IBM Cognos Express Data Advisor
Version 10.1.0

User Guide

Note
Before using this information and the product it supports, read the information in "Notices" on page 25.

Product Information

This document applies to IBM Cognos Express Version 10.1.0 and may also apply to subsequent releases. To check for newer versions of this document, visit the IBM Cognos Information Centers (http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp).

Contents

Introduction

IBM® Cognos® Express® Data Advisor is a tool to create either multidimensional model definitions or relational model definitions.

You can use Express Advisor to analyze multidimensional based model definitions, and you can use Express Reporter to analyze relational model definitions.

Use this document with Express Data Advisor. Your system administrator or supervisor will give you access to one or more data sources that reside in the database of your organization.

Audience

Express Data Advisor is meant for users who are familiar with the Microsoft Windows environment, but who are not interested in programming or creating detailed spreadsheet calculations.

Finding information

To find IBM Cognos product documentation on the web, including all translated documentation, access one of the IBM Cognos Information Centers (http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp). Release Notes are published directly to Information Centers, and include links to the latest technotes and APARs.

You can also read PDF versions of the product release notes and installation guides directly from IBM Cognos product disks.

Forward-looking statements

This documentation describes the current functionality of the product. References to items that are not currently available may be included. No implication of any future availability should be inferred. Any such references are not a commitment, promise, or legal obligation to deliver any material, code, or functionality. The development, release, and timing of features or functionality remain at the sole discretion of IBM.

Accessibility features

This product does not currently support accessibility features that help users with a physical disability, such as restricted mobility or limited vision, to use this product.

IBM Cognos HTML documentation has accessibility features. PDF documents are supplemental and, as such, include no added accessibility features.

Samples disclaimer

The Great Outdoors Company, GO Sales, any variation of the Great Outdoors name, and Planning Sample depict fictitious business operations with sample data used to develop sample applications for IBM and IBM customers. These fictitious records include sample data for sales transactions, product distribution, finance,

and human resources. Any resemblance to actual names, addresses, contact numbers, or transaction values is coincidental. Other sample files may contain fictional data manually or machine generated, factual data compiled from academic or public sources, or data used with permission of the copyright holder, for use as sample data to develop sample applications. Product names referenced may be the trademarks of their respective owners. Unauthorized duplication is prohibited.

Chapter 1. System overview

With IBM Cognos Express Data Advisor you can create multi-dimensional based model definitions and relational definitions. With these model definitions Express Data Advisor Server generates multi-dimensional packages and relational packages.

You can use these packages to analyze your data in Express Advisor and Express Reporter.

System introduction

This section provides a system introduction of IBM Cognos Express Data Advisor.

IBM Cognos Express Data Advisor has the following components or items to create a model definition:

- Data

  You can define the tables that you want to include in your model definition.
- Relationships

  You can create relationships between fields in tables.
- Advisories

  Express Data Advisor offers guidance on creating a working model definition.
- Dimensions

  A dimension contains the related items that describe either the context of a fact or a measure of a fact. Context dimensions can include time, product, person, and location. Measure dimensions can include quantity and value. Dimensions can form a hierarchical structure, for example, the dimension location can include region, city, building, and floor.
- Members

  Members are single types of data. Members are grouped together in a dimension.

System requirements IBM Cognos Express Data Advisor

The client system for the IBM Cognos Express Data Advisor should meet the requirements.

Requirement	Specification
Operating System. **Note:** Ensure that the operating systems has the latest service pack and all current updates installed.	- Microsoft Windows XP Professional - Microsoft Windows Server 2003 Standard Edition - Microsoft Windows Server 2003 Standard x64 Edition - Microsoft Windows Server 2003 Enterprise Edition - Microsoft Windows Server 2003 Enterprise x64 Edition - Microsoft Windows Server 2008 - Microsoft Windows Server 2008 x64 Edition - Microsoft Windows Vista Business or higher - Microsoft Windows Vista x64 Edition Business or higher - Microsoft Windows 7
Disk space	10MB
Memory	512MB
Processor	Pentium 4 or higher
Color depth	16-bit color or higher

Chapter 2. Getting started

This section describes how to first start IBM Cognos Express Data Advisor.

Express Data Advisor produces a model definition from a relational database. You can export these model definitions as packages, and open them in either Express Advisor or Query Studio.

Working with IBM Cognos Express Data Advisor

The IBM Cognos Express Data Advisor installation option is available after you install IBM Cognos Express.

- You must configure the Express Data Advisor client system for an ODBC data source. For more information, see “Configuring the ODBC environment for Express Data Advisor,” on page 21.
- For best results, ensure that the client version of Express Data Advisor is at the same version level as the Express Data Advisor Server. For more information, see “Getting started with Express Data Advisor.”

Configuring Express Data Advisor client system for the ODBC data source

There are two methods of generating multi-dimensional cubes:.

- Client-based
- Server-based

About this task

The client-based method requires you to configure the ODBC only on the Express Data Advisor client system.

The server-based method requires you to configure the ODBC data source to be configured identically on the Express Data Advisor Server system, and on a Express Data Advisor client system. The ODBC data source for both the Express Data Advisor Server and the Express Data Advisor client must have the same name and link to the same relational database.

The system administrator ensures that the client system and the ODBC data source are configured correctly. For more information, see either “Configuring the ODBC environment for Express Data Advisor,” on page 21 or "Configuring the ODBC environment for IBM Cognos Express Data Advisor" in the *Managing IBM Cognos Express* guide.

