Version 2.9

User Guide

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1. Introduction

EUROTRACE – What does it do?

EUROTRACE is a powerful and flexible software application that provides the structures and tools for the management of statistical data.

EUROTRACE can be used as a production system for the integration, validation and management of statistical datasets and can be use with the following DBMS:
MS ACCESS
ORACLE
SQL Server

EUROTRACE can create and store 'histories' of data processing, thus allowing for the management of historical data processing information.

EUROTRACE enables the efficient exchange of data between applications.

EUROTRACE provides a complete toolset for the processes of statistical production and management.

EUROTRACE is therefore suitable for database administrators who require complex functionality and also for end users who will want less complex features.

EUROTRACE integrates with the standard software tools used by Eurostat. For example, data can be imported and exported, using all of the main file formats used by Eurostat.

Text
CubX
MS Excel
MS Access
New Cronos
EUROTRACE data Viewer
Structured text files

Other data source formats
Other data storage formats

EUROTRACE'S broad functionality reflects Eurostat's diverse data processing needs.

The level of sophistication of the software is controlled by the allocation of user permissions. These are granted by the database administrator.

The database administrator should therefore manage the implementation of EUROTRACE. They can set up individual 'user' accounts and assign appropriate 'user profiles' to individuals. These user profiles assign various 'permissions' and

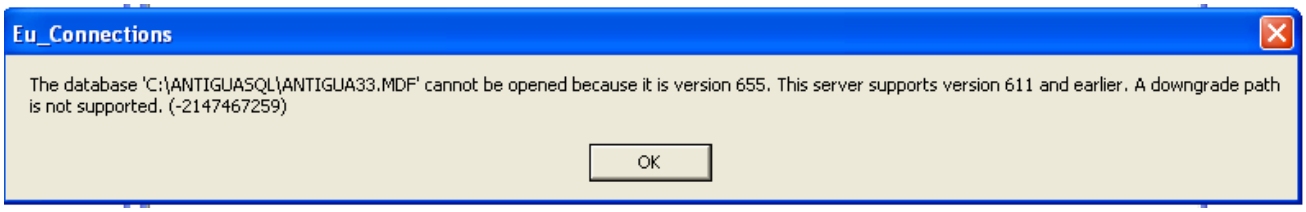
'rights' to access the different levels of features and thus also provide the statistical domains with security.

IMPORTANT NOTICE

The free SQL Server Express edition (2005 or 2008) has a **size limit of 4 gigabytes** for each domain. If you need to create / convert a big domain, you need to install a licensed version of SQL Server.

The length of domains and/or datasets names can be a problem converting a domain from Access to SQL or Oracle, because there are limits, especially in Oracle, regarding the length of names.
In SQL and Oracle all the nomenclature and datasets tables are stored in one single file. To make all the objects visible to the system, the table names have the following structure:
For datasets, DomainName_DATA_datasetName
For dictionaries, DomainName_DIC_dictionaryName
If you will get an error message during the conversion, you should rename in the Access domain the dataset / dictionary name that cannot be converted, and restart the conversion procedure.
Another problem during the conversion is the **use of special characters in Access names**, like spaces, "-","/". These characters are not accepted in SQL and Oracle, and Eurotrace convert them automatically to "_" during the upsizing process. But it could happen that Access names contains other kind of special characters ("&", "$", "*"and so on). In this case you will get an error message. You should rename in the Access domain the dataset / dictionary name that cannot be converted, and restart the conversion procedure.

SQL Server doesn't support downgrade.
This means that when you create as new or convert one domain with a specific version of SQL Server, this domain cannot be opened and used with earlier versions of SQL.
For example if one domain has been created or converted using SQL 2008, trying to open it with the 2005 version you'll get the following error message:



The same problem can occur trying to open a domain built with SQL standard edition with the Express edition.

2. What's new in EUROTRACE 4.3.x ?

The latest version of Eurotrace has been improved with new outlier detection features:

The virtual datasets definition has been extended in order to enable the definition of a virtual dataset to multi-table datasets in Microsoft Access DBMS storage.

3. EUROTRACE Terminology

To make EUROTRACE easier to use, the application is based upon the terminology commonly used at Eurostat.

Because EUROTRACE has been designed for users who are familiar with Eurostat terminology and operational procedures, some understanding of these terms and procedures is recommended prior to using the software.

Some of the more important terms are described below:

A statistical **DOMAIN** is a like a statistical theme, and consists of an integrated group of datasets and associated classifications.

A **DATASET** is a file of data records. Each record contains many individual fields. There are two main types of field within a record:

Field codes – These store codes such as a country identifier code for example, the 2 digit ISO country identifier codes.

Field values – These store values such as the amount, or cost, of a particular commodity. I.e. - the number of tonnes in weight.

The **field codes** in a record can be automatically checked. This is done by linking the fields to valid lists of appropriate **NOMENCLATURES**. These nomenclatures are lists of officially approved classification codes and labels. When used to validate and cross check records the lists of valid codes are referred to as **DICTIONARIES**.

Each dictionary of valid codes can have limitations applied to the range of codes that are defined for and then associated with, a particular dataset.

For example a global list of country codes might be limited in range to include just the country codes for the European Union Member States. These limits to ranges or sub sets of valid dictionary codes are called dictionary **SCOPES**.

Dictionary scopes allow the validation of record elements, pertaining to specific nomenclatures codes for individual sets of data. Scopes can also be used when importing and exporting data to restrict the sets of data selected. Dictionaries and scopes are therefore used to filter and select data and so control the quality of the data that are stored within datasets and extractions.

Bad records that have field codes that don't comply with the assigned nomenclatures in the specified dictionaries and scopes can therefore either be filtered out for fixing locally, or be filtered out for return to the data providers for correction.

The **field values** can also be crosschecked against value **VALIDATION RULES.**

Validation rules can be set up to work with SQL type statements to check the values when importing and loading datasets. For example 'value must be greater than 1' but less than 1 million.

Using validation rules, to test the data, **OUTLIERS** can be detected – these are values that seem extreme compared to the majority of other values in a given set. Extreme outlier values could be values that are in error. EUROTRACE can detect such values and filter these records to a separate file that can then be amended or returned to the data supplier.

Both validation rules and dictionary based nomenclature field code checking can be established to run automatically when importing data into a dataset structure.

Each dataset may have a different structure and is linked to all, or part, of a shared domain **CLASSIFICATION PLAN.**

A classification plan consists of the definitions of the structures and contents of the data sets, dictionaries and rules for the loading validation and storage of the statistical data pertaining to a particular statistical domain.

The classification plans, can be stored and modified as required using the tools within EUROTRACE.

Data can be extracted and exported from datasets ready for importation, analysis and viewing, using the EUROTRACE data viewer/editor.

The database administrator manages the users of the database, by assigning them a particular 'status' or **USER PROFILE**.

The database administrator will establish different user profiles for different types of users depending upon their day to day needs for certain functionalities.

These user profiles determine what the user is able to do, and what they are not able to do within the database. They effectively assign PERMISSIONS. They help to provide security and also to provide the users with the level of functionality that they require – not everyone will want to see or have open access to all of the EUROTRACE DBMS functionality.

The database administrator manages the definition of the user profiles and allocates these user profiles to the different users in accordance with their needs.

If you don't see the functionality that you need, when using the EUROTRACE DBMS – it might be because you need to request from the database administrator a different user profile that has more permissions granted.

Similarly, if you find that your EUROTRACE DBMS environment is too complicated – you could ask the database administrator to provide you with a user profile that is better suited to your needs. This might be a user profile that has different or less permissions granted.

Some people might only need the functionality found within the EUROTRACE Editor Application, rather than all of the functionality found within the EUROTRACE DBMS application.

Establishing which users need what functionality, is the job of the project manager and they, in association with the Database Administrator should set up the User Profile allocations accordingly.

EUROTRACE is therefore fully configurable, in terms of functionality and permissions, via the application of database administrator defined user profiles to the users of the statistical domain.

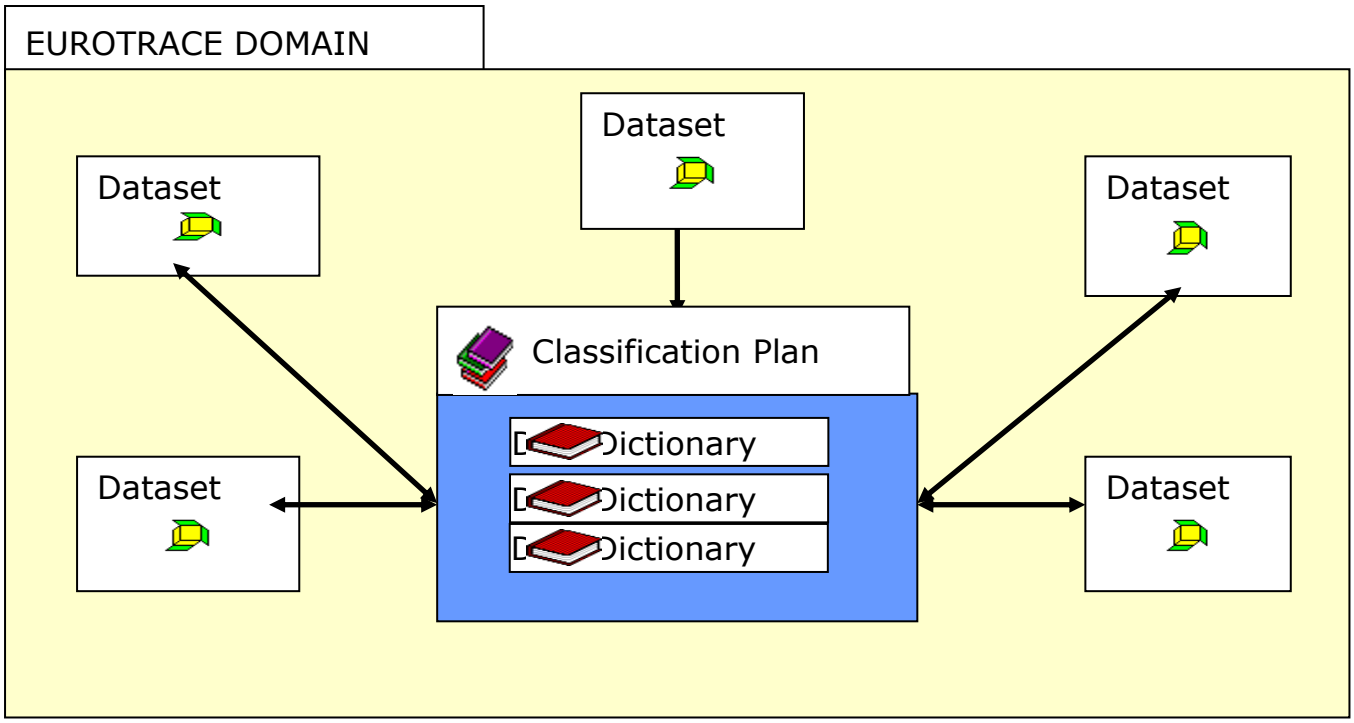
The EUROTRACE functionality that you have depends upon how your database administrator has configured the specific user profile that they have assigned to you.

If you don't have particular menu options, or if you see some menu buttons 'greyed out' – it is because these particular functions have not been granted by the database administrator within the definition of the user profile that the database administrator has assigned to you.

4. EUROTRACE System Overview

Secure and transparent relational environment
Innovating by integrated processing and validation tools
User friendly and flexible multidimensional system
Integrated with Eurostat's environment and policy

A EUROTRACE Domain is composed of an integrated group of Datasets and Classifications. One domain can contain many different datasets. Each dataset may have a different structure and is linked to all, or part of, a shared Classification Plan.



Clear and Documented Relational Storage

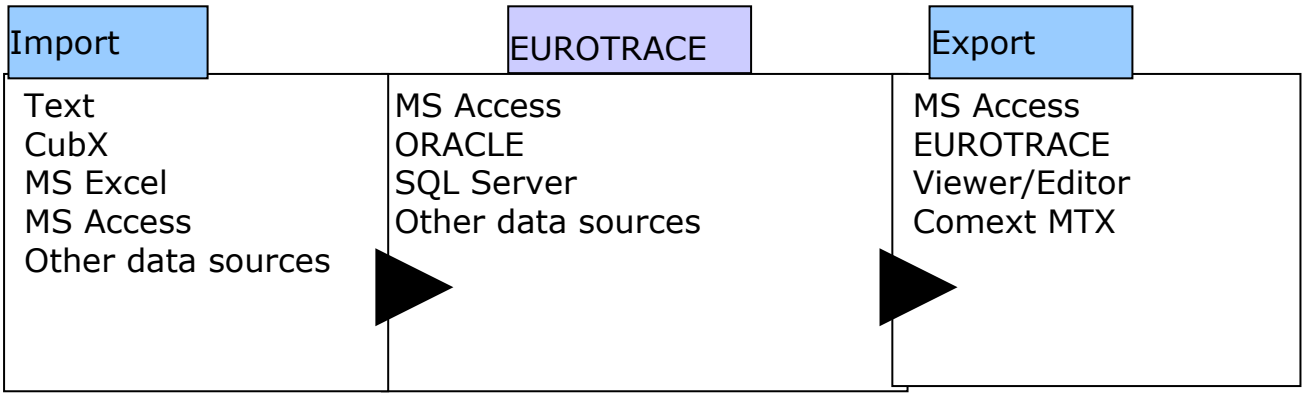
EUROTRACE's storage structure can be accessed and interpreted on standard platforms with applications like Microsoft Excel, Access, etc.

The system is designed to store data in many file formats and structures. Datasets can be optimised for size, speed and consistency by defining how codes and values are stored.

Multiple Data Type Definition

More than one data type can be stored in each dataset. Each data type can be different
(Numeric, text, memo, date, metadata, etc…)

EUROTRACE can exchange data with different file formats



The Basic integrated features of EUROTRACE ensure that only validated data can be stored.
All codes are checked against dataset classification plans and structures. Double and existing records are checked and the user is prompted before any changes to the database are made. The data flow is designed so that error and relocated data are stored in separate historical tables.

Advanced features offer powerful validation possibilities.

User defined validation and transformation rules can be added and stored for more detailed data preparation. Advanced data filters allow you to enhance the quality of your data.

Visual control of data operations and facilitated processing plus error diagnostics

You can see the data at different stages of processing, data processing is displayed step by step, and all operations are automatically registered in a log file. Visual control and storage of errors makes error diagnostics easier. Transformation rules allow for auto-correction during importation. Errors can be processed directly in the EUROTRACE interface.

EUROTRACE is User Friendly and Portable

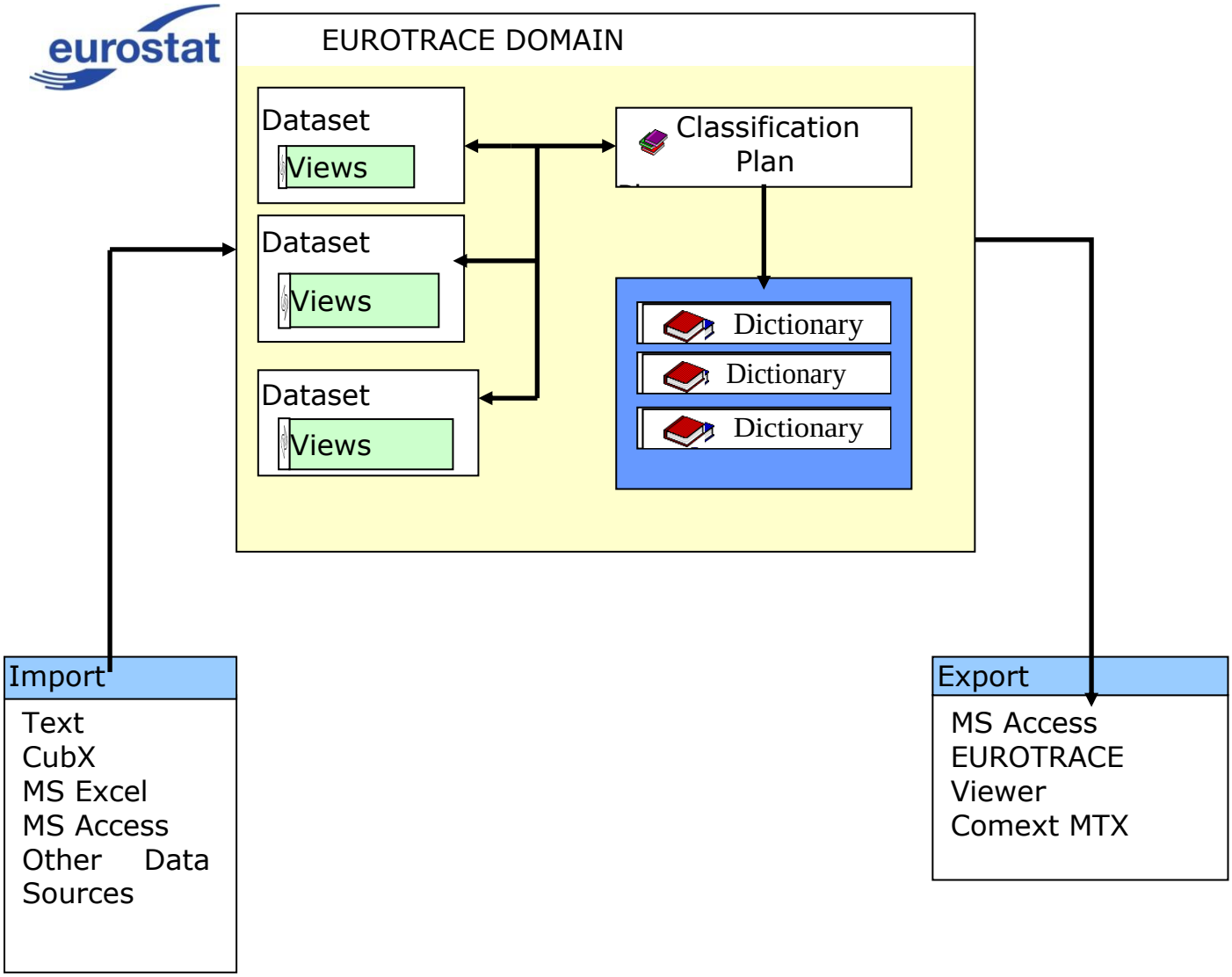
It is compatible with all the most recent Microsoft Windows operating systems. Familiar Windows interface components and the clear and organised data flow makes EUROTRACE easy to use. It is developed for all levels of users from Database Administrators to the end users

EUROTRACE is integrated with the data flow in Eurostat, and allows bi-directional communication with the reference and diffusion environment of Eurostat. It runs on the platforms and software most commonly used at Eurostat, while remaining open to other Eurostat standards.

A EUROTRACE Domain is a group of Datasets and Classifications. EUROTRACE allows you to generate autonomous extractions containing the tables, their structure definitions and common classification plan in one single file.

Multi-lingual

EUROTRACE is able to store codes and labels in different languages that are accessible throughout the application. The language of the interface is set by the user to either French, or English.


eurostat
EUROTRACE DOMAIN
Dataset
Views
Dataset
Views
Dataset
Views
Classification Plan
Dictionary
Dictionary
Dictionary
Import
Text
CubX
MS Excel
MS Access
Other Data Sources
Export
MS Access
EUROTRACE Viewer
Comext MTX

5. The EUROTRACE File System

5.1. Under MS ACCESS

EUROTRACE generates several different files when you create a domain. It is useful for database administrators to understand the file system to make effective use of all the functions of EUROTRACE.

The EUROTRACE files will be stored in the directory that you specify when you create a EUROTRACE Domain. Some can only be opened by the EUROTRACE application others can be opened outside EUROTRACE by using Microsoft Access.

Files that can only be opened by EUROTRACE

All the definitions and structures of the EUROTRACE Domain, including links between the dictionaries and datasets are stored in a file with the **'.dom'** extension. This file can only be opened with EUROTRACE.

.dom Domain definitions and structures.

Files that can be opened by the MS Access DB engine:
When you create a EUROTRACE Domain, the following files will be generated automatically as you work:

.plc This file contains the nomenclatures used for the domain, as well as the Scope definitions. This file can be viewed and edited with MS Access, and can be protected with a password from within EUROTRACE.

.bki This file contains schema for text file importation.

.dta This file is where the actual **data** are stored as well as the:

Error table This stores any error records that occur when you import data to your EUROTRACE Dataset.

History table Stores relocated and updated records when you import data.

Operations table This is a log table that keeps track of all operations performed within a dataset, including user name, time and date, types of operations, as well as the number of null, error, new, updated, and deleted records.

For each dataset you create within a domain, EUROTRACE will generate one **'.dta'** file. The name of the **'.dta'** file will be a combination of the domain name and the dataset name (domain name_dataset name.dta).

.bak Backup files are created automatically when you delete a Dataset or change the structure, and will be stored with the **'.bak'** extension.

N.B. If you have a multi-file defined then the title of the .dta files will be in the form domain name_datset name_multi-file item.dta

For example, if the year is part of the multi-file the domain name is XX and the dataset YY the .dta files are called:

XX_YY_1998.dta XX_YY_1999.dta and XX_YY_2000.dta

If you have more than one dimension in a multi-file, for example, year and also period – to illustrate the point we will use period 01 - the names would be :

XX_YY_1998_01.dta, XX_YY_1999.01.dta and XX_YY_2000.dta - plus also however many other periods you specify period 02. 03 etc.

Therefore, normally a domain will have only 1.dta file, but where multi-files have been used, it is possible that the domain can have more than one .dta file. In which case the first set of naming conventions are applied in the case of one dimension being used in the multi-file and the second set of naming conventions apply in the case of two or more dimensions being included in the multi-file.

In all cases a '.dta' file is created once you create a dataset within a domain.

EUROTRACE Environments and Privacy

EUROTRACE has been designed to work in a networked environment.

This means that whilst it CAN be implemented as a stand-alone system on a single PC – it will probably be used most effectively within a network context. This is particularly so where dictionaries and nomenclatures are stored and managed centrally rather than being distributed with multiple copies locally.

It is important therefore for EUROTRACE users to appreciate the concept of **locally stored files** and **files stored at another location via their network.**

A locally stored file is a file that is stored on the users local PC hard disc drive. A file stored at another location is one stored not on the users local PC hard disc drive, but on another storage disc in a different network location. This is important because – not all files that are stored locally are necessarily visible via the network. The Users have the ability - in some cases – to ensure that their local files are not viewable or accessible via the network.

This means that it is possible for the users to establish some degree of privacy at a local PC level using EUROTRACE. This could be most relevant when processing confidential data.

Setting the privacy of an object

Every time a user creates an object, they have the chance to set the objects 'Properties'. For example: a dictionary.

It is within these properties that the privacy status of the object is set. There are 3 levels of privacy status. These relate to the 'ownership' properties of the object. By choosing the most appropriate form of 'ownership', the user can set the privacy status of the object and therefore control how the object is seen by other people connecting to the domain.

Tip! Don't forget that the database administrator has extensive powers to create custom profiles that grant permissions for actions on both objects and their associated data. By allocating appropriate profiles to the users, the database administrator can also control what any specific user is allowed to see, and do.

The three levels of object ownership are:

Public
Read only
Private

They are described on the properties screen for each object.

The database administrator will be able to see all the objects that you create regardless of their ownership / privacy status.

In general it is better to discuss and agree a planned and structured approach to file keeping when using EUROTRACE.

The database administrator should propose a suitable structure given their knowledge of the network available.

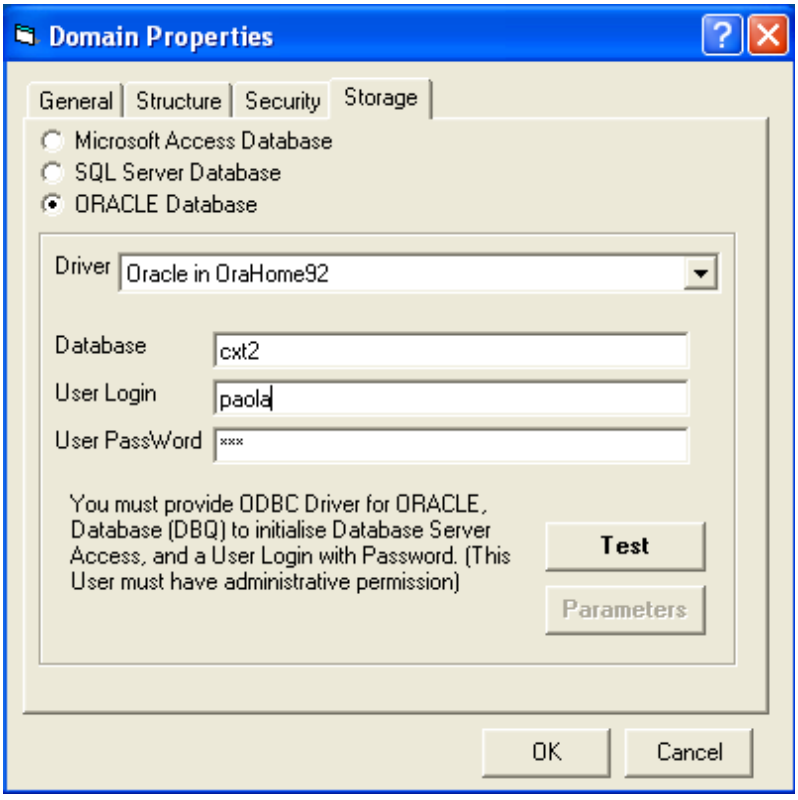
The database administrator should also allocate, to the users, suitable user profiles which will in turn grant them appropriate permissions to view, create, delete and edit, the various object structures and also the data within these objects and structures.

It's a good idea for the database administrator to plan the security requirements of the domain before implementing the final working domain.

Privacy and security requirements are usually closely related and can often be managed accordingly.

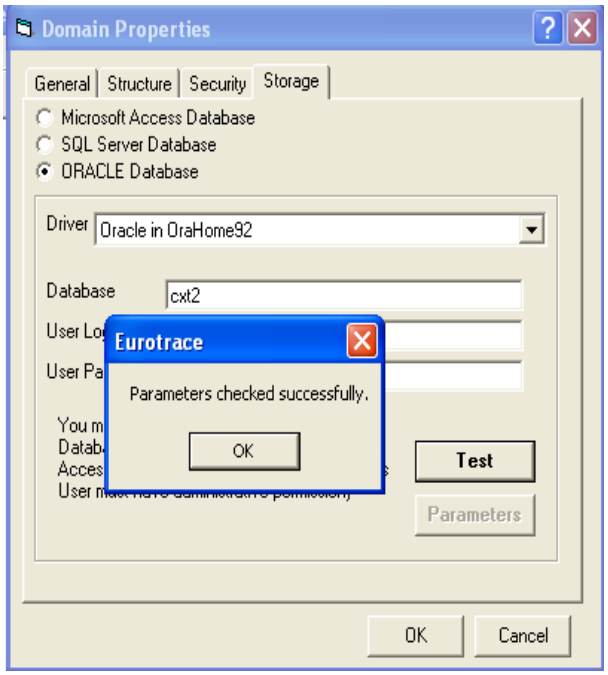
5.2. Under ORACLE

For **Oracle DB**, users will have to specify the Driver to use as well as the name of the database (where the dedicated table space is available), the user ID and the password for the connection to the database.
The Test button enables you to check if parameters enable you to connect properly to the database.

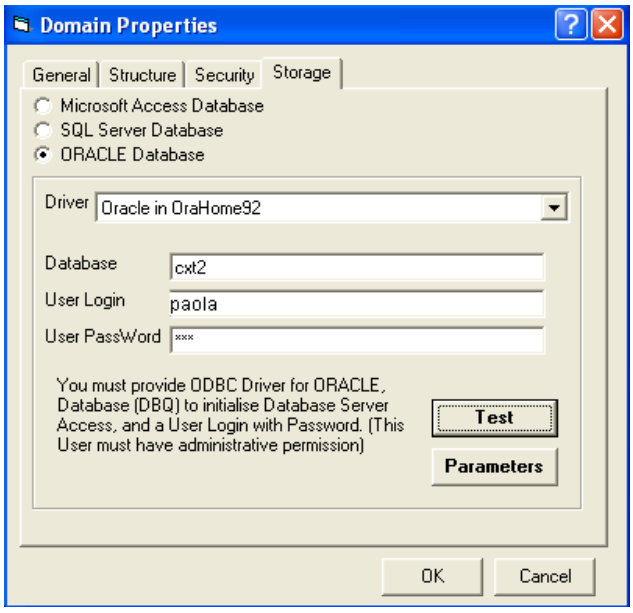


Oracle storage parameters

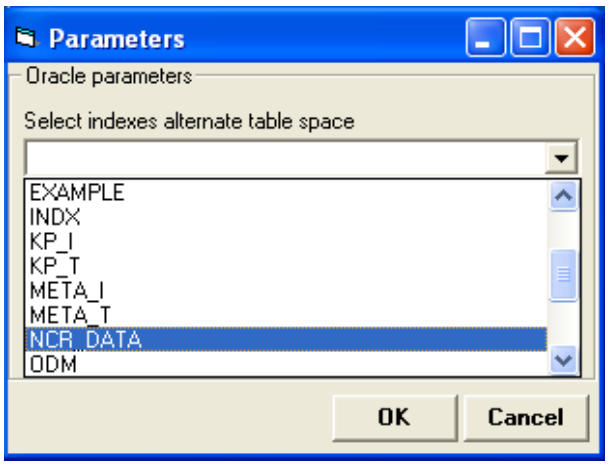
When creating a new domain, and after having filled all Oracle connection parameters, some advanced storage features become available. To modify these parameters, connection to Oracle database must be tested and validate. The test is done by clicking on the Test Button.

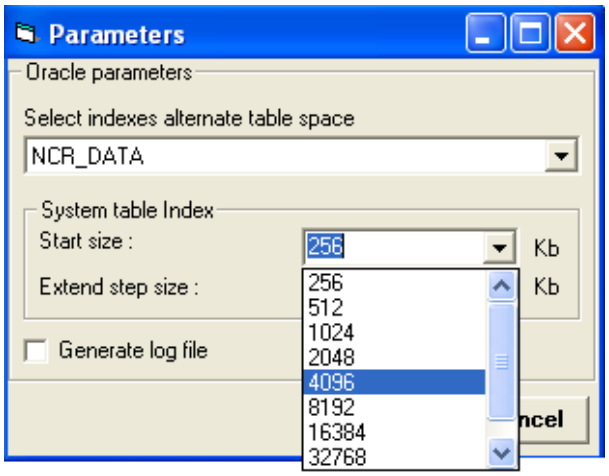


Then the button "Parameters" becomes available.



This option “Parameters” give access to the following screens:





Select indexes alternate table space:
Select the table space that will be used to store all indexes generated for the current domain. This is useful to manage available space and separate the table's table space from the indexes table space.

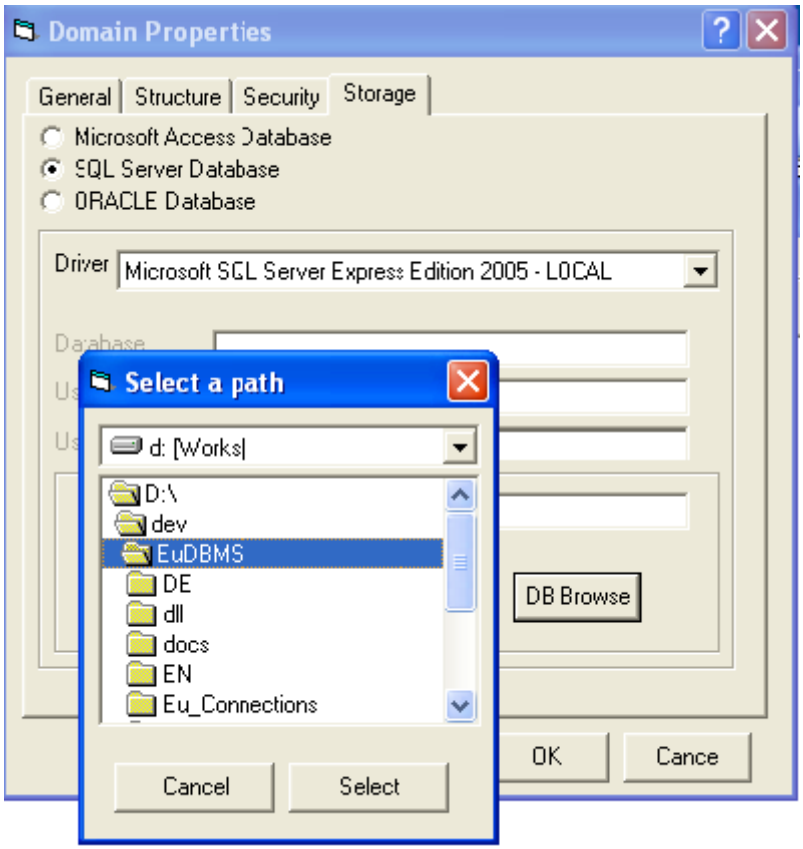
Index Start size:
Indicates the space allocated to the first segment of the new table created. It's possible to specify a custom size.

Index Extend size:
Indicates the space allocated to the second and following segment of the table when new data are added to it. It's possible to specify a custom size.

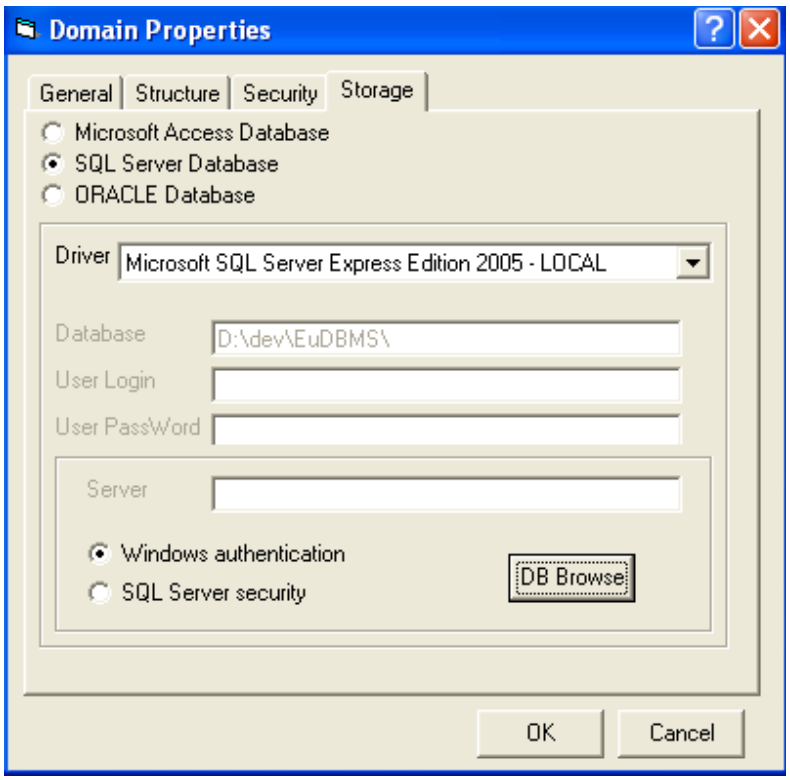
Generate log file:
Indicates if a log file if generated. A log file could be useful for Oracle optimizations.
By default this option isn't activated.

5.3. Under SQL Server

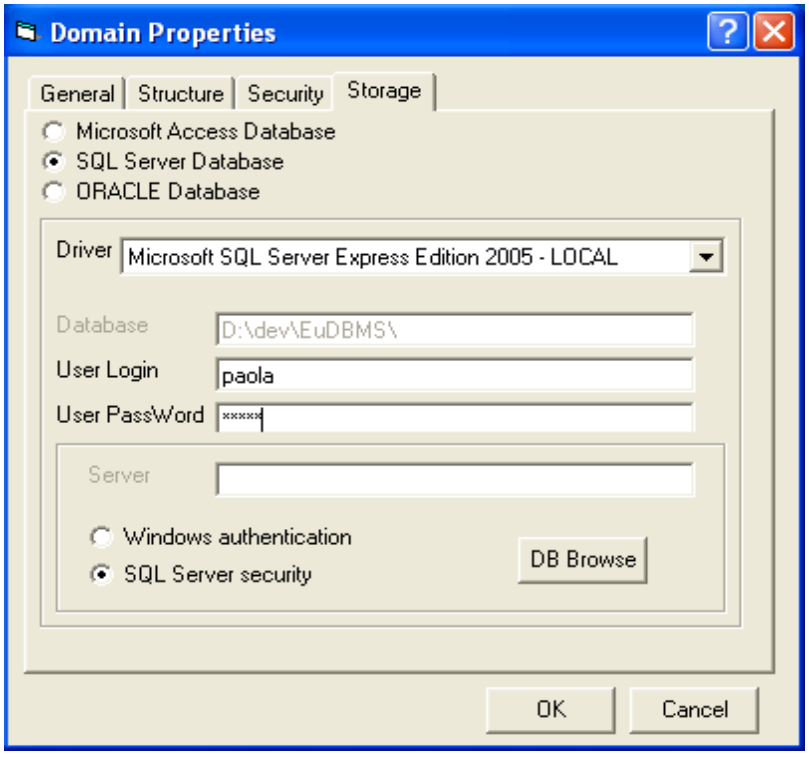
For **SQL Server DB**, users will have to specify the Driver to use. The driver can be local, and in this case the button "DB Browse" is enabled, to select the path for the new domain. The fields "Database" and "Server" are disabled.



If the driver is not local, the button "DB Browse" is disabled, because the domain will be created in the remote machine, and the fields "Database" and "Server" are enabled to insert the proper informations.
For the login, in SQL Server there are two possible options: *Window authentication* and *SQL Server security*.
With Window authentication ,user ID and the password for the connection to the database are not required, and the relative fields are disabled.



Clicking on SQL Server Security, user ID and the password for the connection to the database are required, and the relative fields are enabled



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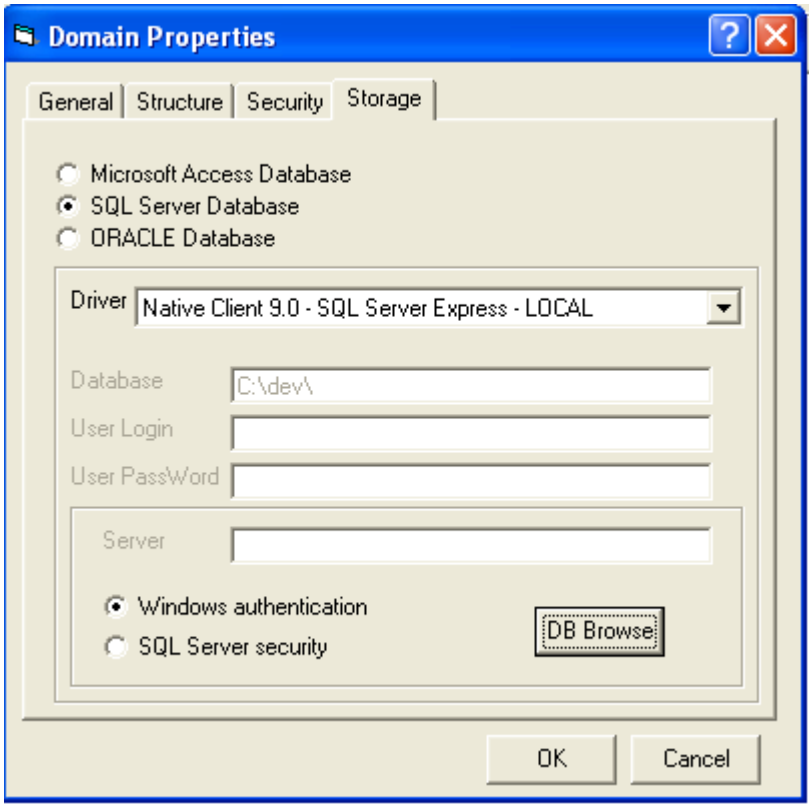
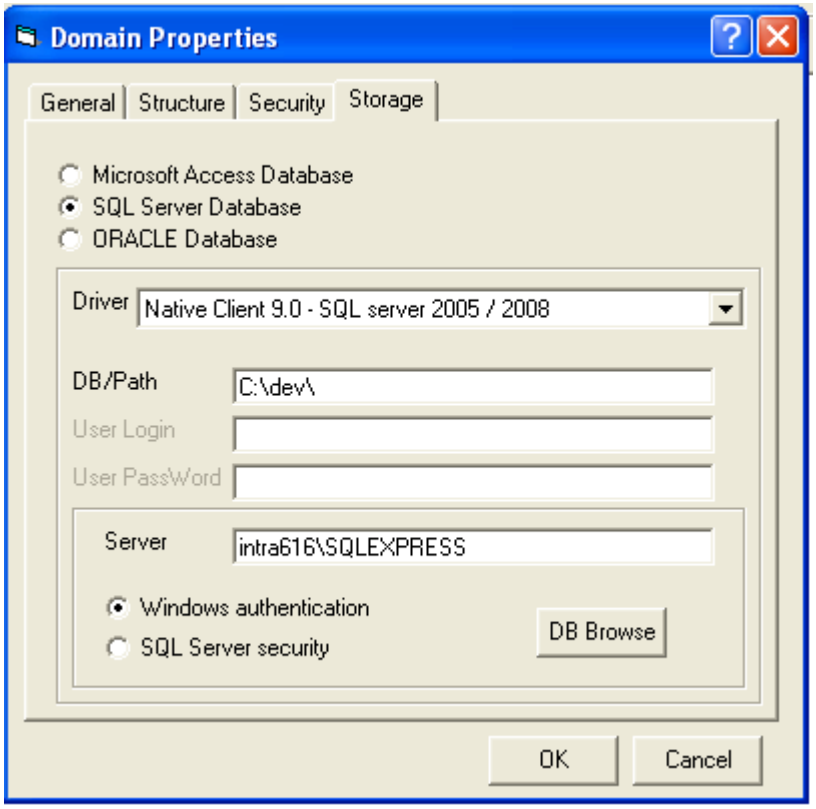


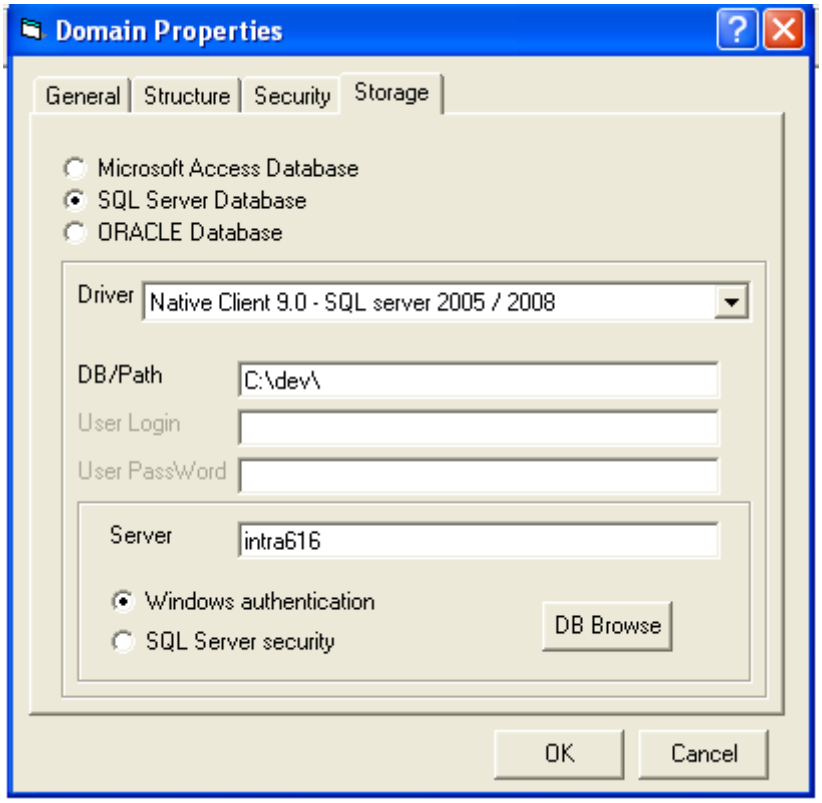
For SQL Server 2005 or 2008 Express Edition local select the first option.

If this will not work, even with the **express edition** you can use the **third option** of the drop down menu:



In the *Server* field write the **hostName\SQLEXPRESS**

For SQL Standard Edition, LOCAL or REMOTE, select the **third option** and write the host name in the *Server* field.



6. System Requirements

EUROTRACE is designed to run on most Microsoft Windows operating systems with a minimum of system requirements.

The performance of the application will depend upon a number of factors including: the size of the databases, the speed of the processor, the configuration of the PC, the storage of the domain, the other concurrent tasks that might be running etc.

Please note that when using EUROTRACE with a network – the performance of the network and the volumes of data that you are transferring will influence the overall impression of performance.

Minimum Requirements

Pentium II processor-based personal computer or compatible,
Microsoft Windows XP
512 MB RAM,
200 MB of available hard disk space (not including the space required for databases as this could vary).

Recommended Requirements

Pentium IV 2.5 to 3.0 GHz or AMD DualCore 3800+ processor
Microsoft Windows XP or Windows7
512 MB to 2 GB of RAM
400 MB of available hard disk space (not including the space required for databases as this could vary).

To make full use of the data stored in the EUROTRACE domains, we recommend that you have a DBMS, spreadsheet, and /or multidimensional browser application installed. For example: Microsoft Access, Microsoft Excel or EUROTRACE Viewer.
To build SQL Server or Oracle domains, SQL Server or Oracle standard editions must be installed on the machine.

VERY IMPORTANT: click on control panel - regional and language options and set it to English UK or US

7. Installing EUROTRACE

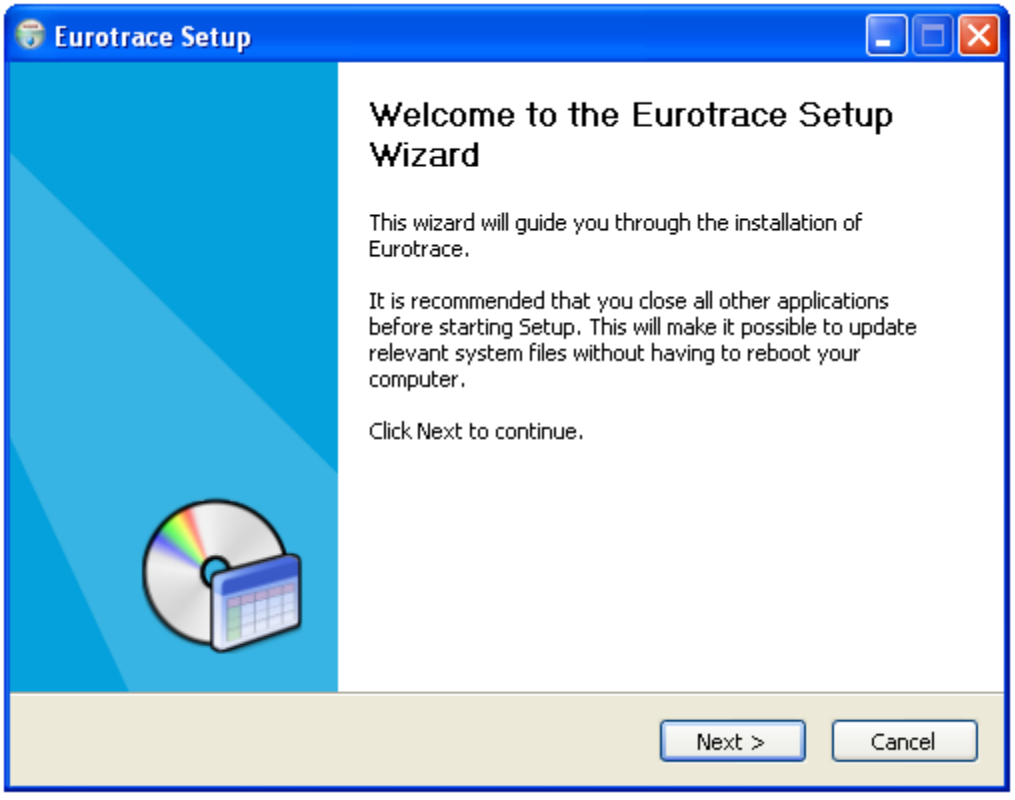
EUROTRACE installer can be obtained from the User Support web site http://circa.europa.eu/irc/dsis/eurotracegroup/info/data/website/EN/group_EN.htm or on CD ROM available at Eurostat.
The EUROTRACE package installers change depending on the User's Operating system: Windows7 & Windows XP.

7.1. Windows 7 & XP installers

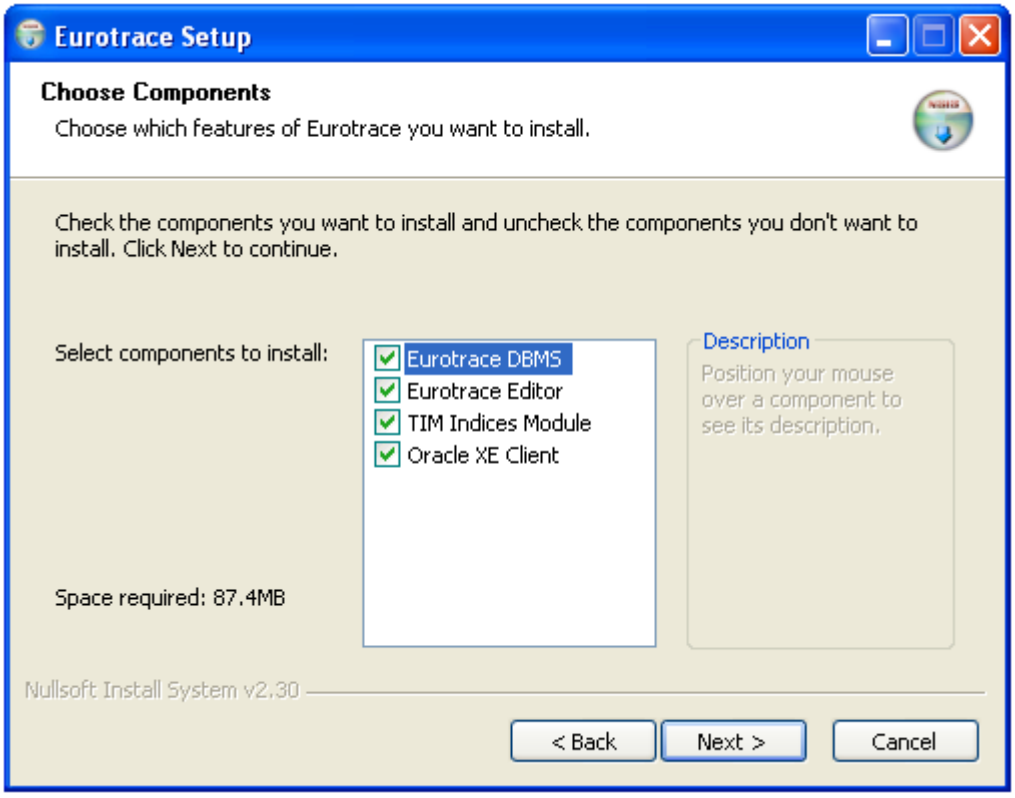
Run **Eurotrace_System_Setup_all.exe** installs the five applications.

Eurotrace_dbms_3_0_6.exe
Eurotrace_editor_2_1_15.exe
WinTIM_1_0_0.exe
Comext_Browser_8_3_0.exe
Oracle_XE_Client.exe

Once the installer for the EUROTRACE package is running, the following windows appears:



Click on Next to continue in order to obtain the list of the components that can be installed:



By default all the components are checked for installation.
Oracle XE Client is needed only if the user will run the Web Comext application. Web Comext is not part of the Eurotrace package, but interacting with Eurotrace DBMS needs the installation of the Oracle client.

8. How EUROTRACE works with languages

EUROTRACE supports different languages, in two different ways.

The software user interface

The software user interface can be switched between any one of three languages French, German and English.

You can change this using the Tools Menu, Options sub menu, Misc. Tab and then select your language of choice from the Interface Language Drop down list box.

The second way in which EUROTRACE supports different languages concerns The data storage.

This is a separate and distinct useage of language.

The data storage

The data storage means, the storage of datasets, dictionaries, classification plans and all the objects associated with a EUROTRACE Domain.

Each object, can support labels and memo fields in different languages. You can establish these when you create the objects or later on by changing the objects properties.

All new domains by default support the three working languages of the European Commission – French, German and English and you may add support for any or all of the languages in the list below :

Italian
Spanish
Portuguese
Greek (but not support of the Greek characterset)
Dutch
Swedish
Danish
Finnish

Luxembourgish

However each time you do add a language to the default 3 languages you will be increasing the size of the database storage- with very large datasets this might incur costs in performance and storage size.

We therefore recommend that the minimum number of languages necessary be used to reduce the file sizes, reduce the network traffic and increase the system's performance.

Thus it is possible to be working in Eurotrace with the Interface working in German and the domains labels and memo fields being displayed for example in Finnish.

Tip ! Remember this – You can independently switch the Language of the interface or the language of the data or change both – but each requires a separate change.

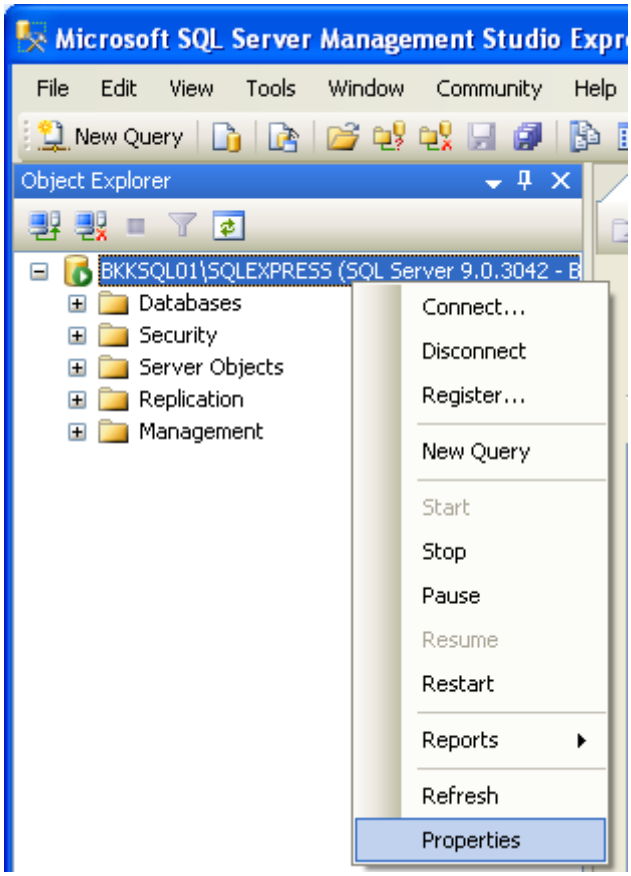
9. SQL Server Configuration

9.1. SQL Server setup

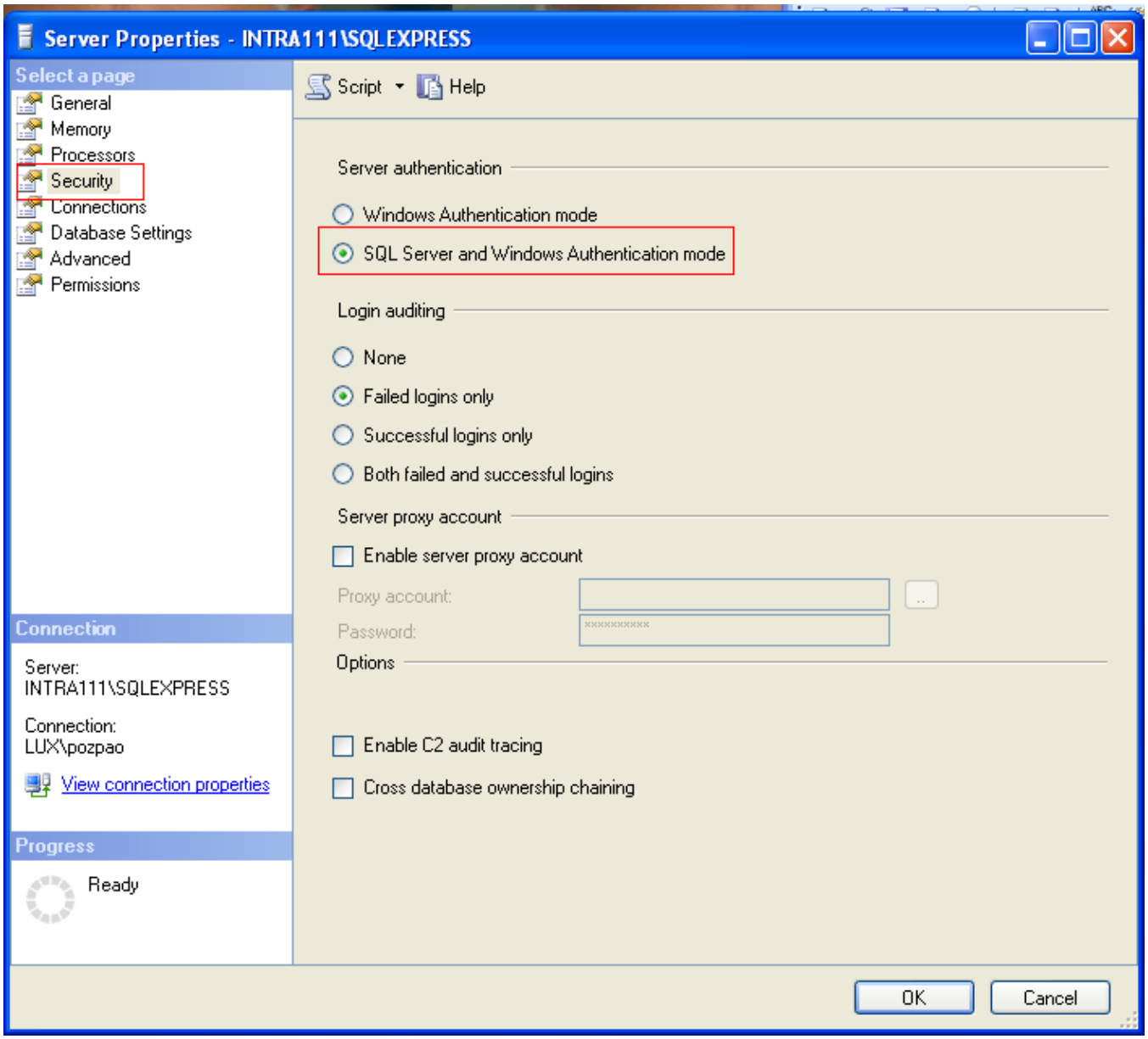
Set up sql server 2005 to accept local and remote connections:

You need SQL server and Window authentication to connect with user name and password to the remote server.

Open SQL server Management Studio. In Object Explorer, right click on the instance name and select Properties.



On the left, select Security and change Server authentication to SQL Server and Windows Authentication mode. If the choice is already selected, that means you have already allowed SQL Server authentication.

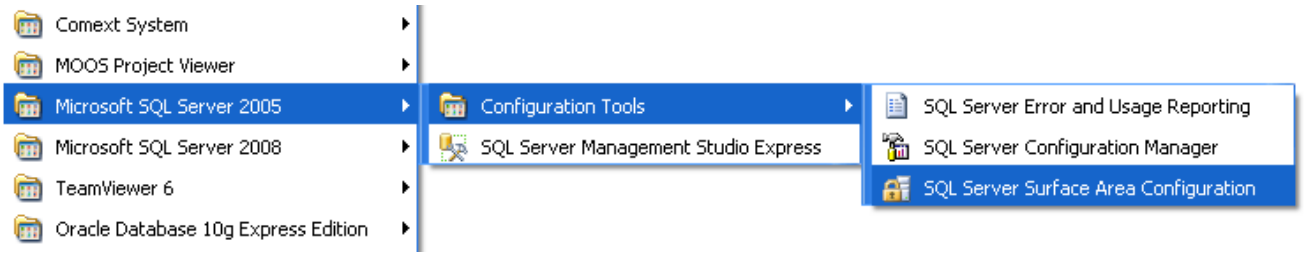


To be able to work both in local and remote we need to enable communications via TCP-IP and pipes.

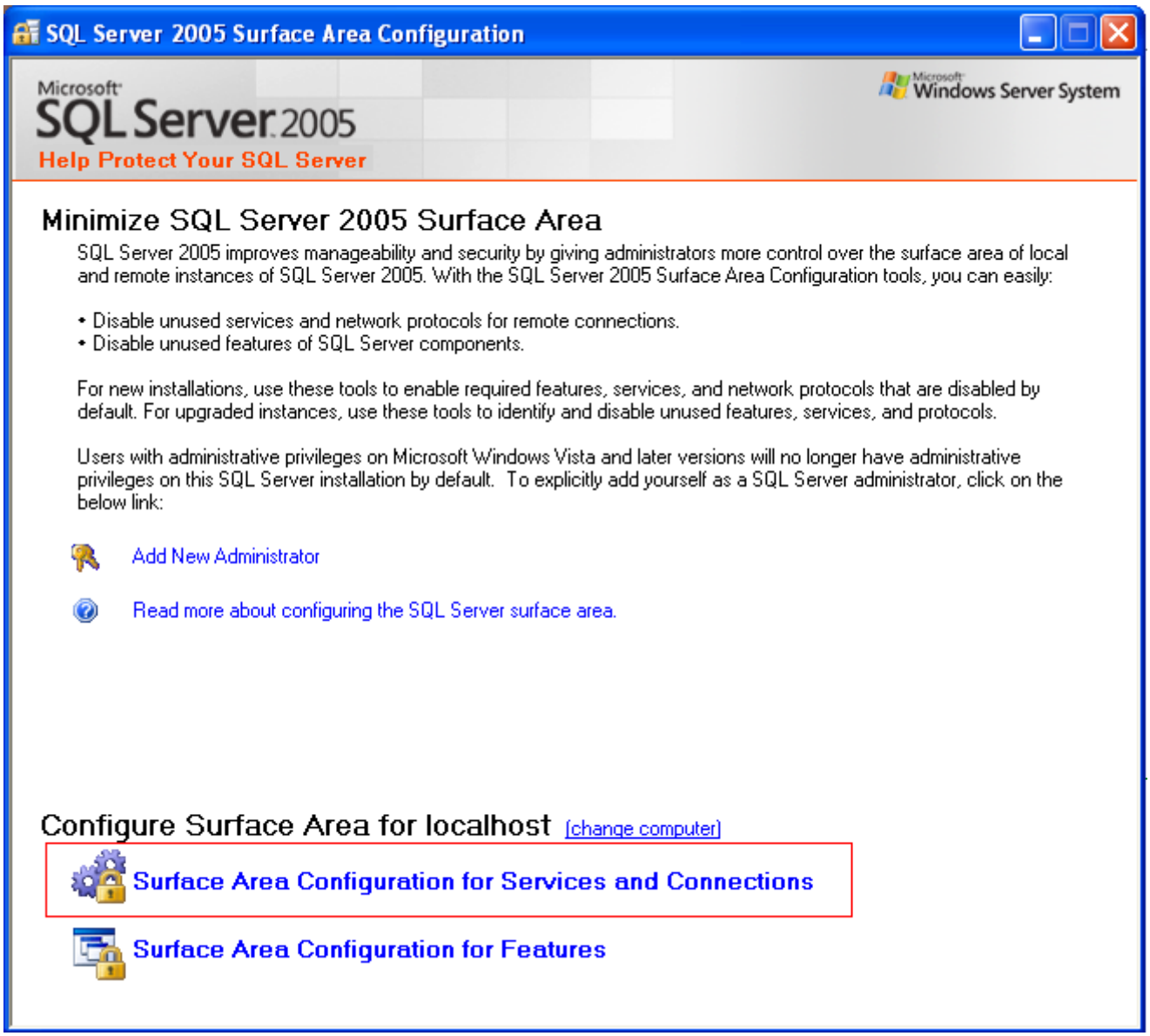
First of all we enabled remote connection on SQL Server Surface Area Configuration

Open SQL Server Surface Area Configuration from

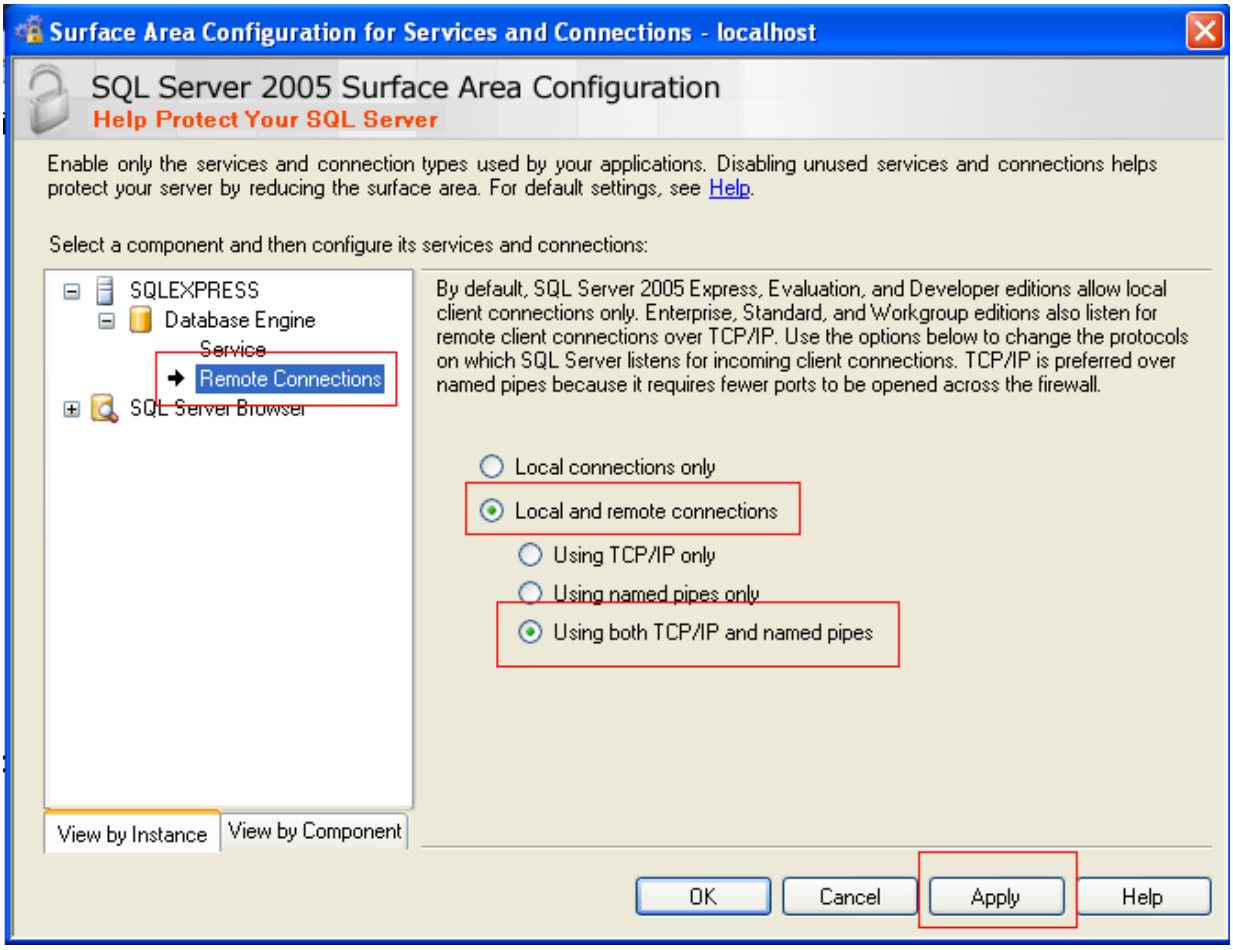
start-all programs-microsoft sql server 2005 – configurations tools- SQL Server Surface Area Configuration



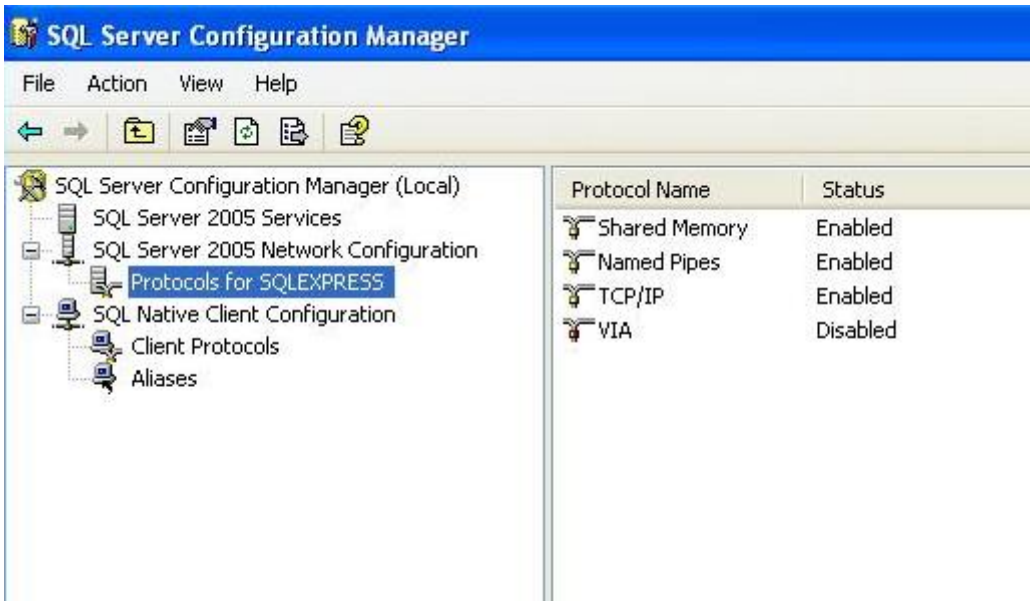
Select Surface Area Configuration for Services and Connections.



