not specify both. If you do not specify either, the default name (`*DEFAULT`) is used. The default filter ID is 1; any additional filters are numbered sequentially, starting with the number 2. If the filter name contains a space, enclose it in double quotation marks. For information about creating filters, see the Essbase Integration Services Console Help.

CalcScriptname

Optional. The name of the calculation script. The calculation script determines how Essbase calculates the data values in the database. If you do not select a calculation script, Essbase Integration Server does not perform a calculation.

EsscmdScriptname

Optional. The name of an ESSCMD script. The script that you define instructs Essbase to perform specified actions on the Essbase database. These actions might include changing a member tag or loading data from a worksheet into user-defined members after you load the data from the relational data source. The ESSCMD script must be in the `ISHOME/esscript` directory.

Incremental Dimension Update Level

Optional. The level at which dimensions are updated during an incremental data load. The format is:

```
INCUPD=n-n,n-n,... n-n[;]
```

Values are as follows:

- The first digit, *n*, represents the dimension ID of the dimension to which the incremental update applies.
- The second digit, *n*, represents the member ID of the level zero member of the hierarchy to which the incremental update applies.

Incremental Data Load Update Level

Optional. Data Load Update options determine how Essbase loads values from a data source to the database. Specify 1, 2, or 3. Values are as follows:

1 = Overwrite. Select to replace the values in the database with the values in the data source. This is the default (`INCUPD_DATA=1`).

2 = Add. Select to add values in the data source to the existing values in the database.

3 = Subtract. Select to subtract the values in the data source from the existing values in the database.

EssbaseUsers

Optional. Lists all user IDs that can access the Essbase application and database into which you are loading the members. Commas separate user IDs. For example, `@@USERS="admin","ljones","ksmith"`.

Example

```
LOADDATA "OTL=TBC Metaoutline;
APP=OLAP_TBC;DBN=Basic;
FLT_NAME=Blue filter;
INCUPD=1-2,2-1,3-2,4-2,5-1,5-2,5-3;
INCUPD_DATA=1;"
```

LOADALL

The LOADALL command initiates a load of both members and data on Essbase Integration Server. The load environment must be set up properly before you invoke this command. To set up the load environment, issue the SET commands in any order. For more information, see “Using SET and LOAD Commands” on page 88.

LOADALL takes a few seconds to execute. After executing LOADALL, use the STATUS command to learn the status of the command execution.

Note: If you want an ESSCMD script to execute between a member and data load, use the LOADMEMBER and LOADDATA commands instead of the LOADALL command.

Syntax

```
LOADALL "OTL=Metaoutline;APP=EssbaseApplication;
DBN=EssbaseDatabase;[FLT_NAME=Filtername;]
[FLT_ID=Filter_ID_Number;][CALC_SCRIPT=CalcScriptname;]
[ESSCMD_SCRIPT=EsscmdScriptname;]
[DELETE_DB=Delete and Restore Database;]
[INCUPD=Incremental_Dimension_Update_Level;]
[INCUPD_MEMBER=Incremental_Member_Load_Update_Level;]
[INCUPD_DATA=Incremental_Data_Load_Update_Level;]
[OTL_CLEAR=Delete all members first;][@@USERS=EssbaseUsers][;]
[ATTR_UPDATE_LEVEL=AttributeUpdateLevel][;]"
```

Metaoutline The name of the metaoutline. Essbase Integration Server uses the specified metaoutline to extract data from the relational data source to create an Essbase outline.

EssbaseApplication The name of the Essbase application on the target Essbase OLAP Server computer where the Essbase outline is created.

EssbaseDatabase

The name of the Essbase database on the target Essbase OLAP Server computer. Essbase Integration Server applies this name to the Essbase outline.

Filtername/ Filter_ID_ Number

Optional. You can specify a filter name or filter ID to use when loading data. Because filter name and filter ID are the same, do not specify both. If you do not specify either, the default name (`*DEFAULT`) is used. The default filter ID is 1; any additional filters are numbered sequentially, starting with the number 2. If the filter name contains a space, enclose it in double quotation marks. For information about creating filters, see the Essbase Integration Services Console Help.

CalcScriptname

Optional. The name of the calculation script. The calculation script determines how Essbase calculates the data values in the database. If you do not select a calculation script, Essbase Integration Server does not perform a calculation.

EsscmdScriptname

Optional. The name of an ESSCMD script. The script that you define instructs Essbase to perform specified actions on the Essbase database. These actions might include changing a member tag or loading data from a worksheet into user-defined members after you load the data from the relational data source. The ESSCMD script must be in the *ISHOME*`\esscript` directory.

Delete and Restore Database

Optional. The Delete and Restore Database parameter directs the Essbase Integration Server whether or not to delete all members and data in the Essbase database before performing a member and data load. When this option is selected (`DELETE_DB=Y`), the options Delete All Members First, Modify Essbase Users, and Incremental Update cannot be used.

Values are as follows:

Y = Delete and restore (recreate) the Essbase database during the member load process.

N = Do not delete and restore the Essbase database (this is the default).

Incremental Dimension Update Level

Optional. The level at which dimensions are updated during an incremental member and data load. The format is:

```
INCUPD=n-n,n-n,...n-n[;]
```

Values are as follows:

- The first digit, *n*, represents the dimension ID of the dimension to which the incremental update applies.
- The second digit, *n*, represents the member ID of the level zero member of the hierarchy to which the incremental update applies.

Incremental Member Load Update Level

Optional. Specify 1, 2, 3, or 4. Member Load Update options set the parameters for restructuring the database during a member load. The option that you select affects any subsequent data loads. Values are as follows:

1 = Preserve all data. Select to preserve all existing data that applies to the changed outline when restructuring occurs. This is the default (`INCUPD_MEMBER=1`).

2 = Discard all data. Select to clear all data from the database.

3 = Preserve level 0 data. Select to preserve data only for level zero members.

This is the optimal restructure option if you change the source database and need to recalculate the data, and if all data required for the calculation is in level zero members.

Selecting this option deletes all upper-level blocks before restructuring. This reduces the disk space for restructuring and improves calculation time when the database is recalculated. The upper-level blocks are re-created when you calculate the database.

4 = Preserve input data. Select to preserve only those blocks containing data that is loaded. Many applications contain data that is entered at parent levels. Selecting this option prevents deletion of any blocks that are created by data load, whether they are non-level zero or level zero (leaf member) blocks.

Incremental Data Load Update Level

Optional. Data Load Update options determine how Essbase loads values from a data source to the database. Specify 1, 2, or 3. This is the default (`INCUPD_DATA=1`).

Values are as follows:

1 = Overwrite. Select to replace the values in the database with the values in the data source.

2 = Add. Select to add values in the data source to the existing values in the database.

3 = Subtract. Select to subtract the values in the data source from the existing values in the database.

Delete all members first

Optional. Specify Y or N. Enter Y (Yes) for Essbase Integration Services to remove all members from the existing database and then recreate the database by using the members in the metaoutline. This process is slower than creating or updating a Essbase outline without deleting members; therefore, do not delete all members unless it is necessary. You should delete all members if, for example, you know that some members have been removed from the OLAP metaoutline and you want to build the Essbase outline containing a smaller set of members. The default is N (No).

EssbaseUsers

Optional. Lists all user IDs that can access the Essbase application and database into which you are loading members. Commas separate user IDs. For example, `@@USERS="admin","ljones","ksmith"`.

AttributeUpdateLevel

The level at which attribute dimensions are updated. Values are as follows:

1 = Remove all existing attribute dimensions from the Essbase outline and use Global Settings from the OLAP metaoutline.

2 = Use Global Settings defined in the Essbase outline to add new attribute dimensions but do not update existing attribute dimensions. With this parameter, no new members are added to an existing attribute dimension.

