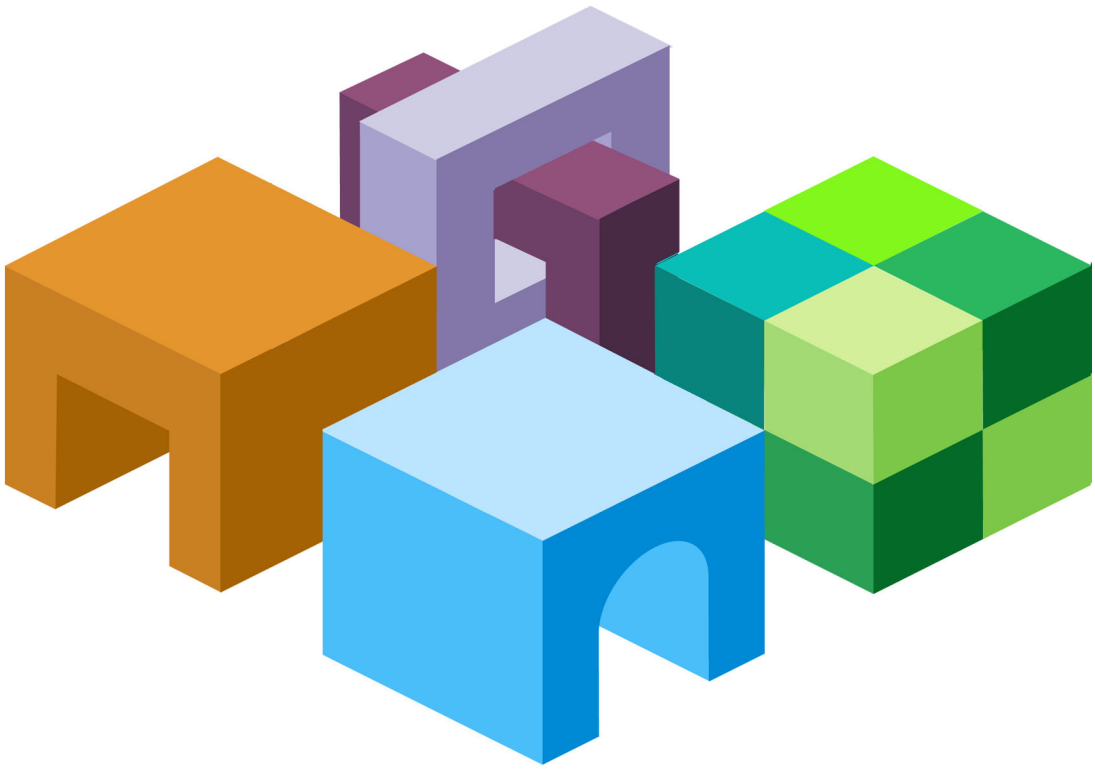

ORACLE® ESSBASE INTEGRATION SERVICES

RELEASE 11.1.1

SYSTEM ADMINISTRATOR'S GUIDE

ORACLE®
ENTERPRISE PERFORMANCE MANAGEMENT SYSTEM

Integration Services System Administrator's Guide, 11.1.1

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Contents

1 Using Essbase Integration Server

In This Chapter

This chapter describes starting and stopping Essbase Integration Server and how to view its log file.

Integration Server

Integration Server is multithreaded server software that is the bridge between the data source, OLAP Metadata Catalog, and Essbase Server. Oracle Essbase Integration Services performs several tasks:

- Retrieves OLAP model and metaoutline information from OLAP Metadata Catalog
- Generates SQL statements
- Retrieves data from external sources
- Loads members and data into the Oracle Essbase database

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

Starting Integration Server

Before starting Integration Server, verify all required components are running. These components need not be on your local computer. Also, verify that these components are running:

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

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

You can start Integration Server using several methods:

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

Note:

To start Integration Server as a Windows service, you must have configured it as a Windows service during the configuration process. See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.

➤ To start Integration Server from DOS:

1 **At the command line, type the `startup.bat` command.**

The `startup.bat` command ensures the environment is set correctly and that proper PATH and CLASSPATH settings are used when starting Integration Server.

2 **If you want to change a default startup switch, add the switch to the `ais.cfg` file or the `startup.bat` file.**

3 **If you want to change a default configuration parameter, add the parameter to the `ais.cfg` file.**

See "Storing Startup Information in the Configuration File" on page 26 and "Storing Startup Information in the Startup File (Windows Only)" on page 27 for information on adding startup switches and configuration parameters to files.

➤ To start Integration Server from UNIX:

1 **Type `is.sh`.**

2 **Type the executable name on the command line, for example, type**

`olapisvr`

Note:

If Integration Server does not start when `olapisvr` is executed from the command line, the operating system path may not be updated correctly. See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.

3 **If you want to change a default startup switch, type the command syntax after the `olapisvr` command or add the switches to the `ais.cfg` file.**

See "Storing Startup Information in the Configuration File" on page 26 and "Storing Startup Information in the Startup File (Windows Only)" on page 27 for information on adding startup switches to these files.

Values for startup switches entered at the command line override startup switch values stored in the `ais.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\bin\essbase.mdb"
```

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

1 **Click Start.**

2 **Select All Programs, then Oracle EPM System, then Essbase, then Integration Services, then Server.**

If startup switch settings are stored in `startup.bat` or `ais.cfg`, the settings in `startup.bat` override the settings in `ais.cfg` when Integration Server is started from the Windows Desktop Start menu.

➤ To start Integration Server as a Windows service:

1 **Access the Services dialog box.**

- On Windows 2000 and Windows 2003, select **Start**, then **Settings**, then **Control Panel**, double-click **Administrative Tools**, and then double-click **Services**.
- On Windows XP, select **Start**, then **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 or configuration parameters, add the switches to the `ais.cfg` file or the `startup.bat` file.**

4 **Start the service for Integration Server.**

- On Windows 2000 and 2003, select **Action**, then **Start**.
- On Windows XP, click **Start**.

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

Running Integration Server as a Background Process on UNIX Systems

➤ To run Integration Server in the background, modify `ais_start` or type the following commands

```
.is.sh
nohup olapisvr &
```

Note:

If you choose to run Integration Server by using the above commands, ensure you have configured your environment.

The `nohup` command keeps the Integration Server program running even if you log off. The ampersand (&) suffix makes the program a background process.

Caution!

To allow the Integration Services Console client to create OLAP models and metaoutlines, you must run Integration Server and keep it running while any clients are connected to it.

When you start Integration Server, it begins writing to the log, `olapisvr.log`, in the `log` directory. To write to a log on another directory, specify the log name in `ais_start` or type the following command:

`olapisvr -E`*`mydir/mylog`*

Note:

Do not type the `.log` file extension. The .log extension is automatically appended to the name that you type for the log.

Integration Server Startup Switches

This topic lists the switches and configuration parameters used to change default settings when starting Integration Server. The switches can be used from the command line, added to the `startup.bat` file, or stored in the `ais.cfg` file.

- -?
- -A
- -C
- -D
- -E

- -F
- -I
- [K]
- -L
- -M
- -N
- -P
- -R
- -S
- -T
- -U
- [V]

For information on storing startup switches in `startup.bat` or `ais.cfg`, see "Storing Startup Information in the Configuration File" on page 26 and "Storing Startup Information in the Startup File (Windows Only)" on page 27.

The following topics describe the default switches.

-?

To view a list of available switches for starting Integration Server.

-A

To ignore the parent of a given member when updating OLAP intersections during a drill-through operation.

To ignore parents when updating OLAP intersections, do one of the following:

- In Windows, add `-AY` to the `startup.bat` file.
- In UNIX, type `-AY` when you start Integration Server.
- In Windows or UNIX, add `[A]=Y` to the `ais.cfg` file.

By default, Integration Server sets the value at N so that parents are not ignored when updating OLAP intersections. If a parent is ignored during an update of OLAP intersections, subsequent drill-through operations cannot be performed on any shared members related to that parent.

In Windows:

In the `startup.bat` file, to ignore the parent of a given member when updating OLAP intersections during a drill-through operation, add `-AY` after `"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -AY
```

In UNIX:

To ignore the parent of a given member when updating OLAP intersections during a drill-through operation, type:

```
olapisvr -AY
```

In Windows or UNIX:

In the `ais.cfg` file, this parameter is specified in the following format:

```
[A]=Y
```

-B

Note:

-B is no longer available.

-C

To set the number of records that Integration Server commits to Essbase:

- In Windows, add `-C`*`number_of_records`* to the `startup.bat` file.
- In UNIX, type `-C`*`number of records`* when you start Integration Server.
- In Windows or UNIX, add `[C]=`*`number_of_records`* to the `ais.cfg` file.

The default setting is all records.

-C can be used with the -N switch.

Note:

-C should not be used in operations involving aggregate storage.

-C is often used in testing environments. The recommended setting for testing purposes is 5,000 to 10,000 records. After you have completed testing, shut down Integration Server to revert to the default setting, or reset to the limit allowed by DATAERRORLIMIT.

When -C is used with the DATAERRORLIMIT setting in the `essbase.cfg` file, you can maximize the number of records written to `dataload.txt`, the data load error file. For example, if you set DATAERRORLIMIT to 65,000, the maximum number of error records allowed in the Essbaselog, and then set -C to 65,000 or less, you will be able to view all error records allowed by Essbase.

Note:

If you have included a setting for testing purposes for -C in ais.cfg, be sure to edit the file to clear the `ais.cfg` file so that it will change the setting back to "all records."

Setting a smaller number of records during testing enables you to see data load errors incrementally, providing you an opportunity to correct problems before continuing. Resetting the number of records to the default of all records results in faster performance.

There is no limit to the number of records that Integration Server can transfer to Essbase during a data load. If, however, you experience memory problems during a data load, set -C to a smaller value.

Note:

The setting of -C does not apply to member loads.

In Windows:

For example, in the `startup.bat` file, to set the number of records that Integration Server incrementally transfers to Essbase during a data load to 5,000, add -C5000 after `"C:\Hyperion\products\ Essbase\eis\server\bin\olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -C5000
```

In UNIX:

For example, to set the number of records that Integration Server incrementally transfers to Essbase during a data load to 5,000, type:

```
olapisvr -C5000
```

In Windows or UNIX:

For example, to set the number of records that Integration Services incrementally transfers to Essbase during a data load to 5,000, in the `ais.cfg` file, type:

```
[C]=5000
```

-D

To specify whether or not to add the DISTINCT clause to the SELECT statement of drill-through SQL.

The default behavior adds the DISTINCT clause. To not add the DISTINCT clause:

- In Windows, add `-DN` to the `startup.bat` file.
- In UNIX, type `-DN` when you start Integration Server.
- In Windows or UNIX, add `[D]=N` to the `ais.cfg` file.

In Windows:

In the `startup.bat` file, to specify that the DISTINCT clause should not be added to drill-through queries, add `-DN` after `"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -DN
```

Any value other than -DN or no value specifies that the DISTINCT clause should always be added to drill-through SQL.

In UNIX:

To specify that the DISTINCT clause should not be added to drill-through queries, type:

```
olapisvr -DN
```

In Windows or UNIX:

In the `ais.cfg` file, this parameter is specified in the following format:

```
[D]=N
```

-E

To give the log file a different name:

- In Windows, add `-E`*`log_file_name`* to the *`startup.bat`* file.
- In UNIX, type `-E`*`log_file_name`* when you start Integration Server.
- In Windows or UNIX, add `[E]=`*`log_file_name`* to the `ais.cfg` file.

The `.log` extension is added automatically. The default name and location is *`HYPERION_HOME`*`\logs\eis\olapisvr.log`.

In Windows:

In the `startup.bat` file, to name the log file `myserver.log` and put it in the `temp` directory on Windows, add `-Ec:\temp\myserver` after `"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe -E"c:\temp
\myserver
```

Do not type the `.log` file extension. The `.log` extension is automatically appended to the name you type for the log.

Always enclose path names that contain spaces with quotation marks (" "); for example, type:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -I -E"c:
\program files\eis\myserver"
```

In UNIX:

To name the log file `myserver.log` and put it in the `temp` directory on Windows, type

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

Enclose path names that contain spaces in quotation marks (" "); for example, type:

```
olapisvr -E"c:\program files\eis\myserver"
```

In Windows or UNIX:

In the `ais.cfg` file, this parameter is specified in the following format:

```
[E]=c:\temp\myserver
```

or

```
[E]=c:\program files\eis\myserver
```

Note:

In the `ais.cfg` file, you do not need to type quotation marks around path names that contain spaces.

-F

To specify whether to add parentheses around user-defined drill-through filters. See Essbase Spreadsheet Add-in help.

The default is not to add parentheses around user-defined drill-through filters. To add parentheses:

- In Windows, add `-FY` to the `startup.bat` file.
- In UNIX, type `-FY` when you start Integration Server.
- In Windows or UNIX, add `[F]=Y` to the `ais.cfg` file.

In Windows:

In the `startup.bat` file, to specify that parentheses should be added around user-defined drill-through filters, add -FY after `"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -FY
```

Any other value or no value specifies that parentheses should not be added around user-defined drill-through filters.

In UNIX:

To specify that parentheses should be added around user-defined drill-through filters, type:

```
olapisvr -FY
```

In Windows or UNIX:

In the `ais.cfg` file, this parameter is specified in the following format:

```
[F]=Y
```

-I

To prevent Integration Server from shutting down as a service on Windows after you log off, add -I to the `startup.bat` file.

When you run Integration Server as a service on Windows, Oracle recommends you use -I.

Note:

This configuration parameter is applicable only in Windows environments.

Note:

`-I` cannot be entered in the `ais.cfg` file. It can only be specified in the `startup.bat` file.

In Windows:

In the `startup.bat` file, to prevent Integration Server from shutting down as a service, add -I after `"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -I
```

-L

To set the level of detail of the messages that Integration Server logs:

- In Windows, add `-L`*`level`* to the `startup.bat` file.
- In UNIX, type `-L`*`level`* when you start Integration Server.
- In Windows or UNIX, add `[L]=I` to the `ais.cfg` file.

The default level is 2. You can specify the following levels:

- **0**

  To log all debug messages and the ODBC SQL generated by Integration Server; generate the `dataloadrecord.txt` file, listing the first 1,000 records, which may include successfully loaded records and rejected records; and create the `hisdld.rul` file consisting of the names of the dimensions loaded followed by the leaf node number of each dimension or member

- **2**

  To log all informational messages and some of the ODBC SQL generated by Integration Server

- **3**

  To log all warnings

- **4**

  To log all noncritical errors

- **7**

  To log all critical errors where Integration Server terminates the command

- **8**

  To log all critical server errors

The recommended level setting is 2 or 3.

In Windows:

In the `startup.bat` file, to use the highest level of logging, add -L0 after `"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -L0
```

In UNIX:

To use the highest level of logging, type:

```
olapisvr -L0
```

In Windows or UNIX:

In the `ais.cfg` file, this switch is specified in the following format:

```
[L]=0
```

-M

To specify the location of the Essbase message database file if the file is moved to a new location:

- In Windows, add `-M`*`path\essbase.mdb`* to the `startup.bat` file.
- In UNIX, type `-M`*`path\essbase.mdb`* when you start Integration Server.
- In Windows, add `[M]=path\essbase.mdb` to the `ais.cfg` file.

The default location is *`HYPERION_HOME`*`\products\Essbase\eis\server\bin\essbase.mdb`.

In Windows:

In the `startup.bat` file, to specify the new location of the Essbase message database file as `essbasemsg\bin`, add `-Mc:\essbasemsg\bin\essbase.mdb` after `"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -Mc:\essbasemsg
\bin\essbase.mdb
```

Always enclose path names that contain spaces with quotation marks (" "); for example, type:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -M"c:\eis svr
\bin\essbase.mdb"
```

In UNIX:

To specify the new location of `essbase.mdb` as `essbasemsg\bin`, type:

```
olapisvr -Mc:\essbasemsg\bin\essbase.mdb
```

Enclose path names that contain spaces with quotation marks (" "); for example:

```
olapisvr -M"c:\eis svr\bin\essbase.mdb"
```

In Windows or UNIX:

In the `ais.cfg` file, this parameter is specified in the following format:

```
[M]=c:\eissvr\bin\essbase.mdb
```

or

```
[M]=c:\ess svr\bin\essbase.mdb
```

Note:

In the `ais.cfg` file, you do not need to add quotation marks around path names that contain spaces.

-N

To specify the number of threads Integration Server uses when sending data to Essbase during a data load, do one of the following:

- In Windows, add `-N` to the `startup.bat` file.
- In UNIX, type `-N`*`number_of_threads`* when you start Integration Server.
- In Windows or UNIX, add `[N]=`*`number_of_threads`* to the `ais.cfg` file.

The default setting is 1 thread.

-N may be used with -C.

-N controls the number of threads allocated to data load optimization. Usually, users start with 2 threads and adjust according to the environment.

In Windows:

In the `startup.bat` file, to set the number of threads to 2, add -N2 after `"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -N2
```

In UNIX:

To set the number of threads to 2, type:

```
olapisvr -N2
```

In Windows or UNIX:

In the `ais.cfg` file, this parameter is specified in the following format:

```
[N]=2
```

-P

To set the TCP port number with which Integration Server communicates with its clients to a port different from the default 3388:

- In Windows, add `-P`*`portnumber`* to the `startup.bat` file
- In UNIX, type `-P`*`portnumber`* when you start Integration Server
- In Windows or UNIX, add `[P]=`*`portnumber`* to the `ais.cfg` file

In Windows:

In the `startup.bat` file, add `-P`*`portnumber`* after `"C:\Hyperion\products\Essbase\eis\server\bin \olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -P8850
```

If you change the default port number, in Integration Services Console you must log in to the Integration Server by typing the server name or IP address and the non-standard port number, separated by a colon; for example:

```
aspen:8850
```

When starting Integration Services Shell, to change the TCP port number, at the command line, type `-P`*`portnumber`*. For example:

```
olapicmd -P8850
```

In UNIX:

When starting Integration Server or Integration Services Shell, to change the TCP port number, type:

```
olapisvr -P8850
```

or

```
olapicmd -P8850
```

In Windows or UNIX:

In the `ais.cfg` file, this parameter is specified in the following format:

```
[P]=8850
```

-Q

Note:

-Q is no longer available.

-R

To specify that users are restricted from browsing table records when customizing a drill-through report.

- When -R is not set, users have unrestricted access to all table records.
- When -R is set to Y, users have no access to any table records.
- When -R is set to F, users have no access to fact table records but have unrestricted access to all other table records.

To restrict users from browsing fact table records:

- In Windows, add `-R`*`access_parameter`* to the `startup.bat` file.
- In UNIX, type `-R`*`access_parameter`* when you start Integration Server.
- In Windows or UNIX, add `[R]=`*`access_parameter`* to the `ais.cfg` file.

By default, -R is not set, giving users unrestricted access to all table records.

In Windows:

In the `startup.bat` file, to prevent users from accessing any table records, add -RY after `"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -RY
```

In the `startup.bat` file, to prevent users from accessing fact table records, add -RF after `"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -R`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -RF
```

In UNIX:

To prevent users from having any access to any table records, type:

```
olapisvr -RY
```

To prevent users from having any access to fact table records, type:

```
olapisvr -RF
```

In Windows or UNIX:

In the `ais.cfg` file, this parameter is specified in the following format:

```
[R]=Y
```

or

```
[R]=F
```

-S

To specify the stack size in megabytes of each thread that Integration Server creates::

- In Windows, add `-S`*`stacksize_in_megabytes`* to the `startup.bat` file.
- In UNIX, type `-S`*`stacksize_in_megabytes`* when you start Integration Server.
- In Windows or UNIX, add `[S]=`*`stacksize_in_megabytes`* to the `ais.cfg` file.

For Windows and Solaris, no stack size setting is required. For AIX, the default stack size setting is 3 MB; for HP-UX, the default stack size setting is 8 MB.

In Windows:

In the `startup.bat` file, to set the stack size that Integration Server creates to 1 MB, add -S1 after `"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -S1
```

In UNIX:

To set the stack size that Integration Server creates to 2 MB, type:

```
olapisvr -S2
```

In Windows or UNIX:

In the `ais.cfg` file, this parameter is specified in the following format:

```
[S]=2
```

-T

To set the number of network listeners that Integration Server starts:

- In Windows, add `-T`*`number`* to the `startup.bat` file
- In UNIX, type `-T`*`number`* when you start Integration Server
- In Windows or UNIX, add `[T]=`*`number`* to the `ais.cfg` file

The default (and recommended) number is 10.

Network listeners receive requests from Integration Services Console. Integration 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 Integration Server.

In Windows:

In the `startup.bat` file, to set the number of network listeners that Integration Server starts to 17, add -T17 after `"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -T17
```

In UNIX:

To set the number of network listeners Integration Server starts to 17, type:

```
olapisvr -T17
```

In Windows or UNIX:

In the `ais.cfg` file, -T is specified in the following format:

```
[T]=17
```

-U

To specify whether the Essbase database and application should be unloaded from memory after a load is completed.

Integration Server can successfully unload the Essbase database from memory only if there are no users accessing it.

To specify whether the Essbase database and application should be unloaded from memory after a load is completed, do one of the following:

- In Windows, add -UY to the `startup.bat` file.
- In UNIX, type -UY when you start Integration Server.
- In Windows or UNIX, add `[U]=Y` to the `ais.cfg` file.

By default, Integration Server does not unload the Essbase database from memory after a load is completed.

In Windows:

In the `startup.bat` file, to specify whether the Essbase database and application should be unloaded from memory after a load is completed, add -UY after `"C:\Hyperion\ products \Essbase\eis\server\bin\olapisvr.exe"`. For example:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -UY
```

In UNIX:

To specify whether the Essbase database and application should be unloaded from memory after a load is completed, type

```
olapisvr -UY
```

In Windows or UNIX:

In the `ais.cfg` file, -U is specified in the following format:

```
[U]=Y
```

Storing Startup Information in the Configuration File

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

- As an environment for Teradata and Oracle users to configure the required JDBC drivers, as discussed in "Mapping JDBC Data Sources for Windows (Teradata Only)" on page 72 and "Mapping JDBC Data Sources for UNIX (Teradata Users Only)" on page 73.
- To pass startup switches and configuration parameters, other than the defaults, when launching Integration Server

The `ais.cfg` file is a text file residing in the `\bin` directory on Windows, UNIX, and Linux platforms. When you start Integration Server from the command line using the `startup.bat` command (in DOS or UNIX), the startup routine checks the contents of `ais.cfg` for any startup switch or parameter information. Then one of the following applies:

- Startup switch or configuration parameter syntax added to the `ais.cfg` file override default settings (see "Integration Server Startup Switches" on page 14 and "Storing Startup Information in the Configuration File" on page 26).
- If you did not add startup switch or parameter information to `ais.cfg`, the default settings are used to start Integration Server.
- If `ais.cfg` contains startup switch syntax and you enter startup switch overrides in the `startup.bat` file (Windows only) any startup switches in `startup.bat` override both the startup switch settings contained in the `ais.cfg` file and the default settings.

➤ To store startup switch and parameter settings in the `ais.cfg` file:

1. **Open the `ais.cfg` file in any text editor.**
2. **Add the startup switch 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:**

   ```
   [L]=0
   [E]=c:\temp\myserver
   ```

```
[N]=40
[M]=c:\ess\bin\essbase.mdb
```

To enter the above overrides in the `startup.bat` file, type:

```
"C:\Hyperion\products\Essbase\eis\server\bin\olapisvr.exe" -I -L0 -Ec:\temp
\myserver -N40 -M"c:
\ess\bin\essbase.mdb"
```

4 **Save and close** `ais.cfg`.

Storing Startup Information in the Startup File (Windows Only)

The `startup.bat` file has two purposes:

- As an environment to configure the common Oracle Hyperion Enterprise Performance Management System components, such as Java, ODBC, and JDBC drivers, for Teradata and Oracle users. See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.
- As a means to pass startup switches and configuration parameters, other than the defaults, when launching Integration Server

The `startup.bat` file is a text file residing in the `eis\server\bin` directory. When you start Integration Server as a Windows service, the startup routine checks the contents of `startup.bat` for any startup switch information. Then the startup routine checks `ais.cfg` for any startup switch and configuration parameter information. Then one of the following applies:

- Startup switch syntax added to the `startup.bat` file (Windows only), override default settings (see "Integration Server Startup Switches" on page 14).
- If you added startup switch or configuration parameter syntax only to the `ais.cfg` file, those settings that you added override the default settings for those switches and parameters (see "Integration Server Startup Switches" on page 14 and "Storing Startup Information in the Configuration File" on page 26).
- If you did not add startup switch or parameter information to `startup.bat` or `ais.cfg`, the default settings (see "Integration Server Startup Switches" on page 14 and "Storing Startup Information in the Configuration File" on page 26) are used to start Integration Server.

➤ To store startup switch settings in the `startup.bat` file:

1 **Open the** `startup.bat` **file in any text editor.**

2 **If you want to change a default startup switch, type the command syntax in the line that calls the Integration Server.**

The values for startup switches that you enter into `startup.bat` override any startup switch values you have stored in the `ais.cfg` file.

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

```
"C:\Hyperion\eis serv\bin\olapisvr.exe" -I -L0 -Ec:\temp\myserver -N40
-M"c:\ess\bin\essbase.mdb"
```

Note:

In the `startup.bat` file, the above syntax should be entered all on one line.

You can only enter startup switch information into `startup.bat`. Configuration parameters must be entered in `ais.cfg`.

3 **Save and close** `startup.bat`.

Additional Configuration Parameters

Add the configuration parameters specified in this topic to the `ais.cfg` file to change the default configuration settings described in "Storing Startup Information in the Configuration File" on page 26.

Windows Configuration Parameters

The configuration parameters described in this section can only be specified in the `ais.cfg` file that is installed on Windows. These parameters cannot be specified in the `startup.bat` file, at the command line, or in the `ais.cfg` file that is installed with the UNIX version of Integration Server.

[K]

To specify whether to display the primary keys in an OLAP model. The default behavior is not to display the primary keys in an OLAP model.

If you want to display the primary keys in an OLAP model, add `[K]=Y` to the `ais.cfg` file.

In Windows:

In the `ais.cfg` file, this parameter is specified in the following format:

```
[K]=Y
```

[V]

To specify whether Integration Server automatically validates an OLAP model or metaoutline when a Save or Save As operation is performed. The default behavior is for Integration Server to validate an OLAP model or metaoutline before saving it.

If you want to disable automatic OLAP model and metaoutline validation, add `[V]=0` to the `ais.cfg` file.

In Windows:

In the `ais.cfg` file, this parameter is specified in the following format:

```
[V]=0
```

Windows and UNIX Configuration Parameters

The configuration parameter described in this section can be specified in the `ais.cfg` file that is installed on Windows and UNIX. This parameter cannot be specified in the `startup.bat` file or at the command line.

[ADDDUPLICATESFORASO]

To allow addition of duplicate data records when using an aggregate storage database. The default behavior is to set the data load option in aggregate storage to not allow duplicate records.

To allow duplicate data records when using an aggregate storage database, add `[ADDDUPLICATESFORASO]=Y` to the `ais.cfg` file.

In Windows and UNIX:

In the `ais.cfg` file, this parameter is specified in the following format:

```
[ADDDUPLICATESFORASO]=Y
```

[UNIFORMVALUEFORMAT]

To obtain correct results when an aggregate storage database contains duplicate records with different values. In the following example, duplicate records at the intersection of SKU, MONTH, and STATE show different results for SALES:

```
SKU      MONTH   STATE   SALES
100-10   JAN     CA      389.99999999999994
100-10   JAN     CA      390
```

When a database contains duplicate records with different values, data loads are terminated with an error; for example:

```
IS Error(EssLoadBufferTerm): Data load failed: input contains different
values for the same cell [(Jan, Sales, 100-20, Florida): 389.
99999999999994 / 390] 1270089
```

When you add the [UNIFORMVALUEFORMAT] parameter to the `ais.cfg` file, data load results for measures are rounded up or down as appropriate to six decimal places (0.000000), ensuring that the duplicate records will have the same value.

Using the same data from the example above, the results would be:

```
SKU      MONTH   STATE   SALES
100-10   JAN     CA      390.000000
100-10   JAN     CA      390.000000
```

To enable uniform value formatting, add `[UNIFORMVALUEFORMAT]=Y` to the `ais.cfg` file

In Windows and UNIX:

In the `ais.cfg` file, this parameter is specified in the following format:

```
[UNIFORMVALUEFORMAT]=Y
```

Reconnecting Integration Server and OLAP Metadata Catalog

If you lose the connection to Integration Server and OLAP Metadata Catalog, you can reconnect directly from Integration Services Console without losing unsaved work.

➤ To reconnect to Integration Server:

1. Start Integration Server using any method described in "Starting Integration Server" on page 12.
2. In the Integration Services Console, select **Connections**, then **OLAP Metadata Catalog**, then **Reconnect**.

Note:

The connection is made implicitly; no messages are displayed.

Shutting Down Integration Server

After using Integration Server, shut it down using any of several methods.

Note:

Always close Integration Services Console before shutting down Integration Server.

➤ To shut down Integration Server from the command line, either close the Integration Server window, or use Integration Services Shell:

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

See "Integration Services Shell Commands" on page 159.

➤ To shut down Integration Server from the Windows desktop:

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

➤ To shut down Integration Server as a Windows service:

1. Select **Start**, then **Settings**, then **Control Panel**.
2. Open the Services dialog box.
   - On Windows 2000 and 2003, double-click **Administrative Tools**, and then double-click **Services**.

- On Windows XP, select **Performance & Maintenance**, and then **Administrative Tools**. In the **Administrative Tools** window, double-click **Services**.

3 Locate **Essbase Integration Server** in the list of services.

4 Stop the service.

- On Windows 2000 and 2003, select **Action**, then **Stop**.
- On Windows XP, right-click **Essbase Integration Server** and select **Stop**.

Integration Server Log File

By default, the Integration Server log file is named `olapisvr.log` and is located in the `HYPERION_HOME\logs\eis` directory. View it from Integration Services Console by selecting the View Log File option from the Tools menu to launch the Server Log file dialog box, or open `olapisvr.log` in any text editor. To create the log file with a different location or name, use -E. See "Integration Server Startup Switches" on page 14.

Items Logged in Integration Server File

Items are logged in the Integration Server log file, depending on the logging level you set when you start Integration Server:

- Processing messages
- Member load error messages
- Settings for switches used to start Integration Server from the command line or as a Windows service
- Two copies of each SQL statement generated to access the data source as follows:
  - The first statement is in the SQL dialect understood by the ODBC driver and is generated by Integration Server.
  - The second statement is generated by the ODBC driver and is translated by the driver into the dialect of SQL understood by the data source being accessed.
- Integration Services Shell commands used to perform an action
- Connection information
- Load status
- Names of any metaoutline running
- Other informational messages

When a user accesses a drill-through report using Essbase Spreadsheet Add-in, items related to the drill-through report are also logged:

- Drill-through report name
- Metaoutline with which this drill-through report is associated
- Essbase Server computer being accessed

- Essbase application and database
- User accessing drill-through report

See "Integration Server Startup Switches" on page 14.

Integration Server error message text is located in *HYPERION_HOME*\products\Essbase\eis\server\bin\error.txt on Windows systems; $HYPERION_HOME/products/Essbase/eis/server/bin/error.txt on UNIX.

Essbase error message text is located in *HYPERION_HOME*\products\Essbase\eis\server\bin\message.txt on Windows systems; $HYPERION_HOME/products/Essbase/eis/server/bin/message.txt on UNIX.

Integration Server Log File Size

Your server log file will grow to a maximum of 50 megabytes in size. Then it will be truncated to 10 megabytes with the most recent 10 megabytes of entries being retained. The log file will again grow to 50 megabytes before it is truncated.

Change the default settings by specifying LOGFILEMIN and LOGFILEMAX in the ais.cfg file, for example:

```
[LOGFILEMIN] = 20
[LOGFILEMAX] = 60
```

Data Load Error File

If data loads generate errors, the file dataload.txt is placed in a folder Integration Server creates for the load under the HYPERION_HOME/products/Essbase/eis/server/loadinfo directory. The dataload.txt file lists rejected dimensions and members and error message codes to identify data load problems.

The folder Integration Server creates in the loadinfo directory is in the following format:

<application_database_timestamp_sessionnumber>

If you performed a data load for the MyTBC application and MyTBC_DB database at 10 P.M. on May 1, 2003, the folder is named:

MyTBC_MyTBC_DB_2003_May_1_10_00_pm_*<sessionnumber>*

In the case of data load failure, open the dataload.txt file located in the folder described previously and review the error codes.

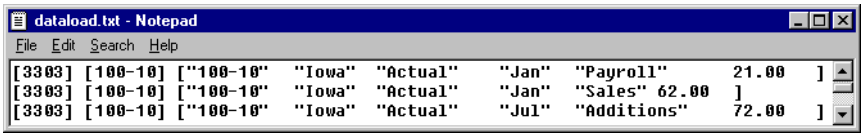
These are the most common error codes:

Message Number	Message
3303	Member not found in database.
3304	Insufficient access to store data.

Message Number	Message
3333	Bad data value supplied.
3335	Record rejected because of duplicate member names.
3336	Member/Data Unknown.
3337	Record rejected because of dimension conflicts with Header Name.

Figure 1 shows three records from the `dataload.txt` file with the error code 3303.

Figure 1 Example from dataload.txt File



Unicode

Sharing data across national and language boundaries is a challenge for multi-national businesses. Traditionally, each computer stores and renders text based on its locale specification. A *locale* identifies the local language and cultural conventions such as the formatting of currency and dates, sort order of the data, and the character set encoding to be used on the computer. The *encoding* of a character set refers to the specific set of bit combinations used to store the character text as data, as defined by a code page or an encoding format. In Essbase, *code pages* map characters to bit combinations for non-Unicode encodings.

Because different encodings can map the same bit combination to different characters, a file created on one computer can be misinterpreted by another computer that has a different locale.

The Unicode Standard was developed to enable computers with different locales to share character data. Unicode provides encoding forms with thousands of bit combinations, enough to support the character sets of multiple languages simultaneously. By combining all character mappings into a single encoding form, Unicode enables users to correctly view character data created on computers with different locale settings.

Users whose computers are set up in different languages can work with the same database. For example, using alias tables in their respective languages, users in Taiwan can view database reports displaying Chinese characters while users in France can view the same reports in French characters.

User-defined character sets (UDC) are not supported and the Chinese National Standard GB 18030-2000 is not supported.

Note:

For information on using Unicode in Essbase, see the *Oracle Essbase Database Administrator's Guide*.

Unicode and Non-Unicode Application Modes

Applications are designated as Unicode-mode applications or non-Unicode-mode applications.

Unicode-mode applications support multiple character sets. Integration Services uses the UTF-8 encoding form to interpret and store character text. Character-based artifacts in Unicode-mode applications, such as member and alias names, can include characters from different languages.

Clients working with Unicode-mode applications can have different locales than Essbase Server. For example, client computers with Japanese locales and client computers with German locales can work with the same Unicode-mode application on an Essbase Server that has a Spanish locale.

Non-Unicode-mode applications support one character set that is defined by a locale value, which must be the same for Essbase Server and all non-Unicode clients that work with the non-Unicode-mode applications. Both Unicode-mode and non-Unicode-mode applications can reside on the same Essbase Server.

Note:

You cannot convert a Unicode-mode application to non-Unicode mode.

When to Use Unicode-Mode Applications

Consider working with Unicode-mode applications only if you have any of the following situations:

- You need to enable users with different languages to view, in their own languages and character sets, information from a common database. For example, using alias tables in Japanese and German, users in Japan and Germany could view, in their own languages, information about a common product set.
- You need to handle artifact names longer than non-Unicode-mode applications support. For example, application and database names need to be larger than eight characters or, if you are working with a multi-byte character set, you need to handle more characters in artifact names.
- You have experienced what is called the "round-trip" problem. The round-trip problem can occur in communications between multi-byte operating systems and application programs where two different bit values can map to the same character. As Java applications, Oracle Essbase Administration Services and Oracle Hyperion Provider Services always work in Unicode. No encoding conversions occur when these clients work with Unicode-mode applications and UTF-8-encoded text files; hence no round-trip conversion errors.

When deciding on using Unicode-mode applications, you should also consider the following points:

- Using non-Unicode text files with Unicode-mode applications requires an understanding of locales and care in managing to them. To prevent errors that could cause database corruption, using UTF-8-encoded files is recommended. For details, see the *Oracle Essbase Database Administrator's Guide*.

- To work with Unicode-mode applications, custom client applications that were written to support non-Unicode-mode applications must be built to use the longer string lengths used by Unicode-mode applications. This may be a simple re-build or may involve re-programming, depending on the design of the applications. Also, depending on how they are coded, the new client applications may require more memory.

Unicode-Enabled Administration Tools

Oracle provides Oracle Essbase Administration Services and MaxL to administer Unicode-mode applications. The main administration activities include, in addition to the normal Essbase administration activities, changing the Unicode-related mode of the Essbase Server to enable or disable creation of Unicode-mode applications, creation of Unicode-mode applications, migration of non-Unicode-mode applications to Unicode mode, and viewing the Unicode-related status of servers and applications.

Enabling Regional Options for Multiple Languages

When you enable the appropriate languages in Windows, Integration Services Console can display OLAP model and metaoutline elements in the languages of the source database. Integration Services Console uses the settings you configure in Windows to display languages.

Enabling Regional Options in Windows 2000

➤ To enable the Regional Options for languages in Windows 2000:

1 In the Windows taskbar, select **Start Settings**, then **Control Panel** and double-click **Regional Options**.

The General tab of the Regional Options dialog box is displayed.

2 In the **Your locale (location)** drop-down list, select the appropriate locale.

In most cases, you set the locale to match your location.

3 In the **Language settings for the system** frame, select the languages that you want to display on the Integration Services Console computer.

For example, you may select Cyrillic to display Russian characters or Simplified Chinese and Traditional Chinese to display Chinese characters.

4 If the languages that you need do not appear in the **Language settings for the system** frame, or if you want to attach a specific code page to a language, click the **Advanced** button and perform the following tasks:

a. In the **Advanced Regional Options** dialog box, select the appropriate code page conversion tables.

Select the code page tables that correspond to the languages that you want to display on the Integration Services Console computer.

b. Click **OK** to close the **Advanced Regional Options** dialog box.

5 In the **Regional Options** dialog box, click **Apply** to apply the changes you made.

6 Click **OK** to close the **Regional Options** dialog box.

For more information on Windows Regional Options, refer to the Windows 2000 documentation.

Enabling Regional Options in Windows XP

➤ To enable the Regional and Language Options in Windows XP:

1 In the Windows taskbar, select **Start**, then **Control Panel** and double-click **Regional and Language Options**.

The Regional Options tab of the Regional and Language Options dialog box is displayed.

2 In the **Standards and formats** frame, from the drop-down list, select the appropriate language to use for formatting items such as numbers, currencies, time, and dates.

In most cases, you set this language to match your location.

3 Click the **Languages** tab and click the **Details** button.

The Text Services and Input Languages dialog box is displayed.

4 In the **Installed services** frame, click **Add**.

5 In the **Input Languages** list, select the language that you want to add and select the check box for the type of text service you want to install.

For example, you may select Cyrillic to display Russian characters or Simplified Chinese and Traditional Chinese to display Chinese characters.

6 If the languages that you need do not appear in the **Input Languages** frame, or if you want to add a specific code page to a language, click the **Advanced** tab and perform the following tasks:

a. In the **Code page conversion tables** frame, select the appropriate code page conversion tables.

Select the code page tables that correspond to the languages that you want to display on the Integration Services Console computer.

b. Click **Apply**.