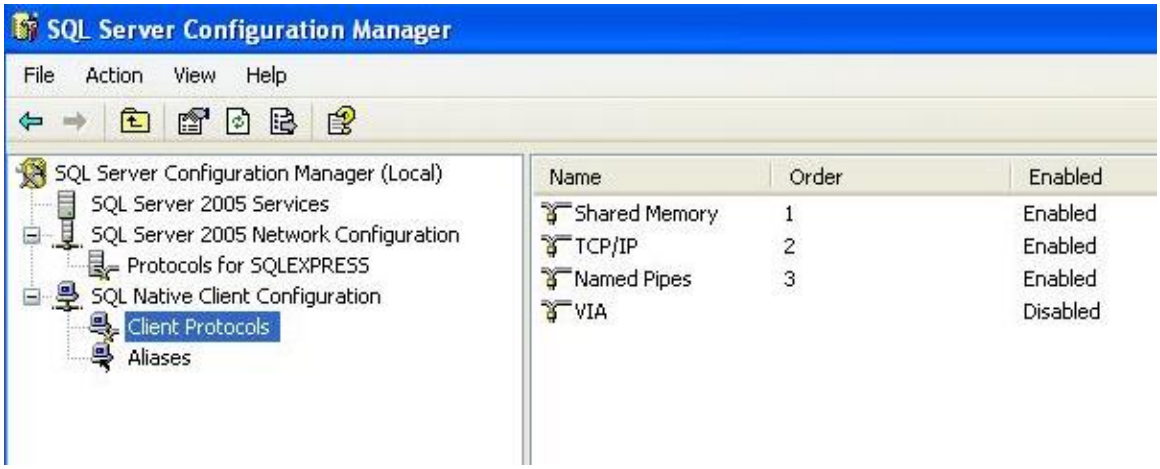
On the left side, expand your SQL Server instance -> Database Engine -> Remote Connections. On the right side, select Local and remote connections -> using both TCP/IP and named pipes.



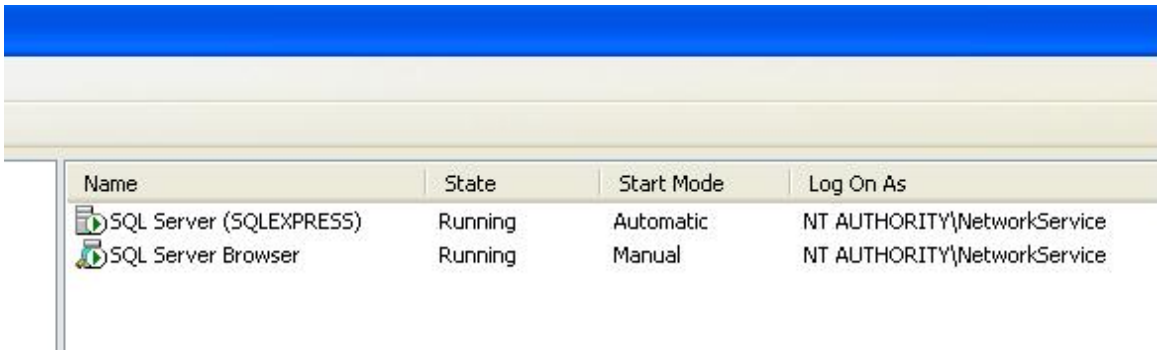
Now in the Sql configuration manager we enable shared memory, pipes and TCP-IP in server protocols:



And client protocols:



Restart sqlexpress and browser services, being sure that are running as network services

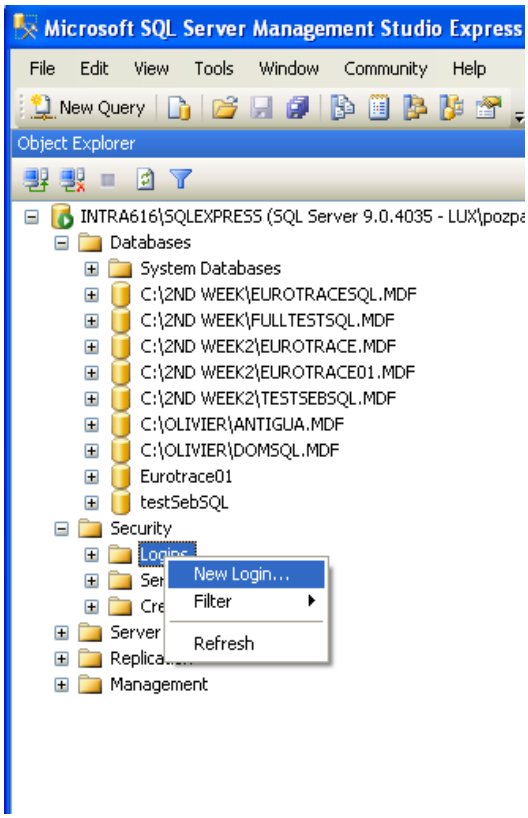


All the previous steps must be done in both client and server machines.

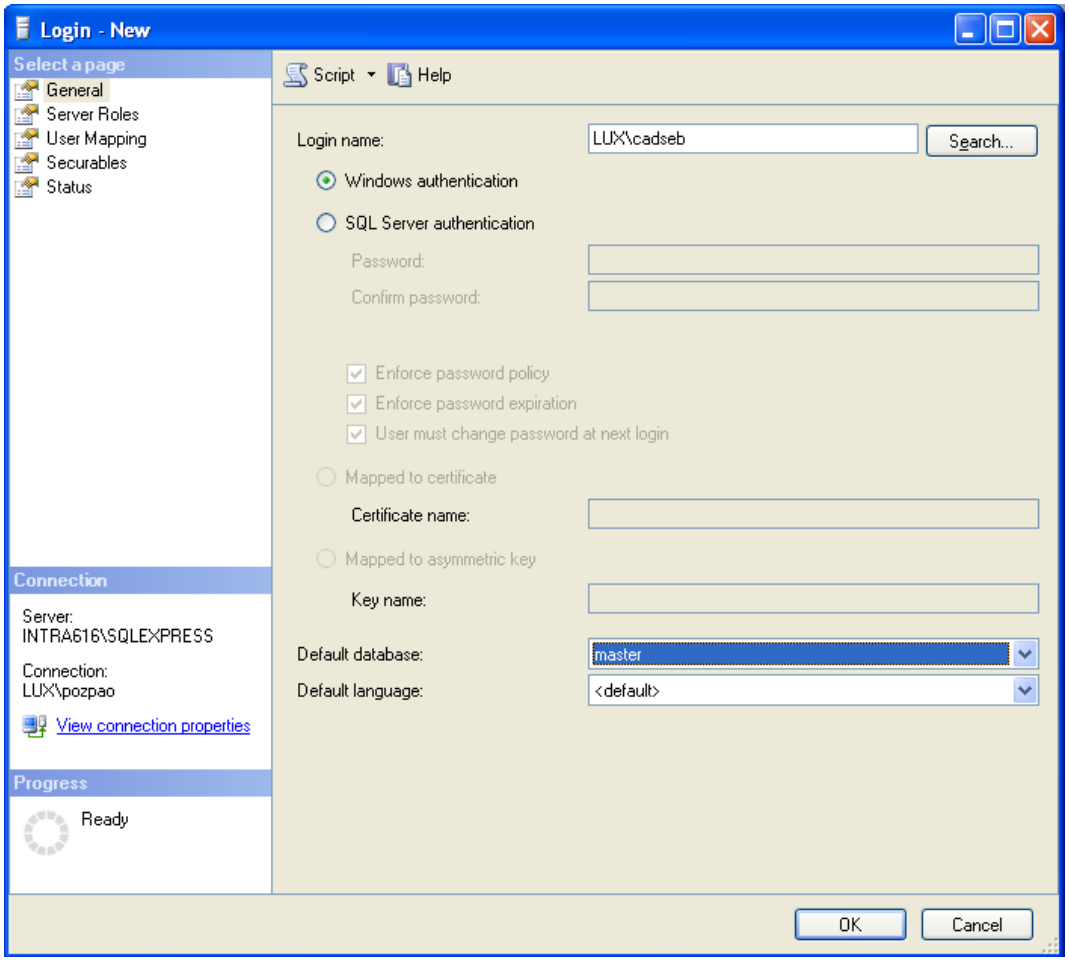
9.2. User account on remote machine

Give generic access on the remote machine to a specific user:

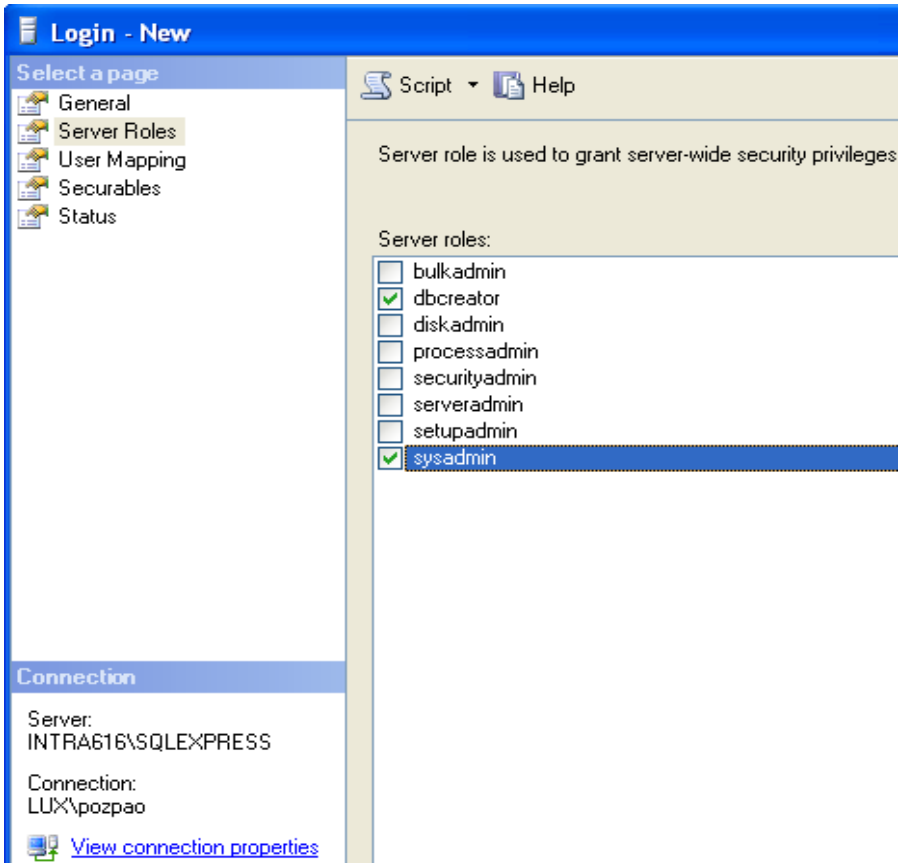
In the remote machine, using the SQL server management studio, select security/logins/new login



Write on the top of the new dialog the new user name you want to add



Then click on Server Roles and set the privileges for this user



Click on OK and the user will be able now to connect remotely with the server.

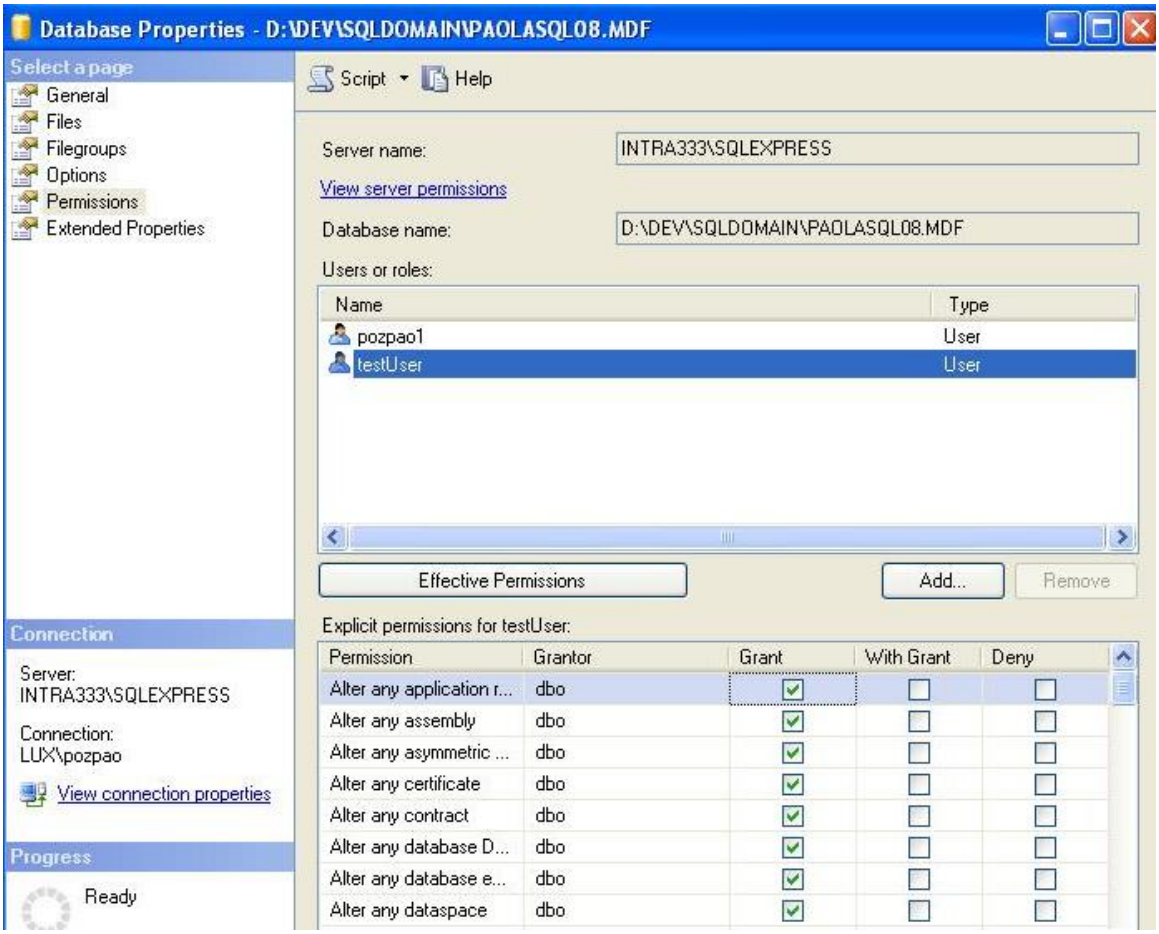
Give access to an existing database on the remote machine to a specific user:

In the server machine we have now to create a user account for the remote user in the sqlserver manager tool run the query:

```
CREATE USER testUser
CREATE LOGIN testUser with password = 'testPassword'
```

then you have to grant privileges to the user.

On the DB list right click on the instance name and select Properties - permissions.
You should have a window with the user name just defined.You should click in ALL the permissions for this user (valid only for that database).



Now restart sqlserver 2005 services (application and browser).

Now the connection to the remote database is ready.

9.3. **Eurotrace Parameters**

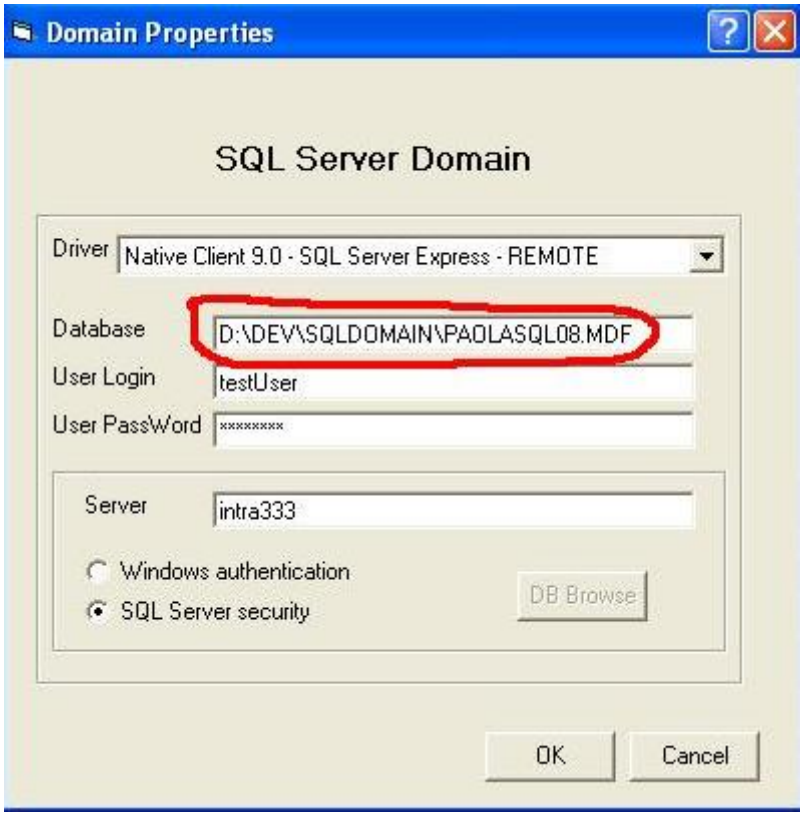
You must be able to use your user account in the remote machine (in this example, the userTest login just defined).

For sql express use Use option 2 in the drop down down menu (or option 8 if you are using native client 10.0).

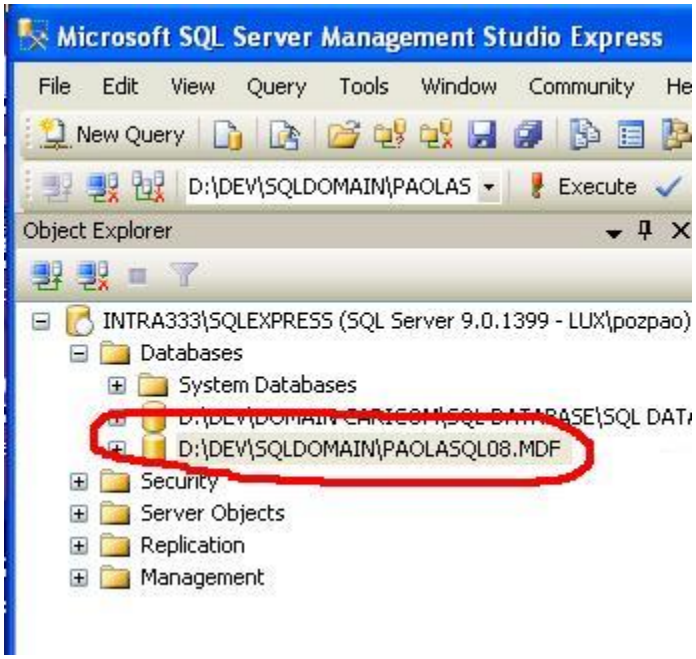
For SQL 2005 standard edition, use option 3.

For SQL Express in the local machine use option 1.

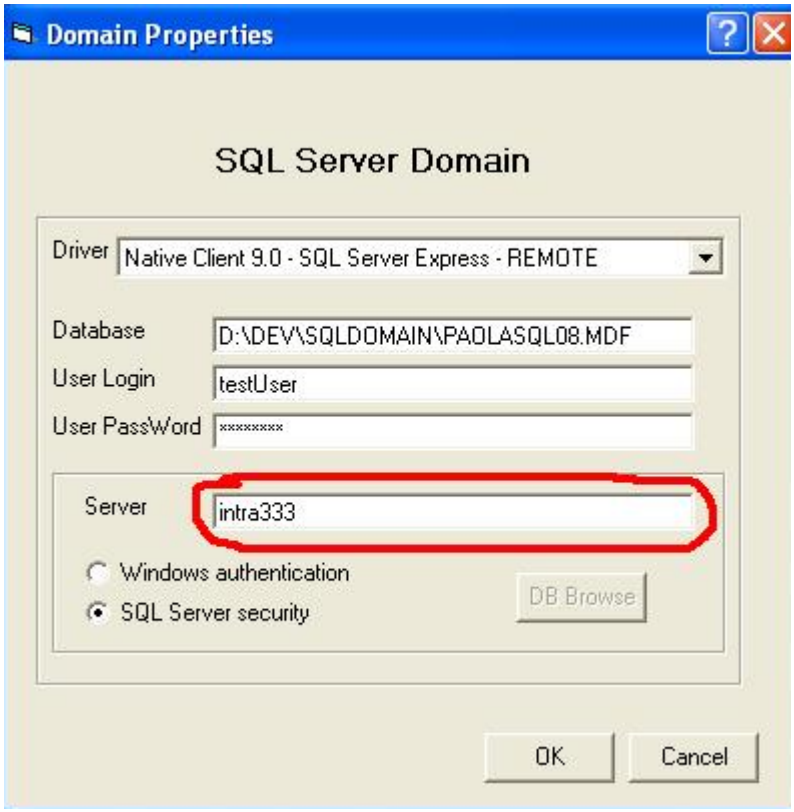
9.4. **Eurotrace database field**



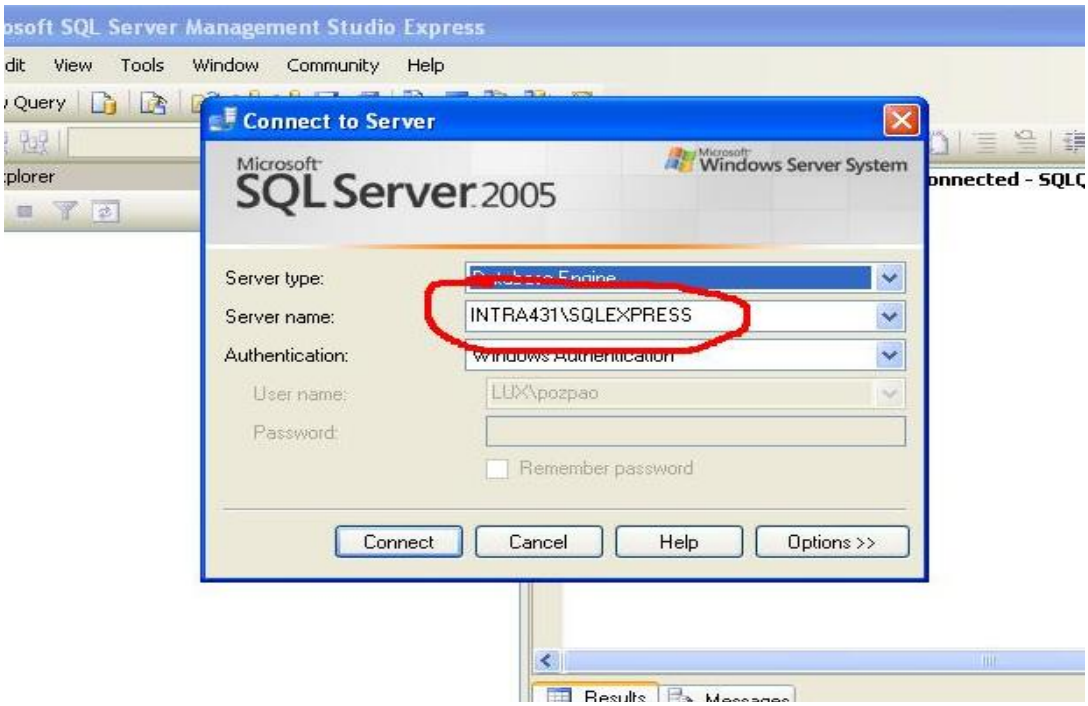
In the database field write exactly yhe name as you see it in the database list and that you already used in the query to create the user account:



9.5. Eurotrace server field



If you connect to **2005 STANDARD edition** use the same name as you see in the login window of the SQL server Management Studio when you login:



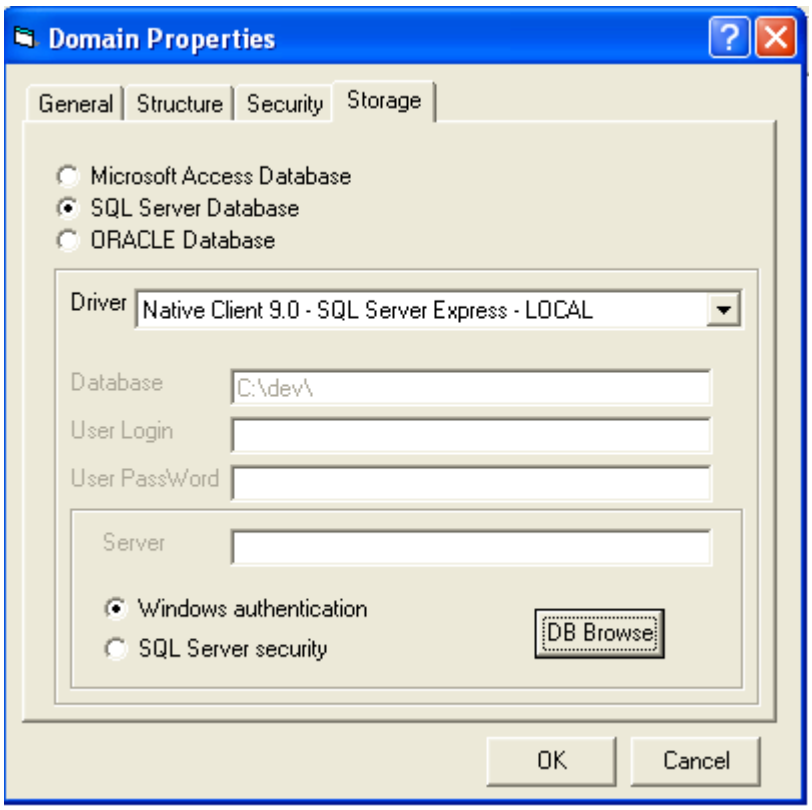
If you use EXPRESS edition write only the machine name, NOT the \SQLEXPRESS.

In this example you should just write INTRA431 for express edition but INTRA431\SQLEXPRESS for standard edition (machinName\instance).

Also if you use option 10 in the drop down menu 10 write in server the full sentence machineName\instance (i.e. intra333\sqlexpress)

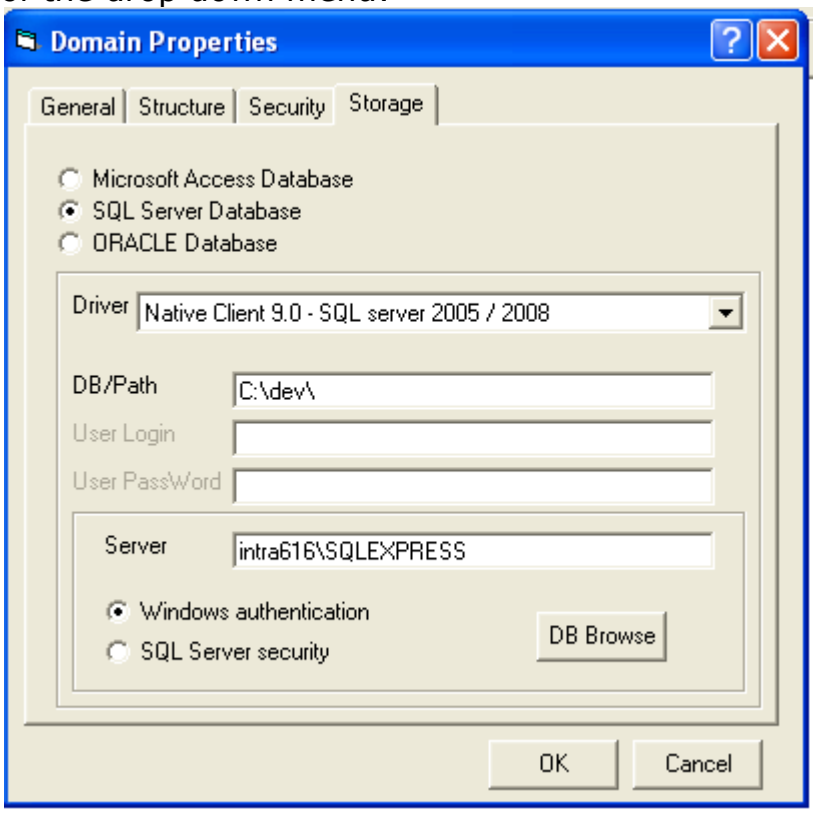
Use login name and password as defined in the remote machine.

Connections



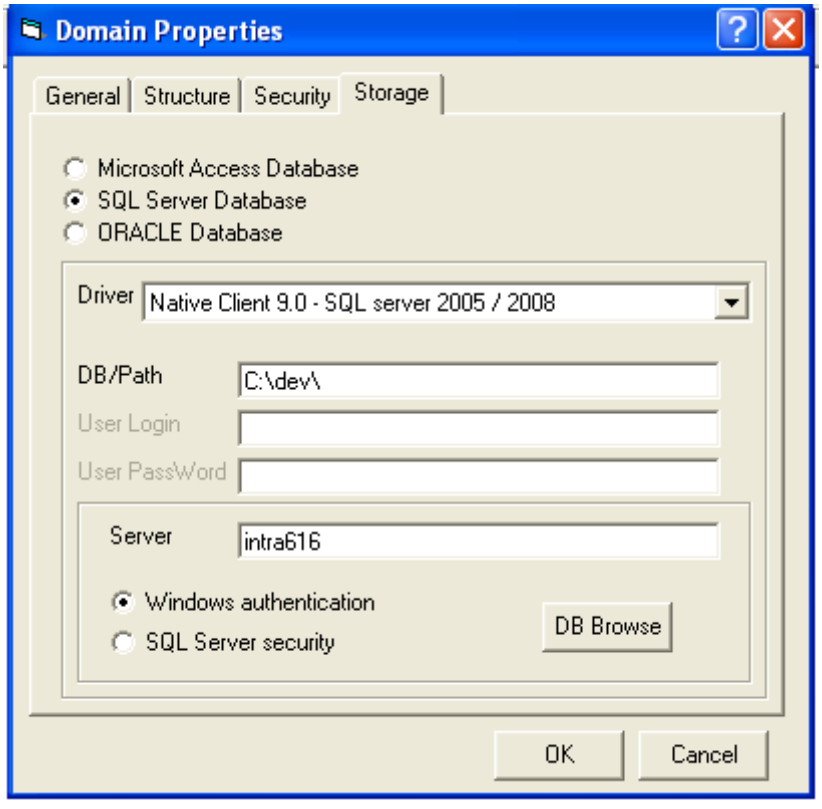
In the *Driver* drop down list select the SQL server.
For SQL Server 2005 or 2008 Express Edition local select the first option.

If this will not work, even with the **express edition** you can use the **third option** of the drop down menu:



In the *Server* field write the **hostName\SQLEXPRESS**

For SQL Standard Edition select the **third option** and write the host name in the *Server* field.



Click on the *DB Browse* button to choose the location where to save the new Domain.
Click on OK to start the conversion.

ATTENTION:
It can happen that just after the OK you get the following error message:

It shows an Operating System error message: the process cannot access the file because it is being used by another process.
It means that Eurotrace application is trying to access the new SQL DB just created too fast, that is SQL server didn't release yet the DB, still locked.
This is not a problem: just change the domain name in the Domain Properties dialog and click again on OK.

ATTENTION: Create new or convert from access a SQL domain using remote connection
When you create ET domain locally, you select a path on your machine where the domain will be created, with all the ET specific files, like domaine.str and the .bki files.

When you create a remote ET domain , the domain of course will be created on the remote machine.
This means that you have to write in the DB\path field a path existing in the remote machine, where you have admin permissions (you create a new database).
The same path (like c:\temp) has to exist on your local machine where the ET specific files (domaine.str, .bki etc) will be stored.

Infact the .mdf and .ldf files SQL server specific are stored on the remote machine, but the ET specific files will be located on any local machine from where a user will connect to the remote domain.

This is for the creation with the menu item "new".

If you convert an access domain with remote connection, the procedure is the same: the domain will be physically created in the remote machine, where you need to have admin rights to create/write/delete files, but in this case on the local machine you need the same path of the remote one, in which you should copy the domaine.str file.

All this is not needed of course if for the conversion you use on the remote machine the same path of the original access domain (in this case the original ET specific files will be used).

10.Domains conversion: From Access to SQL Server

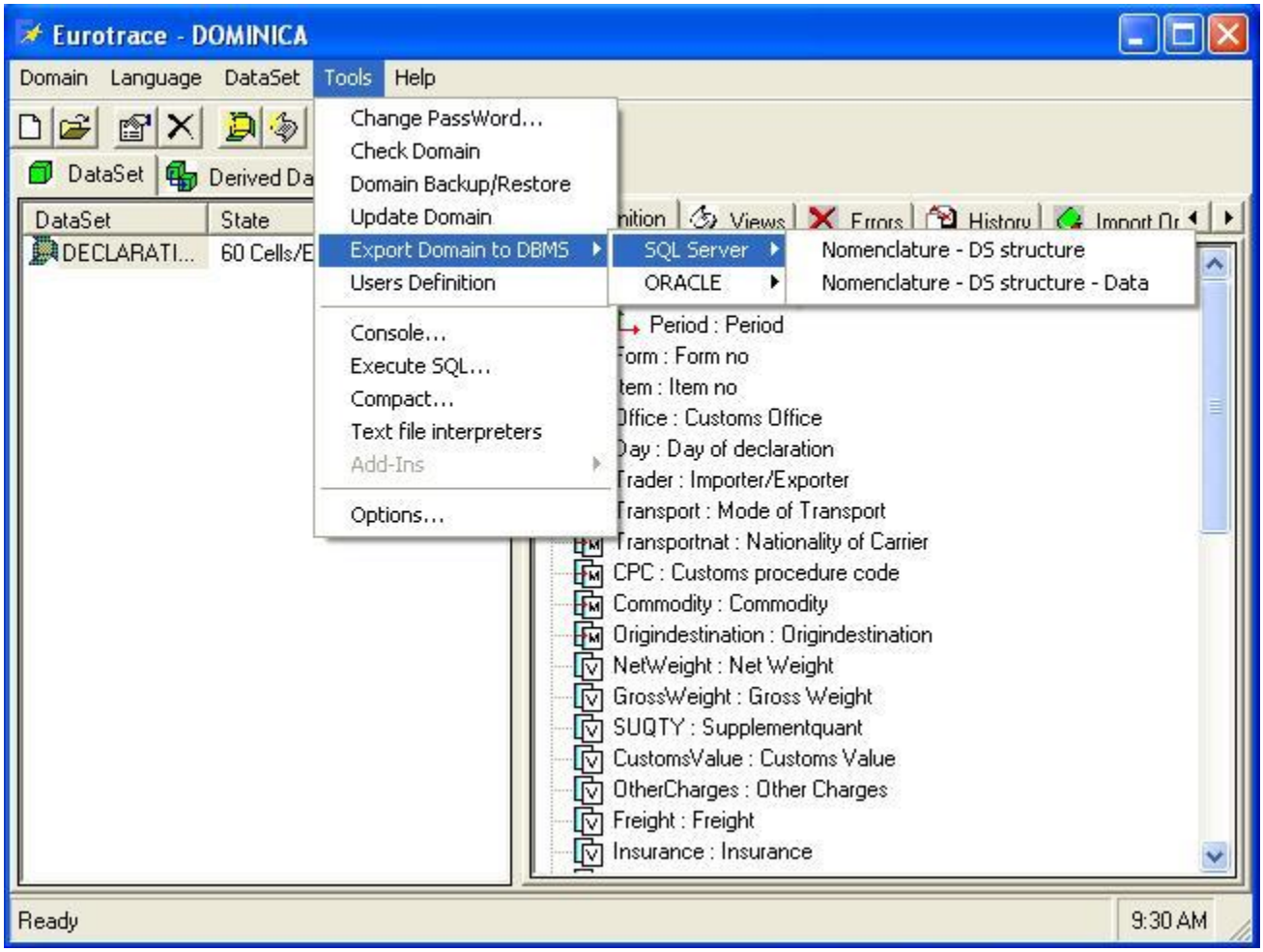
IMPORTANT NOTICE

The free SQL Server Express edition (2005 or 2008) has a **size limit of 4 gigabytes** for each domain. If you need to create / convert a big domain, you need to install a licensed version of SQL Server.

The length of domains and/or datasets names can be a problem converting a domain from Access to SQL or Oracle, because there are limits, especially in Oracle, regarding the length of names.
In SQL and Oracle all the nomenclature and datasets tables are stored in one sigle file. To make all the objects visible to the system, the table names have the following structure:
For datasets, DomainName_DATA_datasetName
For dictionaries, DomainName_DIC_dictionaryName
If you will get an error message during the conversion, you should rename in the Access domain the dataset / dictionaty name that cannot be converted, and restart the conversion procedure.
Another problem during the conversion is the **use of special characters in Access names**, like spaces, "-", "/". These characters are not accepted in SQL and Oracle, and Eurotrace convert them automatically to "_" during the upsizing process. But it could happen that Access names contains other kind of special characters ("&", "$", "*" and so on). In this case you will get an error message. You should rename in the Access domain the dataset / dictionaty name that cannot be converted, and restart the conversion procedure.

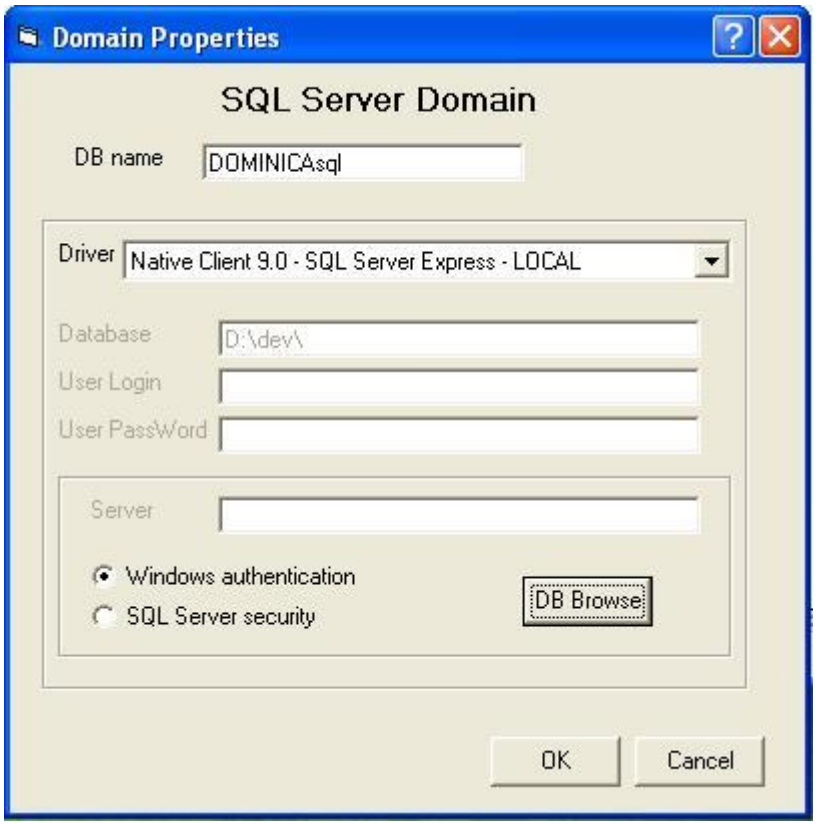
10.1. **Selection of conversion options:**

In the *Tools* menu a new item has been added: *Export Domains to DBMS*
To convert an Access domain to a SQL server domain select the subitem SQL Server.
There are two conversion options:
Nomenclature – DS structure will create a SQL Server domain with the full nomenclature (dictionaries) and Datasets with the same structure as in Access, but the DS data will not be transferred.
Nomenclature – DS structure – Data will create a SQL Server domain with the full nomenclature (dictionaries) and Datasets with the same structure as in Access, with all the data contained into access datasets.


Eurotrace - DOMINICA
Domain
Language
DataSet
Tools
Help
Change PassWord...
Check Domain
Domain Backup/Restore
Update Domain
Export Domain to DBMS
Users Definition
Console...
Execute SQL...
Compact...
Text file interpreters
Add-Ins
Options...
SQL Server
ORACLE
Nomenclature - DS structure
Nomenclature - DS structure - Data
DataSet
Derived Da
DataSet
State
DECLARATI...
60 Cells/E
Views
Errors
History
Period : Period
Form : Form no
Item : Item no
Office : Customs Office
Day : Day of declaration
Trader : Importer/Exporter
Transport : Mode of Transport
Transportnat : Nationality of Carrier
CPC : Customs procedure code
Commodity : Commodity
Origindestination : Origindestination
NetWeight : Net Weight
GrossWeight : Gross Weight
SUQTY : Supplementquant
CustomsValue : Customs Value
OtherCharges : Other Charges
Freight : Freight
Insurance : Insurance
Ready
9:30 AM

10.2. Domain Conversion

After the menu item selection, the following dialog will appear:

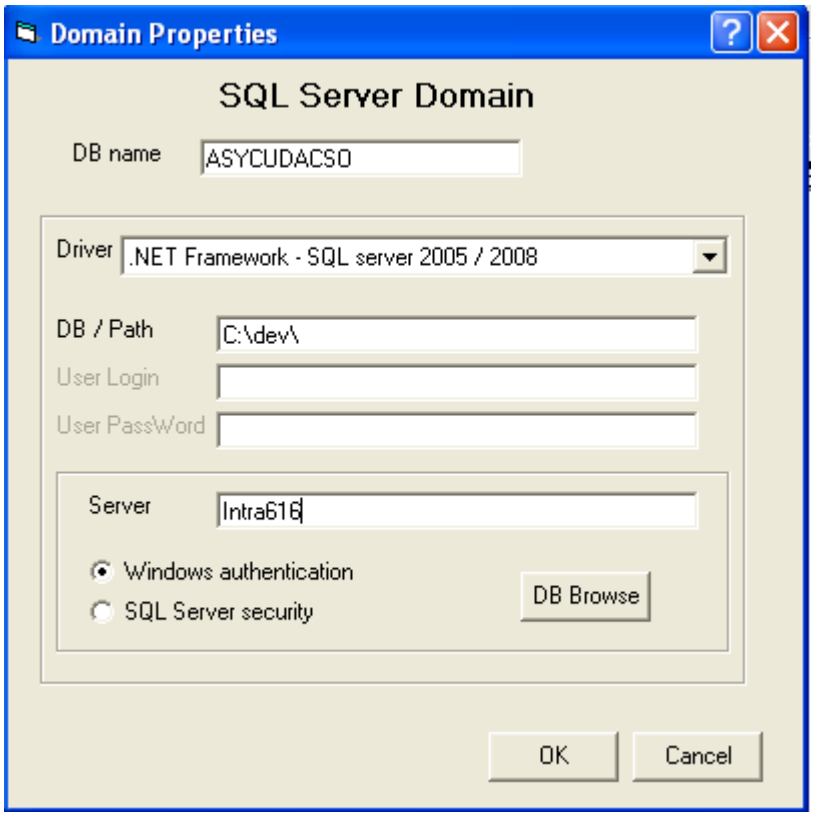


The *DB name* field will contain as default the access domain name, but it can be changed.

In the *Driver* drop down list select the SQL server used.

For SQL Server 2005 or 2008 Express Edition local select the first option.

For SQL Standard Edition select the third option and write the host name in the *Server* field.



Click on the *DB Browse* button to choose the location where to save the new Domain.
Click on OK to start the conversion.

ATTENTION:
It can happen that just after the OK you get the following error message:

It shows an Operating System error message: the process cannot access the file because it is being used by another process.
It means that Eurotrace application is trying to access the new SQL DB just created too fast, that is SQL server didn't release yet the DB, still locked.
This is not a problem: just change the domain name in the Domain Properties dialog and click again on OK.

ATTENTION: Create new or convert a SQL domain using remote connection
When you create ET domain locally, you select a path on your machine where the domain will be created, with all the ET specific files, like domaine.str and the .bki files.

When you create a remote ET domain, the domain of course will be created on the remote machine.

This means that you have to write in the DB\path field a path existing in the remote machine, where you have admin permissions (you create a new database).

The same path (like c:\temp) has to exist on your local machine where the ET specific files (domaine.str, .bki etc) will be stored.

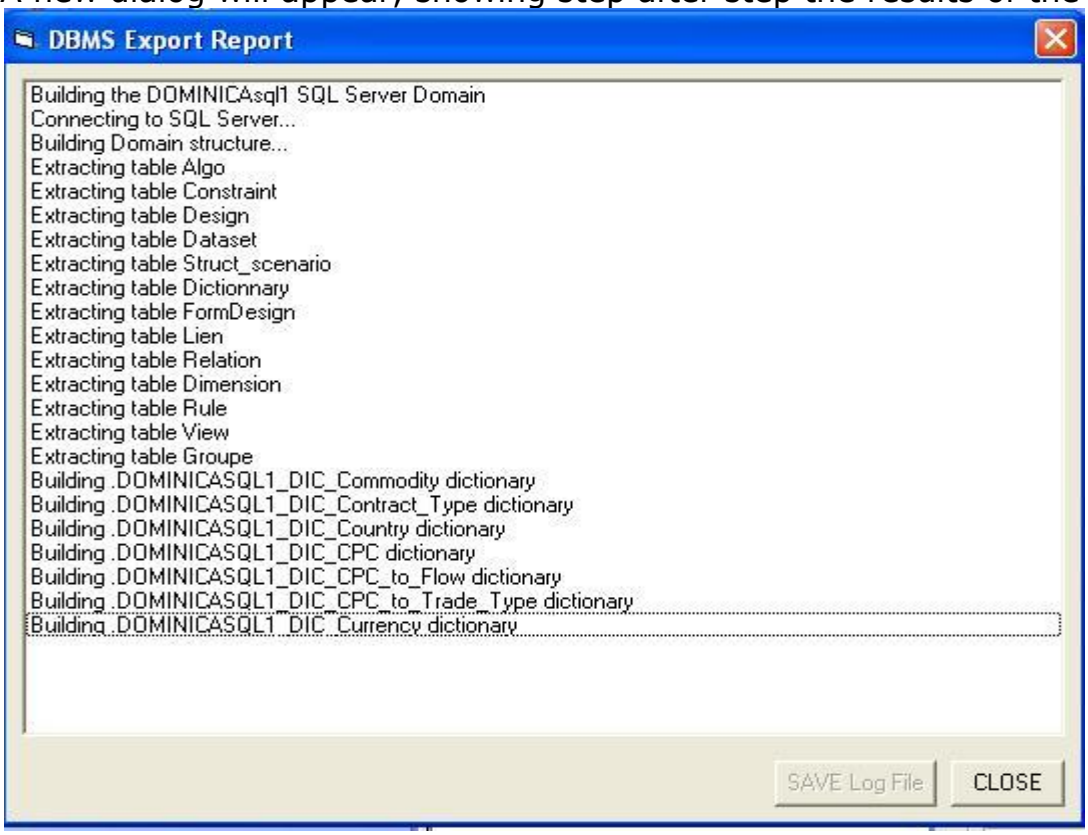
Infact the .mdf and .ldf files SQL server specific are stored on the remote machine, but the ET specific files will be located on any local machine from where a user will connect to the remote domain.

This is for the creation with the menu item "new".

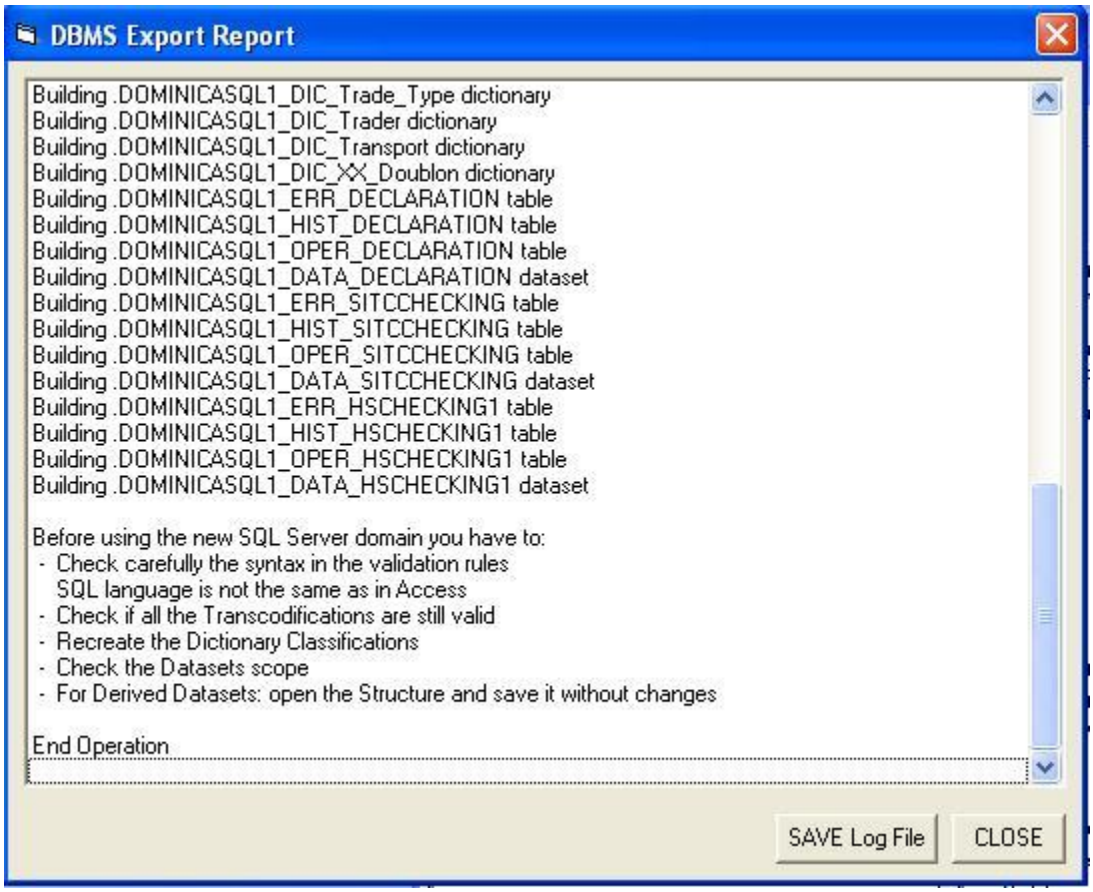
If you convert an access domain with remote connection, the procedure is the same: the domain will be physically created in the remote machine, where you need to have admin rights to create/write/delete files, but in this case on the local machine you need the same path of the remote one, in which you should copy the domaine.str file.

All this is not needed of course if for the conversion you use on the remote machine the same path of the original access domain (in this case the original ET specific files will be used).

A new dialog will appear, showing step after step the results of the conversion.



At the end of the conversion process (that can take several time, depending on the datasets size), the report dialog shows the following messages:



The conversion cannot be fully automatic. Some steps must be completed manually:

- Check carefully the syntax in the validation rules: the SQL language is not the same as in Access
- Check if all the Transcodifications are still valid
- Recreate the Dictionary Classifications
- Check the Datasets scope
- For Derived Datasets: open the Structure and save it without changes.

11. Domains conversion: From Access to Oracle

11.1. Selection options

To convert an Access domain to an Oracle domain select the menu item *Tools - Export Domains to DBMS - Oracle*.
There are two conversion options:
Nomenclature – DS structure will create an Oracle domain with the full nomenclature (dictionaries) and Datasets with the same structure as in Access, but the DS data will not be transferred.
Nomenclature – DS structure – Data will create an Oracle domain with the full nomenclature (dictionaries) and Datasets with the same structure as in Access, with all the data contained into access datasets.

11.2. **Domain Conversion**

After the menu item selection, the following dialog will appear:

The *Domain* field will contain as default the access domain name, but it can be changed.
Oracle Server address: the Oracle Service name used for the Comext database in the server machine.
Oracle UserID: user name for the Oracle connection
Oracle User's password: password for the Oracle connection
Click on the *Parameters* button to select the Tablespace to be used for the new Oracle tables.
Click on OK and start the conversion.

It will appear the same dialog discussed in the SQL server section, showing step after step the results of the conversion.
At the end of the conversion process (that can take several time, depending on the datasets size), the report dialog will inform the user that the conversion cannot be fully automatic. Some steps must be completed manually:

- Check carefully the syntax in the validation rules: the SQL language is not the same as in Access
- Check if all the Transcodifications are still valid
- Recreate the Dictionary Classifications
- Check the Datasets scope
- For Derived Datasets: open the Structure and save it without changes.

12. Web Domains Management

The main objective of this section is to explain the management of Eurotrace Domains in order to be accessed by the WEB Comext analytical Interface integrated with Easy Comext.

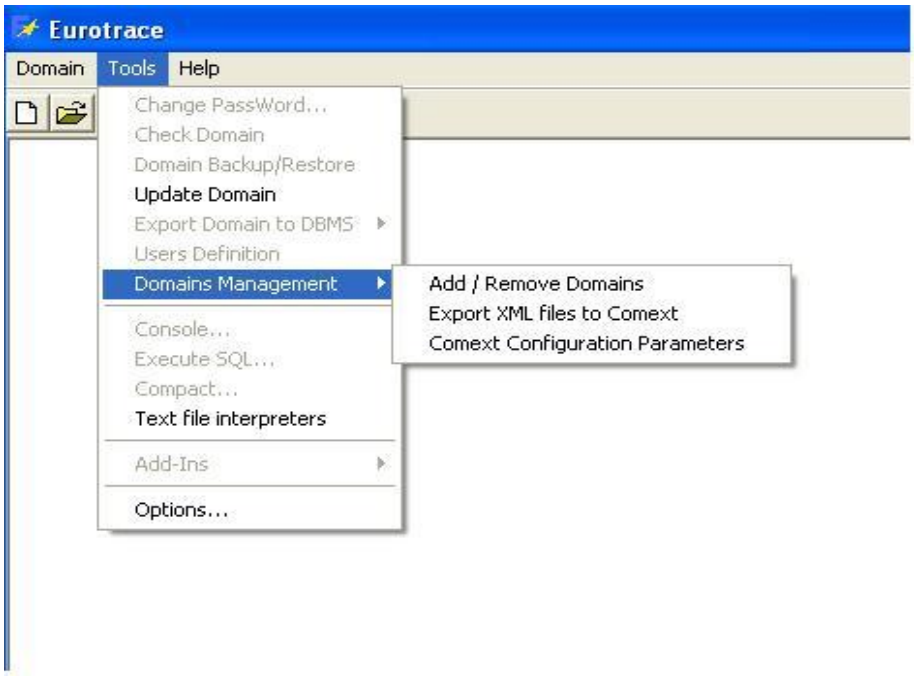
IMPORTANT NOTICE
Eurotrace application doesn't modify directly the Comext System application DataBase. All the settings related to show/ hide domains or datasets in Eurotrace, are not immediately visible in the Comext System. Eurotrace generates XML files with all the new informations, then the XML file will be sent to Comext System Database to synchronize the two applications.

The Comext System database is an Oracle DB, and **the length of domains and/or datasets names can be a problem** creating an XML file because there are limits regarding the length of names.

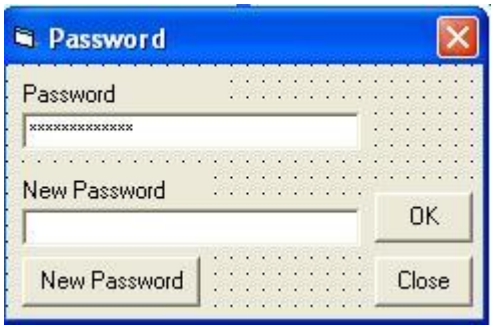
If you will get an error message in the XML log file, you should rename in the Access domain the dataset / dictionaty name that is causing the problem, and restart the all procedure: create a new XML file with the *Update* option (see *4.3 Update Domains*) and send again the XML file.

12.1. Menu and login

In the Eurotrace *Tools* menu has been added the new item **Domains Management**



The new item is only available for Eurotrace Administrator. In order to access each one of the three subitems a login is required.



The default password is "***nontelodico***".

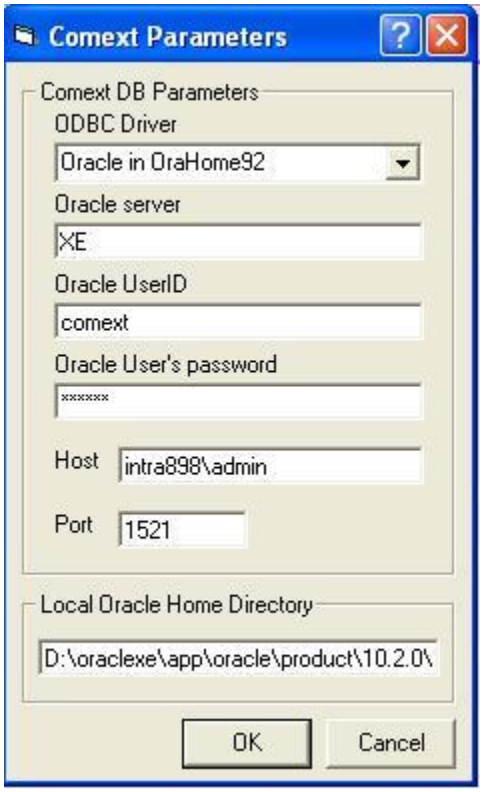
The password can be changed clicking on the *New Password* button.
The *Comext Configuration Parameters* item is used to setup the connection parameters to the Oracle Comext Database to allow the Easy Comext / Web Analytical connections to Eurotrace Domains.

The *Add / Remove Domains* item is used to set the Eurotrace domains and datasets we want to make visible via Web. When we set / change available domains / datasets, the changes are not immediately known by Comext. In order to make these changes available, we have to synchronize Comext setting with Eurotrace settings.

In order to synchronize the applications, we have to click on the *Export XML files to Comext*.

12.2. Comext configuration parameters

Clicking on the *Comext Configuration parameters* menu item the following dialog will appear:



The *Comext DB Parameters* section is related to the Oracle Comext Database that can be local or remote.

ODBC driver: select from the drop-down list the ODBC driver you want to use to set up the connections
Oracle Server: the Oracle Service name used for the Comext database in the server machine.

Oracle UserID: user name for the Oracle connection

Oracle User's password: password for the Oracle connection

Host: *(host name)* is the host for the Oracle server (remote or local), and *admin* is the name of the folder (accessible from any client) containing the oracle server configuration files (tnsnames.ora and listener.ora).

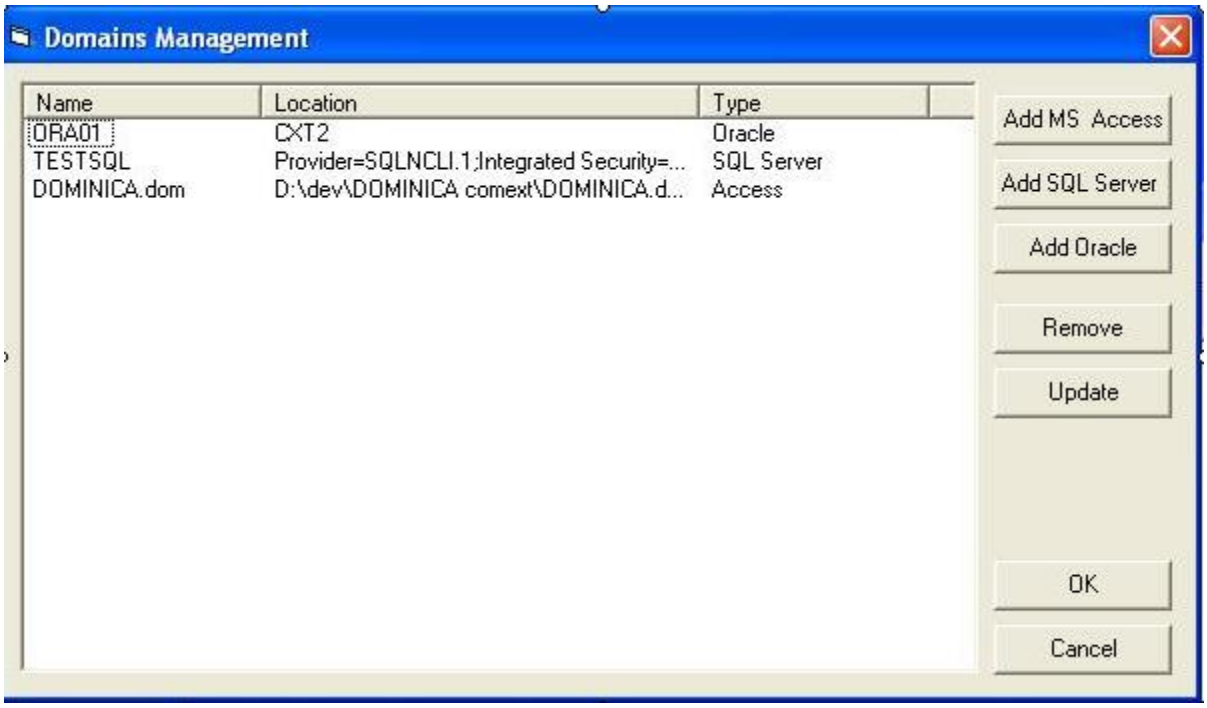
Port :) is the port number for the Oracle server (remote or local).