3 = Use Global Settings from the OLAP metaoutline and perform updates to the existing attribute dimensions. Essbase reports error conditions for any invalid attribute members.

Example

```
LOADALL "OTL=TBC Metaoutline;APP=OLAP_TBC;DBN=Basic;
FLT_NAME=Blue filter" CALC_SCRIPT=#DEFAULT#;
INCUPD=1-2,2-1,3-2,4-2,5-1,5-2,5-3;
INCUPD_MEMBER=1;INCUPD_DATA=1;"
```

LOGOUT

The LOGOUT command logs you out of Essbase Integration Server. On a successful logout, the Essbase Integration Services Shell prompt changes to LOCAL.

Syntax

```
LOGOUT
```

Example

LOGOUT logs you out of Essbase Integration Server.

Note: If you log out of Essbase Integration Server, you no longer have an active session. To execute another command, you must log on to Essbase Integration Server again.

SHUTDOWN

The SHUTDOWN command shuts down Essbase Integration Server. You must be logged on to Essbase Integration Server before you can use this command.

Syntax

```
SHUTDOWN
```

Example

SHUTDOWN shuts down Essbase Integration Server.

EXIT

The EXIT command exits Essbase Integration Services Shell and closes the Essbase Integration Services Shell window. Before you exit from Essbase Integration Services Shell, Essbase Integration Server automatically executes a LOGOUT command.

Syntax

```
EXIT
```

Example

EXIT logs you out of Essbase Integration Server and closes the Essbase Integration Services Shell window.

Loading Dimensions and Members Using Essbase Integration Services Shell

You can perform a member load by using Essbase Integration Services Shell instead of Essbase Integration Services Console.

You can manually schedule the batch file by using the AT service in Windows NT and Windows 2000 or the cron scheduling daemon on UNIX systems. If you are not sure how to schedule the batch file manually, see the operating system documentation.

➤ To load members and dimensions when using Essbase Integration Services Shell, follow the same basic steps for loading members as you would when using Essbase Integration Services Console:

1. Log on to the Essbase Integration Server computer by using the LOGIN command; for example

   ```
   LOGIN cypress
   ```

2. Connect to the external data source by using the SETSOURCE command; for example

   ```
   SETSOURCE DSN=TBC;UID=TBC;PWD=password
   ```

3. Connect to the Essbase server computer by using the SETTARGET command; for example

```
SETTARGET DSN=sequoia;UID=sys;PWD=password
```

4. Connect to OLAP Metadata Catalog by using the SETCATALOG command; for example

```
SETCATALOG DSN=TBC_MD;UID=TBC;PWD=password
```

5. Start the member load by using the LOADMEMBER command; for example

```
LOADMEMBER "OTL=TBC Metaoutline;APP=OLAP_TBC;
DBN=Basic;FLT_NAME=Filter1"
```

Loading Data Using Essbase Integration Services Shell

You can perform a data load by using Essbase Integration Services Shell instead of Essbase Integration Services Console.

You can manually schedule the batch file by using the AT service on Windows NT and Windows 2000 or the cron scheduling daemon on UNIX systems. If you are not sure how to schedule a batch file manually, see the operating system documentation.

➤ To load data by using Essbase Integration Services Shell, follow the same basic steps for loading data as you would using Essbase Integration Services Console:

1. Log on to Essbase Integration Server by using the LOGIN command; for example

```
LOGIN FIG
```

2. Connect to the external data source by using the SETSOURCE command; for example

```
SETSOURCE DSN=TBC;UID=TBC;PWD=password
```

3. Connect to the OLAP Essbase server by using the SETTARGET command; for example

```
SETTARGET DSN=sequoia;UID=sys;PWD=password
```

4. Connect to OLAP Metadata Catalog by using the SETCATALOG command; for example

   ```
   SETCATALOG DSN=TBC_MD;UID=TBC;PWD=password
   ```

5. Start the data load by using the LOADDATA command; for example

   ```
   LOADDATA "OTL=TBC Metaoutline;APP=OLAP_TBC;DBN=Basic;
   FLT_NAME=Filter1"
   ```

Appendix

A

Essbase Integration Server Error Messages

This appendix details the error messages generated by Essbase Integration Server. Error messages are grouped into the following categories:

- "Member Load Error Messages" on page 111
- "Data Load Error Messages" on page 115
- "Drill-Through Report Error Messages" on page 115
- "Miscellaneous Error Messages" on page 117

Member Load Error Messages

Table 8 lists error messages that Essbase Integration Server may generate during a member load. Italicized words represent variable names inserted in the error message. Refer to the error message number in the first column and make a note of it if you need to contact Hyperion Technical Support with a problem.

Table 8: Essbase Integration Server Member Load Error Messages

Message Number	Message Content
049	Detected metadata join problem (*table.column* < - > *table.column*).
050	Encountered unknown ODBC exception while opening database. Aborting the command.
064	Failed to add database *Essbase database*.
065	Failed to add dimension *dimension*.
066	Failed to add Essbase member *member* (%d).
067	Failed to add Essbase member *member* (child of shared parent).

Table 8: Essbase Integration Server Member Load Error Messages (Continued)

Message Number	Message Content
068	Failed to add Essbase member *member* (DUPLICATE).
069	Failed to add Essbase member *member* (DUPLICATE, ignored).
070	Failed to add Essbase member *member* (no parent or sibling members found).
071	Failed to add Essbase member *member*, %d.
072	Failed to add Essbase member *member;* the member exists.
073	Failed to add formula *formula*.
074	Failed to add member *member.*
075	Failed to add metaoutline member *member.*
076	Failed to add user attribute *user-defined attribute.*
077	Failed to create a local context.
078	Failed to create a local outline.
079	Failed to create application *Essbase application*.
080	Failed to create dimension *dimension*.
083	Failed to get information for parent of *recursive hierarchy member.*
085	Failed to get metadata for *dimension.member.*
088	Failed to initialize Essbase API.
089	Failed to open outline *Essbase outline*.
093	Failed to restructure *Essbase outline*.
095	Failed to update Essbase server (NULL HEADER)
097	Filter *metaoutline filter* doesn’t exist for *metaoutline* metaoutline.
098	Filter expression length exceeded the limit of *maximum bytes* bytes.
115	Incremental update specification *incremental update specification string* is incorrect.
126	Invalid aggregation function *aggregate function* for *table.column*.
129	Invalid esscmd script name *esscmd script*.

Table 8: *Essbase Integration Server Member Load Error Messages (Continued)*

Message Number	**Message Content**
130	Invalid parameter *parameter.*
132	Invalid parameter string.
142	Metadata error: *property ID* is not a valid property for *member* or *dimension*.
143	Metaoutline validation error. *Recursive hierarchy member*, a recursive member cannot have aggregation filter.
144	Metaoutline validation error. Filter = *member filter*, is not associated with any member.
188	Unknown exception encountered while opening dimension *dimension*.
189	Unknown exception encountered while opening member *member.*
190	Unknown exception encountered while opening metaoutline *metaoutline*.
341	Failed to Login to Essbase Server.
342	Failed to Get Essbase Settings.
344	Failed to unload database.
345	Failed to delete database.
346	Failed to close outline.
347	Failed to read outline.
349	Failed to unlock Database *database*.
350	Failed to save outline.
351	Unable to process state for *Essbase command*.
352	Failed to get access permissions for application.
353	Failed to set access permissions for application.
354	Failed to get access permissions for database.
355	Failed to set access permissions for database.
356	No member found.