Getting started with Express Data Advisor

Before you start IBM Cognos Express Data Advisor you must install it.

Installing Express Data Advisor

You can install the latest version of Express Data Advisor for use on your client system. If Express Data Advisor is already installed, this will overwrite the existing version without loss of data.

Procedure

1. Use the address that your system administrator provided to navigate to the **Welcome to the IBM Cognos Express** page.

   The system administrator should send you the address of the **Welcome to the IBM Cognos Express** page.
2. Select **Download Express software to my computer**.
3. Select **Data Advisor**.

   Data Advisor will be installed.

Starting Express Data Advisor

When Express Data Advisor is installed, you can start it.

Procedure

Click **Start** > **All Programs** > **IBM Cognos Express** > **Data Advisor**.

Flow process for Express Data Advisor

You can follow the flow process for IBM Cognos Express Data Advisor to create a model definition and analyze your data.

Procedure

1. Receive link to the Welcome page of Express Manager.
2. Install Express Data Advisor.
3. Start Express Data Advisor.
4. Create a model definition that is multi-dimensional or relational. You must specify the name and data source for the definition.
5. Configure the multi-dimensional or relational model definition. This is completed in the **Select Data**, **Define Relationships**, and **Create Dimensions** panes of Data Advisor.The **Create Dimensions** pane is only available when you create a multi-dimensional model definition.
6. Preview the table.
7. Save the model definition.
8. Analyze the data in Express Advisor or in Express Query Studio.

Chapter 3. Using IBM Cognos Express Data Advisor

IBM Cognos Express Data Advisor enables you to use relational data for analysis purposes by creating a model definition that is either multi-dimensional based or based on relational tables. With this model definition, the Express Data Advisor Server generates either an cube or a relational package.

You can use the multi-dimensional package to analyze your data in Express Advisor. You can use the relational package to analyze your data in Query Studio.

Before you can use Express Data Advisor you must configure some settings.

Starting IBM Cognos Express Data Advisor

You start IBM Cognos Express Data Advisor from the Microsoft Windows Start menu.

Procedure

1. Click **Start** > **All Programs** > **IBM Cognos Express** > **Data Advisor**.
2. Choose one of the following:
   - The **Create a new Model Definition** icon  .
     See "Creating a model definition with a specific ODBC data source" on page 11.
   - The **Open an existing Model Definition** icon  .
     See "Opening a model definition" on page 12.
   - Open a recently used model definition.

Configuring Data Advisor

Before you use IBM Cognos Express Data Advisor, you must configure it.

You can configure the following items in Cognos Express Data Advisor:

- The connection to the Express Data Advisor Server
- The language of the user interface
- The visibility of the **Advisories** pane
- The default location of a model definition

Setting the connection

After installing Express Data Advisor, the connection information is set to refer to the machine where Express is installed. You can change the connection information, if you want to connect to a different Express installation.

Procedure

1. In Express Data Advisor click the **Configure Settings** icon  to open the **Settings** dialog box.
2. Specify the location of the Express dispatcher in the **Dispatcher** field.

The location of the Express dispatcher is specified as a web page:

`http://<SERVER>:19300/p2pd/servlet/dispatch`

Where <SERVER> is the name of the machine where Express is installed.

Changing the language

There are several languages available for Express Data Advisor.

Procedure

1. In Express Data Advisor click the **Configure Settings** icon  to open the **Settings** dialog box.
2. You can choose to use the regional settings on your system or you can select a language from the menu.

Showing the Advisories pane

The Advisories pane gives you advice on your model definition.

Procedure

1. In Express Data Advisor click the **Configure Settings** icon  to open the **Settings** dialog box.
2. In the **User Interface** section set the **Show the Advisories Pane** option.

Setting the default location of a model definition

You can change the default location of a model definition.

Procedure

1. In Express Data Advisor click the **Configure Settings** icon  to open the **Settings** dialog box.
2. In the **Model Definitions Folder** field change the default location of a model definition.