Local Oracle Home directory: the Oracle Home directory in the local client machine

13. Doimain Management

13.1. Add Domains

Clicking on the *Add / Remove domains* menu item the following dialog will appear:

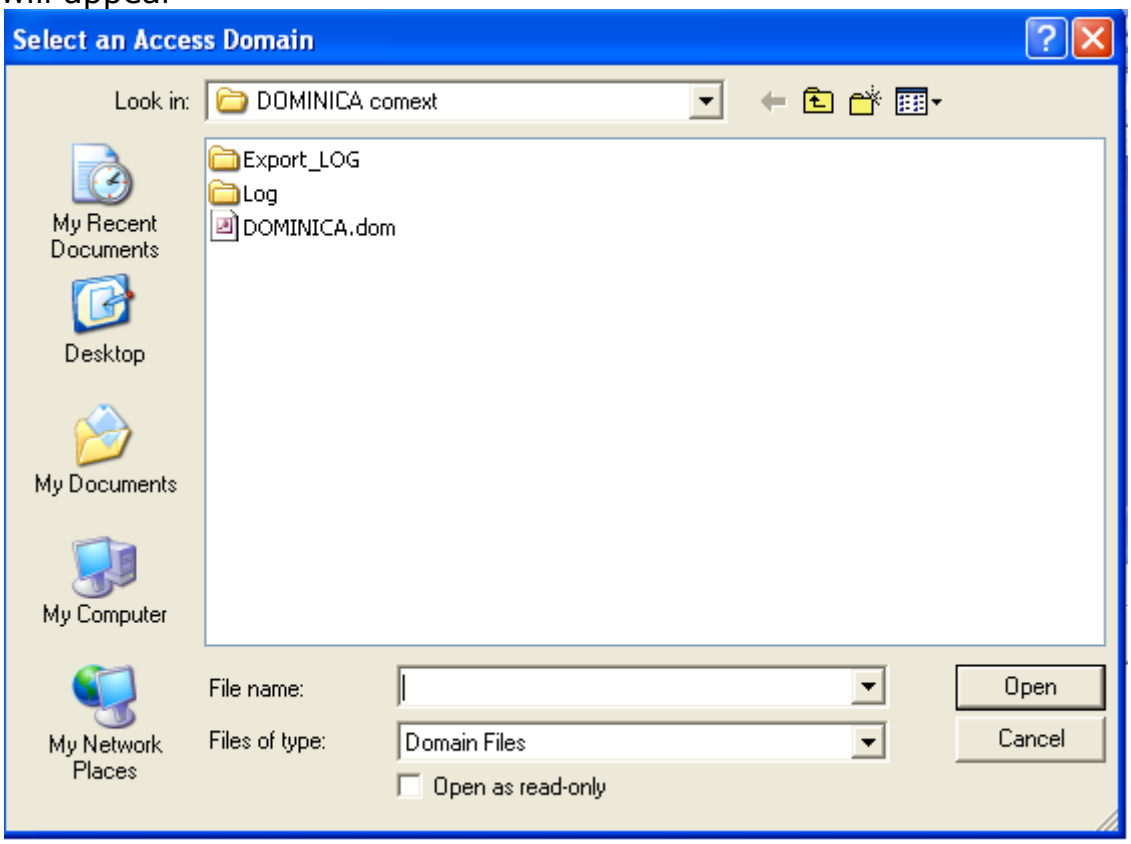


For each domain are available the following informations:
Name: domain name

Location: for Access domain (always local) the path on the local machine to the domain, for SQL server domains the connection string with host and path informations, for Oracle domains the server (local or remote).

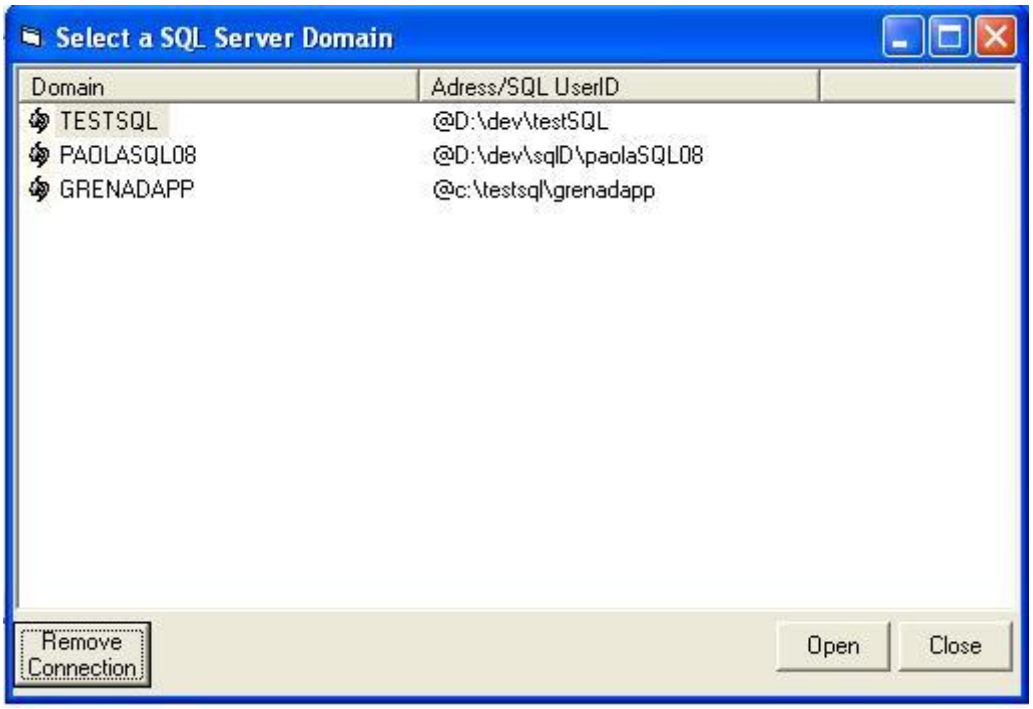
Type: Oracle, SQL Server or Access.

To add an Access domain click on the *Add MS Access* button. The following dialog will appear



To navigate on your local machine and select the Access domain you want to make visible.

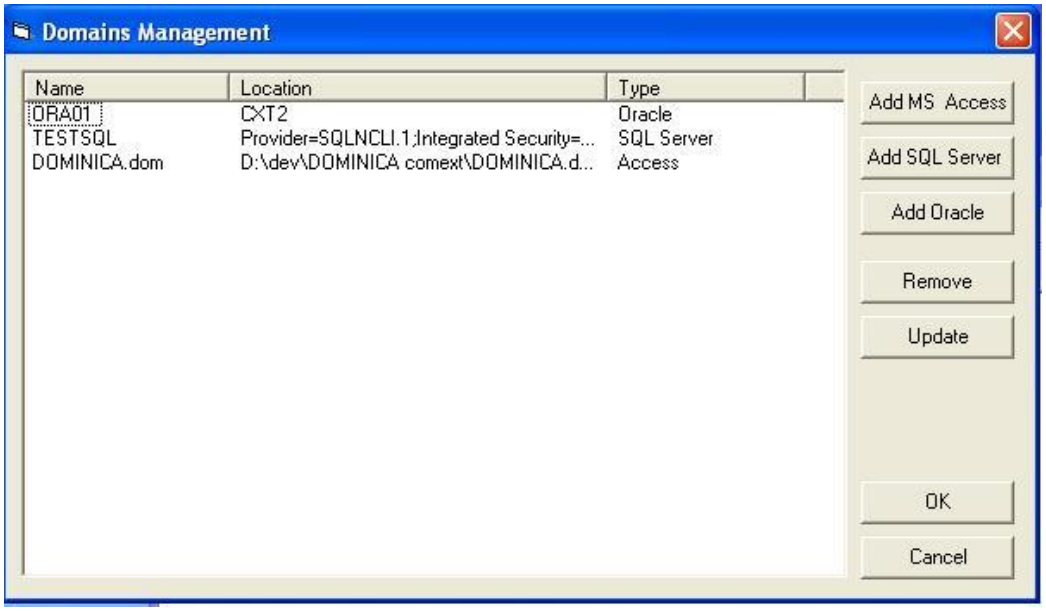
To add a SQL server domain click on the *Add SQL Server* button. The following dialog will appear



With the list of Eurotrace SQL Server domains available from your local machine. To add an Oracle domain click on the *Add Oracle* button. It will appear the same dialog as for SQL Server with the list of Oracle domains available from your local machine.

13.2. Remove Domains

To remove a domain from your list just select the domain you want to remove in the *Domains management* dialog and click on the *Remove* button.



13.3. Update Domains

The *Update* button must be used when in a domain already set as visible one / more of the following changes have been done:

new datasets have been created

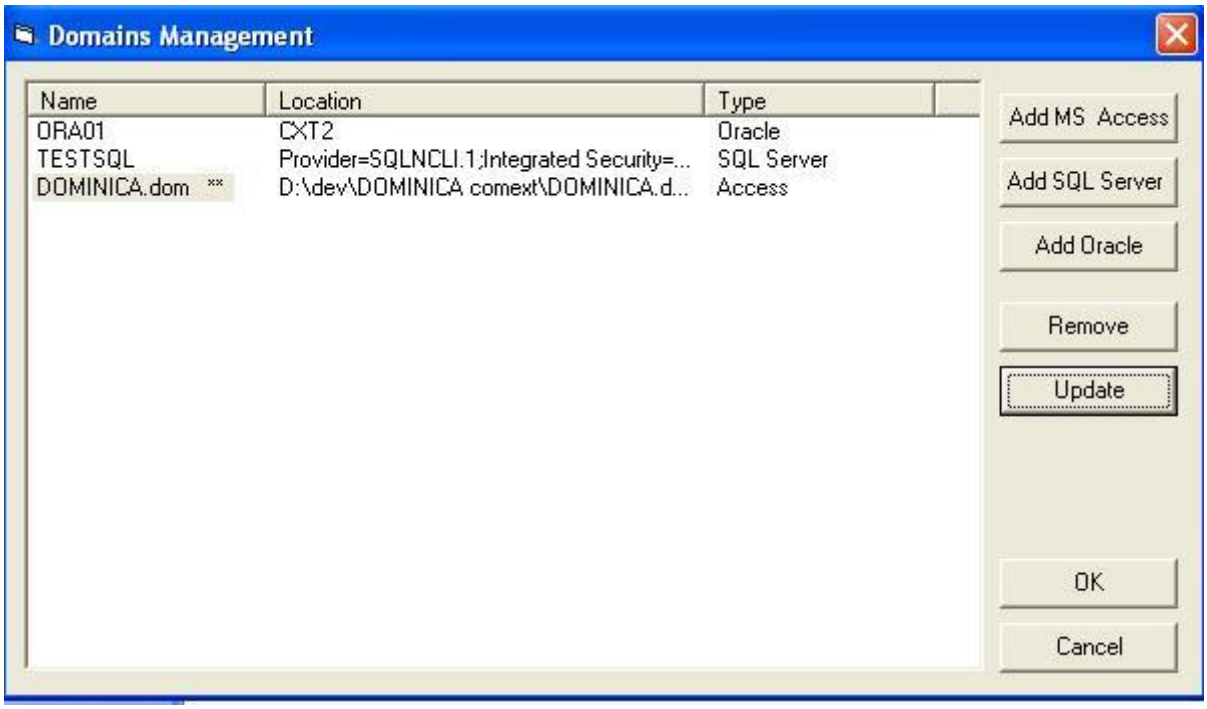
datasets have been deleted

datasets structure has been changed

the list of available datasets have been changed (added or removed)

in an Access domain have been imported new data into a multifile dataset visible.

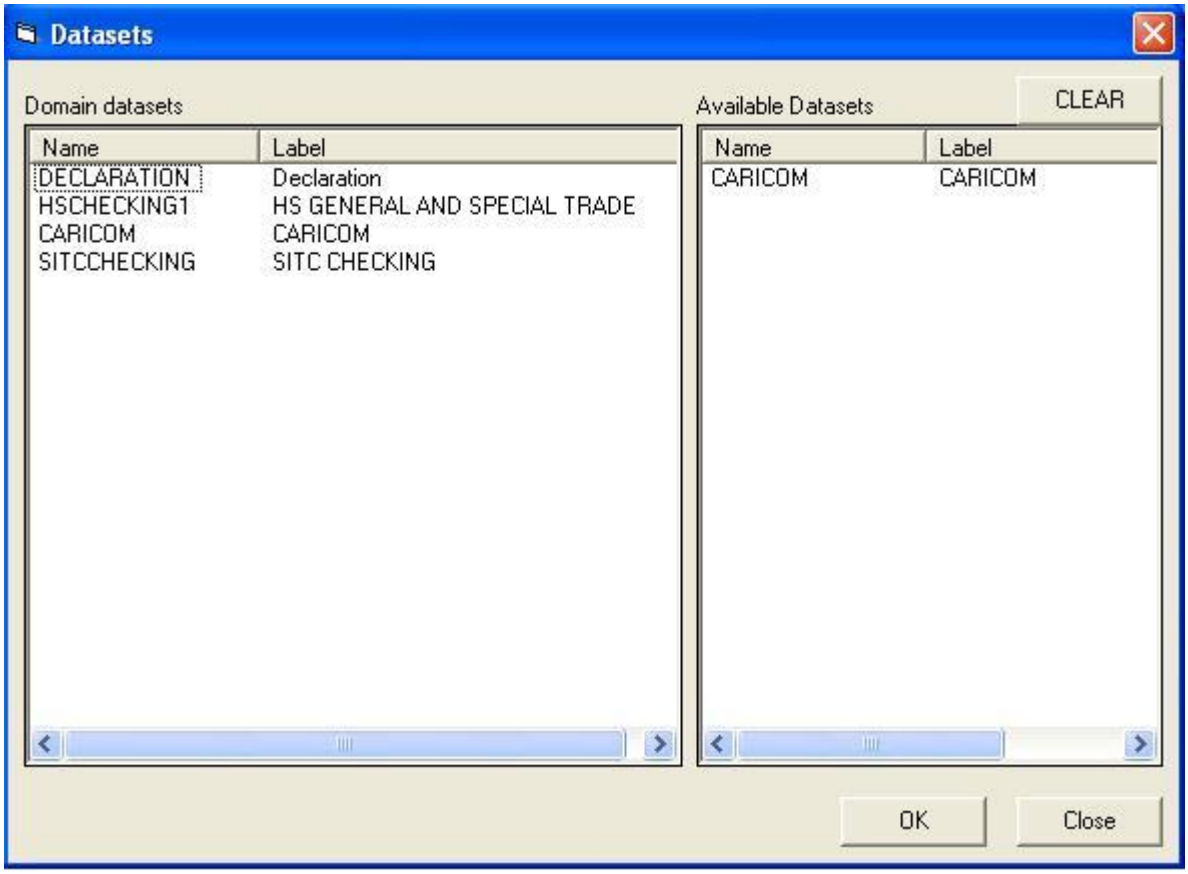
The domain to be updated will be marked as **



Then click on OK to generate the new XML file that will be used to synchronize Eurotrace domains with the Comext application.

13.4. Datasets management

To set the list of datasets available for each domain, double click on the domain name in the *Domains Management* dialog.
The following dialog will appear:



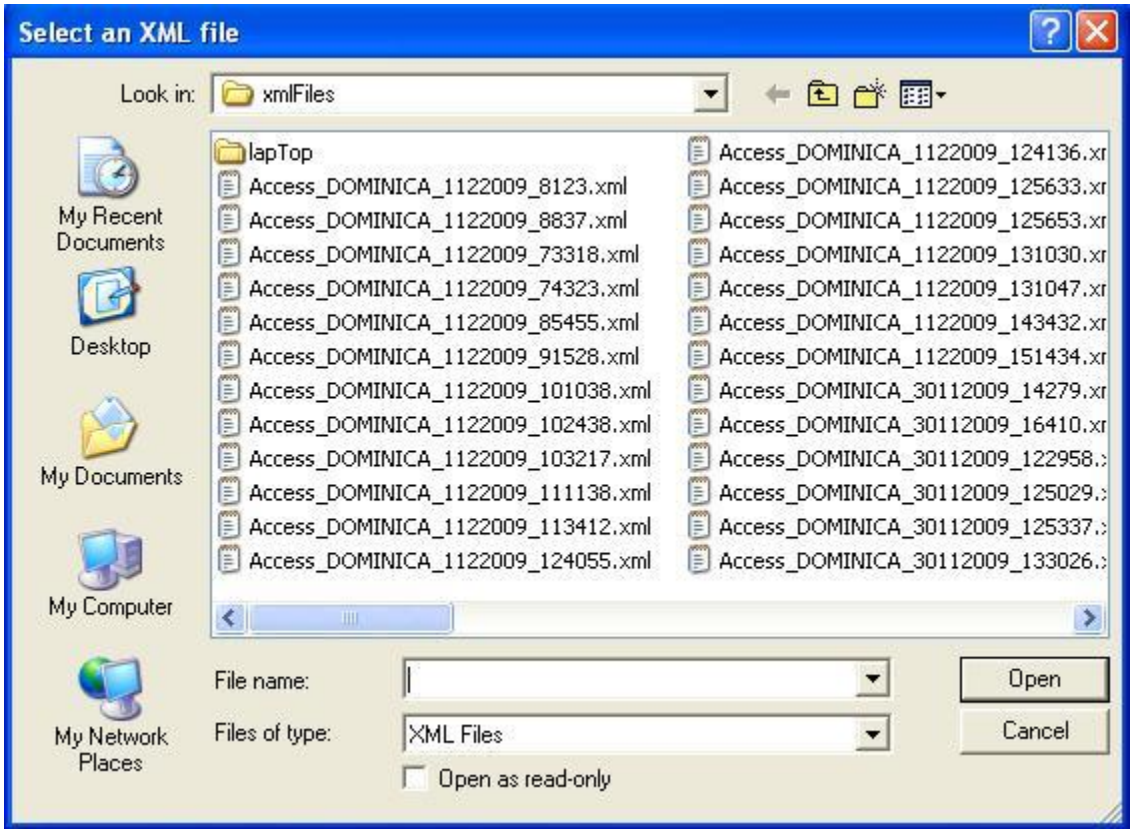
On the left side there is the list of all the domain datasets, on the right side the list of the datasets available for public access.
To move the datasets from one list to the other, just double click on the dataset name.

Closing the Add/Remove domains window you get the following message:

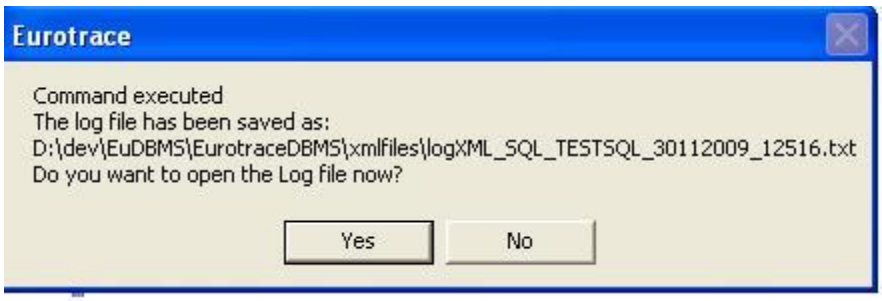
Click on YES and the oracle Listener will be restarted automatically.

13.5. Synchronization of Comext DB with Eurotrace domains

Clicking on the *Export XML files to Comext* menu item the following dialog will appear:

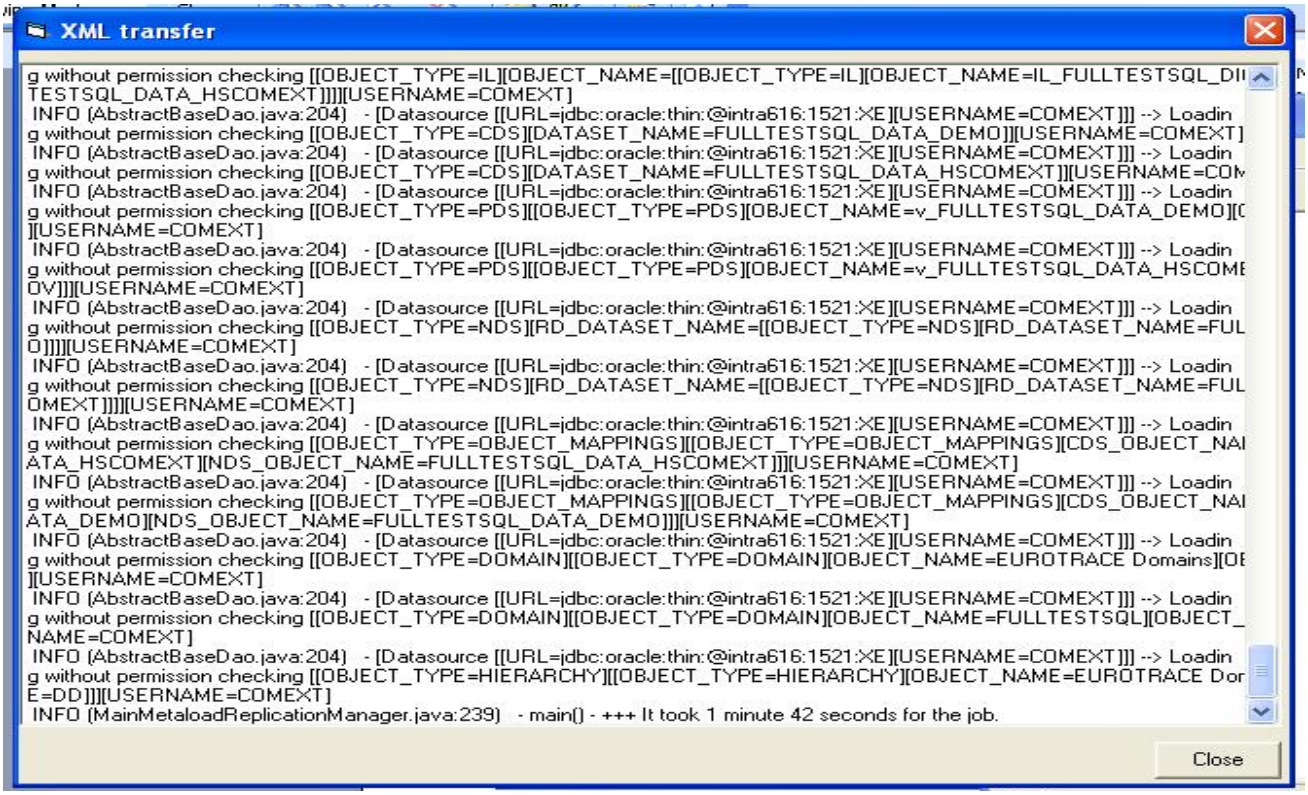


You can see the list of the xml files generated to synchronize Eurotrace with Comext, into the folder *xmlFiles* in the directory where is installed the Eurotrace application. Select the file you just generated and click on OK.
We recommend to delete or move to another location the XML file after the synchronisation is succesfully completed.
At the end of the synchronisation procedure, the following message will appear:



It contains the name and path of the log file, where you can check eventual transfer errors.

It contains the name and path of the log file, where you can check eventual transfer errors.
Click on YES and a new window with the transfer result will open.



Check the end of the log file. The transfer is OK only if at the end of the file you get the following message:

Main() - +++ It took xx minutes xx seconds for the job

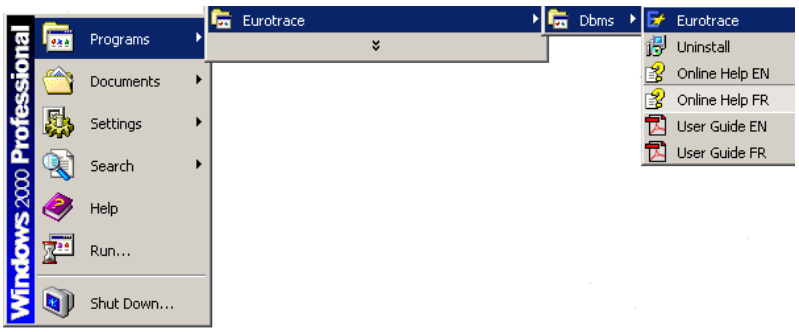
If you don't see this message, the transfer was not OK. Send the log file to the tachnical assistance.

If the transfer is OK, closing the log window you get the message:

Infact if the Comext System was already running on your machine, to see the new updates you must restart the Comext System and your internet browser.

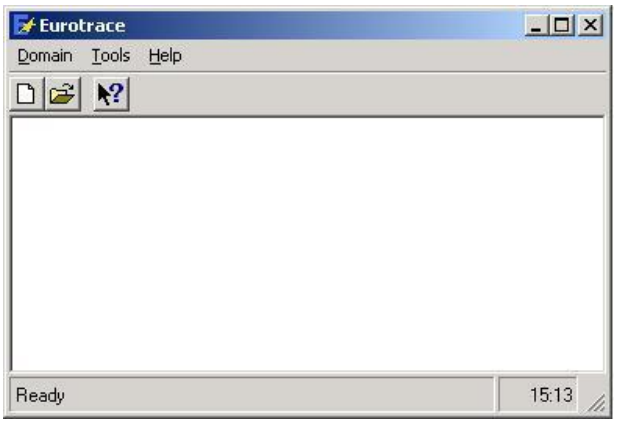
14. Starting EUROTRACE

Start EUROTRACE by clicking on the **'Start'** button, Programs, EUROTRACE, and click on the **'EUROTRACE'** icon.



This program group could be different depending on the name you specified during the EUROTRACE installation.

When you start EUROTRACE, you will see the window shown below.

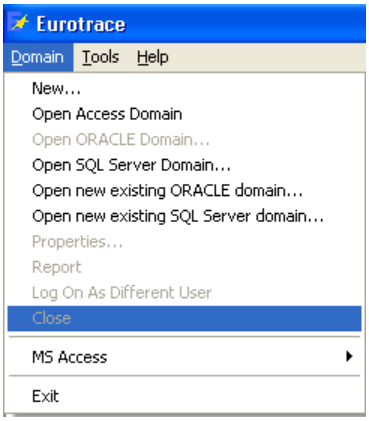


The application begins with an empty screen and you must first create a new EUROTRACE Domain or open an existing EUROTRACE Domain to continue.

To navigate through around the interface you use shortcut menus, drop down menus and buttons and different Tabs. Before covering these in detail we will consider different ways of opening a domain.

If you have never used the software before you will want to create a new domain.

To create a new domain



Choose the **Domain menu** and then the option called **New...**

According to the DBMS which will be use for the data storage, parameters will be set by the user.

The description of the parameters are descibed in the section 4 of this user guide.

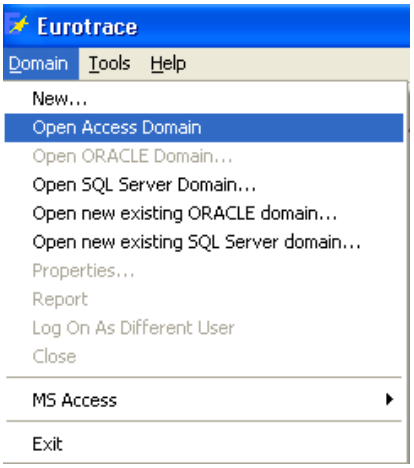
To open an existing domain

The procedure to open an existing domain will also be linked to the DBMS in use.

14.1. To open an existing MS ACCESS Domain

To open an existing MS ACCESS domain, the procedure will be the following:

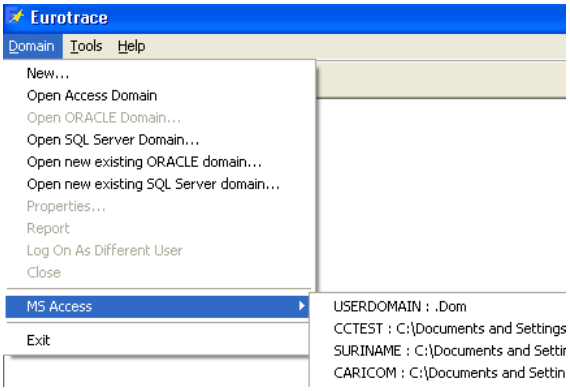
Choose the **Domain menu** and then the option called **'Open Domain'.** EUROTRACE Domain files have the '.dom' extension.



From the dialog box navigate to and then select a EUROTRACE Domain and click on the 'Open' button.

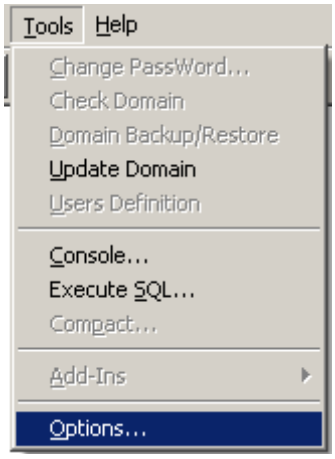
To access a recently opened domain

Choose the **Domain menu** and then the option called **'Recent'.**

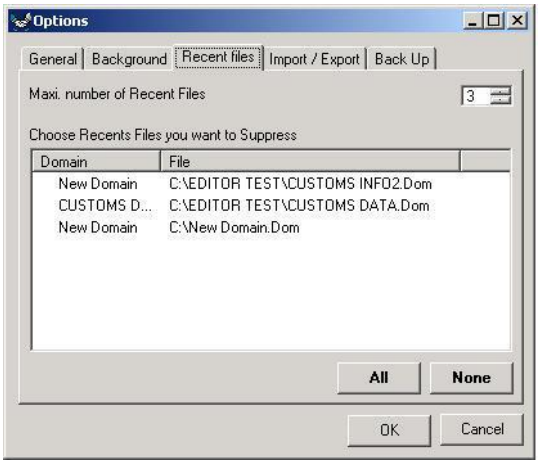


Select a recently opened domain from the list.

You can set the length of the list of recently opened files that are displayed in this list to a maximum of eight by using the Tools menu and then the menu option called **'Options'**.



You then use the TAB called **'Recent Files'**.



The list length of recent files in the list corresponds to the number in the box at the top right corner of this screen entitled 'Maxi number of recent Files'**.**

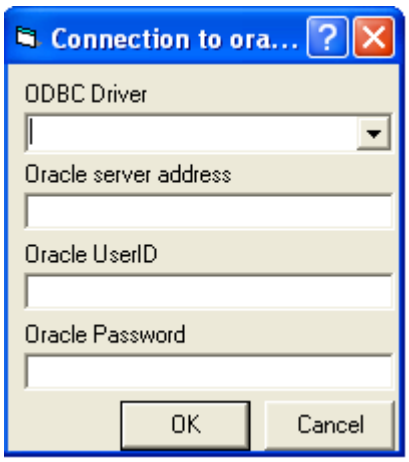
Once you've opened or created a domain you can move around within it.

14.2. To open an new existing ORACLE Domain

An existing ORACLE Domain is a domain which has been created by another user and never opened by the current user.

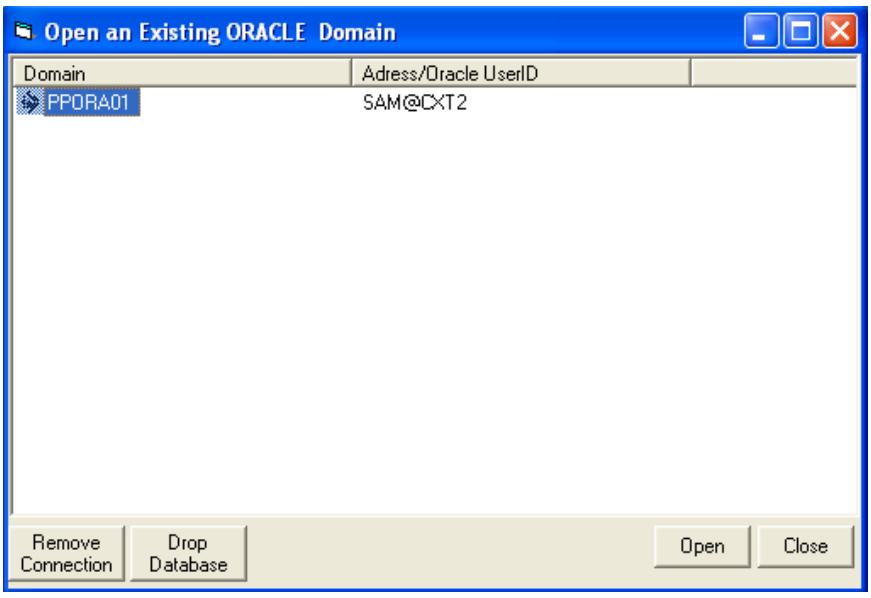
To open a new existing Oracle domain that has not yet been opened, select "open new existing ORACLE Domain" from the "Domain" menu.

user will have to specify the Driver to use as well as the name of the database (where the dedicated table space is available), the user ID and the password for the connection to the database.



Click the "OK" button to continue. A list of available Oracle domains will be displayed for you to choose from.

To open an existing Oracle domain that has previously been opened by the current user (Eurotrace application), user will just have to select "Open ORACLE domain" from the menu. A list of domains will be opened to choose from.



Two buttons are available:

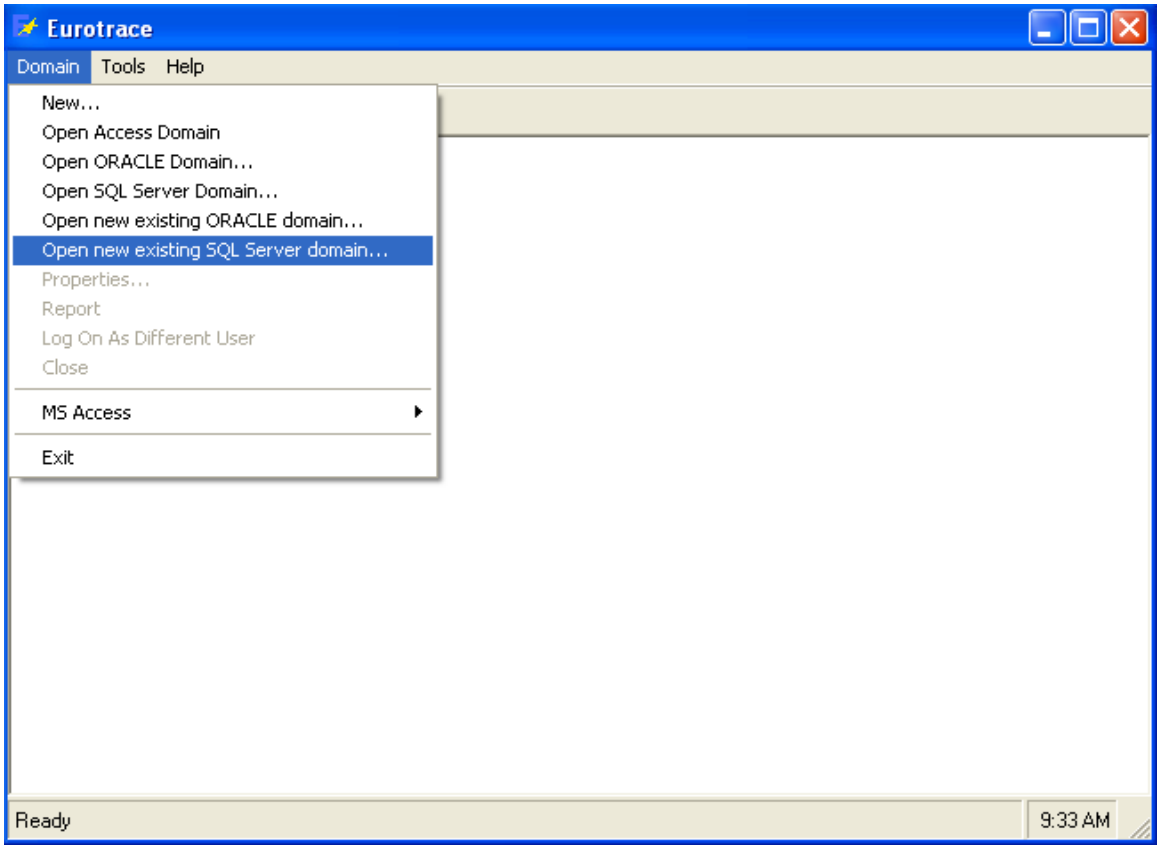
.

Remove Connection: Remove the connection to the selected domain from the list.

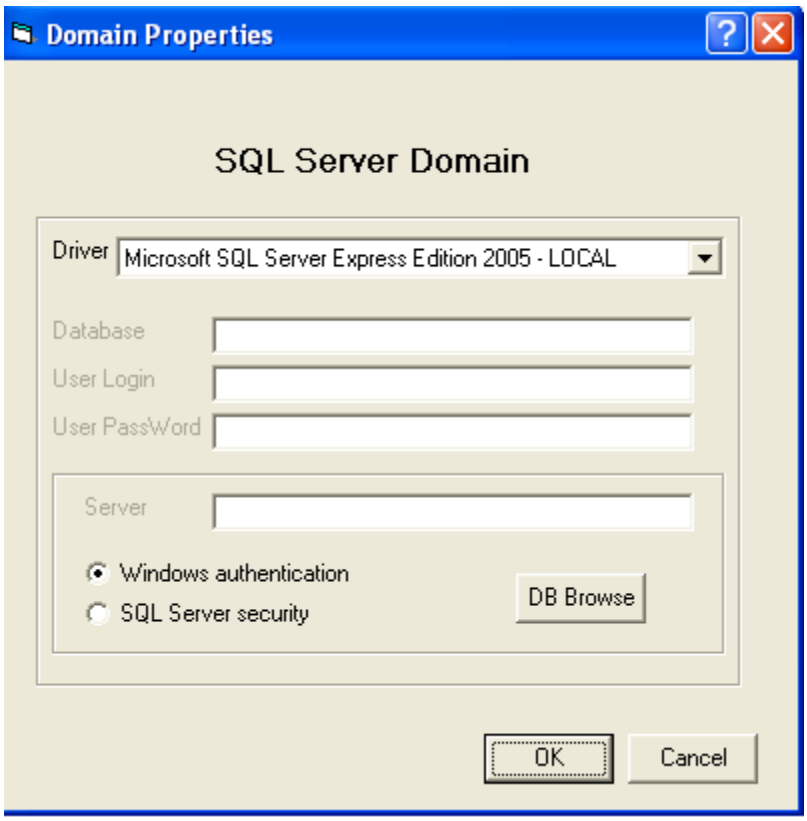
Drop Database: Remove the connection to the selected domain from the list and delete all data of the selected domain in Oracle.

14.3. To open an new existing SQL SERVER Domain

To open an existing SQL Server domain that has not yet been opened, select "open new existing SQL Server Domain" from the "Domain" menu.



User will have to provide all the required information about the database (server local or remote, database name or path) and the connection mode (Window authentication or SQL Server security).



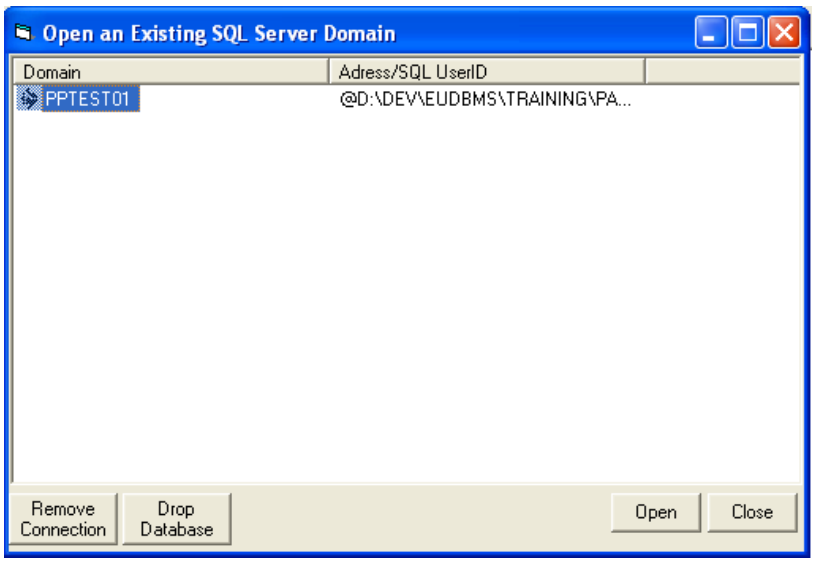
To open an existing SQL Server domain that has previously been opened by the current user, select "Open SQL server domain" from the menu. A list of domains will be opened to choose from.

Two buttons are available:

.

Remove Connection: Remove the connection to the selected domain from the list.

Drop Database: Remove the connection to the selected domain from the list and delete all data of the selected domain in SQL Server.



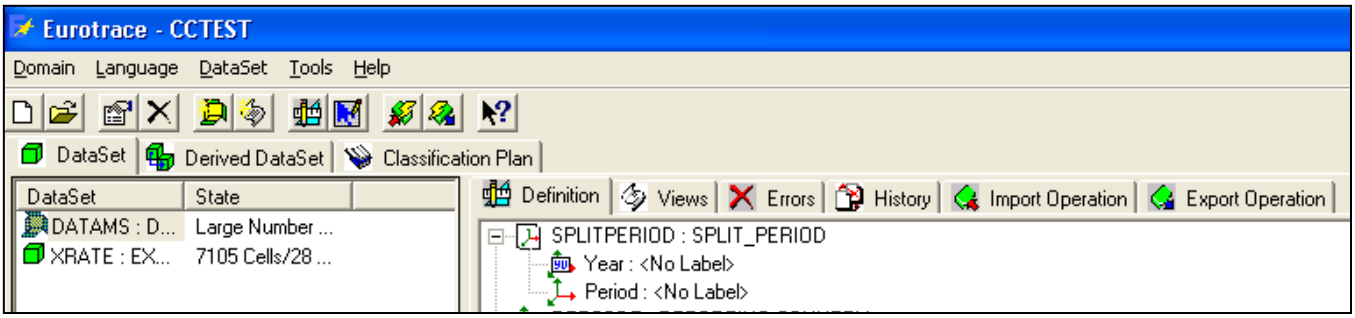
14.4. Moving around the different parts of a domain

The main EUROTRACE interface is made up of different views of different parts of a domain. Each part of a domain has a coresponding 'TAB' which is used to select the view of that particular part of the domain.

The above is central to understanding how to use the software as each tab has its own associated functionality.

Understand what these different tabs do so you can move around within your domain and access the various different types of functionality which addresses the different parts of your domain.

The initial screen is divided into two sides a left and a right hand side.



On the left side there are three main tabs which allow you to switch between the views of the two types of Datasets (normal and derived datasets), or Classification Plans. We will start our quick tour of the Eurotrace interface by considering each of these three Tabs.

The Dataset Tab

When the Dataset Tab is active, the left side of the window will display a list of datasets, and you will have **seven** tabs on the right that display the definitions of each dataset as well as tabs for the extraction views, error, history and import / export operations.

Definition Tab

A dataset **Definition** contains the structural specification of the dataset.

View Tab

Views are selections of all or part of a dataset defined for exportation.

The Error Tab

The **Error Tab** contains a list of errors that occurred while processing (importing and exporting) data.

History Tab

The **History Tab** allows you to view and process relocated and deleted data.

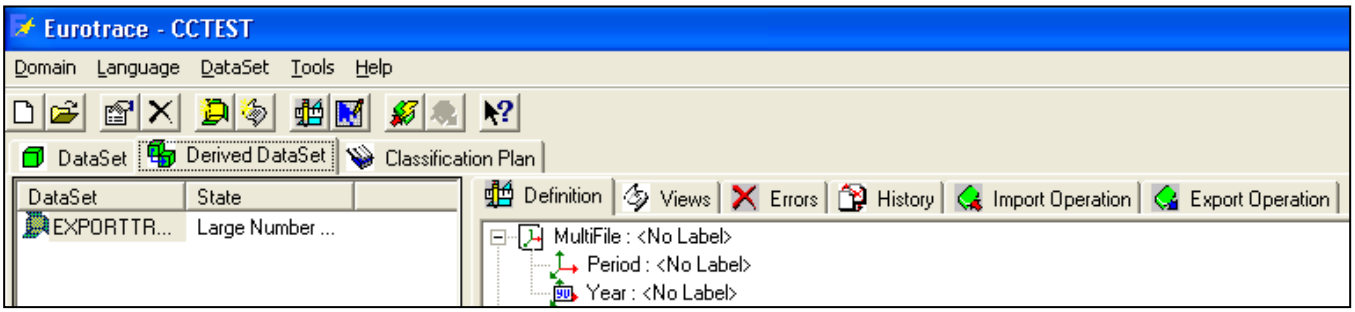
Import Operation and Export Operation Tabs

The **Import Operations** and **Export Operations Tabs** contain a list of operations performed on the dataset with information on the results, the date of the operation and how many records were affected.

The Error, History, Import Operation and Export Operation Tabs are described in more detail in **Chapter 15.**

14.5. The Derived Dataset Tab

This tab lists the derived datasets. These are datasets that are wholly or in part, based upon other previously defined datasets. The functionality and right hand side of the screen in the derived dataset tab, are similar to the dataset tab (see above).

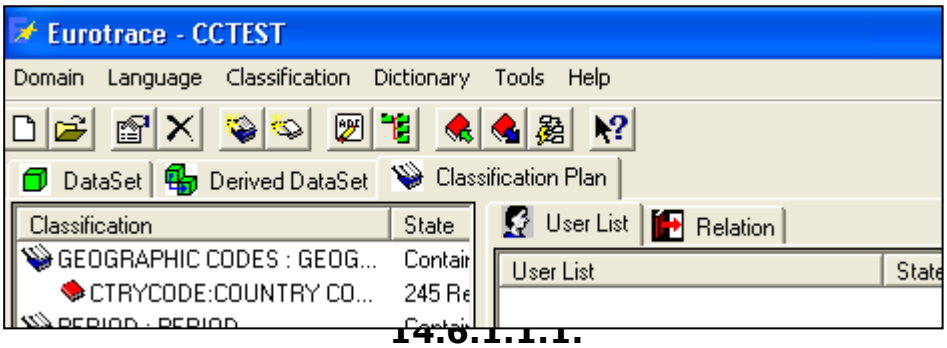


Some features for derived datasets are not necessary for example validation, because the validation can be applied to the original dataset upon which, the derived dataset is based.

So although very similar in form and function you will see some minor differences between datsets and derived datsets.

14.6. The Classification Plan Tab

When the Classification Plan Tab is active, the left side of the window displays a list of dictionaries. The right side displays the User List Tab and Relation Tab.



14.6.1.1.1.

14.7. The User List Tab

The **User List Tab** lists custom user defined views of **dictionaries**.

14.8. The Relation Tab

The Relation Tab lists relations between dictionaries defined by the user.

14.9. Shortcut menus, drop down menus and buttons

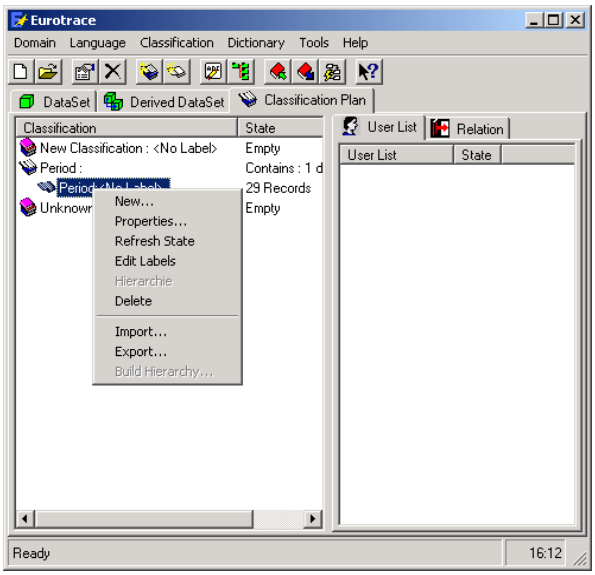
How to Access the Short Cut Menus

Shortcut menus have been implemented for all the different sections of the EUROTRACE interface, they can be accessed by right-clicking on the screen. These menus change dynamically depending on where in the screen you click. Sometimes when you right click and access a menu option a new screen will be displayed. These new screens also usually include further right click short cut menus.

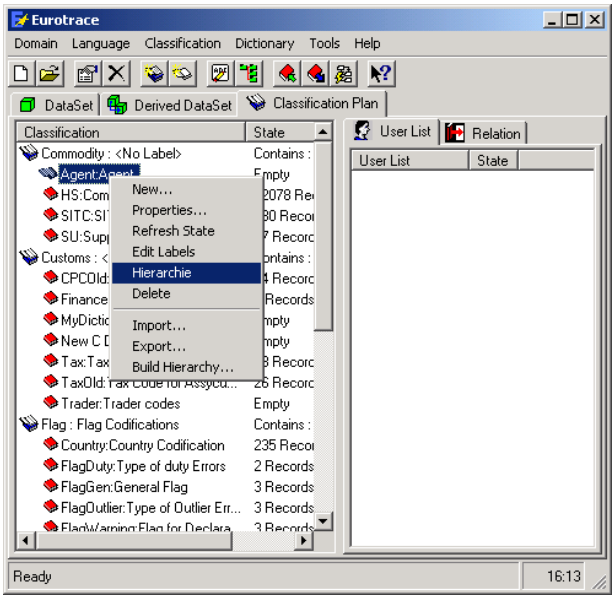
In brief, it is always worth a right click – to see what shortcut menu oprtions are available in all the different parts of any new screen.

Using the right click shortcut menus is the fastest way to get around the different parts of the interface, although as we shall see – there are standard menus and also buttons which could also be used.

A right click shortcut menu looks like this:



All necessary functions are also available through standard Windows type drop down menus at the top of the Eurotrace screen.



Similarly the principle functions also are available in Button form at the top of the screen. Buttons are quicker to use than menus in some circumstances These buttons are arranged on button bars and the button bars are also dynamically allocated by the software so that the buttons that you see are suitable for the particular tasks that are possible for that particular place in the interface.

Why are some menu options or buttons in grey and not selectable?
Sometimes this might be the case. There are two reasons why this could happen. The first reason relates to the security of the domain.

Case 1

If you see some functionality that is 'greyed out' or disabled on either the shortcut and dropdown menus or the buttonbars – it is because the user profile allocated to you by the domain database administrator, does not give you permissions to access that particular functionality.

Eurotrace has a very comprehensive approach to database security. It can be adapted by the database administrator. This will be discussed in detail later in Chapter 20 'Management of Security by database administrators'.

Case 2

If you do have a user profile allocated by the database administrator that **does** permit you to have access to a particular type of functionality and that particular funtionality is still 'greyed out' and unnaccesible in a menu, it is because the items for the option you are trying to select have not been made yet. You will have to make the necessary items before you can have access to the menu option.

To take a simple example: The delete a dictionary menu option will remain grey and unaccessible until you have created a dictionary that you can then delete.

The menus are therefore context sensitive. Only the possibilities that make sense are available at each stage in the process of creating, managing and using the domain.

The grey and unnaccessible menu options are not a problem with the software!

The database administrator has extensive powers to allocate and deny Eurotrace functionality by allocating each user an appropriate user profile which in turn grants the users the permisions they need.

If you need more functionality than you currently have allocated – discuss this with the database administrator and they can adjust the permissions allocated to you within your personal User Profile.

To conclude this introduction: Different parts of the domain are accessible through the different Tabs on the screen and via right click shortcut menus, drop down 'normal' menus and buttons on button bars. The options that you get are dynamically allocated and are a function of your User Profile permissions and also of what is possible at the location you have reached.

Navigating these different Tabs and Menus is the key to getting around within your domain. There are sometimes many levels of programs within each Tab.

The more different types of object you create – the more menu functionality becomes available.

For example : After you have created your first dataset, then the dataset menu options become active. After you have created your first dictionary, then the dictionary options become available etc.

This completes the quick tour of the different Domain interface Tabs, and menus and completes our first high level overview of the Interface.

What follows is a much more detailed look at all of the functionality available from all of the tabs and their sub menus.

15. Managing Domains

15.1. Creating a New Domain

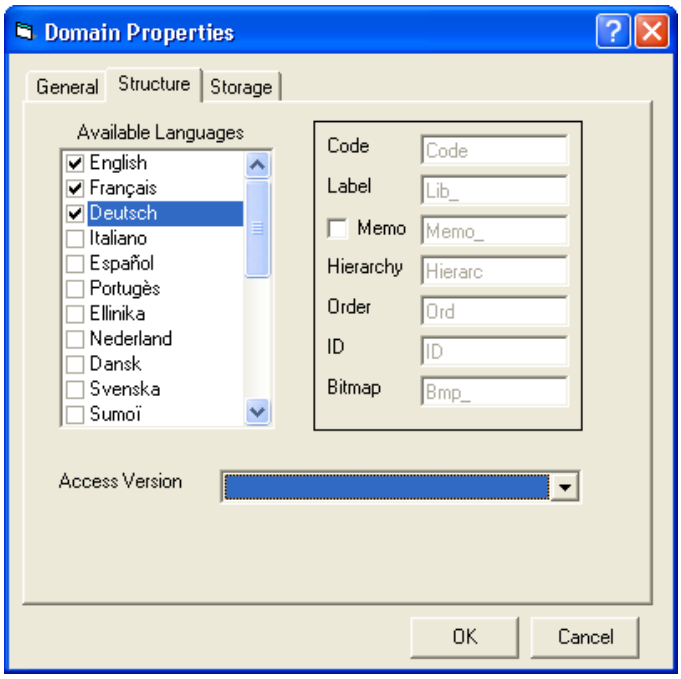
Either click on the **'Create a New Domain'** button or choose **'New'** from the domain menu.
The screen appears for you to set the domain's general properties.

Before you fill in the Code and Label fields, you should first of all select the languages that your domain will support. This is because these code and label fields are *related* to the languages that are set for the domain.

First you **set** the languages that the domain supports.
You then select one of these languages.
You then enter the codes and labels for the selected language.

Therefore you should set the domain's languages before you fill in the codes and labels in on the General Properties screen. The languages that you choose for your domain to are set and stored as part of the Domain's structural properties. So click on the Structure Tab – we will discuss the General Properties Tab soon. The first thing to do when creating a new domain is to set the languages for the domain.
Domain Structure Properties

Select the **Structure Tab** and use the **'Available Languages'** check box on the left-hand side to make a choice of label languages for your domain. These languages will be applied to the entire domain.



The three official working languages of the European Union are automatically set by default. To select an extra language, just check the box next to the language.
Tip! Save database file space and processing time by only selecting the languages that you really need. (see 'How EUROTRACE works with languages Chapter 7).
The right hand side of the structure tab lists the naming conventions for the fields in the storage structure ofEUROTRACE.
These settings are for database administrators only.
It is highly recommended to keep the default settings.

Code
This is the default field name for the code column in the Dictionary and Relation Tables in the database.

Label
This is the default field name for the Label column in the Dictionary Tables in the database. This has DE for German, FR for French and EN for English added at the end i.e. in the form of Lib_De, Lib_FR and Lib_EN.

Memo
When the 'Memo' field is activated it allows you to add notes to all EUROTRACE objects. Memo field notes can be added in each of the languages supported by the domain (see 'How Eurotrace works with Languages', Chapter 8). This is the default field name for the memo column in the Dictionary Tables in the database.

Hierarchy
This is the default field name for the column, which stores the Dictionary hierarchies in the database.

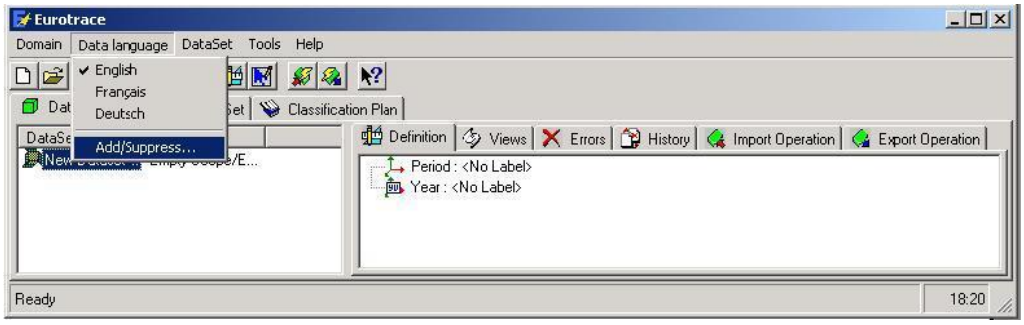
Order This is the default field name for the column, which orders the data when exporting and structuring the objects within the domain.

ID
Is a unique identifier for the table.

Bitmap
This is the default field name for the dictionary, which stores the views and the User Lists in the database.

Adding or suppressing domain languages and memo fields for an existing domain

If you decide to add languages to your domain at a later stage you can use the Drop down menu called 'Data Language' and the option called 'Add / Suppress language'.

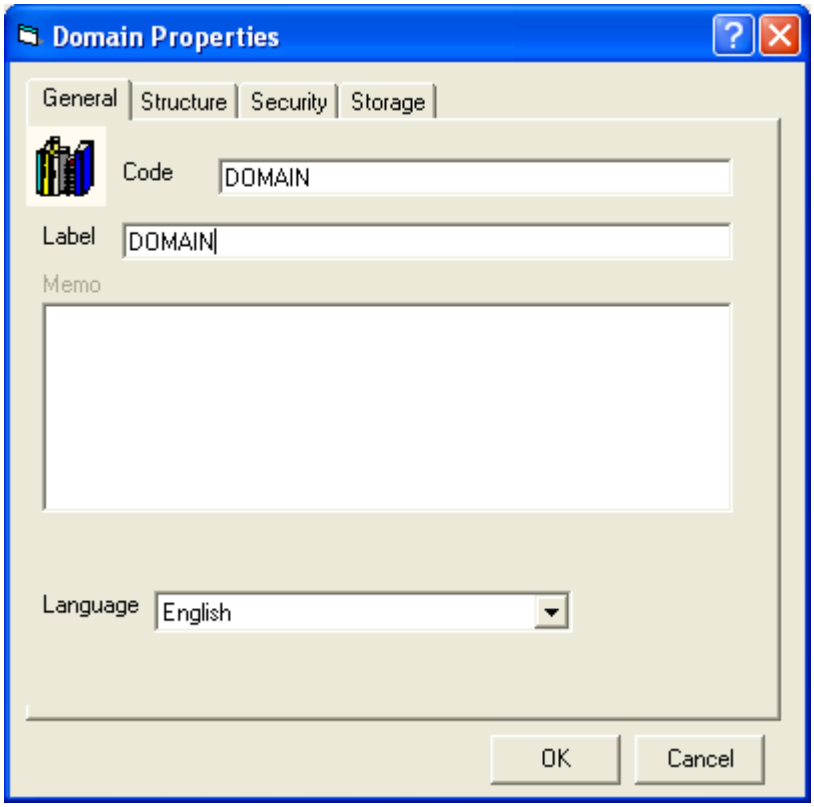


This will display a list of languages to select from.

To add a new language or activate the memo field capability click in the appropriate box. To suppress a language or the memo field capability remove the appropriate tick in the relevant box by clicking on it.

15.2. General Domain Properties

Select the General Tab.



The general properties are the names, labels and memo text entries of the Domain.

You must provide a unique **Name** for the Domain in the field marked **'Code'**

You should also provide a meaningful **Label** for each language that you wish to use in the field marked **'Label'**.

To do this, first select the language of your label from the drop down '**Language list box'.** This sets the field in the database which stores your label and then you type into the Label field box, the label that you wish to be stored.

If the **Memo** field was activated in the domain structure Tab (see 'Managing Domains', Chapter 9.1) you can also enter a memo in the memo field.

The information for codes, labels and memos is stored as you type. You don't have to press save or enter – the information is saved automatically as you type it in.

Tip ! Remember that the three working languages of the European Commission – French, German and English are supported by default when you first create the Domain. If when setting the structure of the Domain you enabled additional languages, you can enter further labels, and if activated, memos in these additional languages.

To enter a memo or label in another language, select the new language from the drop down list box – then enter the label in the label field or memo in the memo field, or both (if appropriate) using the language you have selected from the drop down list box.

To add more labels in other supported languages repeat the above by starting with selecting the new language from the list until you have entered labels and memos in all the languages that you wish to apply.

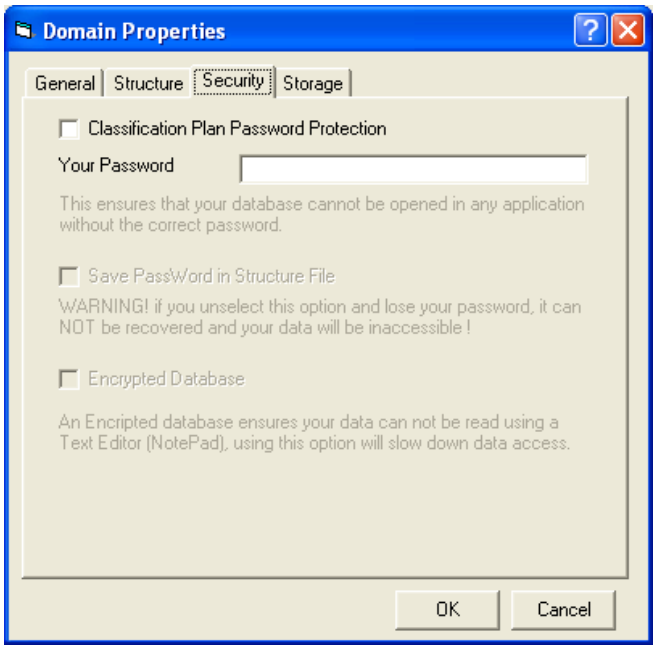
When you have finished defining the labels and memo fields in the different languages that you require, click on the OK button to leave the Domain properties.

You can always change the general properties of the Domain at a later time by selecting **'Properties'** from the right mouse button shortcut menu when you are within the Domain Tab.

TIP! The name you choose for the Domain should be short as well as unique since it will be used as a prefix for all files and tables associated to your Domain.

15.3. Domain Security Properties

The domain properties (Available at the domain creation only) **Security Tab** enables you to set passwords for Classification Plans.



To activate the password protection, click in the box entitled **'Classification Plan Password Protection'** and enter a password in the field.

The Classification Plan password prevents modification of the Classification Plan structure without the appropriate password.

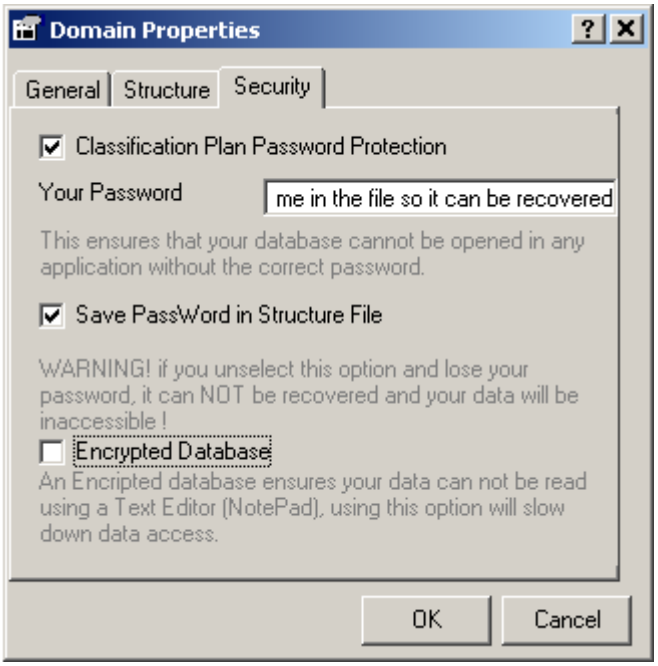
After the domain parameters have been set, click on the 'OK' button and you will be prompted to save your domain.

Enter a file name for your domain then navigate to the directory in which you wish to save and press the 'OK' button to store the domain. The directory where you store the EUROTRACE Domain will also be the location where EUROTRACE will store all associated files.

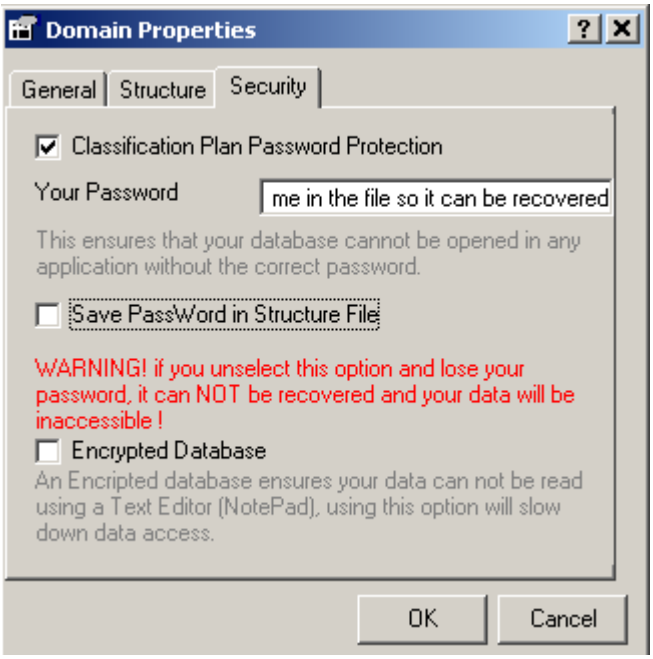
Once you have created a new domain you can create a new Classification Plan within the domain.

N.B. When you click in the classification plan password protection box to activate the password functionality you have the option to save the password in the Structure file.

IMPORTANT ! If you save the password in the structure file the password is stored in the domains' .PLC file.