Table 8: Essbase Integration Server Member Load Error Messages (Continued)

Message Number	Message Content
357	Essbase Error: *error definition*.
358	Failed to get user attributes.
360	Failed to add member to outline.
361	Failed to calculate the data.
362	Failed to get parent.
363	Failed to get member.
364	Failed to move member.
365	Failed to get shared member.
366	Failed to get member information.
367	Failed to sort outline.
377	IS Error: Unable to delete outline.
378	IS Error: SQL Generation for member load failed.
379	IS Error: Database close operation failed after load.
380	IS Error: Catalog close operation failed after load.
381	IS Error: Essbase close operation failed after load.
382	IS Error: No OLAP model name specified.
383	IS Error: Failed to open OLAP model *OLAP model*.
384	IS Error: Failed to close OLAP Metadata Catalog *OLAP Metadata Catalog*.
385	Failed to create virtual model.
386	Member load completed with errors.
387	Member load terminated due to error.

Data Load Error Messages

Table 9 lists the error messages that Essbase Integration Server may generate during a data load. Italicized words represent variable names inserted in the error message. Refer to the error message number in the first column and make a note of it if you need to contact Hyperion Technical Support with a problem.

Table 9: Essbase Integration Server Data Load Error Messages

Message Number	Message Content
034	Cell load exceptions encountered.
047	Data load exceptions encountered. *? , amount*.
063	Failed to activate *Essbase_application.Essbase.database*.
082	Failed to execute esscmd script *esscmd script*.
388	IS Error: Failed to get dataload SQL.
389	IS Error: Failed to get dimbuild SQL.
390	IS Error: No. of dataload SQLs not equal to no. of hierarchies.

Drill-Through Report Error Messages

Drill-through reports are created using the Essbase Integration Services Console OLAP Metaoutline standard user interface and are viewed using Essbase Spreadsheet Add-in for Excel or Lotus 1-2-3.

Table 10 lists the error messages that Essbase Integration Server may generate to Essbase users viewing Drill-through reports. Italicized words represent variable names inserted in the error message. Refer to the error message number in the first column and make a note of it if you need to contact Hyperion Technical Support with a problem.

Table 10: Essbase Integration Server Drill-Through Report Error Messages

Message Number	**Message Content**
081	Failed to enable DTS Member *member*.
087	Failed to get the universal member handle.
125	Intersection element *member* does not exist in *table.column*.
131	Invalid parameter count for the drill-through request. Aborting...
153	Received NULL pointer in DTAttributes( ) for Report = *Drill-Through report*.
154	Received NULL pointer in GetDTData ( ) for Report = *Drill-Through report*.
155	Received NULL pointer in GetDTDomain ( ).
156	Received NULL pointer in GetDTReport ( ).
157	Received NULL pointer in SetDTReport ( ).
183	Too many Drill-Through reports defined (exceeded Essbase metadata size limit). Drill-Through is disabled for this outline.
186	Unknown exception in GetDTReport ( ).
359	Essbase Error: Invalid Drill-Through Metadata.
369	IS Error: Data load completed with errors.
370	IS Error: Data load terminated due to errors.
371	IS Error: Unable to log in to data source.
372	IS Error: Unable to log in to OLAP Metadata Catalog.
373	IS Error: Unable to log in to Essbase Server.
374	IS Error: Unable to read Metaoutline information.
375	IS Error: Data calculation failed.
376	IS Error: Esscmd script execution failed.

Miscellaneous Error Messages

Table 11 lists the miscellaneous error messages that Essbase Integration Server may generate during OLAP model and metaoutline creation and during data and member loads. Italicized words represent variable names inserted in the error message. Refer to the error message number in the first column and make a note of it if you need to contact Hyperion Technical Support with a problem.

Table 11: Essbase Integration Server Miscellaneous Error Messages

Message Number	Message Contents
004	*Metaoutline* failed validation. Database measures not specified.
007	*Add job* failed.
017	*Syntax* Syntax error at *character location* in the filter expression *filter.*
018	*Member* cannot have aggregation filter. Only leaf members can have aggregation filters.
054	Error message unavailable for this error.
057	Essbase server on *Essbase server computer* is not enabled with Essbase Integration Services option. Please inform your system administrator.
084	Failed to get job info (OS error *Job-ID*).
086	Failed to get the ODBC message.
090	Failed to remove *temporary batch file* (OS error *operating system error*).
091	Failed to remove job (OS error *operating system error*).
092	Failed to remove old job (OS error *operating system error*).
094	Failed to schedule job (OS error *operating system error*).
096	Fatal error.
124	Internal system error. Please contact Technical Support with the error number 1999999.
127	Invalid command line option *OLAP Integration Server switch*.
128	Invalid datatype specification *data type*.

Table 11: Essbase Integration Server Miscellaneous Error Messages (Continued)

Message Number	Message Contents
133	Invalid session identifier; please log in to Essbase Integration Services again.
159	Replace Failed *member transformation.*
185	Trying to access invalid memory. Contact Technical Support.
187	Unknown ODBC exception encountered while closing database.
206	*Syntax* Syntax error at *character location* in the filter expression *filter.*
207	Essbase Integration Services is already running on this machine.
208	Failed to release locks.
333	ODBC Error: Encountered unknown ODBC exception while opening database.
334	ODBC Error: Encountered unknown ODBC exception while closing database.
336	ODBC Error: Failed to get ODBC Error message for error number.
338	IS Error: Error during parsing Load Parameters.
343	Essbase Error: Essbase Server on *Essbase server computer* is not enabled with Essbase Integration Services option.
344	Failed to unload database.
348	Failed to get information for Database *database*.
391	IS Error: Unable to get tables for pattern name *SQL regular expression pattern* from data source.
392	IS Error: Unable to get columns for table *relational table* from data source.
393	IS Error: Unable to extract foreign keys for tables *relational table, relational table* from data source.
394	IS Error: Failed to bind columns.
395	IS Error: Failed to fetch next row.
396	IS Error: Failed to get number of columns.

Table 11: Essbase Integration Server Miscellaneous Error Messages (Continued)

Message Number	Message Contents
397	IS Error: Failed to get column attributes.
398	IS Error: Failed to get statement handle.
399	IS Error: Failed to release statement handle.
400	IS Error: Failed to get number of rows.
401	IS Error: Failed to connect to Essbase Integration Services.

Glossary

accounts dimension. A dimension type that makes accounting intelligence available. You can tag only one dimension as Accounts; you do not have to have an accounts dimension.

Add Joins mode. In Essbase Integration Services, a state in which you can draw lines to define joins between objects in the OLAP model.

aggregate. *See* consolidate.

aggregation level. *See* consolidation level.

alias. An alternative name for a dimension, member, or description.

alias column. In Hyperion Integration Server, a column in the data source that contains the aliases for a member level in the metaoutline.

alternate name. *See* alias.

ancestor. A branch member that has members below it. For example, in a dimension that includes years, quarters, and months, the members Qtr2 and 2001 are ancestors of the member April.

application. In Hyperion Essbase, a container for one or more Hyperion Essbase databases and files, such as calc scripts and data load rules, that are related to the databases.

Architect. *See* Essbase Integration Services Console.

attribute. A classification of a member in a dimension. You can specify an attribute to select and group members with a specified attribute and to perform calculations and application-specific functions. For example, a Product dimension can have several attributes, such as Size and Flavor. A specific member of the Product dimension can have the Size attribute 8 and the Flavor attribute Cola.

base dimension. A standard dimension that is associated with one or more attribute dimensions. To classify a member of a base dimension, you associate it with a member of one or more attribute dimensions that describes the classification, such as a specific flavor. For example, assuming products have flavors, the Product dimension is the base dimension for the Flavors attribute dimension.

block. The primary storage unit within Essbase. A block is a multidimensional array representing the cells of all dense dimensions.

branch. A member of a hierarchy that may or may not contain leaf members.

Builder. *See* Essbase Integration Services Console.

catalog. *See* OLAP Metadata Catalog.

cell. A unit of data representing the intersection of dimensions in a multidimensional database; the intersection of a row and a column in a worksheet.

child. A member that has a parent above it in the database outline.

column. In relational databases, a vertical part of a table. Also known as a field. A column contains all the values for a specific type of information. Every column has a name and a particular data type. For example, a column may contain the name or employee number for each employee.