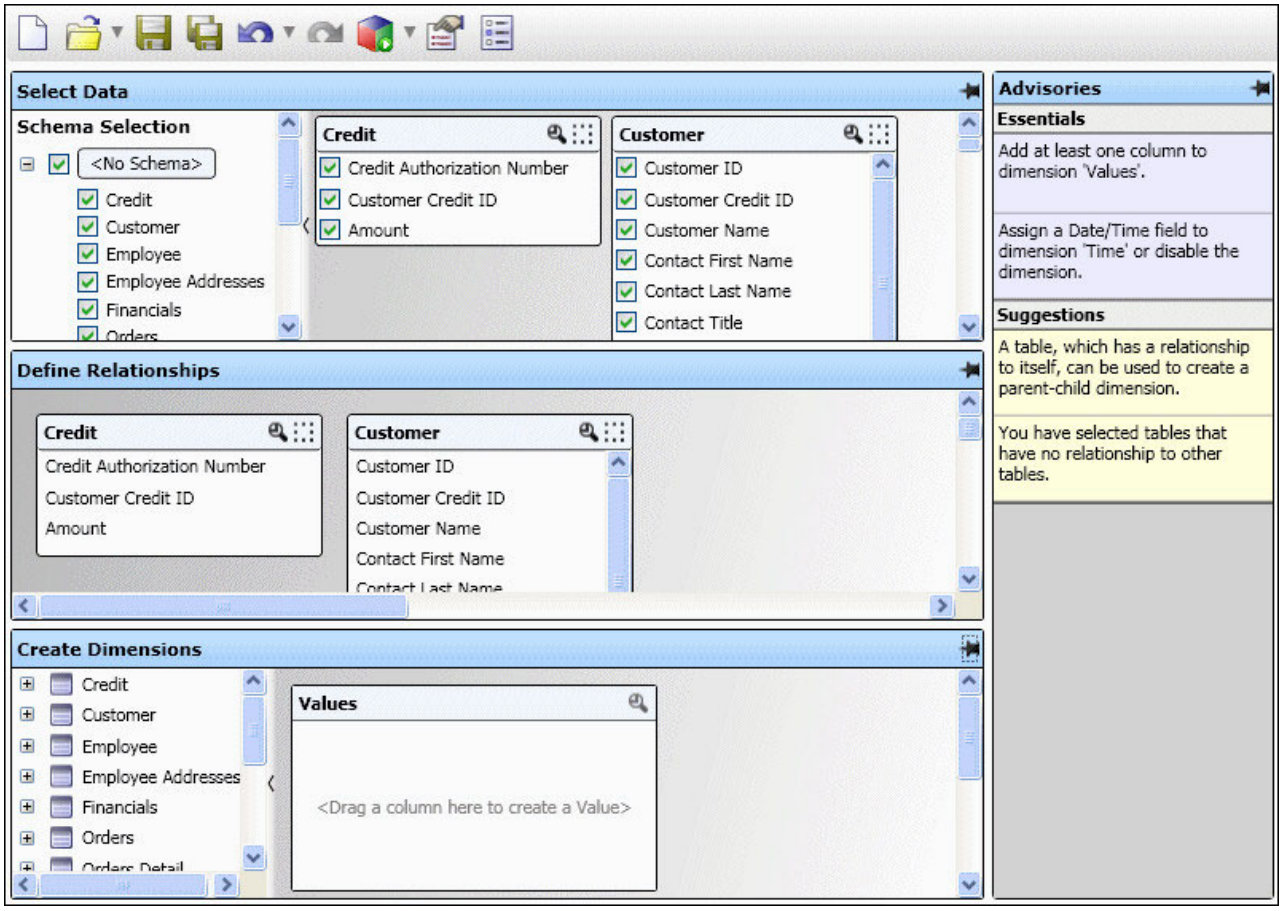
   The default location of a model definition is: *C:\Documents and Settings\user name\My Documents\My IBM Cognos Express Advisor\Model Definitions*.

The IBM Cognos Express Data Advisor user interface

This section describes the user interface of IBM Cognos Express Data Advisor.

The Cognos Express Data Advisor user interface consists of the following elements:

- The toolbar
- The **Select Data** pane
- The **Define Relationships** pane
- The **Create Dimensions** pane
- The **Advisories** pane



Toolbar

The toolbar of IBM Cognos Express Data Advisor contains buttons for performing actions.

Icon	Purpose
	Create a new model definition.
	Open an existing model definition.
	Save a model definition.
	Save a model definition in another location.
	Undo the last action.
	Redo the last undone action.

Icon	Purpose
	Create cube.
	Create and analyze cube.
	Create model.
	Create and use model.
	Configure the options.
	Set the model definition properties.

Interaction between panes

The Select Data, Define Relationships and Create Dimensions panes interact with each other. For example, if you disable a table in the Select Data pane, that table will not be available in the Define Relationships pane.

You can also drag and drop fields from a table between the three panes to create relationships and dimensions.

Workflow

Analyzing your relational data starts by creating a model definition in IBM Cognos Express Data Advisor. You can create a multi-dimensional model definition or a relational model definition.

- You can generate the multi-dimensional model definition either on the client or the server as described:
  - Client-based. Only the client needs access to the source data.
  - Server-based. Use this method for increased performance. Both the client and the server system need access to the source data.
- The relational model definition needs both the client and the server systems to have access to the same source data. A relational model definition does not contain dimensions.

Refer to the section “Configuring the ODBC environment for Express Data Advisor,” on page 21 for more information on setting the source data for the client and server systems.

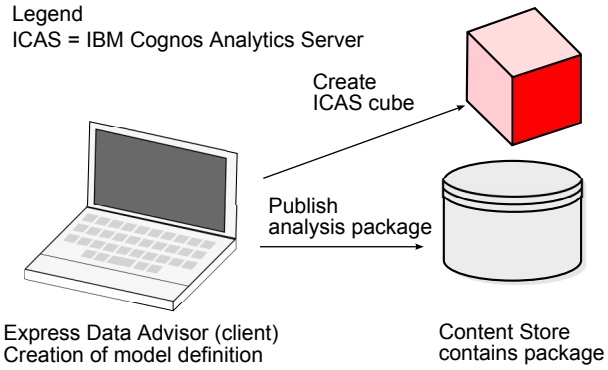
Multi-dimensional based model definition

A complete multi-dimensional based model definition contains dimensions that the tables and relationships of a relational data source creates. These dimensions form the basis for the multi-dimensional database that Express Advisor analyzes.

Create cube

This section explains how to create a cube.

When you click the **Create Cube** icon  , a cube is generated on the IBM Cognos Analytic Server. Also an analysis package is published in either **My Folders** or in the **Public Folders** of the **Content Store** that makes reference to the generated ICAS cube.