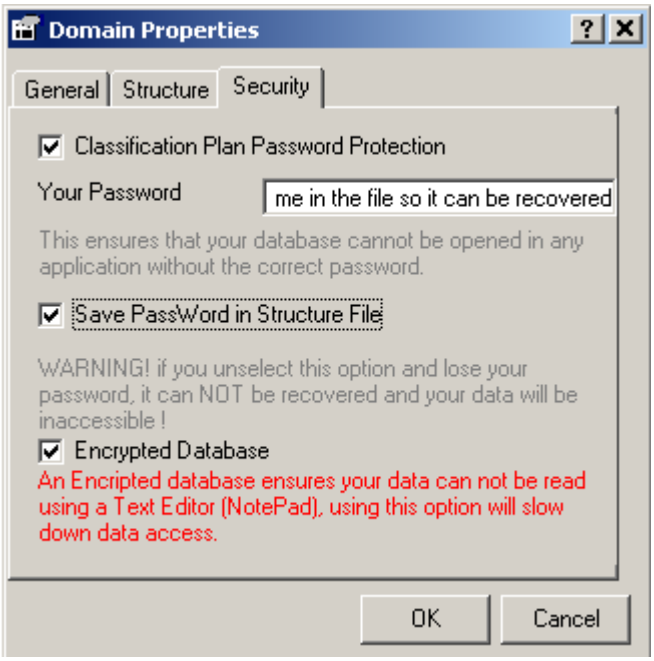


This is good for password recovery and ease of use of the domain. The password can be recovered if you forget it.



If you activate the classification plan password protection box and provide a password but choose not to save the password in the classification plan you have to be really sure that you will never forget the password.

If you do forget your password you will not be able to recover the information.



Similarly, should you decide to use encrypted password protection, you must be sure that you will not forget the password in the future.

If a member of staff leaves an organisation, make sure you know their passwords, otherwise you might not be able to access their domains and they could contain substantial amounts of valid data.

For these reasons it would be wise to save the password as part of the classification plan since this will provide a reasonable level of security.

Choosing to use passwords and not saving them in the classification plan (.PLC file) or saving them in the classification plan, but using the encrypted option, should only be used by the brave and the certain! Since these options provide ultimate security, but also, no chance of password recovery.

N.B Passwords are limited to a 14 digit maximum.

N.B. When you click in the classification plan password protection box to activate the password functionality you have the option to save the password in the Structure file.

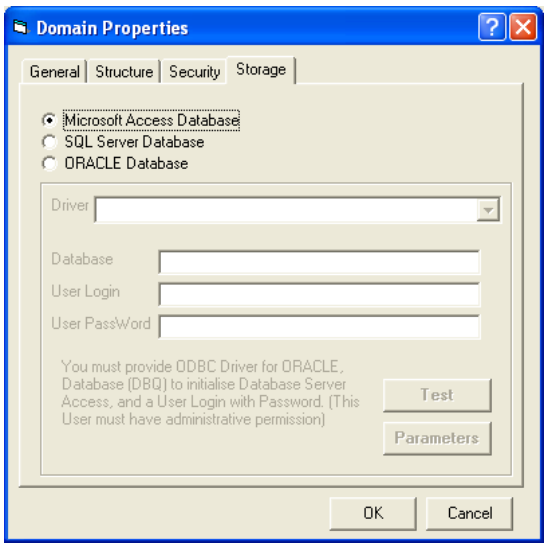
IMPORTANT ! If you save the password in the structure file the password is stored in the domains' .PLC file.

15.3.1.1.1.

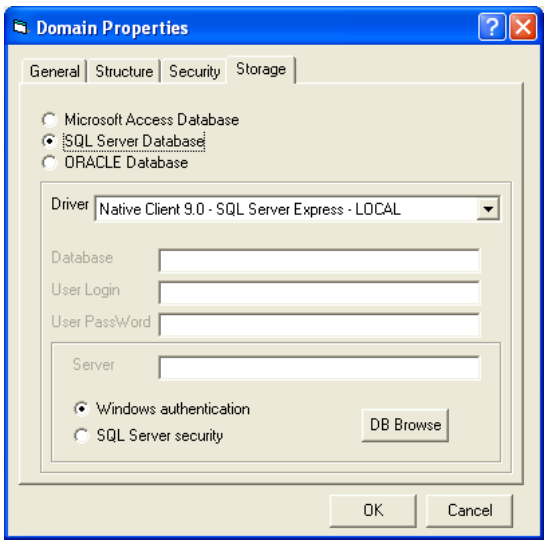
15.3.1.1.2.

15.4. Domain Storage Properties

The domain property **Storage Tab** enables you to set parameters linked to the DBMS system (MS ACCESS, ORACLE or SQL Server).



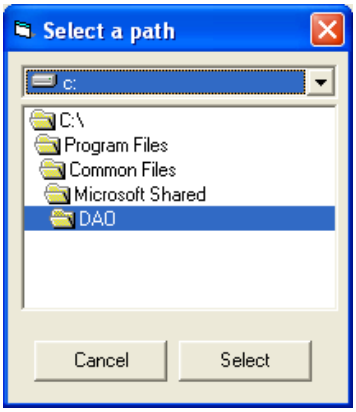
This tab enables you to select the DBMS and to set the parameters.
By default, **MS ACCESS** is selected, in this case, you don't need to enter anything

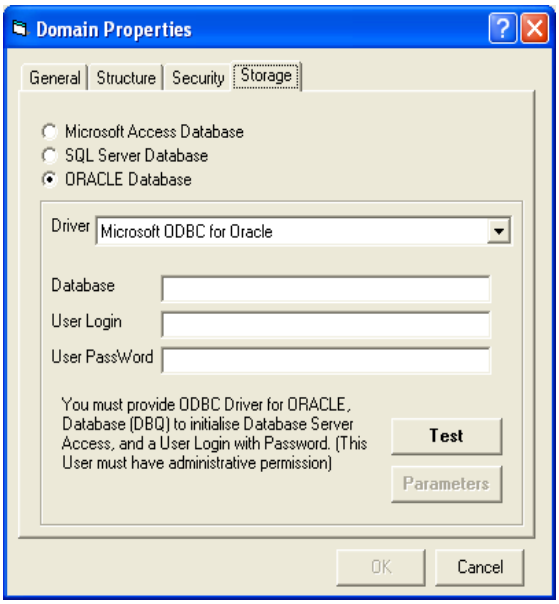


The second option is **SQL Server** Database.
Selecting this option will enable you to select a **Driver** (to be used for the ODBC connection)

The Database is to be selected by using the DB Browse button.

You have to select the database, using the Select Path navigation dialog.



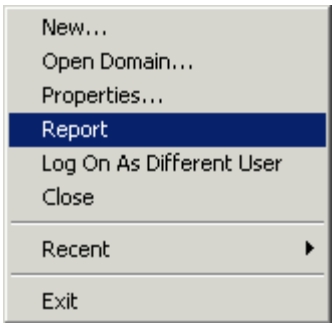


The last option is to specify the **ORACLE** Database parameters.
Under this dialog, you will have to select the ODBC Driver for Oracle

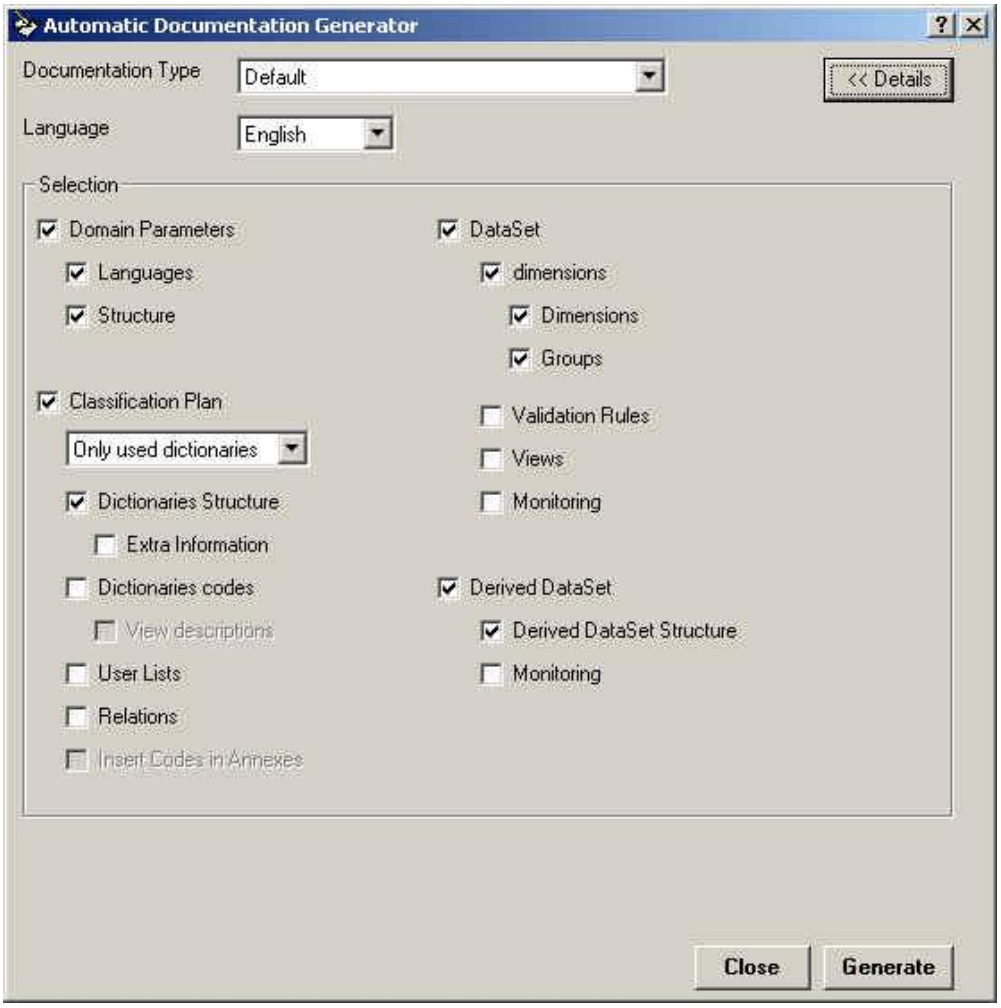
Then, the database and the user information will have to be filled for the connection

15.5. Domain Report

In the **'Domain'** menu, select the **'Report'** sub-menu.



The 'Automatic Documentation Generator' window appears.



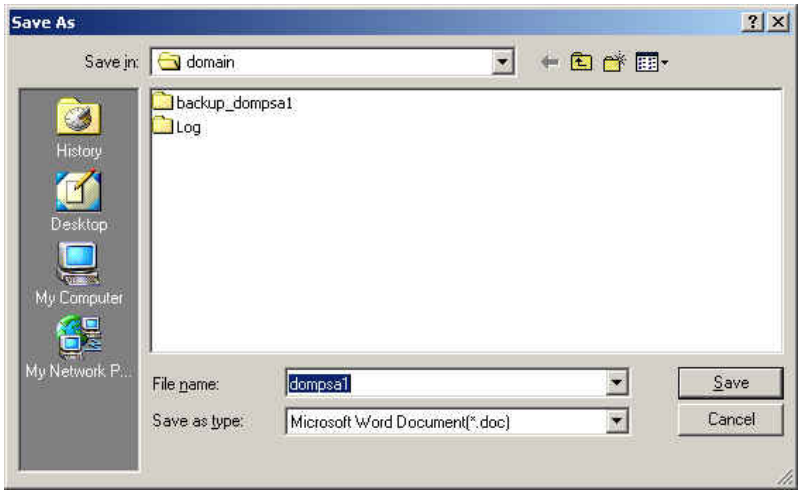
This window is used to select the information you want to add in the report.

In this version of Eurotrace, only the **'Default'** type of report and the **'English'** language are developped.

The **'<< Details'** or **'>> Details'** button hides or shows the generation parameters.
Description of the generation parameters:

'Domain Parameters': general information on the domain. Values:
'Languages': languages used in Eurotrace and language of the interface
'Structure': structure of the domain
'Classification Plan': information on the classification plan of the domain. Values:
Type of Dictionaries. Values:
Only selected dictionaries = add only the selected dictionaries in the report
Only used dictionaries = add used dictionaries in the report
All = add all dictionaries in the report
'Dictionaries Structure': structure of the dictionaries. Values:
'Extra Information': add extra information in the report
'Dictionaries codes': codes of the dictionaries. Values:
'View descriptions': add description of the views in the report
'User Lists': user lists of the dictionaries
'Relation': relation between dictionaries
'Insert Codes in Annexes': if **'Dictionaries Codes'** is selected, this add the codes in annexes, instead of in the document
'DataSet': datasets of the domain. Values:
'dimensions': dimensions of the datasets. Values:
'Dimensions': add a description of the datasets' dimensions in the report
'Groups': add a description of the datasets' groups in the report
'Validation Rules': datasets' validation rules
'Views': datasets' views
'Monitoring': datasets' monitoring information
'Derived DataSet': derived datasets of the domain. Values:
'Derived DataSet Structure': derived datasets' structure
'Monitoring': derived datasets' monitoring information

Click on the **'Generate'** button to create the report.

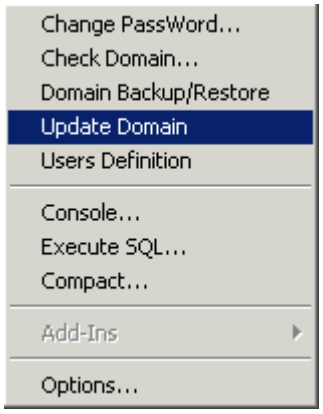


Select the name and directory of the report and click the **'Save'** button.

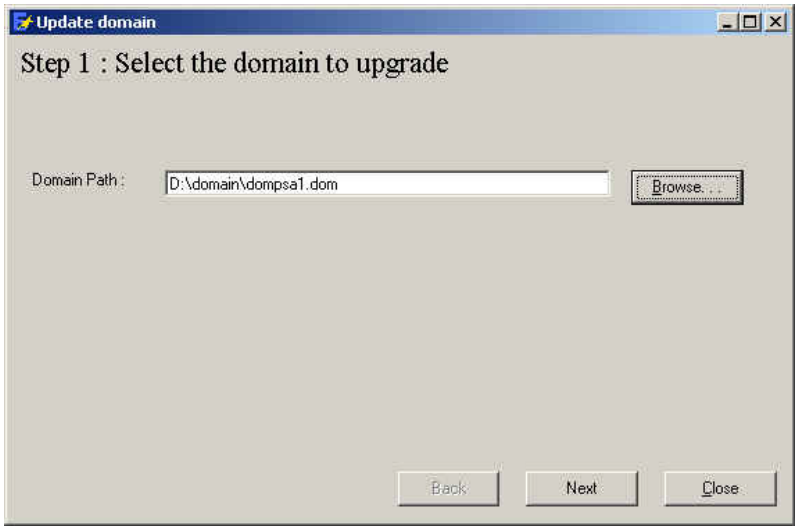
At the end of the generation, click on the **'Close'** button to return to the domain management.

15.6. Domain Upgrade

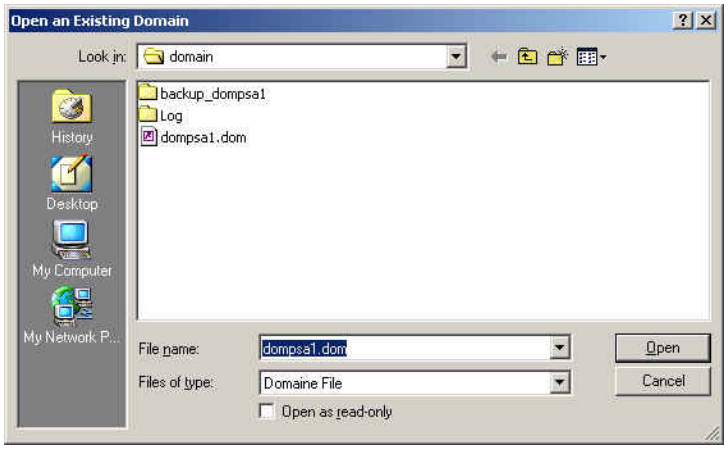
In the **'Tools'** menu, select the **'Update Domain'** sub-menu. This function is only useful if users have domains created with the older version of Eurotrace MS ACCESS DBMS (version 1.4)



The **'Domain Update'** window appears.



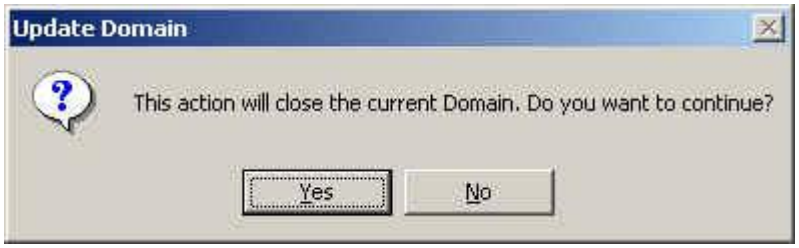
Enter the full path and name of the domain you want to upgrade in the **'Domain Path'** textbox, or click on **'Browse...'**.



Select a Domain and click on **'Open'** to return to the **'Update Domain'** form.

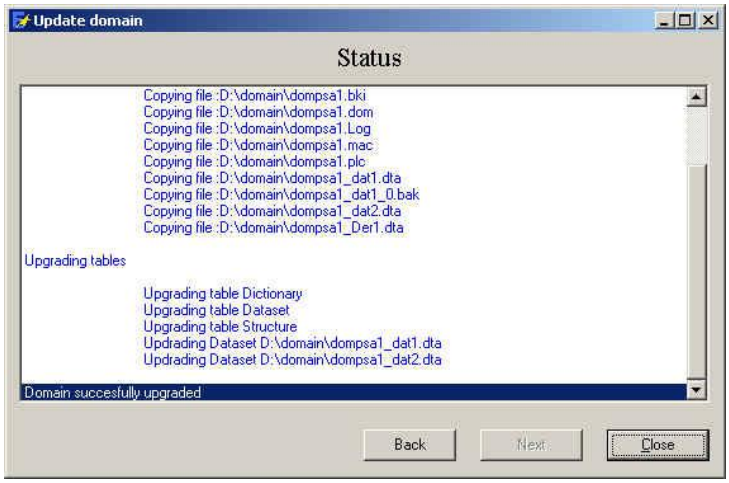
Click **'Next'** to perform the operation.

If a domain is open, the application will ask you to close it to continue.



Click **'Yes'** to Continue. If a domain is already updated, Eurotrace show this message and stop the process:

If the domain is not updated, the process continues.

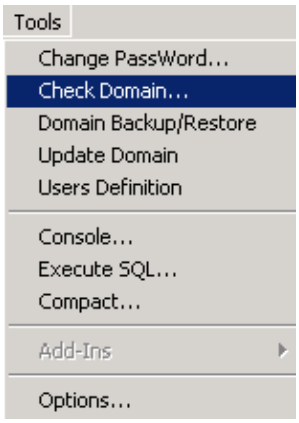


Click on the **'Close'** button to return to the domain management.

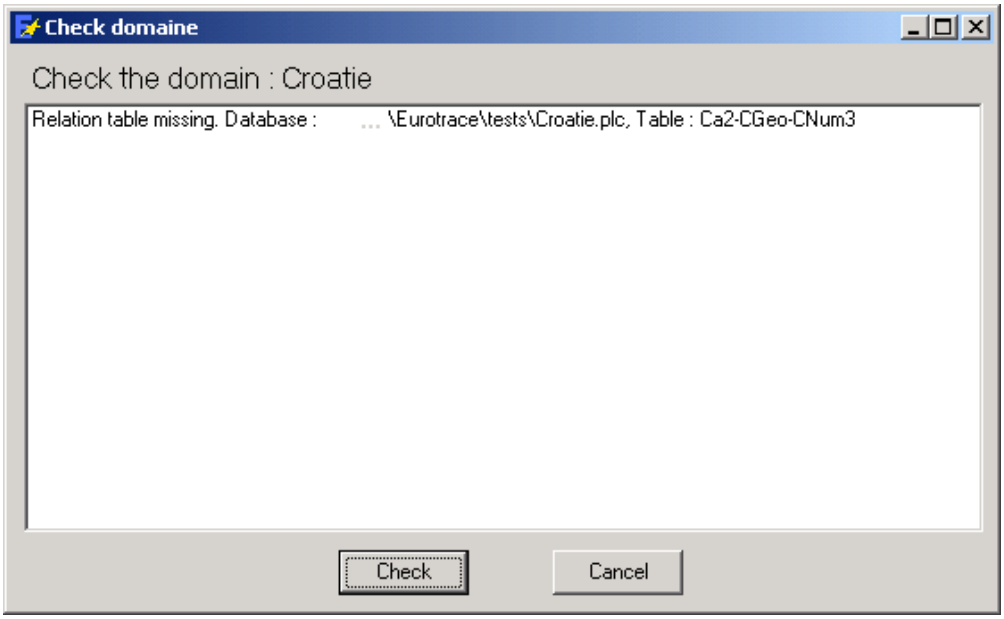
Click on the **'Back'** button to upgrade another domain.

15.7. Check Domain

In the **'Tools'** menu, select the **'Check Domain'** sub-menu.

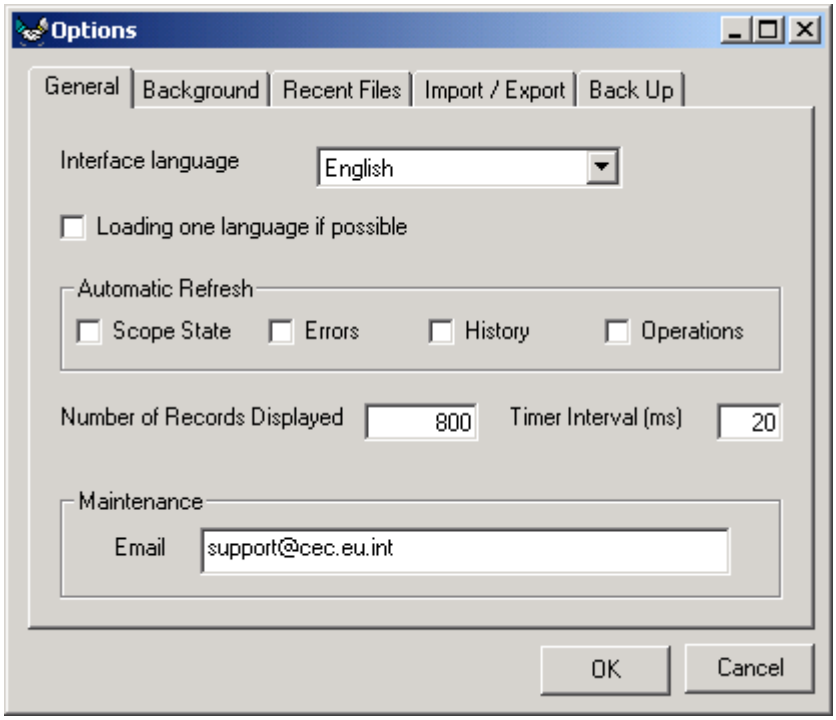


The **'Check Domain'** window appears.



Click on **'Check'** to run the procedure.

If an error is detected, it will show as in the above window. An email will also be send to the email address specified for support of the domain (see below maintenance section).

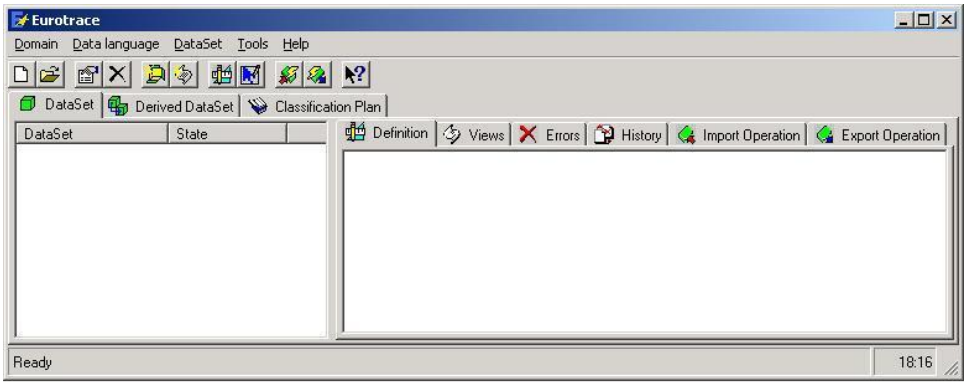


N.B.: the process of sending mail may vary depending on the local configuration settings (security level and type of mail server)

16. Managing Classification Plans and Dictionaries

16.1. What is a classification plan?

After you create a new domain or load a previously created domain, a screen like this is shown.



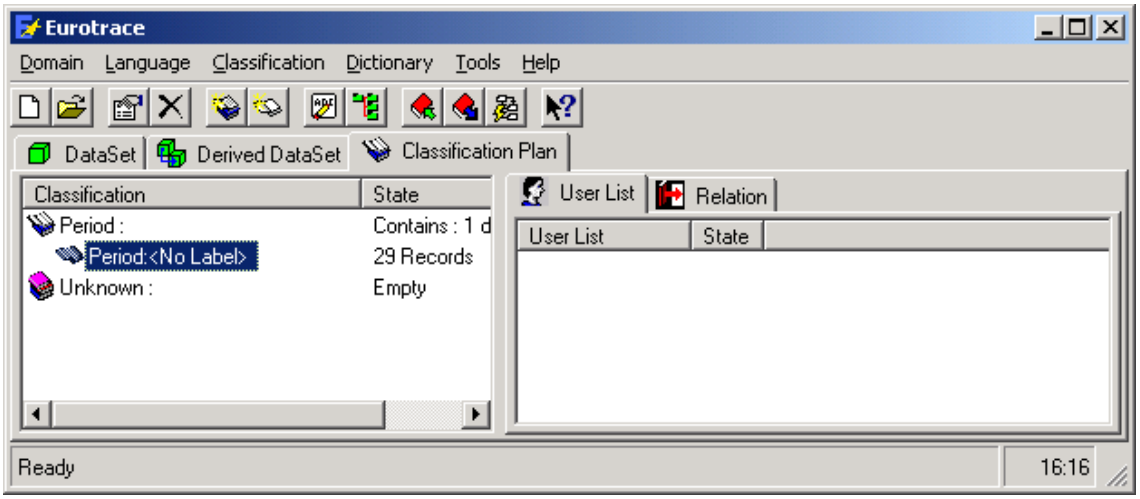
On the left hand side of the screen there are three Tabs: Dataset, Derived Dataset and the Classification Plan Tab.

The **Dataset Tabs** refer to the definition and storage of ***datasets*** (normal and derived).

The **Classification Plan Tab** is the place where ***dictionaries*** are defined and stored.

These dictionaries are associated to the structure of the dataset's dimensions. When data are imported or exported to, or from these datasets, the individual records can be automatically validated against the contents of the dictionaries, in order to ensure the quality of the data.

Clicking on the Classification Plan tab displays this screen.



The left hand side of the screen displays the dictionaries that belong to the classification plan. The right hand side of the screen displays two tabs called 'User List' and 'Relation'.

The **User List Tab** lists the 'user lists' for each selected dictionary. These are user lists of selected dictionary codes (see '**Managing User Lists'** later on in this chapter).

The **Relation Tab** lists the 'relations' for each selected dictionary. These are transcodification definitions, which can transcode codes in different dictionaries (see **'Managing Relations'** later on in this chapter).

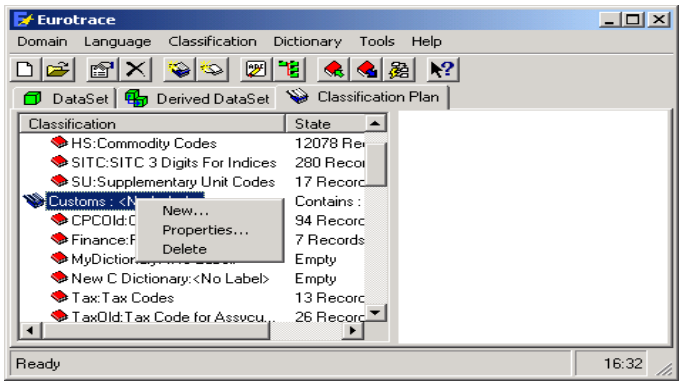
If you select the Classification Plan Tab, you will notice that a dictionary called **Period** is automatically generated in the classification plan, when you create a new domain. This is because the Period dictionary is mandatory for all classification plans. The **Period Dictionary** is a special dictionary that lets you associate data with a specific time period i.e. monthly, quarterly, annually etc.

You will want to create other dictionaries to add to the period dictionary.

16.2. Creating a New Classification and Dictionary

General Classification Properties

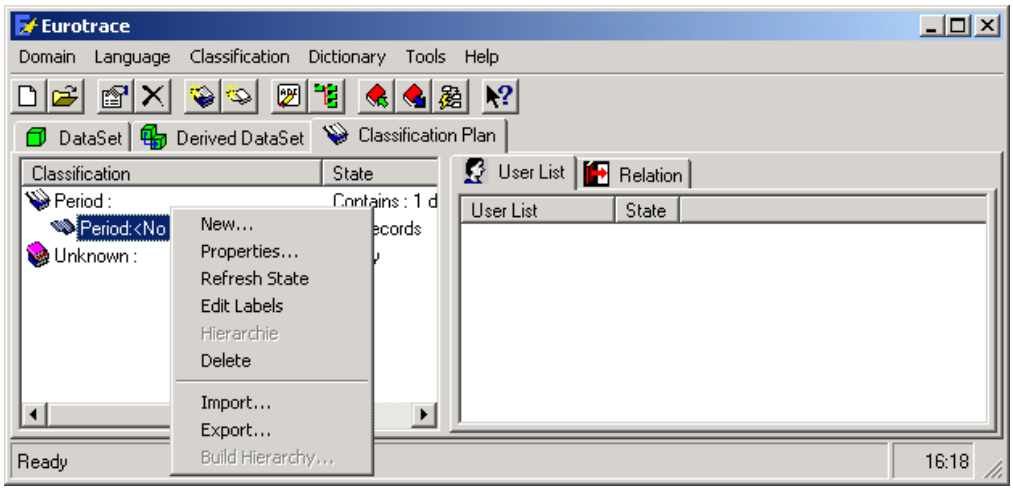
To create a new classification, click on the right mouse button in the left hand part of the classification window and select 'New'.



You will see the following screen to set the properties of your classification

General Dictionary Properties

To create a new dictionary, click on the right mouse button in the left hand part of the dictionary window and select 'New'.



You will see the following window to set the properties of your dictionary.

The 'Memo' field will only be active if the 'Memo' field was selected when the domain was created (see Domain Properties Structure Tab).

Similarly the choice of label Language will be restricted to those chosen when the Domain was created.

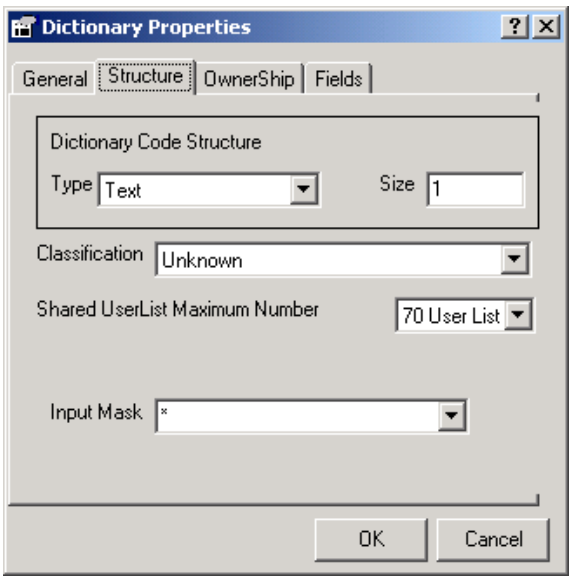
TIP! You can change the general dictionary properties and ownership at any time by selecting the dictionary from the dictionary window and clicking on the **'Object Properties'** button  or by selecting the dictionary and right clicking and then selecting **'Properties'** from the menu.

TIP! As with domain properties it is recommended that you keep the code and label text as short and as descriptive as possible.

You can also move your dictionary to another classification with a simple drag and drop.

16.3. Dictionary Properties Structure Tab

The Dictionary Code Structure Type can be:



Text Type is the default type. The size can be up to 255 alphanumeric characters.

Integer Type can be used to store the Dictionary Codes as numbers (sometimes it saves file space to do this). This type stores numbers from -32,768 to 32,767 (no fractions).

Long Integer Type also stores the Dictionary Codes as numbers. This type stores numbers from -2,147,483,648 to 2,147,483,648 (no fractions)

For all the different types, the '**Size'** field informs you of the number of bytes used for each code that are stored in the database.

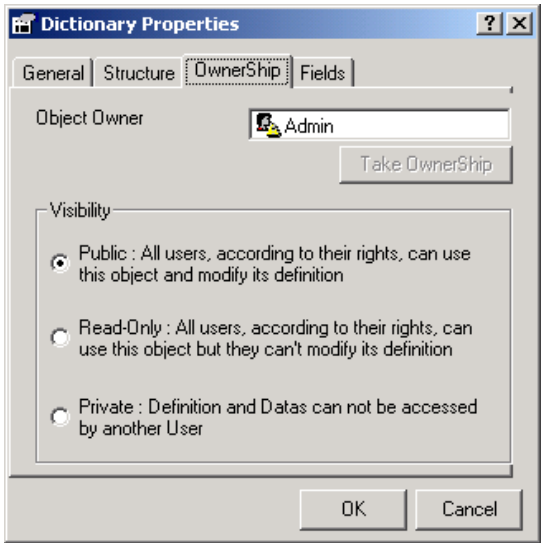
For the Integer and Long Integer Types the '**String Size'** field indicates the number of digits.

The definitions of the dictionary code, structure, type, size and input mask are important, because later on when importing data you might find that data are refused because your dictionaries were not established properly.

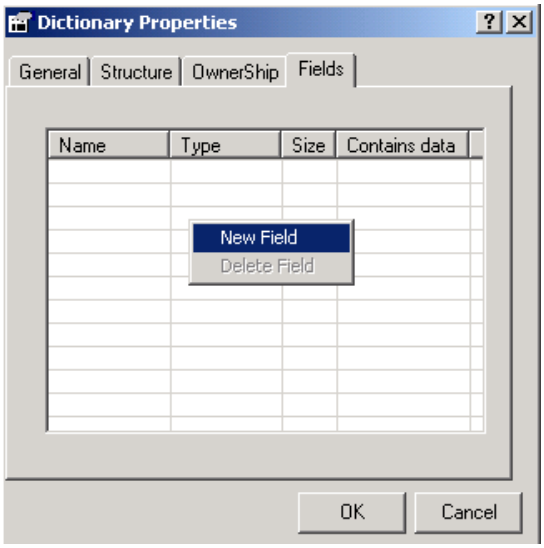
16.4. Dictionary Properties Ownership and Fields Tabs

The ownership properties can be set from the Dictionary Properties Ownership Tab.

N.B Remember that all users with a 'higher' user profile and set of permissions/access rights can take ownership of objects that you have created. Those with Admin status profiles can take ownership of all objects in the database.

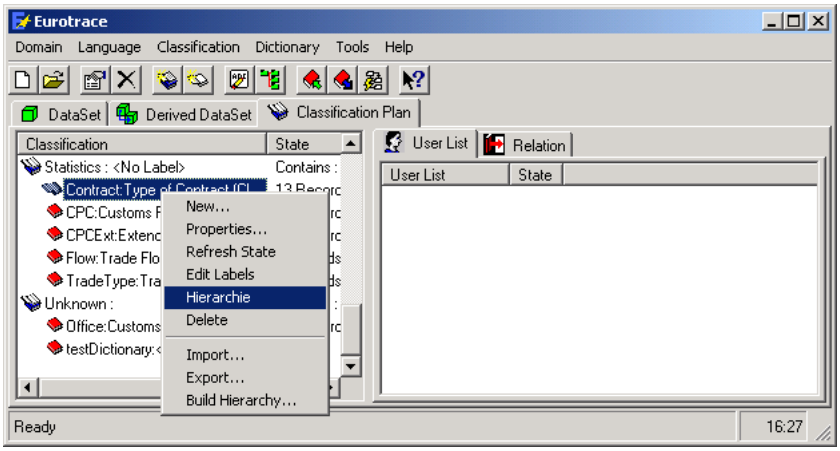


Customs Fields for each dictionary can be set from the Dictionary Properties Fields Tab.

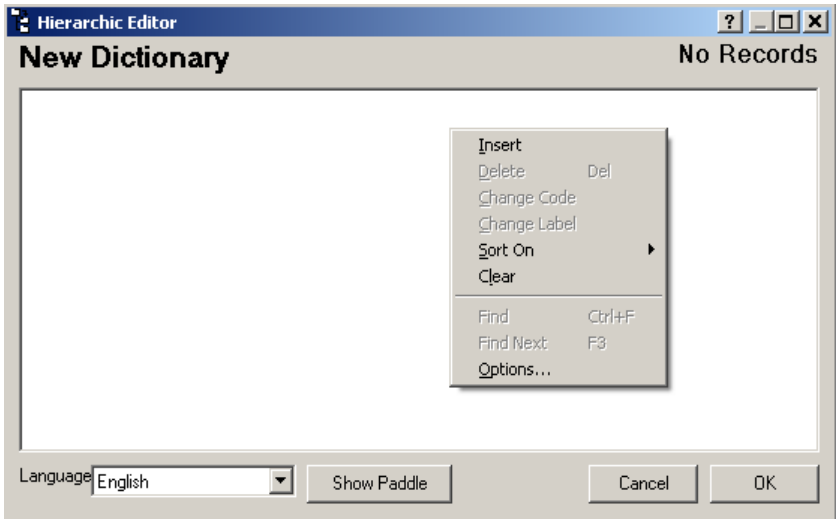


16.5. Populating Dictionaries

Once you have created a new dictionary, and defined its properties and structure, you will need to fill it with codes and labels. Select a Dictionary and from the shortcut menu choose 'Hierarchy'.



Here you can fill your dictionary, by right-clicking in the window and selecting from the following menu options:



Insert prompts you to add a dictionary code.

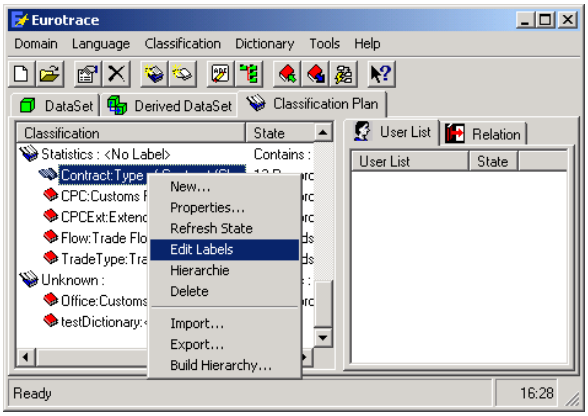
Delete lets you delete a single selected dictionary code.

Change Code lets you edit a selected dictionary code. Right click on the code first to select it.

Change Label lets you enter or rename the label of a selected dictionary code. Right click on the code first to select it.
Memo lets you add a memo to a selected dictionary code.
Sort on code lets you sort the list in accordance with the dictionary codes.
Sort on label lets you sort the list in accordance with the labels.
Clear – Deletes **all** codes and labels. N.B. if you want to delete just one code and not all of them you should select the code you want to delete and use the menu option 'delete'.
Find/Find Next: Enable users to find codes on a dictionary which has been organised into Hierarchy.
Options: Allow the definition of Hierarchie Properties

16.6. Editing a Dictionary's Labels and Memos

Dictionaries are composed of **Codes** that can have labels and memos assigned in different languages**.** Existing code labels and memos can be edited at any time.



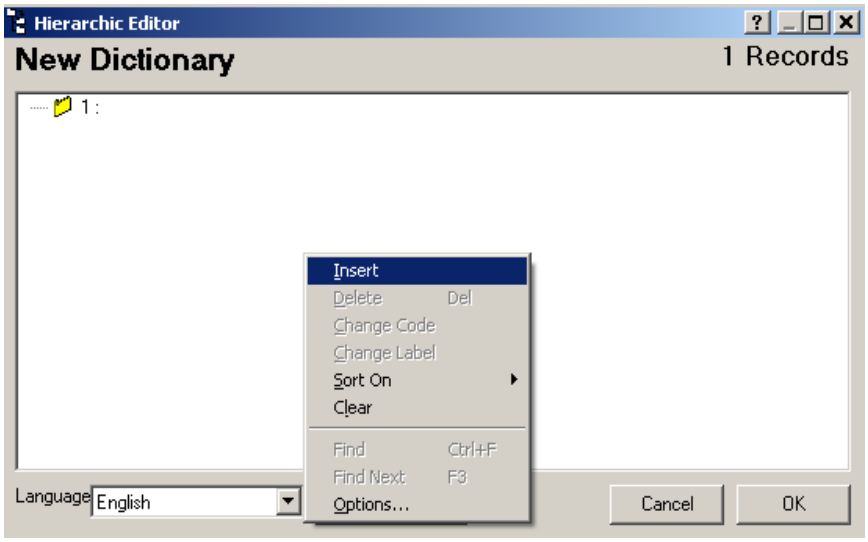
Select the dictionary you wish to edit and from the shortcut menu select **'Edit labels'**. If the dictionary has already been populated with codes and labels, the labels and memos can then be edited by typing the new text into the fields next to each code.

You may also select the different languages from the drop down list.

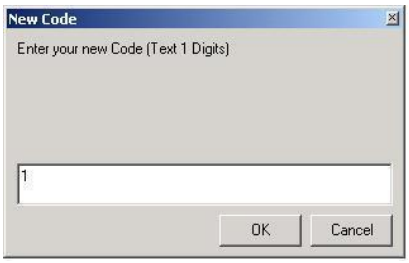
You can also use the 'Edit Dictionary Labels' Button 

16.7. Adding Codes to a Dictionary

Use the Hierarchy option on the shortcut menu, and then click with the right mouse button again to get the shortcut menu shown below.



Use the right-click menu 'Insert" option and you will see the following screen.



The size of the code that you type here must be smaller than or equal to the size that is stated on the screen. This is the size that you specified when you set the structural properties of the dictionary when you first created it (see Setting the Structural Properties of a Dictionary above).

You type the new code you want to add and then click on the 'OK' button. The new code will appear in the dictionary window and you can edit the label then right-clicking on the code and selecting the **'Change Label'** option.

The language of the labels can be changed by selecting a language from the drop down language box.

Type the new label and press the return key to enter the label.

When you have finished working with your dictionary click the 'OK' button at the bottom of the screen.
Alternatively use the method described above in **'Editing a Dictionary's Labels and Memos'.**

16.8. Importing Codes into a Dictionary from a File

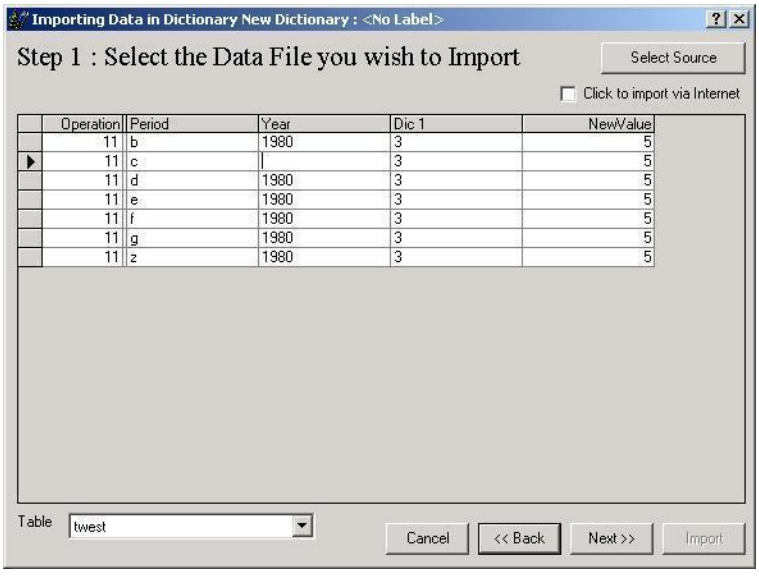
'Import' lets you populate the Dictionary automatically with codes that are listed as records in a file such as an existing Access database table. There is also a button to insert files into dictionaries, which looks like this:  The Import menu option and the button both call the **Dictionary Import Wizard.**

This wizard guides you through a straightforward file importation process in a series of logical steps.

Step 1

If you select the Dictionary Import Wizard you must navigate to where your file is and select the source file.

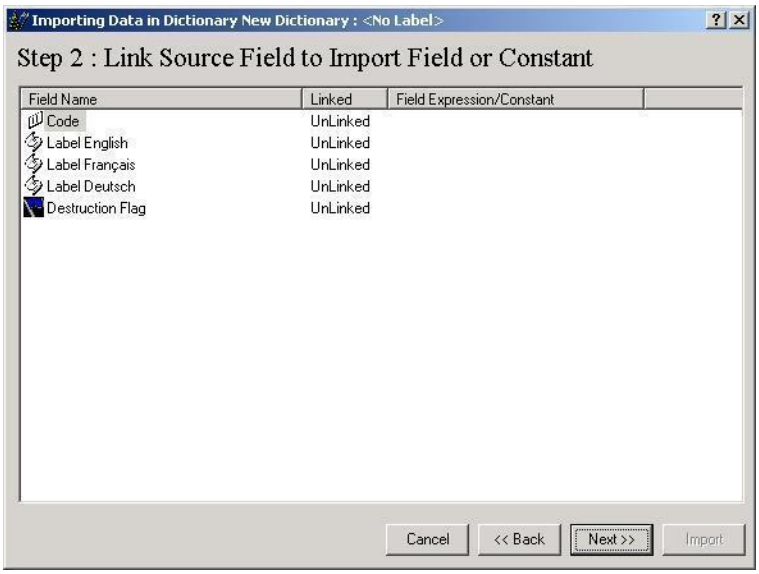
You select the source from the drop down list. The contents of the selected file are then listed in the window.



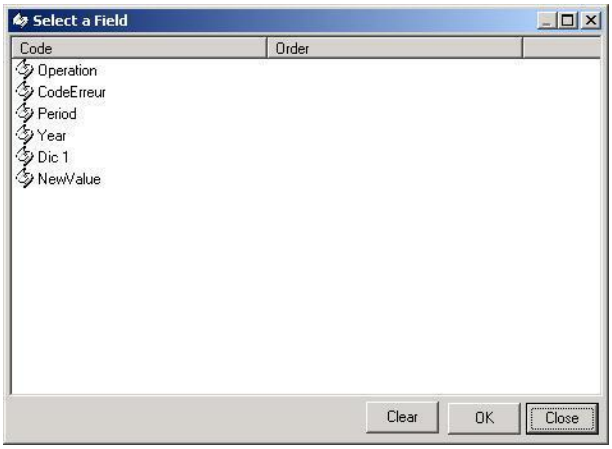
Click on '**Next'**.

Step 2

To make the relationship between the dictionary and the file you are importing, right click on a code in the fieldname column that is the code and select the menu option '**Link'**.



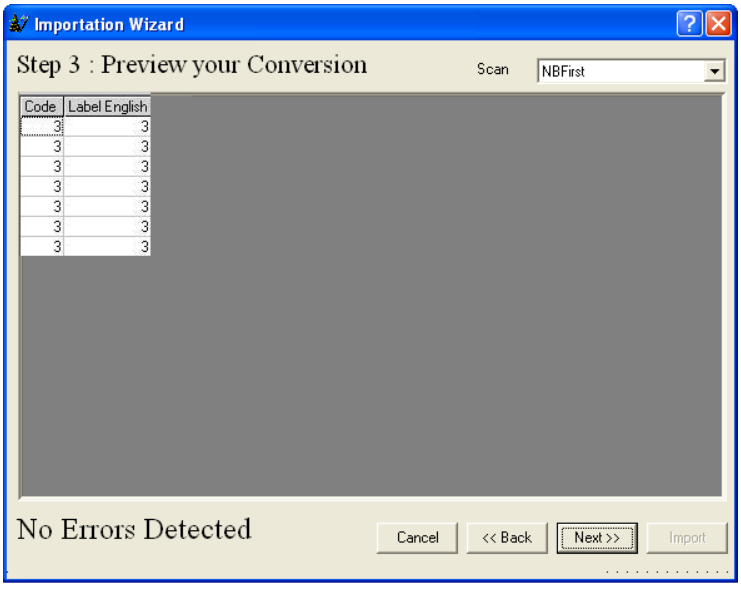
Now choose a code from the file you are importing and click '**OK'** to make the link.



If your import file is not structured correctly you can use the expression option to make adjustments using MS Access SQL language.

Step 3

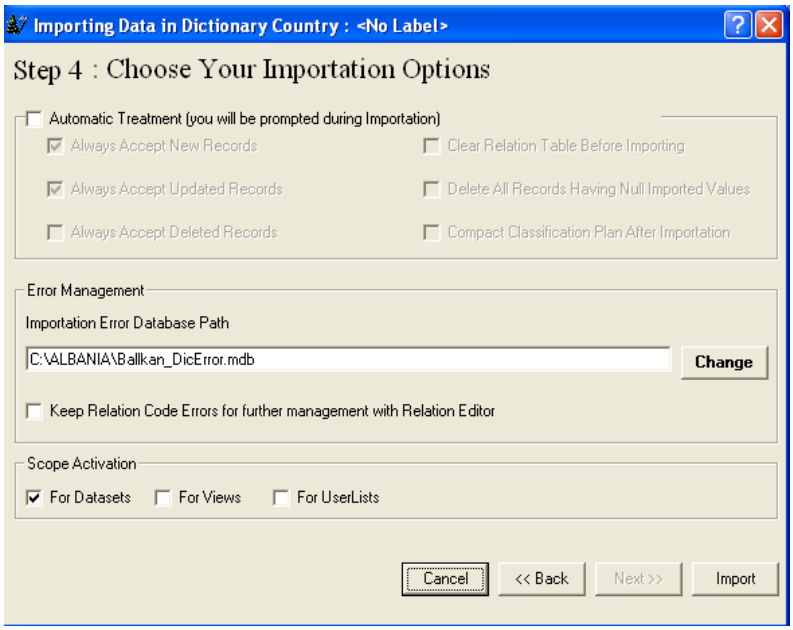
Then click on the '**Next'** Button and the wizard will check for errors and display a summary of any problems encountered. If you have problems use the '**Back'** button to return to the previous screen to correct them.



Click '**Next'** to continue.

Step 4

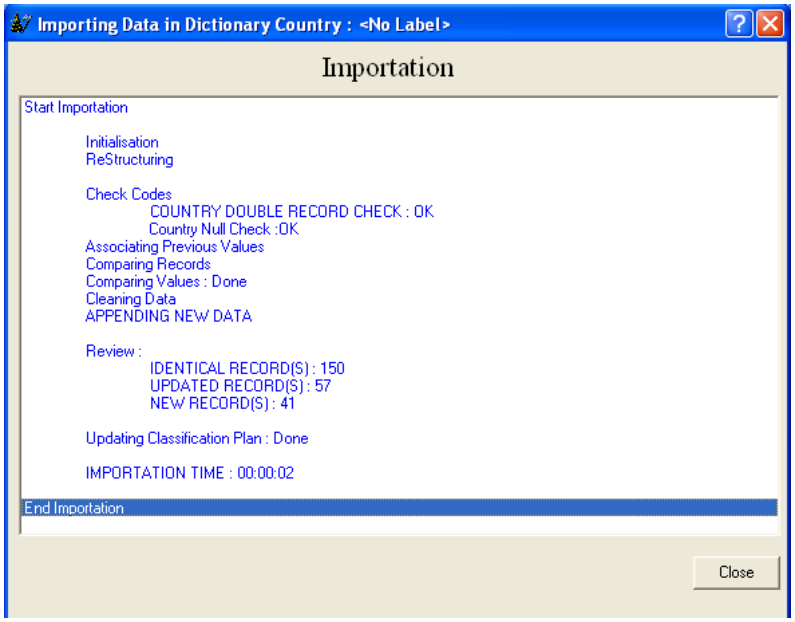
Choose your importation options.



The top half of the screen displays various importation options which will be greyed out and unavailable until you click in the top left box labelled **'Automatic Treatment'**. When you do this they become available.

Make the selections you require then move to the Error management section in the lower half of the screen.

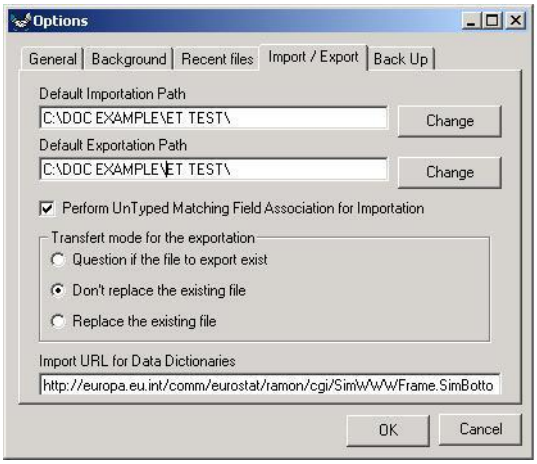
The box displays the **Importation Error Database Path**. This path determines where the importation error files will be written to. If you want to change the path make use of the '**Change'** button.



Then click on the **'Import'** button to populate the dictionary. You will see a list of status messages and progress message on the screen as the Import process progresses.

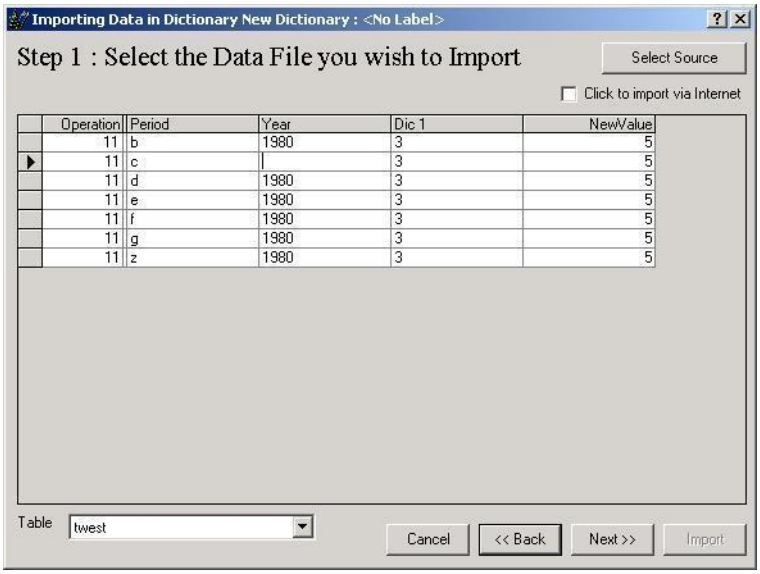
16.9. Importing Codes Into a Dictionary From the Web

You can import codes into a dictionary that is stored in a file on a web page.



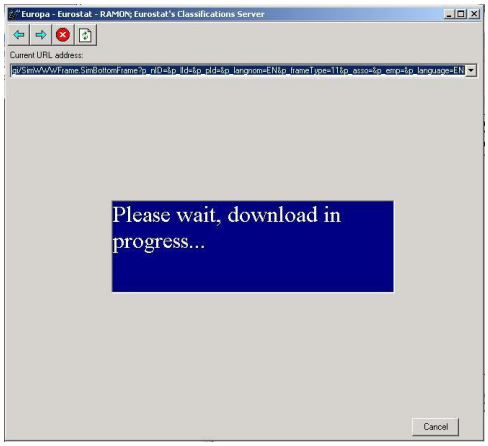
Enter the URL web address into the default URL path box. This can be found under the 'Tools' Menu 'Options' sub Menu, 'Import/Export' Tab. The box is labelled 'Import URL for data dictionaries'.

It is box at the bottom of the image on the left.



Repeat the process described above, but at the Step 1 Screen, below, click in the small check box labelled 'Click to import via the Internet' at the top right hand corner of the screen and then click on the Select source button.

The web page listed in the 'Tools' Menu, 'Options' menu option 'Import/export' Tab default Import URL for data dictionaries path will display. Click on the file you want to load. The system works with .ZIP, .TXT and .MDB format files. When you click on the file it is downloaded to your hard drive from the URL.

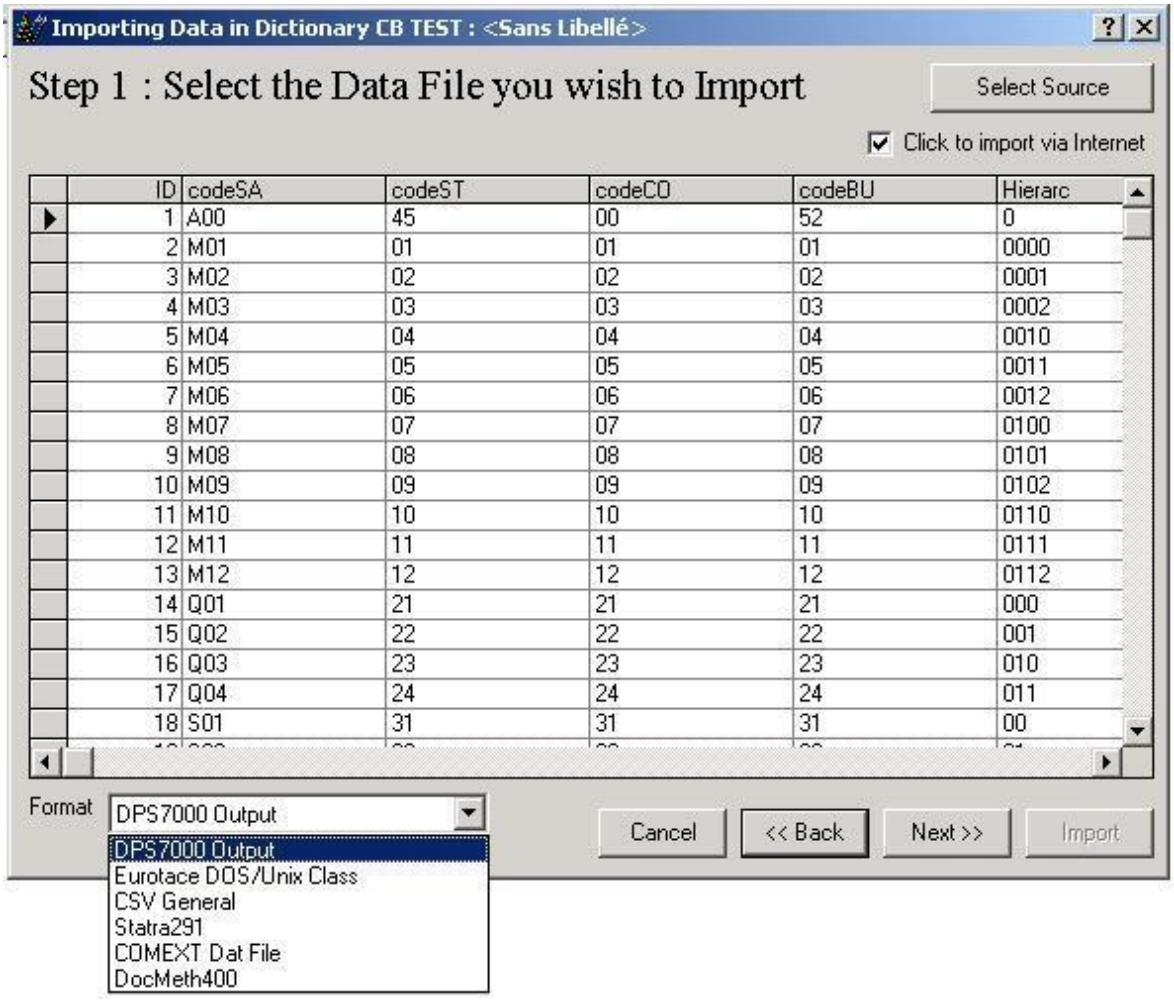


If the file is a **.zip** format file the WinZip program will be invoked if it is installed on your computer to unzip the file.

If the file format is an **.mdb** file, this will be recognised and you will be prompted to select the table that contains the dictionary.

If the format of the file is a **.txt** file the file will be opened.

In all cases you may wish to change the format of the file from the bottom drop down list, before continuing as guided by the import wizard.



16.10. Organising a Dictionary's Codes

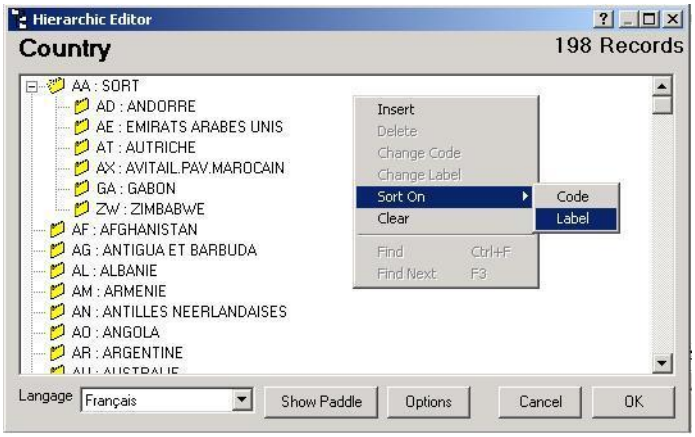
The codes in the dictionaries are organised in a tree similar to the Windows Explorer tree.

There are different ways to change the organisation of the codes within the tree.

Manual Organisation

The easiest way is to just drag and drop the codes from one location to another. Another way is to use the 'paddle'. Click on the **'Show Paddle'** button and use the arrows to move the codes.

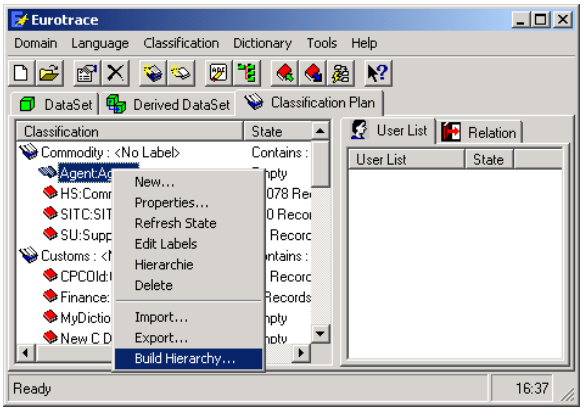
Sort Codes and Labels



From the Hierarchy window (see above), you can sort the codes and the labels one level at a time. You must select an upper level code from the list and then choose 'Sort on Code' or 'Sort on Label' from the shortcut menu. All the codes under that level will be sorted.

The sort by label and sort by codes functions work for sub levels of grouped codes

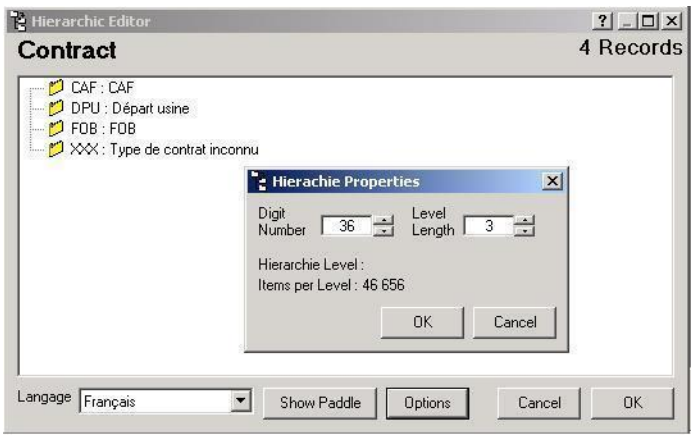
Automatic Organisation



To organise the dictionary codes in a hierarchical way based upon the codes structures use the automatic method. From the shortcut menu choose **'Build Hierarchy'**, or use the **'Build Automatic hierarchy Using Codification'** button  from the toolbar.

Setting Hierarchy Properties

To set these properties, Right click on the dictionary select the hierarchy menu option, then click on the 'Options' button. Here you can set the number of digits and level length for the Codes.



TIP! The 'Import File', and 'Build Hierarchy' commands are all available from the Classification Plan window by right clicking on a dictionary. It is recommended to use this approach for medium to large size dictionaries.

16.11. Managing User Lists

What is a user list?

Each user list stores a selection of an associated dictionary's codes. It is a therefore a user defined list of dictionary codes (not a list of people using the domain).

When are user lists used?

Classification Plan user lists are used when you create 'data set views'. They enable you to set up specific views of datasets.

Therefore prior to creating dataset views, you will find it useful to establish appropriate 'user lists' of dictionary codes that are appropriate to the views that you wish to create.

For example:
You might have a dictionary of European Countries.

You might want to view data from your dataset that only relate to European Union countries.

You should set up an appropriate user list of the European countries dictionary that only includes the codes for the European Union Member States.

Then when you set up a data set view, to look at the data in your dataset, you can use this user list of dictionary codes to help establish the correct view of the data from the dataset.

Classification Plan user lists are therefore sub selections of codes from a dictionary, that enable you to establish the scope of data that are views from a dataset when you establish a dataset view. They filter and constrain data from datasets.

EUROTRACE classification plan user lists, (of dictionary codes) are an important concept to understand, since they are used within dataset views to enable you to see the data in ways that you want.

16.12. Create a new User List

Click on the **'User list'** Tab in the right hand side of the Classification Plan Screen. Right click in the user list window space and select **'New'** from the shortcut menu.

You must provide a unique code for the user list.

You should provide a meaningful label for each language that you wish to use.