Command Interface. *See* Essbase Integration Services Shell.

concatenation. An operation that joins two characters or strings in the order specified, forming one string whose length is equal to the sum of the lengths of the two characters or strings. For example, the strings “New York “ and “Library”, when concatenated, become “New York Library”.

condition. In relational databases, a data extraction criterion. For example, you can apply a condition to extract only the data that begins with the letter A.

consolidate. The process of gathering data from dependent entities and aggregating the data to parent entities. Once you enter or load data into child entities, you perform a consolidation to aggregate the data through the organization. As data consolidates, intercompany processing, conversion methods, equity adjustments, and minority ownerships perform calculations on the data.

consolidation level. The top of an aggregation hierarchy or any branch or sub-branch below the top, including the input (leaf) portion of the hierarchy.

data block. *See* block.

data cleansing. The process of making inconsistent data consistent. Examples of inconsistent data are data in which some values are incorrect or not of the correct data type.

data file. A file containing data blocks; Essbase generates the data file during a data load and stores it on disk.

data load. The process of populating an Essbase database with data. Loading data establishes actual values for the cells defined by the structural outline of the database.

data point. *See* cell.

data type. Defines the kind of data that a column can contain. For example, columns with the Numeric data type contain numbers.

data value. *See* cell.

database. A collection of related information. Each unit (record) of the database is typically organized in a fixed format to make it easy to retrieve selected portions of the data on demand. Each record is made up of one or more data fields, and each data field can hold one piece of data (known as a value).

database administrator (DBA). An individual who administers database servers, such as Essbase, and who may also design, maintain, and create databases.

database outline. *See* outline.

DateTime transformation. A set of instructions that defines how to change or reformat a relational database DateTime data type to your choice of date format.

DBMS. *See* relational database management system (RDBMS).

denormalization. The process of adding redundancy to data in a database, typically by joining tables to form more complete sets of data in the individual tables. This process is performed for the purpose of increasing data retrieval performance. *Contrast with* normalization.

dense dimension. A dimension likely to contain data for every combination of dimension members. For example, a time dimension is typically a dense dimension because it contains all combinations of all members. Contrast with sparse dimension.

descendant. Any member below a parent in the database outline. For example, in a dimension that includes years, quarters, and months, the members Qtr2 and April are descendants of the member Year.

detail member. *See* leaf member.

dimension. A data category that is used to organize business data for retrieval and preservation of values. Each dimension usually contains a hierarchy of related members grouped within it. For example, a Year dimension often includes members for each time period, such as quarters and months. Other common business dimensions may be measures, natural accounts, products, and markets.

dimension branch. A collection of dimension tables organized in a hierarchical structure, with one of the dimension tables joined directly to the fact table. A dimension branch defines a single, potential Hyperion Essbase dimension in an Essbase Integration Services metaoutline.

dimension build rules. In Hyperion Essbase, a set of operations similar to data load rules. Instead of loading data, the dimension build rules modify the outline based on data in the external data source file.

dimension table. A container in the OLAP model for one or more relational tables that define a potential Hyperion Essbase dimension. When one dimension table joins to another dimension table, forming a dimension branch, the dimension is composed of the columns of all of the dimension tables in the dimension branch.

dimension type. A property in the OLAP model and in the metaoutline that defines which tables form the Hyperion Essbase accounts, time, and standard (default) dimensions.

drill-through report. Direct access by Spreadsheet Add-in users to data stored in the relational data source. Defined in Essbase Integration Services, a drill-through report is based on intersection levels (member sets) that Spreadsheet Add-in users double-click to view detail information that is not stored in the Essbase database.

duplicate member. The second occurrence of a member name in a data source. Users can determine whether Essbase Integration Server ignores duplicate members or adds them as shared members. *See also* shared member.

Dynamic Time Series. A process that is used to perform dynamic period-to-date reporting for all values associated with a query.

Essbase database. A repository of data within Hyperion Essbase that contains a multidimensional data storage array. Each database consists of a defined storage structure (a database outline), data, security definitions, and other associated files, such as calc scripts or data load rules. *See also* application.

Essbase Integration Server. The server component of the Essbase Integration Services product family. Essbase Integration Server uses the information stored in the OLAP Metadata Catalog to extract the dimension names and member names needed to build a Hyperion Essbase outline from the data source. When the Hyperion Essbase outline is complete, Essbase Integration Server extracts data from the data source, performs the operations specified in the metaoutline, and loads the data into the Hyperion Essbase database.

Essbase Integration Services Console. The client component of the Hyperion Integration Services product family. This graphic interface tool is used to create OLAP models and metaoutlines, and to load data into a Hyperion Essbase database.

Essbase Integration Services Shell. In Essbase Integration Services, a command-line tool that you can use to perform common operations on the Hyperion Essbase outline and the data in the Hyperion Essbase database. For example, you can use the LOADDATA command to load data.

Essbase kernel. A layer of the Essbase server that provides the foundation for a variety of functionality, including data loading, calculations, spreadsheet lock&send, partitioning, and restructuring. The Essbase kernel reads, caches, and writes data; it manages transactions; and it enforces transaction semantics to ensure data consistency and data integrity.

Essbase OLAP Server. A Hyperion server that locates and accesses multidimensional data.

Essbase outline. *See* outline.

fact table. A container for one or more relational tables that define the data values for each dimension intersection in the OLAP model. For example, if the OLAP model contains Products, Region, and Year dimensions, the fact table might include data values for the number of units of Product A sold in New York in January.

field. (1) In Hyperion Essbase, a value or item in a data source file that is retrieved from a Hyperion Essbase database. (2) In relational databases, a space allocated for a particular item of information. Fields are the smallest units of information you can access. Most fields have certain characteristics associated with them. For example, some fields are numeric, whereas others are textual. Every field has a name.

file delimiter. One or more characters, such as a comma (,), separating fields in a data source.

filter. (1) In Hyperion Essbase, a method for controlling access to database cells. A filter is the most detailed level of security, allowing you to define the varying access levels that users can have to data. (2) In Essbase Integration Services and in relational databases, a method for controlling which data you retrieve from a relational database. For example, you can choose to retrieve products only in the Product A product family. A filter contains one or more conditions.

foreign key. In relational databases, a column whose data values correspond to the values of a key column in another relational table. *See also* key column and primary key.

formula. In Hyperion Essbase, a combination of operators and functions as well as dimension names, member names, and numeric constants. Formulas are used to calculate relationships between members of a Hyperion Essbase database. @VAR(Actual, Budget) is an example of a formula.

generation. A layer in a hierarchical tree structure that defines member relationships in a database. For example, Essbase orders generations incrementally from the dimension (generation 1) down to the child members.

generation name. A unique name that describes a generation.

hierarchy. A set of multidimensional relationships in an outline, often created in a tree formation. For example, parents, children, and generations represent a hierarchy.

Hybrid Analysis. The integration of a relational database with an Essbase multidimensional database so that lower-level data remains in the relational database and is mapped to summary-level data residing in the Essbase database. Hybrid Analysis allows Essbase to take advantage of the mass scalability of a relational database while maintaining a multidimensional view of the data in a live environment.

Hyperion Integration Server Desktop. *See* Essbase Integration Services Console.

index. (1) In Hyperion Essbase, a method of retrieving data based on sparse dimensions. Also refers to the index files, collectively. (2) In relational databases, pointers that are logically arranged by the values of a key. Indexes optimize access to relational data.

index cache. In Hyperion Essbase, a buffer in memory that holds index pages.

index entry. In Hyperion Essbase, a pointer to an intersection of sparse dimensions. Each index entry points to a block on disk and locates a particular cell within the block by means of an offset.

index file. In Hyperion Essbase, a file used to store data retrieval information. It resides on disk and contains index pages.

index page. In Hyperion Essbase, a subdivision of an index file containing entries that point to data blocks.

input block. A type of data block that has at least one loaded data value.

input data. Any data that is loaded from a data source and is not generated by calculation.