7 Click **OK** to close the Regional Language and Options dialog box.

For more information on Windows Regional Language and Options, refer to the Windows XP documentation.

Enabling Regional Options in Windows 2003

➤ To enable the Regional and Language Options in Windows 2003:

1 In the Windows taskbar, select **Start**, then **Control Panel** and double-click **Regional and Language Options**.

The Regional Options tab of the Regional and Language Options dialog box is displayed.

2 In the **Standards and formats** frame, from the drop-down list, select the appropriate language to use for formatting items such as numbers, currencies, time, and dates.

   In most cases, you set this language to match your location.

3 Click the **Languages** tab and click the **Details** button.

   The Text Services and Input Languages dialog box is displayed.

4 In the Default input language drop-down list, select the installed input language to use.

5 If the language you want does not appear in the **Default input language** drop-down list, click Add in the **Installed services** frame.

   The Add Input Language dialog box is displayed.

6 In the **Input languages** list, select the language that you want to add.

7 In the **Keyboard layout/IME** list, select the check box for the type of text service you want to install and click OK.

   For example, you may select Cyrillic to display Russian characters or Simplified Chinese and Traditional Chinese to display Chinese characters.

8 Optional: If the languages that you need do not appear in the **Add input languages** dialog box, or if you want to add a specific code page to a language, perform the following steps:

   a. Click **Cancel** to close both the **Add input languages** dialog box.

   b. Click **Cancel** to close the **Text Services and Languages** dialog box.

   c. In the **Regional and Language Options** dialog box, click the **Advanced** tab.

   d. In the **Code page conversion tables** frame, select the appropriate code page conversion tables.

      Select the code page tables that correspond to the languages that you want to display on the Integration Services Console computer.

   e. Click **Apply**.

9 Click **OK** to close the Regional Language and Options dialog box.

   For more information on Windows Regional Language and Options, refer to the Windows 2003 documentation.

Creating Database User Aliases and Synonyms

When using the sample application, you must connect to TBC_MD as user TBC unless you set up your user name as an alias or synonym for TBC.

- On Microsoft SQL Server and Sybase, make your login user name an alias of TBC.
- On IBM DB2 and Oracle, log in with your user name and password, and create synonyms that map to the tables in TBC_MD.

This user alias or table synonym enables you to access a table that is qualified by TBC because it was created by the TBC user; for example, TBC.MO_INFO in the TBC_MD OLAP Metadata Catalog.

For more information, see the documentation for the RDBMS you are using.

Scheduling Jobs in UNIX

➤ To schedule jobs, perform the following steps:

1. Set up the $ENV variable to a file that initializes the environment for Integration Services, including running `is.sh`.
2. Give authorization to the Integration Services user to schedule jobs using the cron scheduling daemon.

   After the configurations are complete, you can access the relational data source to create an OLAP Metadata Catalog and—if you choose—to set up the sample application. For more information about creating the OLAP Metadata Catalog, see Chapter 3, "Creating, Upgrading, and Deleting OLAP Metadata Catalogs" For more information about setting up the sample application, see Chapter 5, "Setting Up the Sample Applications."

Starting the Windows Task Scheduler Service

Integration Services uses the Task Scheduler service for the Windows platforms to perform scheduled member and data loads. To allow loads to be scheduled, you must ensure that both of these conditions are met:

- The Task Scheduler service must be started on the computer that runs Essbase Integration Server.
- The Task Scheduler service is enabled to start automatically each time the computer that runs Essbase Integration Server is started.

➤ To start the Windows 2000 Task Scheduler service:

1. On the Windows desktop, click **Start**.
2. Select **Settings**, then **Control Panel**.
3. In the **Control Panel** window, double-click the **Administrative Tools** icon, and then double-click the **Services** icon.
4. In the list of services, locate **Task Scheduler** and verify that the entry in the **Status** column is **Started** and the entry in the **Startup type** column is **Automatic**.

   If you must change one or both entries, this is the process:

   a. Double-click **Task Scheduler**.

   b. In the **Task Scheduler Properties** dialog box, select the **General** tab.

   c. Under **Startup type**, select **Automatic**.

   d. To start the service, in the **Task Scheduler Properties** dialog box, click **Start**.

➤ To start the Windows XP Task Scheduler service:

1. On the Windows desktop, click **Start**.
2. Select **Control Panel**.
3. In the **Control Panel** window, click **Performance and Maintenance**.
4. In the **Performance and Maintenance** window, click **Administrative Tools**.
5. In the **Administrative Tools** window, double-click the **Services** icon.
6. In the list of services, locate **Task Scheduler** and verify that the entry in the **Status** column is **Started** and the entry in the **Startup type** column is **Automatic**.

   If you must change one or both entries, this is the process:

   a. Double-click **Task Scheduler**.

   b. In the **Task Scheduler Properties** dialog box, select the **General** tab.

   c. Under **Startup type**, select **Automatic**.

   d. To start the service, click **Start** in the **Task Scheduler Properties** dialog box.

➤ To start the Windows 2003 Task Scheduler service:

1. On the Windows desktop, click **Start**.
2. Select **Control Panel**.
3. In the **Control Panel** window, click **Administrative Tools**.
4. In the **Administrative Tools** window, double-click the **Services** icon.
5. In the list of services, locate **Task Scheduler** and verify that the entry in the **Status** column is **Started** and the entry in the **Startup type** column is **Automatic**.

   If you must change one or both entries, this is the process:

   a. Double-click **Task Scheduler**.

   b. In the **Task Scheduler Properties** dialog box, select the **General** tab.

   c. Under **Startup type**, select **Automatic**.

   d. To start the service, click **Start** in the **Task Scheduler Properties** dialog box.

2 Configuring Data Sources

In This Chapter

To create OLAP models or build metaoutlines, you must connect Integration Services to a database that contains metadata (the OLAP Metadata Catalog database) and to a database in which needed users' data is stored (the Data Source database). To make these connections, you must configure a data source name for an OLAP Metadata Catalog database and a Data Source database. You do this by mapping a supported Open Database Connectivity (ODBC) driver to each database.

Note:

You are not required to use two different databases for your Data Source database and OLAP Metadata Catalog database. Additionally, you are not required to use two different data source names to connect to the Data Source database and OLAP Metadata Catalog database if the two databases reside in the same database.

About Data Source Configuration

In Integration Services, a data source name must be configured for the source database or flat files that contains users' data (the Data Source database). A data source must also be configured for the relational database that contains the OLAP Metadata Catalog. Databases, including an OLAP Metadata Catalog, can run on any supported platform, provided that you have the ODBC driver and, in some cases, the database client software needed to access them.

The Integration Services installation program installs DataDirect ODBC driver files that you use to configure data source names for both the Data Source database and OLAP Metadata Catalog database.

If database client software is required, the relational database management system (RDBMS) should include one of the database clients listed in the *Oracle Hyperion Enterprise Performance Management System Installation Start Here*. If your configuration requires database client software, ensure that the versions of the database client and the RDBMS are compatible.

This chapter provides information on how to configure ODBC drivers. For information on how to install and configure database client software, see the RDBMS documentation.

Note:

Integration Services does not support data source table names and column names that contain spaces or special characters, such as a period (.). See Appendix B, "Integration Services Limits and Guidelines" for a complete listing of the unsupported characters.

On Windows, use the ODBC Administrator to configure ODBC data sources. All ODBC data source names are configured only on the computer that runs Essbase Integration Server.

Note:

If a supported ODBC driver is already mapped to a Data Source database, you do not need to map it again. In this case, you need to map a supported ODBC driver only to the OLAP Metadata Catalog database.

Server and Client Software and ODBC Connections

Integration Server runs on Windows 2000, Windows XP, Windows 2003, AIX, HP-UX, Solaris, or Red Hat Enterprise Linux. You must install Integration Server software, including ODBC drivers, and if required, database client software on the Integration Server computer.

Integration Services client software runs on Windows 2000, Windows XP, or Windows 2003. You must install the Integration Services Console software on Integration Services client computers.

Configure the ODBC connections to the Data Source database and the OLAP Metadata Catalog database only on the computer running Integration Server. You do not need to configure ODBC connections on Integration Services client computers.

Supported ODBC Drivers

For a complete list of supported ODBC drivers by platform, see the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*, available on the Oracle Technical Network.

For detailed information on the DataDirect Wire Protocol drivers provided with Integration Services, see the *DataDirect Connect ODBC Reference* in PDF format in the `HYPERION_HOME\common\ODBC\Merant\5.2\books` (for Windows) directory or `$HYPERION_HOME/common/ODBC/Merant/5.2/books` (for UNIX) directory. Use Adobe Acrobat Reader, which is available for free download at `www.adobe.com`) to read the PDF files.

Configuring Data Source Names on Windows Systems

To configure data source names on Windows systems, you must start ODBC Administrator and then map an ODBC driver to one or more relational databases or flat file data sources that you will use for creating and storing OLAP models and metaoutlines. Run the ODBC Administrator utility from the Windows Control Panel.

Note:

Integration Services does not support data source table names and column names that contain spaces or special characters, such as a period (.). See Appendix B, "Integration Services Limits and Guidelines" for a complete list of the unsupported characters.

The procedures in the following sections show you how to configure data source names to create connections to databases. The examples in the procedures use a database named TBC as the sample Data Source database and a database named TBC_MD as the sample OLAP Metadata Catalog database.

For each site-specific data source name that you configure, obtain the following information from your database administrator:

- The name of the relational database or flat file data source for which you want to configure a data source name

  For example, in the sample application, TBC is the name of the Data Source database; TBC_MD is the name of the OLAP Metadata Catalog database.

- IP address or name of the computer on which the database tables are stored

  You can enter either an alphabetic computer name (for example, sequoia), or an IP address (for example, 172.0.0.125).

  In the sample application, if you are configuring a data source name for the TBC database, use the IP address of the computer where the TBC database tables are stored. If you are configuring a data source name for the TBC_MD database (the sample OLAP Metadata Catalog database), use the IP address of the computer where the TBC_MD tables are stored.

- Port number on which your database listens

  For clarity in presenting the sample application in Integration Services Console, the sample Data Source database and sample OLAP Metadata Catalog database are two separate databases that use two different data source names.

  If your data is stored in a relational database, you are not required to use two different databases for your Data Source database and OLAP Metadata Catalog database. Additionally, you are not required to use two different data source names to connect to your Data Source database and OLAP Metadata Catalog database if all the tables reside in the same database.

  If your data is stored in one or more flat files, you must still use a relational database when setting up your OLAP Metadata Catalog database.

Note:

If you plan to use flat files as data sources, you must configure their Data Source Name (DSN). See "Configuring the DataDirect Text Driver on Windows" on page 49 for detailed instructions.

Accessing ODBC Data Source Administrator in Windows

For any RDBMS, you must access the Windows ODBC Data Source Administrator to begin the data source name configuration process.

➤ To access the Administrator:

1. On the Windows desktop, select**Start**, then **Settings**, then **Control Panel** to open the **Control Panel** window.
2. In the **Control Panel** window, double-click the **Administrative Tools** icon, and then double-click the **Data Sources (ODBC)** icon to open the **ODBC Data Source Administrator** dialog box.
3. In the **ODBC Data Source Administrator** dialog box, click the **System DSN** tab.

Configuring DataDirect Wire Protocol Drivers in Windows

Use the following procedures to configure a data source name for your Data Source database using a DataDirect Wire Protocol driver for Oracle, IBM DB2, Informix, or Sybase. Then repeat the procedure to configure a data source name for the relational database that you want to use as your OLAP Metadata Catalog database.

Before beginning the configuration procedure, perform the procedure in "Accessing ODBC Data Source Administrator in Windows" on page 44.

Note:

You may repeat the configuration procedure to create any number of data source names to relational Data Source databases or OLAP Metadata Catalog databases.

➤ To configure a data source name:

1. In the **ODBC Data Source Administrator**, click **Add** to open the **Create New Data Source** dialog box.
2. In the driver list box of the **Create New Data Source** dialog box, select the appropriate Wire Protocol driver for your RDBMS, and click **Finish**.

   The Wire Protocol Driver Setup dialog box for your RDBMS is displayed.
3. In the **Data Source Name** text box, type the name that you want to use for this data source connection.

   In the sample application, TBC is the data source name used to connect to the Data Source database called TBC; TBC_MD is the data source name used to connect to the sample OLAP Metadata Catalog database called TBC_MD.
4. **Optional:** If you want to record a description, in the **Description** text box, type a description that indicates how you use this data source name.

For example, you might type the following to describe the My Business database:

```
Customers, products, markets
```

You might type the following to describe the sample application database:

```
Sample relational data source
```

You might type the following to describe the sample OLAP Metadata Catalog database:

```
Sample OLAP Metadata Catalog
```

5 **Make the necessary entries to configure data source names by completing the set of steps appropriate to your RDBMS.**

Refer to the following sections for the specific configuration instructions for your RDBMS:

- "IBM DB2 UDB or DB2 OS/390" on page 45
- "Informix" on page 46
- "Oracle" on page 47
- "Sybase" on page 47

6 **Test the connection by following the procedures in "Testing DataDirect Wire Protocol Drivers on Windows" on page 47.**

When you finish testing, repeat Step 2 through Step 5 to configure a data source name for an OLAP Metadata Catalog database.

IBM DB2 UDB or DB2 OS/390

➤ Perform the following steps to configure the Wire Protocol driver for IBM DB2 UDB or OS/390:

1 **In the IP Address text box, type the address (either the computer name or the numeric IP address) of the computer where the database tables are stored.**

2 **In the Tcp Port text box, type the port number on which the IBM DB2 database server listens.**

- If you are using IBM DB2 UDB, the default port number is 50000.
- If you are using IBM DB2 OS/390, the default port number is 446.

3 **If you are using IBM DB2 UDB, in the Database Name text box, type the name of the database for which you want to create this data source name.**

4 **If you are using IBM DB2 OS/390, perform the following actions:**

a. In the **Location** text box, type the IBM DB2 location name as defined during the IBM DB2 OS/390 installation.

b. In the **Collection** text box, type the name that identifies a logical group of database objects (the default is `DATADIRECT00`).

Note:

For IBM DB2 OS/390, you configure a data source name for the Data Source database only. You cannot configure a data source name for the OLAP Metadata Catalog database. OLAP Metadata Catalog functionality is not supported in IBM DB2 OS/390.

To use Integration Services with IBM DB2 OS/390, you must add an entry to the `ais.cfg` file after you configure the data source name for the source database. See "Adding a Configuration File Entry for IBM DB2 OS/390 in Windows" on page 48 for more information.

5 Click the **Bind** tab.

6 Accept the default in the **Bind** tab and click the **Create Package** button.

For more information about the bind process, see *DataDirect Technologies Connect ODBC Reference*. The DataDirect documentation is located in `HYPERION_HOME/common/ ODBC/Merant/5.2/books`. You can also access the Product Documentation on the DataDirect Web site at http://www.datadirect-technologies.com.

7 In the **Login** dialog box, type the user name and password associated with the database for which this ODBC data source name is being created, and click **OK**.

A message is displayed informing you that the package was created successfully.

8 Return to Step 6 in "Configuring DataDirect Wire Protocol Drivers in Windows" on page 44 to complete the configuration process.

Informix

➤ Perform the following steps to configure the Wire Protocol driver for Informix:

1 In the **Host Name** text box, type the address (either the computer name or the numeric IP address) of the computer where the database tables are stored.

2 In the **Port Number** text box, type the port number on which the Informix database server listens.

The default port number for Informix is 1526.

3 In the **Server Name** text box, type the address, either numerically or by name, of the Informix server as it appears in the `sqlhosts` file.

If you do not know this information, contact your Informix database administrator.

4 In the **Database Name** text box, type the name of the database for which you want to create this data source name.

5 Return to Step 6 in "Configuring DataDirect Wire Protocol Drivers in Windows" on page 44 to complete the configuration process.

Oracle

➤ Perform the following steps to configure the Wire Protocol driver for Oracle:

1 In the **Host** text box, type the address (either the computer name or the numeric IP address) of the computer where the database tables are stored.

2 In the **Port Number** text box, type the port number on which the Oracle database server listens.

The default port number for Oracle is 1521.

3 In the **SID** text box, type the name of the database for which you want to create this data source name.

4 Return to Step 6 in "Configuring DataDirect Wire Protocol Drivers in Windows" on page 44 to complete the configuration process.

Sybase

➤ Perform the following steps to configure the Wire Protocol driver for Sybase:

1 In the **Network Address** text box, type the address (either the computer name or the numeric IP address) of the computer where the database tables are stored and the port number on which the Sybase database server listens.

Separate the computer name or IP address and the port number with a comma as shown in the following examples:

By name: `sequoia,4100`

Numerically: `172.0.0.125,4100`

2 In the **Database Name** text box, type the name of the database for which you want to create this data source name.

3 If you are using a DataDirect Wire Protocol driver for a Sybase relational database server, or a Microsoft SQL server, you must perform the following tasks:

a. Open the **ODBC Sybase Wire Protocol Driver Setup** dialog box.

b. Select the **Advanced** tab.

c. Select the **Enable Quoted Identifiers** option.

4 Return to Step 6 in "Configuring DataDirect Wire Protocol Drivers in Windows" on page 44 to complete the configuration process.

Testing DataDirect Wire Protocol Drivers on Windows

➤ To test a data source name connection:

1 Click **Test Connect**.

The **Login to Wire Protocol** dialog box for your RDBMS is displayed.

2 In the **User Name** and **Password** text boxes, enter a valid user name and password for this data source connection, and click **OK**.

If an error message is displayed, make the necessary corrections, and click **Test Connect** again.

When no errors occur, a dialog box displays the message, **Connection established!**

3 In the message dialog box, click **OK**.

You are returned to the **ODBC Wire Protocol Driver Setup** dialog box.

4 In the **ODBC Wire Protocol Driver Setup** dialog box, click **OK**.

You are returned to the System DSN tab of the ODBC Data Source Administrator dialog box. The data source name that you entered and the driver that you mapped to the data source name are displayed in the System Data Sources list box.

5 Repeat Step 1 through Step 5 in "Configuring DataDirect Wire Protocol Drivers in Windows" on page 44 to configure a data source name for an OLAP Metadata Catalog database.

6 When you have completed configuration of all needed data source names, click **OK** to close the **ODBC Data Source Administrator** dialog box.

Adding a Configuration File Entry for IBM DB2 OS/390 in Windows

If you are using IBM DB2 OS/390, you must add an entry to the `ais.cfg` file to support Integration Services functionality. You must add entries for each data source name for IBM DB2 OS/390 that you have configured.

Note:

For IBM DB2 OS/390, you configure a data source name for the Data Source database only. You cannot configure a data source name for the OLAP Metadata Catalog database. OLAP Metadata Catalog functionality is not supported in IBM DB2 OS/390.

➤ To add an entry for IBM DB2 OS/390 to the `ais.cfg` file: :

1 On the computer running Integration Server, use a text editor to open `ais.cfg`.

2 Add a new line for IBM DB2 OS/390 using the data source name or names you have configured.

Add separate lines for each data source name configured for IBM DB2 OS/390. The syntax is:

```
[DS:dsn:390]
```

For example, using the sample application database, TBC, the following is the entry to the `ais.cfg` file:

```
[DS:TBC:390]
```

3 Save and close `ais.cfg`.

Configuring the DataDirect Text Driver on Windows

Use the following procedure to configure a data source name for your Data Source database that consists of one or more ASCII text files using a DataDirect Text driver.

Note:

Integration Services does not support data source table names and column names that contain spaces or special characters, such as a period (.). See Appendix B, "Integration Services Limits and Guidelines" for a complete listing of the unsupported characters.

For more information on configuring the ODBC driver settings for text files, see the *DataDirect Connect ODBC Reference* PDF file in the `$HYPERION_HOME/common/ODBC/Merant/5.2/books` directory.

Note:

You must complete the steps in "Configuring DataDirect Wire Protocol Drivers in Windows" on page 44 to configure a data source name for the relational database that you want to use as your OLAP Metadata Catalog database.

Before beginning the configuration procedure, perform the procedure in "Accessing ODBC Data Source Administrator in Windows" on page 44.

➤ To configure a data source name for a flat file data source:

1. Click **Add** to open the **Create New Data Source** dialog box.
2. In the driver list box of the **Create New Data Source** dialog box, select the Merant OEM 5.2 TextFile driver, and click **Finish**.

   The General tab of the ODBC Text Driver Setup dialog box for flat file configuration is displayed.
3. In the **Data Source Name** text box, type a name for the flat file data source.
4. **Optional:** If you want to record a description, in the **Description** text box, type a description that indicates how you use this data source name.

   For example, you might type the following to describe the My Business database:

   ```
   Customers, products, markets
   ```
5. In the **Database Directory** text box, type the path to the folder where the flat files are located.
6. In the **Default Table Type** drop-down list, select whether the text file is comma-separated, tab-separated, character-separated, fixed length, or stream.

Note:

If your text files are character-separated, type the character that is used as a delimiter in the Delimiter Character text box.

7. If the first line of your text files contains the column names of the database table, select the **Column Names in First Line** check box; otherwise, proceed to Step 8.
8. Select the **Advanced** tab.
9. In the **Rows to Scan** text box, type the number of rows that should be scanned for the driver to determine the data types in the file.

   The default is 25 rows. If 0 is entered, all rows in the file are scanned.
10. In the **Action for Undefined Tables** group, choose one of the following actions that the driver should take when it encounters a file that has not been defined.

    - **Prompt for Definition.** The text driver prompts you when it encounters a file that has not been defined.
    - **Guess Definition.** The text driver analyzes the file and guesses the file's format.

    Note:

    The options in the Return Additional Tables group are not supported.
11. Complete the following steps to define the structure of your data source text files:

    a. Click the **Define** button to display the **Define File** dialog box.

    b. Navigate to the folder that contains your data source text files.

    c. Select a text file to define and click **Open** to display the **Define Table** dialog box.

    d. In the **Table** text box, type a table name to associate with this text file.

    The table name you define is the table name that will be displayed in the left frame of the OLAP Model main window.

    e. If the first line of text in the file contains the column names, select the **Column Names in the First Line** check box.

    If the first line of the text file does not contain the column names, then do not select this check box.

    f. From the **Table Type** drop-down list, select the delimiter that is used in the text file.

    g. If you select **Character** in the **Table Type** drop-down list in Step f, specify the character in the **Delimiter Character** text box.

    You can specify any printable character except single and double quotation marks.

    h. In the **Decimal Symbol** text box, specify either a comma or period as a decimal separator to use when data is stored.
12. Perform one of the following actions to define the column names:

    - If you specified in Step 11f that your text files were comma-separated, tab-separated, or character-separated, click the **Guess** button to have the text driver guess at the column names and display them in the list box under Column Information.
    - If you specified in Step 11f that your text files were fixed-length or stream type, click the **Parse** button to display the Parse Table dialog box, where you define the table column names.

For more information on using the Parse Table dialog box, see the *DataDirect Connect ODBC Reference*. You can also view the DataDirect online help by clicking the Help button in the Parse Table dialog box.

- If you want to define the values and fields for each column manually, click **Add** to add the column name to the list box under Column Information.

  For each table that you add manually, you must specify the data type, data mask (where appropriate), column precision, column scale, length, and offset. For more information on these settings, see the *DataDirect Connect ODBC Reference*. You can also view the DataDirect online help by clicking the Help button in the Define Table dialog box.

13 **Optional:** Modify or delete any of the existing column definitions by selecting a column name in the list box under **Column Definition** and clicking the **Modify** or **Remove** button.

14 Click **OK** to define the table.

15 Complete Step 11 through Step 14 for each data source table that you want to define.

16 When you have finished defining each data source table, click **Cancel** in the **Define File** dialog box to return to the **Advanced** tab of the **ODBC Text Driver Setup** dialog box.

17 Specify the remaining settings on the **Advanced** tab.

For information on the remaining settings, refer to the *DataDirect Connect ODBC Reference* in the PDF file in `$HYPERION_HOME/common/ODBC/Merant/5.2/books`. You can also view the DataDirect online help by clicking the Help button in the Advanced tab of the ODBC Text Driver Setup dialog box.

Configuring the SQL Server ODBC Driver for Microsoft SQL Server

Use the following procedure to configure a data source name for your Data Source database using the SQL Server driver. Then repeat the procedure to configure a data source name for your OLAP Metadata Catalog database.

Note:

You may repeat the configuration procedure to create any number of data source names to relational Data Source databases or OLAP Metadata Catalog databases.

The procedures that follow provide information on basic configuration. If you are using more advanced options, refer to the online help for each wizard screen for assistance in completing the wizards.

➤ To use the SQL Server driver to configure a data source name:

1 Access **ODBC Data Source Administrator** by following the procedure in "Accessing ODBC Data Source Administrator in Windows" on page 44.

2 Click **Add** to open the **Create New Data Source** dialog box.

3 In the driver list box of the **Create New Data Source** dialog box, select the **SQL Server** driver, and click **Finish**.

The **Create a New Data Source to SQL Server** dialog box is displayed.

4 In the **Name** text box, type the data source name that you want to use for this data source connection.

In the sample application, TBC is the data source name used to connect to the Data Source database called TBC; TBC_MD is the data source name used to connect to the sample OLAP Metadata Catalog database called TBC_MD.

5 **Optional:** In the **Description** text box, type a description that indicates how you use this data source name.

For example, you might type the following names to describe the My Business database:

```
Customers, products, markets
```

You might type the following statement to describe the sample application database:

```
Sample relational data source
```

You might type the following statement to describe the sample OLAP Metadata Catalog database:

```
Sample OLAP Metadata Catalog
```

6 In the **Server** text box, type the address (either the computer name or the numeric IP address) of the computer where the database tables are stored.

7 Click **Next**.

The second wizard screen is displayed.

8 Select the appropriate option button for the method to use for verifying login IDs:

- **With Window NT authentication using the network login ID.**
- **With SQL Server authentication using a login ID and password entered by the user.**

9 **Optional:** If you are using a network library other than TCP/IP (the default) to connect to the database server, perform the following steps:

a. Click the **Client Configuration** button.

b. In the **Network libraries** list, select the appropriate option button for the library that you are using to connect to the database server computer, and click **OK**.

You are returned to the second wizard screen.

10 **Optional:** Select the **Connect to SQL Server to obtain default settings for the additional configuration** check box.

When this check box is selected, the driver obtains default settings from Microsoft SQL Server that it uses to complete additional setup screens in the wizard.

When this check box is clear, the driver uses standard defaults to complete the additional setup screens in the wizard.

11 Click **Next**.

The third wizard screen is displayed.

12 Select the **Change the default database to** check box and then type or select the name of the database for which you want to create this data source name.

For example, in the sample application, TBC is the name of the Data Source database; TBC_MD is the name of the OLAP Metadata Catalog database.

13 Click **Next**.

The fourth wizard screen is displayed.

14 Make any entries appropriate to your system configuration and click **Finish**.

15 Repeat Step 2 through Step 14 to configure a data source name for an OLAP Metadata Catalog.

16 When you have completed configuring all needed data sources, click **OK** to close the **ODBC Data Source Administrator** dialog box.

Configuring the Teradata ODBC Driver for Teradata

Use the following procedure to configure a data source name for your Data Source database using the Teradata driver. Then repeat the procedure to configure a data source name for the relational database that you want to use as your OLAP Metadata Catalog database.

Note:

You may repeat the configuration procedure to create any number of data source names to Data Source databases or OLAP Metadata Catalog databases.

➤ To configure a data source name:

1 Access the **ODBC Data Source Administrator** by following the procedure in "Accessing ODBC Data Source Administrator in Windows" on page 44.

2 Click **Add** to open the **Create New Data Source** dialog box.

3 In the driver list box of the **Create New Data Source** dialog box, select Teradata, and click **Finish**.

The **ODBC Driver Setup for Teradata RDBMS** dialog box is displayed.

4 In the **Name** text box, type the data source name that you want to use for this data source connection.

In the sample application, TBC is the data source name used to connect to the Data Source database called TBC; TBC_MD is the data source name used to connect to the sample OLAP Metadata Catalog database called TBC_MD.

5 **Optional:** In the **Description** text box, type an description that indicates how you use this data source name.

For example, you might type the following to describe the My Business database:

```
Customers, products, markets
```

You might type the following to describe the sample application database:

```
Sample relational data source
```

You might type the following to describe the sample OLAP Metadata Catalog database:

```
Sample OLAP Metadata Catalog
```

6 In the **Teradata Server Info** text box, type the address (either the computer name or the numeric IP address) of the computer where the database tables are stored.

7 In the **Default Database** text box, type the name of the database for which you want to create this data source name.

For example, in the sample application, TBC is the name of the Data Source database; TBC_MD is the name of the OLAP Metadata Catalog database.

8 **Optional:** Enable the X Views option for Teradata.

You can limit the number of data sources displayed in the left frame of an OLAP Model main window based on the security of the Teradata user ID that was used to connect. Follow steps a through c to enable the X Views option:

a. Click the **Options** button.

b. Check the **Use X Views** check box.

c. Click **OK** to return to the **ODBC Driver Setup for Teradata RDBMS** dialog box.

9 Click **OK** to return to the **System DSN** tab of the **ODBC Data Source Administrator** dialog box.

The data source name that you entered and the driver that you mapped to it are displayed in the **System Data Sources** list box.

10 Repeat Step 2 through Step 9 above to configure a data source name for an OLAP Metadata Catalog.

Note:

You may repeat the above procedure to create any number of data source connections to relational data sources or OLAP Metadata Catalogs.

11 When you have completed configuring all needed data sources, click **OK** to close the **ODBC Data Source Administrator** dialog box.

Editing a Data Source Name

➤ To edit configuration information for a data source name:

1 Access the **ODBC Data Source Administrator** by following the procedures in "Accessing ODBC Data Source Administrator in Windows" on page 44.

2 Select the data source name and click **Configure** to open the driver setup dialog box or wizard specific to your RDBMS.

3 Correct any information that you want to change.

Configuring Data Source Names on UNIX Systems

ODBC Administrator is not available on UNIX systems. On AIX, HP-UX, Solaris, and Linux, you must manually set environment variables and edit the `odbc.ini` file. You can edit the

odbc.ini file (using a text editor such as vi) to configure, add, or change data sources names, and to add or change drivers.

Note:

Integration Services does not support data source table names and column names that contain spaces or special characters, such as a period (.). See Appendix B, "Integration Services Limits and Guidelines" for a complete listing of the unsupported characters.

Flat File Data Sources: If you are using a flat file data source, you must define the structure of the text files in your data source in a QETXT.INI file. The process for creating the QETXT.INI file for UNIX operating systems is described in the *DataDirect Connect ODBC Reference* in the PDF file in $HYPERION_HOME/common/ODBC/Merant/5.2/books.

Configuring Environment Variables

On UNIX systems, you must set environment variables to enable access to ODBC core components. The is.sh and is.csh shell scripts that set the required variables are provided in the Integration Services home directory.

You must run one of the scripts before starting Integration Server and using ODBC to connect to Data Source databases and OLAP Metadata Catalog databases. You can include the scripts in the login script for the user name that you use to run Integration Server.

Teradata: If you are using Teradata drivers, you must set environment variables to point to the location of the installed drivers.

Note:

Use the env command to verify environment settings.

Editing the odbc.ini File

You configure data source names for a Data Source database or OLAP Metadata Catalog database in an odbc.ini file. In one section of the file, add a name and description for the ODBC data source. In a separate, newly created section of the file, provide the ODBC driver path, file name, and all other required driver settings.

The Integration Services installation program installs a sample odbc.ini file in the HYPERION_HOME/common/ODBC/Merant/5.2 directory. The file contains generic ODBC connection and configuration information for supported ODBC drivers. Use the file as a starting point to map the ODBC drivers that you use to the Data Source database and OLAP Metadata Catalog database.

IBM DB2: For each server computer to which you are connecting using the DataDirect Wire Protocol driver, you must create a bind package. DataDirect supplies a program that creates the bind package for you. See "Creating IBM DB2 Bind Packages for DataDirect Wire Protocol Driver Connections" on page 64 for instructions on using the DataDirect-supplied program.

Teradata: When configuring a data source name, the data source description must be set to `tdata.sl` (HP-UX) or `tdata.so` (AIX and Solaris). Specific examples for AIX, HP-UX, and Solaris operating systems are shown in "Examples of ODBC Settings for Teradata" on page 62.

Tip:

The procedure in this section shows you how to configure a data source name by manually editing the `odbc.ini` file.

Note:

If you use a file other than the `odbc.ini` file (located by default in `$HYPERION_HOME/common/ODBC/Merant/5.2`), be sure to set the ODBCINI environment variable to the name of the file that you use.

➤ To add an ODBC data source to an `odbc.ini` file::

1. **On the computer running Integration Server, open the `odbc.ini` file by using a text editor such as vi.**
2. **Locate the section starting with `[ODBC Data Sources]` and add a new line with the data source name and description; for example:**

   ```
   mydata=data source for analysis
   ```

   To minimize confusion, the data source name can match the name of the database in the RDBMS.
3. **Add a new section to the file by creating a new line with the new data source name enclosed in brackets; for example:**

   ```
   [mydata]
   ```
4. **On the lines following the data source name, add the full path and file name for the ODBC driver required for this data source and any other required ODBC driver information.**

   Use the examples shown in the following sections as guidelines for specific RDBMSs.

   Note:

   Ensure that the ODBC driver file actually exists in the location that you specify for the Driver= setting.
5. **Add a new section to the file by creating a new line with ODBC enclosed in brackets; for example:**

   ```
   [ODBC]
   ```
6. **Under the [ODBC] heading, add the full path to the location where the `/lib` and `/messages` directories are contained.**

   Use the examples shown in the following sections as guidelines for specific RDBMSs.
7. **When you finish editing `odbc.ini`, save the file and exit the text editor.**

   For information about the `odbc.ini` file and the ODBC driver settings for each RDBMS or flat file data source, see the *DataDirect Connect ODBC Reference* in the PDF file and the `Readme` files

in the $HYPERION_HOME/common/ODBC/Merant/5.2/books directory. For information about vendor-supplied ODBC driver settings, refer to the installation documentation for the vendor-supplied ODBC drivers.

Flat File Data Sources: If you are using a flat file data source, you must define the structure of the text files in your data source in a QETXT.INI file. The process for creating the QETXT.INI file for UNIX operating systems is described in the *DataDirect Connect ODBC Reference* in the PDF file in $HYPERION_HOME/common/ODBC/Merant/5.2/books.

Examples of ODBC Settings for IBM DB2 UDB

The following example illustrates how you might edit odbc.ini to connect to a Data Source database, such as db2data on IBM DB2 version 8.2 (on AIX), using a DataDirect Wire Protocol driver. You can make a separate entry to connect to the OLAP Metadata Catalog database.

Use the vi $ODBCINI command to edit the odbc.ini file and insert the following statements:

```
[ODBC Data Sources]
db2data=DB2 Source Data on AIX
...
[db2data]
Driver=/home/hyperion/Hyperion/common/ODBC/Merant/5.2/Drivers/ardb222.so
IpAddress=isaix7
Database=tbd7a7n
TcpPort=50000
Package=PACK4A
Action=REPLACE
QueryBlockSize=8
CharSubTypeType=SYSTEM_DEFAULT
ConversationType=SINGLE_BYTE
CloseConversation=DEALLOC
UserBufferSize=32
MaximumClients=35
GrantExecute=1
GrantAuthid=PUBLIC
OEMANSI=1
DecimalDelimiter=PERIOD
DecimalPrecision=15
StringDelimiter=SINGLE_QUOTE
IsolationLevel=CURSOR_STABILITY
ResourceRelease=DEALLOCATION
DynamicSections=32
Trace=0
WithHold=0
[ODBC]
IANAAppCodePage=4
InstallDir=$HYPERION_HOME/common/ODBC/Merant/5.2
Trace=0
TraceDll=$HYPERION_HOME/common/ODBC/Merant/5.2/lib/odbctrac.so
TraceFile=odbctrace.out
UseCursorLib=0
```

Example of ODBC Settings for IBM DB2 OS/390

The following example illustrates how you might edit `odbc.ini` to connect to a Data Source database, such as db2data on IBM DB2 version 8.2 (on AIX), using a DataDirect Wire Protocol driver. You can make a separate entry to connect to the OLAP Metadata Catalog database.

Use the vi $ODBCINI command to edit the `odbc.ini` file and insert the following statements:

```
[ODBC Data Sources]
os390=DB2 OS/390 Source Data
...
[os390]
Driver=/home/hyperion/Hyperion/common/ODBC/Merant/5.2/Drivers/ARdb222.so
Collection=DATADIRECT00
Database=
DynamicSections=100
GrantAuthid=PUBLIC
GrantExecute=1
IpAddress=isaix21
IsolationLevel=CURSOR_STABILITY
Location=DALLAS
Package=PACK42
PackageOwner=
TcpPort=446
WithHold=1
[ODBC]
IANAAppCodePage=4
InstallDir=$HYPERION_HOME/common/ODBC/Merant/5.2
Trace=0
TraceDll=$HYPERION_HOME/common/ODBC/Merant/5.2/lib/odbctrac.so
TraceFile=odbctrace.out
UseCursorLib=0
```

Note:

To use Integration Services with IBM DB2 OS/390, you must add an entry to the ais.cfg file after you configure the data source name for the source database.

Example of ODBC Settings for Informix

The following example illustrates how you might edit `odbc.ini` to connect to a Data Source database, such as ifxdata, on Informix version 9.4 (on HP-UX), using a DataDirect Version 5.2 ODBC driver. You can make a separate entry to connect to the OLAP Metadata Catalog database.

```
[ODBC Data Sources]
ifxdata=Informix 9.4 Source Data on HP-UX
...
[ifxdata]
Driver=/home/hyperion/Hyperion/common/ODBC/Merant/5.2/Drivers/ARifc220.so
Description=Informix9.4 ODBC Driver
Database=ifxdata
HostName=ishp4
PortNumber=1526
ServerName=informixhost
[ODBC]
```

```
IANAAppCodePage=4
InstallDir=$HYPERION_HOME/common/ODBC/Merant/5.2
Trace=0
TraceDll=$HYPERION_HOME/common/ODBC/Merant/5.2/lib/odbctrac.so
TraceFile=odbctrace.out
UseCursorLib=0
```

Example of ODBC Settings for Oracle

The following example illustrates how you might edit `odbc.ini` to connect to a Data Source database, oradata, on Oracle 9i (on Solaris), using a DataDirect version 5.2 ODBC driver. You can make a separate entry to connect to the OLAP Metadata Catalog database.

```
[ODBC Data Sources]
oradata=Oracle9i Source Data on Solaris
...
[oradata]
Driver=/home/Hyperion/common/ODBC/Merant/5.2/Drivers/arora22.so
Description=my oracle source
HostName=oraclehost
SID=tbc1
PortNumber=1521
[ODBC]
IANAAppCodePage=4
InstallDir=$HYPERION_HOME/common/ODBC/Merant/5.2
Trace=0
TraceDll=$HYPERION_HOME/common/ODBC/Merant/5.2/lib/odbctrac.so
TraceFile=odbctrace.out
UseCursorLib=0
```

Tip:

Run `ivtestlib` to verify that the environment is set to run the correct ODBC driver file. For example, run `ivtestlib` and paste the path and file name that follow `Driver=` in the `odbc.ini` file that you edited.

Example of ODBC Settings for Flat File Data Source

The following example illustrates how you might edit `odbc.ini` to connect to a Data Source database that consists of one or more flat files. The example also includes descriptions for each line item in parentheses. You can make a separate entry to connect to the OLAP Metadata Catalog database, which must be stored in a relational database.