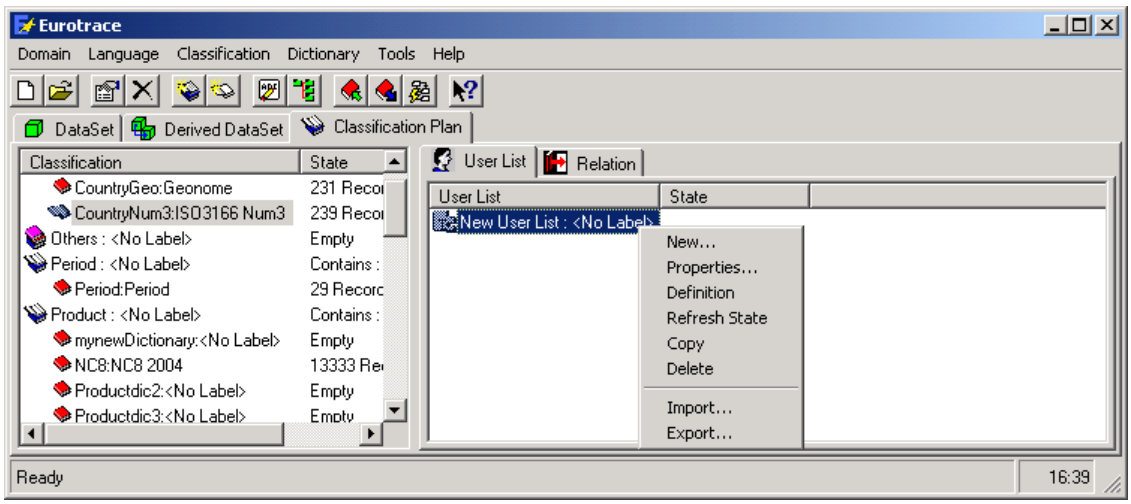
To do this first select the language of your label from the drop down '**Language list box'** This sets the field in the database which stores your label and then you type the label that you wish to be stored, into the label field box.

If the memo field was activated when you created the Domain you can also enter a Memo in the memo field.
Both labels and memo fields are saved automatically as you type.

Tip ! Remember that the three working languages of the European Commission – French, German and English are supported by default when you first create the Domain. If when creating the domain you enabled additional languages, you can enter further labels, and if activated, memos in these additional languages at this point. To enter a memo or label in another language select the new language from the drop down list box – enter the label, or memo, or both (if appropriate) in the language you have selected and repeat until you have entered labels and memos in all the languages that you wish.

When you have finished defining the labels and memo fields in the different languages that you require, click on the OK button to leave the user list properties.

You can always change the properties of the user list at a later time by selecting **'Properties'** from the shortcut menu.



The definition of the user list can be set by selecting the menu option **'Definition'** from the short cut menu. After changing the definition or properties of the user list you should 'refresh' the list by using the **'Refresh State'** shortcut menu option.

To copy a user list use the **'Copy'** shortcut menu option. Each copy must have a unique code field.

To delete a user list use the **'Delete'** shortcut menu option.

17. Managing Relations

17.1. What is a Relation ?

A relation is a definition that is used to transcode one dictionary's contents for another dictionary's contents. It works in principle like a relational database 'look up' table.

In the example below there are two dictionaries A and B.

Each has three codes and each code has an associated label.

Dictionary A	
Code 1A	Label 1A
Code 2A	Label 2A
Code 3A	Label 3A

Dictionary B	
Code 1B	Label 1B
Code 2B	Label 2B
Code 3B	Label 3B

Using a Eurotrace 'Relation' you can link and associate the two dictionaries.

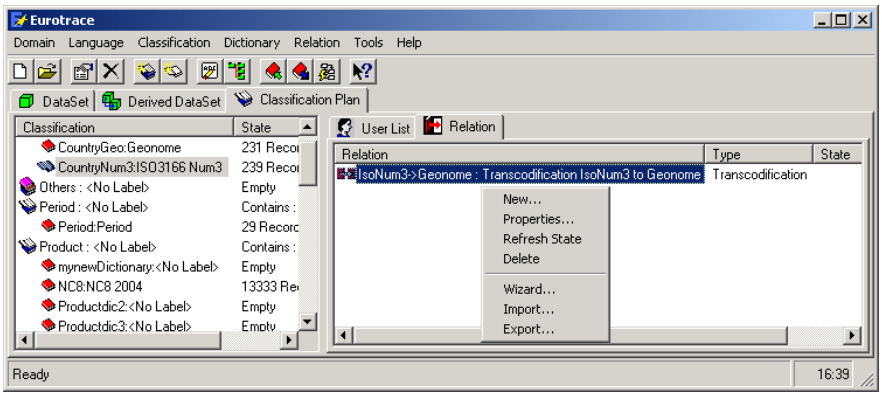
Dictionary A	Dictionary B
Code 1A	Code 1B
Code 2A	Code 2B
Code 3A	Code 3B

The system can therefore substitute the codes for Dictionary B in place of the codes for Dictionary A.

17.1.1.1.1.

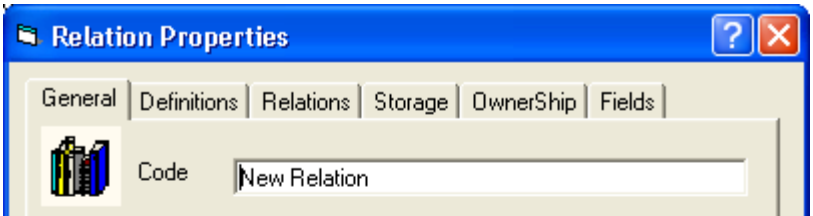
17.2. Creating a New Relation

Click on the **'Relation'** Tab in the right hand side of the Classification Plan Screen.



Right click in the Relation window space and select **'New'** from the shortcut menu.

The following screen appears.

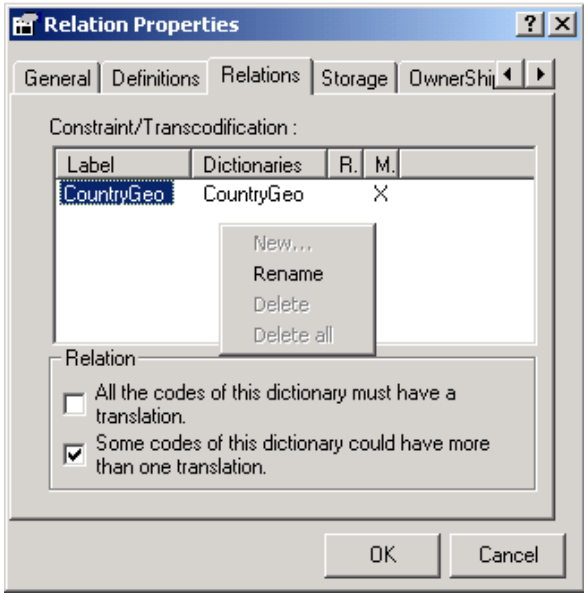


The first thing to do is select

the **Relations Tab** and assign the dictionary that you will use.

The Relations Tab

The tab looks like this:



Right click in the white space and select 'new' from the shortcut menu to create a new relation.

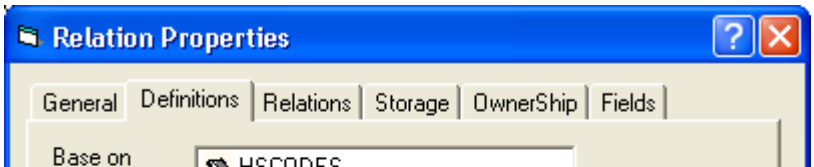
A dictionary window appears listing your range of dictionaries established for the domain. Select the dictionary you want and click on the OK button.

Next you specify the definition of the relation using the definitions Tab.

The Definitions Tab

The definition Tab screen looks like this:

1



The 'Base on' box displays the dictionary on which the relation is based.
The 'Label' box displays a label name for the relation. When you enter this label – the name has to be unique.

A radio field select box function has three choices 'Transcodifcation', 'Constraint', and Formula. The Formula option is at the bottom left hand corner of the screen. You must select one of these options.

Use **'Transcodification'** when you are using the relation to transcode between **only two** dictionaries. I.e.

Dictionary A	
Code 1A	Label 1A
Code 2A	Label 2A
Code 3A	Label 3A

Dictionary B	
Code 1B	Label 1B
Code 2B	Label 2B
Code 3B	Label 3B

Dictionary A	Dictionary B
Code 1A	Code 1B
Code 2A	Code 2B
Code 3A	Code 3B

Use **'Constraint'** when you have **more than two** dictionaries to transcode between. When you use this option, you can have many dictionaries transcoded if necessary. In theory the number of dictionaries you could transcode is unlimited. In practise your practical needs will probably be exceeded before the system resources are overloaded.

Dictionary A	Dictionary B	Dictionary C	Dictionary D
Code 1A	Code 1B	Code 1C	Code 1D
Code 2A	Code 2B	Code 2C	Code 2D
Code 3A	Code 3B	Code 3C	Code 3D

For both the Constraint and Transcodification options, two check boxes exist to provide details about the nature of the relation.

One states 'all of the codes of this dictionary must have a translation' and the other states 'some codes of this dictionary could have more than one translation'. You should click in the box if the statement is true and you may have both boxes selected or unselected if required.

The top check box determines whether the relationship between the dictionary and relation codes is obligatory.

The bottom check box determines whether the relationship is 'one to many'.

Use **'Formula'** when you want to transcode a dictionary's codes using a formula. For example ignore the last two letters of a four-letter code.

Dictionary A			Becomes	
Code AFBB	Label 1A		Code AF	Label 1A
Code AFGH	Label 2A		Code AF	Label 2A
Code BLWK	Label 3A		Code BL	Label 3A

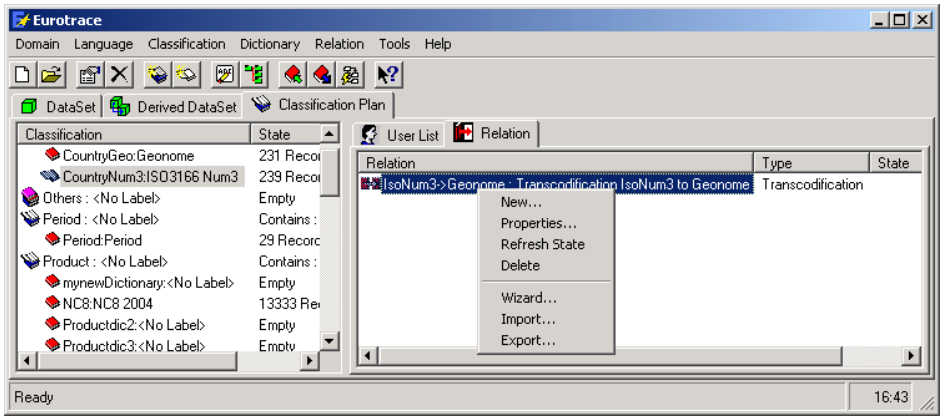
If you click on the Formula check box at the bottom left hand corner of the Definitions tab – the Storage and ownership tabs are removed.

At the bottom of the screen are two boxes labeled 'First Character' and 'Last Character'. These are only operational when 'Formula' has been selected.

You use these boxes to enter the starting position code in the first character box and the number of characters after the code in the last character box.

Renaming a Relation

Select the relation in the list and use '**Properties'** on the shortcut menu and type in the new code and label details on the General Tab.



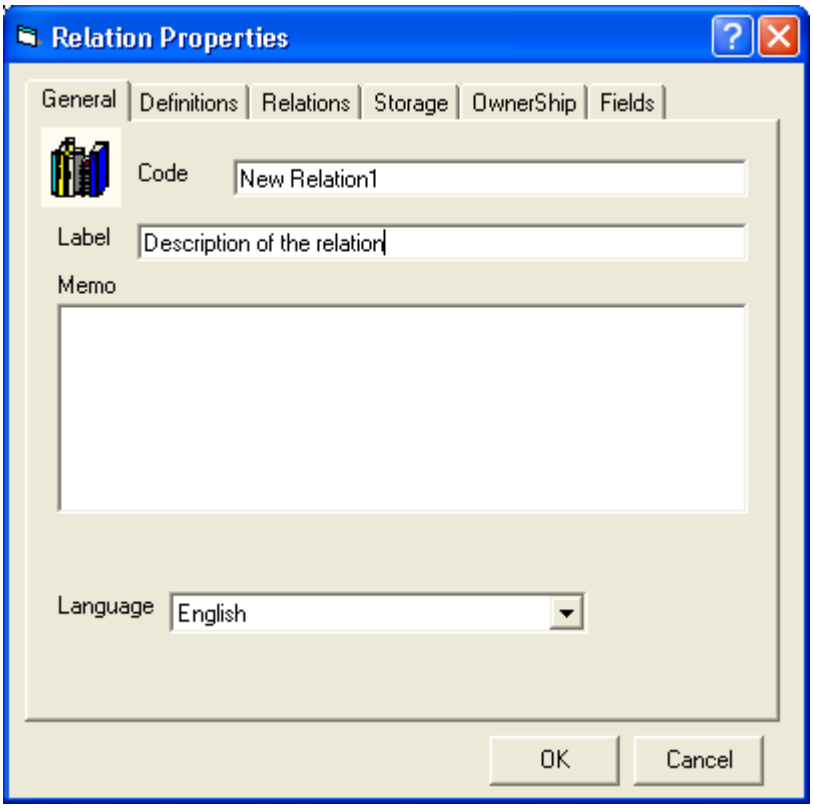
Deleting a Relation

Select the relation in the list and use '**Delete'** on the shortcut menu illustrated in the image above.

Changing the Properties Of A Relation

Select the relation in the list and use the shortcut **'Properties'** menu option. Five Tabs are shown. The Definitions Tab has been discussed above.

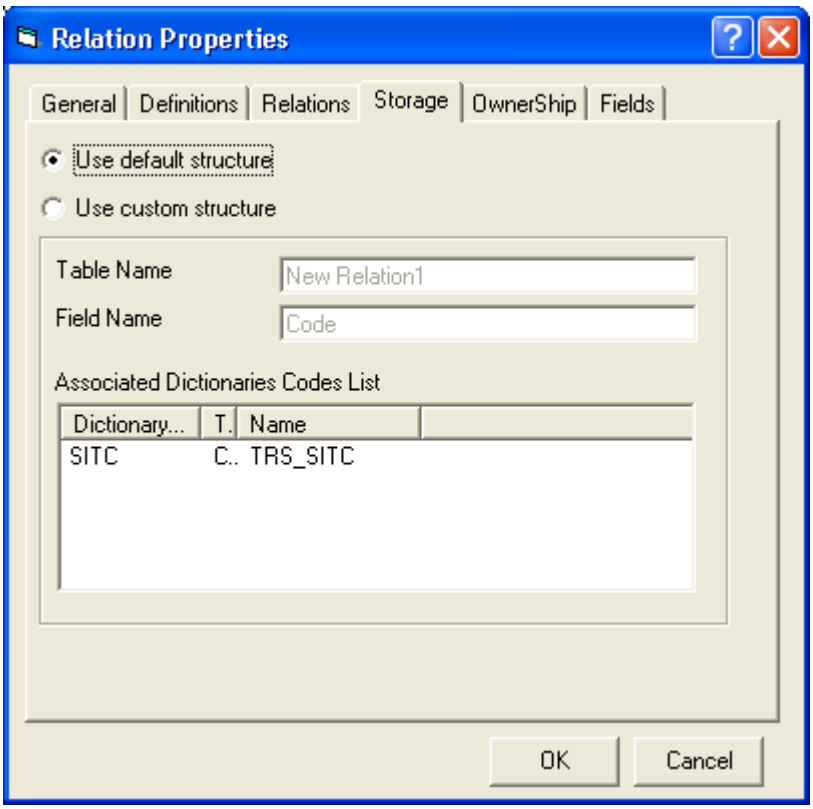
The General Tab



Allows you to set the general properties for the Relation. These include the code and the label and memo (if activated). The code will remain the same in all languages but the content of the memo field and label can change for each language you select from the drop down list box.

To set these you should first select the language from the drop down list box and then enter the label and memo in accordance with the language you have selected. The range of languages available for your labels will be consistent with the range of languages set when the Domain was created.

The Storage Tab



The storage tab lets you define the storage characteristics of the Relation ONCE only.

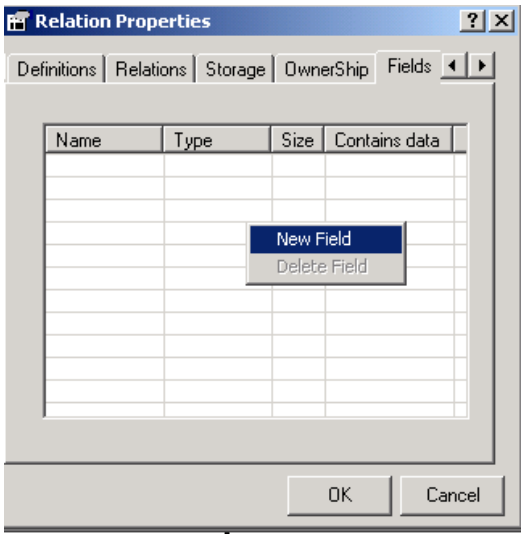
A window entitled Associated Dictionaries codes list – lists the dictionaries that are associated with the relation. This will display the Label used in the Relations Tab list.

You have two options in the form of radio field selection boxes one entitled **'Use Default structure'** and the other entitled **'Use custom structure'**.

Use the custom structure when you want to activate the possibility to change the Table Name and field name parameters.

Use the default structure when you don't want to change them.

The Fields Tab



The Fields tab lets you define customs fields linked to your dictionnaries.

You have two options from the pop up menu **'New Field'** and **'Delete Field'**.

A list view shows the existing customs fields as well as their type and size.

17.3. Ownership Tab

The ownership tab enables the user to set the visibility status of the relation within the domain for other users.

The object owner is listed in the display box at the top of the screen.

Below this is a button marked **'Take Ownership'.** This allows Users with a higher level of profile permissions to take control of the relation.

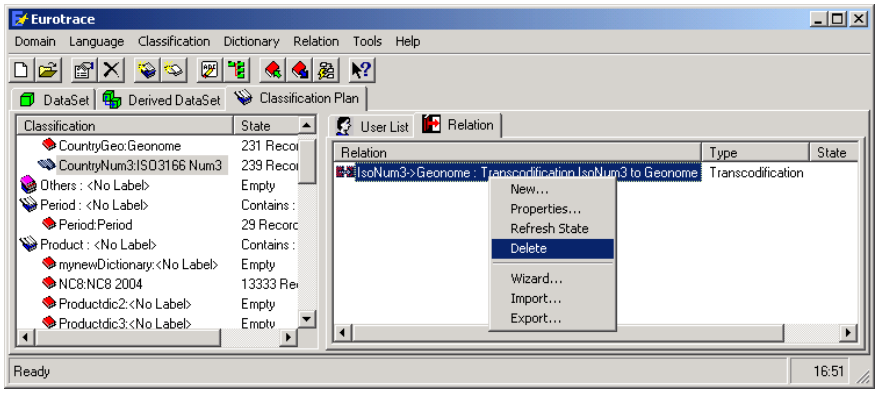
The 'Visibility' section of the screen has three options – you must choose one:

Public
All users according to their rights can use the object and modify its definition.

Read only
All users, according to their rights can use this object but they can't modify its definition.

Private
Definition and data can not be accessed by another user.

To Delete a Relation use the **'Delete'** shortcut menu option.



17.4. Edit / Check Wizard menu option

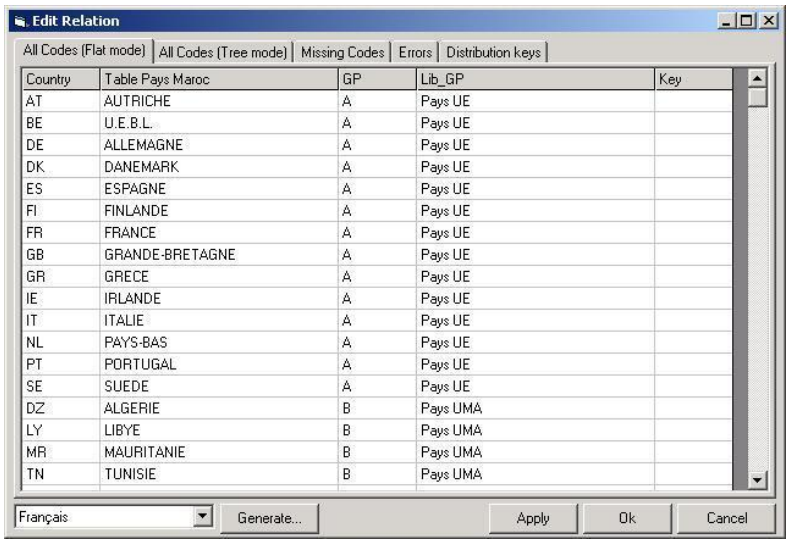
You will want to visually check the relation and have the opportunity to manually amend any errors or add missing codes.

Select the relation in the list and use the 'Edit/Check Wizard' option in the shortcut menu (see previous image).

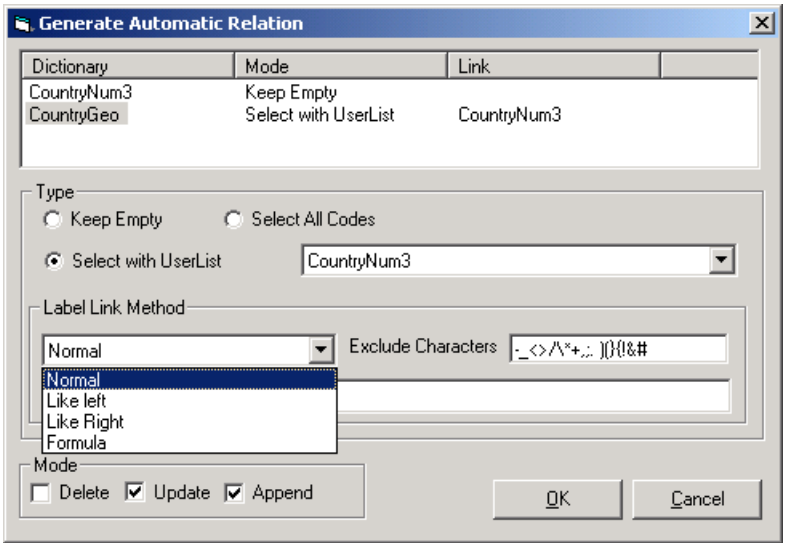
There are two different views of the relation. The first View is displayed on the **'All codes (Flat mode)'** Tab. The second view is displayed on the **'All codes (Tree Mode)'** Tab. Two other Tabs detail the Missing Codes and the Errors.

17.5. All Codes (Flat Mode) Tab

This view lists the relation in a flat mode. This provides the most simple view of the table so that it can be edited.



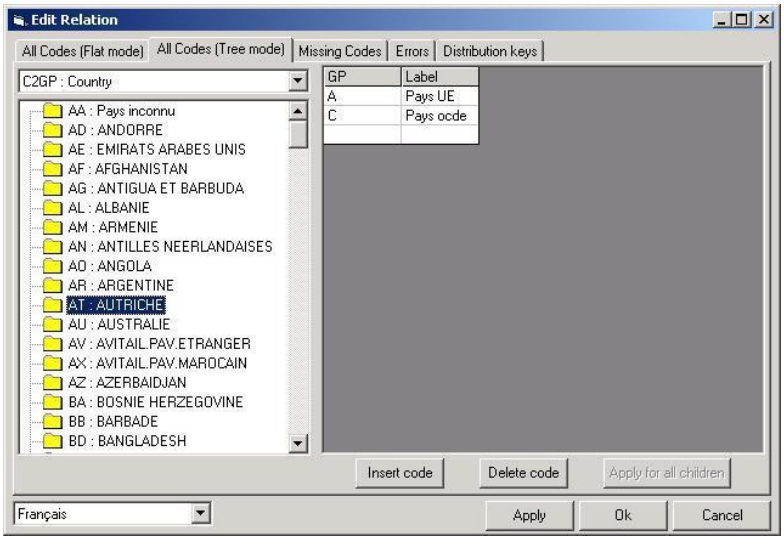
Clicking on **'Generate'** opens the Generate automatic relation form



It enable you to link automatically your dictionaries by selecting the appropriate label link method as in the above example.

17.6. All Codes (Tree Mode) Tab

This view lists the relation in a tree mode. This enables the user to select a code in the left hand window and see the detailed information for the relation in the right hand side of the screen.



To edit the detailed information double click on the code and a dictionary will be displayed to select a new valid code from.

The drop down list of dictionaries lets you choose the dictionary and permits you to see the relationship from another direction.

The available possible associations are listed in the left hand part of the screen.

The right hand part of the screen lists three different types of associations that you can make.

Associate using simple text match
Use this option when the label is identical.

Associate excluding following characters
You can use this option to exclude certain specified characters.

Associate like text*
This association type enables you to match using the standard '*' wildcard.

The additional options are to replace existing links. You can associate only the un-associated codes, or associate all the codes and delete the existing relations.

When you have set your options as required click the OK button.

The **Insert code** button lets you add a code in the relation file. The appropriate dictionary is automatically displayed for you to select a valid code.

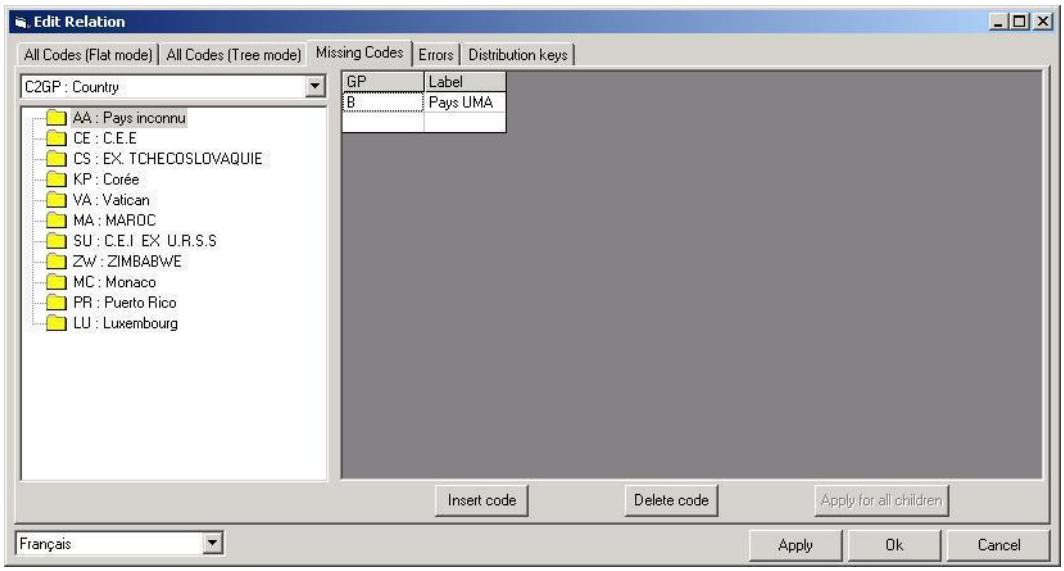
The **Delete code** button lets you delete.

The **Apply for all children** button lets you automatically assign the same relation that you have defined for the parent code, to all of the 'children' sub codes that belong to the parent code.

There is also the **label language select list** at the bottom left corner of the screen which lets you set the display language of the codes and labels.

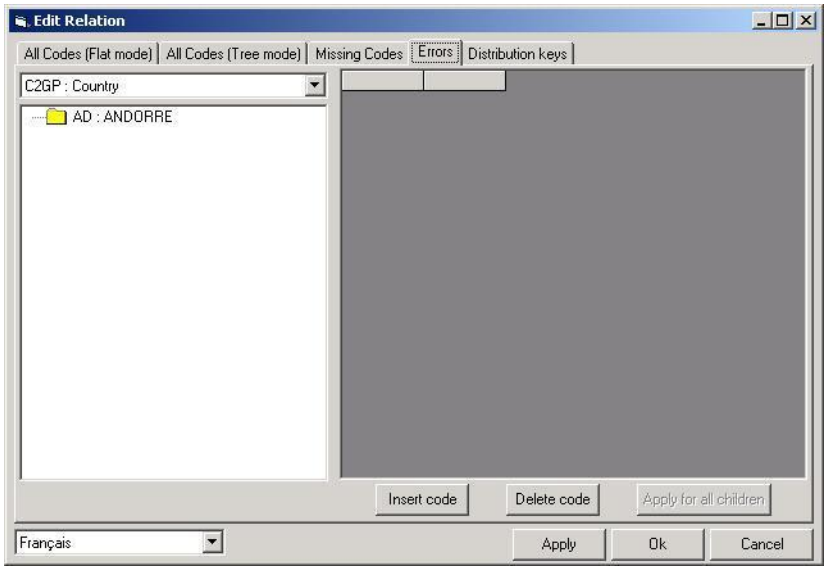
17.7. Missing Codes Tab

This Tab lists the missing codes for the relation.



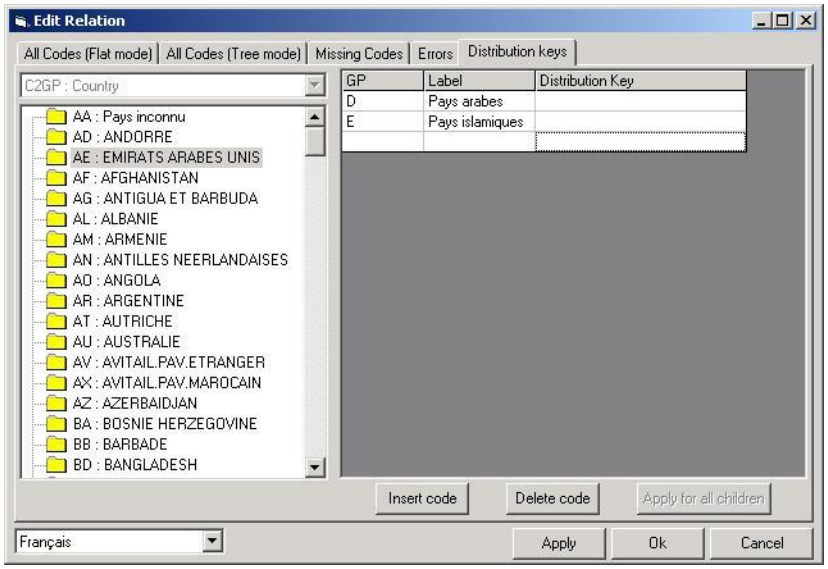
17.8. List Error Tab

This Tab lists the Errors. This enables the user to easily view the errors in the relation (all codes must exist in the dictionaries).



17.9. Distribution Keys Tab

This Tab lists the distribution keys of the relation. This enables you to select a code in the left hand list of the screen and to see which groups that code belongs to in the right hand part of the screen.



You can change these groups by using the 'Insert code' button to insert new valid group codes (a dictionary is displayed listing the valid codes for you to select from), and the 'Delete code' button to delete a code.

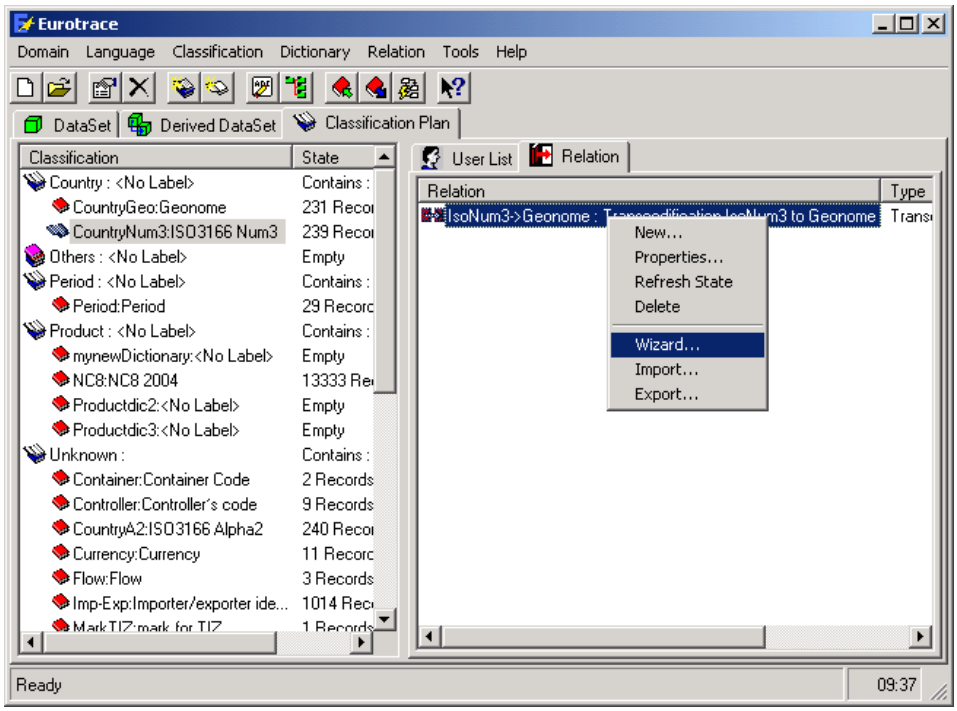
To edit the label double click in the label field type the new label and click on the 'OK' button.

To edit the distribution key codes in the distribution key code column, double click on the column, type the new keys and click on the 'OK' button.

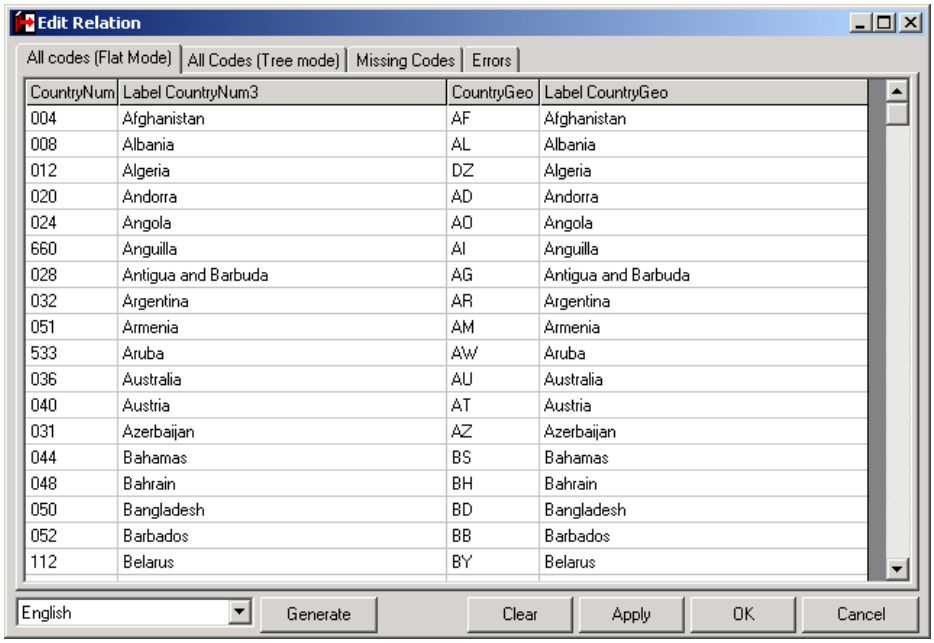
When you have finished editing your relation click on the '**Apply'** button to update the changes and the '**OK'** button to save them. If You wish to exit without saving any changes made use the '**Cancel**' button.

17.10. Wizard menu option

Select the relation in the list and use the 'Wizard' option in the shortcut menu.



This displays the relation in grid format and allows you to directly edit the values in the grid.



17.11. Import data into a relation

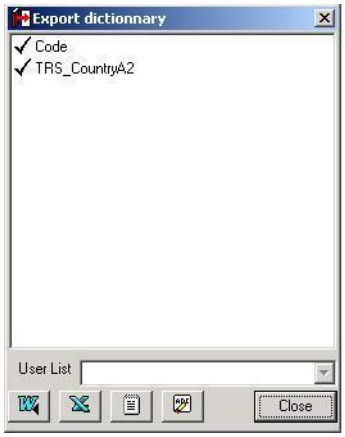
Select the relation in the list and use the 'Import' option in the shortcut menu to access the import wizard (see image above).

Follow the standard Eurotrace importation wizard steps as prompted on screen.

17.12. Export data from a relation

Select the relation in the list and use the 'Export' option in the shortcut menu to access the export screen. You must select the field of the table that you wish to export. You can export to Microsoft Word, Excel, text file and CSV format file by choosing the format from the buttons on the bottom of the screen.

N.B. The user list drop down list box is not used.



When you have chosen your options use the 'Close' button to exit the Export options.

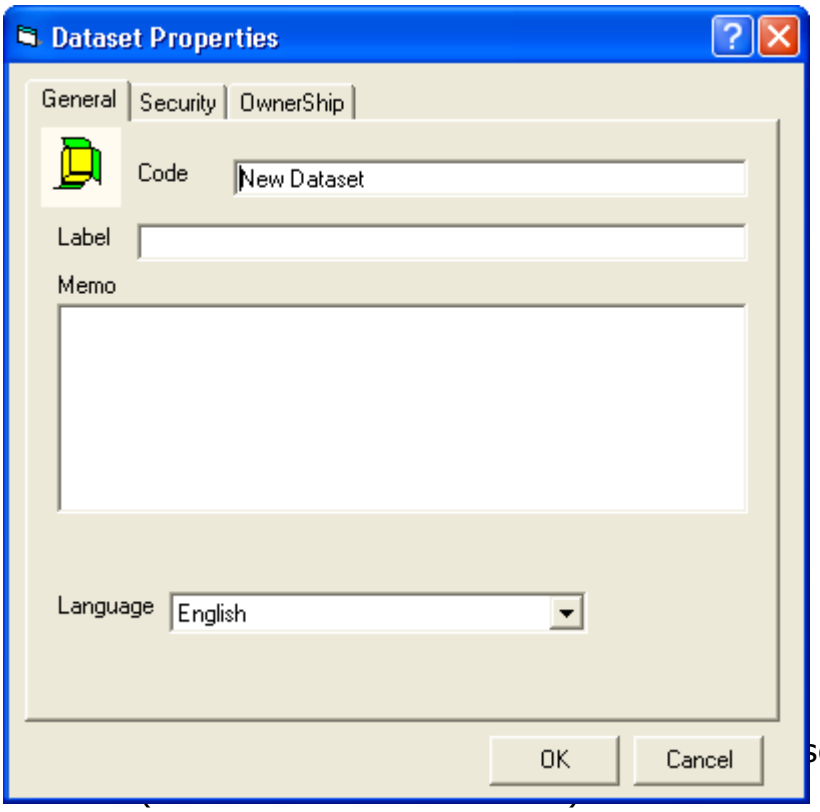
18. Managing Datasets

18.1. Creating A New Dataset

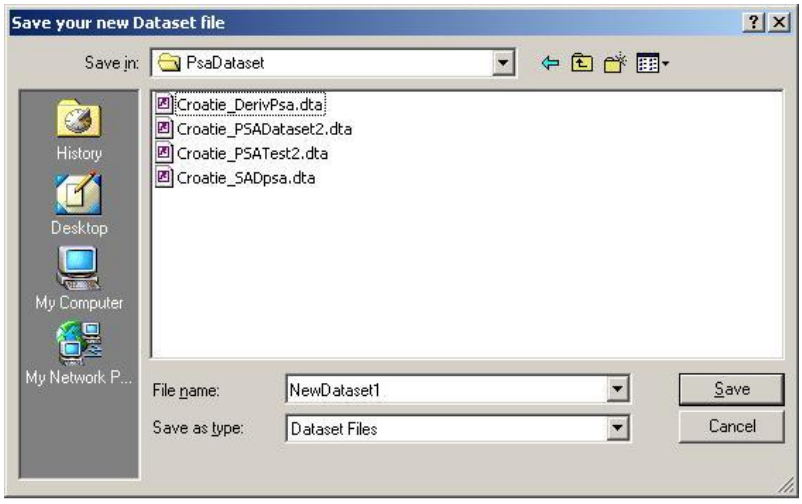
Select the Dataset Tab on the main screen.

Either right click in the Dataset Window and select the **'New'** menu or click on the **'Create New Dataset'** button  **.**

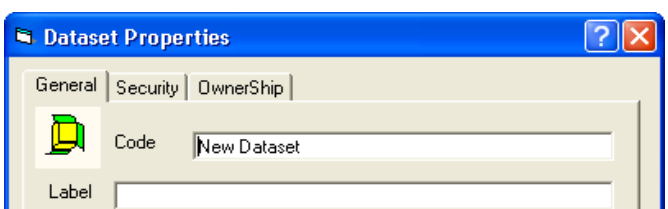
The 'Dataset Properties' window appears allowing you to set the properties of the new dataset.



select the directory to save the



In the **'Code'** field you should type a unique Code.



This code should be descriptive

as it will be appended to the domain name in the data file that is created for each dataset.

In the **'Label'** field you can type a label for the dataset. This label does not have to be unique but you should use labels that will help you identify the dataset.

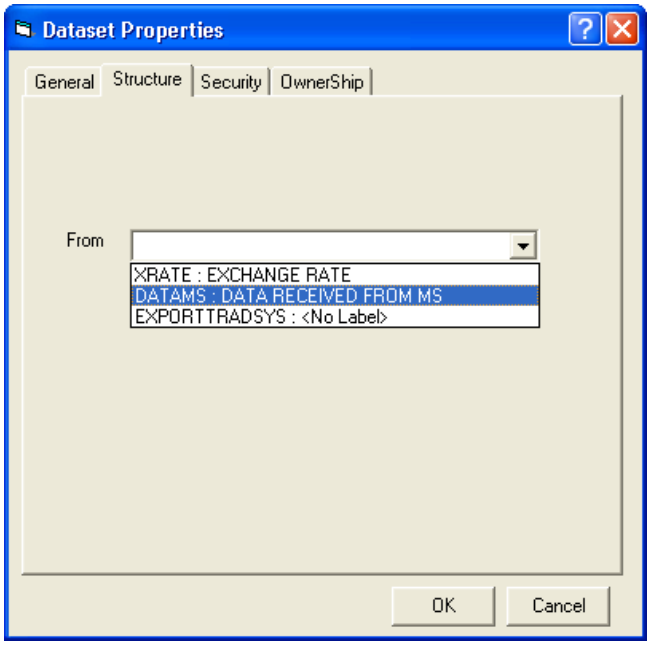
In the **'Memo'** field, you can type text, but only if the memo field checkbox was flagged in the Structures tab of the Domain Properties window.

You may change the General Properties of a dataset at anytime. Either select the dataset you wish to work with and from the shortcut menu choose **'Properties'** or select the Dataset you wish to work with and then click the **'Object Properties'** button. 

18.2.1.1.1.

18.3. The Structure Tab (Only available when creating a Derived dataset)

The Structure Tab lets you set the maximum number of shared views for the dataset from a drop down list of options.



The 'Derived Dataset' check box and drop down selection list will be unavailable when you create the dataset – but become available for derived datasets. You use these to set the link between the main datasets and the newly created derived dataset

18.4. The Ownership Tab lets you set the visibility of the dataset to other users who might access the domain.

There are three levels of visibility that are selected by clicking in the appropriate selection indicator. The on screen text explains their functions.

Objects that are set to be private are not necessarily local objects – it is possible to create a private dataset in a domain stored at another location, in which case the dataset will still remain only accessible by the person who created the domain and also the database administrator.

N.B. The 'Object Owner' field displays the owner of the object. This is normally the person who created the object. However, you should be aware that the rights and permissions to create view, modify and delete data and objects are assigned

by the database administrator to the users through, 'User profiles'. Another user with a higher set of permissions than your set – in other words a higher level of 'User Profile' - will have the ability to use the 'Take Ownership' button on the ownership Tab Screen and take ownership of your object.

A user can take control of a Guest's objects – a Manager can take control of a User's objects and the Database Administrator can take control of everyone's objects!

Other users with the same level of user profile as you will not be able to take control of your objects (unless of course you both have database administrator profiles assigned).

By managing the permissions assigned by the database administrator through 'User Profiles' and by setting the visibility of the objects as you create them it is therefore possible to fully manage the access to your datasets. It is important to practice and understand these controls, if you are to manage the visibility and access to confidential data sets. These controls are further enhanced by the addition of the extra security controls below.

18.5. Setting the Security Properties of a Dataset

The security properties of the dataset, can only be set when the dataset is initially defined. If you do nothing, your Dataset will not have any security applied.

If you click in the check box **'Dataset Password Protection'** you can select the type of Password Protection you would like to apply to your Dataset.

If you select the check box **'Save Password in Structure File'** the password that you type will be saved as part of the Dataset.

This Dataset can then only be viewed and edited using EUROTRACE.

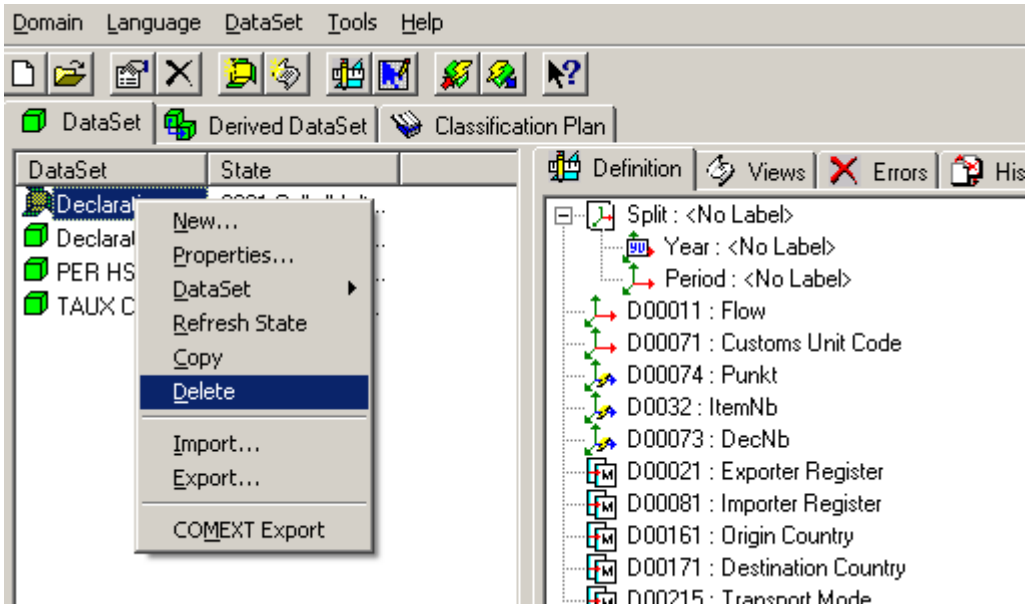
The Dataset can only be opened with other applications (MS Access) if the correct password is used. If this option is unselected, you must supply a password each time the domain is opened with EUROTRACE.

If you select the check box 'Encrypted Database', the entire data (‘.dta’) file will be encrypted and therefore illegible if opened with any software except EUROTRACE.

! **Warning! It is not possible to recover a forgotten encrypted password, make sure you do not forget it!**

18.6. Deleting a Dataset

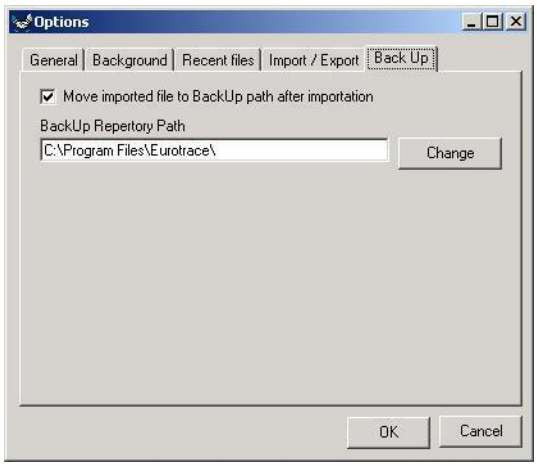
Select the Dataset you wish to delete and either click on the **'Delete'** button or choose **'Delete'** from the shortcut menu.



18.7. Backup copies of deleted datasets

When you delete datasets from a EUROTRACE Domain, a backup file is created to make it possible to retrieve accidentally deleted datasets.

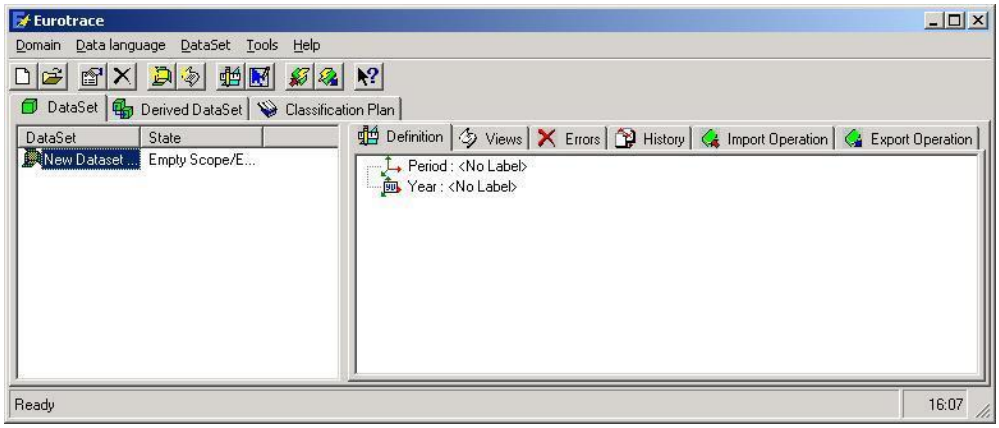
N. B. This file is called ***Domain name_Dataset name*** and will be located in the path stated under Tools Menu Option's sub Menu Backup Tab.



18.8. Dataset Structural Definition

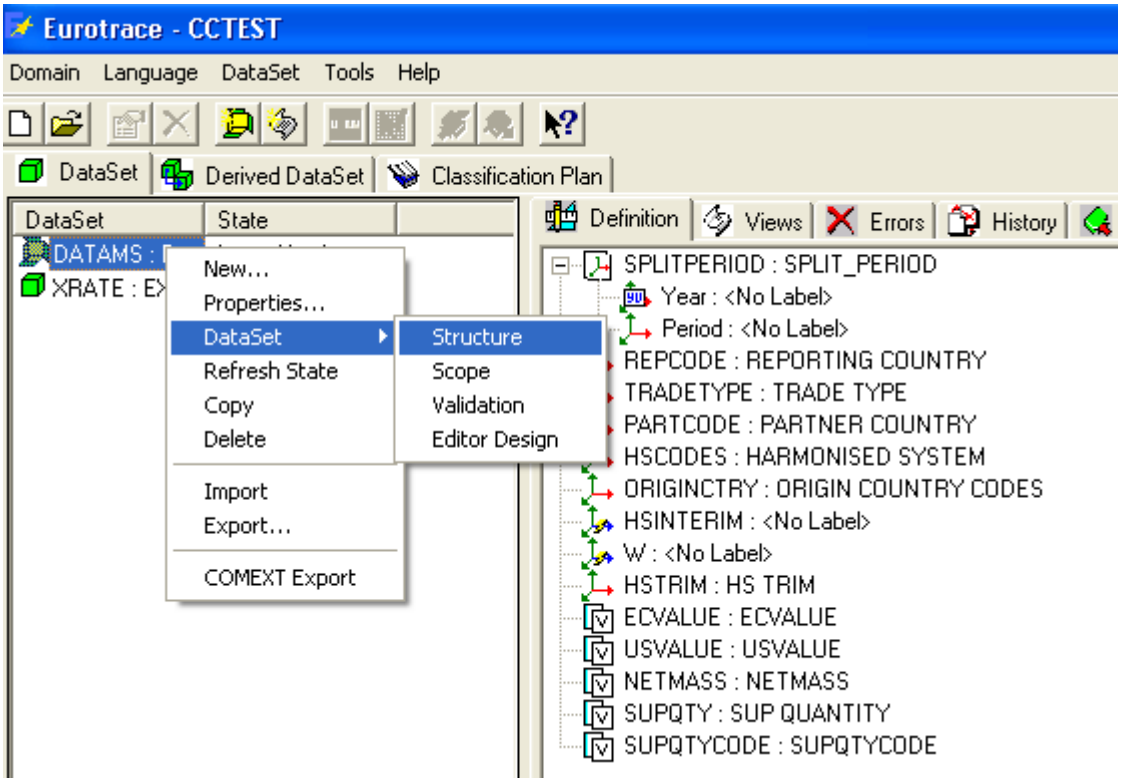
When you create a new dataset you have to define the structure of the dataset. How many dimensions, how many values, what types of dimension, etc.

When you specify a dataset's definition, the information is displayed in summary form on the right hand side of the screen in the '**Definition Tab'**.



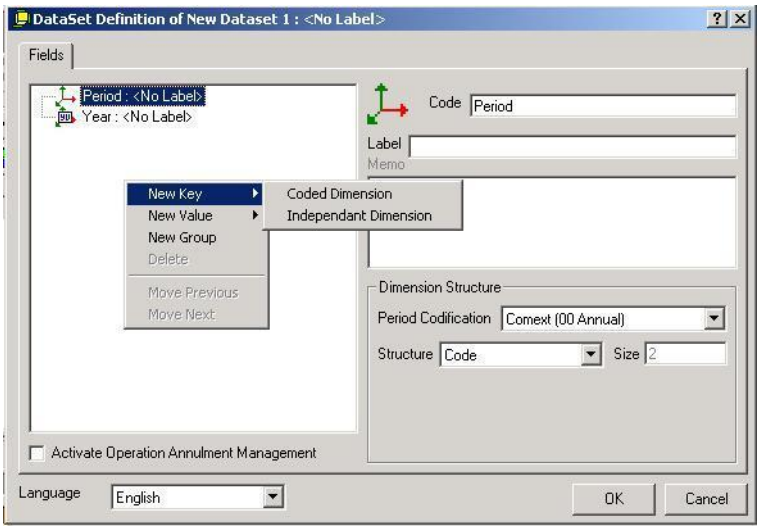
TIP! Remember that in order to define your dataset, you will need to have established your dictionaries first.

To define the dataset either select the dataset and choose **'Structure'** from the shortcut menu or use the **'Definition'** button  **.**



18.9. Adding a New Dimension to the Dataset

In the dataset definition Tab window, click on either the 'Period' or 'Year' dictionaries (which are created automatically when you create a new dataset) and click on the right hand mouse button and use the '**Definition'** shortcut menu option.



The dataset definition screen is displayed. This is the place where you can define the structure of your dataset.
The fields are listed in a box on the left hand side of the screen.

The right hand side of the screen will change to show information about the various fields as and when you click on the fields to select them.

To add a new dimension to the dataset click on the right hand mouse button in the field list window and select the 'New Key' menu.

The **'New Key'** shortcut menu lets you add two types of dimension; Coded Dimensions and Independent Dimensions.

18.10. What is a coded dimension?

A coded dimension is a dimension that is linked to a dictionary. An example would be a dictionary of country codes, in which case the dimension might be called 'Country'. The Dimension has multiple possible valid code values listed in the country dictionary. The dimension could for example, contain the code values such as 'FR' for France, 'DE' for Germany (Deutschland) or 'GB' which ISO use somewhat misleadingly to identify the United Kingdom - despite the fact that Northern Ireland is not a part of Great Britain.

Coded dimensions are therefore important identifiers and form part of the unique identifier key for each record in a dataset.

In a flow or movement from one country to another, it is possible to have a dataset that has one coded dimension declared for the origin country and another

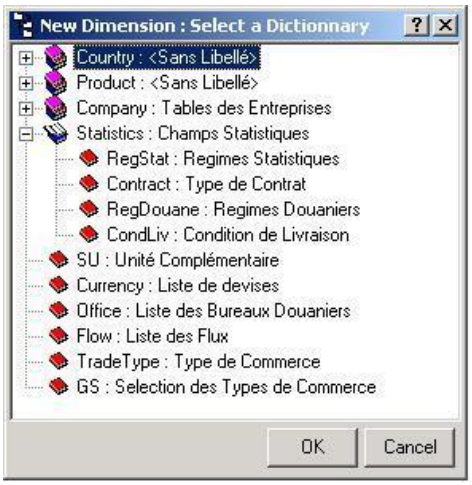
dimension for the destination country. In such datasets both of the coded dimensions would share a global dictionary of valid country codes, but the records of data themselves could have different country codes stored in the country of origin and country of destination positions.

Coded dimensions are also commonly used for classifications of groups of goods or types of product or service. Similarly lists of companies, commodities and organisations can also be managed through the use of dictionaries, codes and coded dimensions in the datasets.

When your records are then being validated, each code can then be checked against the relevant dictionary and scope of valid codes to ensure that the data are permissible.

18.11. Adding a coded dimension

If you choose a **'Coded Dimension',** a window is displayed with a list of dictionaries. N.B. These are the dictionaries that you have made previously. If your list of dictionaries is blank, it is because you need to make some dictionaries first ! – (You cannot associate non-existing dictionaries to your datasets).



Select one to attach to your new dimension and click the **'OK'** button.

The new dimension is added to the dataset and, by default, the name of the dictionary is used to name the dimension (displayed in the **'Code'** field).

You may change this name at any time by typing a new name in the **'Code'** field.

You may also apply a descriptive label to it by typing in the **'Label'** field.

Similarly if you had the **'Memo'** box checked on the Structure Tab when you created the Domain, you can type a memo in the **'Memo'** field.

A drop down list box of Languages at the bottom of the screen allows you to set the display language of the dictionary labels.

Other controls exist at the bottom right corner of the screen to establish the Dimensions Structure (see 'Dimension Structure Settings' below).

18.12. What is an Independent dimension?

An independent dimension is a dimension that is NOT linked to a dictionary.

There may be times when you wish to include a dimension in your dataset structure which is not linked to any dictionaries that you have defined within the Classification Plan. In these cases use an Independent dimension and not a coded dimension.

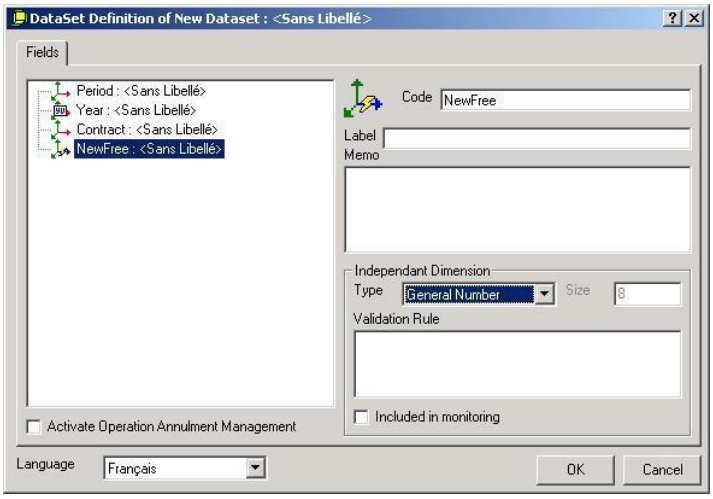
You can still validate the content of these dimensions but rather than validate them against a list of valid dictionary codes they can be validated by way of Microsoft Access compatible SQL (see below).

18.13. Adding an independent dimension

If you choose an **'Independent Dimension'** the dimension is added to the dataset with the default name 'NewFree'.

You can change the '**Code'** and '**Label'** by entering text in the code and label boxes.

Below the memo field are the parameters to define the structure of the independent dimension (see 'Dimension Structure Settings' below).



A validation rule using Microsoft Access SQL syntax can be applied to an independent dimension, and a check box enables you to include the validation test in the monitoring process when importing and exporting data to the dataset.

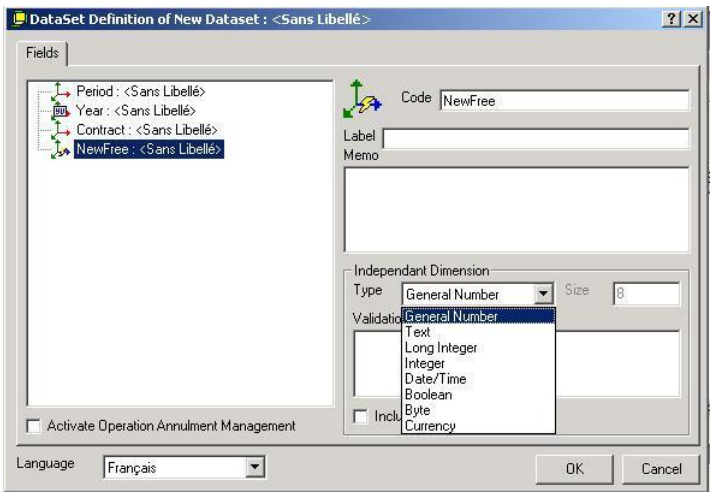
Having set the above fields as you wish for your dimension continue to add and define other dimensions as required, or add some values (see adding values below). When you have defined and checked your dataset structure click on the 'OK' button to save it.

18.14. Dimension Structure Settings

When you add dimensions, they are initially inserted with a default structure. You can change the structure or accept the default settings.

N.B. The Period and Year Dimensions are special cases and are dealt with in the next section of this documentation.

The Structure options allow you to specify the way the dimensions are stored in the database, a range of standard Microsoft Access data types are supported.



You must select a data type from the 'Type' drop down list box. The default size is displayed in the Size box.

If the 'Size' box is displayed in black font, you may change the size of the data type to be appropriate to your needs.

Some data types, however, have a fixed size format. You are not able to change these. If the data type is of a fixed size format, then the Size box displays in grey font and you will not be able to change the value shown.

'Validation'
Below the Type list and Size box is a Validation Rule box.
Here you may enter a validation rule (see Validation rules section later for more on validation rules).

18.15. Include in Monitoring

If you want to include the Independent dimension in the on-screen monitoring process when importing and exporting data click in the check box entitled **'Include in monitoring'**

18.16. Annulment Operation

If you want to **'Activate the Operation Annulment Monitoring'** click in the checkbox underneath the field list to activate this feature.

A drop down list box of 'Languages' at the bottom of the screen allows you to set the display language of the dictionary labels.

18.17. Changing the Structure of Existing Dimensions

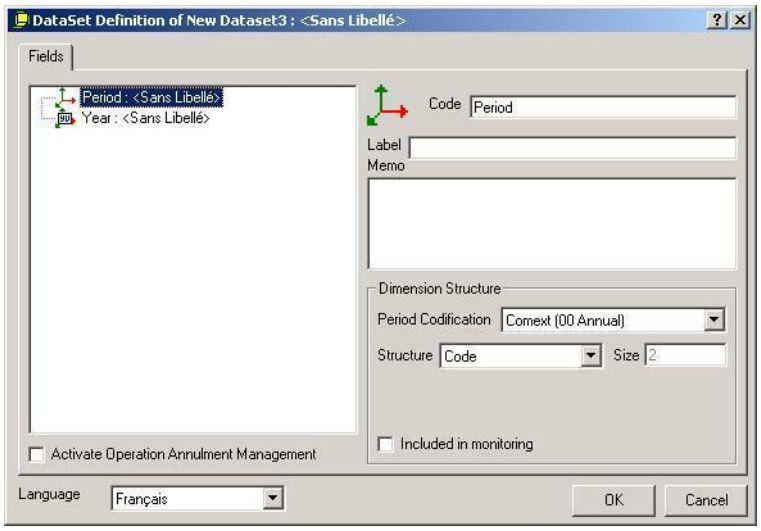
It is possible to change the structure of the existing Dimensions and fields by selecting the dataset, then the right clicking to get the shortcut menu , then selecting the 'Structure' sub menu option to see the dataset definition screen. You then select the dimension or field you wish to change by clicking on it in the list and then change the parameters in the bottom right hand corner of the screen.

The parameters and controls change depending upon the qualities of the field selected.

The Period Dimension and the Year Dimension are both created automatically when you create a new dataset, but you can reset their structures to suit your needs as follows:

Period Dimension

Select the Period dimension by clicking on it .



If you want to change the type of period codification, select a different type from the **'Period Codification'** drop down list.

You can also change the storage structure be selecting from the structure drop down list box.
The following types of storage structure are supported.

Code This is used to store the actual dictionary codes in the dimension and is the default type.

Index This stores a unique identifier for each code and is stored as a number. This can save space, but will increase processing time.

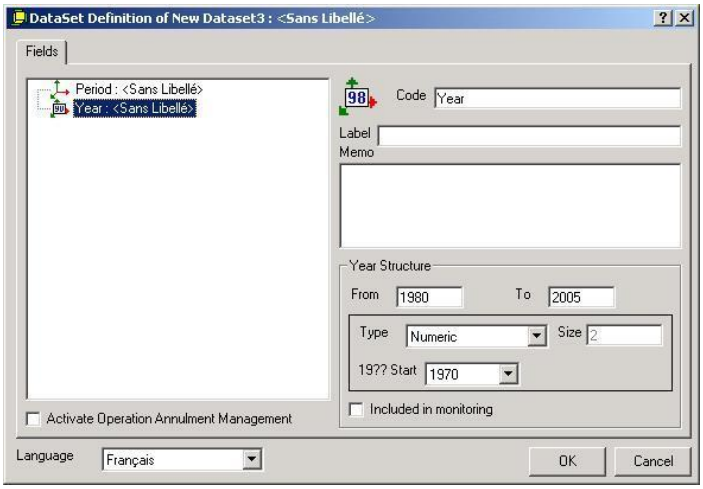
Constant Only one code from a dictionary is used in the dataset. This code will not be stored for each record and therefore saves time and space.

TransposedThis is used to store in the EUROTRACE record the values for each selected code of the Dictionary. See section entitled 'More Information On Transposed Period Data Structures' below.

Metadata This is used to store the codes of a dictionary as additional information to the values. This ensures that the values of this dimension are taken from the dictionary, if the values do not exist in the dictionary they will be refused. This structure can be useful to store flags.

Year Dimension

Select the year dimension by clicking on it.