Integration Server. *See* Essbase Integration Server.

integrity constraint. In relational databases, a rule stating that each row should have an entry for each required key column.

Intelligent Help. In Essbase Integration Services, procedural help displayed in a dockable window that accompanies the OLAP Model and OLAP Metaoutline main windows. Intelligent Help provides numbered procedures and links to new automatic-detection options and frequently used functions.

intersection level. In Essbase Spreadsheet Add-in, a Hyperion Essbase member combination that defines a specific value. For example, the member combination Actual, Root Beer, Sales, Jan, East represents the actual January sales value for root beer in the Eastern region.

join. Creates a relationship between two tables based on matching key column values in relational databases and as an SQL command.

join columns. In Essbase Integration Services, two relational table columns that are joined from one table to another.

key column. In relational databases, a column or columns that form a unique identifier for each row. For example, EMPLOYEE_ID might be a key column.

leaf member. A member that has no children.

left frame. (1) In the Essbase Integration Services Console OLAP Metaoutline main window, the area on the left that enables you to view a list of dimensions previously defined in the OLAP model. (2) In the OLAP Model main window, the area on the left that displays a list of the tables and views available in a source relational database.

level. (1) In Hyperion Essbase, a layer of a hierarchical tree structure that defines database member relationships. Hyperion Essbase numbers levels incrementally from the leaf member (level 0) up to the dimension member. (2) In Essbase Integration Services, the distance of a dimension table from the fact table in the OLAP model. For example, if a table is level 2, it is separated from the fact table by two links.

level 0 block. A data block that is created for sparse member combinations when all of the members of the sparse combination are level 0 members.

level 0 member. *See* leaf member.

level name. A unique name that describes a level.

load member. In Essbase Integration Services, a member in a user-defined dimension into which data is loaded. Only user-defined dimensions require load members. For all non user-defined dimensions, Essbase Integration Server knows how to load members and data into the Hyperion Essbase database.

load properties. In Essbase Integration Services, a set of rules that determine what actions the product performs on member level names and data as they are loaded.

logical column. In Essbase Integration Services, a column created by manipulating the data in one or more physical columns. *See also* column. *Contrast with* physical column.

logical table. In relational databases, a table created by manipulating columns from one or more physical tables. The logical table is only a view of the data; the columns remain stored in the original tables and are not physically duplicated in the logical table. *See also* view. *Contrast with* physical table.

mathematical operator. A symbol that defines how data is calculated. A mathematical operator can be any of the standard mathematical or Boolean operators; for example, +, -, *, /, and %. Mathematical operators are used in formulas, abd outlines.

MDDB. *See* multidimensional database (MDDB).

measures. Data values that a user wants to track, such as Unit_Price and Discount. By default, measures values map to the accounts dimension in the OLAP model, which maps to the measure dimension in the OLAP metaoutline, which in turn maps to the accounts dimension in the Hyperion Essbase outline.

measures dimension. In Essbase Integration Services, a dimension that, by default, maps to the accounts dimension in the Hyperion Essbase outline.

member. A discrete component within a dimension. For example, a time dimension might include such members as Jan, Feb, and Qtr1.

member combination. In Hyperion Essbase, a list of member names used to specify a set of data at the intersection of two or more dimensions. A member combination is specified by using the cross-dimensional operator -> (a hyphen followed by a right-angle bracket). For example, the actual sales data for the month of January in Sample Basic is Sales->Jan->Actual.

member level. A hierarchical level of detail within a dimension. For example, in a dimension that defines geographic areas by nation, which are then subdivided into provinces, the nation and province categories each represent a member level. A member level corresponds to a level in a Hyperion Essbase outline. The measures dimension contains actual members that are also member levels.

member load. In Essbase Integration Services, the process of adding new dimensions and members (without data) to a Hyperion Essbase outline. *Contrast with* data load.

metadata. A set of data that defines and describes the properties and attributes of the data stored in a database or used by an application. Examples of metadata are dimension names, member names, properties, time periods, and security.

metaoutline. In Essbase Integration Services, a template containing the structure and rules for creating a Hyperion Essbase outline from an OLAP model.

missing data (#MISSING). A marker indicating that data in the labeled location does not exist, contains no meaningful value, or was never entered or loaded. For example, missing data exists when an account contains data for a previous or a future period but not for the current period.

Move mode. In Essbase Integration Services, a state in which you can pick up, move, and drop objects in the OLAP Model main window.

multidimensional. Describes a method of referencing data through three or more dimensions. An individual data value is the intersection of one member from each dimension.

multidimensional database (MDDB). A method of organizing, storing, and referencing data through three or more dimensions. An individual value is the intersection of a point for a set of dimensions.

normalization. The process of grouping and removing redundancy from data so that each entity is in its appropriate place in the database and only in its appropriate place. *Contrast with* denormalization.

numeric transformation. In Essbase Integration Services, a set of instructions that define how to change or reformat a relational database numeric field type. For example, you may choose to divide numeric data by 100.

ODBC. *See* Open Database Connectivity (ODBC).

ODBC data source. Location of the data that you are accessing and the information necessary to access the data using ODBC. For example, an ODBC data source that connects to an SQL Server might require a server name, a database name, a user name, and a password. See also Open Database Connectivity.

OLAP. *See* online analytical processing (OLAP).

OLAP Architect. *See* Essbase Integration Services Console.

OLAP Builder. *See* Essbase Integration Services Console.

OLAP Catalog. *See* OLAP Metadata Catalog.

OLAP Command Interface. *See* Essbase Integration Services Shell.

OLAP Metadata Catalog. In Essbase Integration Services, a relational database containing metadata describing the nature, source, location, and type of data that you pull from the relational data source. Essbase Integration Server accesses the OLAP Metadata Catalog to generate the SQL statements and the information required to generate a Hyperion Essbase database outline.

OLAP model. In Essbase Integration Services, a logical model (star schema) that you create from tables and columns in a relational database. You can then use the OLAP model to generate the structure of a multidimensional database.

OLAP Server log. A record of actions performed by the OLAP Server (agent).

OLTP. *See* online transaction processing (OLTP).

online analytical processing (OLAP). A multidimensional, multi-user, client-server computing environment for users who need to analyze consolidated enterprise data. OLAP systems feature functionality such as drilling down, data pivoting, complex calculations, trend analyses, and modeling.

online transaction processing (OLTP). OLTP applications are commonly referred to as data capture, data entry, or data collection applications. OLTP applications enable an organization to capture the large amounts of data resulting from its daily activities but provide limited capability for reporting on the data.

Open Database Connectivity (ODBC). Standardized application programming interface (API) technology that allows applications to access multiple third-party databases.

outline. The structure that defines all elements of a database within Hyperion Essbase. For example, an outline contains definitions of dimensions, members, and formulas.

parent. A member that has an aggregated branch of children below it.

pass-through transformations. In Essbase Integration Services, a feature that allows you to use functions specific to your relational database management system (RDBMS) to extract data values for columns. You can provide a statement that Essbase Integration Server passes through to your RDBMS as a part of the SQL SELECT statement. You provide the statement as a property of a column and the pass-through feature returns a value for the column.

permission. A special privilege that must be assigned to users or groups to enable them to access or modify secure data. Permissions include Read, Read/Write and None.

physical column. A column that is stored in a relational database. *See also* column. *Contrast with* logical column.

physical table. A combination of rows and columns stored in a relational database. *Contrast with* logical table.

pointer. In relational databases, a data element that indicates the location of data in storage.

primary dimension table. A dimension table that joins directly to the fact table. Additional dimension tables may join to the primary dimension table to create a dimension branch.

primary key. In relational databases, a column (key) that uniquely identifies a row. For example, Employee_ID.

query governor. An Essbase Integration Server parameter or Essbase OLAP Server configuration setting that you set to control the duration and size of the queries made to the data source.