Also included is an example of the `QETXT.INI` file. The example uses shows how you would configure three tables from the TBC database: Product, Region, Market, and an abbreviated version of Sales.

Note:

Integration Services does not support data source table names and column names that contain spaces or special characters, such as a period (.). See Appendix B, "Integration Services Limits and Guidelines" for a complete listing of the unsupported characters.

Note:

You must use a relational database as your OLAP Metadata Catalog database and configure it as described in "Editing the odbc.ini File" on page 55.

```
[ODBC Data Sources]
tbc_ff=TBC flat file data source
...
[tbc_ff]
Driver=/home/hyperion/Hyperion/common/ODBC/Merant/5.2/Drivers/ARtxt22.so
  (location of a driver)
Description=DataDirect 5.2 TextFile(*.*)
AllowUpdateAndDelete=0 (a variable edited by user)
ApplicationUsingThreads=1 (a variable edited by user)
CacheSize=64 (a variable edited by user)
CenturyBoundary=20 (a variable edited by user)
Database=/home/hyperion/flat_files/stream (a data file location)
DataFileExtension=TXT (a variable edited by user, default is TXT)
DecimalSymbol=. (a variable edited by user, default is dot(.))
Delimiter=~ (a variable edited by user)
FileOpenCache=0 (a variable edited by user)
FirstLineNames=1 (a variable edited by user)
IntlSort=1 (a variable edited by user)
ScanRows=5 (a variable edited by user)
TableType=Character (a variable edited by user)
UndefinedTable=GUESS (a variable edited by user)
[ODBC]
IANAAppCodePage=4
InstallDir=$HYPERION_HOME/common/ODBC/Merant/5.2
Trace=0
TraceDll=$HYPERION_HOME/common/ODBC/Merant/5.2/Drivers/odbctrac.so
TraceFile=odbctrace.out
UseCursorLib=0
```

For more information on editing the ODBC.INI file in UNIX to configure a flat file data source see the DataDirect Connect ODBC Reference in PDF format in `$HYPERION_HOME/common/ODBC/Merant/5.2/books/odbcref`.

Example of QETXT.INI for Flat File Data Sources

The following is an example of the `QETXT.INI` file. The example shows how you would configure three tables from the TBC database: Product, Region, Market, and an abbreviated version of Sales.

```
[Defined Tables]
PRODUCT.txt=Product
REGION.txt=REGION
SALESFACTSHORT.txt=SalesFactShort
MARKET.txt=Market
[Product]
FILE=PRODUCT.txt
FLN=1
TT=Comma
Charset=ANSI
```

```
DS=.
FIELD1=PRODUCTID,NUMERIC,9,0,9,0,
FIELD2=FAMILYID,NUMERIC,8,0,8,0,
FIELD3=SKU,VARCHAR,6,0,6,0,
FIELD4=SKUNAME,VARCHAR,18,0,18,0,
FIELD5=CAFFIENATED,VARCHAR,11,0,11,0,
FIELD6=OUNCES,NUMERIC,6,0,6,0,
FIELD7=PKGTYPE,VARCHAR,7,0,7,0,
FIELD8=INTRODATE,DATE,10,0,10,0,yyyy/m/d
[REGION]
FILE=REGION.txt
FLN=0
TT=Comma
Charset=ANSI
DS=
[SalesFactShort]
FILE=SALESFACTSHORT.txt
FLN=1
TT=Comma
Charset=ANSI
DS=.
FIELD1=STATEID,NUMERIC,7,0,7,0,
FIELD2=PRODUCTID,NUMERIC,9,0,9,0,
FIELD3=SCENARIOID,NUMERIC,10,0,10,0,
FIELD4=SUPPLIERID,NUMERIC,10,0,10,0,
FIELD5=TRANSDATE,DATE,10,0,10,0,yyyy/m/d
FIELD6=SALES,NUMERIC,7,2,6,0,
FIELD7=COGS,NUMERIC,6,2,6,0,
FIELD8=MARKETING,NUMERIC,11,2,9,0,
FIELD9=PAYROLL,NUMERIC,9,2,7,0,
FIELD10=MISC,NUMERIC,6,2,4,0,
FIELD11=OPENINGINVENTORY,NUMERIC,18,2,16,0,
FIELD12=ADDITIONS,NUMERIC,11,2,9,0,
[Market]
FILE=MARKET.txt
FLN=1
TT=Comma
Charset=ANSI
DS=.
FIELD1=STATEID,NUMERIC,7,0,7,0,
FIELD2=REGIONID,NUMERIC,8,0,8,0,
FIELD3=STATE,VARCHAR,13,0,13,0,
FIELD4=POPULATIONID,NUMERIC,12,0,12,0,
```

For more information on creating the `QETXT.INI` file in UNIX to configure tables for a flat file data source see the DataDirect Connect ODBC Reference in PDF format in `$HYPERION_HOME/common/ODBC/Merant/5.2/books/odbcref`.

Example of ODBC Settings for Microsoft SQL Server

The following example illustrates how you might edit `odbc.ini` to connect to a Data Source database, such as sqldata, on Microsoft SQL Server 2000 (on HP-UX), using a vendor-supplied ODBC driver. You can make a separate entry to connect to the OLAP Metadata Catalog database.

```
[ODBC Data Sources]
sqldata=SQL Server 2000 Source Data on HP-UX
```

```
...
[sqldata]
Driver=/home/hyperion/Hyperion/common/ODBC/Merant/5.2/Drivers/ARmsss22.so
Description=SQL Server 2000 Driver
Database=sqldata
Address=isqa17,1433
QuotedId=No
AnsiNPW=No
[ODBC]
IANAAppCodePage=4
InstallDir=$HYPERION_HOME/common/ODBC/Merant/5.2
Trace=0
TraceDll=$HYPERION_HOME/common/ODBC/Merant/5.2/lib/odbctrac.so
TraceFile=odbctrace.out
UseCursorLib=0
```

Example of ODBC Settings for Sybase

The following example illustrates how you might edit `odbc.ini` to connect to a Data Source database, such as sybdata, on Sybase version 12.6 (on HP-UX), using a DataDirect version 5.2 ODBC driver. You can make a separate entry to connect to the OLAP Metadata Catalog database.

```
[ODBC Data Sources]
sybdata=Sybase 12.6 Source Data on HP-UX
...
[sybdata]
Driver=/home/hyperion/Hyperion/common/ODBC/Merant/5.2/Drivers/ARase22.so
Description=Sybase 12.6 ODBC Driver
Database=sybdata
NetworkAddress=issol5,4200
[ODBC]
IANAAppCodePage=4
InstallDir=$HYPERION_HOME/common/ODBC/Merant/5.2
Trace=0
TraceDll=$HYPERION_HOME/common/ODBC/Merant/5.2/lib/odbctrac.so
TraceFile=odbctrace.out
UseCursorLib=0
```

Examples of ODBC Settings for Teradata

The following example illustrates how you might edit `odbc.ini` to connect to a Data Source database, tbc, on Teradata (on AIX), using the Teradata ODBC driver. You can make a separate entry to connect to the OLAP Metadata Catalog database. The data source description in [ODBC Data Sources] must be set to `tdata.so`.

```
[ODBC Data Sources]
tbc=tdata.so
...
[tbc]
Driver=/usr/odbc/drivers/tdata.so
Description=NCR 3600 running Teradata V2R5
DBCName=139.64.140.45
DefaultDatabase=tbc
```

```
UseXViews=Yes
[ODBC]
IANAAppCodePage=4
InstallDir=$HYPERION_HOME/common/ODBC/Merant/5.2
Trace=0
TraceDll=$HYPERION_HOME/common/ODBC/Merant/5.0/lib/odbctrac.so
TraceFile=odbctrace.out
UseCursorLib=0
```

HP-UX

The following example illustrates how you might edit `odbc.ini` to connect to the same Data Source database, tbc, on Teradata (on HP-UX), using the Teradata ODBC driver. You can make a separate entry to connect to the OLAP Metadata Catalog database. The data source description in [ODBC Data Sources] must be set to `tdata.sl`.

```
[ODBC Data Sources]
tbc=tdata.sl
...
[tbc]
Driver=/usr/odbc/drivers/tdata.sl
Description=NCR 3600 running Teradata V2R5
DBCName=139.64.140.45
DefaultDatabase=tbc
UseXViews=Yes
[ODBC]
IANAAppCodePage=4
InstallDir=$HYPERION_HOME/common/ODBC/Merant/5.0
Trace=0
TraceDll=$HYPERION_HOME/common/ODBC/Merant/5.0/lib/odbctrac.so
TraceFile=odbctrace.out
UseCursorLib=0
```

Solaris:

The following example illustrates how you might edit `odbc.ini` to connect to the same Data Source database, tbc, on Teradata (on Solaris), using the Teradata ODBC driver. You can make a separate entry to connect to the OLAP Metadata Catalog database. The data source description in [ODBC Data Sources] must be set to `tdata.so`.

```
[ODBC Data Sources]
tbc=tdata.so
...
[tbc]
Driver=/usr/odbc/drivers/tdata.so
Description=NCR 3600 running Teradata V2R5
DBCName=139.64.140.45
DefaultDatabase=tbc
UseXViews=Yes
[ODBC]
IANAAppCodePage=4
InstallDir=$HYPERION_HOME/common/ODBC/Merant/5.0
Trace=0
TraceDll=$HYPERION_HOME/common/ODBC/Merant/5.0/lib/odbctrac.so
TraceFile=odbctrace.out
UseCursorLib=0
```

Note:

The UseXViews parameter is optional on all UNIX platforms. The UseXViews parameter limits the number of data sources displayed in the left frame of an OLAP Model main window based on the security of the Teradata user ID that was used to connect.

Creating IBM DB2 Bind Packages for DataDirect Wire Protocol Driver Connections

In the UNIX environment, you must create a bind package for each connection between Integration Server and an IBM DB2 database that you make using the DataDirect (formerly MERANT) Wire Protocol driver. Without a bind package for each connection, the Wire Protocol driver will not work properly. DataDirect supplies a command line program to create the bind packages.

➤ To create a bind package for a connection using the DataDirect Wire Protocol Driver for IBM DB2:

1 **On the computer running Integration Server, open a command shell window.**

2 **In the command shell window type:**

```
bind19 dsn
```

Replace *dsn* with the data source name for which you are creating this bind package. For example, to create a bind package for the data source name TBC, type:

```
bind19 TBC
```

Note:

You are prompted for a user name and password if this information is not stored in the system information file.

If successful, a message is displayed stating that the package was created and bound.

For troubleshooting information, access the DataDirect Web site at http://www.datadirect-technologies.com and select the Product Documentation link.

3 **Repeat Step 2 for all bind packages you want to create.**

4 **When all bind packages are created, close the command shell window.**

Adding a Configuration File Entry for IBM DB2 OS/390

If you are using IBM DB2 OS/390, you must add an entry to the `ais.cfg` file to support Integration Services functionality. You must add entries for each data source name for IBM DB2 OS/390 that you have configured.

Note:

For IBM DB2 OS/390, you configure data source name for the Data Source database only. You cannot configure a data source name for the OLAP Metadata Catalog database. OLAP Metadata Catalog functionality is not supported in IBM DB2 OS/390.

➤ To add an entry for IBM DB2 OS/390 to the `ais.cfg` file: :

1 **On the computer running Integration Server, use a text editor to open `ais.cfg`.**

2 **Add a new line for IBM DB2 OS/390 using the data source name or names you have configured.**

Add separate lines for each data source name configured for IBM DB2 OS/390. The syntax is:

```
[DS:dsn:390]
```

For example, using the sample application database, TBC, the following is the entry to the `ais.cfg` file:

```
[DS:TBC:390]
```

3 **Save and close `ais.cfg`.**

After Configuration of Data Source Names

After you configure data source names for the Data Source database and OLAP Metadata Catalog database, you can connect to databases from Integration Services. You can then create, modify, and save OLAP models and metaoutlines. For information on viewing TBC tables, columns, OLAP models, and metaoutlines in Integration Services Console, see "Viewing TBC Tables and Columns " on page 118.

If you plan to use flat (text) files as data source, you must set up data source names for those files. See "Configuring Data Source Names on Windows Systems" on page 43"Configuring Data Source Names on UNIX Systems" on page 54.

Note:

The SQL Server ODBC driver may time out during a call to an SQL Server database, particularly during a data load. If a timeout occurs, try again when the database is not busy. Increasing the driver time-out period may avoid this problem. For more information, see the ODBC documentation for the driver that you are using.

For more information on ODBC connection problems and solutions, see Chapter 7, "Troubleshooting ODBC and Connections".

Connecting to Server Components and Data Sources

Whether you are installing Integration Services for the first time or upgrading from a previous release, after you start the console, the OLAP Metadata Catalog Setup dialog box is displayed. Using this dialog box, you can either create a catalog or upgrade an existing catalog.

Note:

An OLAP Metadata Catalog must be created and configured before you can connect to it. For information on configuring a relational data source for an OLAP Metadata Catalog, see *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*. For information on creating OLAP Metadata Catalogs, see Chapter 3, "Creating, Upgrading, and Deleting OLAP Metadata Catalogs."

After the process of creating or upgrading an OLAP Metadata Catalog is complete, you can begin to create OLAP models and metaoutlines. You must connect to Integration Server, to an external data source, and to the OLAP Metadata Catalog where you want to store the OLAP models and metaoutlines that you create.

To use Integration Services Console to perform data loads, member loads, or member and data loads, you must connect the client software to an additional server component, Essbase Server.

You are prompted by the Login dialog box to connect to an Integration Server and an OLAP Metadata Catalog. Optionally, in the Login dialog box, you can also connect to an instance of Essbase Server and create default connection settings for both server components.

For information on troubleshooting connections to server components, see Chapter 7, "Troubleshooting ODBC and Connections".

Connecting to Integration Server

Integration Server manages access to OLAP Metadata Catalogs and to data sources. A catalog stores information that defines the external data source and the structure of OLAP model and metaoutline elements. To create an OLAP model or a metaoutline, you must connect to Integration Server.

Note:

The Integration Server system administrator must provide a user name and password to an OLAP Metadata Catalog before you can connect to the server.

Note:

It is highly recommended that you do not connect the Integration Server and Integration Services Console via a wide area network (WAN). Doing so may cause severe performance degradation.

➤ To connect to Integration Server:

1 To display the **Login** dialog box from the OLAP Model main window of the Integration Services Console, select **Connections**, then **OLAP Metadata Catalog**, then **Connect**.

Note:

The Login dialog box is displayed automatically when you start Integration Services Console. You can redisplay the Login dialog box by using the procedures described in this topic.

2 In the **Server** drop-down list under Integration Services, enter or select the name or IP address of an Integration Server computer; for example, cypress.

If the port number on which Essbase Integration Server communicates with the console has been set to a value other than the default, you must type the server name or IP address and type the nonstandard port number, separated by a colon; for example:

```
cypress:3390
```

3 In the **OLAP Metadata Catalog** drop-down list, select the data source name of an OLAP Metadata Catalog; for example, TBC_MD for the sample TBC (The Beverage Company) catalog database.

```
Oracle:TBC_MD
```

4 In the Code Page drop-down list box, select the code page of the language you want to use during the current Integration Services Console session.

The code page is a portion of the *locale* which identifies the local language and cultural conventions such as the formatting of currency and dates and the sort order of data.

5 In the **User Name** drop-down list box under Integration Services, type or select your user name.

It is necessary to type a user name the first time it is used. After a user is successfully connected to Integration Services, the user name is then displayed in the User Name drop-down list.

6 In the **Password** text box under Essbase Integration Server, type your password.

Note:

Use the same user name and password that you use to connect directly to the database server and to access the database that contains the OLAP Metadata Catalog.

7 Click **OK** or enter information for connecting to an instance of Essbase Server.

Connecting to Essbase Server

Essbase Server creates and manages Essbase databases. You do not have to connect Integration Services Console to Essbase Server to create an OLAP model or metaoutline, but you must connect to Essbase Server to view a sample Essbase outline or to load members or data into an Essbase database.

In the Login dialog box, you can specify the information for connecting to Essbase Server, but Integration Services Console does not connect to Essbase Server until you attempt to view a sample Essbase outline or to load members or data.

If you plan to use Essbase Integration Services Console on a client computer that is outside the firewall for your network, and the console requires that Integration Server and Essbase Server be located inside the firewall for your network, you must log on to Essbase Server with a name or an IP address that connects from both sides of the firewall. The system administrator provides you with this name or IP address.

Note:

The system administrator for Essbase Server must provide you with a user name and password before you can connect.

➤ To set connection information for an instance of Essbase Server:

1 In the OLAP Metaoutline main window, select **Connections**, then **OLAP Metadata Catalog**, then **Connect** to display the **Login** dialog box.

Note:

The Login dialog box is displayed automatically when you start Integration Services Console. You can redisplay the Login dialog box at any time while working in the OLAP Metaoutline main window by using the procedures described in this topic.

2 In the **Server** text box under **Essbase Server**, type or select the name of a computer that is running Essbase Server; for example, sequoia.

Note:

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

3 In the **User Name** drop-down list box under **Essbase Server**, type or select your Essbase user name.

It is necessary to type a user name the first time it is used. After a user is successfully connected to Essbase Server, the user name is then displayed in the User Name drop-down list.

4 In the **Password** text box under **Essbase Server**, type your Essbase password.

5 Click **OK**.

Setting Connection Defaults

If you typically use a specific instance of Integration Server, OLAP Metadata Catalog, and Essbase Server, you can save the settings as the default. After you set default connection information, you can reuse these settings without reentering the information.

If you use multiple instances of Integration Server and OLAP Metadata Catalogs, you can also set multiple relationships and select the appropriate one to use so that you do not need to reenter the information.

➤ To set connection defaults:

1. To display the **Login** dialog box, in the OLAP Model main window or OLAP Metaoutline main window, select **Connections**, then **OLAP Metadata Catalog**, then **Connect**.
2. In the **Login** dialog box, click **Set Login Defaults**.

   The **Set Login Defaults** dialog box is displayed.
3. In the **Server** text box, type or select the name of an Integration Server computer; for example, cypress.
4. In the **OLAP Metadata Catalog** text box, type or select the name of an OLAP Metadata Catalog; for example, TBC_MD for the sample TBC database.
5. In the Code Page drop-down list box, select the code page of the language you want to use for this Integration Services Console session.

   The code page is a portion of the *locale* which identifies the local language and cultural conventions such as the formatting of currency and dates and the sort order of data.
6. In the **User Name** text box, type or select a user name for the OLAP Metadata Catalog.
7. Take one of the following actions:
   - To set the connection defaults, click **Set Default**.
   - To save the connection information without setting the information as the default, click **Add to List**.
8. In the **Default Server** text box, type or select the name of an Essbase Server computer; for example, cypress.
9. In the **Default User Name** text box, type or select a user name for the instance of Essbase Server; for example, TBC.
10. Click **OK** to return to the **Login** dialog box.

Connecting to Data Sources

A data source is an external data repository—typically a large database—whose data you want to analyze by using Essbase. You must connect Integration Services to all data sources that you plan to use in creating OLAP models and metaoutlines and in loading data into an Essbase database.

Note:

You can connect to more than one relational data source to create OLAP models.

➤ To connect to a data source:

1. In the Integration Services Console **Welcome** dialog box, click the appropriate icon to create a new OLAP model or metaoutline. Alternatively, select the **Existing** or **Recent** tab and double-click an OLAP model or metaoutline to open it for editing.

   The Data Source dialog box is displayed.

2 In the **Data Source** drop-down list, select the data source to be used; for example, TBC in the sample application.

An ODBC data source must be created on the computer that is running Integration Server for any external data sources that you want to use. If the data source that you need is not visible in the scroll list, contact the Integration Services system administrator.

For more information about troubleshooting server and data source connections, see Chapter 7, "Troubleshooting ODBC and Connections".

The following example is a Net Service Name stanza that defines TBC in the tnsnames.ora file:

```
TBC =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = labmachine2)(PORT = 1521))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = orasid)
    )
  )
```

For Oracle using onames, in the example above, TBC is the Schema Name used to connect to an Oracle database. This is the database identifier that you use when you are using SQL *Plus to connect to a database.

DataDirect Drivers: If you are using DataDirect drivers with Oracle, pick a data source name from the Data Source drop-down list.

3 In the **Code Page** drop-down list box, select the code page of the language you want to use during the current Integration Services Console session, and click **OK**.

The code page is a portion of the locale which identifies the local language and cultural conventions such as the formatting of currency and dates and the sort order of data.

4 In the **User Name** drop-down list box, type or select your user name.

Note:

If you are using a flat file data source, no user name is required.

5 In the **Password** text box, type your password.

Note:

If you are using a flat file data source, no password is required.

6 Click **OK**.

The left frame of the OLAP Model main window initially displays information about the first data source to which you connected. Data source information is displayed hierarchically by data source name and owner name.

For each owner name, data is further sorted and organized by tables, views, and synonyms. You can use the listed source tables to create an OLAP model or use additional source tables by connecting to other data sources.

Information about subsequent data sources to which you connect is displayed in the same manner as information about the first connected data source was displayed; that is, by data source name and owner name, then tables, views, and synonyms.

Expand the plus sign, ⊞, to display tables, views, and synonyms contained in the data source.

If you want to connect to additional data sources, complete the steps in the following procedure:

➤ To connect to additional data sources:

1 Select **Connections**, then **Add Data Sources**.

The Data Source dialog box is displayed. You can connect to any number of available data sources without closing this dialog box.

2 In the **Data Source** drop-down list, select the additional data source to which you want to connect.

If you are using DataDirect drivers with Oracle, pick a data source name from the Data Source drop-down list.

3 In the **Code Page** drop-down list box, select the code page of the language you want to use during the current Integration Services Console session, and click **OK**.

4 In the **User Name** drop-down list box, type or select your user name.

It is necessary to type a user name the first time it is used. After a user is successfully connected to a data source, the user name is then displayed in the User Name drop-down list.

Note:

If you are using a flat file data source, no user name is required.

5 In the **Password** text box, type your password and click **Connect**.

Note:

If you are using a flat file data source, no password is required.

The left frame of the OLAP Model main window displays information about the data source to which you just connected along with information about the first data source to which you connected.

6 Repeat Step 2 through Step 3 for each data source to which you want to connect.

As you connect to additional data sources, the left frame of the OLAP Model main window displays information about all data sources to which you are connected.

7 When you finish connecting to all appropriate data sources, click **Close**.

Mapping JDBC Data Sources for Windows (Teradata Only)

Teradata users must map a JDBC data source to a relational database in the `ais.cfg` file in order to use the XML Import/Export feature of Integration Services. Teradata requires JDBC Type 3 .

To map a data source, edit the `ais.cfg` file (located in *HYPERION_HOME*`\products\Essbase\eis\server\bin`) using any text editor. If the `ais.cfg` file does not exist, use a text editor to create and edit it, then save it in *HYPERION_HOME*`\products\Essbase\eis\server\bin`.

Multiple OLAP Metadata Catalogs can be mapped under the [JDBC DSN] heading. If you want to comment out certain data sources in a list of data sources, insert the pound sign (#) as the first character in a line. (See the data source mapping examples that follow.)

The following syntax provides usage guidelines for editing `ais.cfg` to connect to a Teradata or an Oracle relational data source.

Syntax

```
[JDBC DSN]<Teradata ODBC DSN>:<Gateway Host>:<Port # on Gateway>/
<Server Host>oracle:<tnsname | oname>:<host name>:<port #>:<SID>
```

Command	Description
[JDBC DSN]	(Required) Available by default
For Teradata:	
Teradata ODBC DSN	The name of the Teradata data source used as the OLAP Metadata Catalog in Integration Services
Gateway Host	The host on which the Teradata Gateway program is running
Port # on Gateway	Port number of the Gateway host
Server Host	The host on which the Teradata server resides
For Oracle:	
tnsname	The name of the Oracle Net Service Name (found in `$ORACLE_HOME/network/ admin/ tnsnames.ora`) used as the OLAP Metadata Catalog in Integration Services
oname	The Schema Name used to connect to an Oracle database if you are using onames instead of tnsnames This is the database identifier that you use when you connect to the database using SQL*Plus.
host name	The host on which the Oracle server is installed or running
port #	Port number of the host on which the Oracle server is configured
SID	The server identifier for Oracle on host <*host name*>

In the following examples for mapping a JDBC data source for Teradata and Oracle, note that the pound sign (#) at the beginning of a line indicates that the line has been commented out.

Example of JDBC Type 3 Settings for Teradata

```
[JDBC DSN]td_catalog_dsn:labmachine1:6063/teradataServer
#tbc_md:labmachine1:6063/tera1td_tbc_md:labmachine1/
6063:tera1
```

Example of JDBC Type 4 Settings for Oracle

```
[JDBC DSN]oracle:ora_tbc_md:labmachine2:1521:orasid
#oracle:tbc_md:labmachine2:1521:orasid
```

When using Oracle with tnsnames, if the definitions for tnsname, host name, port #, and SID elements do not match the corresponding elements of a Net Service Name stanza in the `tnsnames.ora` file, a Java environment error will be the result. The preceding JDBC settings example is built using the elements in the following `tnsnames.ora` stanza:

```
ora_tbc_md =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = labmachine2)(PORT = 1521))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = orasid)
    )
  )
```

When using Oracle with onames, in the example above, `ora_tbc_md` is the Schema Name used to connect to an Oracle database. This is the database identifier you use when you are connecting to the database using SQL*Plus.

Mapping JDBC Data Sources for UNIX (Teradata Users Only)

Teradata users must map a JDBC data source to a relational database in the `ais.cfg` file in order to use the XML Import/Export feature of Integration Services. Teradata requires JDBC Type 3 .

To map a data source, edit the `ais.cfg` file (located in `$HYPERION_HOME/products/Essbase/eis/server/bin`) using any text editor. If the `ais.cfg` file does not exist, use a text editor to create and edit it, and then save it in `$`*`HYPERION_HOME`*`/products/Essbase/eis/server/bin`.

Multiple OLAP Metadata Catalogs can be mapped under the [JDBC DSN] heading. If you want to comment out certain data sources in a list of data sources, insert the pound sign (#) as the first character in a line. (See the data source mapping examples that follow.)

The following syntax provides usage examples for editing `ais.cfg` to connect to a Teradata or an Oracle relational data source.

Syntax

```
[JDBC DSN]
<Teradata ODBC DSN>:<Gateway Host>/<Port # on Gateway>/<Server Host>
oracle:<tnsname | oname>:<host name>:<port #>:<SID>
```

Command	Description
[JDBC DSN]	(Required) Available by default
For Teradata:	
Teradata ODBC DSN	The name of the Teradata data source used as the OLAP Metadata Catalog in Integration Services
Gateway Host	The host on which the Teradata JDBC Type 3 driver is configured and the Jserver is running
Port # on Gateway	Port number of the Gateway host
Server Host	The host on which the Teradata server resides
For Oracle:	
tnsname	The name of the Oracle Net Service Name (found in `$ORACLE_HOME/network/ admin/ tnsnames.ora`) used as the OLAP Metadata Catalog in Integration Services
oname	The Schema Name used to connect to an Oracle database if you are using onames instead of tnsnames This is the database identifier that you use when you are using SQL *Plus to connect to the database.
host name	The host on which the Oracle server is installed and running
port #	Port number of the host on which the Oracle server is configured
SID	The server identifier for Oracle on host <*host name*>

In the following examples for mapping a JDBC data source for Teradata and Oracle, note that the pound sign (#) at the beginning of a line indicates that the line has been commented out.

Example of JDBC Type 3 Settings for Teradata

```
[JDBC DSN]
td_catalog_dsn:labmachine1:6063/teradataServer
#tbc_md:labmachine1:6063/tera1
td_tbc_md:labmachine1:6063:tera1/
```

Example of JDBC Type 4 Settings for Oracle

```
[JDBC DSN]
oracle:ora_tbc_md:labmachine2:1521:orasid
#oracle:tbc_md:labmachine2:1521:orasid
```

When using Oracle with tnsnames, if the definitions for tnsname, host name, port #, and SID elements do not match the corresponding elements of a Net Service Name stanza in the tnsnames.ora file, a Java environment error results. The preceding JDBC settings example is built using the elements in the following `tnsnames.ora` stanza:

```
ora_tbc_md =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = labmachine2)(PORT = 1521))
```

```
    (CONNECT_DATA =
      (SERVICE_NAME = orasid)
  )
```

When using Oracle with onames, in the example above, `ora_tbc_md` is the Schema Name used to connect to an Oracle database. This is the database identifier that you use when you are using SQL*Plus to connect to a database.

Manually Configuring the Environment for UNIX Systems

After you install server products on any UNIX platform, you can manually configure the environment for the hyperion user to allow Essbase Integration Server to run and access the relational data source.

Note:

Running `ais_start` automatically configures your environment.

The steps to configure your environment include configuring the hyperion user login scripts to run the `is.sh (or) is.csh` file and update the environment variables for Essbase Integration Server.

3 Creating, Upgrading, and Deleting OLAP Metadata Catalogs

In This Chapter

Before you run Integration Services, you must create an OLAP Metadata Catalog to store the OLAP models that you create and the metaoutlines that you build from the OLAP models.

Note:

If you intend to use the Sample application to acquaint yourself with Integration Services, skip to Chapter 5, "Setting Up the Sample Applications." The Sample application has its own relational data source, OLAP Metadata Catalog, OLAP model, and metaoutline. Return to this chapter when you are ready to use a relational data source to build OLAP models and metaoutlines. It is recommended that you use the automatic installation process to install the Sample applications. See "Setting Up the Standard Sample Application Automatically" on page 95.

This chapter tells you what to consider before you create an OLAP Metadata Catalog in a relational database. You can create the catalog either automatically, through the use of Integration Services Console, or manually. You can also manually create a Unicode-enabled OLAP Metadata Catalog. For manual creation of an OLAP Metadata Catalog, this chapter lists the SQL scripts that you must run to create tables for the catalog. The procedures in this chapter assume that you know how to create tables by running SQL scripts.

About OLAP Metadata Catalogs

An OLAP Metadata Catalog is a database that consists of 33 tables in which Integration Services stores OLAP models and metaoutlines.

For a complete list of supported RDBMSs, see*Oracle Hyperion Enterprise Performance Management System Installation Start Here*.

You can run the RDBMS for an OLAP Metadata Catalog on any supported platform as long as you have the ODBC driver and database client software required to connect to the catalog from the computer that runs Essbase Integration Server. You can also run the RDBMS for the relational data source that you use to create OLAP models and build metaoutlines on any supported platform, if you have the ODBC driver and database client software required to access the data source. For a detailed matrix of specifically supported databases and ODBC drivers, see *Oracle Hyperion Enterprise Performance Management System Installation Start Here*.

The RDBMS for the OLAP Metadata Catalog can be different from the RDBMS for the relational data source, and the platforms for the two RDBMSs do not need to be the same.

You can have more than one OLAP Metadata Catalog and, by using the XML Import/Export utility, you can move OLAP models and metaoutlines from one OLAP Metadata Catalog to another OLAP Metadata Catalog.

Creating or Upgrading OLAP Metadata Catalogs

To create an OLAP Metadata Catalog, you must have permission to create tables in the database or have whatever similar access privileges are required by the RDBMS that you are using.

Note:

Microsoft SQL Server—The tables in a catalog are not accessible if they are created by a user that does not have db_owner privileges.

➤ To create an OLAP Metadata Catalog:

1 **Create a database for OLAP Metadata Catalog tables using the applicable RDBMS utility.**

See "Creating Databases for OLAP Metadata Catalog Tables" on page 78.

2 **Take one of the following actions:**

- Create an OLAP Metadata Catalog automatically by using Integration Services Console (see "Creating or Upgrading OLAP Metadata Catalogs Automatically" on page 79).
- Create tables for the OLAP Metadata Catalog database by running SQL scripts (see "Creating OLAP Metadata Catalogs Manually" on page 80).

Creating Databases for OLAP Metadata Catalog Tables

Create a database for the OLAP Metadata Catalog tables by using the applicable RDBMS utility, in the same way that you create any database.

- Create a database device or tablespace
- Allot 30 MB for storage
- Create user names and passwords, if needed
- Grant user privileges or permissions

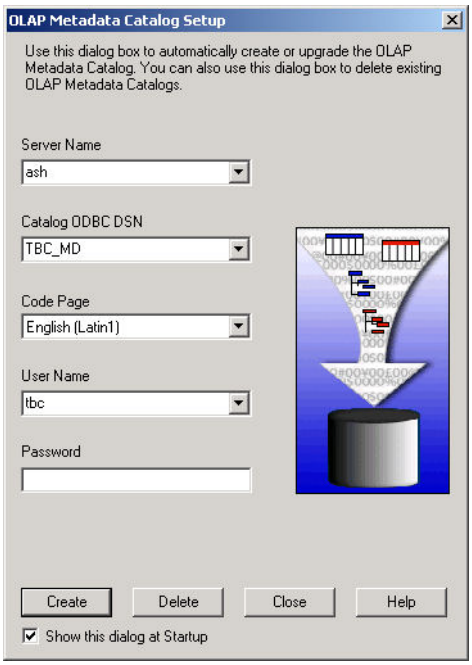
One OLAP Metadata Catalog can store all OLAP models and metaoutlines from numerous relational data sources. You can also create separate OLAP Metadata Catalogs to store additional OLAP models and metaoutlines for different projects.

Creating or Upgrading OLAP Metadata Catalogs Automatically

When you complete installation of Integration Services and start Integration Services Console, the program automatically displays the OLAP Metadata Catalog Setup dialog box, as shown in Figure 2.

This dialog box enables you to create a standard OLAP Metadata Catalog automatically, using Integration Services Console. If you have an older version of the OLAP Metadata Catalog, you also use this dialog box to upgrade the older version to the current version.

Figure 2 OLAP Metadata Catalog Setup Dialog Box



If you prefer to create the OLAP Metadata Catalog manually, see "Upgrading OLAP Metadata Catalogs Manually" on page 81.

➤ To create an OLAP Metadata Catalog automatically:

1 **From the Server Name drop-down list in the OLAP Metadata Catalog Setup dialog box, type or select the server computer on which you have installed Essbase Integration Server.**

It is necessary to type a server name the first time it is used. After the OLAP Metadata Catalog is successfully created, the server name is then displayed in the **Server Name** drop-down list box.

2 **From the Catalog ODBC DSN drop-down list, select the Data Source Name for the OLAP Metadata Catalog that you are creating.**

Note:

You must create the database in which you will store the OLAP Metadata Catalog, assign the appropriate user permissions, and configure the ODBC connection before you can create the catalog.

3 In the **Code Page** drop-down list box, select the code page that corresponds to the code page of the relational database that will be used as the OLAP Metadata Catalog.

The code page is a portion of the *locale* which identifies the local language and cultural conventions such as the formatting of currency and dates and the sort order of data.

4 In the **User Name** drop-down list, select or type the user name to which you have assigned permission to access the database in which the OLAP Metadata Catalog will be stored.

5 In the **Password** text box, type the password for the user name to which you have assigned permission to access the database in which the OLAP Metadata Catalog will be stored.

6 If you want the **OLAP Metadata Catalog Setup** dialog box to be displayed automatically each time you start Integration Services Console, leave the **Show this dialog at Startup** check box selected.

If you do not select the "Show this dialog at Startup" check box, you can access the "OLAP Metadata Catalog Setup" dialog box from the console by selecting Tools, then Create Catalog.

If an OLAP model or metaoutline is open when you select Tools, then Create Catalog, you are prompted to disconnect from the current catalog (Connections, then OLAP Metadata Catalog, then Disconnect). Note that disconnecting from an OLAP Metadata Catalog causes the open OLAP model or metaoutline to close.

7 Click **Create**.

Integration Services Console creates the OLAP Metadata Catalog automatically.

Note:

If you are migrating from a previous release of Integration Services, the OLAP Metadata Catalog auto-creation process upgrades the existing OLAP Metadata Catalog.

Creating OLAP Metadata Catalogs Manually

If you choose to create the OLAP Metadata Catalog manually, you must run SQL scripts by using the same utility program that you normally use to create tables.

The scripts that you use to create the tables for a non-Unicode OLAP Metadata Catalog are named:

`oc_create_`*`database_name`*`.sql`

The scripts that you use to create the tables for a Unicode OLAP Metadata Catalog are named:

`oc_create_`*`database_name`*`_unicode.sql`

These scripts are listed in Table 1 on page 83, along with the utility programs with which they have been tested.

Note:

Hyperion strongly recommends that you use the automatic installation process to create the OLAP Metadata Catalog (see "Creating or Upgrading OLAP Metadata Catalogs Automatically" on page 79).

➤ To create tables for the OLAP Metadata Catalog database manually:

1 **Start the utility program.**

2 **Connect to the database that you created for the OLAP Metadata Catalog.**

3 **Open the appropriate SQL script file in the `ocscript` directory.**

4 **Run the SQL script to build the tables.**

On Microsoft SQL Server, you receive a message that you did not create data or rows. This message is normal because you created only tables and columns.

5 **Verify that you have created the OLAP Metadata Catalog tables.**

For example, type a command such as:

```
SELECT * FROM JOIN_HINTS
```

or, start the applicable RDBMS utility program and verify that the OLAP Metadata Catalog has the new tables.

6 **Close the utility program.**

Upgrading OLAP Metadata Catalogs Manually

If you have OLAP Metadata Catalogs from an earlier release of Integration Services and you choose not to use the automatic creation-upgrade process, you must upgrade the existing OLAP Metadata Catalogs manually. You cannot use the existing catalogs with the new release of Integration Services until the catalogs are upgraded.

Note:

If you use Integration Services Console to create an OLAP Metadata Catalog automatically, the system upgrades existing OLAP Metadata Catalogs and you do not need to upgrade them manually (see "Creating or Upgrading OLAP Metadata Catalogs Automatically" on page 79). Hyperion recommends that you use the automatic process to create the OLAP Metadata Catalog.

You manually upgrade the tables of an OLAP Metadata Catalog by running the SQL scripts that use the same database utility program that you typically use to create tables. The SQL scripts to upgrade tables for the OLAP Metadata Catalog are in the `ocscript` directory where you installed Integration Services. The upgrade scripts are named `oc_upgrade*_` *`database_name`*`.sql` and are listed in Table 1 on page 83, along with the utility programs with which they have been tested.

Note:

If you manually rebuild an OLAP Metadata Catalog, you must drop (delete) the catalog tables by using `oc_drop*`*`database_name`*`.sql`. Then you create the OLAP Metadata Catalog tables by using `oc_create*`*`database_name`*`.sql`. If you choose to rebuild a catalog manually, it is not necessary to run any upgrade scripts.

Caution!

If you drop (delete) an OLAP Metadata Catalog, you also delete the OLAP models and metaoutlines that it contains.

The following topics discuss various aspects of upgrading OLAP Metadata Catalogs manually:

- "SQL Scripts Used to Create and Upgrade Tables" on page 82
- "Proper Order of SQL Scripts" on page 84
- "Upgrading Tables in the OLAP Metadata Catalog" on page 85

SQL Scripts Used to Create and Upgrade Tables

The SQL scripts to create tables for the OLAP Metadata Catalog (listed in Table 1) are located in the `ocscript` directory where you installed Integration Services.

Integration Services provides SQL scripts for each supported RDBMS:

- `oc_create_`*`database_name`*`.sql` to build tables
- `oc_drop_`*`database_name`*`.sql` to drop tables
- `oc_upgrade20_`*`database_name`*`.sql` to upgrade tables from Integration Services Release 1.*x* to 2.0 (does not apply to Teradata users)
- `oc_upgrade61_`*`database_name`*`.sql` to upgrade tables from Integration Services Release 2.0 to 6.1 (does not apply to Teradata users)
- `oc_upgrade65_`*`database_name`*`.sql` to upgrade tables from Integration Services Release 6.1 to 6.5
- `oc_upgrade651_`*`database_name`*`.sql` to upgrade tables from Integration Services Release 6.5 to 6.5.1

  Note:

  If you need to rebuild an OLAP Metadata Catalog, you must drop (delete) the catalog tables before you build them. Remember that if you drop an OLAP Metadata Catalog, you also delete the OLAP models and metaoutlines that it contains.