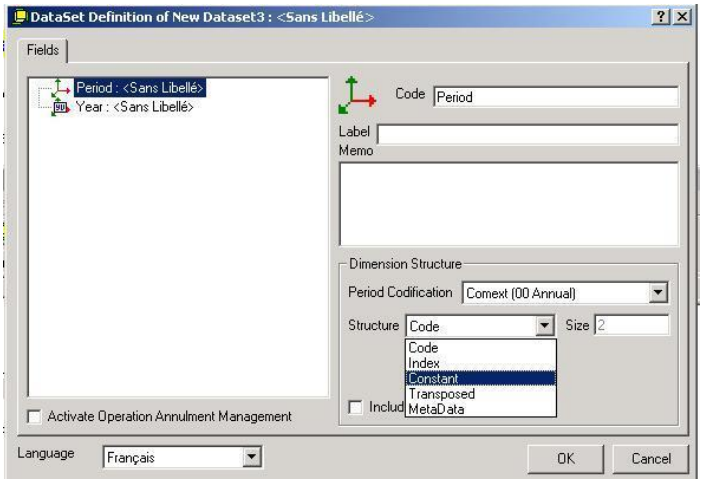


You can select the Start Year and type from the two drop-down lists and add a label and memo.

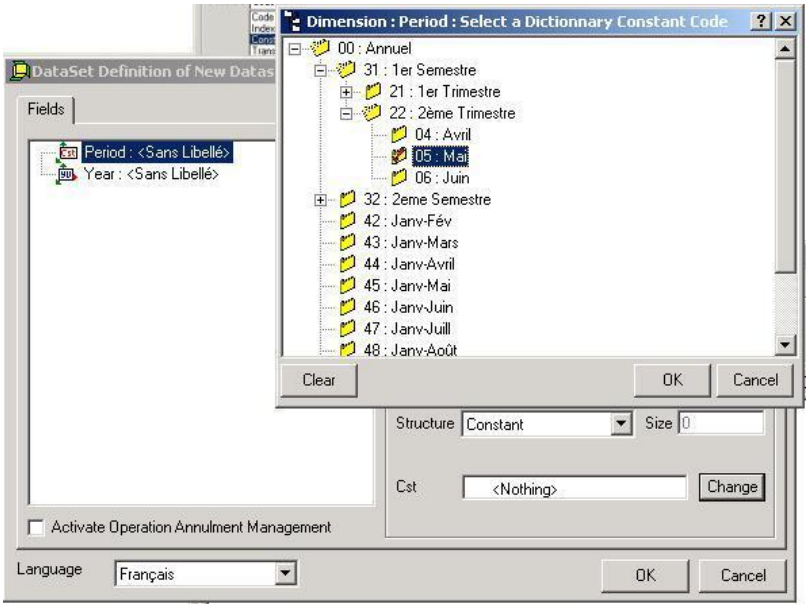
Constants

To define a period dimension as a constant, click on the dimension and select constant from the structure drop down list.

When you define a dimension as constant, you must designate a code from a dictionary to be used.



Click on the **'Change'** button to select a code to be used as the constant.



The selected code will be marked with a red check mark in the dictionary list.

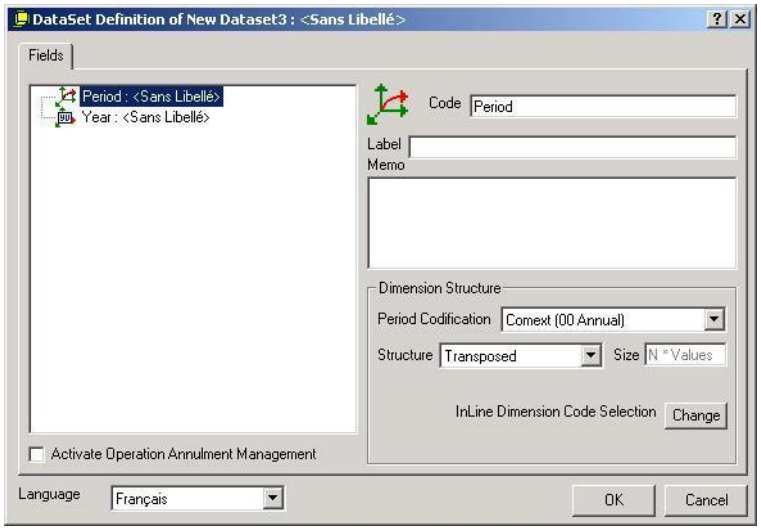
Click the 'OK' button to confirm the selected constant.

A variety of period Codification types are supported. Select the one you need from the Dimension Structure Period Codification drop down list box:

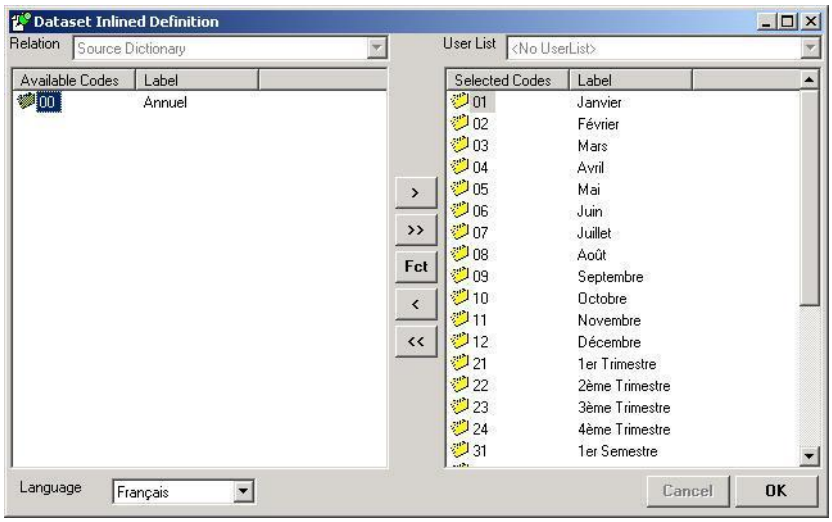
Comext (00Annual)
SAM
Statra
Comext (52 Annual)

More information about Transposed Period Data Structures

When you define a Dimension as transposed, you must then choose the codes from a dictionary to be included.



Click on the 'Change' button at the bottom left of the window to select the codes.

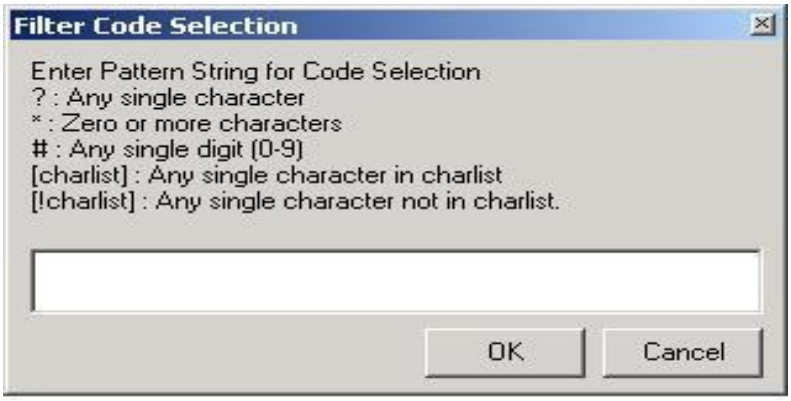


Whilst holding down the 'Control' key on the keyboard, select the codes you want in the left hand window by clicking on them. These are highlighted in blue when they are selected.

Then click on the top arrow button in the centre of the EUROTRACE screen to move the selected codes to the right hand side of the EUROTRACE screen.

When you have checked your list of selected codes in the hand side of the screen, you can click on the **'OK'** button to confirm your selection.

The other arrow buttons in the centre of the screen are for moving all or individual codes.

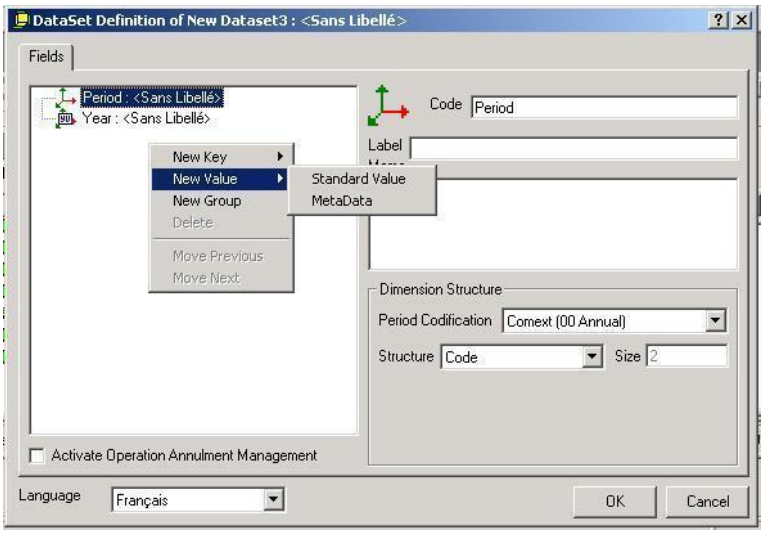


Tip ! The FCT (Filter Code Selection) button provides the useful feature to search for a set of codes based upon a user defined filter. Standard wildcards and instructions are provided on screen.

However, please note that it is THE CODES that are filtered and not the labels.

Adding a New Value Field to the Dataset

From the Dataset Definition window, open the shortcut menu and select **'New Value'**.

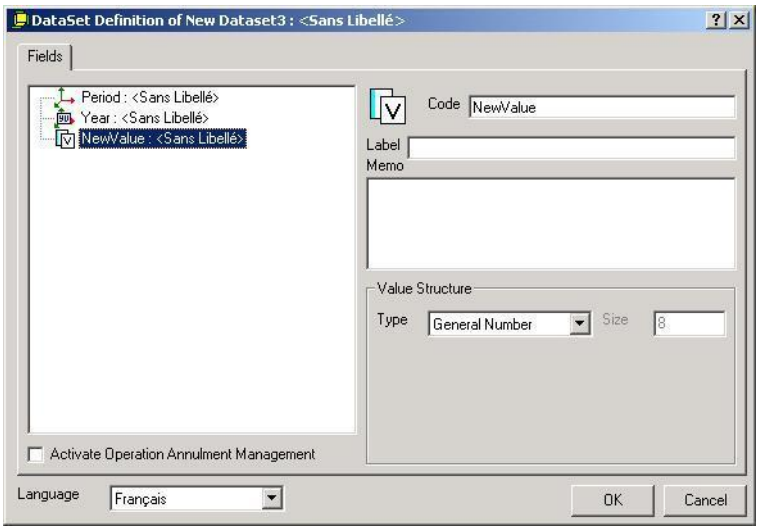


There are two types of new value you can add from the New Value sub menu:

Standard Value and Metadata.

‘Standard Value’

Select the standard value sub menu to add a standard value to the dataset. Name the value by typing in the **‘Code’** field.

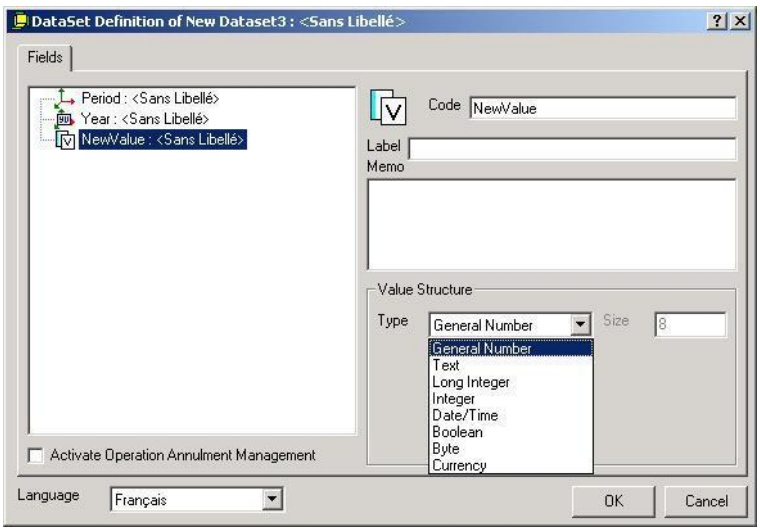


You can apply a descriptive label to it, by typing in the **'Label'** field.

Similarly if you had the ‘Memo’ box checked on the Structure Tab when you created the Domain, you can type a Memo in the ‘Memo’ field.

Setting the Value Structure

A drop down list enables you to set the value storage structure and the size box allows you to set the size where the type of structure permits.



General Number Real numbers (precise to 15 digits).
Text Alphanumeric up to 255 characters (you must specify the size in the ‘Size’ field).
Long integer This type Stores numbers from -2,147,483,648 to 2,147,483,648 (no fractions).
Date/Time Date and time should follow the structure as defined in the regional settings of MS Windows.
Boolean True or false.
Byte A number between 0 and 255.

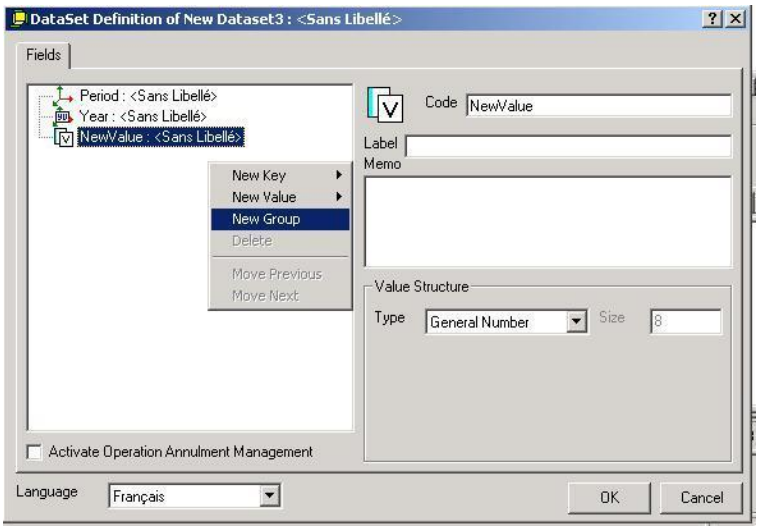
Currency Real numbers with (precise to 15 digits), as defined in the currency settings of MS Windows.

After adding and defining a standard value you can later set validation rules for the standard value (see section on validation rules).

Metadata Value A metadata value can also be added, in which case you must associate a dictionary to the value.

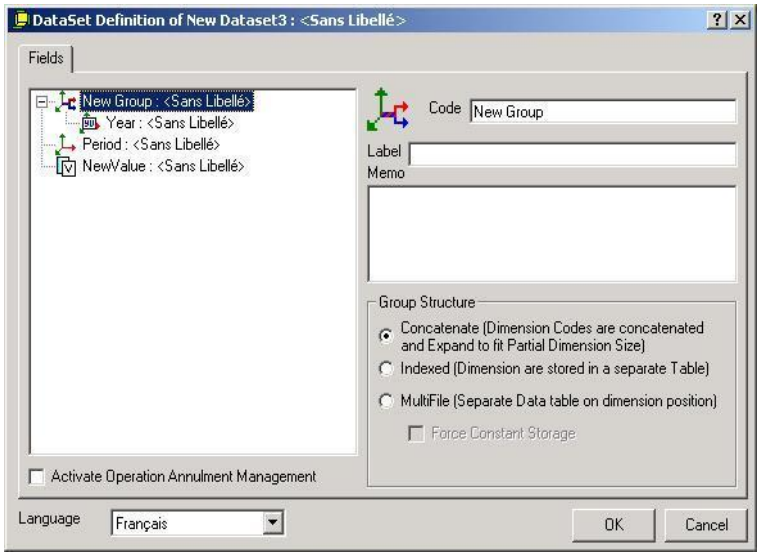
18.18. Adding Combined Fields as a Grouped Field

Grouping Dimensions can save storage space by creating an indexed group.



To add a new Dimension that is the combination of two or more other Dimensions, use 'New Group' from the shortcut menu .

N.B. After creating a new group, you can drag and drop the dimensions from the field list directly onto the New Group Icon in the Field list.



If a Grouped Dimension is selected the controls will look like the image above.

You can set the Group Structure to be either a **Concatenation** or an **Index** or a Multifile**.**

Concatenate: The two or more dimensions in the group are stored as one unique dimension, by storing the result of the concatenation of the codes.

This will only work if the dimensions to be grouped are defined as codes.

Multifile: This will provide separate data tables for dimensions. These tables have the name: **domain_datasest.dta**
and are stored in the same place as the .dom domain file

Indexed: This will store a

unique index calculated by all the existing combinations of the two codes.

The .dta extension means 'data'. Each dataset therefore has its own .dta file or several .dta files in the cases where the domain is stored as a multifile.

So if you had a dimension time in the multifile, by year, for the years 1998 – 2002, for a domain called customs and a dataset called evolution the multifile would produce:

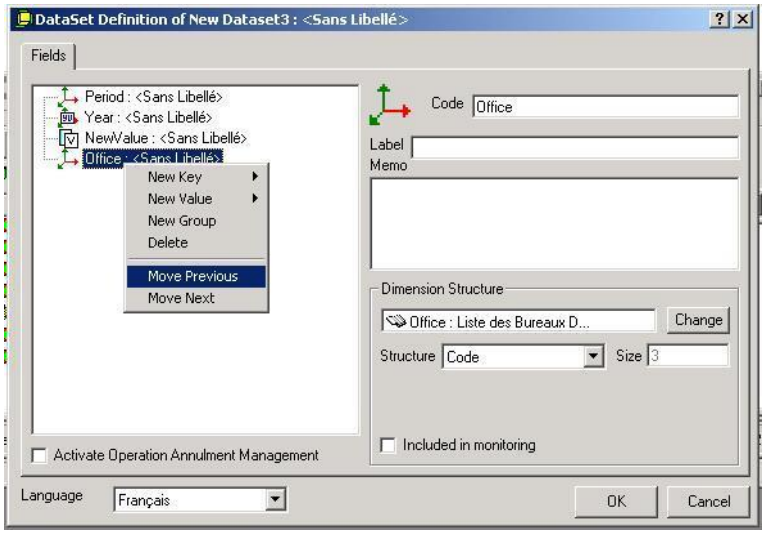
Customs_evolution_1998.dta
Customs_evolution_1999.dta
Customs_evolution_2000.dta
Customs_evolution_2001.dta

These .dta files are useful when you have a huge file greater than the 1 GB limit that exists per dataset when using Microsoft Access 97, because you can split the domain into several smaller files this way and thus not surpass the limit.

Force Constant Storage: This option under review: Not available in this release.

18.19. Changing the Order of the Fields in the Dataset

Select the item in the dataset that you wish to move. From the shortcut menu select **'Move Previous'** to move the item up one place in the list order and select **'Move Next'** to move the item one place down the list order.



18.20. Operation Annulment Management

To activate the operation annulment management click in the check box at the bottom right hand corner of the dataset structure definition screen. If you have

selected this option you will be able to roll back any changes that you make to your dataset.

This checkbox adds an id column to your dataset table, which later on, is used to identify various import or export operations.

You can therefore at a later date, when your dataset has data in it, choose to undo a particular import operation by reference to the id number in the id column that this check box adds. If you have not clicked the checkbox, you will not have added this column and you will not be able to undo a specific load operation because, you will not be able to identify which records were loaded for a specific import operation.

N.B. You can only activate this feature when the dataset is empty.

18.21. Deleting Dimensions and values from a dataset

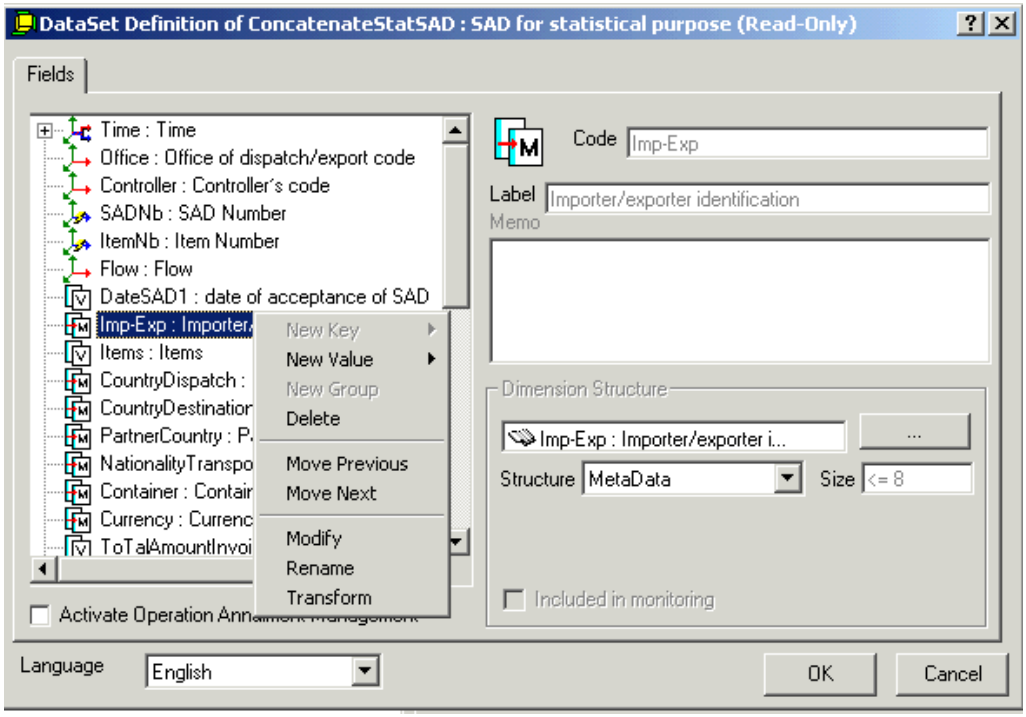
To delete a value or a dimension from a previously defined dataset, select the dataset, right click to access the shortcut menu, select the 'Structure' menu option, click on the item in the datasets structural definition list that you wish to delete, then right click and use the 'Delete' menu option.

N.B. You can't delete the Period or Year dictionary – these are mandatory.

18.22. Modifying Dimensions and values on a non empty dataset

On a non empty dataset, it is possible to execute the following modifications:
Change of dimension's name
Change of dictionary
Modification of the type and size of the dimension (increase only allowed)
Addition of a new value or dimension
Deletion of a dimension
Deletion of a key dimension
Modification of a value dimension in key dimension
Modification of a key dimension in dimension value
Modification of a group structure.

To process a modification, simply select a dimension and access the appropriate pop-up menu (right click):



N.B. You cannot process more than one modification to the dataset at the time. After your modification, you will have to validate your current modification (clicking on OK or Process) before selecting a new modification.

This completes the documentation on changing the structure of datasets. When you have defined your datasets you can apply validation rules to these structures and then load data into them.

19. Managing Derived Datasets

Several functionalities relating to Derived Datasets are identical to "Managing dataset" part in paragraph 11. The user will refer to this section for more information on dataset management.

19.1. Creating a New Derived Dataset

Select the **"Derived Dataset"** Tab on the main screen.
Either right click in the Dataset Window and select the **'New'** menu or click on the **'Create New Dataset'** button 
The **'Dataset Properties'** window appears allowing you to set the properties of the new Derived Dataset.

19.2. The General Tab

In the **'Code'** field you should type a unique Code. This code should be descriptive, as it will be linked to the domain name in the data file that is created for each dataset.

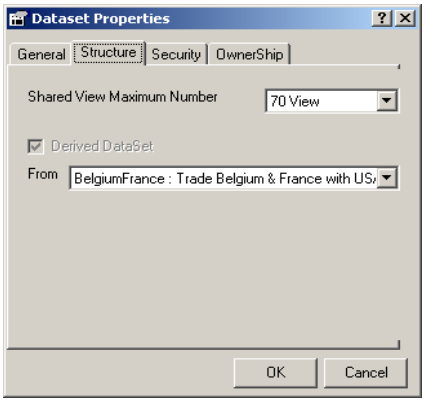
In the **'Label'** field you can type a label for the dataset. This label does not have to be unique but you should use labels that will help you to identify the dataset.

In the **'Memo'** field, you can type text, but only if the memo field checkbox was flagged in the Structures tab of the Domain Properties window.

You can change the General Properties of a dataset at anytime. Either select the dataset you wish to work with and from the shortcut menu choose **'Properties'**, or select the Dataset you wish to work with and then click the **'Object Properties'** button  .

19.3. The Structure Tab

The Structure Tab allows you to set the maximum number of shared views for the dataset from a drop down list of options.



Unlike the dataset section, the **'Derived Dataset'** check box and the drop down selection list are available.
Eurotrace propose in this list all the Datasets previously created.

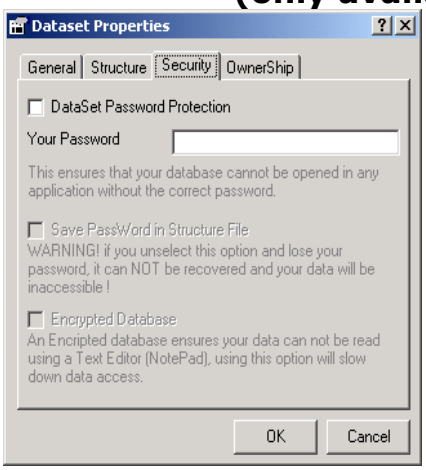
Select the dataset on which you wish to base your Derived Dataset.

19.4. The Ownership Tab

The **"Ownership"** Tab allows you to set the visibility of the dataset to other users who might access the domain.

It is the same tab as the one for the Datasets (see 11.4 section).

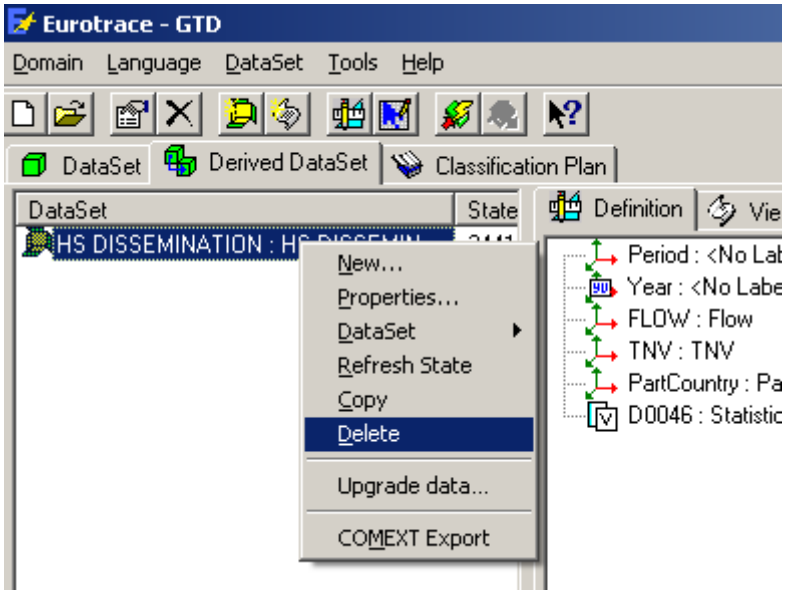
19.5. Setting the Security Properties of a Derived Dataset (only available under MS ACCESS)



It is the same functionality as the one for the Datasets.

19.6. Deleting a Derived Dataset

Select the Derived Dataset you wish to delete and either click on the **'Delete'** button  or choose **'Delete'** from the shortcut menu.

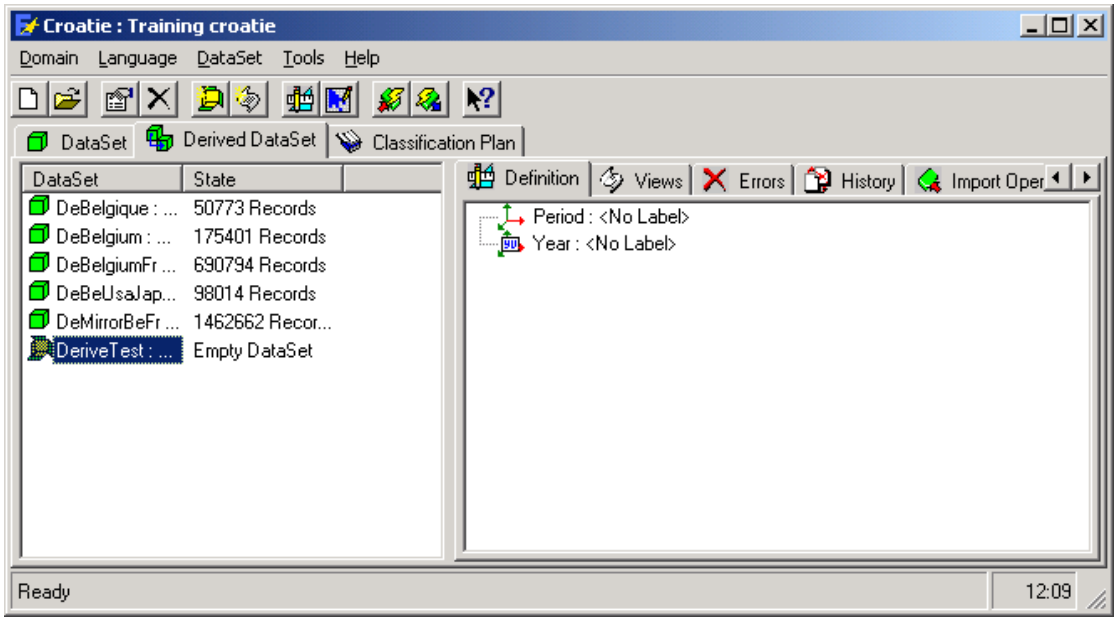


It is the same functionality as the one for the raw Datasets.

19.7. Derived Dataset Structural Definition

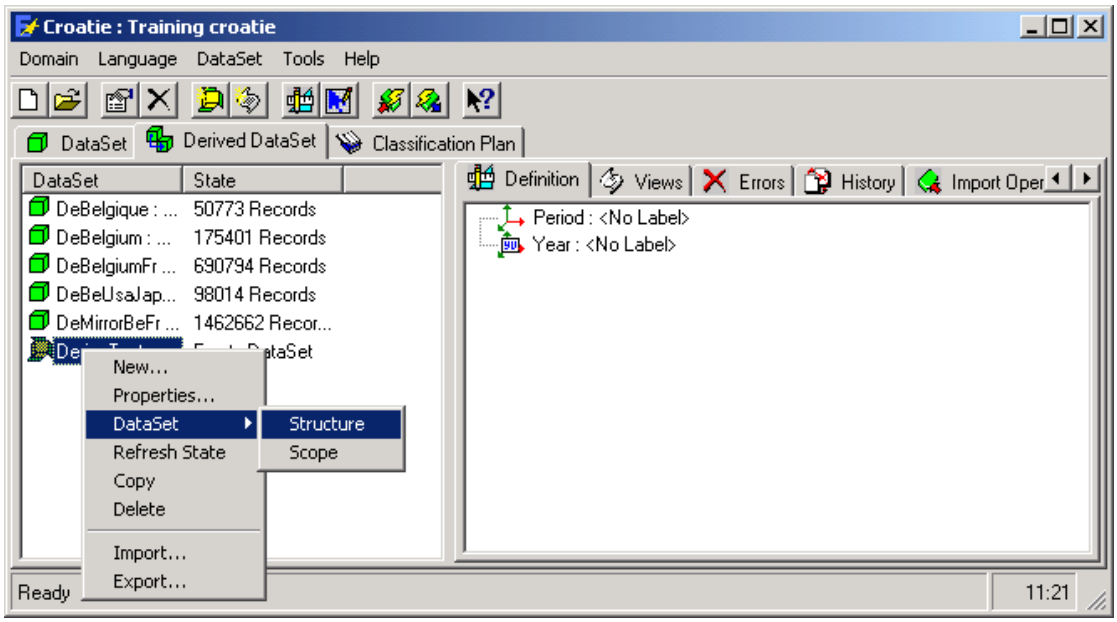
When you create a new dataset you have to define the structure of the dataset. How many dimensions, how many values, what types of dimension, etc.

When you specify a Derived Dataset's definition, the information is summarized on the right hand side of the screen in the 'Definition Tab'.

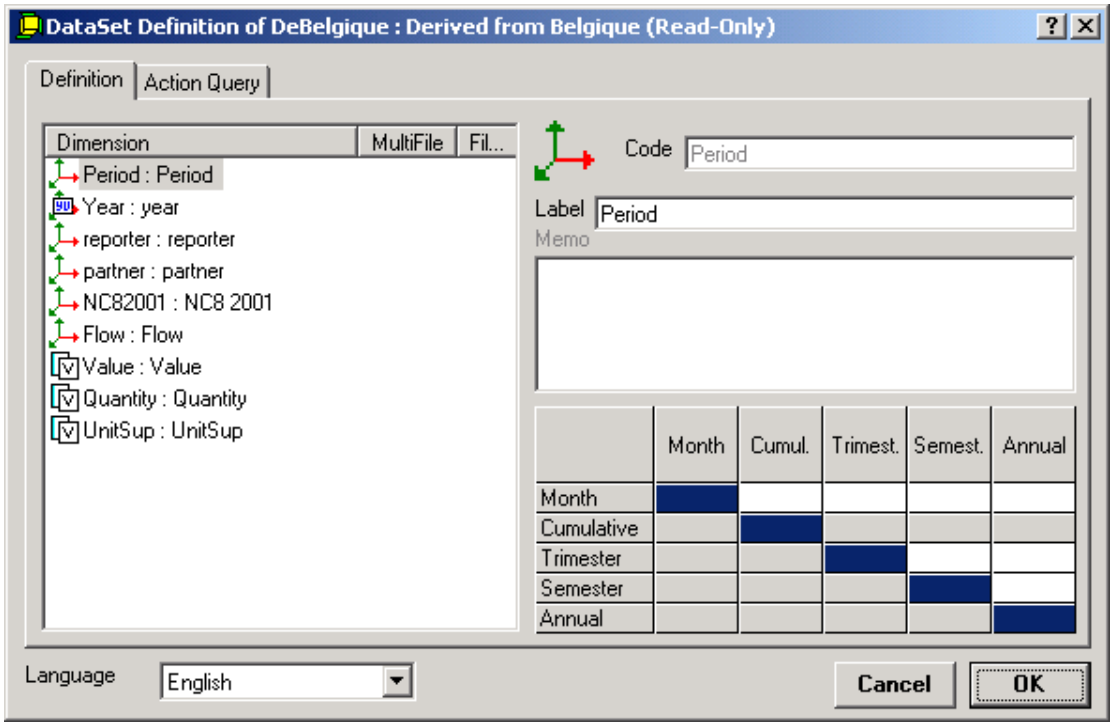


TIP! Remember that in order to define your Derived Dataset, you need to have established your dictionaries first as well as the Dataset on which the Derived Dataset will be based.

To define the Derived Dataset, select either the dataset and choose **'Structure'** from the shortcut menu (as shown below) or use the **'Definition'** button .

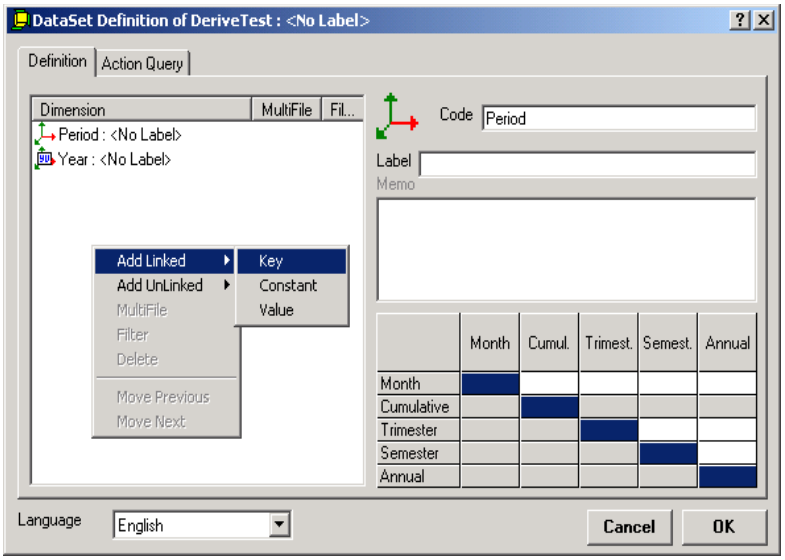


After having selected the **"Structure"** menu the following screen appears:



19.8. Adding a New Dimension to the Derived Dataset

In the **'Derived Dataset'** definition Tab window, right click and use the **'Dataset'** menu option and then the **'Structure'** option.
The Dataset Definition screen is displayed as shown in the following screen:



This is the place where you can define the structure of your dataset. The fields are listed in a box on the left hand side of the screen.

The right hand side of the screen will change to show information about the various fields.

To add a new dimension in the Derived Dataset click with the right button on the list of dimensions and according to dimension to be added, select one of the menus. There are linked and unlinked dimensions.

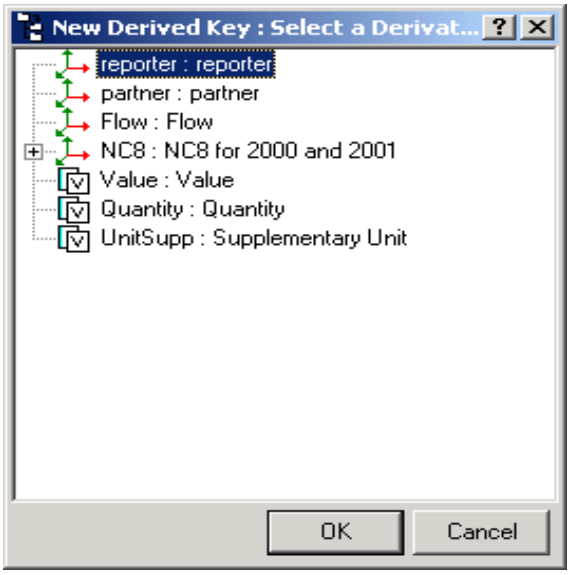
19.9. What is a linked dimension?

A linked dimension is a dimension contained in the Dataset on which your Derived Dataset is based. There are three type of linked dimension: Key, constant and value.

A key is an unspecified dimension of the Dataset (value or constant)
A constant is a dimension not declared as being a value
A value is a dimension declared as value

19.10. Adding a linked dimension (key, constant, value)

Right click on **'Add Linked'** and then choose the **'key'**, **'constant'** or **'value'** option.
When you add for example a **` linked key'**, a window will be displayed with a list of dimensions as shown in the following screen:



Note: This is the list of dimensions, which you have created in the Dataset on which your Derived Dataset is based.

- Add a linked key will display (in the screen) the list of all dimensions of the Dataset.
- Add a linked constant will display (in the screen) the list of the dimensions not declared as value in the Dataset.
- Add a linked value will display (in the screen) the list of the dimensions declared as value in the Dataset.

Select one dimension of the dataset to be attached to your new dimension and click on the **'OK'** button. New dimension is added to the Derived Dataset and, the name of the dimension is used by default to name this new dimension (displayed in the **'Code'** field).
You can change this name at any time by typing a new name in the **'Code'** field.
You can also apply a descriptive label to it by typing in the **'Label'** field.
Similarly if you had the **'Memo'** box checked on the Structure Tab when you created the domain, you can type a memo in the **'Memo'** field.
A drop down list box of Languages at the bottom of the screen allows you to set the display language of the dictionary labels.

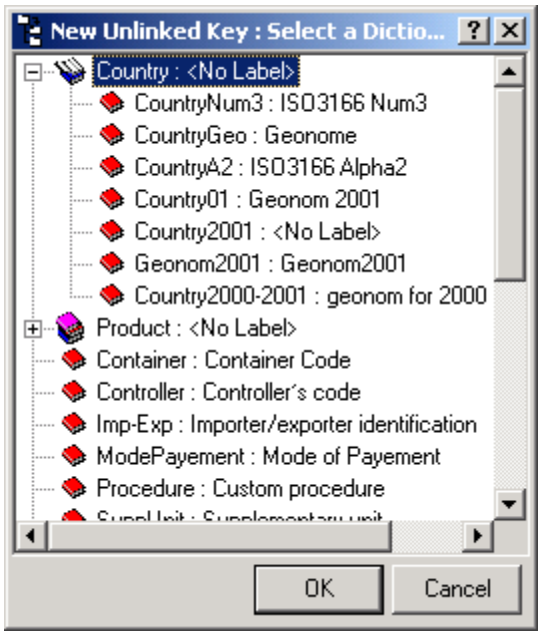
19.11. What is an unlinked dimension?

An unlinked dimension is a dimension, which is not related to a Dataset or a dictionary. It is an independent dimension. As explained for the linked dimensions, there are three type of unlinked dimension: Key, constant, value

19.12. Adding an unlinked dimension (key, constant, value)

Right click on **'Add UnLinked'** and then choose the **'key'**, **'UnCoded Key'** or **'Value'** option.

- If you have selected the **'Key'** option that means you wish to add an independent key and the system display the list of all the dictionaries present in the domain as shown in the following screen:



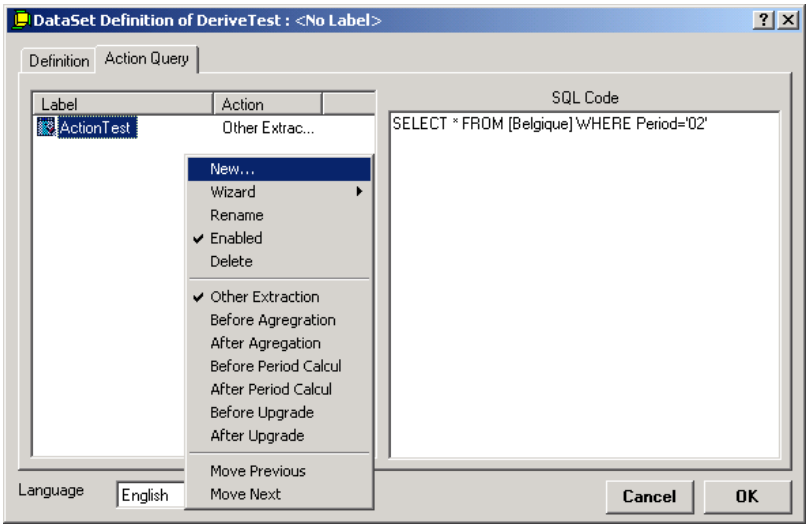
Select a dimension of a dictionary and click on the **'OK'** button.

- If you have selected the **'UnCoded Key'** option a dimension is added in the Derived Dataset with the default name **`NewUnCoded'**. You can change this name and the label at any time by typing a new name in the **'Code'** and **'Label'** fields.

- If you have selected the **'Value'** option a value field is added in the Derived Dataset with the default name **`NewDerived'**. You can change this name and the label at any time by typing a new name in the **'Code'** and **'Label'** fields.

19.13. Applying an Action Query

Select the **"Action Query"** tab in the structure screen as shown in the following screen:

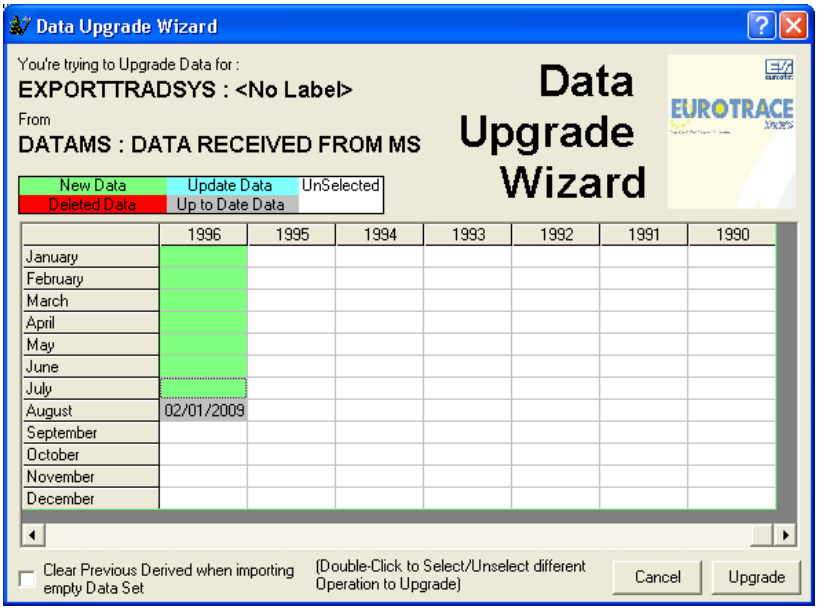


Right click in the list on the left and then choose the **'New'** option.
The system creates a new action with the default name **'NewAction'**.
It is possible to change this name by right clicking and by choosing the **'Rename'** option.

Type in the list on the right the query you wish to associate to this action.
The system will apply this condition when loading data from the dataset.

19.14. Importing Data

To import data in the Derived Dataset, right click on the desired Derived Dataset and in the contextual menu, select **'Import'**. The importation wizard is launched and the following screen is displayed:



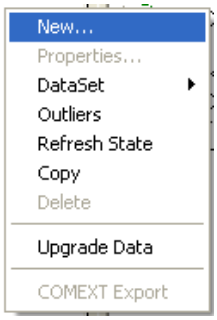
The user has the possibility of selecting one or more cells and, double-click on it in order to choose one of the following colours:

- Green: If you wish to import new data for the month and the year of These are the changes I made for the requirements the selected cell
- Turquoise: If you wish to update the data from the Dataset on which your Derived Dataset is based
- Red: If you wish to remove data

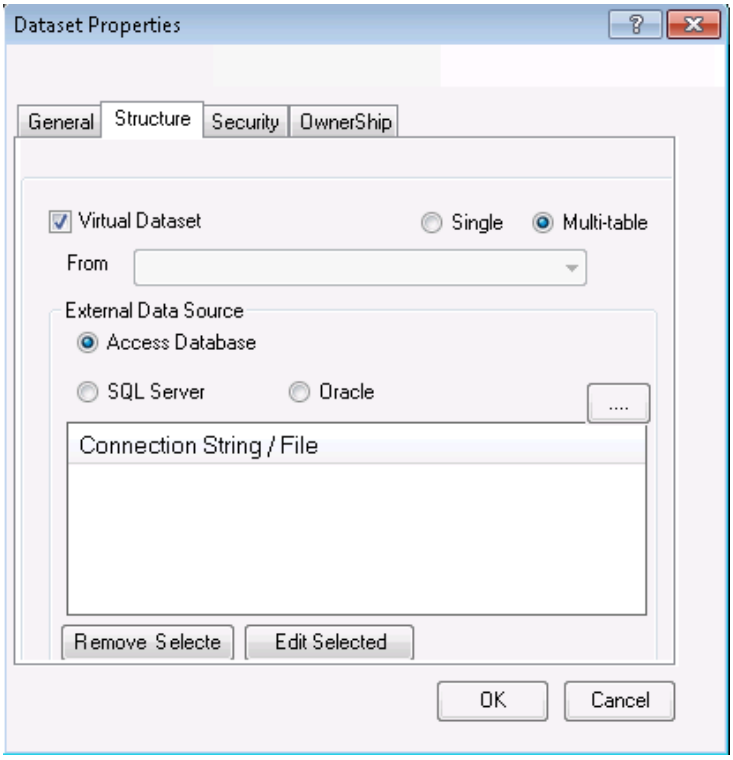
Once colours are allocated to the selected cells, click on the **'Upgrade'** button. After the importation is carried out the concerned cells are displayed in grey colour.

20. Virtual datasets

IMPORTANT: if a virtual dataset is based on external table, be very careful linking the dimensions of the dataset and the fields of the table. The external data MUST be consistent with the nomenclature of your domain. A virtual dataset is a dataset without physical storage of the data.
The informations about the structure are stored but, instead of the physical data, a query is associated to the dataset. To create a virtual dataset click on the *Derived Dataset* Tab and select the menu item *Dataset - New*



The Dataset Properties dialog is displayed, as usual for datasets creation.
Insert the name for the dataset and click on the *Structure* Tab.



Check the *Virtual Dataset* box.
You can create ***two different types of datasets,*** depending on the source:
Based on a dataset of the Domain, as for any derived dataset
Based on an external database, Access, SQL Server or Oracle

Additionnaly, the virtual dataset can access a single table or use multiple tables and query(s).

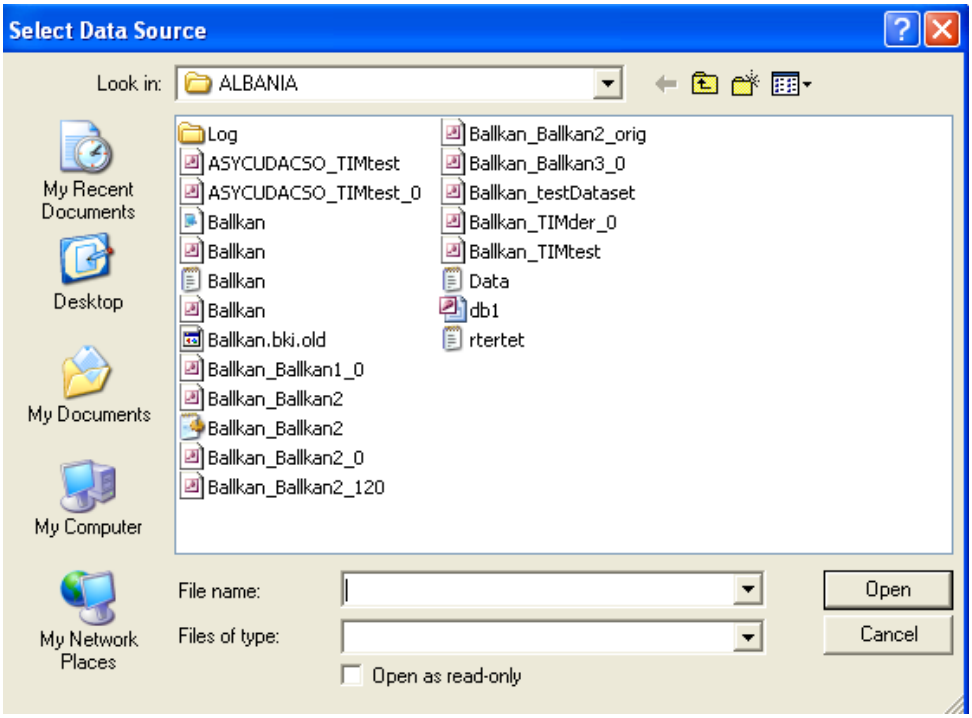
There are several steps to build a Virtual Dataset:

- Create the Dataset
- Create the structure

If the source is external you have also to:
Define the Query selecting the fields of the external table
Link the dimensions of the dataset to the fields of the external table

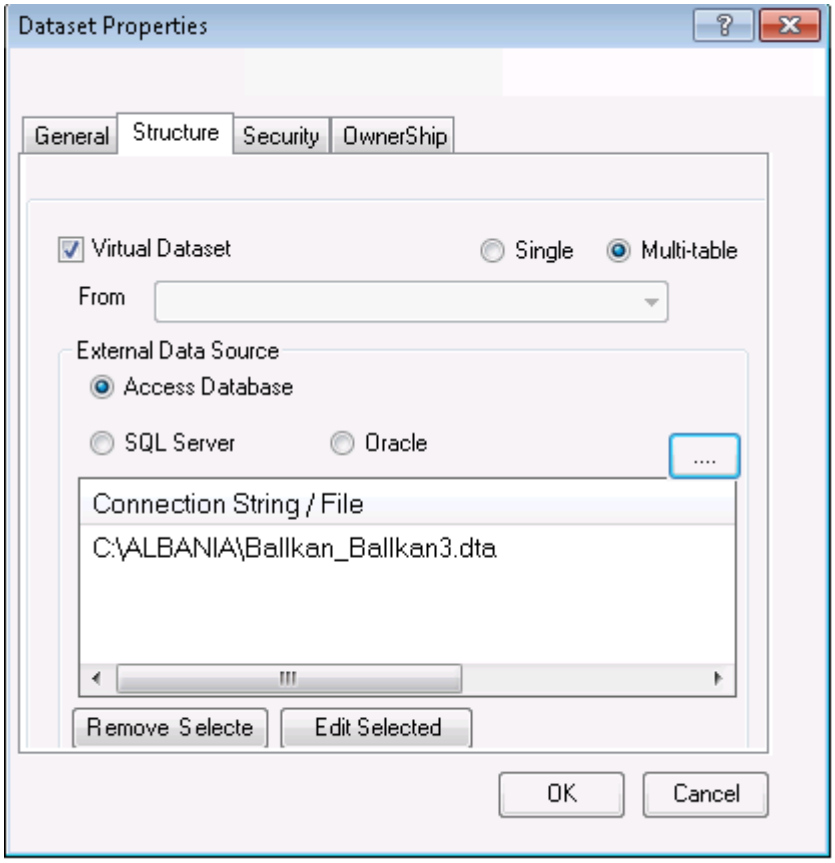
20.1. Virtual dataset based on external Access database

Select the '*Access database'* option in the *External Data Source* section and click on the '**...**' button to browse the external Access database.
Select the Access database and click on **OK**

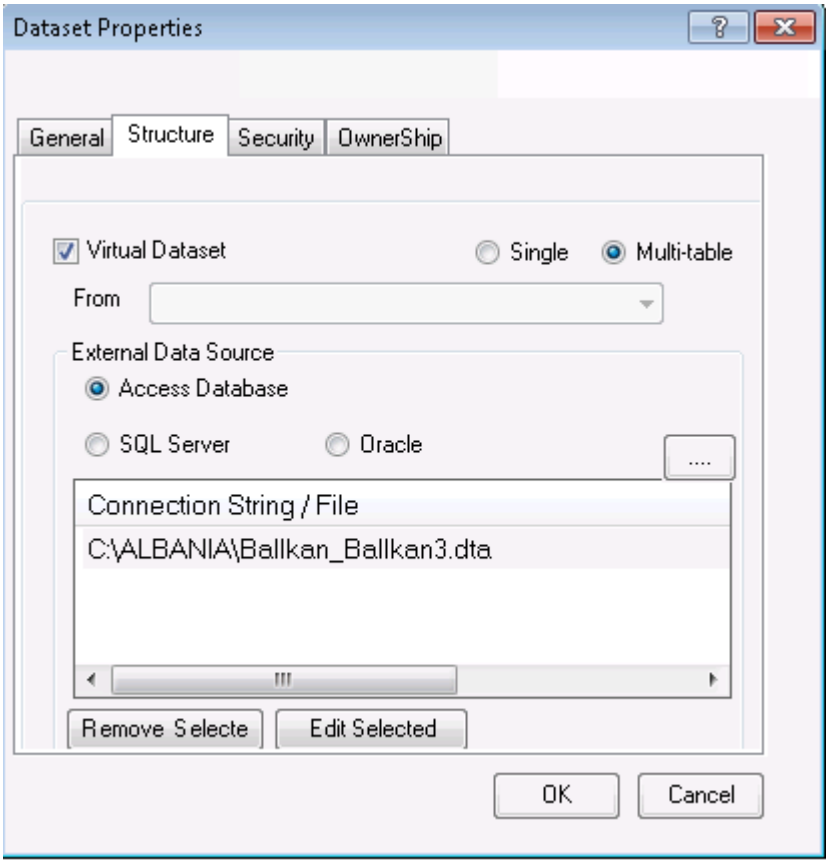


The database path and name will display in the '*Connection string / File'* field.

If you have selected the "Single" table option, the screen will look like the following:



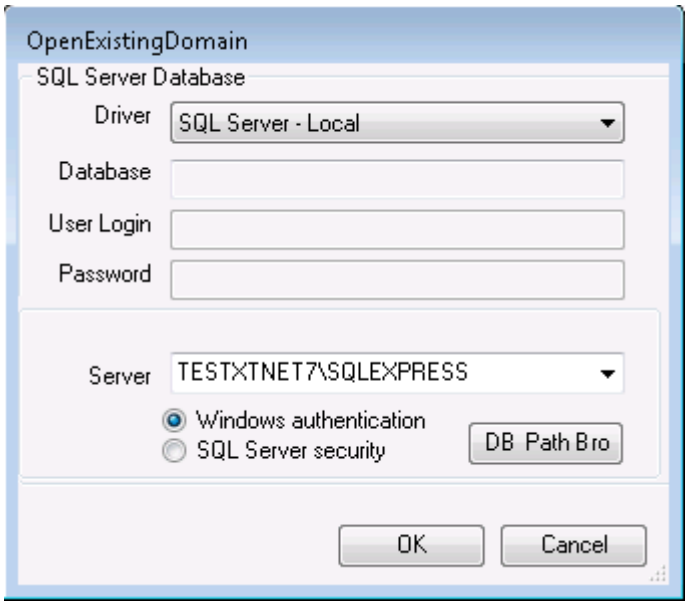
Click on the **OK** button and the dataset will display in the dataset tab of the domain window.
In case of a multi-table virtual dataset, the screen will look slightly differently since you can add more datasources:



You can edit or remove a datasource by clicking on the related buttons.

20.2. Virtual dataset based on external SQL Server database

Select the '*SQL Server'* option in the *External Data Source* section and click on the '**...**' button to select the SQL database. This action will open a new dialog.



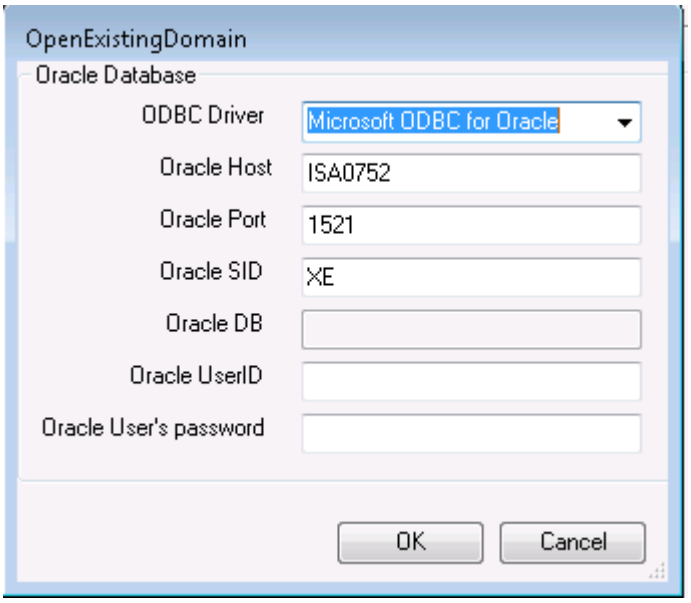
Select the proper Driver from the *Driver* drop-down list.
Type the Host name/ Path or Browse the database as requested, depending on if your SQL server installation is local or remote (for more informations see the section *Domain Storage Properties* in the chapter **13 – Managing Domains**).

Click on the **OK** button. The database connection string will display in the '*Connection string / File'* field.

Click on the **OK** button and the dataset will display in the dataset tab of the domain window.

20.3. Virtual dataset based on external Oracle database

Select the '*Oracle'* option in the *External Data Source* section and click on the '**...**' button to select the Oracle database. This action will open a new dialog.



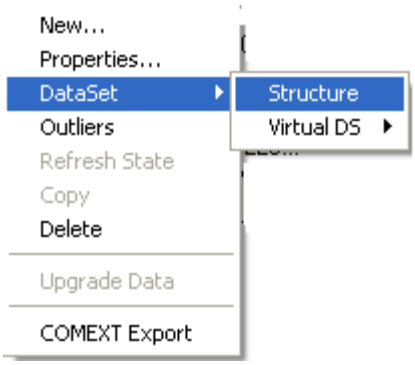
Select the proper Driver from the *ODBC Driver* drop-down list
Type the DB path, username and password as requested (for more informations see the section *Domain Storage Properties* in the chapter **13 – Managing Domains**).

Click on the **OK** button. The database driver information will display in the '*Connection string / File'* field.

Click on the **OK** button and the dataset will display in the dataset tab of the domain window.

20.4. Virtual Dataset Structure

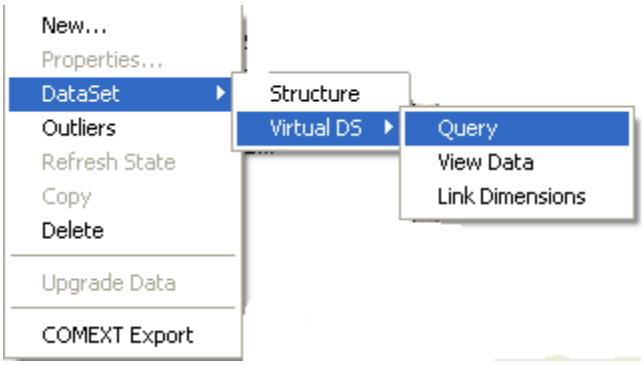
Select the menu item *Dataset – Structure* to build the structure of the dataset, as described in the section **16 – Managing Derived Dataset**



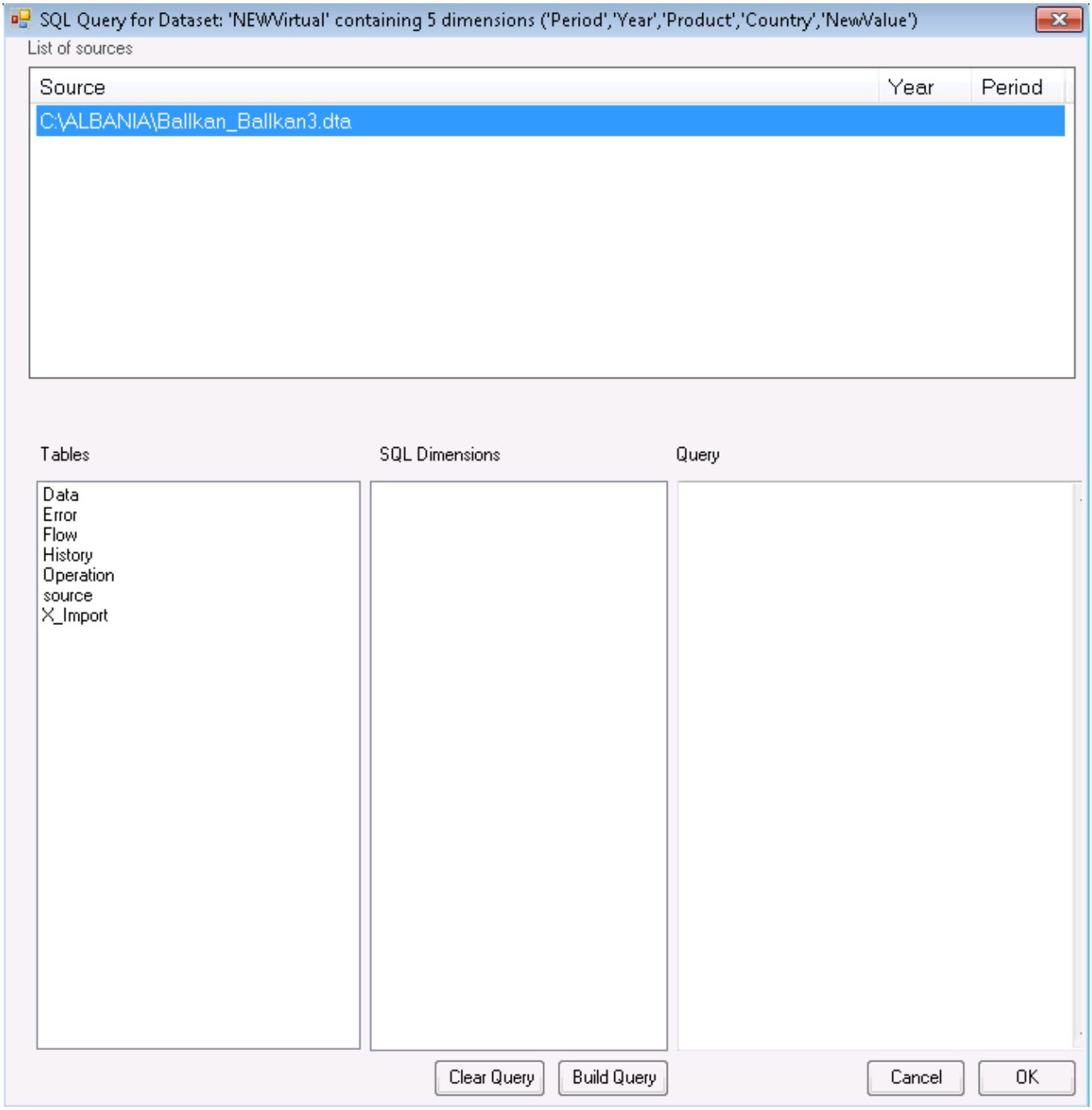
20.5. Virtual dataset Query

This step is mandatory only for virtual datasets with external source.

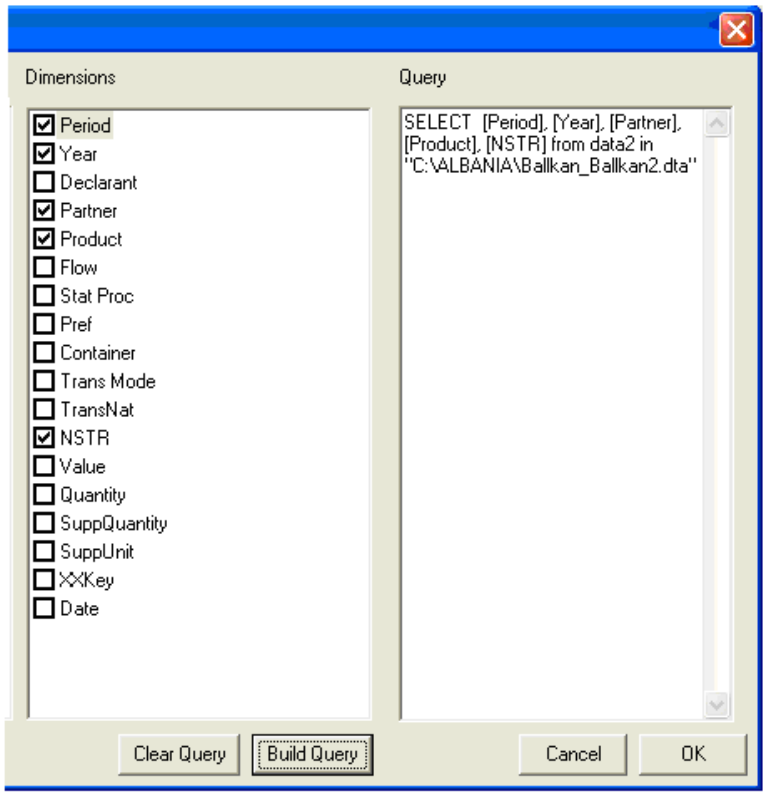
Select the 'Dataset – Virtual DS - Query' menu item



This action will open a new dialog.