RDBMS. *See* relational database management system (RDBMS).

record. A set of information in a data source. Records are composed of fields, each of which contains one item of information. A set of records constitutes a table. A single record constitutes a row in the table. For example, a table containing personnel information might contain records (rows) that have three fields: a NAME field, an ADDRESS field, and a PHONE_NUMBER field.

recursive table. A source relational table that contains information in one row that is a parent or child of information in another row. For example, in a relational source table containing the columns EMPLOYEE_ID, NAME, and MANAGER_ID, the columns EMPLOYEE_ID and MANAGER_ID are recursive because MANAGER_ID refers back to the EMPLOYEE_ID. Using Essbase Integration Services, you can build a Hyperion Essbase outline hierarchy from a recursive source table.

relational database. A type of database that stores data in the form of related tables. A single database can be spread across several tables, and can be viewed in many different ways. *Contrast with* multidimensional database (MDDB).

relational database management system (RDBMS). A database management system for accessing data in a relational database and storing data in the form of related tables. A RDBMS takes SQL statements entered by a user or contained in an application program and creates, updates, or provides access to the relational database.

restructure. In Hyperion Essbase, an operation to regenerate or rebuild the database index and, in some cases, the data files.

right frame. In the Essbase Integration Services Console OLAP Metaoutline main window, the area on the right, in which you build a metaoutline; In the OLAP Model main window, the area on the right, in which you build an OLAP model.

schema. In relational databases, a logical model that represents the data and the relationships between the data.

server. *See* Essbase OLAP Server and Essbase Integration Server.

shared member. A member that shares storage space with another member of the same name. The shared member has a property that designates it as shared. The use of shared members prevents duplicate calculation of members that appear more than once in an Essbase outline.

sibling. A child member at the same generation as another child member and having the same immediate parent. For example, the members Florida and New York are both children of the member, East, and siblings of each other.

sparse dimension. A dimension unlikely to contain data for all combinations of dimension members. For example, product and market dimensions are sparse if not all products are sold in all markets. Contrast with dense dimension.

SQL. *See also* Structured Query Language (SQL).

SQL Override. In Essbase Integration Services, a function that enables editing of the standard SQL statements generated by Essbase Integration Server for drill-through reports. ODBC SQL, Native SQL, and stored procedures can be used when editing the standard SQL. The edited, user-defined SQL can be selected to improve data load performance when loading data into a Hyperion Essbase database.

staging area. A database that you create to meet the needs of a specific application. A staging area is a snapshot or restructured version of one or more RDBMSs.

standard dimension. A dimension that is not an attribute dimension.

star schema. A logical model that represents your relational data in a form that mirrors that of OLAP data. A star schema contains a fact table and one or more dimension tables.

string. A sequence of characters treated as a unit.

Structured Query Language (SQL). A computer language used to access data in relational databases.

system administrator. A person who maintains the hardware, software, disk space distribution, and configurations for running software applications such as Essbase.

table. In relational databases, a form of data storage in which data is stored in records comprised of fields. Each record is defined by a unique, or primary, key.

transformation rules. In Essbase Integration Services, a set of instructions that define how to change or reformat the member names and data you extract from the source relational database.

UDA. A user-defined attribute. A UDA is a term associated with members of an outline to describe a particular characteristic of the members. Users can specify UDAs within calculation scripts and reports so that they return lists of members that have the specified UDA associated with them. UDAs can be applied to dense as well as sparse dimensions.

unary operator. A group of mathematical indicators (+, -, *, /, %) that define how roll-ups take place on the database outline.

union. An SQL command that is a type of join that combines the results of two SELECT statements. A union is often used to merge lists of values contained in two tables.

user-defined dimension. Dimensions that you explicitly create in Essbase Integration Services, rather than dimensions obtained or built from the relational data source.

user-defined member. Members that you explicitly create in Essbase Integration Services, rather than obtaining and building them from the relational data source.

validation. (1) In Hyperion Essbase, a process of checking a rules file against the outline to make sure the rules file is valid. (2) In Essbase Integration Services, a process of checking the OLAP model and metaoutline.

view. In relational databases, a logical table created by combining columns from one or more tables.

XML Import/Export. In Essbase Integration Services, a function that enables importing data into and exporting data from an OLAP Metadata Catalog in Extended Markup Language (XML) file format. Both OLAP models and metaoutlines can be saved as XML files and imported into other OLAP Metadata Catalogs.

Index

A

access
- codes, for metaoutlines, 37
- codes, for OLAP models, 36
- exclusive access mode, 31
- multi-user, 30
- privileges, common problems, 40
- problems, correcting, 61
- setting, 34
- standard access mode, 30

accessing
- data sources, 40
- OLAP Metadata Catalog, 40, 42
- servers and databases, troubleshooting, 39

accounts
- problems in the RDBMS, 47
- user, administrative, 47
- user, problems, 62

administrative accounts, using, 47

Architect. *See* Essbase Integration Services Console

AT service, 108 to 109

audience, skills required, 7, 13

B

backtracking connection problems, 44

backups, OLAP Metadata Catalog, 76

bat extension files, 91

batch files
- Essbase Integration Services Shell and, 87
- running, 92
- running Essbase Integration Services Shell scripts with, 91
- scheduling manually, 108 to 109

batch mode, Essbase Integration Services Shell, 87

binding, requirement for DB2 databases, 66

brackets, in Essbase Integration Services Shell syntax, 90

buffer size. *See* fetch size

Builder. *See* Essbase Integration Services Console

C

catalog. *See* OLAP Metadata Catalog

CB_CONCURRENCY table
- column descriptions, 32
- defined, 84

CB_OBJECT_TYPE column, data defined, 32

CB_VERSION table, 84

cbs extension files, 91

checking
- common connection problems, 40
- release number of Essbase Integration Services, 55
- script syntax for loads, 90

client software
- port number, 69
- problems, correcting, 70
- RDBMS, common problems, 40
- RDBMS, correcting problems, 65
- troubleshooting, 39

codes, access
- for metaoutlines, 37
- for OLAP models, 36

command line
- Essbase Integration Services Shell, 86 to 87
- loading data from, 109
- loading members from, 108

command syntax, Essbase Integration Services Shell, 90
command-line interface, using, 85
commands, Essbase Integration Services Shell, 93
commands, status of, 94
common problems
- areas of failure, 43
- database-specific, 42
- with connections, 40

communication problems, 43
compatibility
- between RDBMS and RDBMS client, 65
- ODBC drivers, 67
- problems with product versions, 55

components, software, common problems, 40, 43
concurrent users, 32
configuration problems (ODBC), 43
connecting
- database client to RDBMS, 46
- problems with data source, 40, 42
- problems with OLAP Metadata Catalog, 40, 42

connections
- areas of failure, 43
- common problems, 40
- isolating problems, 44
- LOADMEMBER command, 54
- OLAP Metadata Catalog, 40, 42
- path through components, 45
- problems, correcting, 61
- problems, diagnosing, 43
- problems, isolating, 44
- testing, 48 to 49, 56
- troubleshooting, 39

consulting services, 19
conventions, document, 11, 17
correcting
- connection problems, 39, 61
- data source problems, 67
- database client problems, 65
- Essbase Integration Server problems, 68
- Essbase Integration Services Console problems, 70
- ODBC problems, 39, 66
- password problems, 62
- RDBMS problems, 63
- user name problems, 62

critical server error messages, 21
cron scheduling daemon, 108

D

data loads
- checking script syntax, 90
- command line and, 110
- error messages, 115
- Essbase Integration Services Shell and, 108 to 109
- incremental, script syntax, 93
- LOADALL command, 103
- LOADDATA command, 101
- OLAP Metadata Catalog and, 15, 76
- optimizing, 19
- scripts, recording, 90
- time required, 89

data sources
- accessing, 40
- connecting to, 108 to 109
- connection problems, 40, 42
- connections to, diagram, 45
- identifying before loading, 95
- problems, correcting, 66

data, retrieving, 15
database client software
- common problems, 40
- environment problems, 46, 65
- problems, correcting, 65
- testing connection to RDBMS, 46

database servers
- common problems, 40
- problems, correcting, 63

database users, source, 29
databases
- connections to, diagram, 45
- vendor-specific problems, 42