The utilities listed in Table 1 have been tested to work with the SQL scripts.

Table 1 SQL Scripts for Creating an OLAP Metadata Catalog

Database	SQL Script	Utility Program
IBM DB2	oc_create_db2.sql oc_drop_db2.sql oc_upgrade20_db2.sql oc_upgrade61_db2.sql oc_upgrade65_db2.sql oc_upgrade651_db2.sql	IBM DB2 Command Center or `>DB2 -tvf`
Informix	oc_create_informix.sql oc_drop_informix.sql oc_upgrade20_informix.sql oc_upgrade61_informix.sql oc_upgrade65_informix.sql oc_upgrade651_informix.sql	DBAccess
Oracle	oc_create_oracle.sql oc_drop_oracle.sql oc_upgrade20_oracle.sql oc_upgrade61_oracle.sql oc_upgrade65_oracle.sql oc_upgrade651_oracle.sql oc_create_oracle_unicode.sql oc_create_oracle9i_unicode.sql	SQL*Plus
Microsoft SQL Server	oc_create_sqlsrv.sql oc_drop_sqlsrv.sql oc_upgrade20_sqlsrv.sql oc_upgrade61_sqlsrv.sql oc_upgrade65_sqlsrv.sql oc_upgrade651_sqlsrv.sql	Query Analyzer (Microsoft SQL Server 7.0 and 2000)
Sybase	oc_create_sybase.sql oc_drop_sybase.sql oc_upgrade20_sybase.sql	ISQL

Database	SQL Script	Utility Program
	oc_upgrade61_sybase.sql oc_upgrade65_sybase.sql oc_upgrade651_sybase.sql	
Teradata	oc_create_teradata.sql oc_drop_teradata.sql oc_upgrade65_teradata.sql oc_upgrade651_teradata.sql	BTEQ

Proper Order of SQL Scripts

If you choose to upgrade the OLAP Metadata Catalog manually, you must run the SQL scripts in successive release order beginning with the upgrade script applicable to your current release. This is necessary because most releases make different changes to the catalog, and changes of one release are predicated on the changes of the preceding release. However, some releases of Integration Services (Release 6.2 and Releases 6.5.2, 6.5.3, 6.5.4, 7.0, and 7.1) do not require any changes to the OLAP Metadata Catalog from the immediately preceding release. No upgrade scripts exist for these releases.

Upgrading from Integration Services Release 1.*x*

If you are upgrading from Release 1.*x* to the current release, you run the following upgrade scripts in the order listed:

```
oc_upgrade20_*.sql
oc_upgrade61_*.sql
oc_upgrade65_*.sql
oc_upgrade651_*.sql
```

Upgrading from Integration Services Release 2.0

If you are upgrading from Release 2.0 to the current release, you run the following upgrade scripts in the order listed:

```
oc_upgrade61_*.sql
oc_upgrade65_*.sql
oc_upgrade651_*.sql
```

Upgrading from Integration Services Release 6.1

If you are upgrading from Release 6.1 to the current release, you run the following scripts in succession:

```
oc_upgrade65_*.sql
oc_upgrade651_*.sql
```

Upgrading from Integration Services Release 6.5

If you are upgrading from Release 6.5 to the current release, you run the following script:

```
oc_upgrade651_*.sql
```

Caution!

After you update an OLAP Metadata Catalog, you cannot roll back to a previous version. The new version of OLAP Metadata Catalog is not compatible with previous releases of Integration Services. In addition, do not attempt to use the new catalog with previous releases of Integration Services software. Such an attempt can result in corrupted OLAP Metadata Catalog data.

Upgrading Tables in the OLAP Metadata Catalog

To upgrade an OLAP Metadata Catalog manually, you upgrade the tables of the OLAP Metadata Catalog database.

➤ To upgrade tables for the OLAP Metadata Catalog database:

1. **Start the utility program.**
2. **Connect to the database that you created for the OLAP Metadata Catalog as the user who created the original OLAP Metadata Catalog tables.**
3. **Open the appropriate SQL script file in the `ocscript` directory.**

   See "SQL Scripts Used to Create and Upgrade Tables" on page 82.
4. **Run the SQL script (or scripts, if applicable) to upgrade the tables.**

   See "Proper Order of SQL Scripts" on page 84.

   On Microsoft SQL Server, you receive a message that you did not create data or rows. This message is normal because you created only tables and columns.
5. **Verify that the new tables have been added to the existing OLAP Metadata Catalog.**

   You can verify this by entering a command, for example:

   ```
   SELECT * FROM OM_DESCRIPTION
   ```

   or, you can start the applicable RDBMS utility program and verify that the OLAP Metadata Catalog has the new tables.
6. **Close the utility program.**

Mapping OLAP Metadata Catalogs

After you create an OLAP Metadata Catalog manually, you must map the catalog to a supported ODBC driver.

For information about supported ODBC drivers, see *Oracle Hyperion Enterprise Performance Management System Installation Start Here*. For information about configuring OLAP Metadata Catalog as an ODBC data source, see Chapter 2, "Configuring Data Sources".

Note:

If you attempt to access a Microsoft SQL Server database with the Microsoft native ODBC driver and you do not have access permission, SQL Server connects you to the default database without notifying you.

Note:

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

Deleting OLAP Metadata Catalogs

You can delete an existing OLAP Metadata Catalog at any time.

Caution!

Remember that if you delete an OLAP Metadata Catalog, you also delete the OLAP models and metaoutlines that it contains.

➤ To delete an OLAP Metadata Catalog:

1. From either the OLAP Model or OLAP Metaoutline main window, select **Tools**, then **Create Catalog** to display the **OLAP Metadata Catalog Setup** dialog box, as shown in Figure 2 on page 79.
2. From the **Server Name** drop-down list, select the appropriate Essbase Integration Server computer.
3. From the **Catalog ODBC DSN** drop-down list, select the Data Source Name for the OLAP Metadata Catalog that you want to delete.
4. In the **User Name** drop-down list, select or type your user name.
5. In the **Password** text box, type your password.
6. Click **Yes** to the confirmation prompt to delete the catalog.

   If the OLAP Metadata Catalog that you are attempting to delete is currently in use, you are prompted to disconnect from the current catalog (Connections, then OLAP Metadata Catalog, then Disconnect). You must disconnect before you can delete the catalog.

Note:

Disconnecting from an OLAP Metadata Catalog causes the open OLAP model or metaoutline to close.

4 Tables in OLAP Metadata Catalog

In This Chapter

OLAP Metadata Catalog is a relational database that contains OLAP models, metaoutlines, and the information necessary to retrieve the required data from the data source. You can install OLAP Metadata Catalog in any supported data source. See the *Oracle Hyperion Enterprise Performance Management System Installation Start Here* for a complete list of supported data sources.

This chapter describes the tables in OLAP Metadata Catalog.

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, Integration Services retrieves the information stored in OLAP Metadata Catalog to determine:

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

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.

Caution!

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

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 Chapter 3, "Creating, Upgrading, and Deleting OLAP Metadata Catalogs".
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 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 89
- "Tables Relating to Drill-Through" on page 91
- "Tables Relating to Hybrid Analysis" on page 91
- "Miscellaneous Tables" on page 92

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.
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.

Table Name	Description
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.
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 88
- "Tables Relating to Drill-Through" on page 91
- "Tables Relating to Hybrid Analysis" on page 91
- "Miscellaneous Tables" on page 92

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.

Table Name	Description
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 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 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 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.
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 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 data source 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 88
- "Tables Relating to the Metaoutline" on page 89
- "Tables Relating to Hybrid Analysis" on page 91
- "Miscellaneous Tables" on page 92

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.
MO_PROPERTIES	Contains information about drill-through filters. This information includes the Essbase user name and password, drill-through report name, and metaoutline name.

Tables Relating to Hybrid Analysis

You enable Hybrid Analysis in the OLAP Metaoutline main window of the Integration Services Console (refer to online help for information on enabling Hybrid Analysis). Hybrid Analysis enables you to access lower-level data stored in a data source database. This stored data, although not physically loaded into Essbase, is mapped to the appropriate Essbase hierarchies and is available to Oracle Essbase Spreadsheet Add-in users. Unlike drill-through data, which is displayed on a separate worksheet, Hybrid Analysis data is displayed seamlessly on the current worksheet in Oracle Essbase 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 88
- "Tables Relating to the Metaoutline" on page 89
- "Tables Relating to Drill-Through" on page 91
- "Miscellaneous Tables" on page 92

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 column precision, scale, and nullability.

Miscellaneous Tables

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

- "Tables Relating to the OLAP Model" on page 88
- "Tables Relating to the Metaoutline" on page 89
- "Tables Relating to Drill-Through" on page 91
- "Miscellaneous Tables" on page 92

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 Integration Services software you have installed. This information includes the release number of Integration Services.

5 Setting Up the Sample Applications

In This Chapter

This chapter tells you what to consider before and after you set up the standard sample application, whether automatically or manually. For manual setup, the topics in this chapter detail which scripts and batch files you must run to create and load the TBC database and the TBC_MD OLAP Metadata Catalog.

The procedures in this chapter assume that you know how to create a database using a relational database management system (RDBMS). For manual setup, the procedures assume that you know how to create tables and load them with data running SQL scripts, batch files, and shell scripts. For information on these topics, see the documentation for the RDBMS that you are using.

Overview of Sample Applications

Integration Services provides sample applications that consists of the following features:

- A database for a fictitious company called The Beverage Company (TBC)
- A sample OLAP model and metaoutline created from the TBC database
- A Hybrid Analysis-enabled OLAP model and metaoutline
- A special OLAP Metadata Catalog to store the sample OLAP models and metaoutlines and any additional OLAP models and metaoutlines that you create using the sample data

Preparing the sample application consists of three tasks:

- Setting up the standard sample application

- **Optional:** Setting up the Hybrid Analysis sample application
- **Optional:** Setting up the Unicode sample application

You can set up the standard sample application automatically using Integration Services Console (see "Setting Up the Standard Sample Application Automatically" on page 95), or you can set up the standard sample application manually ("Setting Up the Standard Sample Application Manually" on page 97. Using either method, setting up the standard sample application involves two main tasks:

- You create two relational databases: one for the data in the TBC sample application and one for the OLAP Metadata Catalog database (TBC_MD).

  Note:

  Creating the relational databases is a manual task that you must perform prior to setting up the standard sample application, regardless of whether you choose the automatic or manual method.

- You then create tables in each of these databases and load data into them, using scripts provided with Integration Services. You can create tables either automatically, through the use of Integration Services Console, or manually.

When you finish setting up the standard sample application, the OLAP Metadata Catalog database (TBC_MD) will contain an OLAP model (TBC Model) and a metaoutline (TBC Metaoutline) based on data in the sample TBC relational data source.

You create the Hybrid Analysis sample application manually by completing the tasks in "Setting Up the Hybrid Analysis Sample Application" on page 106. Upon completion of these tasks, the sample TBC relational data source will contain Hybrid Analysis data. The OLAP Metadata Catalog will contain a Hybrid Analysis-enabled OLAP model (HA TBC Model) and metaoutline (HA TBC Metaoutline).

You create the Unicode sample application manually by completing the tasks in "Setting Up the Unicode Sample Application" on page 115. Upon completion of these tasks, the sample TBC_U relational data source will contain Unicode enabled data. The Unicode TBC_MD_U OLAP Metadata Catalog will contain Unicode-enabled OLAP model (TBC_Model_Unicode) and metaoutline (TBC_Metaoutline_Unicode).

Caution!

If you have installed the sample application from a previous release of Integration Services, you should back up and preserve your existing sample database, OLAP Metadata Catalog, and the OLAP models and metaoutlines that OLAP Metadata Catalog contains. You can then upgrade your existing catalog to be compatible with the current release of the software (see "Upgrading OLAP Metadata Catalogs Manually" on page 81). You cannot, however, store newly created OLAP models and metaoutlines in your previous catalog.

Preparing to Set Up the Standard Sample Application

Before you set up the standard sample application, you must install the database client software for a supported RDBMS. When setting up the standard sample application, you must use a computer on which the server component of Integration Services (Essbase Integration Server) and the necessary database client software are both installed. For more information, see "Setting Up the Standard Sample Application Automatically" on page 95.

For manual setup of the standard sample application, the standard sample application scripts do not have to be installed on the same computer that you are using, but you must be able to access the script files.

Note:

Hyperion strongly recommends that you use the automatic installation process to install the standard sample applications (see "Setting Up the Standard Sample Application Automatically" on page 95).

If you choose to set up the standard sample application manually, refer to Table 8 and also verify that the appropriate client utility program is installed.

Table 8 Required Utilities for Setting Up the Standard Sample Application

Database	Utility Programs
IBM DB2 UDB	IBM DB2 Command Window or `>DB2 -tvf`
Informix	DBAccess
Microsoft SQL Server	Query Analyzer
Oracle	SQL*Plus
Sybase	• ISQL • BCP command line utility
Teradata	BTEQ

The remainder of this chapter assumes that you have installed the required database client software.

Setting Up the Standard Sample Application Automatically

After you have completed the Integration Services installation process, you can choose to install either or both the OLAP Metadata Catalog and the standard sample application. The system first displays the OLAP Metadata Catalog Setup dialog box to enable automatic setup of the catalog (see "Creating or Upgrading OLAP Metadata Catalogs Automatically" on page 79).

Whether or not you choose to create the OLAP Metadata Catalog automatically, you can choose to create the standard sample application automatically, after you finish creating the OLAP

Metadata Catalog. You can create the standard sample application quickly and easily using the automatic feature. You are encouraged to use this convenient feature, but if you choose manual setup, see "Setting Up the Standard Sample Application Manually" on page 97 for detailed procedures.

Hybrid Analysis: If you plan to set up the sample application for Hybrid Analysis, you must follow the procedures in "Setting Up the Hybrid Analysis Sample Application" on page 106.

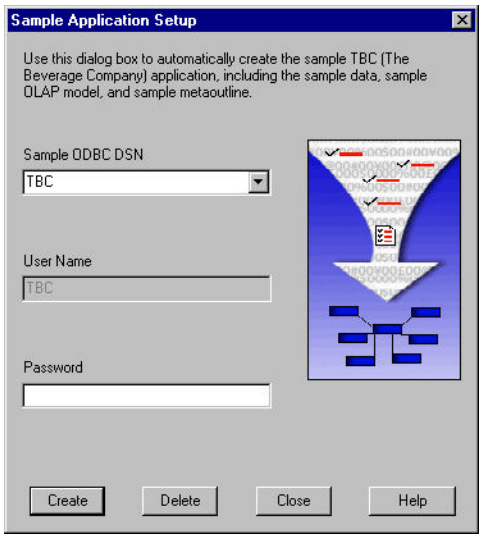
Note:

ODBC connections must be configured before you begin to set up the standard sample application. If you have not yet configured ODBC connections, see Chapter 2, "Configuring Data Sources" for information on setting up ODBC data sources, including an OLAP Metadata Catalog and relational data sources.

➤ To set up the standard sample application automatically:

1 Select **Tools**, then **Create Sample** to access the **Sample Application Setup** dialog box shown in Figure 3:

Figure 3 Sample Application Setup Dialog Box



2 In the **Sample ODBC DSN** text box, select or type the data source name for creating or dropping (deleting) tables in the source database.

The User Name text box displays the name, TBC (lowercase tbc for Informix). You must use this name to create the TBC standard sample application database.

3 In the **Password** text box, type the password for the user to which you have assigned privileges to access the TBC database for the standard sample application.

4 Click **Create** to create the standard sample application.

Integration Services creates the necessary tables, loads the TBC sample data into the tables, and loads the sample OLAP model and metaoutline data into the OLAP Metadata Catalog.

If Integration Services detects that you are not currently connected to the OLAP Metadata Catalog in which to load the sample OLAP model and metaoutline data, the **Login** dialog box is displayed so that you can enter the information necessary to connect.

After you close the **Login** dialog box and are returned to the **Sample Application Setup** dialog box, click **Create** again to initiate setup of the standard sample application.

If, after clicking **Create**, Integration Services detects either an existing sample data source or an existing sample OLAP model and metaoutline in the OLAP Metadata Catalog, you are prompted with the message that tables already exist in the database. Click **OK** to return to the **Sample Application Setup** dialog box to reenter information, or click **Delete** to delete the existing standard sample application data.

If you click **Delete**, your existing OLAP Metadata Catalog sample OLAP models and metaoutlines will be deleted and replaced with the sample OLAP model and metaoutline for the current release.

After you have completed creation of the Integration Services standard sample application, you are ready to begin working with Integration Services Console to create your own sample OLAP models and metaoutlines.

Setting Up the Standard Sample Application Manually

To set up the standard sample application manually, you begin by creating two databases in a supported RDBMS: TBC (the sample database) and TBC_MD (an OLAP Metadata Catalog). You then create tables in each of these databases and load data into them, using scripts provided with Integration Services. The names and directory locations of these scripts are detailed in the topics that follow.

Note:

Hyperion strongly recommends that you use the automatic installation process to install the standard sample applications (see "Setting Up the Standard Sample Application Automatically" on page 95).

After you create the TBC and TBC_MD databases in a supported RDBMS, you use several scripts and files to create the standard sample application:

- A script for creating the TBC sample database tables

  This script is located in the `samples\tbcdbase` directory.

- A script for loading the TBC sample database data

  This script is located in the `samples\tbcdbase` directory.

- A script for creating the TBC_MD OLAP Metadata Catalog database tables

  This script is located in the `ocscript` directory.

- XML files for importing a sample OLAP model and metaoutline in the TBC_MD OLAP Metadata Catalog database

These XML files are located in the `samples\tbcmodel` directory.

The scripts for creating the standard sample application and OLAP Metadata Catalog are installed with the server software during Integration Services installation. Different versions of the scripts are provided for each of the supported RDBMSs.

Note:

Some of the standard sample application scripts require slightly different procedures, depending on the RDBMS that you are using.

Setting Up the TBC Relational Data Source

The relational data source for the standard sample application is TBC.

Note:

To create a database, you must have database administrator or similar access privileges required by the RDBMS that you are using.

➤ To set up TBC relational data source:

1 **Create the TBC database using an RDBMS.**

For more information, see "Creating the TBC Database" on page 98.

2 **Create tables for the TBC database by running SQL scripts.**

For instructions, see "Creating Tables for the TBC Database" on page 99.

3 **Load data into the TBC database by running SQL scripts.**

For instructions, see "Loading Data into the TBC Tables" on page 100.

Creating the TBC Database

Create the TBC database in the same way that you create any database using an RDBMS:

- Create a database device or tablespace named TBC.
- Allot 20 MB for storage.
- Create a user TBC who can drop and create tables.
- Grant user privileges or permissions to create and drop tables.

Caution!

The user TBC must create the tables for the TBC database, or portions of the standard sample application will not work.

Creating Tables for the TBC Database

Create tables for the TBC database with the same utility program that you typically use to create tables by running SQL scripts.

The standard sample application SQL scripts needed to create tables for the TBC database are in the `samples\tbcdbase` directory where you installed Integration Server.

The utilities listed in Table 9 have been tested to work with the SQL scripts:

Table 9 Tested Utilities for Creating TBC Tables

Database	SQL Script	Utility Program
IBM DB2	`tbc_create_db2.sql` `tbc_drop_db2.sql`	IBM DB2 Command Window or `>DB2 -tvf`
Informix	`tbc_create_informix.sql` `tbc_drop_informix.sql`	DBAccess
Microsoft SQL Server	`tbc_create_sqlsrv.sql` `tbc_drop_sqlsrv.sql`	Query Analyzer
Oracle	`tbc_create_oracle.sql` `tbc_drop_oracle.sql`	• SQL*Plus • SQL*Loader command line utility
Sybase	`tbc_create_sybase.sql` `tbc_drop_sybase.sql`	ISQL
Teradata	`tbc_create_teradata.sql` `tbc_drop_teradata.sql`	BTEQ

Each RDBMS has two scripts—one to build tables and another to drop tables.

Caution!

You must create the tables for the TBC database as user TBC, or portions of the standard sample application will not work.

➤ To create tables for the TBC database:

1 **Start the utility program.**

2 **Connect to the TBC database as user TBC.**

Note:

Use lowercase tbc for Informix; use uppercase TBC for Sybase and Microsoft SQL Server.

3 **In the `samples\tbcdbase` directory, open the appropriate SQL script file.**

4 **Run the SQL script.**

Microsoft SQL Server: You should receive a message that you did not create data or rows. This message is normal because you created only tables and columns.

Informix: If you run the Informix SQL script (`tbc_create_informix.sql`) more than once, you must first run `tbc_drop_informix.sql` to drop tables before you build them again.

5 **Verify that you have created the TBC tables; for example, type**

```
SELECT * FROM PRODUCTDIM
```

or start the RDBMS and verify that the TBC database has the new tables.

6 **Close the utility program.**

Loading Data into the TBC Tables

Load data into the TBC tables by running an SQL script using the same utility program that you typically use to load tables by running SQL scripts.

The utilities listed in Table 10 have been tested to work with SQL scripts.

Table 10 Tested Utilities for Loading Data into TBC Tables

Database	SQL Script	Utility Program
IBM DB2	`sampledata.sql`	IBM DB2 Command Window or `>DB2 -tvf`
Informix	`sampledata.sql`	DBAccess
Microsoft SQL Server	`sampledata.sql`	Query Analyzer
Oracle	`sampledata.sql`	SQL*Plus
Sybase	`sampledata.sql`	ISQL
Teradata	`sampledata.sql`	BTEQ

➤ To load data into the TBC tables:

1 **From the command line, move to the `samples\tbcdbase` directory where you installed Integration Server.**

2 **Start the utility program.**

3 **Connect to the TBC database as user TBC.**

4 **In the `sample\tbcdbase` directory, open the `sampledata.sql` script file.**

5 **Run the SQL script using your RDBMS tool.**

6 **Verify that you have loaded data into the TBC tables; for example, type**

```
SELECT * FROM TBC.PRODUCT
```

or start the RDBMS and execute a query.

7 **Close the utility program.**

Setting Up the TBC_MD OLAP Metadata Catalog

The OLAP Metadata Catalog for the standard sample application is TBC_MD. For more information on OLAP Metadata Catalogs, see Chapter 3, "Creating, Upgrading, and Deleting OLAP Metadata Catalogs."

➤ To set up the TBC_MD OLAP Metadata Catalog:

1 **Create a TBC_MD database using an RDBMS.**

For more information, see "Creating the TBC_MD Database" on page 101.

2 **Create tables for the TBC_MD database by running SQL scripts.**

For instructions, see "Creating Tables for the TBC_MD Database" on page 101.

3 **Load data into the TBC_MD database using the XML import utility.**

For instructions, see "Using the XML Import Utility to Load Data into the TBC_MD Tables" on page 104.

Note:

If you have a previous release of Integration Services and are upgrading your OLAP Metadata Catalog, you cannot roll back to the previous version. The new version of the OLAP Metadata Catalog is not compatible with earlier releases of Integration Services.

Creating the TBC_MD Database

Create the TBC_MD database in the same way that you create any database using an RDBMS:

- Create a database device or tablespace named TBC_MD.
- Allot 20 MB for storage.
- Create a user TBC who can drop and create tables.
- Grant user privileges or permissions.

Caution!

You must create the tables for the TBC_MD database as user TBC or portions of the standard sample application will not work.

Creating Tables for the TBC_MD Database

Create tables for the TBC_MD database with the same utility program that you typically use.

The standard sample application SQL scripts used to create tables for the TBC_MD database are in the `ocscript` directory where you installed Integration Server.

The SQL scripts in the `ocscript` directory are the same scripts that you use to create any OLAP Metadata Catalog. For information on OLAP Metadata Catalogs, see Chapter 3, "Creating, Upgrading, and Deleting OLAP Metadata Catalogs."

The utilities listed in Table 11 have been tested to work with the SQL scripts:

Table 11 Tested Utilities for Creating TBC_MD Tables

Database	SQL Script	Utility Program

IBM DB2	`oc_create_db2.sql`
	`oc_drop_db2.sql`
	`oc_upgrade20_db2.sql`
	`oc_upgrade61_db2.sql`
	`oc_upgrade65_db2.sql`
	`oc_upgrade651_db2.sql`
		IBM DB2 Command Center or `>DB2 -tvf`

Informix	`oc_create_informix.sql`
	`oc_drop_informix.sql`
	`oc_upgrade20_informix.sql`
	`oc_upgrade61_informix.sql`
	`oc_upgrade65_informix.sql`
	`oc_upgrade651_informix.sql`
		DBAccess

Microsoft SQL Server	`oc_create_sqlsrv.sql`
	`oc_drop_sqlsrv.sql`
	`oc_upgrade20_sqlsrv.sql`
	`oc_upgrade61_sqlsrv.sql`
	`oc_upgrade65_sqlsrv.sql`
	`oc_upgrade651_sqlsrv.sql`
		Query Analyzer

Oracle	`oc_create_oracle.sql`
	`oc_drop_oracle.sql`
	`oc_upgrade20_oracle.sql`
	`oc_upgrade61_oracle.sql`
	`oc_upgrade65_oracle.sql`
	`oc_upgrade651_oracle.sql`
		SQL*Plus

Database	SQL Script	Utility Program
	oc_create_oracle_unicode.sql oc_create_oracle9i_unicode.sql	
Sybase	oc_create_sybase.sql oc_drop_sybase.sql oc_upgrade20_sybase.sql oc_upgrade61_sybase.sql oc_upgrade65_sybase.sql oc_upgrade651_sybase.sql	ISQL
Teradata	oc_create_teradata.sql oc_drop_teradata.sql oc_upgrade65_teradata.sql oc_upgrade651_teradata.sql	BTEQ

Note:

The scripts used to upgrade OLAP Metadata Catalog manually from Release 2.0 to Release 6.2 are identical to those used to upgrade from Release 2.0 to Release 6.1. Therefore, the names have not been changed from the names used in Integration Services Release 6.1. If you are upgrading OLAP Metadata Catalog from Release 2.0 to Release 6.2, use the scripts named *61*.sql that are appropriate for your RDBMS.

Integration Services provides five SQL scripts for each RDBMS (with the exception of Teradata):

- oc_create_*database_name*.sql to build tables
- oc_drop_*database_name*.sql to drop tables
- oc_upgrade20_*database_name*.sql to upgrade tables from Integration Services Release 1.x to 2.0 (does not apply to Teradata users)
- oc_upgrade61_*database_name*.sql to upgrade tables from Integration Services Release 2.0 to 6.2 (does not apply to Teradata users)
- oc_upgrade65_*database_name*.sql to upgrade tables from Integration Services Release 6.1 or 6.2 to 6.5
- oc_upgrade651_*database_name*.sql to upgrade tables from Integration Services Release 6.5 to 6.5.1

If you need to rebuild tables, you must first drop the tables before you build them again.

Caution!

You must create the tables for the TBC_MD database as user TBC or portions of the standard sample application will not work.

➤ To create tables for the TBC_MD database:

1. **Start the utility program.**
2. **Connect to the TBC_MD database as user TBC.**
3. **In the `ocscript` directory, open the appropriate SQL script file.**
4. **Run the SQL script.**

   Microsoft SQL Server: You receive a message that you did not create data or rows. This message is normal because you created only tables and columns.
5. **Verify that you have created the TBC_MD tables; for example, type the following command:**

   ```
   SELECT * FROM TBC.MS_INFO
   ```

   or start the RDBMS and verify that the TBC_MD database has the new tables.
6. **Close the utility program.**

Using the XML Import Utility to Load Data into the TBC_MD Tables

Use the XML Import utility to load OLAP model and metaoutline data into the TBC_MD tables.

The XML files listed in Table 12 have been tested to work with their respective RDBMS. These files are located in the `samples\tbcmodel` directory.

Table 12 XML Files for Loading Data into TBC_MD Tables

Database	XML File in sample\tbcmodel
• IBM DB2 • Oracle • Microsoft SQL Server • Sybase • Teradata	`sample_model.xml` `sample_metaoutline.xml`
Informix	`sample_model_informix.xml` `sample_metaoutline.xml`

Using XML Import to Load Metadata into TBC_MD

To complete the procedure below, you must start Integration Services Console and connect to Integration Server.

➤ To start Integration Services Console and connect to Integration Server:

1. On the Windows desktop, click **Start**, and select **All Programs**, then **Oracle EPM System**, then **Essbase**, then **Integration Services**, then **Server**.
2. On the Windows desktop, click **Start**, and select **All Programs**, then **Oracle EPM System**, then **Essbase**, then **Integration Services**, then **Console**.
3. If necessary, click **Close** to clear the **OLAP Metadata Catalog Setup** dialog box.

   Integration Services Console automatically displays the Login dialog box.

   a. In the **Server** text box, under Integration Services, select or type the name of an Integration Server computer; for example, `cypress`.

      If the port number on which Essbase Integration Server communicates with the console has been set to a value other than the default, you must type the server name or IP address and type the non-standard port number, separated by a colon; for example:

      ```
      cypress:3390
      ```

   b. In the **OLAP Metadata Catalog** text box, select or type the name of the OLAP Metadata Catalog, TBC_MD, for the sample TBC (The Beverage Company) database.

   c. In the **User Name** and **Password** text boxes, type the user name and password for the standard sample application user, `TBC`, and click **OK**.

➤ To load sample OLAP model metadata into the TBC_MD tables using XML Import:

1. In Integration Services Console, select **File**, then **XML Import/Export**.
2. Select the **Import** tab.
3. In the **XML File Path** text box, enter the file path for the sample OLAP model or click the **Open XML File** button and navigate to the following folder:

   ```
   \eis\server\samples\tbcmodel
   ```

4. Select the XML file to import for the sample OLAP model, `sample_model.xml`.

   Informix: Select the XML file to import for the sample OLAP model for Informix, `sample_model_informix.xml`.

5. Click **OK**.

   Integration Services Console displays the XML Import/Export dialog box with the XML file path and name in the XML File Path text box. The name of the sample OLAP model is displayed in the **OLAP Model Name** text box.

6. Click the **Import to Catalog** button to load the selected XML file into the sample OLAP Metadata Catalog.

➤ To load sample OLAP metaoutline metadata into the TBC_MD tables using XML Import:

1. In Integration Services Console, select **File > XML Import/Export**.
2. Select the **Import** tab.
3. In the **XML File Path** text box, enter the file path for the sample OLAP metaoutline or click the **Open XML File** button and navigate to the following file:

\eis\server\samples\tbcmodel

4 **Select the XML file to import for the sample OLAP metaoutline,** `sample_metaoutline.xml`.

5 **Click OK.**

Integration Services Console displays the XML Import/Export dialog box with the XML file path and name in the XML File Path text box, the name of the sample OLAP metaoutline in the OLAP Metaoutline Name text box, and the name of the OLAP model upon which this metaoutline is based in the Based on OLAP Model text box.

6 **Click the Import to Catalog button to load the selected XML file into the sample OLAP Metadata Catalog.**

Setting Up the Hybrid Analysis Sample Application

Before setting up the Hybrid Analysis sample application, you must set up the standard sample application (see "Setting Up the Standard Sample Application Automatically" on page 95 or "Setting Up the Standard Sample Application Manually" on page 97.)

Setting up the Hybrid Analysis sample application is a manual process. Follow the instructions given in this section for your particular platform.

Note:

The Hybrid Analysis application scripts require slightly different procedures, depending on the RDBMS that you are using.

The utilities listed in Table 9 are required for running the various batch files and SQL scripts used in creating the Hybrid Analysis sample application.

Table 13 Required Utilities for Setting Up the Hybrid Analysis Sample Application

Database	Required Utilities
IBM DB2	DB2CMD command line interface
Oracle	• SQL*Plus • SQL*Loader command line utility
Microsoft SQL Server	• ISQL • BCP command line utility
Teradata	• BTEQ • FastLoad

Setting Up the Hybrid Analysis Sample Application on IBM DB2

You use several files to create the Hybrid Analysis sample application on IBM DB2:

- A batch file to send commands to the DB2CMD command line interface:

  `install_db2.bat`

- A data load script for the TBC sample database:

  `ha_create_db2.sql`

- An XML file that you use to import a sample OLAP model into the TBC_MD OLAP Metadata Catalog database:

  `HA_TBC_Model.xml`

- An XML file that you use to import a sample metaoutline into the TBC_MD OLAP Metadata Catalog database:

  `HA_TBC_Metaoutline.xml`

- A text file containing sample data:

  `ha_sampledata.txt`

Setting up the Hybrid Analysis sample application on IBM DB2 consists of performing the following tasks:

- Running the batch file `install_db2.bat`
- Importing the sample OLAP model and metaoutline

Note:

Before setting up the Hybrid Analysis Sample Application on IBM DB2, verify that the DB2CMD command line interface is installed.

Running the Batch File on IBM DB2

The first task in setting up the Hybrid Analysis sample application on IBM DB2 consists of running the `install_db2.bat` file. This batch file creates tables in the sample database, loads metadata into the dimension tables, and loads sample data into the fact table.

Run the `install_db2.bat` file located in:

`\eis\server\Samples\tbcdbase`

This batch file sends SQL commands to the DB2CMD command line interface.

Pass the following three parameters to `install_db2.bat`:

- The user ID that you use to connect with IBM DB2
- Your password
- The IBM DB2 database name

The `install_db2.bat` file runs the DB2CMD command line interface, which executes the `ha_create_db2.sql` load script file. This script file performs the following tasks:

- Deletes any existing tables in the sample TBC database
- Creates a new set of tables in the TBC database
- Inserts records into the dimension tables

- Creates the `ha_results_createtables.txt` file
- Loads the sample data into the fact table

The `ha_results_createtables.txt` file contains the results of the table-creating and loading operations.

Note:

After the member and data load is finished, close the IBM DB2 command window.

Importing the Sample OLAP Model and Metaoutline

The final task in setting up the Hybrid Analysis sample application on IBM DB2 consists of importing the two XML files for the sample OLAP model and metaoutline:

➤ To import the sample OLAP model:

1. Start Integration Services Console.
2. Select **File**, then **XML Import/Export**.

   The XML Import/Export window is displayed.
3. Select the **Import** tab.
4. In the **XML File Path** text box, enter the file path for the sample OLAP model or click the **Open XML File** button and navigate to the following file:

   `\eis\server\samples\tbcmodel\HA_TBC_Model.xml`
5. Click **Open XML File**.

➤ To import the sample metaoutline:

1. Select **File**, then **XML Import/Export**.

   The XML Import/Export window is displayed.
2. Select the **Import** tab.
3. In the **XML File Path** text box, enter the file path for the sample OLAP metaoutline or click the **Open XML File** button and navigate to the following file:

   `\eis\server\samples\tbcmodel\HA_TBC_Metaoutline.xml`
4. Click **Open XML File**.

Setting Up Hybrid Analysis Sample Application on Oracle

You use several files to create the Hybrid Analysis sample application on Oracle:

- A batch file to send commands to the SQLPLUS command line interface:

  `install_oracle.bat`
- A data load script for the TBC sample database:

`ha_create_oracle.sql`

- An Oracle control file to load data into the fact table:

  `hasales.ctl`

- An XML file that you use to import a sample OLAP model into the TBC_MD OLAP Metadata Catalog database:

  `HA_TBC_Model.xml`

- An XML file you use to import a sample metaoutline into the TBC_MD OLAP Metadata Catalog database:

  `HA_TBC_Metaoutline.xml`

- A text file containing sample data:

  `ha_sampledata.txt`

Setting up the Hybrid Analysis sample application on Oracle consists of performing the following tasks:

- Running the batch file `install_oracle.bat`
- Importing the sample OLAP model and metaoutline

Note:

Before setting up the Hybrid Analysis Sample Application on Oracle, verify that SQL*PLUS and SQLLDR command line interfaces are installed.

Running the Batch File

The first task in setting up the Hybrid Analysis sample application on Oracle consists of running the `install_oracle.bat` file. This batch file creates tables in the sample database, loads metadata into the dimension tables, and loads sample data into the fact table.

Run the `install_oracle.bat` file located in:

`\eis\server\samples\tbcdbase`

This batch file sends SQL commands to the SQL*PLUS command line interface.

Pass the following three parameters to `install_oracle.bat`:

- The user ID that you use to connect with Oracle
- Your password
- The Oracle service name as defined in the `TNSNAMES.ORA` file

Metadata Load Script

The install_oracle.bat file runs the SQLPLUS command line interface, which executes the `ha_create_oracle.sql` metadata load script file. This script file performs the following tasks:

- Deletes any existing tables in the sample TBC database
- Creates a new set of tables in the TBC database

- Inserts records into the dimension tables
- Creates the `ha_results_createtables.txt` file

The `ha_results_createtables.txt` file contains the results of the table-creating operation.

Sample Data Load Script

After loading the metadata into the dimension tables, the `install_oracle.bat` file runs the SQLLDR command line interface, which performs the following tasks:

- Loads the sample data into the fact table
- Creates the `ha_results_loadfact.txt` file

The `ha_results_loadfact.txt` file contains the results of the data-loading operation.

Importing the Sample OLAP Model and Metaoutline

The final task in setting up the Hybrid Analysis sample application on Oracle consists of importing the two XML files for the sample OLAP model and metaoutline:

➤ To import the sample OLAP model:

1. **Start Integration Services Console.**
2. **Select File > XML Import/Export.**

   The XML Import/Export dialog box is displayed.
3. **Select the Import tab.**
4. **In the XML File Path text box, enter the file path for the sample OLAP model or click the Open XML File button and navigate to the following file:**

   `\eis\server\samples\tbcmodel\HA_TBC_Model.xml`
5. **Click Open XML File.**

➤ To import the sample metaoutline:

1. **Select File > XML Import/Export.**

   The XML Import/Export dialog box is displayed.
2. **Select the Import tab.**
3. **In the XML File Path text box, enter the file path for the sample OLAP metaoutline or click the Open XML File button and navigate to the following file:**

   `\eis\server\Samples\tbcmodel\HA_TBC_Metaoutline.xml`
4. **Click Open XML File.**

Setting Up Hybrid Analysis Sample Application on Microsoft SQL Server

Several files are used to create the Hybrid Analysis sample application on Microsoft SQL Server:

- A batch file to send commands to MS Interface SQL (ISQL):

  `install_sqlsrv.bat`

- A data load script for the TBC sample database:

  `ha_create_sqlsrv.sql`

- An XML file that you use to import a sample OLAP model into the TBC_MD OLAP Metadata Catalog database:

  `HA_TBC_Model.xml`

- An XML file that you use to import a sample metaoutline into the TBC_MD OLAP Metadata Catalog database:

  `HA_TBC_Metaoutline.xml`

- A text file containing sample data:

  `ha_sampledata.txt`

Setting up the Hybrid Analysis sample application on Microsoft SQL Server consists of performing the following tasks:

- Running the `install_sqlsrv.bat` batch file
- Importing the sample OLAP model and metaoutline

Note:

Before setting up the Hybrid Analysis Sample Application on Microsoft SQL Server, verify that you have ISQL and BCP (Bulk Copy) installed. These utilities were most likely included when you installed SQL Server Client.

Running the Batch File

To set up the Hybrid Analysis sample application on Microsoft SQL Server, you first run the `install_sqlsrv.bat` file. This batch file creates tables in the sample database, loads metadata into the dimension tables, and loads sample data into the fact table. Run the `install_sqlsrv.bat` file located in:

`HYPERION_HOME\products\Essbase\eis\server\Samples\tbcdbase`

This file sends commands to the Interface SQL (ISQL) command line interface. These commands install the sample application to the sample database TBC.