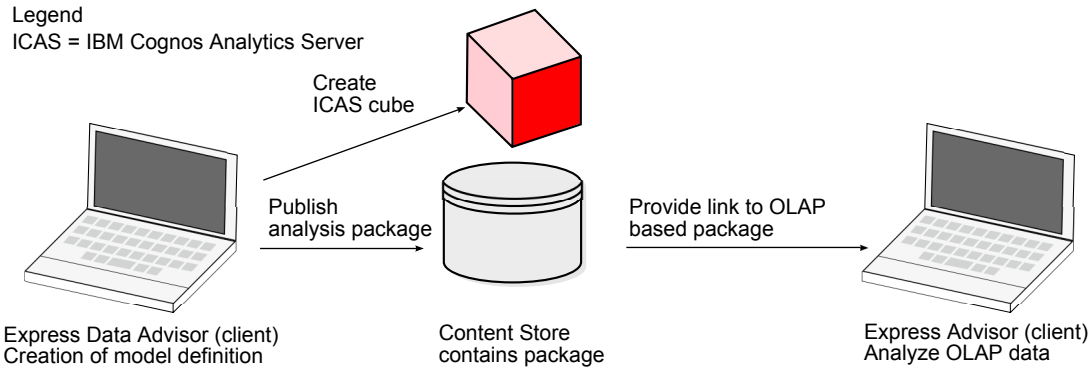


Create and analyze cube

This section explains how to create and analyze a cube.

When you click the **Create and Analyze Cube** icon  , a cube is generated on the IBM Cognos Analytic Server. Also an analysis package is published in either **My Folders** or in the **Public Folders** of the **Content Store** that makes reference to the generated ICAS cube. The Express Data Advisor Server displays the package that contains a view and shows it in Express Advisor. The view is the starting point of your multi-dimensional analysis.

Note: When the analyze function will update an existing package or cube, a warning message displays.



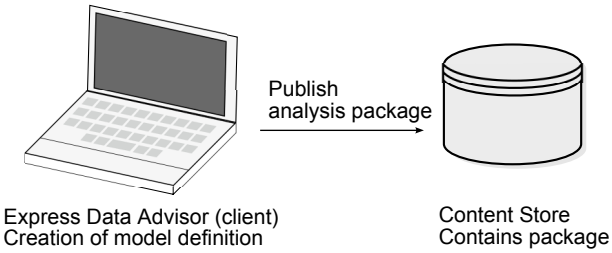
Relational model definition

A complete relational model definition contains tables and relationships of a relational data source.

Create model

This section explains how to create a model.

When you click the **Create Model** icon , a relational package is published in either **My Folders** or in the **Public Folders** of the **Content Store**.



Creating a model definition with specific data sources

When creating a model definition for specific data source types, configuring an ODBC connection can be omitted.

About this task

You do not need to create the ODBC configuration for file based data sources with the extensions: accdb, csv, mdb, txt, xls, xlsb, and xlsx.

Note: To switch from using an xlsx file to using an xls file, you must first close and restart Express Data Advisor.

Procedure

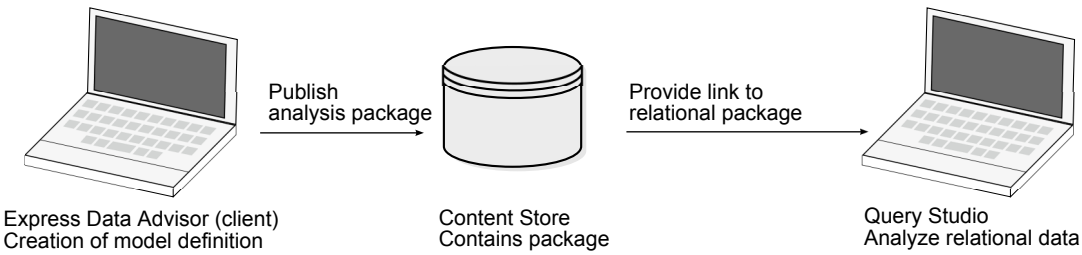
1. Open Express Data Advisor.
2. Drag the file onto Data Advisor. The model definition is created.
3. You can change the properties by clicking the **Model Definition properties** icon.

Create and use model

This section explains how to create and use a model.

When you click the **Create and Use Model** icon , a relational package is published in either **My Folders** or in the **Public Folders** of the **Content Store**. The Express Data Advisor Server shows the package in Query Studio. The report is the starting point of your relational analysis.

Note: When the analyze function will update an existing package, a warning message displays.



Creating a model definition with a specific ODBC data source

To create a model definition you must connect to an available ODBC data source. If you must create an ODBC data source, contact your system administrator.

Before you begin

Note: You can also change these properties after creating the model definition by clicking the **Model Definition properties** icon  .

Tip: If Microsoft Office is installed on your system, you are able to create ODBC connections based on the file types of Microsoft Access and Microsoft Excel.

Procedure

1. Click the **New Model Definition** icon  .
2. In the **General** tab of the **New Model Definition** dialog box specify the following properties.
   - **Name**

     This is the name of your model definition. This will also be the file name when you save a model definition. This name will also be used for the package and cube name.
   - **Data Source**

     Data Source contains a drop down list of the available ODBC data sources, as defined in your ODBC connections. You can also create direct data sources to Excel, Access and dBase Files using the relevant options.
   - **Package**

     This option allows you to store the package in the **Public Folders** or in the **My Folders** in the content store.