DB2
- common problems, 42
- database binding requirement, 66

debug messages, 21
Delete Locks command, 32
deleting
- Essbase Integration Server users, 30
- locks, 32, 34

read and write locks, 34
users, 30
DemoODBC program, 48
diagnosing problems (connections, ODBC), 39
diagram, connections path, 45
disconnecting, users, 30
DNS, problems, 44
document conventions, 11, 17
documentation
list of, 9, 15
ordering, 18
domain name server, problems, 44
drill-through reports, tables relating to, 82
driver file, ODBC, specifying on UNIX, 53
drivers, ODBC, problems, 66
DTR_ATTRIBUTES table, 82
DTR_INFO table, 82

E

education services, 18
eis.cfg file, 16, 18
described, 23
storing startup switch settings, 24
environment variables
common problems, 40
for database client, problems, 46, 65
ODBC problems, 48
error messages
data load, 115
member load, 111
setting logging level, 21
Essbase
message file, 27
relationship to Essbase Integration Server, 15
server name problems, 61
server, connecting to, 109
server, message database, 22
target data server, specifying, 96
testing connection from Essbase Integration Server to OLAP Server, 58
users, defined, 29
Essbase Integration Server
common problems, 40
defined, 15
determining user access, 33
error messages, 111
executable name, 16
fetch size for loads, 19
log files, 26
logging on to, 94, 108 to 109
logging out of, 107
OLAP Metadata Catalog, information in, 76
port number, 23, 69
prerequisites for, 16
problems, correcting, 68
server problems, 61
shutting down, 25, 107
starting, 16, 25
starting as a Windows service, 17
starting from the command line, 16
starting from the Windows Desktop, 17
startup switches, 19
stopping, 25
stopping as a Windows Service, 25
stopping from command line, 25
stopping from Windows Desktop, 25
switches, 19
testing connection to OLAP Server, 58
testing connection to RDBMS, 54
Essbase Integration Server users
defined, 29
deleting, 30
disconnecting, 30
multiple, 32
viewing locks, 32
Essbase Integration Services
connection path, diagram, 45
release number, checking, 55
Essbase Integration Services Console
common problems, 40
port number, 23, 69
problems, correcting, 70
testing connection to Essbase OLAP Server, 59
testing connection to RDBMS, 56
Essbase Integration Services Shell
asynchronous commands, 94
batch mode, 87
command syntax, 90
commands, list, 93
description, 87
executable name, 86

executing commands, 90
information, 85
interactive mode, 88
loading data with, 109
loading members with, 108
running scripts with, 91
starting, 86
using to test connections, 54
Essbase Integration Services Shell commands
EXIT, 108
LOADALL, 103
LOADDATA, 101
LOADMEMBER, 97
LOGIN, 94
LOGOUT, 107
SETCATALOG, 96
SETSOURCE, 95
SETTARGET, 96
SHUTDOWN, 107
STATUS, 94
syntax, 90
VERSION, 95
Essbase Integration Services users
creating, 30
viewing, 30
Essbase OLAP Server, connecting to, 109
essbase.mdb file, 22, 27
exclusive access mode, 31
executable name
for Essbase Integration Server, 16
for Essbase Integration Services Shell, 86
EXIT command, 108
extra locks
deleting, 34
viewing, 32

F

fetch size, setting for Essbase Integration Server, 19
file name, Essbase messages file, 21
file names, 22
files
batch. *See* batch files
log. *See* log files
script. *See* scripts
fixing. *See* troubleshooting

G

guides, viewing online, 11, 17

H

host names, problems, 61
Hybrid Analysis, defined, 83
Hybrid Analysis, tables relating to, 83
Hyperion Essbase. *See* Essbase
Hyperion Integration Server Intelligent Desktop. *See* Essbase Integration Services Console
Hyperion Integration Server. *See* Essbase Integration Services

I

incompatibility, problems with product versions, 55
incremental loads
LOADALL command, 103
LOADDATA command, 101
LOADMEMBER command, 97
script syntax, 93
informational messages, 21
Integration Server. *See* Essbase Integration Server
interactive mode, Essbase Integration Services Shell, 88
INTERSOLV. *See* MERANT, ODBC driver problems, correcting
introduction, 7, 13
is.csh file, using, 52
is.sh file, using, 52
isolating, connection problems, overview, 44
ivtestlib program, 48

J

JOIN_HINTS table, 79

L

levels of access permissions, 36
library path, common problems, 41
listeners, setting, 23
LOAD commands, 88 to 89
LOADALL command, described, 89, 103
LOADDATA command

described, 89, 101
example of, 110
loading
data, optimizing, 19
data, time required, 89
Essbase Integration Services Shell and, 108 to 109
from the command line, 109
OLAP Metadata Catalog and, 15, 76
test, members into Essbase database, 58
LOADMEMBER command
connections made by, 54
described, 89, 97
example of, 109
using to test connections, 54
locks
deleting, 32, 34
exclusive access mode, 31
metaoutlines, 30
OLAP models, 30
read, deleting, 34
read, viewing, 33
standard access mode, 30
storage location in the OLAP Metadata Catalog, 32
timestamps and, 32
unreleased, 32
viewing, 32
working with, 29 to 30
write, deleting, 34
write, viewing, 33
log files
changing name and location, 21
contents, 26
Essbase Integration Server, viewing, 26
messages recording level, 21
logging level, 21
LOGIN command
described, 94
example of, 108 to 109
login problems, correcting, 62
login script
diagnosing problems, 52
problems, 46
LOGOUT command, 107

M

managing
locks and permissions, 29
user names and passwords, 62
MB_FILTER table, 77
MB_TX_RULE table, 77
member loads
checking script syntax, 90
command line, 108 to 109
error messages, 111
LOADMEMBER command, 97
OLAP Metadata Catalog and, 15, 76
scripts, recording, 90
MERANT, ODBC driver problems, correcting, 66
message file, Essbase, 27
messages, debug, 21
messages, error, 111
metaoutlines
access codes, 37
access permissions, 34
locks, 30
opening in exclusive access mode, 31
opening in standard access mode, 30
overwriting, 31
permissions, viewing, 37
restoring, 76
tables in OLAP Metadata Catalog, 79
users, 32
MO_ACCESS_CODE column, data defined, 37
MO_DESCRIPTIONS table, 81
MO_FILTERS table, 80
MO_INFO table, 37, 80
MO_INTERSECTION table, 82
MO_PROPERTIES table, 80, 83
MOD_ATTRIBUTES table, 80
MOD_INFO table, 80
Model. *See* OLAP models
MODEL_ACCESS_CODE column
data defined, 36
MS_INFO table, 81
MS_PREDICATES table, 81
MS_TX_RULE table, 81
MSR_INFO table, 81
MSR_PREDICATES table, 81
MSR_TX_RULE table, 81
multi-threaded server, 15

multi-user access, 30

N

names, server problems, 61
network listeners, setting, 23
network problems, 44
non-critical error messages, 21