The *Source* panel lists the associated dataset source(s) for this virtual dataset.
The *Table* panel of the dialog will display the list of all the available tables of the external database.
Select a table and the *Dimensions* panel will display the list of the fields of the table.
Select all the dimensions needed from the list and click on the **Build Query** button. The query will display in the *Query* panel.

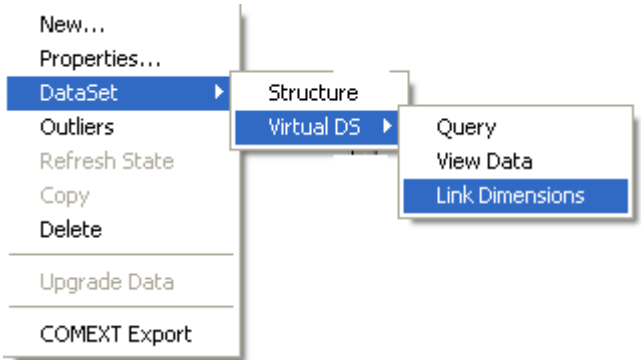


Click on the **OK** button and **YES** to confirm the selection.

20.6. Link Dimensions

This step is mandatory only for virtual datasets with external source.

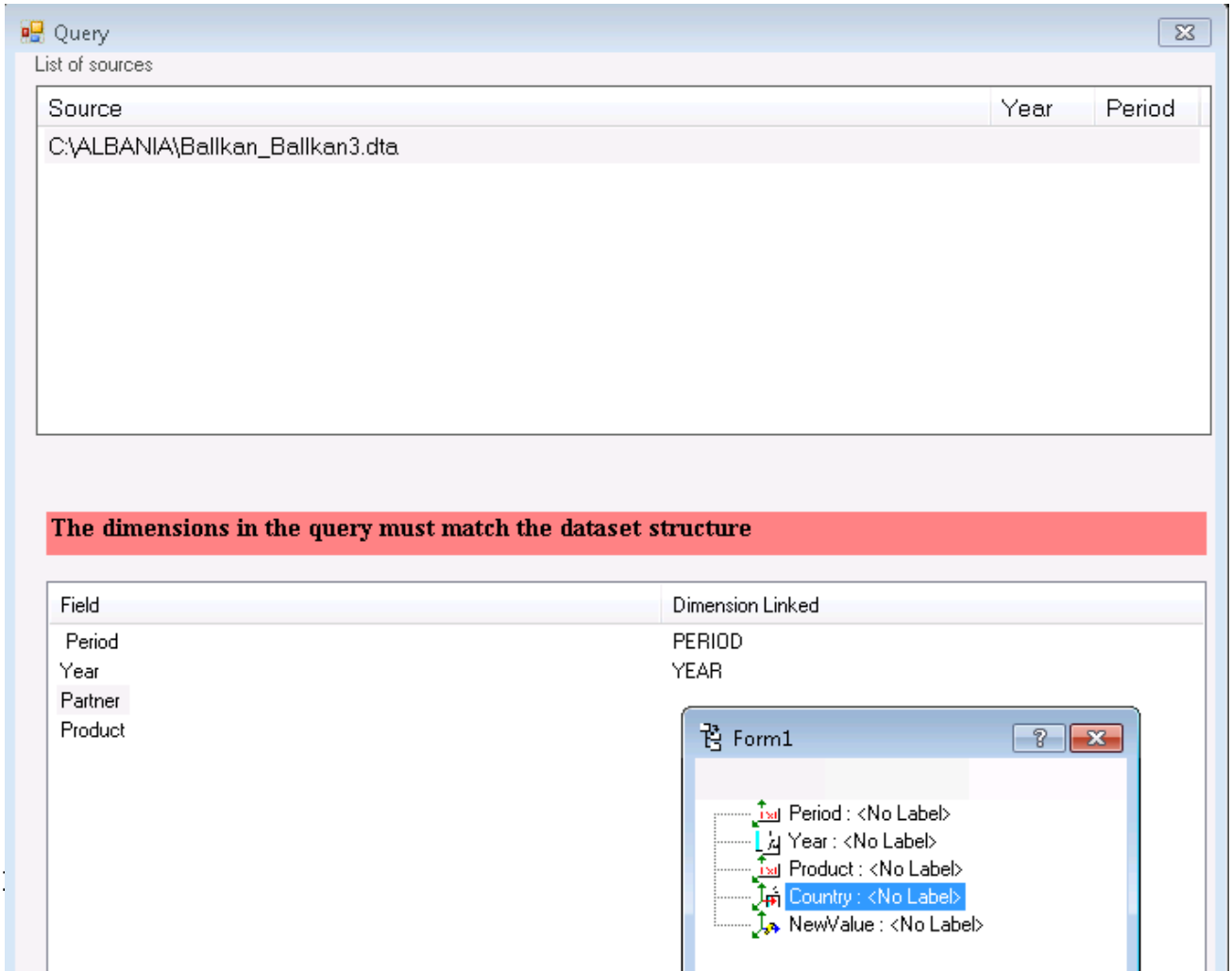
Select the 'Dataset – Virtual DS – Link Dimensions' menu item



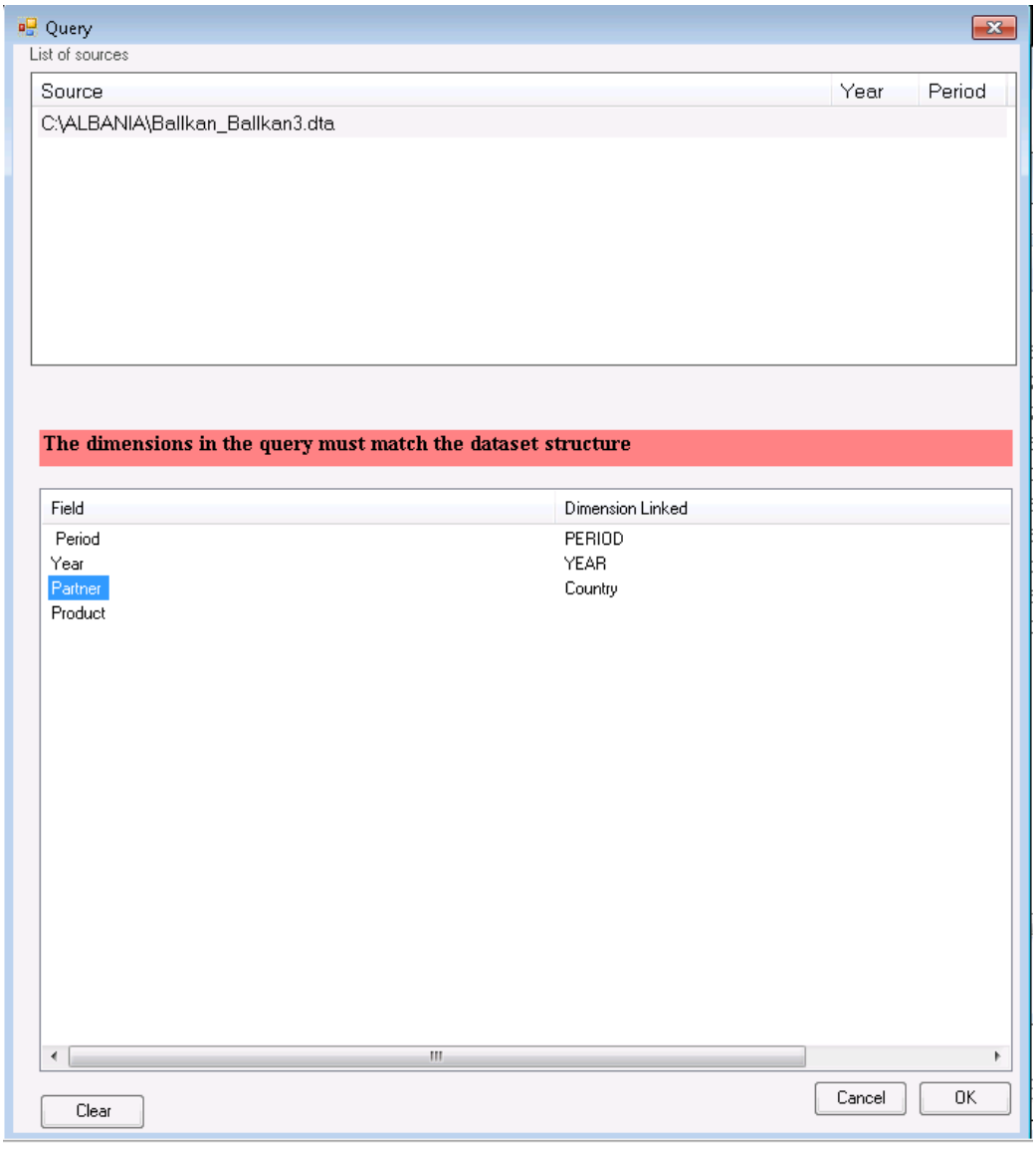
This action will open a new dialog

The column "Field" lists the fields of the external table, and the column "Dimension Linked" will list the dataset dimensions associated.

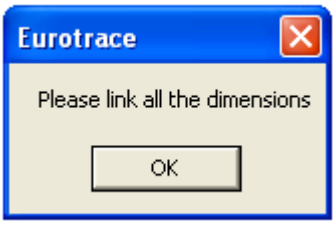
Click on each field to display the list of the dataset dimensions:



Select one dimension and click on the OK button. The dimension linked is now listed in the "Dimension Linked" column:

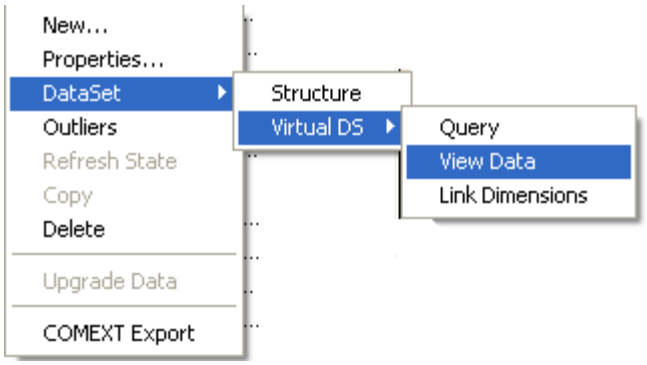


You must link all fields to the dataset's dimensions. If you don't do so, you will be prompted with the following message when clicking on the OK button.

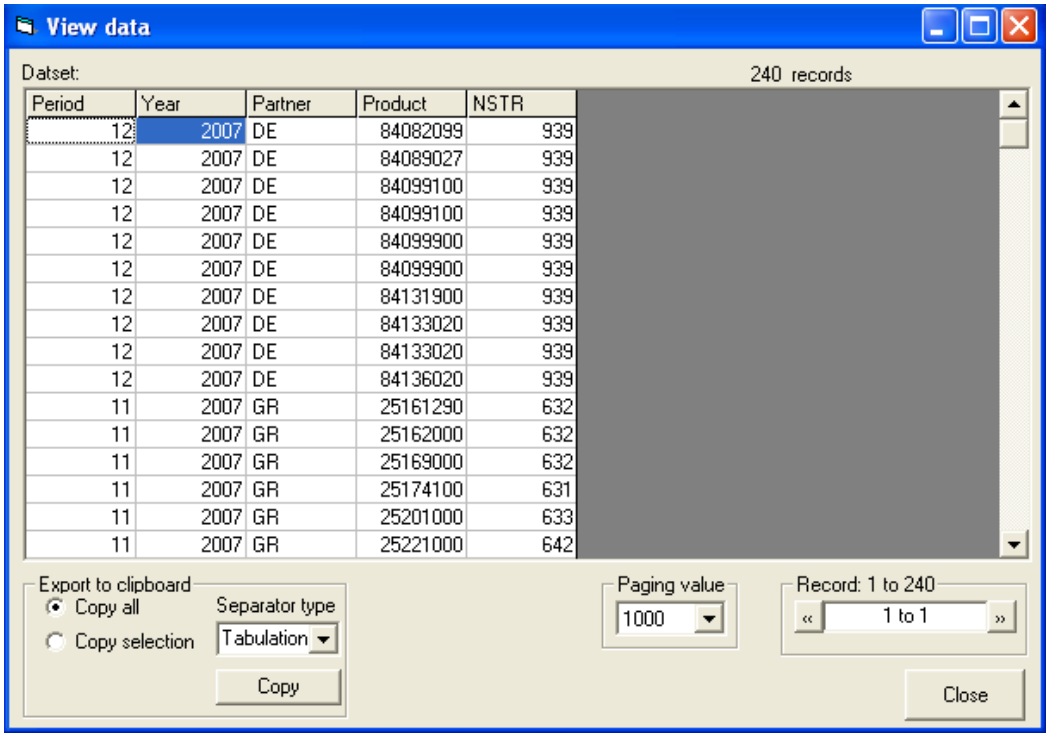


20.7. Virtual dataset Data

This step applies only for virtual datasets with external source.
To run the query and see the data select the menu item *Dataset-VirtualDS-View Data*

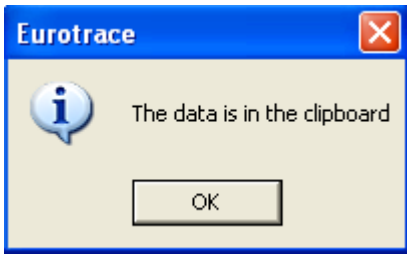


If the dataset is based on an external source this action will open a new dialog which display the results of the query associated to the dataset.



To modify the number of records to display modify the *Paging Value* field, by default set to 2000.
Click on the "**>>**" button to display the next pages of data or the "**<<**" button to display the previous pages of data.

To export and save the data set the options in the *Export to clipboard* section: choose the separator type and if to copy all or only a selection of data.
Click on the **Copy** button.The data have been saved to the clipboard.



Paste the data on the kind of output you prefer: text file of excel sheet.
Click on the **Close** button.

21. Introduction to Validation Rules

21.1. About this chapter of the User Guide

The first time you read this chapter you should aim to understand the types of validation rules and concepts available. These are central to the way the Eurotrace DBMS application works.

It's important to have an understanding of the different types of validation rule, before trying to implement them. It is also a good idea to develop the validation rules using a test dataset or copy dataset before implementing them on important datasets.

When the rules have been set up, tested and then refined, you can implement them on your working datasets.

21.2. What are Validation Rules?

Validation Rules enable the testing of data at various stages during the management of the information.

By using validation rules you can ensure the quality of the data in the datasets. This is essential when the data will be used to derive statistical information.

Validation rules are therefore important to maintain data quality.

They are also a central and important part of the philosophy of using the Eurotrace DBMS application, to control and maintain the quality of data within a dataset.

Who implements them?

The project manager should explain to the database administrator which rules are required. The database administrator should then set the rules up and test them with the project manager.

How are the validation rules made?

The rules are established as 'tests' and usually take the form of combinations of logical or numeric queries. Although often simple, they can also be as complex as you need them to be. The test language that is supported by Eurotrace is Microsoft Access Jet engine format SQL.

An example – detecting the presence of required values in a record

When importing data into a Eurotrace dataset – normally you want to ensure that you don't import records into the dataset if the records have important values missing.

So one of the simpler, but very useful validation tests, is to check for the presence of 'required values' in a record during the importation of the data into the data set.

The following example explains the relevant concepts, and also how to implement this type of validation rule.

The first concept to understand is that records are made up of codes and also values.

The record's codes can be checked against 'dictionary' lists of valid codes.

The record's values can be validated against ranges of acceptable values.

More complex forms of validation can also be established that specify a certain action or test to be made in certain sets of conditions. I.e. If a particular code equals one value and another code equals something else then test that a third code is equal to a particular specified code.

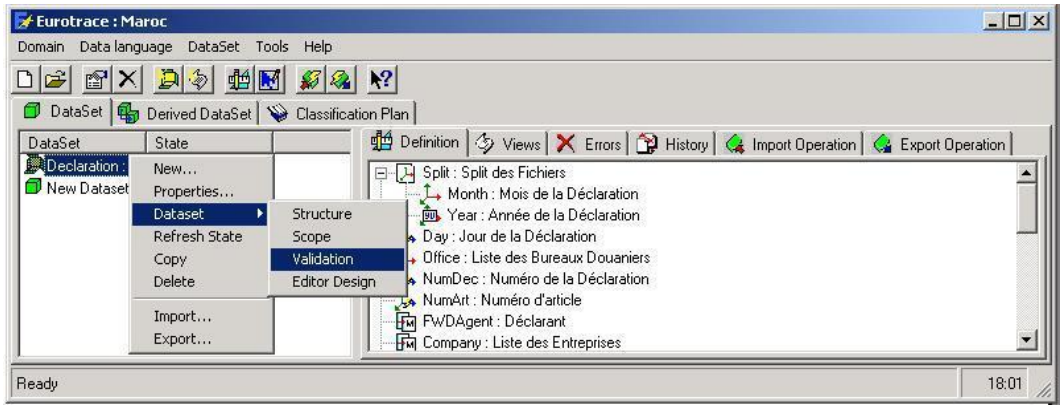
The table of fictional data below illustrates codes, values and missing required values.

Id	Year	Period	Country code 1	Country code 2	Value 1	Value 2	Value 3
1	1999	01	LU	UK	12	100	56
2	1999	01	LU	FR	2	2	
3	1999	01	LU	DE	2		5
4	1999	01	LU	DZ	3	3	33
5	1999	01	LU	XX	4	4	85
6	1999	01	LU	FI	6	5	
7	1999	01	LU	PO		9	
8	1999	01	LU	TU	7	999	6

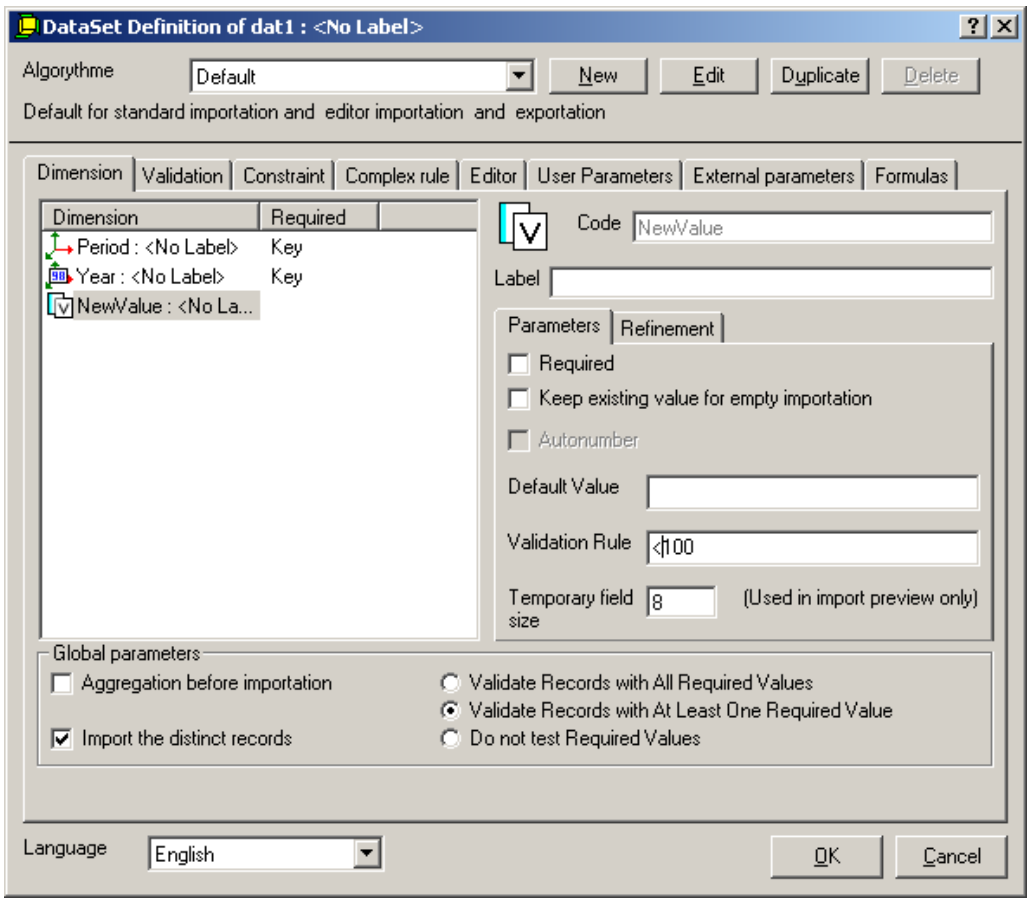
The codes of the records are listed in red. The values of the records are listed in blue. Each record in the table also has a unique identification number in black (the ID column). The fields in the records with values that are missing are highlighted in yellow.

For the purpose of illustrating the 'required values' concept, we will imagine that each of the 3 values, for each record is a 'Required value'. Our test will be to check whether each of these required values is present in each record before it is imported into the dataset.

The first thing to do is to set each of the three values as a required value.



To do this you would select the 'Dataset' menu and then the 'Validation' Sub menu to see a screen similar to the one below that lists definitions of the dataset. By scrolling down the list you can select a value that you want to set as a 'Required value'. To set the value as a required value, you must then click in the box labelled 'Required' in the Parameters Tab on the right hand side of the screen (see the centre of the image below). This will then set the value you selected as a required Value.



You would repeat this for all three Values – Value 1, Value 2 and Value 3 in our example – to set all three values as required values.

Then you would use the option 'Validate Records with All Required Values' at the right hand side of the bottom of the screen.

This means that only records with **all** of the required values (Value 1, Value 2 and Value 3) would pass the Validation test.

Looking again at our example table of data, this would mean that record id numbers 2, 3, 6 and 7 would **fail** the validation test because they did not each have **all** of the required values present. Some have only one of the three required values present, whilst others have only two of the three required values present.

Id	Year	Period	Country code 1	Country code 2	Value 1	Value 2	Value 3
1	1999	01	LU	UK	12	100	56
2	1999	01	LU	FR	2	2	
3	1999	01	LU	DE	2		5
4	1999	01	LU	DZ	3	3	33
5	1999	01	LU	XX	4	4	85
6	1999	01	LU	FI	6	5	
7	1999	01	LU	PO		9	
8	1999	01	LU	TU	7	999	6

Records 1, 4, 5 and 8 each have all 3 of the 3 required values present and would therefore pass the validation test.

The 'Required' check box is undertaking an SQL NULL test on the data values to determine their presence or not, in the record.

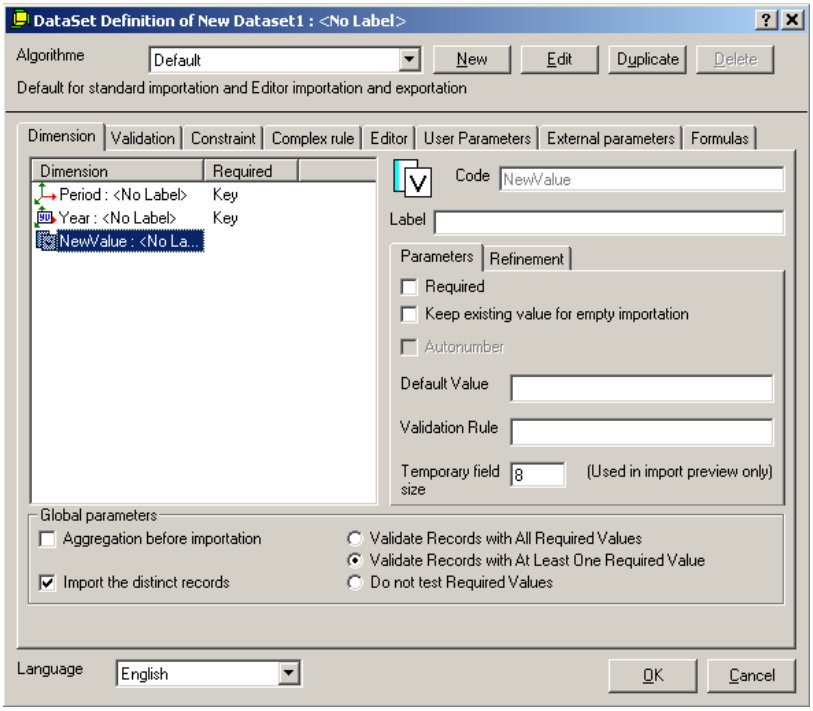
[Is the value Null? 'Yes' or 'no'. If 'No', then the value is present in the record].

Those records with all three values Not Null are therefore present and the record passes the test.

It is important to understand that the 'Required' Check box sets up a NULL test, because you don't have to set a specific Null test in the Validation Rule Box. The 'Required' Box makes the Null test.

Enhancing the validation rule

The above is a basic example, the validation rule could be developed further by using some SQL logical condition clauses to enforce that Value 2 must be less than 100 by inserting a '<100' statement into the 'Validation Rule' box (see image below).



You can insert more complex rules

i.e. >12 and <200 = Greater than 12 and less than 200.

It is important to understand that the clause that you specify in the validation rule box in the image above only applies to the selected dimension in the list. If you want to make use complicated SQL that works with more than one dimension, you should use the Complex Rule Tab that is explained later in this chapter. On the Dimension Tab, the validation rules apply only for the selected dimension.

Looking again at the last image, we can see the other two options at the bottom of the screen:

Validate records with at least one required value

This would pass all of the records in our example dataset because all of the records have at least one of the three required values.

Do not test required values

This switches off the required value testing. It might be useful sometimes to temporarily switch off the value testing. You can always switch it back on later.

Having established:

The nature of the test required
Which values are required values

The logic of the values i.e. (greater than 12 less than 200)

You then need to save the settings as an Algorithm.

The last step in the process is to then set the Algorithm as the default Import algorithm (see below), so that the algorithm including the validation rules is then applied upon the importation of the data.

21.3. When to make Validation Tests?

The above explains how to set up value tests, but you also have further functionality to determine *when* these test are made.

You have three choices to determine *when* these rules are applied:

You can apply the validation tests when:

importing data into a dataset from a file.

importing data back into a dataset from the Eurotrace editor, after an editing session.

Exporting data out to the editor.

You determine when these are applied, by setting the property of the algorithm that the tests belong to.

21.4. Types of Algorithms

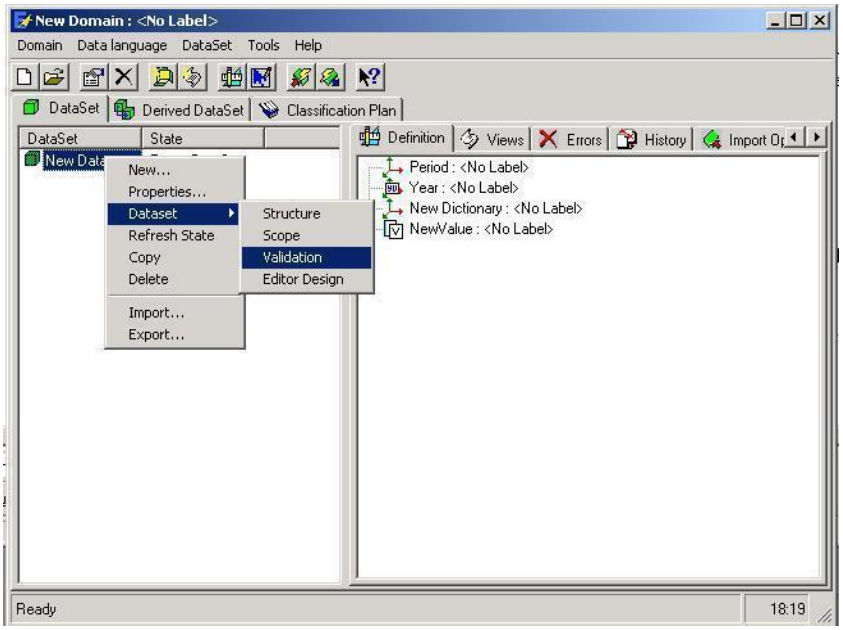
The validation rules that you set up and apply for your dataset are saved as part of an Algorithm.

In addition to validation rules, the algorithm also stores additional data for: Constraints and 'Complex rules'.

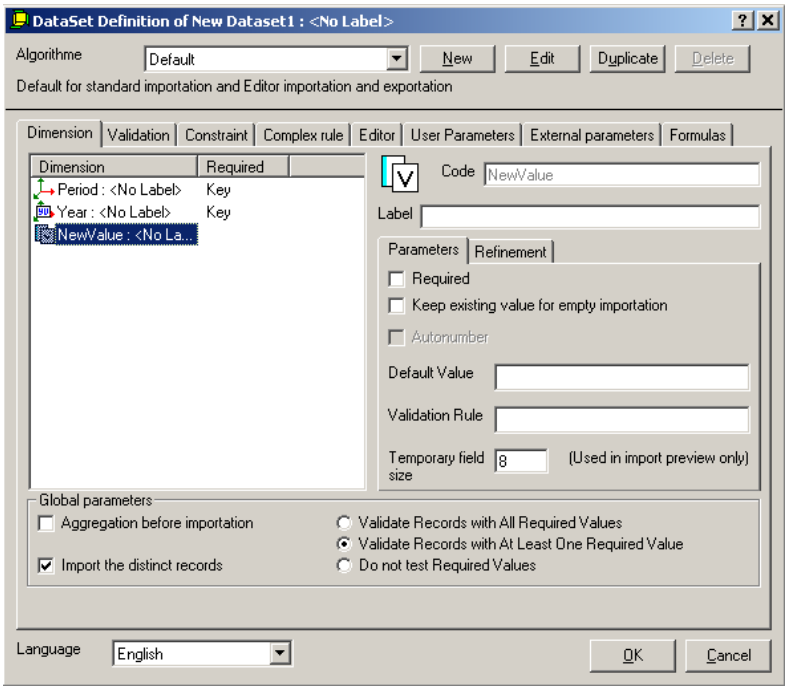
You can save many different algorithms for each dataset, but you can only set one as the default for each of the operations described below.

You can set default algorithms for:

Importing data from a file into a dataset
Exporting data from a file out to the Eurotrace Editor
Importing data back into a dataset from the Eurotrace Editor



To set the validation rules for your dataset, choose the 'Dataset' menu, then the 'Dataset' sub menu option and then the 'Validation' sub menu option. You will see the following screen:



There are eight TABS labelled Dimension, Validation, Constraint, Complex Rule, Editor, User Parameters, External Parameters and Formulas.

All of these Tab screens have a drop down language Select box at the bottom left hand corner that you can use to change the label language.

Above the tabs are the '**algorithm**' controls.

Create a new algorithm and setting it as the default algorithm

Click on the 'New' button.

Type in the name of the Algorithm and select whether you want the algorithm to be the default algorithm for:

Standard Importation (Loading of datasets)
For importing data from the Eurotrace Editor
For exporting data to the Eurotrace Editor

Create a new algorithm but NOT setting it as the default algorithm

If you select none of the three options above, the algorithm will still be created and will still appear in the selection list at later stages in the process, but your newly created algorithm will not be set as the default one for the three stages above.

Edit an existing algorithm's title

Select the algorithm from the list then click on the 'Edit' button and change the title as required. The algorithm is saved with the new name when you click on the 'OK' button.

Copy an existing algorithm

This can be useful when you wish to copy an algorithm and edit it. If they are similar – sometimes it is quicker to copy the previously defined algorithm and to then edit it rather than re-define a new one by starting again.

Select the algorithm from the list then click on the 'Duplicate' button.

Delete an existing algorithm

Select the algorithm from the list then click on the 'Delete' button.

For Standard Importation

This sets the algorithm as the default standard importation algorithm.

For Editor Importation

This sets the algorithm as the default importation algorithm that is applied when re-importing data back into the dataset from the Eurotrace Editor Application.

For Export to editor

This sets the algorithm as the default exportation algorithm that is applied when creating export files for use with the Eurotrace Editor.

Important!

For reasons of logic, it is only possible to set one algorithm as the default algorithm for each of the three processes - Standard Importation process, Editor Importation process and Export to the editor program process. If there were more than one – the system would not know which to use as the default!

For this reason the three check boxes in this image act as 'toggles' that switch the algorithm to be the default algorithm, for each of the three tasks.

This means that when you activate a check box, if this function has been activated on another algorithm, the other algorithm will then be automatically de-selected as the default and the new algorithm will then take over as the new default algorithm.

Activating any of the three check boxes will therefore de-activate any similarly activated check boxes for that particular function in any of the previously defined algorithms.

This is because by definition you can only have one algorithm applied as the default one for each of the three processes.

So far this chapter has introduced:

The setting of 'required' values
The testing of the presence of these required values
The creation and management of Algorithms
The setting of when these algorithms are applied as the defaults

The remainder of the Validation Rules chapter will now consider the remaining validation functionality, including constraints and Complex Rules.

Remember, all of the tests that you define and set up:

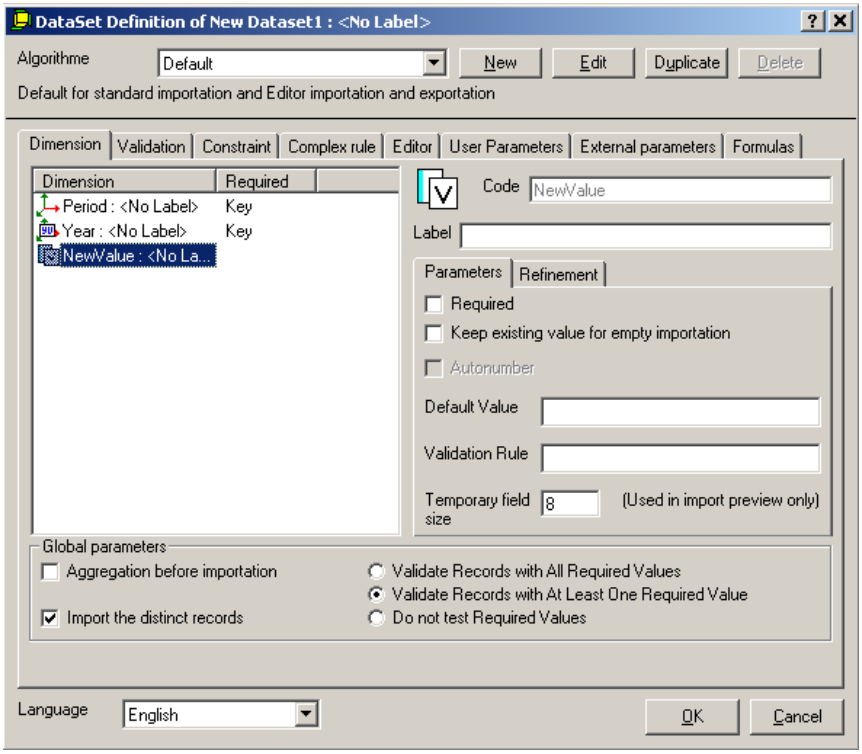
Validation rules
SQL tests

Refinements
Complex rules
Constraints

Are stored collectively as an algorithm. You choose the appropriate algorithm and set this as the default algorithm for the process that you wish to undertake.

21.5. Dimension Tab

The dimension TAB screen looks like this.



The right hand side of the screen will dynamically change as you select different elements of your dimension in the left hand side of the screen.

On the right hand side there are code and label fields that correspond to the code and label fields for the selected elements of the dimension.

There are also two tabs labelled ‘Parameters’ and ‘Refinement’.

Below the two tabs are three radio field selection boxes:

‘Validate records with all required values’
This checks for the presence of all of the required values in a dataset. As long as all of these values are present, the record will pass the test.

Example.
A dataset has been defined with five required values. If all five values are present in the record, the record will pass the test. If one or more of the five values are missing from the record, the record will fail the test.

Validate records with at least one required value

This checks for the presence of all of the required values in a dataset. As long as one of these required values is present in the record, the record will pass the test.

Example.
A dataset has been defined with five required values. If four or less values are missing in the record, the record will still pass the test because at least one of the required values is present. If none of the five required values are present in the record, the record will fail the test because there is not at least one of the required values present in the record.

Do not test required values

This switches off the required value testing. This might be useful sometimes. You can always switch it back on later.

21.6. Dimension Parameters - Tab Settings

Click on a dimension or a value in the left hand side of the screen and the appearance of the Parameters and Refinement tabs on the right hand side of the screen will change accordingly.

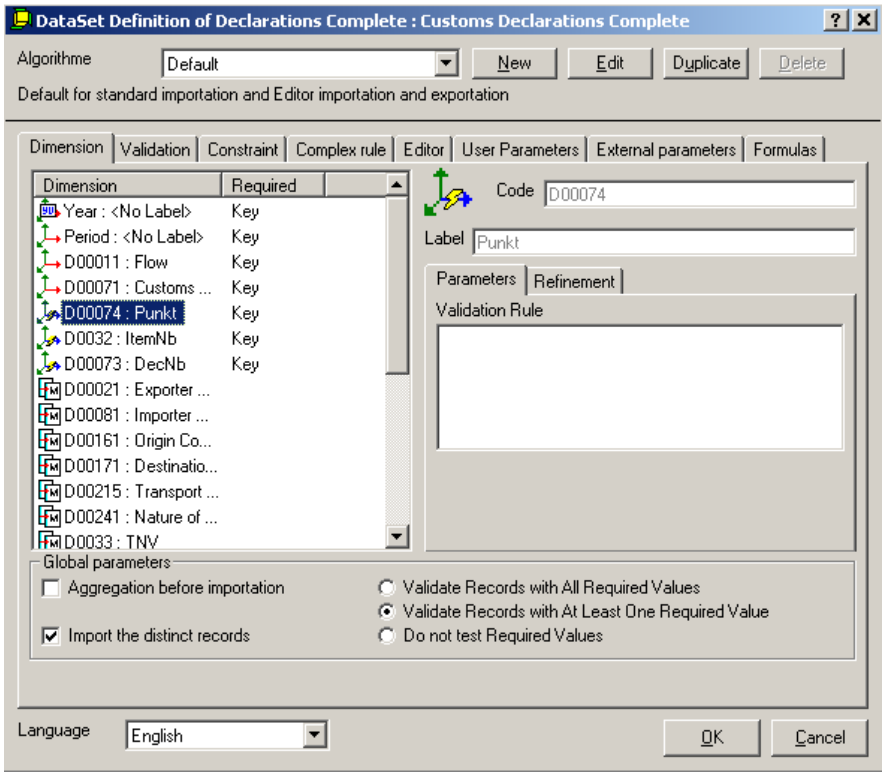
We will now look at the settings for the **parameters tab** first, for each type of dimension or value, and then we will consider the refinement tab settings for each type afterwards.

The Parameter tabs for each type are as follows:

Coded dimension parameters
The parameters tab for coded dimensions is blank because coded dimensions have no parameters to change.

Independent dimension parameters

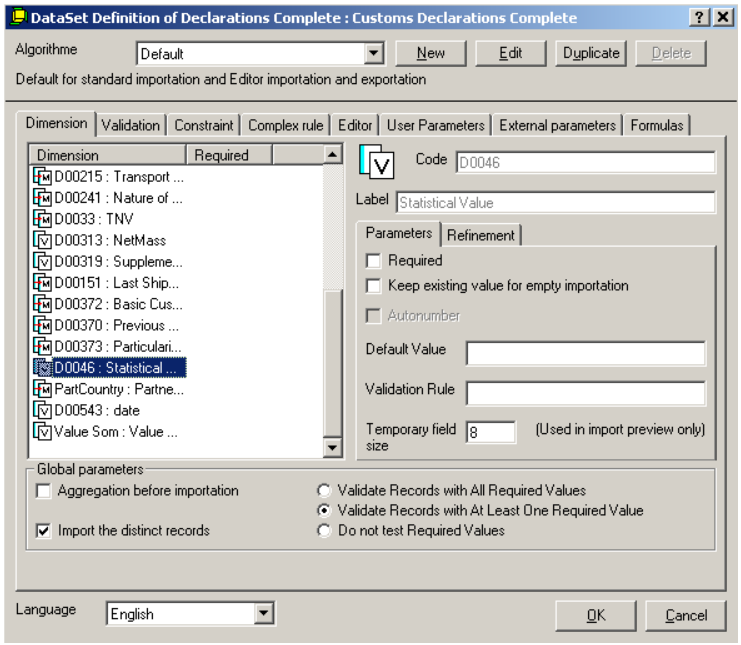
The parameters tab for independent dimensions looks like this:



You can enter a validation rule using Microsoft Access format SQL in the Parameters Tab's validation rule box.

Standard new value parameters

The parameters tab for Standard new values looks like this:



'Required' flags the value as a required value as discussed in the introduction of this chapter.

'**Keep existing value for empty importation'** adds extra functionality that relates to the concept that any information is better than no information.

	Value 1	Value 2	Value 3
Original record	A	B	C
Record that replaces the original record	D		E

If you check out a record for editing to the Eurotrace Editor and you change the values from A, B, C, to D, empty field, E (as described in the table above), you might wish when re-importing the record back into the database to replace value A with the new revised value D, B with an empty field and C with the new revised value E.

In this case you would just re-import the data and the values would change as described.

However, its quite likely that rather than replace value B with an empty field, you would prefer to keep the old value B – because its often argued that it is better to have some data rather than none at all.

In this case to change the updated data, but to keep the old data where no new values are available, you would use the '**Keep existing value for empty importation'** option by clicking on the check box.

This feature is useful because it can stop you loosing data.

'Temporary field size' assign the size of the field used in the calculation of the conversion preview in the importation Wizard.

21.7. The default value box

The default value box is used to assign a default value in cases where there is currently no value existing.

	Value 1	Value 2	Value 3
Original record 1	A	B	
Original record 2	D		E

Default value for Value 1= T
Default value for Value 2 = J
Default value for Value 3 = H

After processing the records would look like this:

	Value 1	Value 2	Value 3
Original record 1	A	B	H
Original record 2	D	J	E

Value 3 would change for record 1 because no value existed. It would therefore take the default value specified for Value 3, which is H.

Value 2 would change for record 2 because no value existed. It would therefore become the default value specified for Value 2, which is J.

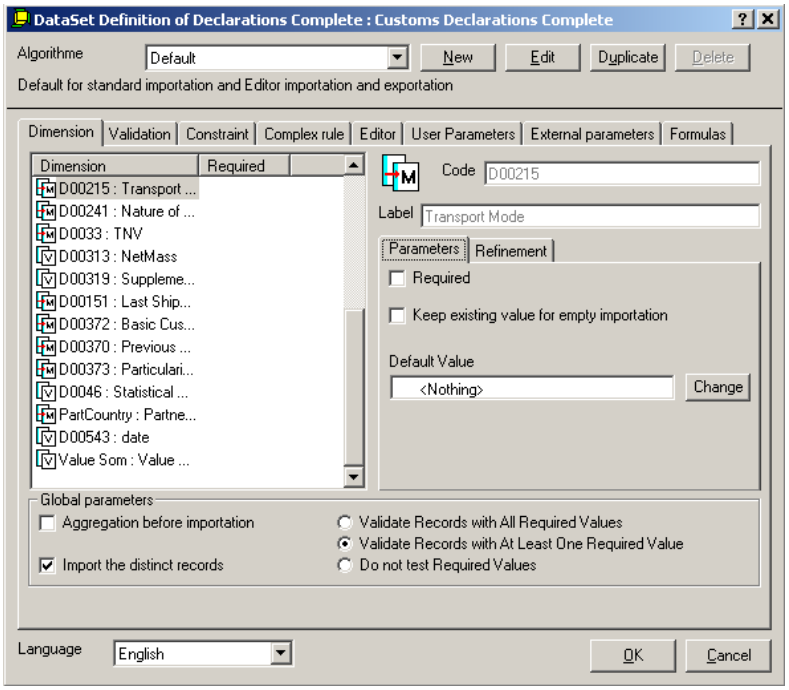
Value 1 would not change for either record because values previously existed in both records.

The default values are therefore only taken when no values exist. If a value already exists, the default value is ignored. This feature is really useful to fill in 'holes' in datasets.

For example:
Imagine you know that the average number of employees in an organization is 20, and you had a dataset where this data was only supplied by 80% of the people who were surveyed. Providing your methodology considered the use of estimates acceptable, you could use this function to enter the value 20 as the default value, for all the records where the value for the number of employees was missing. Filling 'holes' with known average values as a default can be a useful method of completing datasets, as long as the average figures are truly representative.

21.8. Metadata Parameters

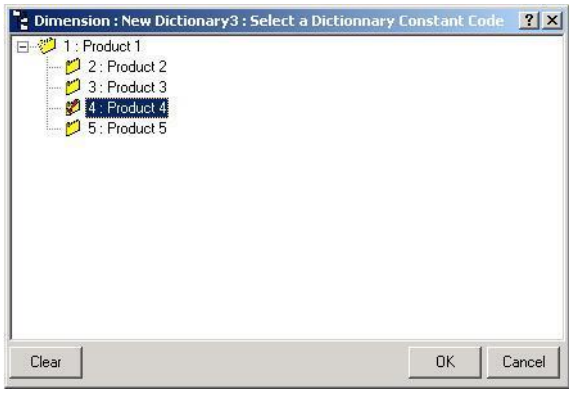
The parameters tab for metadata values looks like this:



The controls are the same as previously described. The 'Change' button calls the appropriate dictionary.

To change the default value click on the button marked change. A window will display with the contents of the dictionary associated to the meta value.

The value that is selected will be ticked in red. Select the value you need and click on the 'OK' button.



To clear the default value and have no value click on the 'Change' button and then in the dictionary window click on the 'Clear' button to make none of the values selected.

21.9. Grouped dimension parameters

Grouped dimensions don't display in the Validation window. There are no parameters to set.

21.10. Year parameters

The parameters tab for the Year dictionary is blank because the Year dictionary does not have any parameters to be set.

21.11. Period parameters

The parameters tab for the period dictionary is blank because the period dictionary does not have any parameters to be set. The above completes the description of the **parameter tab** settings of the dataset validation's dimension tab.

We will now consider the **refinement tab** settings, for each type of dimension or value.

21.12. Dimension Refinement - Tab Settings

This section considers the refinement tab settings for each type.

21.13. What is a Refinement?

A Refinement is a way of transcoding one code in a record to another code in a dictionary based upon the relationship that you set up when you define a 'Relation'.

For example you might have a dataset with a list of countries in a format that uses a code system that has been defined and used within your organisation.

The code for France could be 008.

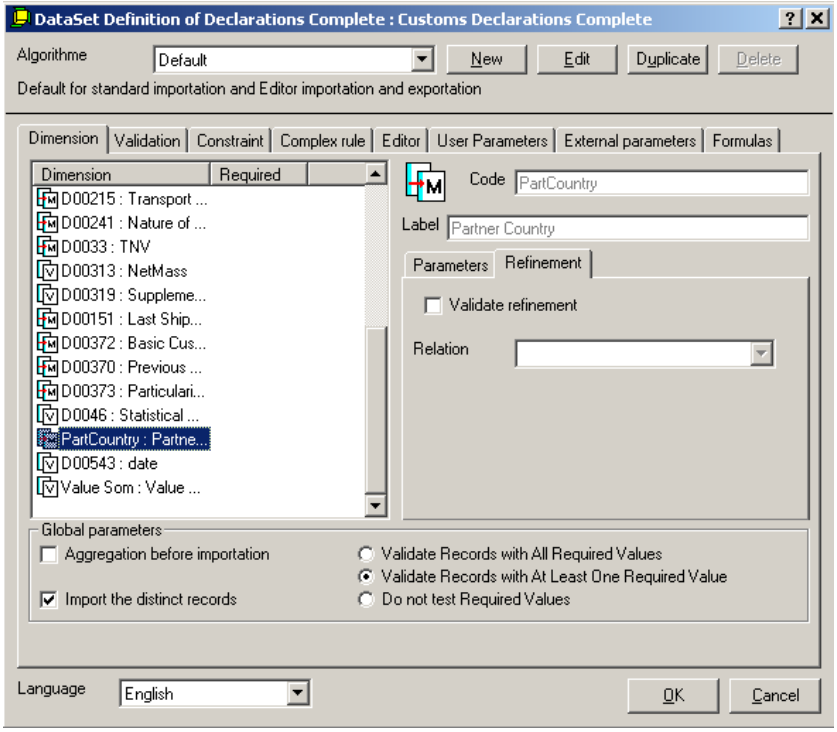
You might wish to use a different internationally recognized nomenclature to record your countries, so that they are consistent with the codes used by an international standard such as the two digit ISO 3166 standard. By using a refinement you could link the codes in the data to a relation, where the relation specifies the transcoding to use, so that the records are recoded with the ISO standard FR for example, instead of 008.

This is a very powerful and versatile feature.

Although it requires you to establish a relation first and then to set a refinement to link to it, once you have a few different lists of relations to choose from you can transcode your data very efficiently so that it is suitable for your purposes. The advantage is that you can still keep your original codes.

21.14. Coded dimension refinements

The refinements tab for coded dimensions looks like this:



Click on the '**Validate Refinement'** button to activate the Relation drop down list box.

You must also select a relation from the drop down list box called 'Relation'.

For further information on defining a relation see Chapter 11 'Managing Classification Plans and dictionaries.'

21.15. Independent dimension refinements

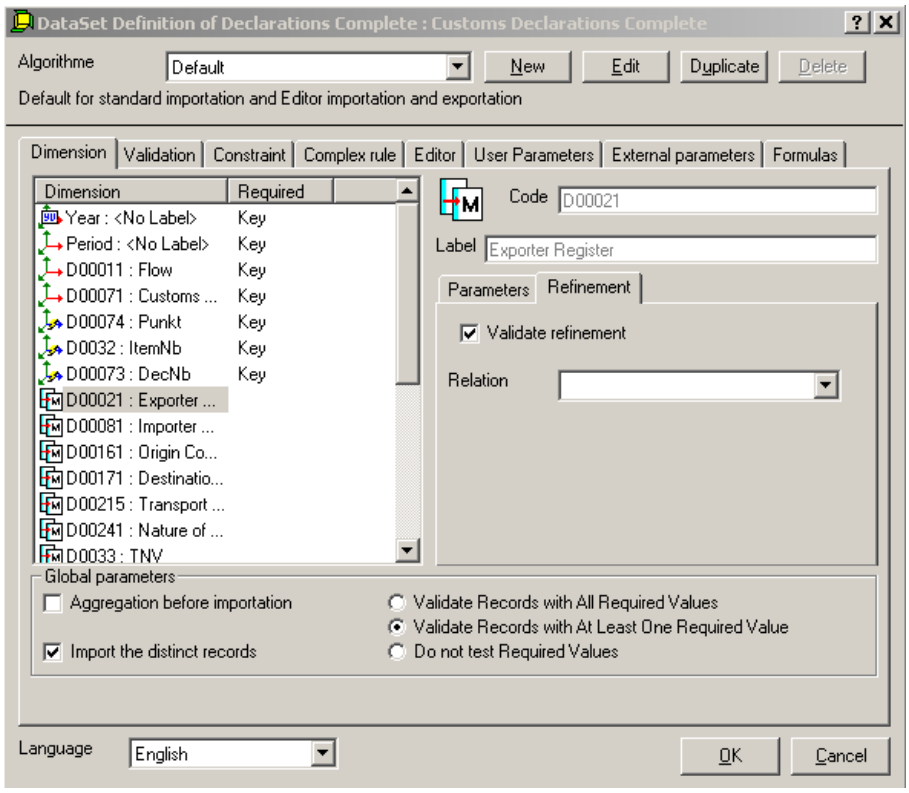
The refinements tab for independent dimensions is blank because the independent dimensions do not require any refinement controls to be set.

21.16. Standard new value refinements

The refinements tab for standard new values is blank because the standard new values do not require any refinement controls to be set.

21.17. Metadata refinements

The refinements tab for metadata looks like this:



You may activate the refinement and select the appropriate Relation.

21.18. Grouped dimension refinements

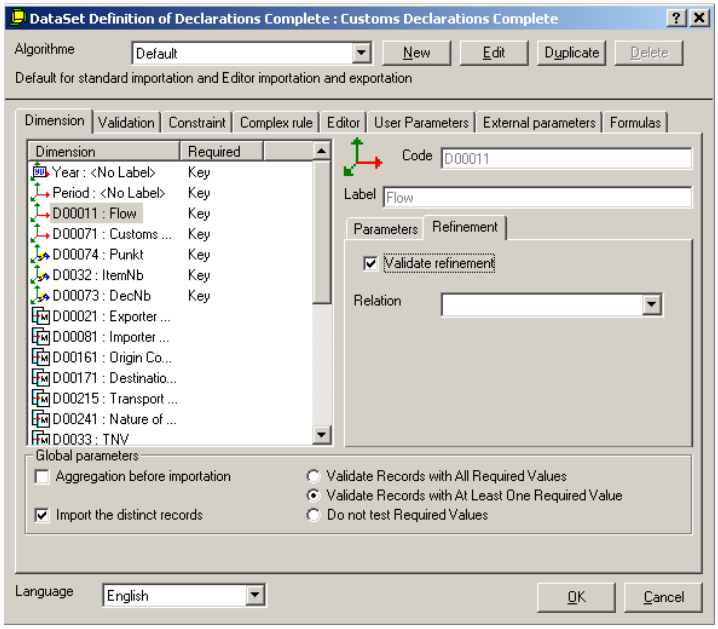
Grouped dimensions don't display in the Validation window. There are no parameters to set.

21.19. Year and Period refinements

The refinements tab for the Year dimension is blank because the year dimension does not require any refinement controls to be set.

21.20. Other dimensions refinements

The refinements tab for the Period dictionary looks like this:

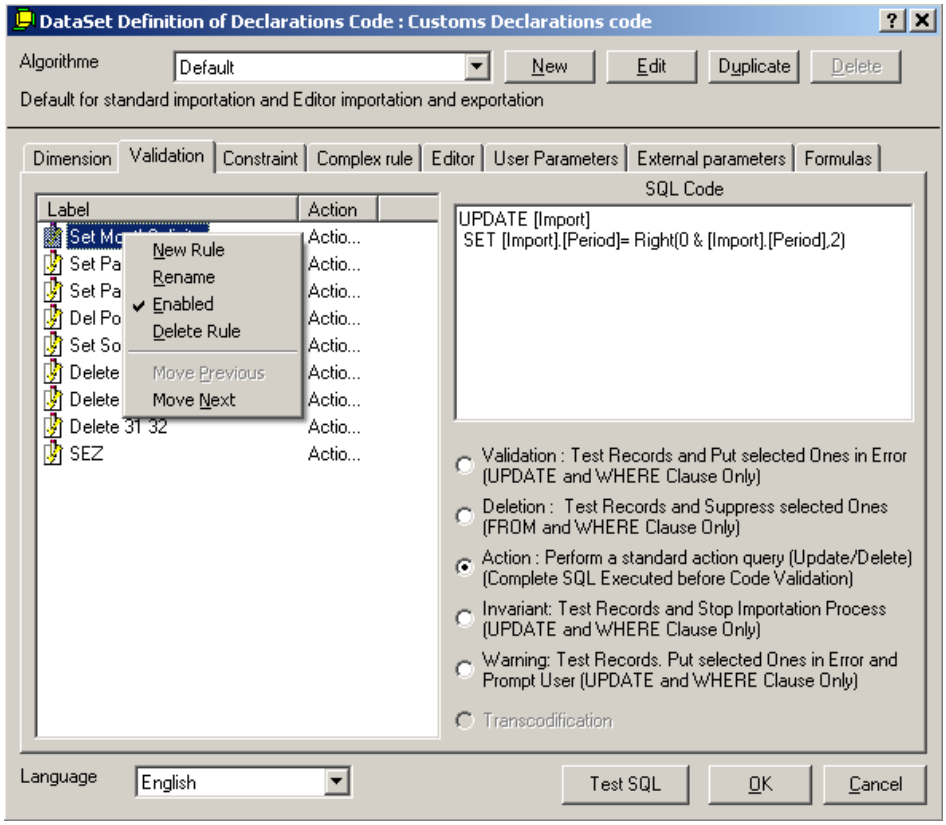


You may activate the refinement and select the appropriate Relation.
This completes the description of the Refinement Tab.

21.21. The Validation Tab

The validation tab will be displayed differently according to the selected DBMS.

21.22. Validation Tab under MS ACCESS:



The left hand window displays the list of rules that are stored with the dataset definition. It also displays the order in which the rules will be executed (with respect to the type of rule).

N.B.: If you are currently viewing a validation rule and there is text in SQL code text box, a command button 'Test SQL' is available to parse your SQL code.

N.B.: If you are working on a non empty dataset, a command 'Run Algo' is available. It enables you to run all validation rules of an Algorithm against the data already in your dataset.

You select a rule by clicking on it. All selected rules are highlighted. When a rule has been selected and is highlighted the details of the rule are displayed in the right hand window labelled 'SQL Code'.

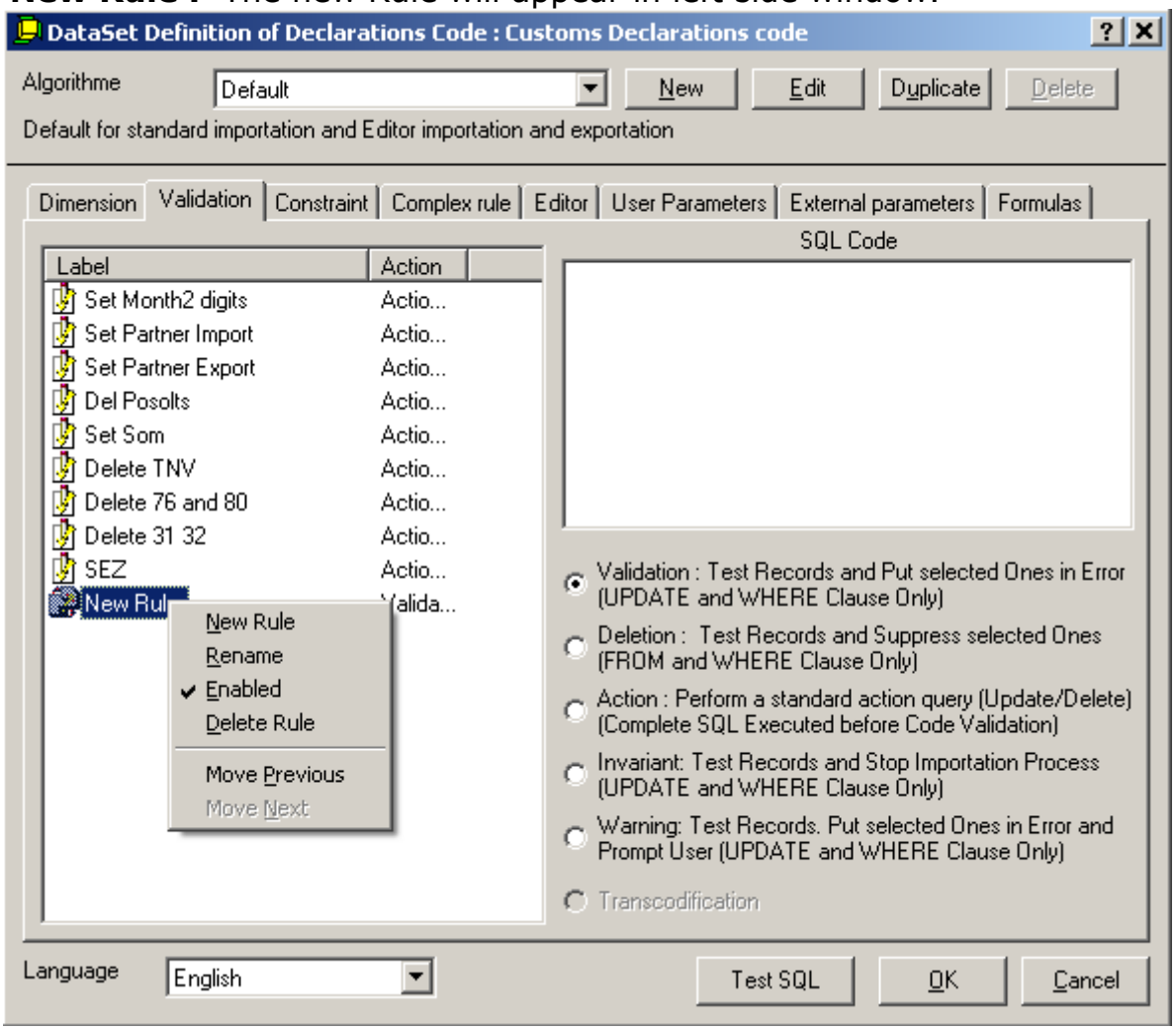
Here you may add a new code for a new rule or edit previously defined codes for previously defined rules.

Below the SQL code window are four radio field selection buttons. Select the option that best suits your requirements for the rule type. Each of these four options corresponds to a specific type of SQL clause.

The icon associated with the rule changes appearance to aid identification of the type of rule.

21.23. Adding a new Validation Rule

In the **'Validation Tab'** window and from the right click shortcut menu select **'New Rule'.** The new Rule will appear in left side window.



By default, the new Validation Rule will be named **'New Rule'**, to change the name, choose **'Rename'** from the shortcut menu.

You should set the properties of the new Rule by choosing from the four options on the bottom right hand corner of the screen:

The **'Validation'** option corresponds to the UPDATE and WHERE clause in the Import processes (import from file and import from editor). Use this type to test records and put only the selected ones in error. Validation Rules are executed after the Codes and double records are checked.

Example: If you want to import data for international flow by country you could check if the country of origin and destination are the same, by using this example**.**

UPDATE [Import]
WHERE [Import].[Origin Country] = [Import].[Destination Country]

The **'Deletion'** option corresponds to the FROM and WHERE clause in the Import processes (import from file and import from editor). Use this to test records and suppress the selected ones. Deletion Rules are executed after data are imported.

Example
FROM [Import]
WHERE [Import].[Origin Country] = [Import].[Destination Country]

The '**Action'** option corresponds to the WHERE clause in the Import processes (import from file and import from editor). Use this type to perform any executable SQL you want. When referring to an import table, be sure to use **[Import]** for the table name and the Dimension name of the Dataset for the field names. By using Action queries you can control or modify the imported data, because of this, Actions will be executed before any Codes are checked on import.

The '**Invariant**' option corresponds to the UPDATE and WHERE clause in the Import processes (import from file and import from editor). Use this type to test records and stop the importation process if there is an error. Invariant Rules are executed at the beginning of the validations. See the **'Validation**' exemple to write the SQL request.

The '**Warning**' option corresponds to the UPDATE and WHERE clause in the Import processes (import from file and import from editor). Use this type to test records and put only the selected ones in error; then prompt the user of the error. Warning Rules are executed after the Codes and double records are checked. See the **'Validation**' exemple to write the SQL request.

Type your validation code in the SQL window on the right hand side of the screen.

TIP! Please use the SQL syntax used within Microsoft Jet Engine (MS Access) and pay attention to the use of brackets, constants, operators and expressions.

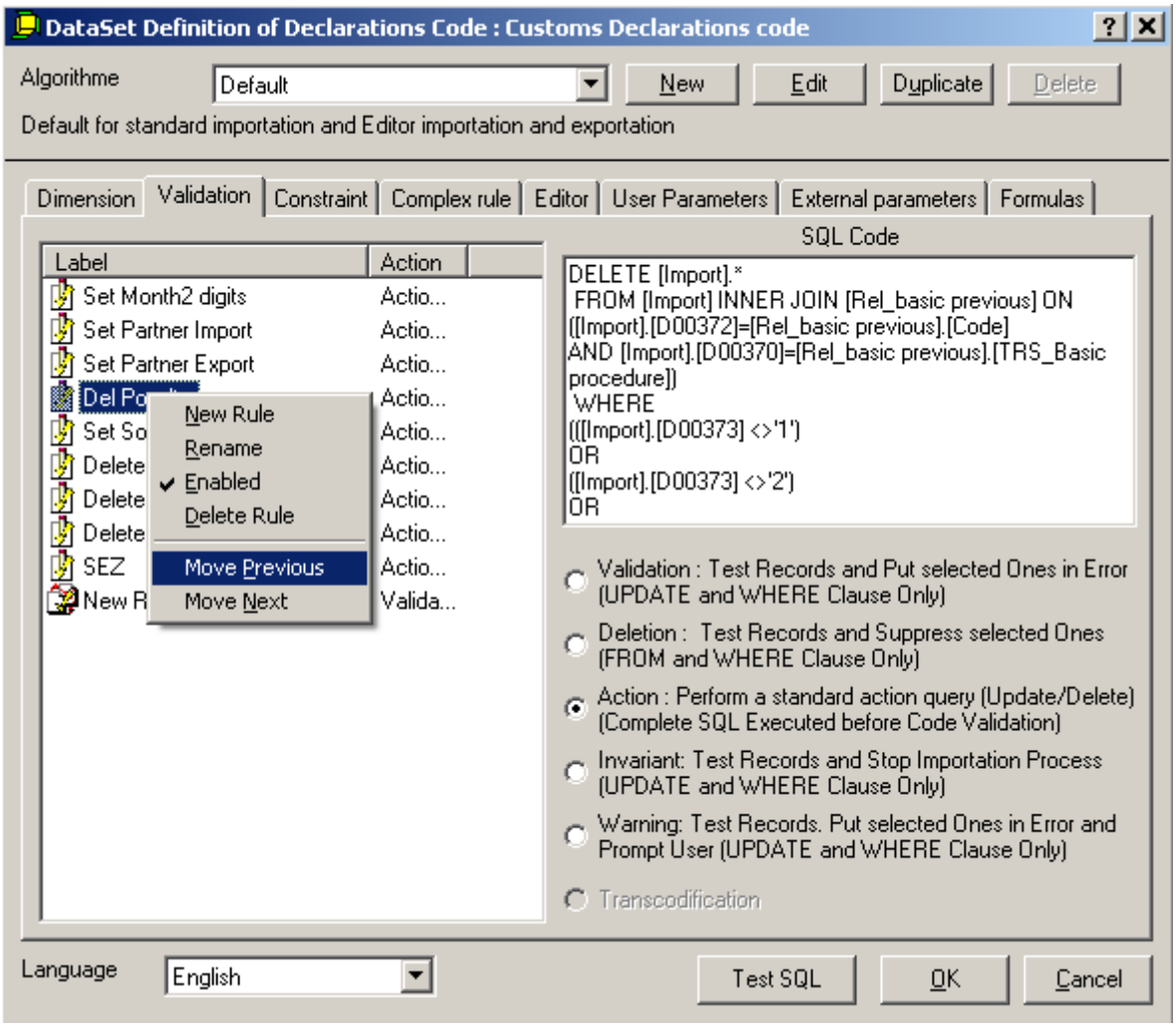
21.24. Deleting a Validation Rule

To delete a Validation Rule, select the Rule and choose from the shortcut menu 'Delete Rule' (See Image above).