     Only authorized users can access the **Public Folders** in the content store. Only you are authorized to access the **My Folders**. You can store packages in either the **Public Folders** or the **My Folders** of the content store.
   - **Model**

     Specify whether you want to create a multi-dimensional based model definition or a relational model definition.
3. In the **Advanced** tab of the **New Model Definition** dialog box select
   - **Client based** to only use the ODBC data source from the client system.
   - **Server based** to use ODBC data source on both the client and server.

Saving a model definition

You can save a model definition for later usage.

Procedure

Click the **Save Model Definition** icon  . The name of the model definition is also used as the file name.
If you want to save your model definition in another location, click the **Save Model Definition as** icon  .

Opening a model definition

Opening a model definition allows you to work with it.

Procedure

1. Click the **Open Model Definition** icon  .
2. Select an existing model definition and click **Open**.

   Note: Click the arrow icon ▼ to open recently used model definitions.

Working with a model definition

The model definition is the basis for analyzing your relational data.

After you have created a model definition (see "Creating a model definition with a specific ODBC data source" on page 11) you must configure it. In a model definition you can:

- Select the data in the tables in which you are interested.
- Define the relationships between the table fields.
- Create dimensions that are based on the tables and relationships in your data source.

  Note: Dimensions are only available in multi-dimensional based model definitions. If you switch during the creation of your model definition from **Multi-dimensional** to **Relational**, then the dimension settings are saved.

After you have configured the model definition you can analyze your data in IBM Cognos Express Advisor or in Query Studio.

Selecting data

You can set the tables in which you are interested in.

The **Select Data** pane allows you to set the tables in which you are interested in. You can exclude from the model definition those tables in which you are not interested.

Selecting schemas

Express Data Advisor supports schemas, which describe the relations in a database. If you only want to select data from specific tables, you can use schemas to show or hide the tables in the database.

Procedure

1. On the left side of the **Select Data** pane click the arrow icon ❯ to show the **Schema Selection** section.
2. Select the schemas and tables that you want to use for your model definition. You can select a schema that includes all tables or you can make a selection of the available tables in a schema.

Selecting data

You can set the tables in which you are interested in. You can exclude from the model definition those tables in which you are not interested.

Procedure

In the **Select Data** pane identify the tables in which you are interested.
You can either disable data by clicking the **Disable this Table** icon or enabling data by clicking the **Enable this Table** icon .

Changing the names of tables and fields

You can change the names of table and fields.

Procedure

1. In the **Select Data** pane, double-click the name you want to change.
2. Change the name.

Creating relationships between fields

A field in a table can be related to either another field in the same table or a field in another table.

For example, if you have a table with customer information, a field called *customer_id* may be present. In another table that contains the yearly sales figures, a field called *customer_id* is also available. To enforce referential integrity, you have to set a relationship between the two fields.

If you create a relationship between two fields in the same table, an auto-hierarchical relationship is created. You can use this to create auto-hierarchy dimensions.

An example of an auto-hierarchy dimension would be the relationship between the *employee_id* and the *supervisor_id* in a table that stores employee data.

You can define or delete relationships.

If you create a relationship between two fields in a relational model definition, then you must specify the **Relationship Properties**. For multi-dimensional based model definitions, the **Relationship Properties** are set automatically. For more information, see "Setting the relationship properties for a model definition" on page 15.

Defining relationships

This section explains how to define relationships between fields in tables.

Procedure

1. In the **Define Relationships** pane, identify the two fields for which you want to define a relationship.
2. Drag and drop one field on top of the other one.

   While dragging over other fields notice the following:

   - The fields that have the same name are highlighted. This indicates that these are advised relationships.

     The mouse cursor looks like this:  .
   - For fields that are the same type (for example integer and integer) you can also create a relationship.

The mouse cursor looks like this: .

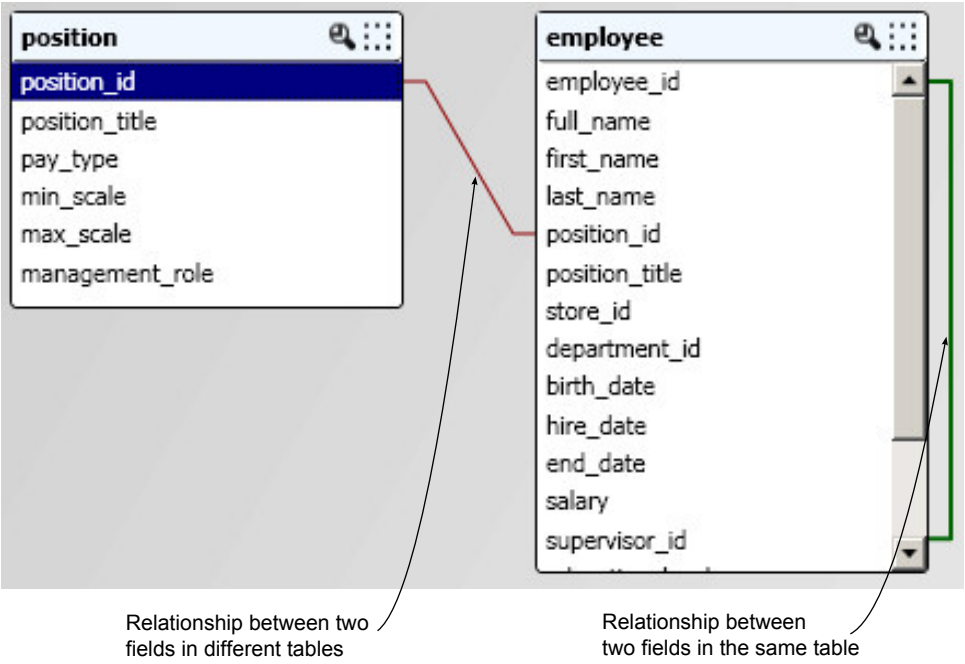
- For fields that are different types (for example integer and text) you cannot create a relationship.