Pass the following three parameters to `install_sqlsrv.bat`:

- The user ID that you use to connect with the Microsoft SQL Server (TBC)
- Your password
- The Microsoft SQL Server name (name of machine where the SQL Server is installed)

Metadata Load Script

The `install_sqlsrv.bat` file runs the ISQL utility, which executes the `ha_create_sqlsrv.sql` metadata load script file. This file performs the following tasks:

- Deletes any existing tables in the sample TBC database
- Creates a new set of tables in the TBC database
- Inserts records into the dimension tables
- Creates the `ha_results_createtables.txt` file

The `ha_results_createtables.txt` file contains the results of the table-creating operation.

Sample Data Load Script

After loading the metadata into the dimension tables, the `install_sqlsrv.bat` file runs the BCP (Bulk Copy) utility which performs the following tasks:

- Loads the sample data into the fact table
- Creates the `ha_results_loadfact.txt` file

The `ha_results_loadfact.txt` file contains the results of the data-loading operation.

Importing the Sample OLAP Model and Metaoutline

The final task in setting up the Hybrid Analysis sample application on Microsoft SQL Server consists of importing the two XML files for the sample OLAP model and metaoutline:

➤ To import the sample OLAP model:

1. Start Integration Services Console.
2. Select **File > XML Import/Export**.

   The XML Import/Export dialog box is displayed.
3. Select the **Import** tab.
4. In the **XML File Path** text box, enter the file path for the sample OLAP model or click the **Open XML File** button and navigate to the following file:

   `\eis\server\samples\tbcmodel\HA_TBC_Model.xml`
5. Click **Open XML File**.

➤ To import the sample metaoutline:

1. Select **File > XML Import/Export**.

   The XML Import/Export dialog box is displayed.
2. Select the **Import** tab.
3. In the **XML File Path** text box, enter the file path for the sample OLAP metaoutline or click the **Open XML File** button and navigate to the following file:

\eis\server\Samples\tbcmodel\HA_TBC_Metaoutline.xml

4 Click **Open XML File.**

Setting Up Hybrid Analysis Sample Application on Teradata

Several files create the Hybrid Analysis sample application on Teradata:

- A batch file to send commands to MS Interface SQL (ISQL):

  `install_teradata.bat`

- A data load script for the TBC sample database:

  `ha_create_teradata.sql`

- An SQL file to add constraints to the fact table after the data load has been completed:

  `ha_altertable_teradata.sql`

- A FastLoad script file, which loads data to the fact table:

  `ha_fastload_teradata.sql`

- An XML file that you use to import a sample OLAP model into the TBC_MD OLAP Metadata Catalog database:

  `HA_TBC_Model.xml`

- An XML file that you use to import a sample metaoutline into the TBC_MD OLAP Metadata Catalog database:

  `HA_TBC_Metaoutline.xml`

- A text file containing sample data:

  `ha_sampledata.txt`

Setting up the Hybrid Analysis sample application on Microsoft SQL Server consists of performing the following tasks:

- Running the batch file `install_teradata.bat`
- Importing the sample OLAP model and metaoutline

Note:

Before setting up the Hybrid Analysis Sample Application on Teradata, verify that the BTEQ and FastLoad utilities are installed.

Running the Batch File

The first task in setting up the Hybrid Analysis sample application on Teradata consists of running the `install_teradata.bat` file. This batch file creates tables in the sample database, loads metadata into the dimension tables, loads sample data into the fact table, and adds constraints to the fact table.

Run the `install_teradata.bat` file located in:

`HYPERION_HOME\products\Essbase\eis\server\Samples\tbcdbase`

This batch file sends SQL commands to the BTEQ command line interface.

Pass the following three required parameters to `install_teradata.bat`:

- The user ID that you use to connect with Teradata
- Your password
- The Teradata database name (DBC)

You can also pass, as an optional parameter, the database name where you want to install the sample application. (The default database is TBC.)

Metadata Load Script

The `install_teradata.bat` file runs the BTEQ utility, which executes the `ha_create_teradata.sql` metadata load script file. This script file performs the following tasks:

- Deletes any existing tables in the sample TBC database
- Creates a new set of tables in the TBC database
- Inserts records into the dimension tables
- Creates the `ha_results_createtables.txt` file

The `ha_results_createtables.txt` file contains the results of the table-creating operation.

Sample Data Load Script

After loading the metadata into the dimension tables, the `install_teradata.bat` file runs the FastLoad utility, which performs the following tasks:

- Loads the sample data into the fact table using the `ha_fastload_teradata.txt` file
- Creates the `ha_results_loadfact.txt` file

The `ha_results_loadfact.txt` file contains the results of the data-loading operation.

Alter Table Script

After loading the sample data into the fact table, the `install_teradata.bat` file runs the BTEQ utility, which executes the `ha_altertable_teradata.sql` alter table script file. This script file performs the following tasks:

- Deletes a few tables no longer needed in the sample TBC database
- Creates indexes and places constraints on the fact table
- Creates the `ha_results_altertables.txt` file

The `ha_results_altertables.txt` file contains the results of the table-altering operation.

Importing the Sample OLAP Model and Metaoutline

The final task in setting up the Hybrid Analysis sample application on Teradata consists of importing the two XML files for the sample OLAP model and metaoutline:

➤ To import the sample OLAP model:

1. Start Integration Services Console.
2. Select **File>XML Import/Export**.

   The XML Import/Export window is displayed.
3. Select the **Import** tab.
4. In the **XML File Path** text box, enter the file path for the sample OLAP model or click the **Open XML File** button and navigate to the following file:

   `\eis\server\Samples\tbcmodel\HA_TBC_Model.xml`
5. Click **Open XML File**.

➤ To import the sample metaoutline:

1. Select **File>XML Import/Export.**

   The XML Import/Export window is displayed.
2. Select the **Import** tab.
3. In the **XML File Path** text box, enter the file path for the sample OLAP metaoutline or click the **Open XML File** button and navigate to the following file:

   `\eis\server\Samples\tbcmodel\HA_TBC_Metaoutline.xml`
4. Click **Open XML File**.

Setting Up the Unicode Sample Application

Setting up the Unicode sample application is a manual process.

Note:

The Unicode sample application in Integration Services is supported only on Oracle relational database management systems (RDBMSs).

The utilities listed in Table 14 are required for running the various batch files and SQL scripts used in creating the Unicode sample application.

Table 14 Required Utilities for Setting Up the Unicode Sample Application

Database	Required Utilities
Oracle	• SQL*Plus • SQL*Loader command line utility

Creating the Unicode TBC_U Database

Create the Unicode TBC_U database in the same way that you create any database using an RDBMS:

- Create a database device or tablespace named TBC_U.
- Allot 20 MB for storage.
- Create a user TBC_U who can drop and create tables.
- Grant user privileges or permissions to create and drop tables.

Caution!

You should create the tables for the Unicode-enabled database as user TBC_U, or portions of the Unicode sample application may not work.

Creating the Unicode TBC_MD_U OLAP Metadata Catalog

Create the Unicode TBC_MD_U OLAP Metadata Catalog by following the steps in "Setting Up the TBC_MD OLAP Metadata Catalog" on page 101, using the file `oc_create_`*`database_name`*`_unicode.sql`.

Setting Up the Unicode Sample Application

Note:

The Unicode sample application in Integration Services is supported only on Oracle relational database management systems (RDBMSs).

You use several files to create the Unicode sample application:

- A table creation and data load script for the Unicode sample database:

  `tbc_create_`*`database_name`*`_unicode.sql`
- An XML file that you use to import a sample OLAP model into the TBC_MD_Unicode OLAP Metadata Catalog database:

  `TBC_Model_Unicode.xml`
- An XML file that you use to import a sample metaoutline into the TBC_MD_Unicode OLAP Metadata Catalog database:

  `TBC_Metaoutline_Unicode.xml`

Setting up the Unicode sample application consists of performing the following tasks:

- Running the SQL file tbc_create_*database_name*_unicode.sql
- Importing the Unicode sample model
- Importing the Unicode sample metaoutline

Running the SQL File

The first task in setting up the Unicode sample application consists of running the tbc_create_*database_name*_unicode.sql file using one of the utilities listed in Table 14 on page 115.

Note:

Ensure you have created a Unicode-enabled database for your sample application as described in "Creating the Unicode TBC_U Database" on page 116.

Run the tbc_create_*database_name*_unicode.sql file located in:

```
HYPERION_HOME\products\Essbase\eis\server\samples\tbcdbase\
```

The `tbc_create_database_name_unicode.sql` file performs the following tasks:

- Deletes any existing tables in the Unicode sample database
- Creates a new set of tables in the Unicode sample database
- Loads Unicode sample metadata into the dimension tables
- Loads Unicode sample data into the fact table

Importing the Unicode Sample Model and Metaoutline

The final task in setting up the Unicode sample application consists of importing the XML file for the Unicode sample model:

➤ To import the Unicode sample OLAP model:

1. Start Integration Services Console and log in to the Unicode catalog.
2. Select **File>XML Import/Export**.

   The XML Import/Export dialog box is displayed.
3. Select the **Import** tab.
4. In the **XML File Path** text box, enter the file path for the Unicode sample OLAP model or click the **Open XML File** button and navigate to the following file:

   ```
   eis\server\samples\tbcmodel\TBC_Model_Unicode.xml
   ```
5. Select the file and click **Import to Catalog**.

   A message is displayed when the import is complete.
6. Click **OK**.

➤ To import the Unicode sample metaoutline:

1. If necessary, select **File>XML Import/Export**.

   The XML Import/Export dialog box is displayed.

2 Select the **Import** tab.

3 In the **XML File Path** text box, enter the file path for the Unicode sample metaoutline or click the **Open XML File** button and navigate to the following file:

```
\eis\server\Samples\tbcmodel\TBC_Metaoutline_Unicode.xml
```

4 Select the file and click **Import to Catalog**.

A message is displayed when the import is complete.

5 Click **OK**.

6 Click **Close** to close the **XML Import/Export** dialog box.

After Setting Up the Sample Application

You must connect to both TBC and TBC_MD from Integration Services Console to create, modify, and store TBC OLAP models and TBC metaoutlines. To make these connections, each database (TBC and TBC_MD) must be mapped to a supported ODBC driver, as described in Chapter 2, "Configuring Data Sources".

When you connect to Integration Services Console, you can view TBC columns, tables, OLAP models, and metaoutlines in Integration Services Console. For more information, see "Viewing TBC Tables and Columns " on page 118.

Note:

You must connect to TBC and TBC_MD as user TBC unless you create user name aliases or synonyms in the RDBMS.

Viewing TBC Tables and Columns

After you set up the sample application and configure TBC and TBC_MD by mapping them to supported ODBC drivers, you can view TBC tables and columns in Integration Services Console.

➤ To see TBC tables and columns in the left frame of Integration Services Console:

1 Start Integration Server.

2 Start Integration Services Console.

3 In a blank Integration Services Console window, select **Connections**, then **OLAP Metadata Catalog**, then **Connect**, and connect to the OLAP Metadata Catalog, TBC_MD.

4 In the **New** tab, double-click the **OLAP Model** icon.

5 In the **Data Source** dialog box, connect to the TBC sample database.

Viewing OLAP Models

After you set up the sample application and configure TBC and TBC_MD by mapping them to supported ODBC drivers, you can view OLAP models in Integration Services Console.

➤ To see the OLAP model (TBC Model) in the right frame of Integration Services Console:

1. Start Integration Server.
2. Start Integration Services Console.
3. If the **Login** dialog box is not already displayed, in a blank Integration Services Console window, select **Connections**, then **OLAP Metadata Catalog**, then **Connect**.
4. Connect to the OLAP Metadata Catalog TBC_MD.
5. Click the **Existing** tab, select **TBC Model**, and click **Open**.

   Hybrid Analysis: To view the Hybrid Analysis-enabled OLAP model, select **HA TBC Model**.

   Duplicate Member (Oracle only): To view the Duplicate Member-enabled OLAP model, select **Duplicate Member TBC Model**.
6. In the **Data Source** dialog box, connect to the TBC sample database.

Viewing Metaoutlines

After you set up the sample application and configure TBC and TBC_MD by mapping them to supported ODBC drivers, you can view metaoutlines in Integration Services Console.

➤ To see the metaoutline (TBC Metaoutline) in the right frame of Integration Services Console:

1. Start Integration Server.
2. Start Integration Services Console.
3. If the **Login** dialog box is not already displayed, in a blank Integration Services Console window, select **Connections**, then **OLAP Metadata Catalog**, then **Connect**.
4. Connect to the OLAP Metadata Catalog TBC_MD.
5. Click the **Existing** tab, then click the plus symbol (+) to the left of TBC Model to expand the view, and select **TBC Metaoutline**.

   Hybrid Analysis: To view the Hybrid Analysis-enabled metaoutline, click the plus symbol (+) to the left of **HA TBC Model** to expand the view, and select **HA TBC Metaoutline**.

   Duplicate Member (Oracle only): To view the Duplicate Member-enabled metaoutline, click the plus symbol (+) to the left of **Sample_duplicate member** to expand the view, and select **Duplicate Member TBC Metaoutline**.
6. Click **Open**.

   The **Data Source** dialog box is displayed.
7. In the **Data Source** dialog box, connect to the TBC sample database.

6 Working with Users, Locks, and Permissions

In This Chapter

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.

See Chapter 4, "Tables in OLAP Metadata Catalog."

Working with Users

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

- Integration Services users who can access OLAP models and metaoutlines stored in OLAP Metadata Catalogs. (Integration Services users are the database users defined in the data source that contains the OLAP Metadata Catalog that you are using.)
- Essbase users who can access the Essbase database that you create from a metaoutline
- Source database and data warehouse users who can access the tables and views in the specified source database or data warehouse

Use the tools provided with each data source to manage each set of users. Consult the data source 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 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 Integration Services and are completely separate from the locking performed by the data source database.

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, Integration Services gives you a read lock on that OLAP model. When you open a metaoutline in standard access mode, 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, Integration Services upgrades the read lock to a write lock for the duration of the save. After 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. See "Using Exclusive Access Mode" on page 122.

➤ If you 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 actions:

- Save the OLAP model or metaoutline using a different name. See 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 and 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 Integration Services Users with Locks" on page 123.

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,

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, 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 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, then OLAP Metadata Catalog, then 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. See "Viewing Integration Services Users with Locks" on page 123. If you are convinced that some or all of the locks are from terminated user sessions, delete them. See "Deleting Locks for Integration Services Users" on page 124.

Viewing 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 data source 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 2004 4:43PM
sa           889845263        2              1          Apr 9 2004 4:43PM
sa           889844639        1              1          Apr 9 2004 5:20PM
sa           892167813        2              1          Apr 9 2004 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 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 Integration Services Users with Locks" on page 123.

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 data source:

```
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. 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 Integration Services Console. See the Integration Services Console Help.
- Save the metaoutline with a different name by selecting **File**, then **Save As**. See the Integration Services Console Help.
- To edit tables containing the permissions for the OLAP model or metaoutline, use the tools provided with the data source that contains OLAP Metadata Catalog. See "Viewing Permissions for OLAP Models" on page 125 or "Viewing Permissions for Metaoutlines" on page 126.

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 data source 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 data source.**

```
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 data source.**

```
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)
```

7 Troubleshooting ODBC and Connections

In This Chapter

Integration Services requires several layers of software components to connect to data sources 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 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.

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 Microsoft SQL Server) or synonyms for the tables (for IBM DB2 and Oracle).

- Are all required components up and running?
  - Essbase Integration Server
  - The database servers that manage OLAP Metadata Catalog and the data source databases
  - The data source database listener for OLAP Metadata Catalog and the data source
- Is the database client software installed and configured on the computer where 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 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 Integration Server is installed?

On UNIX, use `ivtestlib` located in the `eis/server/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 Integration Server?
- Does the ODBC data source name (DSN) configuration identify the name of the data source 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 Integration Server computer? For information on configuring ODBC data sources, see Chapter 2, "Configuring Data Sources".
- Are you using the ODBC data source names for OLAP Metadata Catalog and the data source databases as configured on the Integration Server computer? Do not assume that the data source 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 data source is less busy. To avoid the problem, increase the ODBC driver time-out limit using ODBC Administrator on Windows systems. See the ODBC documentation.

- Did you create tables in OLAP Metadata Catalog? For information on creating tables for the catalog, see Chapter 3, "Creating, Upgrading, and Deleting OLAP Metadata Catalogs".
- 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. See "Using ODBC Tracing on Windows Systems" on page 151.

If you experience problems connecting to the data source, view the log for the data source for information about why the connection failed. See your data source documentation.

If none of the above steps help, review the list of database-specific problems in "Database-Specific Problems" on page 131.

Database-Specific Problems

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

- **IBM DB2:** You may be required to bind the database driver to a IBM DB2 server that is managing the databases you want. See the IBM DB2 installation documentation.
- **Microsoft SQL Server:** If you try to access a Microsoft SQL Server database with the Microsoft-supplied 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. See the Microsoft SQL Server documentation.

If none of the previous suggestions help, proceed to "ODBC and Connection Problems" on page 131 for an overview of connection problems, then see "Isolating Connection Problems" on page 132.

ODBC and Connection Problems

Integration Services Console must pass through three layers of software components to contact a data source: Integration Server, ODBC, and the database client software. Failure within or between any of these components can cause a lack of communication between Integration Services Console and the data source.

In some cases, the error messages received in Integration Services Console may not contain sufficient information for you to diagnose and resolve the problem, and you must go to the Integration Server to get more information and find a resolution.

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

- Software component problems:
  - The components of Integration Services or the data source 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.

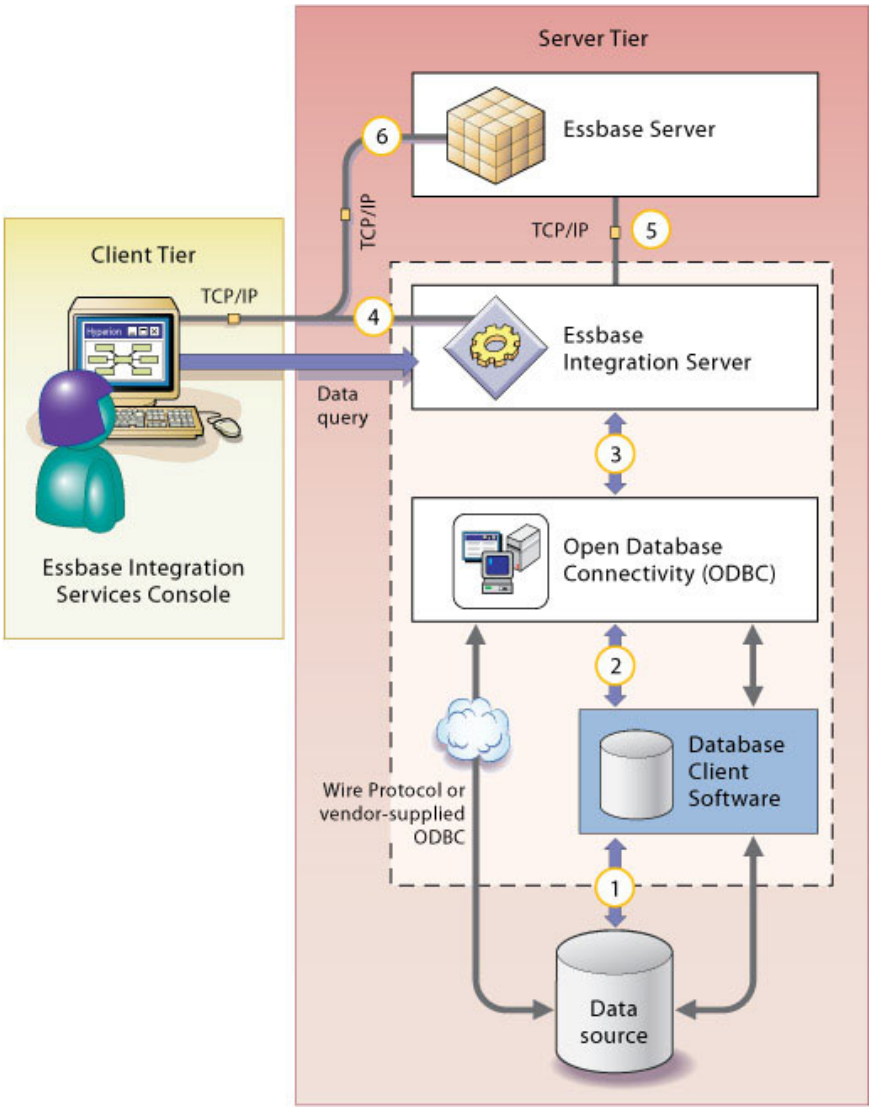
- Network and security problems:
  - A physical network path does not exist between the computers that must communicate with each other.
  - One or both computers attempting to communicate do not have the TCP/IP network protocol installed or configured.
  - The computer attempting to contact another 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 under "Common Connection Problems" on page 129 and your own knowledge fail to diagnose the connection problem, the recommended strategy is to test the components and connections starting at the data source and backtracking through the connections to Integration Services Console.

The client software must pass through three layers of components to connect to the data source containing OLAP Metadata Catalog and the data source, as illustrated in Figure 4.

Figure 4 Integration Services Components and Connections



The numbers in Figure 4 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 data source (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 144.

➤ To isolate connection problems:

1 Attempt to connect to the data source databases using a database client utility program. See "Testing the Database Client Connection to the Data Source" on page 134.

2 Attempt to connect to the data source databases using ODBC. See "Testing the ODBC Connection to the Data Source" on page 135.

3 Attempt to connect to the data source databases using Integration Server. See "Testing the Integration Server Connection to the Data Source" on page 139.

4 Attempt to connect to the data source databases using Integration Services Console. See "Testing the Integration Services Console Connection to Essbase Server" on page 143.

5 Attempt to connect to Essbase Server using Integration Server. See "Testing the Integration Server Connection to Essbase Server" on page 142.

6 Attempt to connect to Essbase Server using Integration Services Console. See "Testing the Integration Server Connection to Essbase Server" on page 142.

Testing the Database Client Connection to the Data Source

If your ODBC connections require database client software, the first step toward isolating connection problems in Integration Services is to attempt to connect the database client software to the data source that you are using. After 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 Integration Server program.

➤ To test the database client connection to the data source:

1 Log on to the computer running Integration Server as the user who starts the 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 that the client software is installed and the required environment variables are set. See "Correcting Database Client Problems" on page 146.

3 Connect to the OLAP Metadata Catalog database in the data source 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 data source for the OLAP Metadata Catalog database, and carefully check user accounts with connection problems. See, "Correcting Data Source Problems" on page 146.

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 data source. See "Correcting Data Source Problems" on page 146. Also, check that the version

of the database client software you are using is compatible with the version of the data source. See "Correcting Database Client Problems" on page 146.

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

See "Testing the Integration Services Console Connection to the Data Source" on page 141. If the connection fails, proceed to "Testing the ODBC Connection to the Data Source" on page 135.

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

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 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 Data Source

After you have established that the database client software and data source are communicating properly (if applicable), the next step in isolating connection problems is to test the ODBC connection to the data source databases.

On Windows systems, use ODBC Administrator to test connections to the data source databases. In UNIX, use the `odbcconfig` utility to verify ODBC configuration. Manually inspect the ODBC configuration files using `ivtestlib` provided with Integration Services or by using DemoODBC (available from Hyperion Solutions Technical Support). You can also use third-party utilities included with your data source.

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

ODBC tracing can also be used to track down connection problems. See "Using ODBC Tracing" on page 151.

Testing ODBC on Windows Systems

➤ To test ODBC connections to the data source databases:

1 **On the Windows desktop, select Start, then Settings, then Control Panel to open the Control Panel window.**

2 **In the Control Panel window, 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 OLAP Metadata Catalog or the data source database, and click Configure.**

A data source configuration dialog box is displayed. Depending on the data source and the driver that 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 data source 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 Integration Server name, database name, user name, and password information for accuracy, and make sure that you are using the correct ODBC driver for the data source.**

See "Correcting ODBC Problems" on page 148.

6 **After you have successfully completed the preceding steps, try connecting to the data source from Integration Services Console.**

See "Testing the Integration Services Console Connection to the Data Source" on page 141.

If the connection from Integration Services Console fails, proceed to "Testing the Integration Server Connection to the Data Source" on page 139.

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 data source 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. See the documentation for the data source or the ODBC driver.

IBM DB2: To use the `odbcconfig` utility with IBM DB2, the environment variable INSTHOME must be set to the IBM 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 on to the computer that runs Integration Server as the user who starts the 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 required DSN exists.

If necessary, proceed to Step 4 to add the DSN.

4 **If the required DSN does not exist, add it by completing the following steps:**

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 data source platform of the DSN that you are adding, such as server name, host name, or database name.

To verify the addition of the DSN, type 1 and press Enter. Verify that the DSN you just added is included in the list.

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

Note:

You can delete a DSN 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 by using the `odbcconfig` utility:

1 **Log on to the computer that runs Integration Server as the user who starts the 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 Integration Server as the user who starts the 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 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. See "Correcting ODBC Problems" on page 148.

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 Integration Services Console Connection to Essbase Server" on page 143.**

If you cannot make a connection, proceed to "Testing the Integration Server Connection to the Data Source" on page 139.

➤ To inspect the `odbc.ini` file:

1 **Log on to the computer that runs Integration Server as the user who starts the 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 Integration Services script in the login script for the user. See "Correcting Integration Server Problems" on page 149.

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 Integration Services are listed in the ODBC Data Sources section; for example:**

```
[ODBC Data Sources]
TBC_MD=Essbase Integration Services 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=
 $HYPERION_Home/common/ODBC/Merant/5.2/Drivers/ARor819.so
Description=my oracle source
ServerName=mytnsServerName
```

For IBM DB2:

```
[TBC_MD]
Driver=
 $HYPERION_Home/common/ODBC/Merant/5.2/Drivers/ARdb219.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.**

See "Correcting ODBC Problems" on page 148.

Testing the Integration Server Connection to the Data Source

After verifying the connections between the ODBC, the database client, and the data source, the next step in isolating a connection problem is to connect to the data source databases from Integration Server. Test this connection by running Integration Services Shell on the same computer that runs Integration Server. See Chapter 8, "Using 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 Integration Server connection to the data source:

1 **Verify that Integration Server is running.**

If Integration Server is not running, start it. If Integration Server will not start, check that the Integration Services environment variables are set. See "Correcting Integration Server Problems" on page 149.

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

```
olapicmd
```

If Integration Services Shell does not start, make sure that the software is installed and that the Integration Services environment variables are set. See "Correcting Integration Server Problems" on page 149.

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

```
login cypress
```

4 **Check the release of 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 ofEssbase you are using. For information on component compatibility, see *Oracle Hyperion Enterprise Performance Management System Installation Start Here*.

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

```
setsource "DSN=TBC;CODEPAGE=English_UnitedStates.Latin1@Binary;
UID=TBC;PWD=password"
```

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

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

```
setcatalog "DSN=TBC_MD;CODEPAGE=English_UnitedStates.Latin1@Binary;
UID=TBC;PWD=password"
```

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

7 **Set the instance of Essbase Server to which you want to connect by typing**

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

8 **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;"
```

9 **Check the status of the preceding command by typing**

```
status
```

During a member load, Integration Services Shell connects first to the data source and then to OLAP Metadata Catalog. If the connection to the catalog is unsuccessful, the message "IS Error: Unable to log in 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 Integration Server Problems" on page 149 and "Correcting ODBC Problems" on page 148. Repeat Step 4 through Step 8 of this procedure to retest the connection. When you successfully connect to the data source, continue to the next step.

10 **Test the connection to the OLAP Metadata Catalog database by attempting to perform a member load. Type:**

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

11 **Check the status of the preceding command by typing**

```
status
```

During a member load, 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 Integration Server Problems" on page 149 and "Correcting ODBC Problems" on page 148. Repeat Step 9 and Step 10 of this procedure to retest the connection. When you successfully connect to OLAP Metadata Catalog, continue to the next step.

12 **Test the connection from Integration Services Console to the data source by proceeding to "Testing the Integration Services Console Connection to the Data Source" on page 141.**

Testing the Integration Services Console Connection to the Data Source

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

➤ To test the Integration Services Console connection to the data source:

1 **Verify that Integration Server is running.**

If Integration Server is not running, start it. If Integration Server will not start, check that the Integration Services environment variables are set. See "Correcting Integration Server Problems" on page 149.

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

3 **Connect to the 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 Integration Server computer name. Also verify that you specified the correct user name and password for the OLAP Metadata Catalog

database on the data source. See "Correcting Integration Services Console Problems" on page 150.

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 Integration Server computer name. Also verify that you specified the correct user name and password for the data source database on the data source. See "Correcting Integration Services Console Problems" on page 150.

Testing the Integration Server Connection to Essbase Server

When isolating connection problems between Integration Server and Essbase Server, use 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 Integration Server connection to an Essbase Server:

1 **Verify that Integration Server is running.**

If Integration Server is not running, start it. If Integration Server will not start, check to ensure that the Integration Services environment variables are set. See "Correcting Integration Server Problems" on page 149.

2 **Verify that the Essbase Server is running.**

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

```
olapicmd
```

If Integration Services Shell does not start, make sure that the software is installed and that the Integration Services environment variables are set. See "Correcting Integration Server Problems" on page 149.

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

```
login cypress
```

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

```
setsource "DSN=TBC;CODEPAGE=English_UnitedStates.Latin1@Binary;UID=TBC;
PWD=password"
```

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

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

```
setcatalog "DSN=TBC_MD;CODEPAGE=English_UnitedStates.Latin1@Binary;
UID=TBC;PWD=password"
```

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

7 **Set the instance of Essbase Server to which you want to connect by typing**

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

Note:

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

8 **Test the connection to the Essbase 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 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 and Step 8 of this procedure to retest the connection.

After you can connect successfully to the Essbase Server, proceed to "Testing the Integration Services Console Connection to Essbase Server" on page 143.

Testing the Integration Services Console Connection to Essbase Server

When isolating the connection problems between Integration Services Console and Essbase 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 Integration Services Console connection to an Essbase Server:

1 **Verify that Integration Server is running.**

2 **Verify that Essbase Server is running.**

3 **Start Integration Services Console.**

4 **From Integration Services Console, connect to the 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, then Member Load.**

7 If prompted, provide the name of the Essbase 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 Server and the correct user name and password. See the Essbase documentation.

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

Correcting Connection Problems

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

To correct system-level problems that 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? See "User Name and Password Problems" on page 145.
- Do all 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 Integration Server computer
  - OLAP Metadata Catalog database
  - Data source database
  - User account for the Essbase 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 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 must have permissions to run all the following software components:

- Integration Server
- ODBC software
- Database client software
- Data source 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 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 user names and passwords that you use to create or to modify the system, including the applications with which the user names and passwords are associated and the purpose of each application.

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

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

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

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

Adding aliases or synonyms to the data source databases adds to the number of user name and password sets you must manage.

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 Data Source Problems

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

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

  Some data sources 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 data source server using ODBC and also may be required on the data source 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 Integration Services. See Chapter 3, "Creating, Upgrading, and Deleting OLAP Metadata Catalogs".
- 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 data source 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.
- If the data source 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 data source server computer, separate from the database users you create.
- Does the data source require any addressing beyond the name of the database if you are using the database client software or ODBC to connect?

  Some data sources may have specific naming requirements for connecting to their databases, including different naming conventions for third-party applications (such as Integration Services). See the documentation for the data source.

Correcting Database Client Problems

If you have problems connecting to the data source 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 data source server and may also be required on the data source server computer.

- Is the database client software compatible with the data source?

  Earlier or later versions of the database client software may not work with the data source version that you are running. See your data source 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 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 Integration Server (typically, hyperion) is configured to run the database client software.

  On UNIX systems, a script file is usually provided by the data source 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 data source 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 data source-specific identification syntax. See "Correcting Data Source Problems" on page 146.

- 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.

  See the installation documentation for the database client software.

  IBM DB2: You may be required to bind the database client software utilities to the IBM DB2 databases. See the IBM 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. 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:

  - AIX and HP-UX: onsoctcp
  - Solaris: ontlitcp

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

Correcting ODBC Problems

To correct problems using ODBC to connect to the data source, investigate the following possible causes:

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

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

- Is the ODBC driver compatible with the data source? Is the driver compatible with the operating system?

  Verify that the ODBC driver you are using is supported by Integration Services by referring to the compatibility matrix provided in the *Oracle Hyperion Enterprise Performance Management System Installation Start Here*.

- Are the data source 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 data source-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.

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

  See "Correcting Data Source Problems" on page 146.

- 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 Integration Services installation provides a sample `odbc.ini` file, which may not include data source parameters required for the data source that you are using. For information on required data source-specific ODBC driver parameters, see the ODBC documentation provided with Integration Services. For examples of `odbc.ini` file configurations for the supported data source platforms, see the *Oracle Hyperion Enterprise Performance Management System Installation Start Here*.

- Can other applications connect to the data source by using ODBC?

  If you can identify another application that is successfully using ODBC to connect to databases on the data source, 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 data source vendors provide utilities to test ODBC connections. For information, see the documentation for the data source.

If the preceding checks do not enable you to correct the problems connecting from ODBC to the data source, try using ODBC tracing to isolate the problem. See "Using ODBC Tracing" on page 151.

Correcting Integration Server Problems

To correct problems connecting to the data source from Integration Server, investigate the following possible causes:

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

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

  - Integration Server software
  - Related base components (on UNIX, these components are included as part of Integration Server software)
  - DataDirect ODBC drivers (unless ODBC and drivers are already installed)

- Is Integration Server running? Is it configured properly?

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

  If 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 enable the setup program to update environment variables automatically, you must update the variables manually.

    On UNIX systems, a script file (`is.sh` or `is.csh`) that sets environment variables must be included in the login script of the user who starts Integration Server.

  - What release of Essbase is installed?

    If an incompatible version of Essbase is installed on the same computer as Integration Server and the `\essbase\bin` directory is in the current path, Integration Server does not start. For information on compatible versions of Essbase, see the *Oracle Hyperion Enterprise Performance Management System Installation Start Here*.

  - Is port 3388 in use?

    Integration Server uses port 3388 to communicate with the Integration Services client software. If this port is being used by another program, Integration Server 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 Integration Server not working properly may be traced to configuration steps that you may have missed. See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.

Correcting Integration Services Console Problems

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

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

- Is Integration Services Console installed? Are all required components installed?

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

  - Integration Services Console software
  - Related base components

- Is the Integration Services Console configured properly?

  Make sure the required environment variables are set. Run the Oracle's Hyperion Enterprise Performance Management System Configurator as described in the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.

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

  For the 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 data source 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.

See "Correcting Data Source Problems" on page 146.

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

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

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

  A particular 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 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 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 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 Integration Server and Integration Services Console.
4. From Integration Services Console, select**Connections** , then **OLAP Metadata Catalog**, then **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 data source.
6. If you cannot connect to OLAP Metadata Catalog (step 4) or to a data source (step 5), see the file that you specified as the log file in the root directory.

   If necessary, share the information in the 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 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 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 Integration Server and Integration Services Console.
5. From Integration Services Console, select **Connections** , then **OLAP Metadata Catalog**, then **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 data source.
7. If you cannot connect to OLAP Metadata Catalog (step 5) or to a data source (step 6), read the `odbctrace.out` file.

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

8 Using Integration Services Shell

In This Chapter

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

If you schedule member or data loads using Integration Services Console, Integration Services automatically creates an 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.

Starting Integration Services Shell

Before you start 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 Integration Services Shell:

- A database that contains the OLAP Metadata Catalog where the metadata is stored
- One or more data sources that you want to use to create OLAP models and metaoutlines
- Essbase Integration Server

  See "Starting Integration Server" on page 12.
- Essbase Server

  See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.

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

- From the Windows **Start** menu, select **All Programs**, then **Oracle EPM System**, then **Essbase**, then **Integration Services**, then **Shell**.
- Enter the executable name on the command line; for example, type

  ```
  olapicmd
  ```

- To set the TCP port number with which Essbase Integration Server communicates with its clients to a port different from the default 3388, enter the executable name and -P*portnumber* when you start Integration Services Shell; for example, type

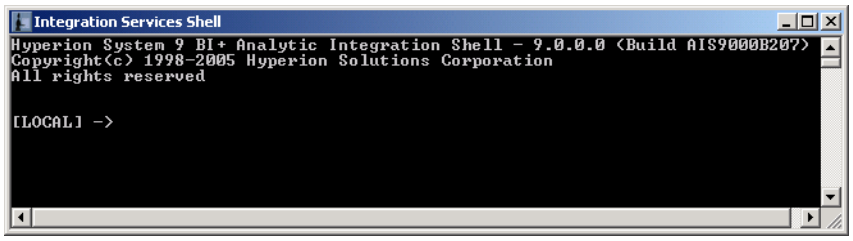
  ```
  olapicmd -P3390
  ```

  Note:

  If Integration Services Shell does not start when `olapicmd` is executed from the command line, the operating system path may not be updated correctly. See the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.

The Integration Services Shell window opens, as shown in Figure 5:

Figure 5 Essbase Integration Services Shell Window



In the 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 Integration Services Shell.
- Type **help** to get a list of Integration Services Shell commands.

Integration Services Shell

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

With 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 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. See "Running OLAP Command Script Files" on page 158.

SET and LOAD Commands

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

Command	Description
SETSOURCE	Specifies the data source databases from which an Essbase outline is built
SETTARGET	Specifies the name of the Essbase Server computer on which an outline for an Essbase application and database is built
SETCATALOG	Specifies the OLAP Metadata Catalog that you created to store OLAP models and metaoutlines
SETLOCALE	Specifies the locale for OLAPICMD.

The STATUS command (see "STATUS" on page 160) 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:

Command	Description
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 "Peforming Member Loads Using Integration Services Shell" on page 172 for a sample sequence of commands for loading members.

See "Loading Data Using Integration Services Shell" on page 173 for a sample sequence of commands for loading data.

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.

Command Syntax and Execution

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 data source 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), code page (CODEPAGE), 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;CODEPAGE=English_UnitedStates.Latin1@Binary;
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 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 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 Integration Services Console to schedule member or data loads, or to create load scripts. An Integration Services Shell batch file and a corresponding `.cbs` file are created automatically in the `eis\server\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. See "Recording Member and Data Load Scripts" on page 157.

Recording Member and Data Load Scripts

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

➤ To record a load script:

1. Start 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 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 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 Integration Services Shell scripts and is used to run multiple sessions of 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, 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 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 Integration Server computer and generates outlines for a sample database. In the following example, the `status` command (see "STATUS" on page 160) is used to check the success or failure of each command. The `status` command returns the execution status in the Integration Services Shell window.

```
login labmachine1
status
settarget "DSN=labmachine1;UID=hyperion;PWD=password"
status
setcatalog "DSN=TBC_MD;CODEPAGE=
   English_UnitedStates.Latin1@Binary;UID=tbc;PWD=password"
status
setsource "DSN=TBC;CODEPAGE=
   English_UnitedStates.Latin1@Binary;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
```

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:

Unless otherwise noted, you must be logged in to 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 Integration Services Console to record a script for a load. See "Recording Member and Data Load Scripts" on page 157.

LOGIN

The LOGIN command connects you to the Integration Server computer. On a successful connection, the Integration Services Shell prompt changes to show the name of the Integration Server computer to which Integration Services Shell is connected. You can also use the LOGIN command to connect to an Integration Server computer that is running on a non-default port. Whether you are logging in to an Integration Server computer that is running on the default port or on a non-default port, this command returns an error if you already are connected to the Integration Server computer.