O

OA_INFO table, 77
OD_DETAILS table, 77
OD_INFO table, 78
ODBC
  common problems, 41
  driver compatibility, 67
  driver file, specifying on UNIX, 53
  environment problems, 46
  problems, correcting, 66
  testing connection to RDBMS, 48
  testing on UNIX, 50
  testing on Windows, 49
  tracing on UNIX, 72
  tracing utility, using, 71
  troubleshooting, 39
ODBC Administrator, 48
ODBC Data Sources, odbc.ini file section, 53
odbc.ini file
  common problems, 48
  inspecting for problems, 52
  Trace parameter, 72
odbcconfig utility, 50
ODBCINI variable, 52
OLAP Architect. *See* Essbase Integration Services Console
OLAP Builder. *See* Essbase Integration Services Console
OLAP Catalog. *See* OLAP Metadata Catalog
OLAP Command Interface. *See* Essbase Integration Services Shell
OLAP Command Script files, 92
OLAP Integration Server. *See* Essbase Integration Server
OLAP Metadata Catalog
  accessing, 29
  backups, 76
  connecting to, 109 to 110
  connection problems, 40, 42
  deleting locks, 34
  drill-through tables in, 82
  Essbase Integration Server and, 15
  Hybrid Analysis tables in, 83
  identifying before loading, 96
  manual editing, 76
  metaoutline tables, 79
  OLAP model tables, 77
  problems, database level, 64
  recovery, 76
  viewing permissions, 37
OLAP metaoutline. *See* metaoutline
OLAP models
  access codes, 37
  access permissions, 34
  accessing, 29
  locks, 30
  opening in exclusive access mode, 31
  opening in standard access mode, 30
  overwriting, 31
  permissions, viewing, 35
  restoring, 76
  tables in OLAP Metadata Catalog, 77
  users, 32 to 33
olapicmd program
  problems, 54
  starting, 86
olapisvr program
  command-line switches, 19
  starting, 16
olapisvr.log file, specifying location, 21
OM_DESCRIPTION table, 79
OM_INFO table, 35, 78
OM_PROPERTIES table, 78
OMB_DETAILS table, 78
OMB_INFO table, 78
online guides, 11, 17
online help, 10, 16
opening metaoutlines, options, 30
opening OLAP models, options, 30
optimizing, data loads, 19
Oracle
  common problems, 42
  tnsnames.ora file, 66

ordering documentation, 18
orphaned locks, deleting, 32, 34
OV_INFO table, 78
overwriting, OLAP models and metaoutlines, problem, 31
OVL_REL_DETAILS table, 78
OVL_REL_INFO table, 78
OVP_REL_DETAILS table, 79
OVP_REL_INFO table, 79

P

password problems, 40, 62
performance, enhancing, data loads, 19
permissions
- changing, 35
- for metaoutlines, 34, 37
- for OLAP models, 34
- problems in the RDBMS, 47
- shutting down Essbase Integration Server, 107
- viewing, 34
- working with, 29

port 3388, 23, 69
prerequisites
- Essbase Integration Services Shell, 86
- for Essbase Integration Server, 16
- for using this guide, 7, 13

primary data source, 95
privileges, common problems, 40
problems
- starting Essbase Integration Server, 16
- system-level, 61
- TCP/IP, 44
- with connections, correcting, 39, 42
- with ODBC, correcting, 39, 43, 65

problems. *See also* troubleshooting
profile file, 52

R

RDBMS
- client problems, correcting, 65
- common problems, 40
- problems, correcting, 63
- server name problems, 61
- testing connection from database client, 46
- testing connection from Essbase Integration Server, 54
- testing connection from Essbase Integration Services Console, 56
- testing connection to ODBC, 48
- testing ODBC connection on UNIX, 50
- testing ODBC connection on Windows, 49
- user account problems, 47

read access, setting, 34
read locks
- deleting, 34
- viewing, 33

recording data load scripts, 90
recording scripts, 90
recovery, OLAP Metadata Catalog, 76
related documentation, 9, 15
relational database management system. *See* RDBMS
relational databases
- connections to, diagram, 45
- problems, correcting, 63

releases
- compatibility problems, 55
- determining for Essbase Integration Services, 95

restoring
- metaoutlines, 76
- OLAP Metadata Catalogs, 76
- OLAP models, 76

right-click menus, 12, 18
rights, problems in the RDBMS, 47
running
- Essbase Integration Server, 16, 25
- Essbase Integration Services Shell, 86
- scripts with Essbase Integration Services Shell, 91

S

scheduling, batch files for loads, 108 to 109
scripts
- incremental loads, syntax, 93
- member and data loads, recording, 90
- running with Essbase Integration Services Shell, 91

secondary data source, 95
security

access permissions, 34
locks, 30
problems, 44
semicolons, in Essbase Integration Services Shell syntax, 90
server problems, 61
server software
port number, 69
problems, correcting, 68
troubleshooting, 39
Servers menu, OLAP Metadata Catalog, Delete Locks command, 32
SET commands, 88
SETCATALOG command
described, 88, 96
example of, 109 to 110
SETSOURCE command
described, 88, 95
example of, 108 to 109
SETTARGET command
described, 88, 96
example of, 109
setting
data source, 108 to 109
Essbase OLAP Server, 109
network listeners, 23
OLAP Metadata Catalog, 96, 109 to 110
primary data source, 95
secondary data source, 95
target Essbase OLAP Server, 96
SHUTDOWN command, 25, 107
shutting down Essbase Integration Server, 25, 107
software components
common problem areas, 43
connection problems, 40
source database users, 29
SQL Server, common problems, 42
standard access mode, 30
starting
Essbase Integration Server, 16, 25
Essbase Integration Server, methods, 16
Essbase Integration Server, programs necessary, 16
Essbase Integration Services Shell, 86
startup switches for Essbase Integration Server, 19
STATUS command, described, 89, 94
stopping Essbase Integration Server, 25
stopping, Essbase Integration Server, 25
storage
metaoutline, 76
OLAP model, 76
switches, for olapisvr, 19
Sybase, common problems, 42
syntax, Essbase Integration Services Shell commands, 90
system variables. *See* environment variables
system-level problems, 61

T

tables
drill-through, 82
Hybrid Analysis, 83
metaoutline, 79
miscellaneous, 84
OLAP model, 77
read-only, 76
TCP/IP problems, 44
Technical Support, 20
testing
connections, overview, 44
database client, 46
Essbase Integration Server connection to Essbase OLAP Server, 58
Essbase Integration Server connection to RDBMS, 54
Essbase Integration Services Console connection to RDBMS, 56
Essbase Integration Services Console to Essbase OLAP Server, 59
ODBC connection to RDBMS, 48
ODBC on UNIX, 50
ODBC on Windows, 49
timestamp, locks and, 32
tnsnames.ora file, 66
Trace parameter, odbc.ini file, 72
tracing utility
ODBC for UNIX, 72
ODBC for Windows, 71
training services, 18
troubleshooting
connections, 39

ODBC, 39
system-level problems, 61
TCP/IP, 44
troubleshooting. *See also* problems
turning off Essbase Integration Server, 25
typographical conventions, 11, 17

U

UNIX
ODBC tracing, 72
odbcconfig utility, 50
testing ODBC, 50
unreleased locks, deleting, 32, 34
user accounts, administrative, 47
user names
locks and, 32
problems with, 40, 62
users
deleting, 30
disconnecting, 30
Essbase Integration Server, defined, 29
Essbase, defined, 29
managing permissions and locks, 29
multiple, 32
source database users, 29

V

variables. *See* environment variables
VERSION command, described, 89, 95
versions, compatibility problems, 55
viewing
log files, 26
permissions for metaoutlines, 37
permissions for OLAP models, 35

W

warning messages, 21
Windows
ODBC testing, 49
ODBC tracing, 71
testing ODBC, 49
Windows service
using to pass startup switches, 17
using to start Integration Server, 17
using to stop Integration Server, 25
write access, setting, 34
write locks
deleting, 34
viewing, 33