  The mouse cursor looks like this: .

Results

When you have defined relationships between fields in tables, the relationships are indicated with lines:

- A red line represents a relationship between two fields from different tables.
- A green line represents a relationship between two fields from the same table.



Create relationships by dragging and dropping fields

There is an alternative way of creating relationships.

You can create relationships by dragging and dropping fields from the **Select Data** pane to the **Define Relationships** pane or vice versa.

Procedure

1. In either the **Select Data** pane or the **Define Relationships** pane identify the field that you want to link to another field.
2. Click the field and drag it from one pane to the other. The following mouse cursor indicates a valid relationship: .

   A line between the fields indicates the relationship in the **Define Relationships** pane.

Deleting relationships

If the relationship between fields is no longer needed, you can delete the relationship.

Procedure

In a model definition, right-click the relationship and select **Delete Relationship**.

Changing names of tables and fields in the Define Relationship pane

You can change the names of tables and fields.

Procedure

1. In the **Define Relationships** pane double-click the name that you want to change.
2. Change the name.

Setting the relationship properties for a model definition

When you create a relational model definition you must specify the relationship between two tables.

For a multi-dimensional based model definition, the **Relationship Properties** are set automatically. Relationships between data tables define how each table links to another table. You can specify each side of the relationship between two tables in the following ways:

- unknown
- zero or one
- zero or many
- one
- one or many

Procedure

1. Create a relationship between two fields. For more information, see "Defining relationships" on page 13 or "Create dimensions by dragging and dropping fields" on page 17.

   The **Relationship Properties** dialog box is shown.
2. In the **Relationship Properties** dialog box specify how the fields relate to each other. You can also show the **Relationship Properties** dialog box by right-clicking on a relationship link > **Relationship Properties**.
3. If you want to invert the relationship between a parent field and a child field, then press the **Invert** icon.

   Note: For a relational model definition, do not set the relationship between tables to **unknown**.

Dimensions

Dimensions form the basis of the multi-dimensional database that Express Data Advisor creates. Use the multi-dimensional database for analysis in Express Advisor.

You must create dimensions to have a valid model definition.

Note:

- Dimensions are only available in multi-dimensional based model definitions.
- If you switch during the creation of your model definition from **Multi-dimensional** to **Relational**, then the dimension settings are saved.

By default your model definition has two dimensions:

- The **Values** dimension

  The **Values** dimension is mandatory. You cannot exclude it from the model definition. Use the value dimension to create a dimension that contains data that is measured, for example, the profits of your stores.

  The **Values** dimension is also know as the *measures* dimension.
- The **Time** dimension

  The **Time** dimension is not mandatory. However, it is likely that you want a **Time** dimension in your model definition. A **Time** dimension allows you to analyze measurements over the course of time. For example, you can measure the profit of a particular store for the past months.

Creating dimensions

You can create a dimension by dragging and dropping a field from the left section of the Create Dimensions pane into the Create Dimension pane. The table from which you drag the field initially determines the name of the dimension.

On the left side of the **Create Dimensions** pane, a list of available fields for creating dimensions and hierarchies is available.

The available fields are listed alphabetically and display the tables and fields that appear in the **Define Relationships** pane.

The time dimension and auto-hierarchy dimensions are special dimensions. For more information, see "Configuring the time dimension."

You can create one or more levels in a dimension. Do this by dragging and dropping more fields in the dimension that you created.

Procedure

1. In the left section of the **Create Dimensions** pane, expand the tree of the table that contains the dimension you that want to create.
2. Drag and drop a field from a table that has an  icon in the **Create Dimensions** pane.

   You have two options:

   - To create a new dimension, drop the field in the empty space in the **Create Dimensions** pane.
   - To expand an existing dimension by adding a level, drop the field on an existing dimension in the **Create Dimensions** pane.

Configuring the time dimension

Levels in the time dimension are created automatically when you specify the level of detail that you want when analyzing your data. You can set a filter for the time dimension by specifying a date range.

Procedure

1. In the time dimension, click the drop-down list box.
2. Select one of the following levels of detail:

- **Year > Month**
- **Year > Quarter > Month**
- **Year > Month > Day**
- **Year > Quarter > Month > Day**
- **Year > Month > Day > Hour > Minute**
- **Year > Quarter > Month > Day > Hour > Minute**

3. Drag and drop a date or time field on the time dimension in the **Create Dimensions** pane.
4. In the **Limit date range** section, enter dates in the **After** and **Before** fields to create a filter for the time dimension.

   For information on how to format **After** and **Before** dates, read the tooltips.

   If you want to remove the **After** and **Before** dates from the filter on the time dimension, then click the **Disable this filter condition** icon .