Logging in to Integration Server Running on the Default Port

Syntax

```
LOGIN IShost
```

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

Example

```
LOGIN cypress
```

Logging in to Integration Server Running on a Non-default Port

Syntax

```
LOGIN IShost:non-default_port_number
```

Parameters	Description
IShost	TCP/IP name or number of the computer where Integration Server is running
non-default_port_number	The nonstandard port number on which Integration Server listens

Example

```
LOGIN cypress:3390
```

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 Integration Services Shell window:

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

VERSION

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

Syntax

```
VERSION
```

Example

VERSION returns the release number for Integration Services software.

SETLOCALE

The SETLOCALE command enables you to override the default locale for OLAPICMD. The default locale for OLAPICMD is UTF-8 (Unicode).

Although a script file saved from Integration Services Console does not have the UTF-8 signature, OLAPICMD nevertheless reads the script as UTF-8.

If you create a script file in Microsoft Notepad and save the script file as a UTF-8 file, you do not need to use the SETLOCALE command to select a locale. You can use the default locale. If you choose to select a locale, you must select one that is UTF-8. A native locale causes load operations to fail.

If you create a script file in Microsoft Notepad and save the script file as an ANSI file, you must select a native locale. A UTF-8 locale causes load operations to fail.

If you intend to enter Integration Services Shell commands manually (rather than executing them through a script) on a native computer, you must select the appropriate native locale using the SETLOCALE command. Failure to do so will cause load operations to fail.

Syntax

```
SETLOCALE <LANGUAGE_TERRITORY.CODEPAGE@SORT>
SETLOCALE .UTF8@default
```

Examples

```
SETLOCALE Japanese_Japan.MS932@Binary
SETLOCALE .UTF8@default
```

SETSOURCE

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

Syntax

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

Parameters	Description
PrimaryODBC datasource	The primary ODBC data source name configured on the computer where Integration Server runs—case-sensitive
Codepage	The code page of the language you want to use during the current Integration Services Console session
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

Parameters	Description
SecondaryODBC datasource	The secondary ODBC data source name configured on the computer where Integration Server runs—case-sensitive

Example

```
SETSOURCE "DSN=TBC;CODEPAGE=English_UnitedStates.Latin1@Binary;UID=TBC;
PWD=Password;DSN=TBC2;CODEPAGE=English_UnitedStates.Latin1@Binary;
UID=TBC;PWD=Password;DSN=TBC3;
CODEPAGE=English_UnitedStates.Latin1@Binary;UID=TBC;PWD=Password"
```

SETTARGET

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

Syntax

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

Parameters	Description
EssbaseServices dataservername	The TCP/IP name or number of the computer where Essbase Server is running
username	The name for logging on to Essbase Server
password	The password for logging on to Essbase 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 Integration Services to use with a load command.

Syntax

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

Parameters	Description
ODBCdatasource	The ODBC data source name configured on the computer where Integration Server runs—case-sensitive
Codepage	The code page of the language you want to use during the current Integration Services Console session
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;CODEPAGE=English_UnitedStates.Latin1@Binary;
UID=Fred;PWD=Password"
```

LOADMEMBER

The LOADMEMBER command initiates a member load operation on 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. See "SET and LOAD Commands" on page 155.

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=Essbase Application;
DBN=Essbase Database;[FLT_ID_MEMBER=Member_Load_Filter_ID;]
[DELETE_DB=Delete and Restore Database Y|N;]
[OTL_CLEAR=Delete All Members First Y|N;]
[INCUPD=DimID-MbrID,DimID-MbrID,...DimID-MbrID;]
[INCUPD_MEMBER=Dynamic Restructuring Member Load Options;]
[ATTR_UPDATE_LEVEL=Attribute Update Level;]
[@@USERS=Username List;][ESSCMD_SCRIPT=Esscmd Script File;]
[UNICODE=Create Unicode Application]
[UPDATE_DTDATA_ONLY=Update Drill-Through Data Only Y/N]"
```

Parameters	Description
Metaoutline	The name of the metaoutline—case-sensitive. This metaoutline is used to extract data and create an Essbase outline.
Essbase Application	The name of the Essbase application on the target Essbase Server computer where the Essbase outline is created.
Essbase Database	The name of the Essbase database on the target Essbase Server computer. Integration Server applies this name to the Essbase outline.
Member Load Filter ID	**Optional.** You can specify a member load filter ID to use when loading members. If you do not specify a filter ID, the default name (*DEFAULT) is used. The default filter ID is 1; any additional filters are numbered sequentially, starting with the number 2. For information about creating filters, see the Integration Services Console Help.
Delete and Restore Database	**Optional.** The Delete and Restore Database parameter directs whether Integration Server should delete all members in the Essbase database before performing a member load. The default is N (No). This is the format: `DELETE_DB=[Y|N]` 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:

Parameters	Description
	Y Delete and restore (re-create) theEssbase database during the member load process. N Do not delete and restore the Essbase database (this is the default).
Delete All Members First	**Optional.** When the Delete All Members First parameter is selected (OTL_CLEAR=Y), Integration Server removes all members from the existing database and then re-creates 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). This is the format: `OTL_CLEAR=[Y|N]` Values are as follows: Y Remove all members from the existing database and then re-create the database by using the members in the metaoutline. N Do not remove members from the existing database; only update the Essbase database (this is the default).
DimID-MbrID, DimID-MbrID,... DimID-MbrID	**Optional.** Incremental Upate. The level at which dimensions are updated during an incremental member load. The format is: `INCUPD=`*`DimID-MbrID,DimID-MbrID,...DimID-MbrID;`*`[;]` Values for incremental update are as follows: ● *DimID* represents the dimension ID of the dimension to which the incremental update applies. ● *MbrID* represents the member ID of the level zero member of the hierarchy to which the incremental update applies.
Dynamic Restructuring Member Load Options	**Optional.** Specify 1, 2, 3, or 4. Dynamic restructuring member load 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

Parameters	Description
	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.
Attribute Update Level	**Optional.** Use with the Incremental Update parameter. The level at which attribute dimensions are updated when a member load is performed. Values are as follows: 0 Delete all attribute dimensions after the member load is performed. 1 Do not update existing attribute dimensions while updating other types of dimensions (for example: standard, time, or measures dimensions) during a member load. 2 Update all existing attribute dimensions and add new attribute dimensions during a member load.
Username List	**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"`.
Esscmd Script File	**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 data source. The ESSCMD script must be in the `eis/server/esscript` directory.

Create Unicode Application	**Optional.** You can specify that a Unicode application is created on Essbase Server. The default is that no Unicode application is created.
	
	This parameter cannot be overwritten. For example, if a previous application exists and you are overwriting that application with the current member load, you cannot overwrite the original Unicode or non-Unicode setting.
	
	This is the format:
	
	`UNICODE=[Y|N]`
	
	For example:
	
	`UNICODE=Y`

Update Drill-Through Data Only	**Optional.** Update drill-through information or hybrid analysis information.
	
	There is no separate option for hybrid analysis. Use this command for both drill-through information and hybrid analysis information.
	
	This is the format:
	
	`UPDATE_DTDATA_ONLY=[Y|N]`
	
	For example:
	
	`UPDATE_DTDATA_ONLY=Y`

Example

```
LOADMEMBER "OTL=ProductsAnalysis;APP=Products;
DBN=Analysis;FLT_ID_MEMBER=1;OTL_CLEAR=Y;
INCUPD=3-2,4-2,5-1,5-2,5-3;INCUPD_MEMBER=3;
@@USERS="TBC","CFO";UNICODE=Y;"
```

LOADDATA

The LOADDATA command initiates a data load operation on 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. See "SET and LOAD Commands" on page 155.

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=Essbase Application;
DBN=Essbase Database;[FLT_ID_DATA=Data Load Filter ID;]
[REPLACE_ZEROS=Replace Zeros with #MISSING;]
[INCUPD=DimID-MbrID,DimID-MbrID,...DimID-MbrID;]
[INCUPD_DATA=Dynamic Restructuring Data Load Options;]
[@@USERS=Username List;][CALC_SCRIPT=Calc Script Name;]
[ESSCMD_SCRIPT=Esscmd Script File;]
[FT_COLUMN=FactTable Column for Incremental Update;]"
```

Parameters	Description
Metaoutline	The name of the metaoutline. Integration Server uses the specified metaoutline to extract data from the data source to create an Essbase outline.
Essbase Application	The name of the Essbase application on the target Essbase Server computer where the Essbase outline is created.
Essbase Database	The name of the Essbase database on the target Essbase Server computer. Integration Server applies this name to the Essbase outline.
Data Load Filter ID	**Optional.** You can specify a data load filter ID to use when loading data. If you do not specify a filter ID, the default filter (*DEFAULT) is used. The default filter ID is 1; any additional filters are numbered sequentially, starting with the number 2. For information about creating filters, see the Integration Services Console Help.
Replace Zeros with #MISSING	**Optional.** The Replace Zeros with #MISSING parameter replaces Essbase account dimension values of zeros with #MISSING. The default is N (No). This is the format: `REPLACE_ZEROS=[Y|N]` Here are the reasons that you may want to replace zeros with #MISSING: ● Fewer input blocks are created during the data load.

Parameters	Description
	● The calculation time required in the Essbase database is decreased significantly. ● Because of differences in calculator behavior depending on whether a value is zero or missing, faulty data is not generated.
DimID-MbrID, DimID-MbrID,... DimID-MbrID	**Optional.** Incremental Update. The level at which dimensions are updated during an incremental data load. This is the format: `INCUPD=`*`DimID-MbrID,DimID-MbrID,...DimID-MbrID;`* `[;]` Values for incremental update are as follows: ● *DimID* represents the dimension ID of the dimension to which the incremental update applies. ● *MbrID* represents the member ID of the level zero member of the hierarchy to which the incremental update applies.
Dynamic Restructuring Data Load Options	**Optional.** Dynamic restructuring data load 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.
Username List	**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".`
Calc Script Name	**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, Integration Server does not perform a calculation. **Note:** If the data storage model property of the metaoutline is aggregate storage, this parameter is not applicable.
Esscmd Script File	**Optional.** The name of an ESSCMD script. The script that you define instructs Essbase Server 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 data source. The ESSCMD script must be in the `eis/server/esscript` directory.
FactTable Column for Incremental Update	**Optional.** You can specify that a time-based incremental data load be performed based on the date the last data load was performed. The DateTimeColumn Name parameter is the name of the datetime column in the fact table that contains each record's create date or modified date. You can perform time-based incremental loads only if the fact table on which a metaoutline is based has a datetime column that contains each record's creation date or modified date. This is the format:

Parameters	Description
	FT_COLUMN=*DataSourceName.TableName.ColumName*; For example: FT_COLUMN=TBC.Sales.Timestamp;

Example

```
LOADDATA "OTL=ProductsAnalysis;APP=Products;DBN=Analysis;
FLT_ID_DATA=2;REPLACE_ZEROS=Y;CALC_SCRIPT=#DEFAULT#;
INCUPD=1-2,2-1,3-2,4-2,5-1,5-2,5-3;INCUPD_DATA=3;@@USERS="TBC","CFO";"
```

LOADALL

The LOADALL command initiates a load of both members and data on 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. See "SET and LOAD Commands" on page 155.

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 load and a data load, use the LOADMEMBER and LOADDATA commands instead of the LOADALL command.

Syntax

```
LOADALL "OTL=Metaoutline;APP=Essbase Application;DBN=Essbase Database;
[FLT_ID_MEMBER=Member Load Filter ID;]
[FLT_ID_DATA=Data Load Filter ID;]
[DELETE_DB=Delete and Restore Database;]
[REPLACE_ZEROS=Replace Zeros with #MISSING;]
[OTL_CLEAR=Delete All Members First;]
[INCUPD=DimID-MbrID,DimID-MbrID,...DimID-MbrID;]
[INCUPD_MEMBER=Dynamic Restructuring Member Load Options;]
[INCUPD_DATA=Dynamic Restructuring Data Load Options;]
[ATTR_UPDATE_LEVEL=Attribute Update Level;][@@USERS=Username List;]
[CALC_SCRIPT=Calc Script Name;][ESSCMD_SCRIPT=Esscmd Script File;]
[UNICODE=Create Unicode Application]"
```

Parameters	Description
Metaoutline	The name of the metaoutline. Integration Server uses the specified metaoutline to extract data from the data source to create an Essbase outline.
Essbase Application	The name of the Essbase application on the target Essbase Server computer where the Essbase outline is created.

Parameters	Description
Essbase Database	The name of the Essbase database on the target Essbase Server computer. Integration Server applies this name to the Essbase outline.
Member Load Filter ID	**Optional.** You can specify a member load filter ID to use when loading members. If you do not specify a filter ID, the default name (*DEFAULT) is used. The default filter ID is 1; any additional filters are numbered sequentially, starting with the number 2. For information about creating filters, see the Integration Services Console Help.
Data Load Filter ID	**Optional.** You can specify a data load filter ID to use when loading data. If you do not specify a filter ID, the default filter (*DEFAULT) is used. The default filter ID is 1; any additional filters are numbered sequentially, starting with the number 2. For information about creating filters, see the Integration Services Console Help.
Delete and Restore Database	**Optional.** The Delete and Restore Database parameter directs whether Integration Server should delete all members in the Essbase database before performing a member load. The default is N (No). This is the format: `DELETE_DB=[Y|N]` 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 (re-create) the Essbase database during the member load process. N Do not delete and restore the Essbase database (this is the default).
Replace Zeros with #MISSING	**Optional.** The Replace Zeros with #MISSING parameter replaces Essbase account dimension values of zeros with #MISSING. The default is N (No). This is the format: `REPLACE_ZEROS=[Y|N]` Here are the reasons that you may want to replace zeros with #MISSING: ● Fewer input blocks are created during the data load. ● The calculation time required in the Essbase database is decreased significantly. ● Because of differences in calculator behavior depending on whether a value is zero or missing, faulty data is not generated.
Delete All Members First	**Optional.** When the Delete All Members First parameter is selected (OTL_CLEAR=Y), Integration Server removes all members from the existing database and then re-creates 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

Parameters	Description
	metaoutline and you want to build an Essbase outline containing a smaller set of members. The default is N (No). This is the format: `OTL_CLEAR=[Y|N]` Values are as follows: Y Remove all members from the existing database and then re-create the database by using the members in the metaoutline. N Do not remove members from the existing database; only update the Essbase database (this is the default).
DimID-MbrID, DimID-MbrID,... DimID-MbrID	**Optional.** Incremental Update. The level at which dimensions are updated during an incremental member and data load. This is the format: `INCUPD=`*`DimID-MbrID,DimID-MbrID,...DimID-MbrID;`*`[;]` Values for incremental update are as follows: ● *DimID* represents the dimension ID of the dimension to which the incremental update applies. ● *MbrID* represents the member ID of the level zero member of the hierarchy to which the incremental update applies.
Dynamic Restructuring Member Load Options	**Optional.** Specify 1, 2, 3, or 4. Dynamic restructuring member load 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.
Dynamic Restructuring Data Load Options	**Optional.** Dynamic restructuring data load 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).

Parameters	Description
	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.
Attribute Update Level	**Optional.** Use with the Incremental Update parameter. The level at which attribute dimensions are updated when a member load is performed. Values are as follows: 0 Delete all attribute dimensions after the member load is performed. 1 Do not update existing attribute dimensions while updating other types of dimensions (for example: standard, time, or measures dimensions) during a member load. 2 Update all existing attribute dimensions and add new attribute dimensions during a member load.
Essbase Users	**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"`.
Calc Script Name	**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, Integration Server does not perform a calculation. If the data storage model property of the metaoutline is aggregate storage, this parameter is not applicable.
Esscmd Script File	**Optional.** The name of an ESSCMD script. The script that you define instructs Essbase Server 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 data source. The ESSCMD script must be in the `eis\server\esscript` directory.

Create Unicode Application	**Optional.** You can specify that a Unicode application is created on Essbase Server. The default is that no Unicode application is created.
	This parameter cannot be overwritten. For example, if a previous application exists and you are overwriting that application with the current member load, you cannot overwrite the original Unicode or non-Unicode setting.
	This is the format:
	`UNICODE=[Y|N]`
	For example:
	`UNICODE=Y`

Example

```
LOADALL OTL=ProductsAnalysis;APP=Products;DBN=Analysis;FLT_ID_MEMBER=2;
FLT_ID_DATA=2;REPLACE_ZEROS=Y;OTL_CLEAR=Y;CALC_SCRIPT=#DEFAULT#;
INCUPD=1-2,2-1,3-2,4-2,5-1,5-2,5-3;INCUPD_MEMBER=3;INCUPD_DATA=3;
@@USERS="TBC","CFO";UNICODE=Y;
```

LOGOUT

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

Syntax

```
LOGOUT
```

Example

LOGOUT logs you out of Integration Server.

Note:

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

SHUTDOWN

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

Syntax

```
SHUTDOWN
```

Example

SHUTDOWN shuts down Integration Server.

EXIT

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

Syntax

```
EXIT
```

Example

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

Peforming Member Loads Using Integration Services Shell

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

You can manually schedule the batch file by using the AT service in Windows 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 with Integration Services Shell, follow the same steps for loading members that you use with Integration Services Console:

1. **Log on to the 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;CODEPAGE=English_UnitedStates.Latin1@Binary;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;CODEPAGE=English_UnitedStates.Latin1@Binary;
   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 Integration Services Shell

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

You can manually schedule the batch file by enabling the Task Scheduler service on Windows 2000, 2003 and Windows XP 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 with Integration Services Shell, follow the same steps for loading data that you use with Integration Services Console:

1. **Log on to 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;CODEPAGE=English_UnitedStates.Latin1@Binary;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;CODEPAGE=English_UnitedStates.Latin1@Binary;
   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"
   ```

9 Naming Restrictions for Essbase Applications, Databases, and Members

In This Chapter

This chapter describes the rules for naming applications, databases, dimensions, members, and aliases in Essbase. For detailed information on creating Essbase applications and databases, see the Essbase product documentation.

Naming Restrictions for Applications and Databases

When naming applications and databases, follow these rules:

- Use no more than 8 bytes when naming non-Unicode-mode applications and databases; use no more than 30 characters when naming Unicode-mode applications and databases.
- Do not use spaces anywhere in the name.
- Do not use the following special characters anywhere in the name:

* asterisk	+ plus
\ back slash	? question mark
[] brackets	" quotation marks
: colon	; semicolon
, comma	' apostrophe
= equals	/ forward slash
> greater than	tabs
< less than	| vertical bar
. period	

- For aggregate storage databases only, do not use any of the following words as application or database names:

DEFAULT
LOG
METADATA
TEMP

Enter the name in the case in which you want the word displayed. The application or database name is created exactly as you enter it. If you enter the name as all capital letters (for instance, NEWAPP), Essbase does not automatically convert it to upper- and lowercase (for instance, Newapp).

Naming Restrictions for Dimensions, Members, and Aliases

When naming dimensions, members, and aliases in the database outline, follow these rules:

- Use no more than 80 characters when naming dimensions, members, or aliases.
- Names are not case-sensitive unless case-sensitivity is enabled. See "Setting Outline Properties" in *Essbase Administration Services Online Help*.
- Do not use quotation marks (""), brackets ([]), or tabs anywhere in a name.

  Note:

  Brackets ([]) are supported in block storage outlines, but are not recommended because their use causes errors when converting to an aggregate storage outline.
- At the beginning of a dimension or member name, do not use the following characters:

@ at	() parentheses
\ back slash	. period
{} braces	+ plus
, comma	' apostrophe
- dash, hyphen, or minus	_ underscore
= equals	| vertical bar
< less than	

- Do not place spaces at the beginning or end of a name. Essbase ignores spaces at the beginning or end of a name.
- Do not use the following words as dimension or member names:
  - Calculation script commands, operators, and keywords. For a list of commands, see the *Essbase Technical Reference*.
  - Report writer commands. For a list of commands, see the *Essbase Technical Reference*.

- Function names and function arguments. For a list of functions, see the *Essbase Technical Reference*.
- Names of other dimensions and members (unless the member is shared), and generation names, level names, and aliases in the database.
- Any of the following words:

ALL	GENRANGE	OR
AND	GROUP	PAREN
ASSIGN	GT	PARENPARM
CALC	ID	PERCENT
CALCMBR	IDERROR	PLUS
COPYFORWARD	INTEGER	RELOP
CROSSDIM	LE	SET
CURMBRNAME	LEVELRANGE	SKIPBOTH
DIM	LOOPBLOCK	SKIPMISSING
DIMNAME	LOOPARMS	SKIPNONE
DIV	LT	SKIPZERO
DYNAMIC	MBR	TO
EMPTYPARM	MBRNAME	TOLOCALRATE
EQ	MBRONLY	TRAILMISSING
EQOP	MINUS	TRAILSUM
EXCEPT	MISSING	UMINUS
EXP	MUL	UPPER
EXPERROR	MULOP	VARORXMBR
FLOAT	NE	XMBRONLY
FUNCTION	NON	$$$UNIVERSE$$$
GE	NONINPUT	#MISSING
GEN	NOT	#MI

Note:

If you enable Dynamic Time Series members, do not use the associated generation names, including History, Year, Season, Period, Quarter, Month, Week, or Day.

Using Dimension and Member Names in Calculation Scripts, Report Scripts, Formulas, and Filters

In calculation scripts, report scripts, filter definitions, partition definitions, or formulas, you must enclose member names in quotation marks (" ") for block storage databases, and in brackets ([]) for aggregate storage databases, in the following situations:

- The name starts with one or more numerals (for example, 100).
- The name contains spaces or any of the following characters:

& ampersand	> greater than
* asterisk	< less than
@ at	() parentheses
\ back slash	% percent
{} braces	. period
: colon	+ plus
, comma	; semicolon
- dash, hyphen, or minus	/ forward slash
= equals	
! exclamation point	~ tilde

- In calculation scripts and formulas, you must enclose the following member names in quotation marks (" ") for block storage databases, and in brackets ([]) for aggregate storage databases:

BEGIN	MEMBER
DOUBLE	RANGE
END	STRING
MACRO	THEN

A Return Codes and Error Messages

In This Appendix

This appendix provides a partial list of the return codes and error messages generated by Essbase Integration Server and Essbase Server. Return codes and error messages are grouped into two categories: return codes and errors generated by Integration Server and errors generated by Essbase Server for member and data loads.

The complete lists of OLAPICMD return codes (`unixrtcd.txt` and `winrtcd.txt`) are located in `eis/server/docs` on UNIX and `eis\server\docs` on Windows.

The complete list of Integration Server error messages is located in `eis/server/bin/error.txt` on UNIX and `eis\server\bin\error.txt` on Windows.

For errors generated by Essbase for member and data loads, see "Essbase Error Messages Generated During Data Loads" on page 187.

OLAPICMD Session Return Codes

At the end of an Integration Services Shell (OLAPICMD) session, OLAPICMD may return a code generated by Integration Server. This return code may be a status code or may be an error code.

To interpret the meaning of a return code, refer to the `unixrtcd.txt` file or the `winrtcd.txt` file. The `unixrtcd.txt` file is located in the `eis/server/docs` directory on UNIX, and the `winrtcd.txt` file is located in the `eis\server\docs` directory on Windows.

- The `unixrtcd.txt` file lists the return codes for UNIX, the corresponding Windows return code, and the associated message text. Because of a limitation in the number of return code values available for use on UNIX, some code numbers are used more than once. When you look up a return code number and find that it is used multiple times, you need to examine the messages for all instances of that return code number. Then you need to determine which

message applies to your situation by understanding the context in which the problem occurred.

- The `winrtcd.txt` file lists the return codes for Windows and the associated message text. The return code values in Windows are unique.

Table 15 shows examples of return codes on UNIX that are used more than once. Italicized words represent variable names inserted in the message text. Refer to the return code value and make a note of it in case you need to contact Hyperion Technical Support with a problem.

For the complete list of return codes, refer to the `unixrtcd.txt` (located in the `eis/server/docs` directory on UNIX) and the `winrtcd.txt` file (located in the `eis\server\docs` directory on Windows).

Table 15 Examples of Multiple Instances of Integration Services Shell (OLAPICMD) Return Code Values for UNIX

UNIX Return Code	Windows Return Code	Message Contents
061	1195069	Failed to add Essbase member *member_name* (DUPLICATE, ignored).
061	1195325	There must be an active session to process this command.
061	2003005	Data source error. Could not locate the metadata attributes.
069	1195077	Failed to create a local context.
069	1195333	ODBC Error. Encountered unknown ODBC exception while opening database.
094	1195358	Failed to get user attributes.
094	2002014	Cube builder error. Client request error. Invalid number of parameters.

Member Load Error Messages

Table 16 lists some of the error messages that 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 16 Essbase Integration Server Member Load Error Messages

Windows Message Number	Message Content
1195049	Detected metadata join problem (*table.column* < - > *table.column*).
1195050	Encountered unknown ODBC exception while opening database. Aborting the command.
1195064	Failed to add database *Essbase database*.
1195065	Failed to add dimension *dimension*.

Windows Message Number	Message Content
1195066	Failed to add Essbase member *member* (%d).
1195067	Failed to add Essbase member *member* (child of shared parent).
1195068	Failed to add Essbase member *member* (DUPLICATE).
1195069	Failed to add Essbase member *member* (DUPLICATE, ignored).
1195070	Failed to add Essbase member *member* (no parent or sibling members found).
1195071	Failed to add Essbase member *member*, %d.
1195072	Failed to add Essbase member *member;* the member exists.
1195073	Failed to add formula *formula*.
1195074	Failed to add member *member*.
1195075	Failed to add metaoutline member *member*.
1195076	Failed to add user attribute *user-defined attribute*.
1195077	Failed to create a local context.
1195078	Failed to create a local outline.
1195079	Failed to create application *Essbase application*.
1195080	Failed to create dimension *dimension*.
1195083	Failed to get information for parent of *recursive hierarchy member*.
1195085	Failed to get metadata for *dimension.member*.
1195088	Failed to initialize Essbase API.
1195089	Failed to open outline *Essbase outline*.
1195093	Failed to restructure *Essbase outline*.
1195095	Failed to update Essbase server (NULL HEADER).
1195097	Filter *metaoutline filter* doesn't exist for *metaoutline* metaoutline.
1195098	Filter expression length exceeded the limit of *maximum bytes* bytes.
1195115	Incremental update specification *incremental update specification string* is incorrect.
1195126	Invalid aggregation function *aggregate function* for *table.column*.
1195129	Invalid esscmd script name *esscmd script*.
1195130	Invalid parameter *parameter*.
1195132	Invalid parameter string.

Windows Message Number	Message Content
1195142	Metadata error: *property ID* is not a valid property for *member* or *dimension*.
1195143	Metaoutline validation error. *Recursive hierarchy member*, a recursive member cannot have aggregation filter.
1195144	Metaoutline validation error. Filter = *member filter*, is not associated with any member.
1195188	Unknown exception encountered while opening dimension *dimension*.
1195189	Unknown exception encountered while opening member *member*.
1195190	Unknown exception encountered while opening metaoutline *metaoutline*.
1195341	Failed to Login to Essbase Server.
1195342	Failed to Get Essbase Settings.
1195344	Failed to unload database.
1195345	Failed to delete database.
1195346	Failed to close outline.
1195347	Failed to read outline.
1195349	Failed to unlock Database *database*.
1195350	Failed to save outline.
1195351	Unable to process state for *Essbase command*.
1195352	Failed to get access permissions for application.
1195353	Failed to set access permissions for application.
1195354	Failed to get access permissions for database.
1195355	Failed to set access permissions for database.
1195356	No member found.
1195357	Essbase Error: *error definition*.
1195358	Failed to get user attributes.
1195360	Failed to add member to outline.
1195361	Failed to calculate the data.
1195362	Failed to get parent.
1195363	Failed to get member.
1195364	Failed to move member.
1195365	Failed to get shared member.

Windows Message Number	Message Content
1195366	Failed to get member information.
1195367	Failed to sort outline.
1195377	IS Error: Unable to delete outline.
1195378	IS Error: SQL Generation for member load failed.
1195379	IS Error: Database close operation failed after load.
1195380	IS Error: Catalog close operation failed after load.
1195381	IS Error: Essbase close operation failed after load.
1195382	IS Error: No OLAP model name specified.
1195383	IS Error: Failed to open OLAP model *OLAP model*.
1195384	IS Error: Failed to close OLAP Metadata Catalog *OLAP Metadata Catalog*.
1195385	Failed to create virtual model.
1195386	Member load completed with errors.
1195387	Member load terminated due to error.
1195389	Failed to get dimbuild SQL.

Data Load Error Messages

Table 17 lists some of the error messages that 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 17 Essbase Integration Server Data Load Error Messages

Windows Message Number	Message Content
1195034	Cell load exceptions encountered.
1195047	Data load exceptions encountered. *?* , *amount*.
1195063	Failed to activate *Essbase application.Essbase.database*.
1195082	Failed to execute esscmd script *esscmd script*.
1195369	Data load completed with errors.
1195370	Data load terminated with errors.
1195388	Failed to get data load SQL.

Windows Message Number	Message Content
1195390	Number of data load SQLs not equal to number of hierarchies.

Drill-Through Report Error Messages

Drill-through reports are created using the Integration Services Console OLAP Metaoutline standard user interface and are viewed using Essbase Spreadsheet Add-in for Excel or Lotus 123 or any other Hyperion drill-through client.

Table 18 lists some of the error messages that 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 18 Essbase Integration Server Drill-Through Report Error Messages

Windows Message Number	Message Content
1195081	Failed to enable DTS Member *member*.
1195087	Failed to get the universal member handle.
1195125	Intersection element *member* does not exist in *table.column*.
1195131	Invalid parameter count for the drill-through request. Aborting...
1195153	Received NULL pointer in DTAttributes( ) for Report = *Drill-Through report*.
1195154	Received NULL pointer in GetDTData ( ) for Report = *Drill-Through report*.
1195155	Received NULL pointer in GetDTDomain ( ).
1195156	Received NULL pointer in GetDTReport ( ).
1195157	Received NULL pointer in SetDTReport ( ).
1195183	Too many Drill-Through reports defined (exceeded Essbase metadata size limit). Drill-Through is disabled for this outline.
1195186	Unknown exception in GetDTReport ( ).
1195359	Essbase Error: Invalid Drill-Through Metadata.
1195369	IS Error: Data load completed with errors.
1195370	IS Error: Data load terminated due to errors.
1195371	IS Error: Unable to log in to data source.
1195372	IS Error: Unable to log in to OLAP Metadata Catalog.
1195373	IS Error: Unable to log in to Essbase Server.

Windows Message Number	Message Content
1195374	IS Error: Unable to read Metaoutline information.
1195375	IS Error: Data calculation failed.
1195376	IS Error: Esscmd script execution failed.

Miscellaneous Error Messages

Table 19 lists some of the miscellaneous error messages that 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 19 Essbase Integration Server Miscellaneous Error Messages

Windows Message Number	Message Contents
1195004	*Metaoutline* failed validation. Database measures not specified.
1195007	*Add job* failed.
1195017	*Syntax* Syntax error at *character location* in the filter expression *filter*.
1195018	*Member* cannot have aggregation filter. Only leaf members can have aggregation filters.
1195054	Error message unavailable for this error.
1195057	Essbase server on *Essbase server computer* is not enabled with Integration Services option. Please inform your system administrator.
1195084	Failed to get job info (OS error *Job-ID*).
1195086	Failed to get the ODBC message.
1195090	Failed to remove *temporary batch file* (OS error *operating system error*).
1195091	Failed to remove job (OS error *operating system error*).
1195092	Failed to remove old job (OS error *operating system error*).
1195094	Failed to schedule job (OS error *operating system error*).
1195096	Fatal error.
1195124	Internal system error. Please contact Technical Support with the error number 1999999.
1195127	Invalid command line option *OLAP Integration Server switch*.
1195128	Invalid datatype specification *data type*.

Windows Message Number	Message Contents
1195133	Invalid session identifier; please log in to Integration Services again.
1195159	Replace Failed *member transformation*.
1195185	Trying to access invalid memory. Contact Technical Support.
1195187	Unknown ODBC exception encountered while closing database.
1195206	*Syntax* Syntax error at *character location* in the filter expression *filter*.
1195207	Integration Services is already running on this machine.
1195208	Failed to release locks.
1195333	ODBC Error: Encountered unknown ODBC exception while opening database.
1195334	ODBC Error: Encountered unknown ODBC exception while closing database.
1195336	ODBC Error: Failed to get ODBC Error message for error number.
1195338	IS Error: Error during parsing Load Parameters.
1195343	Essbase Error: Essbase Server on *Essbase server computer* is not enabled with Integration Services option.
1195344	Failed to unload database.
1195348	Failed to get information for Database *database*.
1195391	IS Error: Unable to get tables for pattern name *SQL regular expression pattern* from data source.
1195392	IS Error: Unable to get columns for table *data source table* from data source.
1195393	IS Error: Unable to extract foreign keys for tables *data source table, data source table* from data source.
1195394	IS Error: Failed to bind columns.
1195395	IS Error: Failed to fetch next row.
1195396	IS Error: Failed to get number of columns.
1195397	IS Error: Failed to get column attributes.
1195398	IS Error: Failed to get statement handle.
1195399	IS Error: Failed to release statement handle.
1195400	IS Error: Failed to get number of rows.
1195401	IS Error: Unable to delete the model *model name*.

Essbase Error Messages Generated During Data Loads

Table 20 lists the most common errors that you will find in the `dataload.txt` file. The `dataload.txt` file for a specific data load is located in a subfolder in the `eis\server\loadinfo` directory in Windows and `eis/server/loadinfo` in UNIX. In the `loadinfo` directory, each data load generates a subfolder named in the following format:

`<application_database_timestamp_sessionnumber>`

Locate the subfolder for the data load that you want to review and open the `dataload.txt` file to view the errors.

Table 20 Essbase Messages Generated During Loads

Message Number	Message Contents
3303	Member not found in database.
3304	Insufficient access to store data.
3333	Bad data value supplied.
3335	Record rejected because of duplicate member names.
3336	Member/Data unknown.
3337	Record rejected because of dimension conflicts with Header Name.

B Integration Services Limits and Guidelines

In This Appendix

This appendix describes Integration Services artifacts and database naming limits; Hybrid Analysis, Drill-through, and Unicode guidelines.

You should be familiar with these limits and guidelines before you begin using Integration Services.

For restrictions and guidelines on naming artifacts, see Chapter 9, "Naming Restrictions for Essbase Applications, Databases, and Members." See also Integration Services Console online help.

Artifact Limits

Table 21 contains a list of limits that you may encounter when creating or manipulating Integration Services artifacts.

Table 21 Artifacts and Limits

Artifact	Limit for Applications
Names and Related Fields	
Alias name	Non-Unicode application limit: 80 bytes Unicode-mode application limit: 80 characters
Alias table name	Non-Unicode application limit: 30 bytes Unicode-mode application limit: 30 characters

Artifact	Limit for Applications
Essbase Server name	Non-Unicode application limit: 29 bytes Unicode-mode application limit: 50 characters
Application name	Non-Unicode application limit: 8 bytes Unicode-mode application limit: 30 characters
Application description	Non-Unicode application limit: 79 bytes Unicode-mode application limit: 80 characters
• Custom-defined function name • Custom-defined macro name • Custom-defined function specification • Custom-defined macro specification	Non-Unicode application limit: 127 bytes. MaxL and the API truncate characters after 127 bytes. Unicode-mode application limit: 128 characters. MaxL and the API truncate characters after 128 characters. In either case, no truncation on server. No error is displayed if truncation occurs.
Custom-defined function and macro comment	Non-Unicode application limit: 255 bytes. After 255 bytes, characters are truncated by MaxL and API. Unicode-mode application limit: 256 characters. MaxL and the API truncate characters after 256 characters. In either case, no truncation on server. No error is displayed if truncation occurs.
Data source name	46 characters
Database name	Non-Unicode application limit: 8 bytes Unicode-mode application limit: 30 characters
Database description	Non-Unicode application limit: 79 bytes Unicode-mode application limit: 80 characters
Directory path For example: `eis/server/bin`	Non-Unicode application limit: 256 bytes Unicode-mode application limit: 1024 bytes
File names for calculation scripts, report scripts, and rules files	Non-Unicode application limit: 8 bytes Unicode-mode application limit: If included within a path, the smaller of the following two values: • 1024 bytes • The limit established by the operating system If not included within a path, as in some MaxL statements, 1024 bytes.
Filter name	Non-Unicode application limit: 30 bytes Unicode-mode application limit: 30 characters
Group name	Non-Unicode application limit: 30 bytes Unicode-mode application limit: 30 characters

Artifact	Limit for Applications
Linked reporting artifact cell note	599 bytes
Linked reporting artifact URL	512 characters (always single-byte characters)
Member comment field	Non-Unicode application limit: 255 bytes Unicode-mode application limit: 256 characters
Member comment field (extended)	8192 bytes
Member name	Non-Unicode application limit: 80 bytes Unicode-mode application limit: 80 characters
OLAP model name	80 characters
OLAP metaoutline name	80 characters
Password	Non-Unicode application limit: 100 bytes Unicode-mode application limit: 100 characters
Substitution variable name	80 bytes
Substitution variable value	255 bytes
Trigger name	30 bytes
User-defined query	No limitations
User names	Non-Unicode application limit: 30 bytes Unicode-mode application limit: 30 characters
Variable names	32 bytes
Data Load and Dimension Building Limits	
Data load query	No limitations
Member load query	No limitations
Number of alias tables associated with a metaoutline	9, including the Default alias table
Number of error messages written to a data load or dimension build error log (DATAERRORLIMIT in `essbase.cfg`)	Default 1000, minimum 1, maximum 65000
Selection and rejection criteria	Number of characters that describe selection and rejection criteria: combination of all criteria limited to 32 KB
Other Limits	
Caches: data, data file, index	2 GB
Formula size	• Created in Formula Editor: 64 KB. Formulas in calculation scripts are not subject to this limit. • Created in MaxL, using multi-byte characters: 40 KB.

Artifact	Limit for Applications
	Formulas in calculation scripts are not subject to these limits.
Number of security filters	Per Essbase Server, 65535 Per Essbase database, 32290
Number of users	30,000. Errors can occur if you create more than 30,000 users.
Number of members in an Essbase outline	Approximately 1,000,000 explicitly defined in an Essbase outline for block storage Approximately 20,000,000 explicitly defined in an Essbase outline for aggregate storage Hybrid Analysis and some uses of partitions enable access to many more members than are explicitly listed in an outline, the actual number of members accessible through the database is much higher. Longer names, which often occur if multi-byte characters are used, decrease the number of members that are allowed.

Source Database Artifact Naming Limits

Integration Services does not support source database table names and column names containing the characters listed in Table 22.

Note:

Table names may contain blank spaces. Column names may contain blank spaces and question marks.

Note:

Table and column names may be greater than 30 characters in length.

Table 22 Unsupported Characters in Table and Column Names

	Character Description		Character Description
“	quotation mark	( )	parenthesis
&	ampersand	.	period
,	comma	|	vertical pipe
=	equal sign	'	single quotation mark
@	at sign	\	backslash

	Character Description		Character Description
#	pound sign	/	forward slash
\t	Tab character	:	colon
	blank space	*	asterisk
+	plus sign	?	question mark
-	dash, minus sign, or hyphen	<	less than sign
{ }	braces	>	more than sign

Setting the Compression Dimension

In aggregate storage databases, the size of the compressed database changes depending on which dimension is specified as the compression dimension, and can affect retrieval performance.

When the data model property is set to aggregate storage, the Accounts dimension is specified as the compression dimension by default. However, you may determine that another dimension is the optimal choice for compression. Using the Compression Dimension check box, you can specify any single dimension as the compression dimension.

After performing a data load, use Administration Services Console or MaxL to view detailed compression and query statistics for your database.

Guidelines

- The compression dimension option is ignored if the outline is being built with Essbase versions earlier than 9.3. In versions less than 9.3, the Accounts dimension is tagged as the compression dimension internally.
- The following dimensions cannot be specified as the compression dimension:
  - Multiple hierarchy dimensions
  - Attribute dimensions
  - A base dimension with an attribute association
- If you tag a compression dimension with an Outline Hierarchy Information option other than “Dynamic at Dimension Level,” that dimension will be tagged as a dynamic dimension when it is loaded into Essbase.
- The compressions dimension option applies to metaoutlines specified for aggregate storage only. To facilitate switching between aggregate and block data storage models, the option is always available, whether the metaoutline is specified for block storage or aggregate storage. If the metaoutline is specified for block storage, this option is ignored.

Hybrid Analysis Guidelines

You should be familiar with the Hybrid Analysis guidelines covered in this section.

Data Source Guidelines

- A single Essbase database can be associated with only one hybrid analysis relational data source.
- A hybrid analysis data source can consist of only one relational database.
- Hybrid Analysis supports data that is stored using either block storage or aggregate storage.
- Hybrid Analysis supports Unicode-enabled data sources.

Dimensions Guidelines

- Hybrid Analysis is not supported on accounts dimensions.
- If the time dimension contains hybrid analysis-enabled members, the time dimension does not support Dynamic Time Series.
- Hybrid Analysis is not supported on user-defined dimensions.
- In an outline that is hybrid analysis-enabled, you can perform operations and analyses on dimensions that have attributes attached to one or more levels. The attribute dimension should be fully loaded into Essbase.
- Only the first hierarchy of a dimension with alternate hierarchies can have members enabled for hybrid analysis on its lowest levels.
- When building a dimension that is enabled for hybrid analysis, you must ensure that the column in the data source table that contributes to the leaf level of the Essbase portion of the dimension is non-nullable.

Members Guidelines

- Only the lowest level members of a dimension can be enabled for hybrid analysis.
- You should not rename a hybrid analysis-enabled member. If you rename a member, the member may not be retrieved the next time you perform a drill-through operation.
- Hybrid Analysis supports only parent-child prefixing on member names.
- Essbase does not support aliases for members that are enabled for hybrid analysis.
- Hybrid Analysis does not support scaling of measures dimension members using any of the operators + (addition), - (subtraction), * (multiplication), and / (division). If you use the scaling operators, drill-through queries into hybrid analysis data may show a mismatch between aggregated level-0 values in the Essbase database and the corresponding detail values in your data source.
- Essbase ignores all member properties, such as formulas, UDAs, and aliases for members that are enabled for hybrid analysis.

- You can associate an attribute member with a member enabled for hybrid analysis but you must make the association by metaoutline member name and not by level.
- Essbase supports drill-through operations defined on members that are enabled for Hybrid Analysis.
- You cannot apply properties of the Account Info tab to Hybrid Analysis members. Specifically, Time Balance, Skip, Variance Reporting, or Currency Conversion properties are not supported for Hybrid Analysis-enabled members.

Spreadsheet Guidelines

- Hybrid Analysis does not return numeric data in a spreadsheet if the member from the Accounts dimension is part of a ragged hierarchy.
- Hybrid Analysis is not supported with the Member Selection feature. You cannot select Hybrid Analysis members from the Member Selection dialog box.
- If you have multiple levels of hybrid analysis members in your outline, performing a zoom out operation on the bottom level hybrid analysis member takes you directly to the Essbase parent member, bypassing all other hybrid analysis levels.

Operations Guidelines

- Hybrid Analysis supports Dynamic Time Series.
- Essbase requires the OLAP Metadata Catalog created in Integration Services in order to drill down in a hybrid analysis data source.
- Hybrid Analysis does not support transparent, replicated, or linked partitions.
- Hybrid Analysis supports recursive hierarchies.

Limitations on Transformation Rules with Hybrid Analysis

Hybrid Analysis sets the following limitations on transformation rules:

- A database value cannot have a separator character that is the same as the one used for the prefix or suffix.
- A member name cannot be more than 80 characters (excluding blanks).
- A prefix or suffix must always have a separator associated with it.
- The data source database value cannot have trailing blanks.
- If spaces are converted to underscores during a transformation, then the Hybrid Analysis Manager assumes there are no underscores present in the database value.
- The use of all ancestors as a prefix or as a suffix is not supported.

Transformations Not Supported by Hybrid Analysis

Hybrid Analysis does not support the following transformations:

- Dropping spaces from around a member name
- Applying a prefix without a separator
- Applying names prefixes for all parents with or without a separator
- Applying a suffix without a separator
- Applying all suffixes of parent names with or without a separator
- Applying scaling to measures

Limitations on Using Formulas with Hybrid Analysis

Formulas used with hybrid analysis-enabled members are subject to the following limitations:

- Formulas are supported only on a measures dimension.
- Formulas cannot be attached to relational members.
- Formulas cannot reference a relational member by name.
- Member set functions (such as @CHILDREN and @DESCENDANTS), which generate member lists in a formula, execute only in the Essbase portion of the outline.

If a formula contains one or more functions that are not supported by Hybrid Analysis, Essbase returns the following error message:

```
Error executing formula for member

[member-name-to-which-formula-is-attached] (line [line# where the offending
function appears inside the formula): function [Name of the offending
function] cannot be used in Hybrid Analysis.
```

Unsupported Essbase Functions in Hybrid Analysis

Hybrid Analysis does not support all Essbase functions. The following topics specify the categories of significant Essbase functions not supported by Hybrid Analysis.

Relationship Functions

Hybrid Analysis does not support functions that look up specific values in the database based on current cell location and a series of parameters. Examples:

@ANCEST	@SPARENT
@SANCEST	@CURLEV
@PARENT	@CURGEN

Member Condition Functions That Use Boolean Test

Hybrid Analysis does not support functions used to specify member conditions. Examples:

@ISIANCEST	@ISLEV
@ISIPARENT	@ISSAMEGEN
@ISISIBLING	@ISUDA

Range Functions

Hybrid Analysis does not support functions that take a range of members as arguments. Rather than return a single value, these functions calculate a series of values internally based on the range specified. Examples:

@PRIOR	@MOVAVG
@SHIFT	@ALLOCATE
@PRIORS	@MDALLOCATE
@SHIFTS	@VAR
@NEXT	@VARPER
@MDSHIFT	@MEDIAN
@MOVSUM	@RANK

Attribute Functions

Hybrid Analysis does not support any Essbase functions that deal with attributes. Examples:

@ATTRIBUTEVAL	@WITHATTR
@ATTRIBUTESVAL	

Current Member and XREF

Hybrid Analysis does not support the following functions used to determine whether the current member is the member being specified:

@CURRMBR	@XREF

Using Advanced Relational Access

By default, when Integration Server creates an Essbase outline, it loads, or builds, all member levels specified in the metaoutline into a multidimensional database. You can, however, set

Integration Server to build to a specified member level (Hybrid Analysis) or build only to the dimension level (Advanced Relational Access). Building down to a specified level produces a smaller Essbase outline and a smaller multidimensional database. Smaller databases can be useful for users with limited disk space who do not need to see the lowest level of detail.

Integration Services uses Advanced Relational Access to give Essbase end users direct access to data from relational databases or data warehouses. This feature enables users to perform online analytical processing (OLAP) on very large data sets.

In Integration Services Console, Advanced Relational Storage is enabled at the metaoutline level. When the Relational Storage option is selected, all members of all non-accounts dimensions are automatically enabled for relational storage. Alternatively, you can enable relational storage on selected non-accounts dimensions.

When a metaoutline is enabled for Advanced Relational Access, end users are able to query directly on relationally-stored members. Essbase Server issues SQl queries to retrieve data from the database or data warehouse. All members of the dimension are accessed directly from the relational data source.

Note:

For detailed information on enabling Advanced Relational Access, see Integration Services Console online help.

Advanced Relational Access Guidelines

When users construct Advanced Relational Access queries, the points outlined in the following sections should be noted.

General Guidelines

Here are general guidelines to keep in mind when using Advanced Relational Access:

- Only outlines that are valid for aggregate storage can be Advanced Relational Access outlines. Block storage is not supported.
- Dynamic Time Series members are not supported.
- Advanced Relational Access requires MDX formulas.

  Note:

  An MDX query made against a ragged hierarchy in an Essbase cube returns data results that can differ significantly from the results obtained when the same MDX query is made against a ragged hierarchy in an Advanced Relational Access cube. See the section "Different Values Loaded in Ragged Hierarchies" on page 200.
- Members enabled for Advanced Relational Access are shown in Administration Services Console Outline Viewer but are not shown in the Outline Editor.
- A Time dimension from the Fact table is not supported. Hyperion strongly recommends that you create a separate Time dimension table with time data only.

- When there are multiple measures defined in a metaoutline, consolidation at the highest level is based on the first measure only.

Data Source Guidelines

Here are guidelines to keep in mind when considering your data source for Advanced Relational Access:

- Advanced Relational Access cannot be enabled in metaoutlines that are connected to multiple data sources.
- Star and snowflake schemas are supported.
- Teradata RDBMS provides different types of SQL date types, but Advanced Relational Access only supports the 'DATE' SQL date type.

Dimension Guidelines

Here are guidelines to keep in mind when working with dimensions in Advanced Relational Access:

- Advanced Relational Access does not support recursive dimensions/hierarchies.
- Alternate hierarchies in standard dimensions are not allowed.
- Attribute dimensions are ignored.
- User-defined dimensions are not supported.
- When a dimension is enabled for relational storage, Integration Server builds only to the dimension level. All members of the dimension are accessed directly from the relational data source.
- Accounts dimension must be created from the fact table.
- For the accounts dimension, no hierarchy is supported. All members should be of generation 2.
- Aliases are not supported.

Member Guidelines

Here are guidelines to keep in mind when working with members in Advanced Relational Access:

- The first member of the accounts dimension must be a base or stored measure. It cannot be a user-defined member.
- Aliases are not supported.
- Duplicate members are not supported.
- Shared members are not supported.
- Relational members are not automatically expanded when part of an outline is expanded. To view the relational members, you must manually click the member node containing the relational members.

- Relational members are not automatically collapsed when part of an outline is collapsed. To collapse the relational members, you must manually click the member node containing the relational members.
- In Integration Services Console, you can specify multiple sort order columns for each generation, selecting ascending or descending order.
- In Integration Services Console, you can associate a key column with each generation name and tag the key column as unique.

Unsupported Data Types

The following data types are not supported in Advanced Relational Access:

- IBM DB2: REAL
- Oracle: NCHAR and NVARCHAR2
- Microsoft SQL Server: TINYINT and SMALLINIT

  Note:

  The data types TINYINT and SMALLINT cannot be used as a measure; however, they can be used as members.
- Teradata: FLOAT

  Note:

  Your member set column names should not be based on columns of FLOAT data types.

Essbase Databases and Advanced Relational Access

When you use Advanced Relational Access, your Essbase database has the following characteristics:

- The accounts dimension completely resides in Essbase.
- For all non-accounts dimensions, only the root members (the dimension level) reside in the Essbase database. All other non-accounts members are accessed directly from the relational database.

Different Values Loaded in Ragged Hierarchies

There is a significant difference in the way Advanced Relational Access and Essbase perform data loads in ragged hierarchies. Because of this difference, separate queries made against a ragged hierarchy can display different consolidation totals.

Essbase loads values in the upper-level members of a ragged hierarchy only when the level 0 members are non-null. Advanced Relational Access, however, loads values in the upper level members of the ragged hierarchy regardless of the value in the level 0 member.

Drill-through Report Guidelines

You should be familiar with these drill-through report guidelines:

- Drill-through operations can be performed on a Unicode Essbase database.
- Drill-through reports may be directed to an alternate Integration Server. Select the alternate server in the OLAP Metaoutline Properties dialog box in Integration Services Console.
- Drill-through operations can be performed with Dynamic Time Series.
- Drill-through operations can be performed on an alternate data source. An alternate data source is a source other than the primary or secondary data source used to create a metaoutline. The alternate data source must contain the same data structure, including column names and data types, as the primary or secondary data source originally used to create the report. Drill-through operations can be performed on an alternate data source that is in a second language.
- Integration Services is not capable of processing drill-through report requests from more than one instance of Essbase running on one server. In order for Integration Services to successfully process requests for drill-through reports from instances of Essbase running on non-standard Agent ports, an essbase.cfg file with the non-standard AGENTPORT setting must be present in eis/server/bin at the time Integration Services is started.
- If you create drill-through reports for a metaoutline based on multiple data sources, the SQL used for each drill-through report cannot include a join across a data source boundary; that is, each drill-through report can be based on only one data source. A metaoutline can contain multiple drill-through reports but all must be based on a single data source.
- Multi-cell drill-through is supported under the following conditions:
  - All members selected for multi-cell drill-through come from same physical table and column in the database.
  - All members selected for multi-cell drill-through come from the same level in the metaoutline.
  - The selected members cannot come from more than one hierarchy.
- The metaoutline in which you are designing a drill-through report cannot contain alternate recursive hierarchies. For example, you cannot insert the same member from a recursive hierarchy into a dimension more than once.
- You cannot use the $$ substitution variable in the template SQL (user-defined SQL) for a drill-through report when the intersection level of the dimension is defined at Generation 1 and the dimension is built from a parent/child table.
- Oracle does not recommend using Drill-Through Template SQL for OLAP metaoutlines that support duplicate member names. Integration Server generates special tags internally to uniquely identify the duplicate members.

  If you still choose to use Drill-through Template SQL with OLAP metaoutlines that support duplicate member names, refer to the *Essbase Integration Services Online Help* for guidelines.
- Drill-through operations can be performed on an database containing multibyte character sets.

- There is a limit to the amount of information that can be stored in the Universal Member Comments (UMC) of an Essbase outline, meaning that users can typically store information for about 40 to 50 drill-through reports only. Because of this limitation, Oracle recommends that users design their drill-through reports so that the total number of reports is kept to under 40.

Unicode Guidelines

- You must use the manual catalog creation procedures to create a Unicode-enabled OLAP Metadata Catalog, as described in Chapter 3, "Creating, Upgrading, and Deleting OLAP Metadata Catalogs".
- Drill-through operations are not supported on a Unicode Essbase database.
- Integration Services does not support Unicode databases in Microsoft SQL Server, Sybase and Informix RDBMSs.
- If the database is UTF-8 but you are using only one language, select the UTF-8 option from the Code Page drop-down list whenever you access the database with the Login, OLAP Metadata Catalog Setup, Set Login Defaults, and Data Source dialog boxes.

Duplicate Member Names Guidelines

When a metaoutline is loaded into Essbase Server, an Essbase outline is usually created with each member name being unique. This is the default behavior of Integration Server. You can change this default and specify a metaoutline that, when loaded into an Essbase database, creates an Essbase outline containing duplicate (non-unique) member names, as shown in the following example:

US-->Massachusetts-->Springfield

US-->Missouri-->Springfield

Oracle Essbase Integration Services generates a unique internal identifier, which is applied to any duplicate member name in a metaoutline. This process enables support for duplicate member names during member loads, data loads, and drill-through operations.

When using duplicate member names, keep in mind the guidelines described in the sections that follow:

Dimensions in Duplicate Outlines

- Dimension names must be unique.
- In a dimension, a user-defined member cannot have the same name as a measure.

Members in Duplicate Outlines

- Duplicate member names are not allowed under the same parent. This is also true for user-defined members.
- A member cannot have children with duplicate names.
- Duplicate members may be shared or non-shared members.
- Duplicate members are supported in both aggregate storage and block storage.
- Duplicate member names are not supported if there are multiple data sources.
- Duplicate member names support duplicate aliases.

Other Guidelines for Duplicate Outlines

- Drill-through operations containing duplicate member names are supported.
- Oracle does not recommend using user-defined data load SQL or Drill-Through Template SQL for metaoutlines that support duplicate member names. Integration Server generates special tags internally to uniquely identify the duplicate members.

  If you still choose to override data load SQL commands, exercise caution. You may have records rejected in error. It is especially recommended that you not change column names in SQL.

  If you still choose to use Drill-through Template SQL with OLAP metaoutlines that support duplicate member names, refer to the *Essbase Integration Services Online Help* for guidelines.
- Duplicate outlines support MDX commands.

Note:

For detailed information on creating an Oracle Essbase outline with duplicate member names, see Integration Services Console online help.

Glossary

! *See bang character (!).*

#MISSING *See missing data (#MISSING).*

access permissions A set of operations that a user can perform on a resource.

accessor Input and output data specifications for data mining algorithms.

account blocking The process by which accounts accept input data in the consolidated file. Blocked accounts do not receive their value through the additive consolidation process.

account eliminations Accounts which have their values set to zero in the consolidated file during consolidation.

account type How an account's value flows over time, and its sign behavior. Account type options can include expense, income, asset, liability, and equity.

accountability map A visual, hierarchical representation of the responsibility, reporting, and dependency structure of the accountability teams (also known as critical business areas) in an organization.

accounts dimension A dimension type that makes accounting intelligence available. Only one dimension can be defined as Accounts.

active service A service whose Run Type is set to Start rather than Hold.

activity-level authorization Defines user access to applications and the types of activities they can perform on applications, independent of the data that will be operated on.

ad hoc report An online analytical query created on-the-fly by an end user.

adapter Software that enables a program to integrate with data and metadata from target and source systems.

adaptive states Interactive Reporting Web Client level of permission.

adjustment *See journal entry (JE).*

Advanced Relational Access The integration of a relational database with an Essbase multidimensional database so that all data remains in the relational database and is mapped to summary-level data residing in the Essbase database.

agent An Essbase server process that starts and stops applications and databases, manages connections from users, and handles user-access security. The agent is referred to as ESSBASE.EXE.

aggregate cell A cell comprising several cells. For example, a data cell that uses Children(Year) expands to four cells containing Quarter 1, Quarter 2, Quarter 3, and Quarter 4 data.

aggregate function A type of function, such as sum or calculation of an average, that summarizes or performs analysis on data.

aggregate limit A limit placed on an aggregated request line item or aggregated metatopic item.

aggregate storage database The database storage model designed to support large-scale, sparsely distributed data which is categorized into many, potentially large dimensions. Upper level members and formulas are dynamically calculated, and selected data values are aggregated and stored, typically with improvements in overall aggregation time.

aggregate view A collection of aggregate cells based on the levels of the members within each dimension. To reduce calculation time, values are pre-aggregated and stored as aggregate views. Retrievals start from aggregate view totals and add up from there.

aggregation The process of rolling up and storing values in an aggregate storage database; the stored result of the aggregation process.

aggregation script In aggregate storage databases only, a file that defines a selection of aggregate views to be built into an aggregation.

alias An alternative name. For example, for a more easily identifiable column descriptor you can display the alias instead of the member name.

alias table A table that contains alternate names for members.

alternate hierarchy A hierarchy of shared members. An alternate hierarchy is based upon an existing hierarchy in a database outline, but has alternate levels in the dimension. An alternate hierarchy allows the same data to be seen from different points of view.

ancestor A branch member that has members below it. For example, the members Qtr2 and 2006 are ancestors of the member April.

appender A Log4j term for destination.

application (1) A software program designed to run a specific task or group of tasks such as a spreadsheet program or database management system. (2) A related set of dimensions and dimension members that are used to meet a specific set of analytical and/or reporting requirements.

application currency The default reporting currency for the application.

area A predefined set of members and values that makes up a partition.

arithmetic data load A data load that performs operations on values in the database, such as adding 10 to each value.

artifact An individual application or repository item; for example, scripts, forms, rules files, Interactive Reporting documents, and financial reports. Also known as an object.

assemblies Installation files for EPM System products or components.

asset account An account type that stores values that represent a company's assets.

assignment The association of a source and destination in the allocation model that controls the direction of allocated costs or revenue flow within Profitability and Cost Management.

attribute Characteristic of a dimension member. For example, Employee dimension members may have attributes of Name, Age, or Address. Product dimension members can have several attributes, such as a size and flavor.

attribute association A relationship in a database outline whereby a member in an attribute dimension describes a characteristic of a member of its base dimension. For example, if product 100-10 has a grape flavor, the product 100-10 has the Flavor attribute association of grape. Thus, the 100-10 member of the Product dimension is associated with the Grape member of the Flavor attribute dimension.

Attribute Calculations dimension A system-defined dimension that performs these calculation operations on groups of members: Sum, Count, Avg, Min, and Max. This dimension is calculated dynamically and is not visible in the database outline. For example, using the Avg member, you can calculate the average sales value for Red products in New York in January.

attribute dimension A type of dimension that enables analysis based on the attributes or qualities of dimension members.

attribute reporting A reporting process based on the attributes of the base dimension members. *See also base dimension*.

attribute type A text, numeric, Boolean, date, or linked-attribute type that enables different functions for grouping, selecting, or calculating data. For example, because the Ounces attribute dimension has the type numeric, the number of ounces specified as the attribute of each product can be used to calculate the profit per ounce for that product.

authentication Verification of identity as a security measure. Authentication is typically based on a user name and password. Passwords and digital signatures are forms of authentication.

authentication service A core service that manages one authentication system.

auto-reversing journal A journal for entering adjustments that you want to reverse in the next period.

automated stage A stage that does not require human intervention, for example, a data load.

axis (1) A straight line that passes through a graphic used for measurement and categorization. (2) A report aspect used to arrange and relate multidimensional data, such as filters, pages, rows, and columns. For example, for a data query in Simple Basic, an axis can define columns for values for Qtr1, Qtr2, Qtr3, and Qtr4. Row data would be retrieved with totals in the following hierarchy: Market, Product.

backup A duplicate copy of an application instance.

balance account An account type that stores unsigned values that relate to a particular point in time.

balanced journal A journal in which the total debits equal the total credits.

bang character (!) A character that terminates a series of report commands and requests information from the database. A report script must be terminated with a bang character; several bang characters can be used within a report script.

bar chart A chart that can consist of one to 50 data sets, with any number of values assigned to each data set. Data sets are displayed as groups of corresponding bars, stacked bars, or individual bars in separate rows.

base currency The currency in which daily business transactions are performed.

base dimension A standard dimension that is associated with one or more attribute dimensions. For example, assuming products have flavors, the Product dimension is the base dimension for the Flavors attribute dimension.

base entity An entity at the bottom of the organization structure that does not own other entities.

batch calculation Any calculation on a database that is done in batch; for example, a calculation script or a full database calculation. Dynamic calculations are not considered to be batch calculations.

batch file An operating system file that can call multiple ESSCMD scripts and run multiple sessions of ESSCMD. On Windows-based systems, batch files have BAT file extensions. On UNIX, batch files are written as a shell script.

batch loader An FDM component that enables the processing of multiple files.

batch POV A collection of all dimensions on the user POV of every report and book in the batch. While scheduling the batch, you can set the members selected on the batch POV.

batch processing mode A method of using ESSCMD to write a batch or script file that can be used to automate routine server maintenance and diagnostic tasks. ESSCMD script files can execute multiple commands and can be run from the operating system command line or from within operating system batch files. Batch files can be used to call multiple ESSCMD scripts or run multiple instances of ESSCMD.

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

block storage database The Essbase database storage model categorizing and storing data based on the sparsity of data values defined in sparse dimensions. Data values are stored in blocks, which exist only for sparse dimension members for which there are values.

Blocked Account An account that you do not want calculated in the consolidated file because you want to enter it manually.

book A container that holds a group of similar Financial Reporting documents. Books may specify dimension sections or dimension changes.

book POV The dimension members for which a book is run.

bookmark A link to a reporting document or a Web site, displayed on a personal page of a user. The two types of bookmarks are My Bookmarks and image bookmarks.

bounding rectangle The required perimeter that encapsulates the Interactive Reporting document content when embedding Interactive Reporting document sections in a personal page, specified in pixels for height and width or row per page.

broadcast message A simple text message sent by an administrator to a user who is logged on to a Planning application. The message displays information to the user such as system availability, notification of application refresh, or application backups.

budget administrator A person responsible for setting up, configuring, maintaining, and controlling an application. Has all application privileges and data access permissions.

build method A method used to modify database outlines. Choice of a build method is based on the format of data in data source files.

business process A set of activities that collectively accomplish a business objective.

business rules Logical expressions or formulas that are created within an application to produce a desired set of resulting values.

cache A buffer in memory that holds data temporarily.

calc script A set of commands that define how a database is consolidated or aggregated. A calculation script may also contain commands that specify allocation and other calculation rules separate from the consolidation process.

calculated member in MaxL DML A member designed for analytical purposes and defined in the optional WITH section of a MaxL DML query.

calculated member in MaxL DML A member designed for analytical purposes and defined in the optional WITH section of a MaxL DML query.

calculation The process of aggregating data, or of running a calculation script on a database.

Calculation Manager A module of Performance Management Architect that Planning and Financial Management users can use to design, validate, and administrate business rules in a graphical environment.

calculation status A consolidation status that indicates that some values or formula calculations have changed. You must reconsolidate to get the correct values for the affected entity.

calendar User-defined time periods and their relationship to each other. Q1, Q2, Q3, and Q4 comprise a calendar or fiscal year.

cascade The process of creating multiple reports for a subset of member values.

Catalog pane Displays a list of elements available to the active section. If Query is the active section, a list of database tables is displayed. If Pivot is the active section, a list of results columns is displayed. If Dashboard is the active section, a list of embeddable sections, graphic tools, and control tools are displayed.

categories Groupings by which data is organized. For example, Month.

cause and effect map Depicts how the elements that form your corporate strategy relate and how they work together to meet your organization's strategic goals. A Cause and Effect map tab is automatically created for each Strategy map.

CDF *See custom-defined function (CDF).*

CDM *See custom-defined macro (CDM).*

cell (1) The data value at the intersection of dimensions in a multidimensional database; the intersection of a row and a column in a worksheet. (2) A logical group of nodes belonging to one administrative domain.

cell note A text annotation for a cell in an Essbase database. Cell notes are a type of LRO.

CHANGED status Consolidation status that indicates data for an entity has changed.

chart A graphical representation of spreadsheet data. The visual nature expedites analysis, color-coding, and visual cues that aid comparisons.

chart template A template that defines the metrics to display in Workspace charts.

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

choice list A list of members that a report designer can specify for each dimension when defining the report's point of view. A user who wants to change the point of view for a dimension that uses a choice list can select only the members specified in that defined member list or those members that meet the criteria defined in the function for the dynamic list.

clean block A data block that where the database is fully calculated, if a calculation script calculates all dimensions at once, or if the SET CLEARUPDATESTATUS command is used in a calculation script.

cluster An array of servers or databases that behave as a single resource which share task loads and provide failover support; eliminates one server or database as a single point of failure in a system.

clustered bar charts Charts in which categories are viewed side-by-side; useful for side-by-side category analysis; used only with vertical bar charts.

code page A mapping of bit combinations to a set of text characters. Different code pages support different sets of characters. Each computer contains a code page setting for the character set requirements of the language of the computer user. In the context of this document, code pages map characters to bit combinations for non-Unicode encodings. *See also encoding*.

column A vertical display of information in a grid or table. A column can contain data from one field, derived data from a calculation, or textual information.

committed access An Essbase Kernel Isolation Level setting that affects how Essbase handles transactions. Under committed access, concurrent transactions hold long-term write locks and yield predictable results.

computed item A virtual column (as opposed to a column that is physically stored in the database or cube) that can be calculated by the database during a query, or by Interactive Reporting Studio in the Results section. Computed items are calculations of data based on functions, data items, and operators provided in the dialog box and can be included in reports or reused to calculate other data.

configuration file The security platform relies on XML documents to be configured by the product administrator or software installer. The XML document must be modified to indicate meaningful values for properties, specifying locations and attributes pertaining to the corporate authentication scenario.

connection file *See Interactive Reporting connection file (.oce)*.

consolidated file (Parent) A file into which all of the business unit files are consolidated; contains the definition of the consolidation.

consolidation The process of aggregating data from dependent entities to parent entities. For example, if the dimension Year consists of the members Qtr1, Qtr2, Qtr3, and Qtr4, its consolidation is Year.

consolidation file (*.cns) The consolidation file is a graphical interface that enables you to add, delete or move Strategic Finance files in the consolidation process using either a Chart or Tree view. It also enables you to define and modify the consolidation.

consolidation rule Identifies the rule that is executed during the consolidation of the node of the hierarchy. This rule can contain customer specific formulas appropriate for the correct consolidation of parent balances. Elimination processing can be controlled within these rules.

content Information stored in the repository for any type of file.

content browser A Component that allows users to Browse and select content to be placed in a Workspace Page .

context variable A variable that is defined for a particular task flow to identify the context of the taskflow instance.

contribution The value added to a parent from a child entity. Each child has a contribution to its parent.

controls group Used in FDM to maintain and organize certification and assessment information, especially helpful for meeting Sarbanes-Oxley requirements.

conversion rate *See exchange rate*.

cookie A segment of data placed on your computer by a Web site.

correlated subqueries Subqueries that are evaluated once for every row in the parent query; created by joining a topic item in the subquery with a topic in the parent query.

critical business area (CBA) An individual or a group organized into a division, region, plant, cost center, profit center, project team, or process; also called accountability team or business area.

critical success factor (CSF) A capability that must be established and sustained to achieve a strategic objective; owned by a strategic objective or a critical process and is a parent to one or more actions.

crosstab reporting Categorizes and summarizes data in table format. The table cells contain summaries of the data that fit within the intersecting categories. For example, a crosstab report of product sales information could show size attributes, such as Small and Large, as column headings and color attributes, such as Blue and Yellow, as row headings. The cell in the table where Large and Blue intersect could contain the total sales of all Blue products that are sized Large.

cube A block of data that contains three or more dimensions. An Essbase database is a cube.

cube deployment In Essbase Studio, the process of setting load options for a model to build an outline and load data into an Essbase application and database.

cube schema In Essbase Studio, the metadata elements, such as measures and hierarchies, representing the logical model of a cube.

currency conversion A process that converts currency values in a database from one currency into another. For example, to convert one U. S. dollar into the European euro, the exchange rate (for example, 0.923702) is multiplied with the dollar (1* 0.923702). After conversion, the European euro amount is .92.

Currency Overrides In any input period, the selected input method can be overridden to enable input of that period's value as Default Currency/Items. To override the input method, enter a pound sign (#) either before or after the number.

currency partition A dimension type that separates local currency members from a base currency, as defined in an application. Identifies currency types, such as Actual, Budget, and Forecast.

custom calendar Any calendar created by an administrator.

custom dimension A dimension created and defined by users. Channel, product, department, project, or region could be custom dimensions.

custom property A property of a dimension or dimension member that is created by a user.

custom report A complex report from the Design Report module, composed of any combination of components.

custom-defined function (CDF) Essbase calculation functions developed in Java and added to the standard Essbase calculation scripting language using MaxL. *See also custom-defined macro (CDM)*.

custom-defined macro (CDM) Essbase macros written with Essbase calculator functions and special macro functions. Custom-defined macros use an internal Essbase macro language that enables the combination of calculation functions and they operate on multiple input parameters. *See also custom-defined function (CDF)*.

cycle through To perform multiple passes through a database while calculating it.

dashboard A collection of metrics and indicators that provide an interactive summary of your business. Dashboards enable you to build and deploy analytic applications.

data cache A buffer in memory that holds uncompressed data blocks.

data cell *See cell*.

data file cache A buffer in memory that holds compressed data (PAG) files.

data form A grid display that enables users to enter data into the database from an interface such as a Web browser, and to view and analyze data or related text. Certain dimension member values are fixed, giving users a specific view into the data.

data function That computes aggregate values, including averages, maximums, counts, and other statistics, that summarize groupings of data.

data load The process of loading data to dimensions and members in Essbase outlines.

data load location In FDM, a reporting unit responsible for submitting source data into the target system. Typically, there is one FDM data load location for each source file loaded to the target system.

data load rules A set of criteria that determines how to load data from a text-based file, a spreadsheet, or a relational data set into a database.

data lock Prevents changes to data according to specified criteria, such as period or scenario.

data mining The process of searching through an Essbase database for hidden relationships and patterns in a large amount of data.

data model A representation of a subset of database tables.

data value *See cell*.

database connection File that stores definitions and properties used to connect to data sources and enables database references to be portable and widely used.

date measure In Essbase, a member tagged as "Date" in the dimension where measures are represented. The cell values are displayed as formatted dates. Dates as measures can be useful for types of analysis that are difficult to represent using the Time dimension. For example, an application may need to track acquisition dates for a series of capital assets, but the acquisition dates span too large a period to allow for feasible Time dimension modeling. *See also typed measure*.

Default Currency Units Define the unit scale of data. For example, if you select to define your analysis in Thousands, and enter "10", this is interpreted as "10,000".

dense dimension In block storage databases, a dimension likely to contain data for every combination of dimension members. For example, time dimensions are often dense because they can contain all combinations of all members. *Contrast with sparse dimension*.

dependent entity An entity that is owned by another entity in the organization.

derived text measure In Essbase Studio, a text measure whose values are governed by a predefined rule expressed as a range. For example, a derived text measure, called "Sales Performance Index," based on a measure Sales, could consist of the values "High," "Medium," and "Low." This derived text measure is defined to display "High," "Medium," and "Low," depending on the range in which the corresponding sales values fall. *See also text measure*.

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

Design Report An interface in Web Analysis Studio for designing custom reports, from a library of components.

destination Within a Profitability and Cost Management assignment, the destination is the receiving point for allocated values.

destination currency The currency to which balances are converted. You enter exchange rates and convert from the source currency to the destination currency. For example, when you convert from EUR to USD, the destination currency is USD.

detail chart A chart that provides the detailed information that you see in a Summary chart. Detail charts appear in the Investigate Section in columns below the Summary charts. If the Summary chart shows a Pie chart, then the Detail charts below represent each piece of the pie.

dimension A data category used to organize business data for retrieval and preservation of values. Dimensions usually contain hierarchies of related members grouped within them. For example, a Year dimension often includes members for each time period, such as quarters and months.

dimension build The process of adding dimensions and members to an Essbase outline.

dimension build rules Specifications, similar to data load rules, that Essbase uses to modify an outline. The modification is based on data in an external data source file.

dimension tab In the Pivot section, the tab that enables you to pivot data between rows and columns.

dimension table (1) A table that includes numerous attributes about a specific business process. (2) In Essbase Integration Services, a container in the OLAP model for one or more relational tables that define a potential dimension in Essbase.

dimension type A dimension property that enables the use of predefined functionality. Dimensions tagged as time have a predefined calendar functionality.

dimensionality In MaxL DML, the represented dimensions (and the order in which they are represented) in a set. For example, the following set consists of two tuples of the same dimensionality because they both reflect the dimensions (Region, Year): { (West, Feb), (East, Mar) }

direct rate A currency rate that you enter in the exchange rate table. The direct rate is used for currency conversion. For example, to convert balances from JPY to USD, In the exchange rate table, enter a rate for the period/scenario where the source currency is JPY and the destination currency is USD.

dirty block A data block containing cells that have been changed since the last calculation. Upper level blocks are marked as dirty if their child blocks are dirty (that is, they have been updated).

display type One of three Web Analysis formats saved to the repository: spreadsheet, chart, and pinboard.

dog-ear The flipped page corner in the upper right corner of the chart header area.

domain In data mining, a variable representing a range of navigation within data.

drill-down Navigation through the query result set using the dimensional hierarchy. Drilling down moves the user perspective from aggregated data to detail. For example, drilling down can reveal hierarchical relationships between years and quarters or quarters and months.

drill-through The navigation from a value in one data source to corresponding data in another source.

driver A driver is an allocation method that describes the mathematical relationship between the sources that utilize the driver, and the destinations to which those sources allocate cost or revenue.

duplicate alias name A name that occurs more than once in an alias table and that can be associated with more than one member in a database outline. Duplicate alias names can be used with duplicate member outlines only.

duplicate member name The multiple occurrence of a member name in a database, with each occurrence representing a different member. For example, a database has two members named "New York." One member represents New York state and the other member represents New York city.

duplicate member outline A database outline containing duplicate member names.

Dynamic Calc and Store members A member in a block storage outline that Essbase calculates only upon the first retrieval of the value. Essbase then stores the calculated value in the database. Subsequent retrievals do not require calculating.

Dynamic Calc members A member in a block storage outline that Essbase calculates only at retrieval time. Essbase discards calculated values after completing the retrieval request.

dynamic calculation In Essbase, a calculation that occurs only when you retrieve data on a member that is tagged as Dynamic Calc or Dynamic Calc and Store. The member's values are calculated at retrieval time instead of being precalculated during batch calculation.

dynamic hierarchy In aggregate storage database outlines only, a hierarchy in which members are calculated at retrieval time.

dynamic member list A system-created named member set that is based on user-defined criteria. The list is refreshed automatically whenever it is referenced in the application. As dimension members are added and deleted, the list automatically reapplies the criteria to reflect the changes.

dynamic reference A pointer in the rules file to header records in a data source.

dynamic report A report containing data that is updated when you run the report.

Dynamic Time Series A process that performs period-to-date reporting in block storage databases.

dynamic view account An account type indicating that account values are calculated dynamically from the data that is displayed.

Eliminated Account An account that does not appear in the consolidated file.

elimination The process of zeroing out (eliminating) transactions between entities within an organization.

employee A user responsible for, or associated with, specific business objects. Employees need not work for an organization; for example, they can be consultants. Employees must be associated with user accounts for authorization purposes.

encoding A method for mapping bit combinations to characters for creating, storing, and displaying text. Each encoding has a name; for example, UTF-8. Within an encoding, each character maps to a specific bit combination; for example, in UTF-8, uppercase A maps to HEX41. *See also code page and locale.*

ending period A period enabling you to adjust the date range in a chart. For example, an ending period of "month", produces a chart showing information through the end of the current month.

Enterprise View An Administration Services feature that enables management of the Essbase environment from a graphical tree view. From Enterprise View, you can operate directly on Essbase artifacts.

entity A dimension representing organizational units. Examples: divisions, subsidiaries, plants, regions, products, or other financial reporting units.

Equity Beta The riskiness of a stock, measured by the variance between its return and the market return, indicated by an index called "beta". For example, if a stock's return normally moves up or down 1.2% when the market moves up or down 1%, the stock has a beta of 1.2.

essbase.cfg An optional configuration file for Essbase. Administrators may edit this file to customize Essbase Server functionality. Some configuration settings may also be used with Essbase clients to override Essbase Server settings.

EssCell A function entered into a cell in Essbase Spreadsheet Add-in to retrieve a value representing an intersection of specific Essbase database members.

ESSCMD A command-line interface for performing Essbase operations interactively or through batch script files.

ESSLANG The Essbase environment variable that defines the encoding used to interpret text characters. *See also encoding*.

ESSMSH *See MaxL Shell*.

exceptions Values that satisfy predefined conditions. You can define formatting indicators or notify subscribing users when exceptions are generated.

exchange rate A numeric value for converting one currency to another. For example, to convert 1 USD into EUR, the exchange rate of 0.8936 is multiplied with the U.S. dollar. The European euro equivalent of $1 is 0.8936.

exchange rate type An identifier for an exchange rate. Different rate types are used because there may be multiple rates for a period and year. Users traditionally define rates at period end for the average rate of the period and for the end of the period. Additional rate types are historical rates, budget rates, forecast rates, and so on. A rate type applies to one point in time.

expense account An account that stores periodic and year-to-date values that decrease net worth if they are positive.