Creating an auto-hierarchy dimension

An auto-hierarchy dimension is based on a relationship between two fields in the same table. An auto-hierarchy dimension is also known as a parent-child dimension.

Once an auto-hierarchy dimension is created you cannot add levels to it. The structure of the table in which the relationship is defined, determines the number of levels.

The data in an auto-hierarchy dimension is consolidated. If, for example, a relationship between the *employee_id* and the *supervisor_id* in a table creates an auto-hierarchy dimension, then the supervisor of a group of employees is also part of that group of employees. This ensures that you can import that data for a supervisor from the source database.

If you preview an auto-hierarchy dimension, consolidated fields are indicated with the word **Consolidated**. See "Previewing tables and dimensions" on page 18.

Procedure

1. In the left section of the **Create Dimensions** pane, expand the tree of the table that contains the dimension that you want to create.
2. Drag and drop a field that has a relationship icon from a table in the **Create Dimensions** pane.

   A new auto-hierarchy dimension is created.
3. Drag and drop a field from the same table into the auto-hierarchy dimension. That field will become the dimension element name.

   Note: You cannot add levels to an existing auto-hierarchy dimension. If you drag and drop another field in an existing auto-hierarchy dimension, the fields will be transposed.

Create dimensions by dragging and dropping fields

There is an alternative way for creating dimensions.

You can create dimensions by dragging and dropping fields from the **Select Data** pane or the **Define Relationships** pane to the **Create Dimensions** pane.

Procedure

1. In either the **Select Data** pane or the **Define Relationships** pane, identify the field from which you want to create a dimension.
2. Click the field and drag it to the **Create Dimensions** pane.

   In the **Create Dimensions** pane your mouse cursor will look like this:  .

   You have two options:

   - To create a new dimension, drop the field in the empty space in the **Create Dimensions** pane.
   - To expand an existing dimension by adding a level, drop the field on an existing dimension in the **Create Dimensions** pane.

Changing the names of dimensions and levels in the Create Dimensions pane

You can change the names of dimensions and levels.

Procedure

1. In the **Create Dimensions** pane, double-click the name that you want to change.
2. Change the name.

   Note: You cannot change the names of the level in a time dimension or in an auto-hierarchy dimension.

Removing dimensions

If you no longer want to use a dimension in your model definition, then you can remove that dimension.

Procedure

1. In the **Create Dimensions** pane, identify the dimension you want to remove.
2. Click the **Remove Dimension** icon .

   Note: You cannot remove the time dimension. The time dimension can only be disabled by clicking the **Disable Dimension** icon  .

Previewing tables and dimensions

You can preview the data of any table or dimension in your model definition.

The preview of the **Select Data** pane and the **Define Relationships** pane allows you to change the name of the columns by double-clicking the name of the column.

The preview of the **Select Data** pane allows you to enable or disable the columns by selecting or clearing the columns in the preview window.

The changes you make in the preview window are reflected in the table.

Procedure

In your model definition, click either the **Show Table preview** icon  or the **Show Dimension preview** icon  .

Analyzing your data

After you create your model definition, you can start analyzing your data with either Express Advisor or Query Studio.

Appendix. Configuring the ODBC environment for Express Data Advisor

This section describes how the administrator must configure the client system and the server for the ODBC environment.

Two methods of generating multi-dimensional cubes are available:

- Client-based. The administrator must only configure the client. The Express Data Advisor generates data files and sends the model definition with the data files to the server. The server uses the data files and the model specification to generate the data files that generate the multi-dimensional cube. When using the client based method in Data Advisor, you need to first configure an ODBC data source on the client system. However, this step can be omitted for file based data sources with the extensions: accdb, csv, mdb, txt, xls, xlsb, and xlsx.
- Server-based. The administrator must configure both the client and the server. The Express Data Advisor sends the model definition to the server that accesses the ODBC data source, generates the data files for TM1® that generates the multi-dimensional cube. An ODBC data source is required for both the client and the server systems.

Configuring for the client-based method

You can configure the ODBC data source on the client system.

Procedure

1. Click **Start** > **Control Panel**.
2. Double-click **Administrative tools** > **Data Sources (ODBC)**.

   Note: A 64-bit client system requires that the ODBC data sources are 32-bit. Use the 32-bit data sources application. Click **Start**> **Run** and type:

   %WINDIR%\SysWOW64\odbcad32.exe
3. On the **ODBC Data Source Administrator** dialog box, select the **System DSN** tab and click **Add**.
4. In the **Create New Data Source** dialog box, from the menu, select the data source driver, and click finish.
5. In the **Create New Data Source** dialog box, complete the on-screen instructions for the driver type. The required fields depend on the data source type. Ensure that you use the same naming convention that the system administrator uses on the server.

   The data source name must be identical on both the server and the client system.
6. Click **OK** until all dialog boxes close.

Configuring for the server based method

The server based-method requires other configuration. You must configure both the server and the client for a particular ODBC database.

You must configure the ODBC data source identically both on the IBM Cognos Express Data Advisor Server system and on an Express Data Advisor client system.

The ODBC data source for both the Express Advisor server and the Data Advisor client must have the same name and link to the same relational database.

Configuring the server

Ensure that the Express administrator follows the steps below to configure the ODBC data source for Express Data Advisor on the server. The procedure on the server is slightly different than the procedure on the client.

A 64-bit server requires 32-bit ODBC data sources. To ensure this, use the 32-bit data sources application.