Extensible Markup Language (XML) A language comprising a set of tags used to assign attributes to data that can be interpreted between applications according to a schema.

external authentication Logging on to Oracle's Hyperion applications with user information stored outside the applications, typically in a corporate directory such as MSAD or NTLM.

externally triggered events Non-time-based events for scheduling job runs.

Extract, Transform, and Load (ETL) Data source-specific programs for extracting data and migrating it to applications.

extraction command An Essbase reporting command that handles the selection, orientation, grouping, and ordering of raw data extracted from a database; begins with the less than (<) character.

fact table The central table in a star join schema, characterized by a foreign key and elements drawn from a dimension table. This table typically contains numeric data that can be related to all other tables in the schema.

Favorites gadget Contains links to Reporting and Analysis documents and URLs.

field An item in a data source file to be loaded into an Essbase database.

file delimiter Characters, such as commas or tabs, that separate fields in a data source.

filter A constraint on data sets that restricts values to specific criteria; for example, to exclude certain tables, metadata, or values, or to control access.

flow account An unsigned account that stores periodic and year-to-date values.

folder A file containing other files for the purpose of structuring a hierarchy.

footer Text or images at the bottom of report pages, containing dynamic functions or static text such as page numbers, dates, logos, titles or file names, and author names.

format Visual characteristics of documents or report objects.

format string In Essbase, a method for transforming the way cell values are displayed.

formula A combination of operators, functions, dimension and member names, and numeric constants calculating database members.

frame An area on the desktop. There are two main areas: the navigation and Workspace frames.

free-form grid An object for presenting, entering, and integrating data from different sources for dynamic calculations.

free-form reporting Creating reports by entering dimension members or report script commands in worksheets.

function A routine that returns values or database members.

gadget Simple, specialized, lightweight applications that provide easy viewing of EPM content and enable access to core Reporting and Analysis functionality.

genealogy data Additional data that is optionally generated after allocation calculations. This data enables reporting on all cost or revenue flows from start to finish through all allocation steps.

generation A layer in a hierarchical tree structure that defines member relationships in a database. Generations are ordered incrementally from the top member of the dimension (generation 1) down to the child members. Use the unique generation name to identify a layer in the hierarchical tree structure.

generic jobs Non-SQR Production Reporting or non-Interactive Reporting jobs.

global report command A command in a running report script that is effective until replaced by another global command or the file ends.

grid POV A means for specifying dimension members on a grid without placing dimensions in rows, columns, or page intersections. A report designer can set POV values at the grid level, preventing user POVs from affecting the grid. If a dimension has one grid value, you put the dimension into the grid POV instead of the row, column, or page.

group A container for assigning similar access permissions to multiple users.

GUI Graphical user interface

head up display A mode that shows your loaded Smart Space desktop including the background image above your Windows desktop.

highlighting Depending on your configuration, chart cells or ZoomChart details may be highlighted, indicating value status: red (bad), yellow (warning), or green (good).

Historical Average An average for an account over a number of historical periods.

holding company An entity that is part of a legal entity group, with direct or indirect investments in all entities in the group.

host A server on which applications and services are installed.

host properties Properties pertaining to a host, or if the host has multiple Install_Homes, to an Install_Home. The host properties are configured from the CMC.

Hybrid Analysis An analysis mapping low-level data stored in a relational database to summary-level data stored in Essbase, combining the mass scalability of relational systems with multidimensional data.

hyperlink A link to a file, Web page, or an intranet HTML page.

Hypertext Markup Language (HTML) A programming language specifying how Web browsers display data.

identity A unique identification for a user or group in external authentication.

image bookmarks Graphic links to Web pages or repository items.

IMPACTED status Indicates changes in child entities consolidating into parent entities.

implied share A member with one or more children, but only one is consolidated, so the parent and child share a value.

import format In FDM, defines the structure of the source file which enables the loading of a source data file to an FDM data load location.

inactive group A group for which an administrator has deactivated system access.

inactive service A service suspended from operating.

INACTIVE status Indicates entities deactivated from consolidation for the current period.

inactive user A user whose account has been deactivated by an administrator.

income account An account storing periodic and year-to-date values that, if positive, increase net worth.

index (1) A method where Essbase uses sparse-data combinations to retrieve data in block storage databases. (2) The index file.

index cache A buffer containing index pages.

index entry A pointer to an intersection of sparse dimensions. Index entries point to data blocks on disk and use offsets to locate cells.

index file An Essbase file storing block storage data retrieval information, residing on disk, and containing index pages.

index page A subdivision in an index file. Contains pointers to data blocks.

input data Data loaded from a source rather than calculated.

Install_Home A variable for the directory where EPM System products are installed. Refers to one instance of an EPM System product when multiple applications are installed on the same computer.

integration Process that is run to move data between EPM System products using Shared Services. Data integration definitions specify the data moving between a source application and a destination application, and enable the data movements to be grouped, ordered, and scheduled.

intelligent calculation A calculation method tracking updated data blocks since the last calculation.

Interactive Reporting connection file (.oce) Files encapsulating database connection information, including: the database API (ODBC, SQL*Net, etc.), database software, the database server network address, and database user name. Administrators create and publish Interactive Reporting connection files (.oce).

intercompany elimination *See elimination.*

intercompany matching The process of comparing balances for pairs of intercompany accounts within an application. Intercompany receivables are compared to intercompany payables for matches. Matching accounts are used to eliminate intercompany transactions from an organization's consolidated totals.

intercompany matching report A report that compares intercompany account balances and indicates if the accounts are in, or out, of balance.

interdimensional irrelevance A situation in which a dimension does not intersect with other dimensions. Because the data in the dimension cannot be accessed from the non-intersecting dimensions, the non-intersecting dimensions are not relevant to that dimension.

intersection A unit of data representing the intersection of dimensions in a multidimensional database; also, a worksheet cell.

intrastage assignment Assignments in the financial flow that are assigned to objects within the same stage.

introspection A deep inspection of a data source to discover hierarchies based on the inherent relationships in the database. *Contrast with scraping.*

Investigation *See drill-through.*

isolation level An Essbase Kernel setting that determines the lock and commit behavior of database operations. Choices are: committed access and uncommitted access.

iteration A "pass" of the budget or planning cycle in which the same version of data is revised and promoted.

Java Database Connectivity (JDBC) A client-server communication protocol used by Java based clients and relational databases. The JDBC interface provides a call-level API for SQL-based database access.

job output Files or reports produced from running a job.

jobs Documents with special properties that can be launched to generate output. A job can contain Interactive Reporting, SQR Production Reporting, or generic documents.

join A link between two relational database tables or topics based on common content in a column or row. A join typically occurs between identical or similar items within different tables or topics. For example, a record in the Customer table is joined to a record in the Orders table because the Customer ID value is the same in each table.

journal entry (JE) A set of debit/credit adjustments to account balances for a scenario and period.

JSP Java Server Pages.

KeyContacts gadget Contains a group of Smart Space users and provides access to Smart Space Collaborator. For example, you can have a KeyContacts gadget for your marketing team and another for your development team.

latest A Spreadsheet key word used to extract data values from the member defined as the latest time period.

layer (1) The horizontal location of members in a hierarchical structure, specified by generation (top down) or level (bottom up). (2) Position of objects relative to other objects. For example, in the Sample Basic database, Qtr1 and Qtr4 are in the same layer, so they are also in the same generation, but in a database with a ragged hierarchy, Qtr1 and Qtr4 might not be in same layer, though they are in the same generation.

layout area Used to designate an area on a Workspace Page where content can be placed.

legend box A box containing labels that identify the data categories of a dimension.

level A layer in a hierarchical tree structure that defines database member relationships. Levels are ordered from the bottom dimension member (level 0) up to the parent members.

level 0 block A data block for combinations of sparse, level 0 members.

level 0 member A member that has no children.

liability account An account type that stores "point in time" balances of a company's liabilities. Examples of liability accounts include accrued expenses, accounts payable, and long term debt.

life cycle management The process of managing application information from inception to retirement.

Lifecycle Management Utility A command-line utility for migrating applications and artifacts.

line chart A chart that displays one to 50 data sets, each represented by a line. A line chart can display each line stacked on the preceding ones, as represented by an absolute value or a percent.

line item detail The lowest level of detail in an account.

lineage The relationship between different metadata elements showing how one metadata element is derived from one or more other metadata elements, ultimately tracing the metadata element to its physical source. In Essbase Studio, a lineage viewer displays the relationships graphically. *See also traceability*.

link (1) A reference to a repository object. Links can reference folders, files, shortcuts, and other links. (2) In a task flow, the point where the activity in one stage ends and another begins.

link condition A logical expression evaluated by the taskflow engine to determine the sequence of launching taskflow stages.

linked data model Documents that are linked to a master copy in a repository.

linked partition A shared partition that enables you to use a data cell to link two databases. When a user clicks a linked cell in a worksheet, Essbase opens a new sheet displaying the dimensions in the linked database. The user can then drill down those dimensions.

linked reporting object (LRO) A cell-based link to an external file such as cell notes, URLs, or files with text, audio, video, or pictures. (Only cell notes are supported for Essbase LROs in Financial Reporting.) *Contrast with local report object*.

local currency An input currency type. When an input currency type is not specified, the local currency matches the entity's base currency.

local report object A report object that is not linked to a Financial Reporting report object in Explorer. *Contrast with linked reporting object (LRO)*.

local results A data model's query results. Results can be used in local joins by dragging them into the data model. Local results are displayed in the catalog when requested.

locale A computer setting that specifies a location's language, currency and date formatting, data sort order, and the character set encoding used on the computer. Essbase uses only the encoding portion. *See also encoding* and *ESSLANG*.

locale header record A text record at the beginning of some non-Unicode-encoded text files, such as scripts, that identifies the encoding locale.

location alias A descriptor that identifies a data source. The location alias specifies a server, application, database, user name, and password. Location aliases are set by DBAs at the database level using Administration Services Console, ESSCMD, or the API.

locked A user-invoked process that prevents users and processes from modifying data.

locked data model Data models that cannot be modified by a user.

LOCKED status A consolidation status indicating that an entity contains data that cannot be modified.

Log Analyzer An Administration Services feature that enables filtering, searching, and analysis of Essbase logs.

logic group In FDM, contains one or more logic accounts that are generated after a source file is loaded into FDM. Logic accounts are calculated accounts that are derived from the source data.

LRO *See linked reporting object (LRO).*

managed server An application server process running in its own Java Virtual Machine (JVM).

manual stage A stage that requires human intervention to complete.

Map File Used to store the definition for sending data to or retrieving data from an external database. Map files have different extensions (.mps to send data; .mpr to retrieve data).

Map Navigator A feature that displays your current position on a Strategy, Accountability, or Cause and Effect map, indicated by a red outline.

Marginal Tax Rate Used to calculate the after-tax cost of debt. Represents the tax rate applied to the last earned income dollar (the rate from the highest tax bracket into which income falls) and includes federal, state and local taxes. Based on current level of taxable income and tax bracket, you can predict marginal tax rate.

Market Risk Premium The additional rate of return paid over the risk-free rate to persuade investors to hold "riskier" investments than government securities. Calculated by subtracting the risk-free rate from the expected market return. These figures should closely model future market conditions.

master data model An independent data model that is referenced as a source by multiple queries. When used, "Locked Data Model" is displayed in the Query section's Content pane; the data model is linked to the master data model displayed in the Data Model section, which an administrator may hide.

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

MaxL The multidimensional database access language for Essbase, consisting of a data definition language (MaxL DDL) and a data manipulation language (MaxL DML). *See also MaxL DDL*, *MaxL DML*, and *MaxL Shell*.

MaxL DDL Data definition language used by Essbase for batch or interactive system-administration tasks.

MaxL DML Data manipulation language used in Essbase for data query and extraction.

MaxL Perl Module A Perl module (essbase.pm) that is part of Essbase MaxL DDL. This module can be added to the Perl package to provide access to Essbase databases from Perl programs.

MaxL Script Editor A script-development environment in Administration Services Console. MaxL Script Editor is an alternative to using a text editor and the MaxL Shell for administering Essbase with MaxL scripts.

MaxL Shell An interface for passing MaxL statements to Essbase Server. The MaxL Shell executable file is located in the Essbase bin directory (UNIX: essmsh, Windows: essmsh.exe).

MDX (multidimensional expression) The language that give instructions to OLE DB for OLAP- compliant databases, as SQL is used for relational databases. When you build the OLAPQuery section's Outliner, Interactive Reporting Clients translate requests into MDX instructions. When you process the query, MDX is sent to the database server, which returns records that answer your query. *See also SQL spreadsheet.*

measures Numeric values in an OLAP database cube that are available for analysis. Measures are margin, cost of goods sold, unit sales, budget amount, and so on. *See also fact table.*

member A discrete component within a dimension. A member identifies and differentiates the organization of similar units. For example, a time dimension might include such members as Jan, Feb, and Qtr1.

member list A named group, system- or user-defined, that references members, functions, or member lists within a dimension.

member load The process of adding dimensions and members (without data) to Essbase outlines.

member selection report command A type of Report Writer command that selects member ranges based on outline relationships, such as sibling, generation, and level.

member-specific report command A type of Report Writer formatting command that is executed as it is encountered in a report script. The command affects only its associated member and executes the format command before processing the member.

merge A data load option that clears values only from the accounts specified in the data load file and replaces them with values in the data load file.

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.

metadata elements Metadata derived from data sources and other metadata that is stored and cataloged for Essbase Studio use.

metadata sampling The process of retrieving a sample of members in a dimension in a drill-down operation.

metadata security Security set at the member level to restrict users from accessing certain outline members.

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

metric A numeric measurement computed from business data to help assess business performance and analyze company trends.

migration The process of copying applications, artifacts, or users from one environment or computer to another; for example, from a testing environment to a production environment.

migration audit report A report generated from the migration log that provides tracking information for an application migration.

migration definition file (.mdf) A file that contains migration parameters for an application migration, enabling batch script processing.

migration log A log file that captures all application migration actions and messages.

migration snapshot A snapshot of an application migration that is captured in the migration log.

MIME Type (Multipurpose Internet Mail Extension) An attribute that describes the data format of an item, so that the system knows which application should open the object. A file's mime type is determined by the file extension or HTTP header. Plug-ins tell browsers what mime types they support and what file extensions correspond to each mime type.

mining attribute In data mining, a class of values used as a factor in analysis of a set of data.

minireport A report component that includes layout, content, hyperlinks, and the query or queries to load the report. Each report can include one or more minireports.

minischema A graphical representation of a subset of tables from a data source that represents a data modeling context.

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

model (1) In data mining, a collection of an algorithm's findings about examined data. A model can be applied against a wider data set to generate useful information about that data. (2) A file or content string containing an application-specific representation of data. Models are the basic data managed by Shared Services, of two major types: dimensional and non-dimensional application objects. (3) In Business Modeling, a network of boxes connected to represent and calculate the operational and financial flow through the area being examined.

monetary A money-related value.

multidimensional database A method of organizing, storing, and referencing data through three or more dimensions. An individual value is the intersection point for a set of dimensions. *Contrast with relational database*.

multiload An FDM feature that allows the simultaneous loading of multiple periods, categories, and locations.

My Workspace Page A page created with content from multiple sources including documents, URL, and other content types. Enables a user to aggregate content from Oracle and non-Oracle sources.

named set In MaxL DML, a set with its logic defined in the optional WITH section of a MaxL DML query. The named set can be referenced multiple times in the query.

native authentication The process of authenticating a user name and password from within the server or application.

nested column headings A report column heading format that displays data from multiple dimensions. For example, a column heading that contains Year and Scenario members is a nested column. The nested column heading shows Q1 (from the Year dimension) in the top line of the heading, qualified by Actual and Budget (from the Scenario dimension) in the bottom line of the heading.

NO DATA status A consolidation status indicating that this entity contains no data for the specified period and account.

non-dimensional model A Shared Services model type that includes application objects such as security files, member lists, calculation scripts, and Web forms.

non-unique member name *See duplicate member name*.

note Additional information associated with a box, measure, scorecard or map element.

Notifications gadget Shows notification message history received from other users or systems.

null value A value that is absent of data. Null values are not equal to zero.

numeric attribute range A feature used to associate a base dimension member that has a discrete numeric value with an attribute that represents a value range. For example, to classify customers by age, an Age Group attribute dimension can contain members for the following age ranges: 0-20, 21-40, 41-60, and 61-80. Each Customer dimension member can be associated with an Age Group range. Data can be retrieved based on the age ranges rather than on individual age values.

ODBC Open Database Connectivity. A database access method used from any application regardless of how the database management system (DBMS) processes the information.

OK status A consolidation status indicating that an entity has already been consolidated, and that data has not changed below it in the organization structure.

OLAP Metadata Catalog In Integration Services, a relational database containing metadata describing the nature, source, location, and type of data that is pulled from the relational data source.

OLAP model In Integration Services, a logical model (star schema) that is created from tables and columns in a relational database. The OLAP model is then used to generate the structure of a multidimensional database.

online analytical processing (OLAP) A multidimensional, multiuser, client-server computing environment for users who analyze consolidated enterprise data in real time. OLAP systems feature drill-down, data pivoting, complex calculations, trend analysis, and modeling.

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

organization An entity hierarchy that defines each entity and their relationship to others in the hierarchy.

origin The intersection of two axes.

outline The database structure of a multidimensional database, including all dimensions, members, tags, types, consolidations, and mathematical relationships. Data is stored in the database according to the structure defined in the outline.

outline synchronization For partitioned databases, the process of propagating outline changes from one database to another database.

P&L accounts (P&L) Profit and loss accounts. Refers to a typical grouping of expense and income accounts that comprise a company's income statement.

page A display of information in a grid or table often represented by the Z-axis. A page can contain data from one field, derived data from a calculation, or text.

page file Essbase data file.

page heading A report heading type that lists members represented on the current page of the report. All data values on the page have the members in the page heading as a common attribute.

page member A member that determines the page axis.

palette A JASC compliant file with a .PAL extension. Each palette contains 16 colors that complement each other and can be used to set the dashboard color elements.

parallel calculation A calculation option. Essbase divides a calculation into tasks and calculates some tasks simultaneously.

parallel data load In Essbase, the concurrent execution of data load stages by multiple process threads.

parallel export The ability to export Essbase data to multiple files. This may be faster than exporting to a single file, and it may resolve problems caused by a single data file becoming too large for the operating system to handle.

parent adjustments The journal entries that are posted to a child in relation to its parent.

parents The entities that contain one or more dependent entities that report directly to them. Because parents are both entities and associated with at least one node, they have entity, node, and parent information associated with them.

partition area A sub cube within a database. A partition is composed of one or more areas of cells from a portion of the database. For replicated and transparent partitions, the number of cells within an area must be the same for the data source and target to ensure that the two partitions have the same shape. If the data source area contains 18 cells, the data target area must also contain 18 cells to accommodate the number of values.

partitioning The process of defining areas of data that are shared or linked between data models. Partitioning can affect the performance and scalability of Essbase applications.

pattern matching The ability to match a value with any or all characters of an item entered as a criterion. Missing characters may be represented by wild card values such as a question mark (?) or an asterisk (*). For example, "Find all instances of apple" returns apple, but "Find all instances of apple*" returns apple, applesauce, applecranberry, and so on.

percent consolidation The portion of a child's values that is consolidated to its parent.

percent control Identifies the extent to which an entity is controlled within the context of its group.

percent ownership Identifies the extent to which an entity is owned by its parent.

performance indicator An image file used to represent measure and scorecard performance based on a range you specify; also called a status symbol. You can use the default performance indicators or create an unlimited number of your own.

periodic value method (PVA) A process of currency conversion that applies the periodic exchange rate values over time to derive converted results.

permission A level of access granted to users and groups for managing data or other users and groups.

persistence The continuance or longevity of effect for any Essbase operation or setting. For example, an Essbase administrator may limit the persistence of user name and password validity.

personal pages A personal window to repository information. You select what information to display and its layout and colors.

personal recurring time events Reusable time events that are accessible only to the user who created them.

personal variable A named selection statement of complex member selections.

perspective A category used to group measures on a scorecard or strategic objectives within an application. A perspective can represent a key stakeholder (such as a customer, employee, or shareholder/financial) or a key competency area (such as time, cost, or quality).

pie chart A chart that shows one data set segmented in a pie formation.

pinboard One of the three data object display types. Pinboards are graphics, composed of backgrounds and interactive icons called pins. Pinboards require traffic lighting definitions.

pins Interactive icons placed on graphic reports called pinboards. Pins are dynamic. They can change images and traffic lighting color based on the underlying data values and analysis tools criteria.

pivot The ability to alter the perspective of retrieved data. When Essbase first retrieves a dimension, it expands data into rows. You can then pivot or rearrange the data to obtain a different viewpoint.

planner Planners, who comprise the majority of users, can input and submit data, use reports that others create, execute business rules, use task lists, enable e-mail notification for themselves, and use Smart View.

planning unit A data slice at the intersection of a scenario, version, and entity; the basic unit for preparing, reviewing, annotating, and approving plan data.

plot area The area bounded by X, Y, and Z axes; for pie charts, the rectangular area surrounding the pie.

plug account An account in which the system stores any out of balance differences between intercompany account pairs during the elimination process.

post stage assignment Assignments in the allocation model that are assigned to locations in a subsequent model stage.

POV (point of view) A feature for setting data focus by selecting members that are not already assigned to row, column, or page axes. For example, selectable POVs in FDM could include location, period, category, and target category. In another example, using POV as a filter in Smart View, you could assign the Currency dimension to the POV and select the Euro member. Selecting this POV in data forms displays data in Euro values.

precalculation Calculating the database prior to user retrieval.

precision Number of decimal places displayed in numbers.

predefined drill paths Paths used to drill to the next level of detail, as defined in the data model.

presentation A playlist of Web Analysis documents, enabling reports to be grouped, organized, ordered, distributed, and reviewed. Includes pointers referencing reports in the repository.

preserve formulas User-created formulas kept within a worksheet while retrieving data.

primary measure A high-priority measure important to your company and business needs. Displayed in the Contents frame.

process monitor report Displays a list of locations and their positions within the FDM data conversion process. You can use the process monitor report to monitor the status of the closing process. The report is time-stamped. Therefore, it can be used to determine to which locations at which time data was loaded.

product In Shared Services, an application type, such as Planning or Performance Scorecard.

Production Reporting *See SQR Production Reporting.*

project An instance of EPM System products grouped together in an implementation. For example, a Planning project may consist of a Planning application, an Essbase cube, and a Financial Reporting server instance.

property A characteristic of an artifact, such as size, type, or processing instructions.

provisioning The process of granting users and groups specific access permissions to resources.

proxy server A server acting as an intermediary between workstation users and the Internet to ensure security.

public job parameters Reusable, named job parameters created by administrators and accessible to users with requisite access privileges.

public recurring time events Reusable time events created by administrators and accessible through the access control system.

PVA *See periodic value method (PVA).*

qualified name A member name in a qualified format that differentiates duplicate member names in a duplicate member outline. For example, [Market].[East].[State].[New York] or [Market].[East].[City].[New York]

query Information requests from data providers. For example, used to access relational data sources.

query governor An Essbase Integration server parameter or Essbase server configuration setting that controls the duration and size of queries made to data sources.

range A set of values including upper and lower limits, and values falling between limits. Can contain numbers, amounts, or dates.

reciprocal assignment An assignment in the financial flow that also has the source as one of its destinations.

reconfigure URL URL used to reload servlet configuration settings dynamically when users are already logged on to the Workspace.

record In a database, a group of fields making up one complete entry. For example, a customer record may contain fields for name, address, telephone number, and sales data.

recurring template A journal template for making identical adjustments in every period.

recurring time event An event specifying a starting point and the frequency for running a job.

redundant data Duplicate data blocks that Essbase retains during transactions until Essbase commits updated blocks.

regular journal A feature for entering one-time adjustments for a period. Can be balanced, balanced by entity, or unbalanced.

Related Accounts The account structure groups all main and related accounts under the same main account number. The main account is distinguished from related accounts by the first suffix of the account number.

relational database A type of database that stores data in related two-dimensional tables. *Contrast with multidimensional database*.

replace A data load option that clears existing values from all accounts for periods specified in the data load file, and loads values from the data load file. If an account is not specified in the load file, its values for the specified periods are cleared.

replicated partition A portion of a database, defined through Partition Manager, used to propagate an update to data mastered at one site to a copy of data stored at another site. Users can access the data as though it were part of their local database.

Report Extractor An Essbase component that retrieves report data from the Essbase database when report scripts are run.

report object In report designs, a basic element with properties defining behavior or appearance, such as text boxes, grids, images, and charts.

report script A text file containing Essbase Report Writer commands that generate one or more production reports.

Report Viewer An Essbase component that displays complete reports after report scripts are run.

reporting currency The currency used to prepare financial statements, and converted from local currencies to reporting currencies.

repository Stores metadata, formatting, and annotation information for views and queries.

resources Objects or services managed by the system, such as roles, users, groups, files, and jobs.

restore An operation to reload data and structural information after a database has been damaged or destroyed, typically performed after shutting down and restarting the database.

restructure An operation to regenerate or rebuild the database index and, in some cases, data files.

result frequency The algorithm used to create a set of dates to collect and display results.

review level A Process Management review status indicator representing the process unit level, such as Not Started, First Pass, Submitted, Approved, and Published.

Risk Free Rate The rate of return expected from "safer" investments such as long-term U.S. government securities.

role The means by which access permissions are granted to users and groups for resources.

roll-up *See consolidation*.

root member The highest member in a dimension branch.

RSC services Services that are configured with Remote Service Configurator, including Repository Service, Service Broker, Name Service, Event Service, and Job Service.

runtime prompt A variable that users enter or select before a business rule is run.

sampling The process of selecting a representative portion of an entity to determine the entity's characteristics. *See also metadata sampling*.

saved assumptions User-defined Planning assumptions that drive key business calculations (for example, the cost per square foot of office floor space).

scaling Scaling determines the display of values in whole numbers, tens, hundreds, thousands, millions, and so on.

scenario A dimension for classifying data (for example, Actuals, Budget, Forecast1, and Forecast2).

scope The area of data encompassed by any Essbase operation or setting; for example, the area of data affected by a security setting. Most commonly, scope refers to three levels of granularity, where higher levels encompass lower levels. From highest to lowest, these levels are as follows: the entire system (Essbase Server), applications on Essbase servers, or databases within Essbase server applications. *See also persistence*.

score The level at which targets are achieved, usually expressed as a percentage of the target.

scorecard Business object that represents the progress of an employee, strategy element, or accountability element toward goals. Scorecards ascertain this progress based on data collected for each measure and child scorecard added to the scorecard.

scraping An inspection of a data source to derive the most basic metadata elements from it. *Contrast with introspection*.

Search gadget Searches the Reporting and Analysis repository. The Search gadget looks for a match in the document keywords and description, which are set when you import a document.

secondary measure A low-priority measure, less important than primary measures. Secondary measures do not have Performance reports but can be used on scorecards and to create dimension measure templates.

security agent A Web access management provider (for example, Netegrity SiteMinder) that protects corporate Web resources.

security platform A framework enabling EPM System products to use external authentication and single sign-on.

serial calculation The default calculation setting. Divides a calculation pass into tasks and calculates one task at a time.

services Resources that enable business items to be retrieved, changed, added, or deleted. Examples: Authorization and Authentication.

servlet A piece of compiled code executable by a Web server.

Servlet Configurator A utility for configuring all locally installed servlets.

shared member A member that shares storage space with another member of the same name, preventing duplicate calculation of members that occur multiple times in an Essbase outline.

Shared Services Registry Part of the Shared Services database, the Shared Services Registry stores and reuses information for most installed EPM System products, including installation directories, database settings, deployment settings, computer names, ports, servers, URLs, and dependent service data.

Shared Workspace Page Workspace Pages shared across an organization which are stored in a special System folder and can be accessed by authorized users from the Shared Workspace Pages Navigate menu.

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 children of East and each other's siblings.

single sign-on Ability to access multiple EPM System products after a single login using external credentials.

smart slice In Smart View, a reusable perspective of a data source that contains a restricted set of dimensions or dimension members.

Smart Space client software Runs on the client's computer and provides gadgets, instant collaboration and access to the Reporting and Analysis repository. It is composed of the Smart Space framework and gadgets.

Smart Space Collaborator A service that enables users or systems to send messages and share Reporting and Analysis repository content. The message can take many forms, including instant message style discussions, meetings, and toast messages.

smart tags Keywords in Microsoft Office applications that are associated with predefined actions available from the Smart Tag menu. In EPM System products, smart tags can also be used to import Reporting and Analysis content, and access Financial Management and Essbase functions.

SmartBook gadget Contains documents from the Reporting and Analysis repository or URLs. All documents are loaded when the SmartBook is opened so you can access all content immediately.

SmartCut A link to a repository item, in URL form.

snapshot Read-only data from a specific time.

source currency The currency from which values originate and are converted through exchange rates to the destination currency.

sparse dimension In block storage databases, a dimension unlikely to contain data for all member combinations when compared to other dimensions. For example, not all customers have data for all products. *Contrast with dense dimension*.

SPF files Printer-independent files created by an SQR Production Reporting server, containing a representation of the actual formatted report output, including fonts, spacing, headers, footers, and so on.

Spotlighter A tool that enables color coding based on selected conditions.

SQL spreadsheet A data object that displays the result set of a SQL query.

SQR Production Reporting A specialized programming language for data access, data manipulation, and creating SQR Production Reporting documents.

stage A task description that forms one logical step within a taskflow, usually performed by an individual. A stage can be manual or automated.

stage action For automated stages, the invoked action that executes the stage.

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.

standard journal template A journal function used to post adjustments that have common adjustment information for each period. For example, you can create a standard template that contains the common account IDs, entity IDs, or amounts, then use the template as the basis for many regular journals.

Status bar The status bar at the bottom of the screen displays helpful information about commands, accounts, and the current status of your data file.

stored hierarchy In aggregate storage databases outlines only. A hierarchy in which the members are aggregated according to the outline structure. Stored hierarchy members have certain restrictions, for example, they cannot contain formulas.

strategic objective (SO) A long-term goal defined by measurable results. Each strategic objective is associated with one perspective in the application, has one parent, the entity, and is a parent to critical success factors or other strategic objectives.

Strategy map Represents how the organization implements high-level mission and vision statements into lower-level, constituent strategic goals and objectives.

structure view Displays a topic as a simple list of component data items.

Structured Query Language A language used to process instructions to relational databases.

Subaccount Numbering A system for numbering subaccounts using non-sequential, whole numbers.

subscribe Flags an item or folder to receive automatic notification whenever the item or folder is updated.

Summary chart In the Investigates Section, rolls up detail charts shown below in the same column, plotting metrics at the summary level at the top of each chart column.

super service A special service used by the startCommonServices script to start the RSC services.

supervisor A user with full access to all applications, databases, related files, and security mechanisms for a server.

supporting detail Calculations and assumptions from which the values of cells are derived.

suppress rows Excludes rows containing missing values, and underscores characters from spreadsheet reports.

symmetric multiprocessing (SMP) A server architecture that enables multiprocessing and multithreading. Performance is not significantly degraded when a large number of users connect to an single instance simultaneously.

sync Synchronizes Shared Services and application models.

synchronized The condition that exists when the latest version of a model resides in both the application and in Shared Services. *See also model*.

system extract Transfers data from an application's metadata into an ASCII file.

tabs Navigable views of accounts and reports in Strategic Finance.

target Expected results of a measure for a specified period of time (day, quarter, and so on).

task list A detailed status list of tasks for a particular user.

taskflow The automation of a business process in which tasks are passed from one taskflow participant to another according to procedural rules.

taskflow definition Represents business processes in the taskflow management system. Consists of a network of stages and their relationships; criteria indicating the start and end of the taskflow; and information about individual stages, such as participants, associated applications, associated activities, and so on.

taskflow instance Represents a single instance of a taskflow including its state and associated data.

taskflow management system Defines, creates, and manages the execution of a taskflow including: definitions, user or application interactions, and application executables.

taskflow participant The resource who performs the task associated with the taskflow stage instance for both manual and automated stages.

Taxes - Initial Balances Strategic Finance assumes that the Initial Loss Balance, Initial Gain Balance and the Initial Balance of Taxes Paid entries have taken place in the period before the first Strategic Finance time period.

TCP/IP *See Transmission Control Protocol/Internet Protocol (TCP/IP)*.

template A predefined format designed to retrieve particular data consistently.

text list In Essbase, an object that stores text values mapped to numeric identifiers. Text Lists enable the use of text measures.

text measure A data type that allows measure values to be expressed as text. In Essbase, a member tagged as "Text" in the dimension where measures are represented. The cell values are displayed as predefined text. For example, the text measure "Satisfaction Index" may have the values Low, Medium, and High. *See also typed measure, text list, derived text measure*.

time dimension Defines the time period that the data represents, such as fiscal or calendar periods.

time events Triggers for execution of jobs.

time line viewer An FDM feature that allows a user to view dates and times of completed process flow steps for specific locations.

time scale Displays metrics by a specific period in time, such as monthly or quarterly.

time series reporting A process for reporting data based on a calendar date (for example, year, quarter, month, or week).

Title bar Displays the Strategic Finance name, the file name, and the scenario name Version box.

toast message Messages that appear in the lower right corner of the screen and fade in and out.

token An encrypted identification of one valid user or group on an external authentication system.

top and side labels Column and row headings on the top and sides of a Pivot report.

top-level member A dimension member at the top of the tree in a dimension outline hierarchy, or the first member of the dimension in sort order if there is no hierarchical relationship among dimension members. The top-level member name is generally the same as the dimension name if a hierarchical relationship exists.

trace allocations A feature of Profitability and Cost Management that enables you to visually follow the flow of financial data, either forwards or backwards, from a single intersection throughout the model.

trace level Defines the level of detail captured in the log file.

traceability The ability to track a metadata element to its physical source. For example, in Essbase Studio, a cube schema can be traced from its hierarchies and measure hierarchies, to its dimension elements, date/time elements, and measures, and ultimately, to its physical source elements.

traffic lighting Color-coding of report cells, or pins based on a comparison of two dimension members, or on fixed limits.

transformation (1) Transforms artifacts so that they function properly in the destination environment after application migration. (2) In data mining, modifies data (bidirectionally) flowing between the cells in the cube and the algorithm.

translation *See currency conversion.*

Transmission Control Protocol/Internet Protocol (TCP/IP) A standard set of communication protocols linking computers with different operating systems and internal architectures. TCP/IP utilities are used to exchange files, send mail, and store data to various computers that are connected to local and wide area networks.

transparent login Logs in authenticated users without launching the login screen.

transparent partition A shared partition that enables users to access and change data in a remote database as though it is part of a local database

triangulation A means of converting balances from one currency to another via a third common currency. In Europe, this is the euro for member countries. For example, to convert from French franc to Italian lira, the common currency is defined as European euro. Therefore, in order to convert balances from French franc to Italian lira, balances are converted from French franc to European euro and from European euro to Italian lira.

triggers An Essbase feature whereby data is monitored according to user-specified criteria which when met cause Essbase to alert the user or system administrator.

trusted password A password that enables users authenticated for one product to access other products without reentering their passwords.

trusted user Authenticated user.

tuple MDX syntax element that references a cell as an intersection of a member from each dimension. If a dimension is omitted, its top member is implied. Examples: (Jan); (Jan, Sales); ([Jan], [Sales], [Cola], [Texas], [Actual])

two-pass An Essbase property that is used to recalculate members that are dependent on the calculated values of other members. Two-pass members are calculated during a second pass through the outline.

typed measure In Essbase, a member tagged as "Text" or "Date" in the dimension where measures are represented. The cell values are displayed as predefined text or dates.

unary operator A mathematical indicator (+, -, *, /, %) associated with an outline member. The unary operator defines how the member is calculated during a database roll-up.

Unicode-mode application An Essbase application wherein character text is encoded in UTF-8, enabling users with computers set up for different languages to share application data.

Uniform Resource Locator The address of a resource on the Internet or an intranet.

unique member name A non-shared member name that exists only once in a database outline.

unique member outline A database outline that is not enabled for duplicate member names.

upgrade The process of replacing an earlier software release with a current release or replacing one product with another.

upper-level block A type of data block wherein at least one of the sparse members is a parent-level member.

user directory A centralized location for user and group information. Also known as a repository or provider.

user variable Dynamically renders data forms based on a user's member selection, displaying only the specified entity. For example, user variable named Department displays specific departments and employees.

user-defined attribute (UDA) User-defined attribute, associated with members of an outline to describe a characteristic of the members. Users can use UDAs to return lists of members that have the specified UDA associated with them.

user-defined member list A named, static set of members within a dimension defined by the user.

validation A process of checking a business rule, report script, or partition definition against the outline to make sure that the object being checked is valid. For example, in FDM, validation rules ensure that certain conditions are met after data is loaded from FDM to the target application.

value dimension Used to define input value, translated value, and consolidation detail.

variance Difference between two values (for example, planned and actual value).

varying attribute An attribute association that changes over one or more dimensions. It can be used to track a value in relation to these dimensions; for example, the varying attribute Sales Representative, associated with the Product dimension, can be used to track the value Customer Sales of several different sales representatives in relation to the Time dimension. Varying attributes can also be used for member selection, such as finding the Products that a Sales Representative was responsible for in May.

version Possible outcome used within the context of a scenario of data. For example, Budget - Best Case and Budget - Worst Case where Budget is scenario and Best Case and Worst Case are versions.

view Representation of either a year-to-date or periodic display of data.

visual cue A formatted style, such as a font or a color, that highlights specific types of data values. Data values may be dimension members; parent, child, or shared members; dynamic calculations; members containing a formula; read only data cells; read and write data cells; or linked objects.

Web server Software or hardware hosting intranet or Internet Web pages or Web applications.

weight Value assigned to an item on a scorecard that indicates the relative importance of that item in the calculation of the overall scorecard score. The weighting of all items on a scorecard accumulates to 100%. For example, to recognize the importance of developing new features for a product, the measure for New Features Coded on a developer's scorecard would be assigned a higher weighting than a measure for Number of Minor Defect Fixes.

wild card Character that represents any single character or group of characters (*) in a search string.

WITH section In MaxL DML, an optional section of the query used for creating re-usable logic to define sets or members. Sets or custom members can be defined once in the WITH section, and then referenced multiple times during a query.

work flow The steps required to process data from start to finish in FDM. The workflow consists of Import (loading data from the GL file), Validate (ensures all members are mapped to a valid account), Export (loads the mapped members to the target application), and Check (verifies accuracy of data by processing data with user-defined validation rules).

workbook An entire spreadsheet file with many worksheets.

Workspace Page A page created with content from multiple sources including documents, URL, and other content types. Enables a user to aggregate content from Oracle and non-Oracle sources.

write-back The ability for a retrieval client, such as a spreadsheet, to update a database value.

ws.conf A configuration file for Windows platforms.

wsconf_platform A configuration file for UNIX platforms.

XML *See Extensible Markup Language (XML).*

XOLAP An Essbase multidimensional database that stores only the outline metadata and retrieves all data from a relational database at query time. XOLAP supports aggregate storage databases and applications that contain duplicate member names.

Y axis scale Range of values on Y axis of charts displayed in Investigate Section. For example, use a unique Y axis scale for each chart, the same Y axis scale for all Detail charts, or the same Y axis scale for all charts in the column. Often, using a common Y axis improves your ability to compare charts at a glance.

Zero Administration Software tool that identifies version number of the most up-to-date plug-in on the server.

zoom Sets the magnification of a report. For example, magnify a report to fit whole page, page width, or percentage of magnification based on 100%.

ZoomChart Used to view detailed information by enlarging a chart. Enables you to see detailed numeric information on the metric that is displayed in the chart.

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