Procedure

1. Click **Start** > **Run**.
2. In the **open** field, type:
   %WINDIR%\SysWOW64\odbcad32.exe
3. Click **OK** to launch the 32-bit data sources application.
4. On the **ODBC Data Source Administrator** dialog box, select the **System DSN** tab, and click **Add**.
5. In the **Create New Data Source** dialog box, from the menu, select the data source driver, and click **Finish**.
6. In the **Create New Data Source** dialog box, complete the on-screen instructions for the driver type. The required fields depend on data source type, but may include
   - Data source name - Required
   - Data source description
   - Data source server
   - Data source address

   Note: The data source name must be identical on both the server and the client system.
7. Click **OK** until all dialog boxes close.

Configuring the client

The server-based method requires you to configure the ODBC for Express Data Advisor on both the server and client systems.

To configure the ODBC data source for Express Data Advisor on the client system do the next procedure.

Procedure

1. Ensure that you have configured the Express Data Advisor Server before configuring the client system.
2. Click **Start** > **Control Panel**.
3. Double-click **Administrative tools** > **Data Sources (ODBC)**.

   Note: A 64-bit client system requires 32-bit ODBC data sources. To ensure this, use the 32-bit data sources application. Click **Start**> **Run** and type:
   %WINDIR%\SysWOW64\odbcad32.exe
4. On the **ODBC Data Source Administrator** dialog box, select the **System DSN** tab and click **Add**.

5. In the **Create New Data Source** dialog box, from the menu, select the data source driver and click **Finish**.
6. In the **Create New Data Source** dialog box, complete the on-screen instructions for the driver type. The required fields depend on the data source type. Ensure that you use the naming convention that the system administrator uses on the server.

   The data source name must be identical on both the server and the client system.
7. Click **OK** until all dialog boxes close.

Notices

This information was developed for products and services offered worldwide.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service. This document may describe products, services, or features that are not included in the Program or license entitlement that you have purchased.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan Ltd.
1623-14, Shimotsuruma, Yamato-shi
Kanagawa 242-8502 Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Software Group
Attention: Licensing
3755 Riverside Dr
Ottawa, ON K1V 1B7
Canada

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Trademarks

IBM, the IBM logo, ibm.com, Express, TM1, and Cognos are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at " Copyright and trademark information " at www.ibm.com/legal/copytrade.shtml.

The following terms are trademarks or registered trademarks of other companies:

- Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Glossary

This glossary includes terms and definitions for [product name].

The following cross-references are used in this glossary:

- See refers you from a term to a preferred synonym, or from an acronym or abbreviation to the defined full form.
- See also refers you to a related or contrasting term.

To view glossaries for other IBM products, go to www.ibm.com/software/globalization/terminology.

A

asymmetric selection
In stacked dimensions, a selection in whose members in rows or columns can be different for each group. An asymmetric selection can be made manually, or can be the result of a sort action or a result of removing missing value.

D

data entry
A mode that allows a user to navigate through the database and add or change stored data in the OLAP database.

dimension
A broad grouping of descriptive data about a major aspect of a business, such as products, dates, or locations. Each dimension may include different levels of members in one or more hierarchies and an optional set of calculated members or special categories.

dimensions dialog
A dialog that allows a user to change the order and the selections in both the Offspread and the Print Range dimensions. Dimensions can be shown, hidden, or ignored.

drill down
In a multidimensional representation of data, to access information by starting with a general category and moving downwards through the hierarchy of information, for example from Years to Quarters to Months.

drill through
To view the details linked to the data in a report, cube, or macro. For example, the user can drill through a value to view the detailed sales transactions for a particular customer. Any filtering of information in the original object is automatically applied.

DynaSelect
A user function that makes a record of frequently used actions. Used to record opening, printing, or other actions on a particular view.

H

hover drill button
A button that facilitates the ability to drill down on members. Hover drill buttons can be permanently visible, or visible only when hovering with the mouse pointer over a member. It is also possible not to show hover drill buttons.

I

inspread
The header area of a table. Inspread dimensions make up a table and are allowed to have more than one member in a selection.

item A data element that is stored in the repository. Items can be folders, views, databases, data sources, images, or shortcuts.

M

member
A node in a dimension structure.

model definition
Data that is used as input for analyzing relational data. A model definition forms the basis for the OLAP database and contains dimensions that are created from the tables and relationships of a relational database.

O

offspread
The area that is outside a table or chart. The offspread includes dimensions that are not directly part of the table or chart. These dimensions are fixed to one member and specify part of the data that should be viewed.

P

portlet
A reusable component that is part of a web application that provides specific information or services to be presented in the context of a portal.

provider
A program that gives catalog, security, and log functionality to Executive Viewer.

R

R/C calculation
See row column calculation.

repository
A persistent storage area for data and other application resources.

row column calculation
A calculation that works with relative members rather than absolute members. In an R/C calculation, the members are included based on their position in the dimension selection of rows or columns and not by name.

S

stacked dimension
One or more dimensions that are on top of a dimension in a table. Dimensions can be stacked in rows as well as columns.

symmetric selection
In stacked dimensions, a selection whose members in rows or columns are the same for each group.

T

traffic light
A feature that allows a user to apply a color to cells or shapes based on their value.

V

view An area within a table or chart, including rows, columns, an offspread area, and optionally a drill-through pane. It shows the data that is stored in the OLAP database.

Index