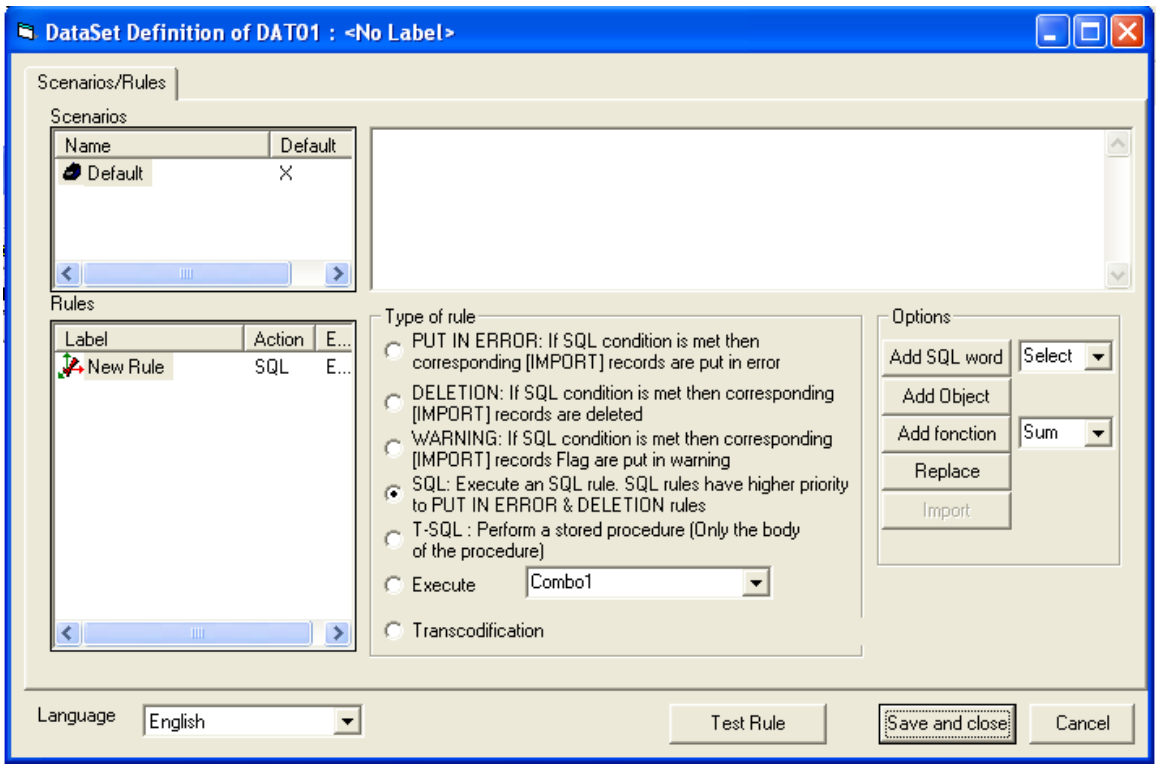
21.25. Changing the Order of Validation Rules

The order of the validation rules in the window is also the sequence in which they will be executed (with respect to the type of rule). To move a validation rule up one position, select the rule, then choose **'Move Previous'** from the shortcut menu.

To move the validation rule one position down the list select the rule, then choose **'Move Next'** from the shortcut menu.



21.26. Validation Tab under ORACLE and SQL SERVER:



By default, the new Validation Rule will be named **'New Rule'**, to change the name, choose **'Rename'** from the shortcut menu .

To delete a Validation Rule, select the Rule and choose from the shortcut menu **'Delete Rule'**.

To test the code of a Rule, select it and click on the **Test Rule** button.

User should set the properties of the new Rule by choosing from the seven options on the bottom right hand corner of the screen (PL SQL is only available with Oracle, T-SQL with SQL Server).

Under the Options area (on the right side of the Tab), Five buttons will provide some help to the users in writing the queries:

Add SQL word:

- This button adds the word of the combo box in the text defining the rule. The common words used in SQL are available in this combo box: Select, From, Where, Group by…

Add function:

- This button adds the word of the combo box in the text defining the rule. The common aggregation functions used in SQL are available in this combo box: Sum, Avg, Count,…

Replace:

- This button allows replacing one word by another word in all the text.

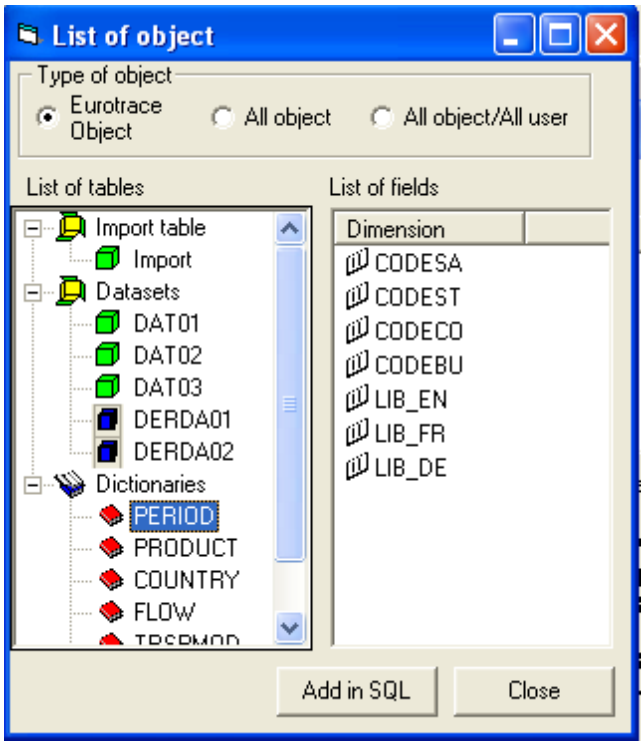
Add Object:

- This button opens a new interface in which an object can be selected.

Import:

- This button enables the importation of an existing validation rule

For the type "Eurotrace Object", this interface allows to select the import table, a dataset or a dictionary as well as their fields. All the selected objects are inserted in the text defining the rule. For the type "All object", this interface allows to select all accessible tables as well as their fields.



L Server and Access syntaxes for the validation rules

With an Access domain, the rule must be written in SQL Access , with an Oracle domain, the rule must be written in SQL Oracle and with SQL Server , the rule must be written in TSQL. For simple rules, there are not so many differences between Oracle and SQL Server. In SQL server brackets [] are not mandatory.

Sample of difference

	Access	Oracle / SQL Server
Using SQL functions	… WHERE Left([Import].[Declarant],2)='FR'	WHERE SubStr([Import].[Declarant],1,2)='FR'
Joining tables	…FROM [Import] INNER JOIN Trans ON [Import].[Declart]=Trans.Code	… FROM [Import], Trans WHERE [Import].[Declar]=Trans.Code

The syntax used for the rules is not always the same between Access And Oracle / SQL server to use the object.

When referring to an import table the syntax to be use is [Import]

The field of the import table are written [Field1], [Field2],…

The import table and these fields have to be contained in between brackets [].

When referring to other objects, the syntax is different.

	Access	Oracle / SQL Server

Identical		
Utilisation of the import table	[Import]	[Import]
Utilisation of a field of the import table	[Import].[Field1]	[Import].[Field1]
Not identical		
Utilisation of a dataset	[Dat_{NameDataset}]	{NameDomain}_DATA_{NameDataset}
Utilisation of a field in a dataset	[Dat_{NameDataset}].Field1	{NameDomain}_DATA_{NameDataset}.Field1
Utilisation of a dictionary	[Dic_{NameDictionary}]	{NameDomain}_DIC_{NameDictionary}
Utilisation of a field in a dictionary	[Dic_{ NameDictionary }].Code	{NameDomain}_DIC_{NameDictionary}.Code

For Oracle and SQL Server, the real name of the table is used. But with Access, the tables are not in the same file, and it is not possible to use the real name of the table (All the tables have the same name)

PL-SQL / T-SQL

Use this type to perform any executable PL-SQL / T-SQL you want. When referring to an import table be sure to use **[Import]** for the table name and the Dimension name of the Dataset for the field names. The PL-SQL / T-SQL PL-SQL must be written without declarations only the body of the code. The declarations are created automatically by Eurotrace.

Oracle and SQL Server Syntaxes for validation rules:

Under Oracle / SQL server, the syntax to be used for validation rules is not the same than the ACCESS ones. The same type of validation (Validation, deletion and action) are available, but the rules to be applies to the syntax is as follow:

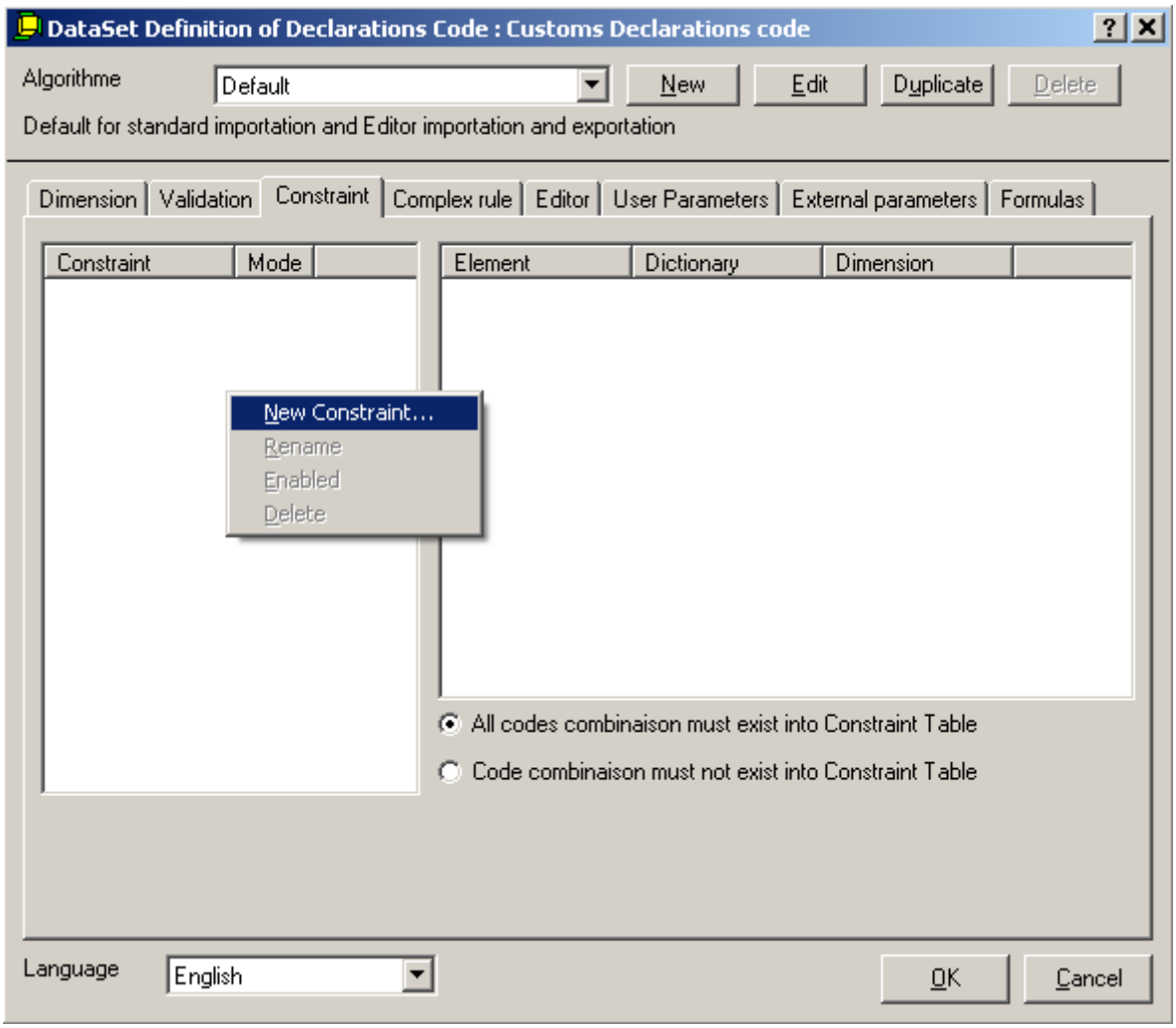
The import table have to be written **in brackets []. (for ex: [Import])**

The same syntax must be applied for the field of the import table (for ex: [name of the filed1], [name of the filed2], etc..)

All the other tables and fields must be written without brackets.

21.28. The Constraint TAB

The constraint Tab looks like this:



21.29. What is a constraint?

A constraint is a special type of rule that makes use of constraint tables.

21.30. What is a constraint table?

A constraint table is a table with combinations of codes combined into one table from a number of separate sources such as dictionaries.

You can test data to see whether the combinations of codes in a single record exist within the pre-defined constraint table.

For example, you might have a constraint table defined as follows:

3 Original Dictionaries

Dictionary 1	
Code1	Label
AAA	
BBB	
CCC	
DDD	
EEE	
FFF	

Dictionary 2	
Code2	Label
AA01	
BB01	
CC01	
DD01	
EE01	
FF01	

Dictionary 3	
Code3	Label
A	
B	
C	
D	
E	
F	

CONSTRAINT TABLE		
Code1	Code 2	Code 3
AAA	AA01	A
BBB	BB01	B
CCC	CC01	C
DDD	DD01	D
EEE	EE01	E
FFFD	FF01	F

The constraint table can then be used to determine valid acceptable **code combinations.**

You can do this in two ways.

You can say if the combination of codes **does** appear in the constraint table then the record is valid. With this logic, you are listing the valid code combinations in the constraint table. Only records that have these valid code combinations will pass the validation tests.

Or

You can say if the combination of codes **does not** appear in the constraint table then the record is valid. With this logic you are listing the invalid code

combinations in the constraint table. Only records that do not have the code combinations listed will pass the validation tests.

Why bother to allow both?

Sometimes it's quicker and easier to list the invalid possibilities than it is to list the valid ones.

Dictionaries therefore validate individual codes in individual record fields, but constraint tables can then test the combinations of codes in records for valid code combinations.

21.31. Example of a constraint table

If we take the constraint table defined on the previous page:

CONSTRAINT TABLE		
Code1	Code2	Code3
AAA	AA01	A
BBB	BB01	B
CCC	CC01	C
DDD	DD01	D
EEE	EE01	E
FFF	FF01	F

And apply a dataset that has the following code combinations:

ID	Code1	Code2	Code3	Value
1	AAA	BB01	A	32
2	BBB	BB01	E	55
3	CCC	DD01	C	67
4	FFF	DD01	D	32
5	EEE	EE01	E	54
6	FFF	FF01	E	2

If you apply the constraint table and say that all code combinations must be in the constraint table, then only record ID 5 will be accepted as valid, since this is the only record with all of the values in the derived constraint table.

If you select the option that all code combinations must **NOT** be in constraint table, all the records will be accepted EXCEPT record 5, because all of the other records are not in the constraint table whereas record 5 is within the constraint table.

21.32. When are constraint tables used?

Constraint tables are useful to filter out unusual data.

The constraint table could feature highly unlikely code combinations that could indicate that the data have been coded incorrectly. These records could then be filtered out of the dataset for further investigation and manual correction. This would therefore help to maintain the quality of the dataset and of the statistics produced from the dataset.

21.33. Forbidden / Impossible data example

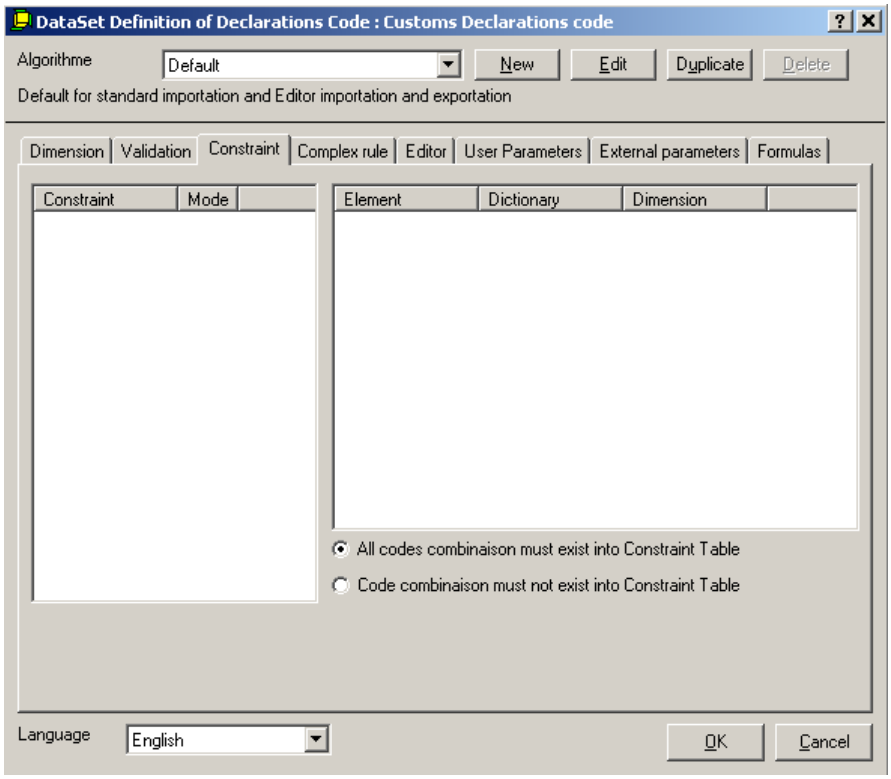
Constraint tables can also be used to filter out or detect 'interesting' transactions or even forbidden transactions.

These are detected by identifying the corresponding code combinations, and implementing them within a constraint table.

N.B. It is not unusual to have codes that in isolation are themselves valid codes, but when taken in context and association with other codes, become invalid. The code combinations can identify impossible or forbidden data.

For example the country codes for Italy and Canada are both valid country codes when tested in isolation, but in combination they would be illegal in the context of Intra EU data, EU-African data – EU Mediterranean data, etc.

The data must be in error, because whilst these countries are valid as individual countries, in this particular context they are not valid in combination.

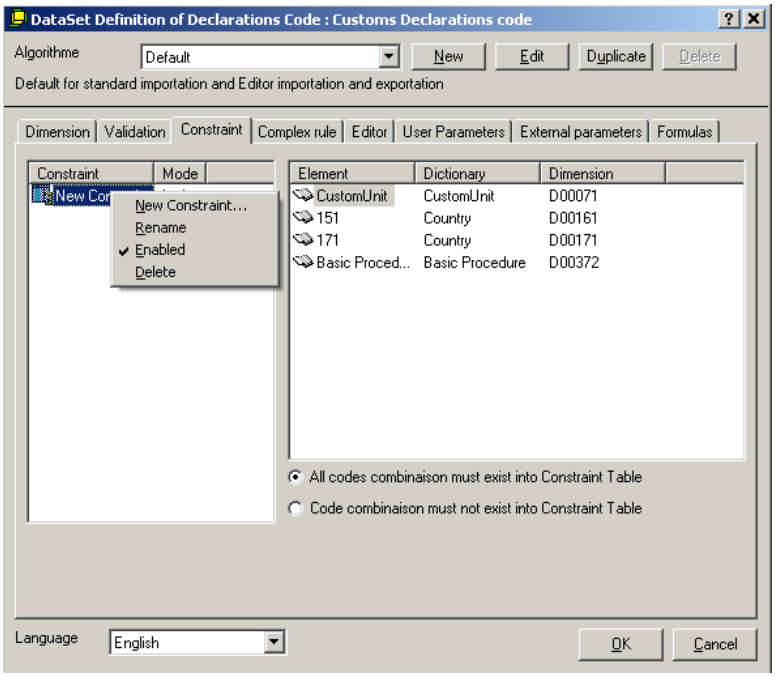


21.34. Add, rename, enable and delete constraints

The left hand window lists the constraints and has a right click short cut menu. Use these menu options to add, rename, enable and delete constraints.

When you add a new constraint, you are provided with a list of existing Relations that you have defined.

Select the relation, you wish to use from the list. The details of the relation are displayed in the right hand section of the screen.



You may select any linked dimensions that you want – providing they are part of the relation definition – by right clicking on the details in the right menu window and then selecting from the list. If you don't have a list displayed it is because you have not defined the linked dimensions in the relation.

You then have to choose at the bottom of the screen between 'All Code combinations must exist in the constraint table' or 'Code combinations must not exist in the constraint table'.

This determines whether the constraint table lists the valid code combinations or whether the constraint table lists the code combinations that are NOT valid.

The right hand window lists the associated elements, dictionaries and dimensions for the selected constraint in the left hand window.

This completes the description of the Constraints Tab.

21.35. Use case for Constrain

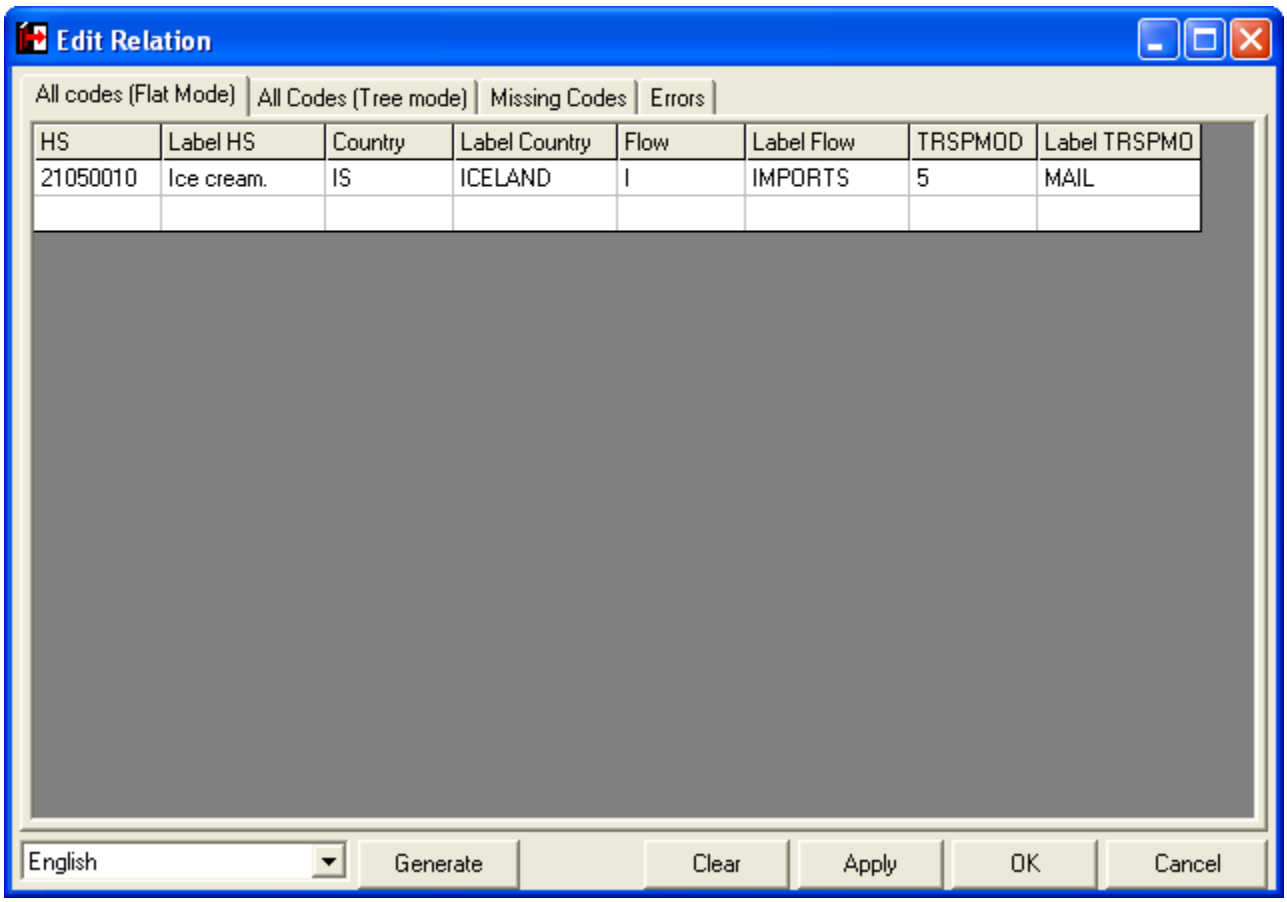
For example, if user wants to ensure that a **product A** has been (or not) **imported** from a **country B**, using the **mode of transport C**.

The constraint will associate four dictionaries, the flow dictionary, the Product dictionary, the country dictionary and the Mode of Transport dictionary.

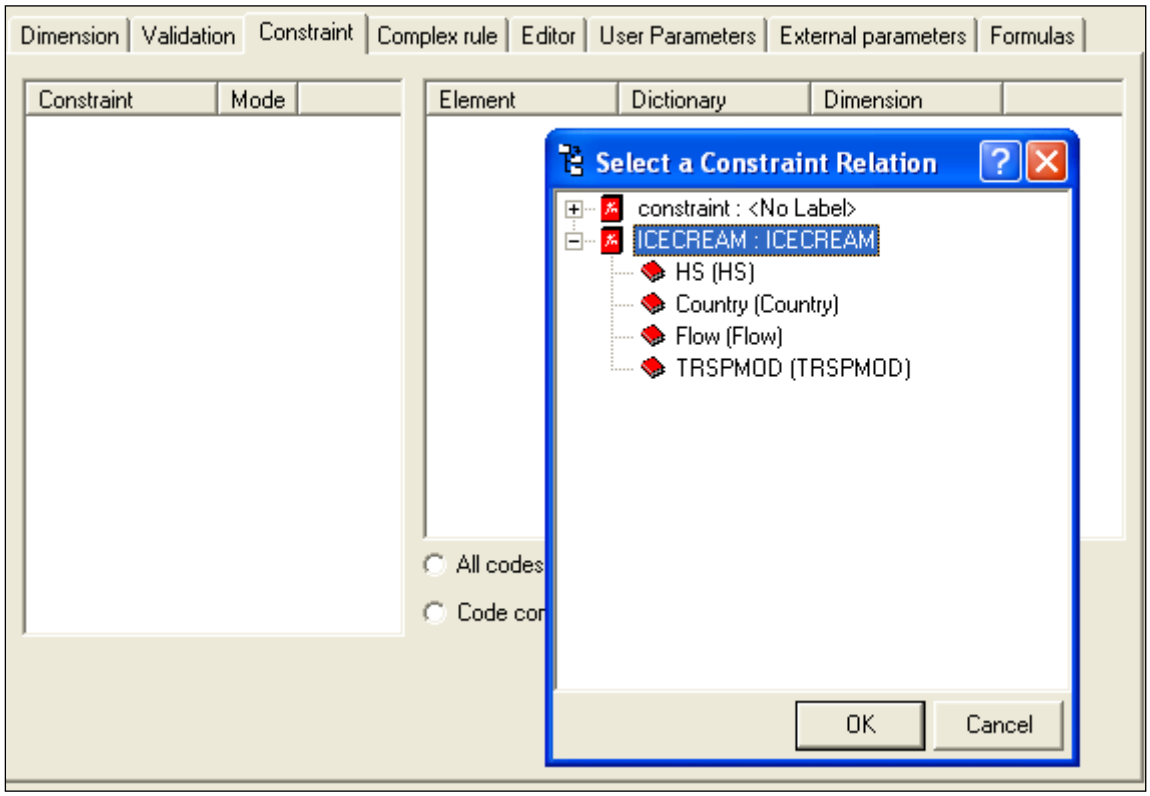
Let's take the following example:

Flow:	I (Imports)
Product:	21050010 (Ice Cream)
Country:	IS (Iceland)
Mode of Transport:	1 (Air)

From the Classification plan, the constraint will be build from one of the above mentioned dictionary (for ex, the Product):

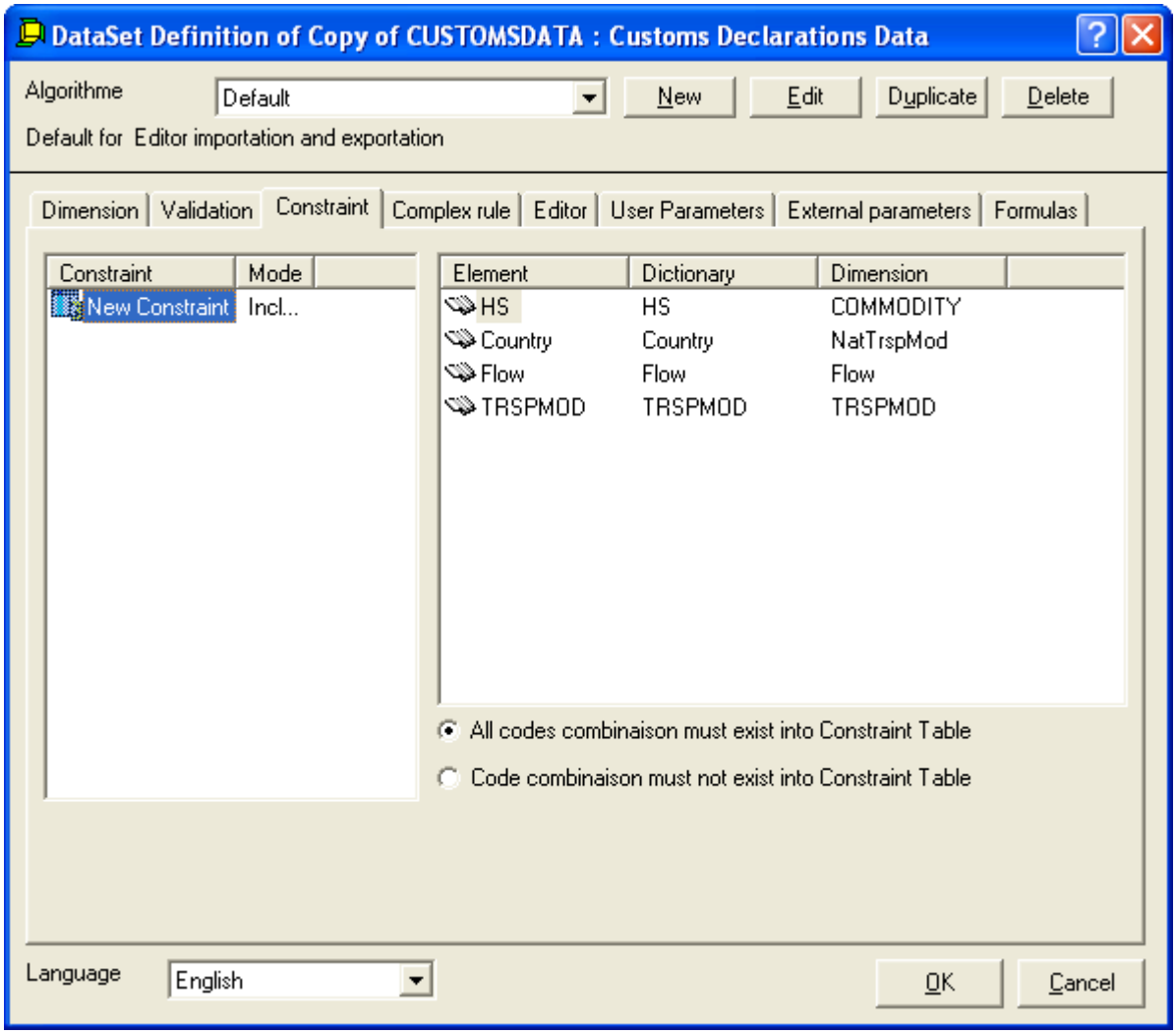


This constraint will be available for use when defining the validation rules, under the Constraint tab:



The dialog will contain all the existing constraint that can be use for this dataset (all the dictionaries used in the constraint must be related to a dimension)

Once the constraint will have been selected, the dialog will be display as follow:



As mentioned above, user will have to select the type of constraint (Inclusive or exclusive). This will define the way; the constraint will be use during the validation.

The first option (**Inclusive**), will check that, in our example, all the Imports must concern Ice cream which must have been Imported from Iceland and by Air. If, in the data file, this is not the case, then the data will be rejected and send to the error table.

Warning: The inclusive mode, in this case is very strict as we are using four dictionaries. The Inclusive mode clearly state that, "All codes combination must exist in the constraint table".

The second option will operate the opposite, if some records are having the association of codes defined in the constraint; it will be rejected (send to the error table).

Usualy, a constraint is use in exclusive mode, so the constraint define only what is not expected in the data.

21.36. The Complex Rule Tab (Only available under MS ACCESS)

What is a complex Rule?

Many forms of validation consider the properties of individual components of a dataset in isolation. They measure or test a specific value. You could describe them as relatively simple tests. Complex rules are tests that can be applied to a variety of values and conditions.

They take the form of conditional tests for a variety of parameters and if the conditions are met then they instruct the automatic action of various activities.

For example:

If the origin country code is for Spain and the destination country code is for Tunisia, and the product code represents XYZ, and the value is greater than W, and the date is between March and October, then do action a) followed by action b) and replace value F with Value D and then multiply column 1 and 2 to provide a new value in field Z.

They need not be quite so complicated – but they are capable of establishing very powerful automatic data processing – which can be triggered automatically by a given set of conditions being met.

Note: When the storage of the database is done under ORACLE or SQL Server, the Complex rule tab is not available as such. The order of the rules execution will be defined under the Validation tab.

When would you use one?

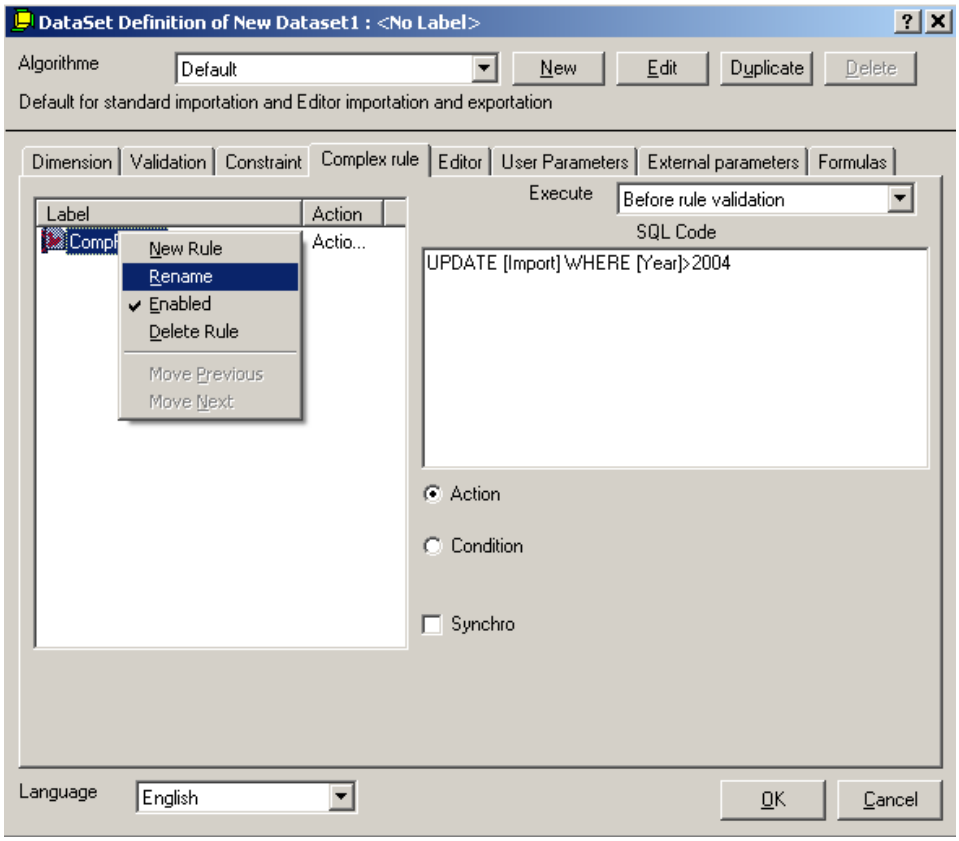
There are many potential uses for complex rules.

You could multiply the monetary value field of a record by an exchange rate value to automatically determine the monetary value in a different currency. You could add default average values to records, where one value field was empty, but not for records where more than one value field was empty.

You could filter out customs declarations between pairs of countries based upon specific types of product, etc.

The complex rules are defined using Microsoft Jet Engine compatible SQL.

The complex rule tab looks like this:

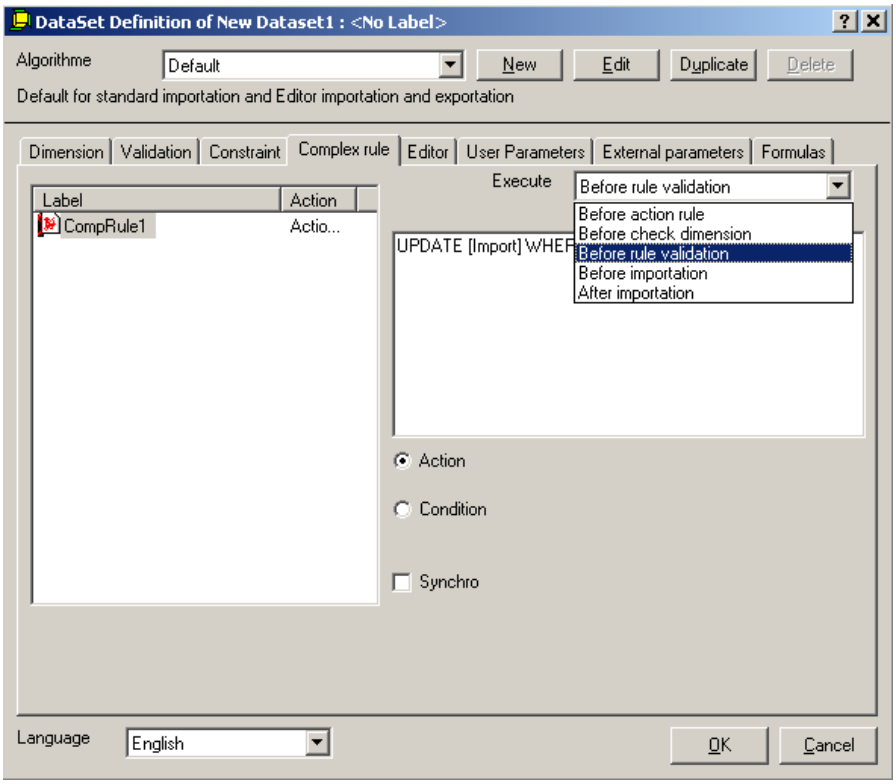


The left hand window lists the Complex rules and has an associated right click short cut menu.

21.37. Add, rename, enable and delete complex rules

Use these menu options to add, rename, enable, delete and move the complex rules. The right hand window contains a data entry box for entering the complex rule logic using Structured Query Language notation (SQL).

Above the SQL box is a drop down list with the options that determine ***when*** the rule is executed. These options are:



'Before rule validation' – Executes the Complex rule before the validations.

'Before check dimension' – Executes the Complex rule before the dimensions are checked.

'Before action rule' - Executes the Complex rule before any action queries.

'Before importation' - Executes the Complex rule before any data are imported.

'After importation' - Executes the Complex rule after the data have been imported.

Below the SQL window are two radio field selection boxes. Select one of these.

The box labelled 'Action' will be implemented shortly.

The box labelled 'Condition' will be implemented shortly.

Further controls relate to conditional Rules:

These include the Time in months box *that is used for setting the time in months* and two radio field boxes.

The box marked after the **'First record'** is selected when you wish the Complex rule to start with the second record in the file (useful if the first record contains header information and is to be ignored).

The box labelled after the 'Last record' is used when you wish to execute the complex rule after the last record (i.e. upon the end of the file).

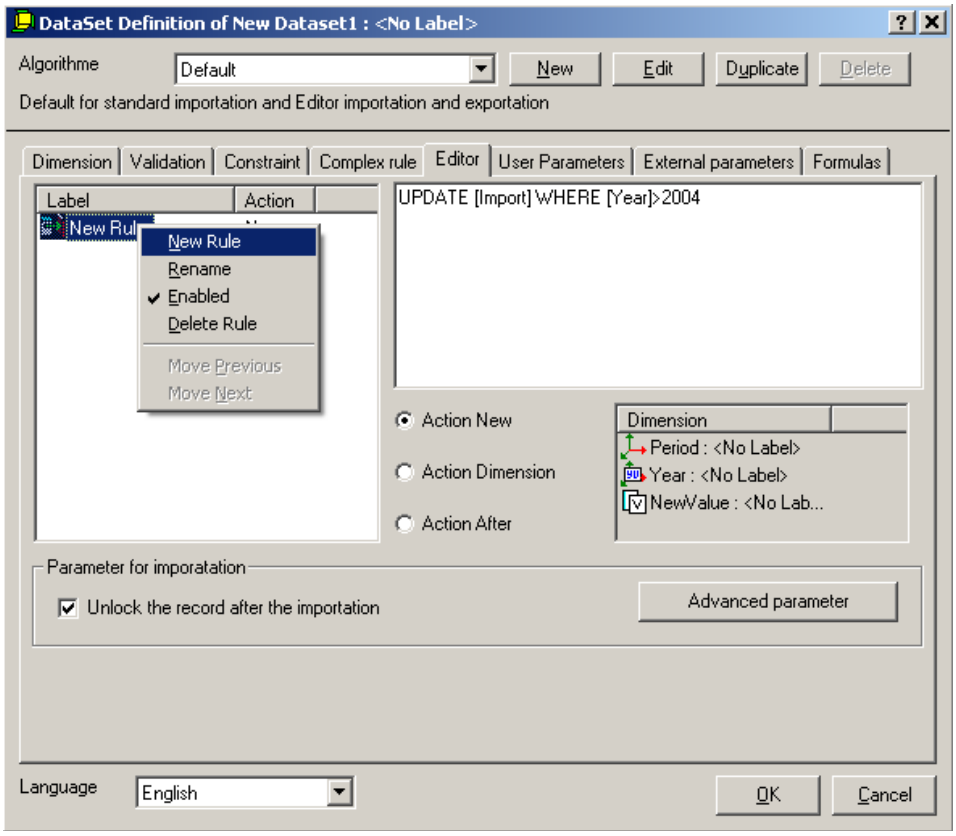
The last option is the **'Synchro'** check box. This works with Multi-files.

This completes the description of the complex rule Tab.

21.38. The Editor TAB

The Editor Tab is used to define SQL operations that can be executed within the Eurotrace Editor application. These rules are exported with the .ETC file so that the Editor will undertake them when the users use the editor program.

The Editor Tab page looks like this:



In the left hand window is the list of rules that can be edited. Click on a rule to select it for editing.

21.39. Add, rename, enable, and delete rules

You can add, rename, enable and delete rules by using the appropriate right click shortcut menus.

The right hand window displays the validation rule you wish to apply. Below the right hand window are three radio field buttons. Select one appropriate to your needs.

The button labelled **'Action New'** is used to instruct the editor to apply the SQL operation automatically each time a new record is selected within the Eurotrace Editor program.

For example, you could set up a rule to populate a field with a certain code each time a new record is invoked within the Eurotrace Editor application.

I.e. Each time a new record is requested set the country code field to 'XX'.

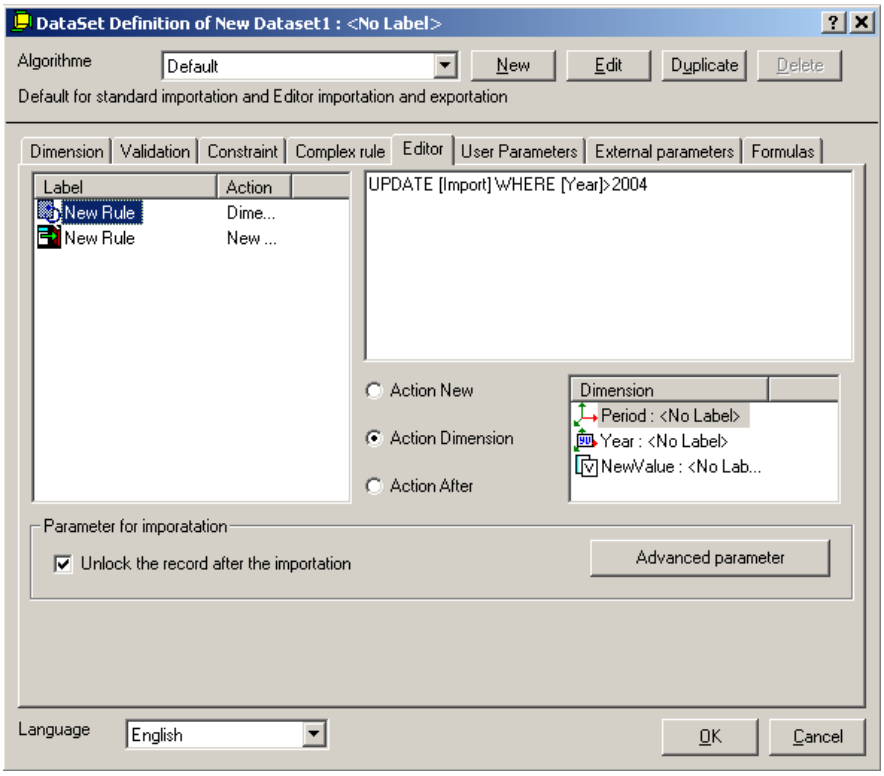
The button labelled **'Action Dimension'** is used to instruct the editor to apply the SQL operation automatically each time data are typed into fields within a record in the Eurotrace Editor program.

For example you might have four fields Tax 1, Tax 2, Tax 3 and Tax 4 in the records that needs to be edited. You could also have a field called Total Tax that is the sum of these fields. You could set up a rule that automatically fills the Total Tax field with the sum of the other 4 fields as the information is filled into the field.

This information would be updated not when the record was called or exited but as the data are being typed into the form.

The button labelled **'Action After'** is used to instruct the editor to apply the SQL operation automatically when the Editor closes a particular record.

The SQL is then only executed when the record is being closed and saved.



Below the Left hand window is a tick box labelled 'Unlock the record after the importation'. Using this option unlocks the record's flag upon re-importation to the dataset from a session in the Eurotrace Editor.

When you check records out to the Eurotrace Editor, the DBMS software makes a copy of the data and puts that into an .ETC file. It also writes an internal system flag against the data that are checked out for editing. This prevents other users from accessing the data that have been checked out by the editor. Then when the data are returned from the Editor, the Flag field can be removed which unlocks the re-imported data. So the check box labelled Unlock the record after the re-importation is setting the instruction to remove the Lock Flag in the data file, after the records have been re-imported.

Below the Scrollable Dimension list box is the 'Advanced parameter' button. Use this to access the panel entitled 'Network spreading Management' that enables the database administrator to monitor which parts of the domain are checked out for update.

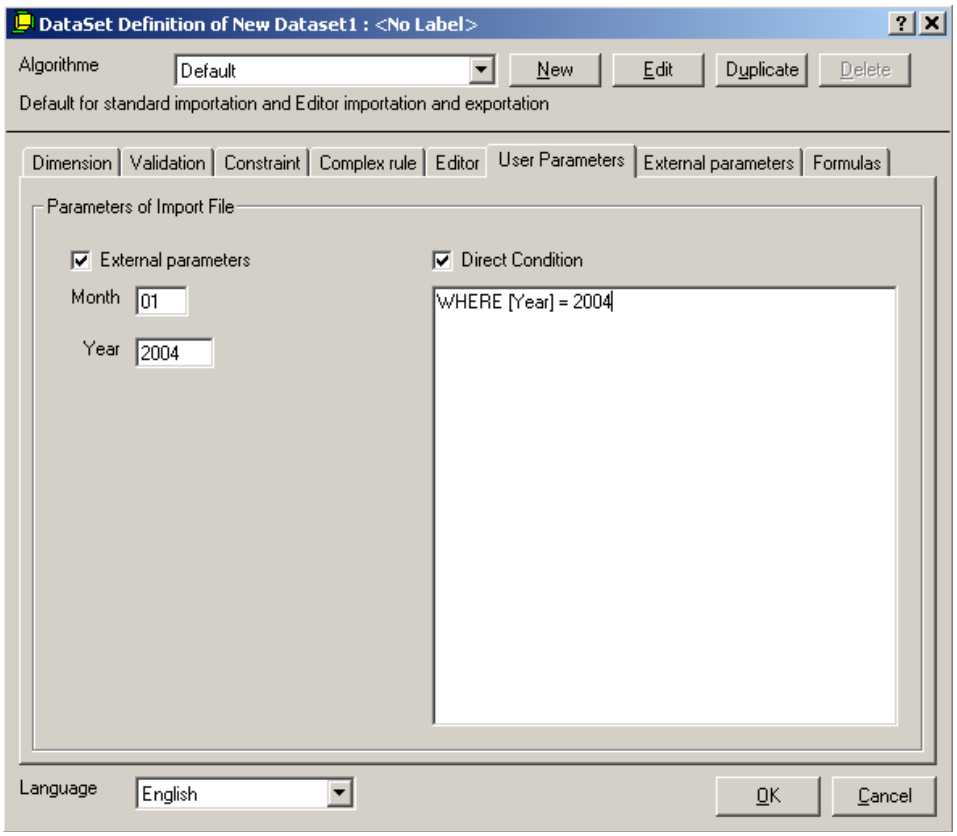
This completes the documentation for Validation Rules.

21.40. The User Parameters Tab (Only available under MS ACCESS)

A user parameter is an easy way to restrict the data to import. Sometimes some files have to be reimported to get new data, but it's not necessary to import all the file.

The user parameters allow to import a part of a file without having to create a full validation.

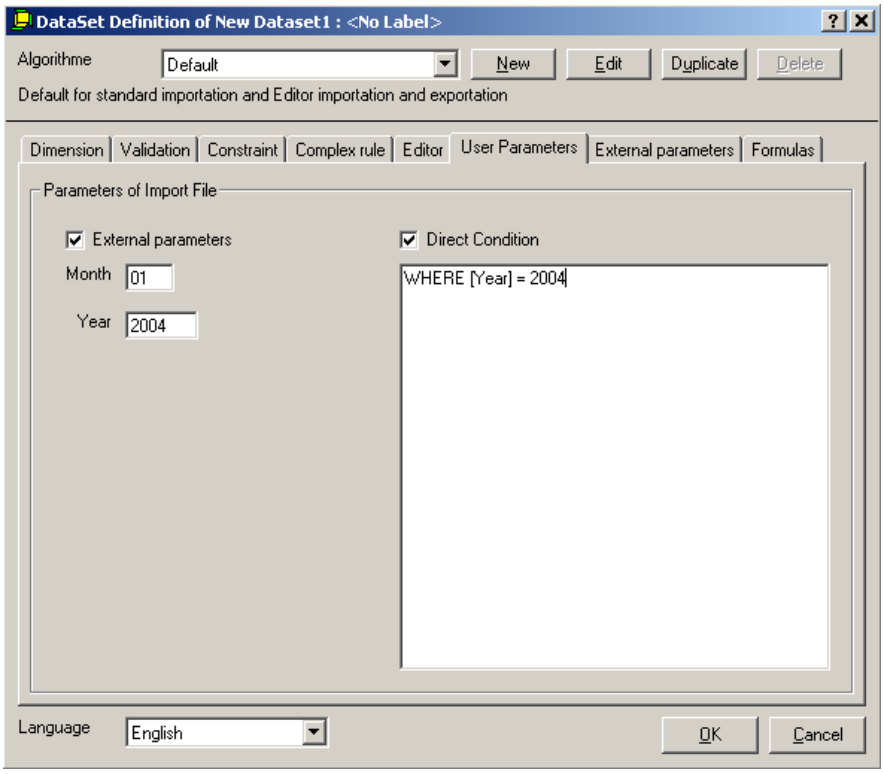
The **'User Parameters'** tab looks like this:



The left hand window allows the selection of a period from the import file and the right hand window is used to enter a direct condition.

21.41. Add and delete user parameters

Use the check boxes to add or delete a parameter. The left hand window contains two textboxes for entering the selection of a period from the import file. The right hand window contains a data entry box for entering the direct condition using the Structured Query Language notation (SQL).



By selecting the **'External Parameters'** checkbox, you can enter 2 parameters:

The 'Month' to import.
The 'Year' to import.

By selecting the **'Direct Condition'** checkbox, you can enter a where clause.

Example: The example above will only allow the importation of the data corresponding of January 2004 in the import file.

The import Wizard will only import data corresponding to the parameters entered in this Window.

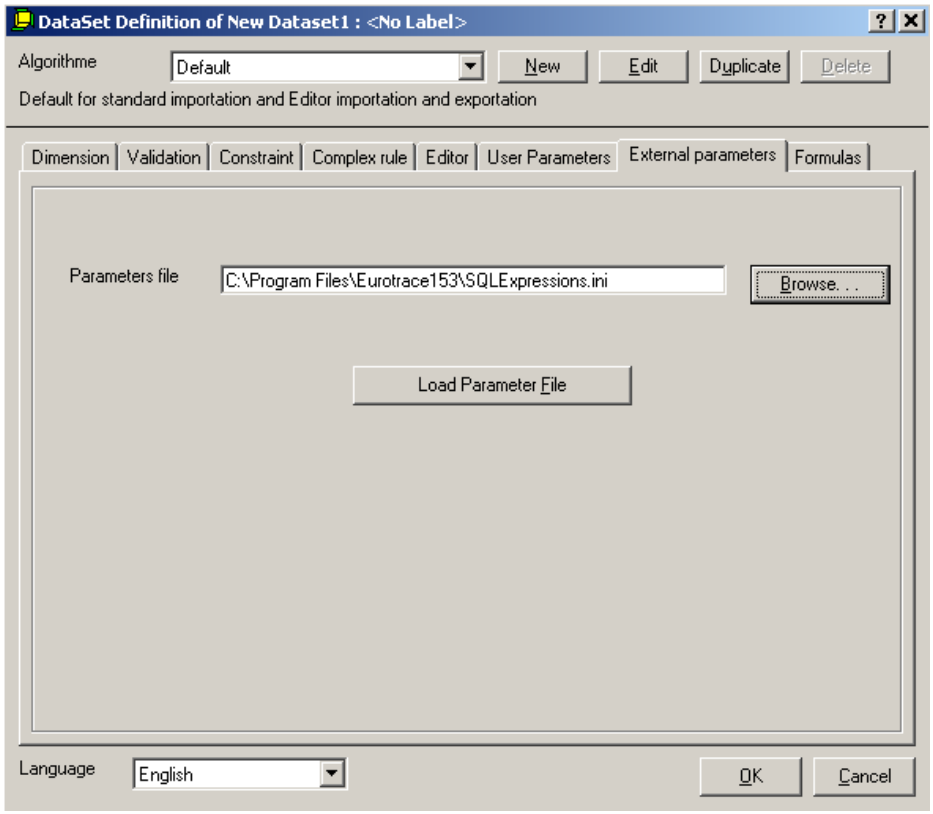
Note that only one of the two checkboxes can be enabled.

21.42. The External Parameter Tab

There are two kind of external parameter:

The **'External Database'** is a database where errors on data can be stored independently of a Dataset.
The **'ParameterFile'** is an INI file where validations are defined.

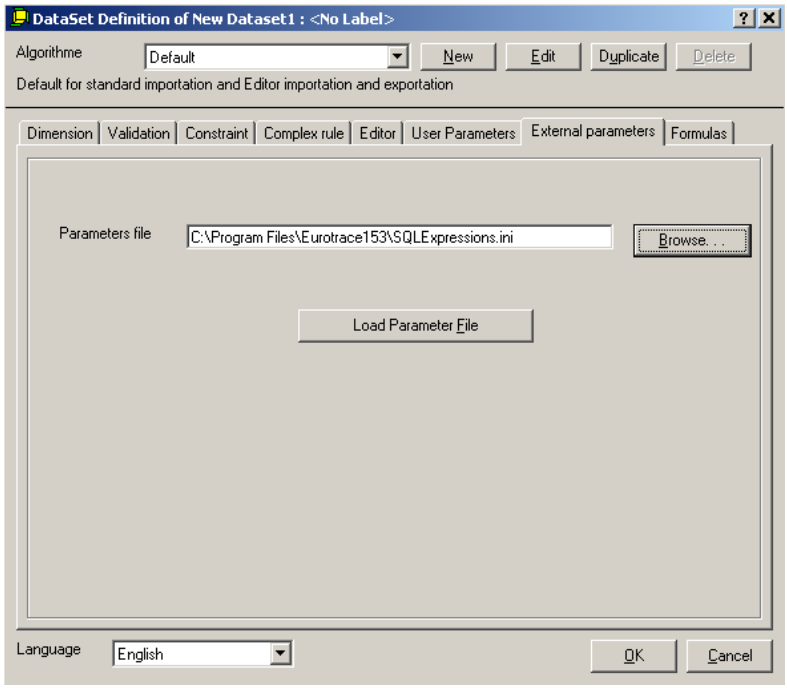
The external parameter tab looks like this:



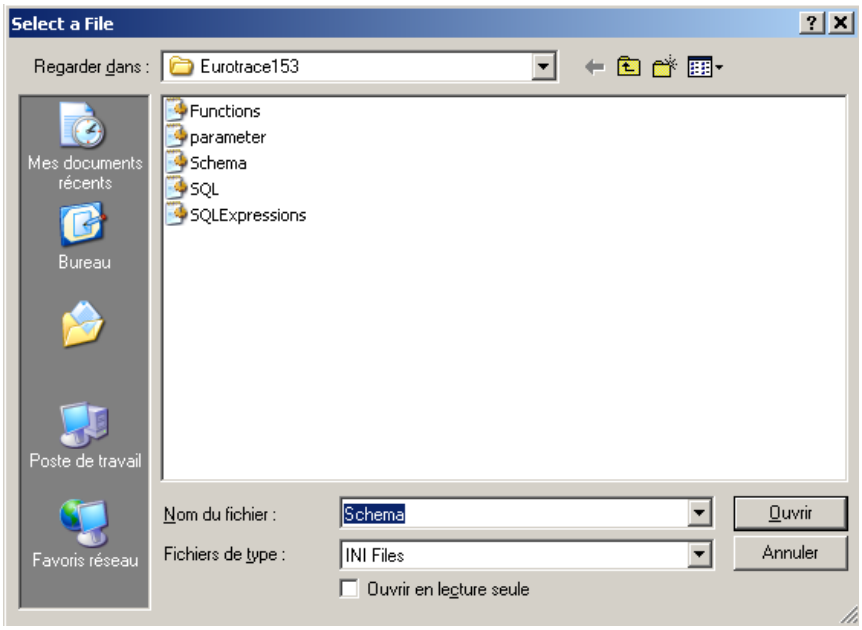
The **'Database path'** textbox is used to enter the path of an **'External Base'**, and the **'Load Parameter File'** button is used to select a **'Parameter File'**.

21.43. Add and delete external parameters

Use the **'Database path'** textbox or the **'Browse...'** button to add the full directory and name of an external base. The **'Load Parameter File'** button is used to select a Parameter file.

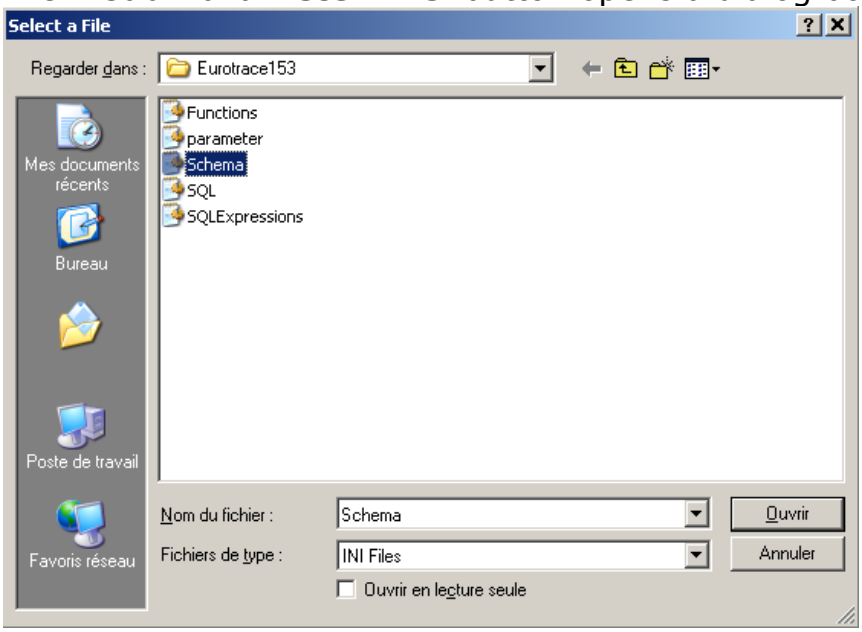


The **'Browse...'** button opens a dialog box to select a database:



Click on **'Open'** to select a database and return to the Validation form or on **'Cancel'** to cancel the operation.

The **'Load Parameter File'** button opens a dialog box to select a parameter file:



Click on **'Open'** to select a parameter file and return to the Validation form or **'Cancel'** to cancel the operation.

The parameter file is an INI file that contains several tags to create different kinds of Validations:

The **[Global]** tag is used to create new global parameters. Only one tag is allowed per file.
The **[Validation]** tag is used to create a new validation rule. Several tags are allowed per file.
The **[Constraint]** tag is used to create a new constraint rule. Several tags are allowed per file.
The **[Complex]** tag is used to create a new complex rule. Several tags are allowed per file.
The **[Editor]** tag is used to create a new editor rule. Several tags are allowed per file.
The **[User]** tag is used to create users parameters. Only one tag is allowed per file.
The **[External]** tag is used to create external parameters. Only one tag is allowed per file.
The **[Formula]** tag is used to create an aggregation formula. Only one tag is allowed per file.

Example of a parameter file named **'Parameter.ini'**:

'Fichier d'initialisation des validations

[Global]
AGREGATION=1
DISTINCT=1
VALIDATION=2

[Validation]
NAME=ValRule2
TYPE=4
SQL=UPDATE [Import] WHERE [Year] > 2004

[Validation]
NAME=ValRule3
TYPE=0
SQL=UPDATE [Import] WHERE [Year] > 2004

[Constraint]
NAME=ConstRule1
RELATION=Rel1
COMBINAISON=1

[Constraint]
NAME=ConstRule2
RELATION=Rel2
COMBINAISON=0

[Complex]
NAME=CompRule1
EXECUTE=2
TYPE=1
START=1
TIME=3
SYNCHRO=1
SQL=UPDATE [Import] WHERE [Year] > 2004

[Complex]
NAME=CompRule2
EXECUTE=1
TYPE=0
START=0
TIME=1
SYNCHRO=0
SQL=UPDATE [Import] WHERE [Year] > 2004

[Editor]
NAME=EditRule1
TYPE=1
DIMENSION=ItemNb
UNLOCK=1
SQL=UPDATE [Import] WHERE [Year] > 2004

[Editor]
NAME=EditRule2
TYPE=0
DIMENSION=Controller
UNLOCK=0
SQL=UPDATE [Import] WHERE [Year] > 2004

[User]
MONTH=01

YEAR=2004
SQL=WHERE [Year] = 2004

[External]
BASE=c:\toto.mbd

[Formula]
AGREGATION=Last

Each tag contains one or more keys to create each kind of rules:

Tag [Global]:
AGREGATION: parameter 'Aggregation before importation'. Values:
0 = False
1 = True
DISTINCT: parameter 'Import the distinct records'. Values:
0 = False
1 = True
VALIDATION: parameter 'Validation of required values'. Values:
0 = Validate Records with At Least One Required Value
1 = Validate Records with All Required Values
2 = Do not test Required Values
Tag [Validation]:
NAME: name of the new validation rule
TYPE: type of validation rule. Values:
0 = Validation
1 = Deletion
2 = Action
3 = Invariant
4 = Warning
5 = Transcodification
SQL: parameter **'SQL Code'**. Value: a SQL request
Tag [Constraint]:
NAME: name of the new constraint rule
RELATION: name of an existing constraint relation
COMBINAISON: type of combinaison. Values:
0 = All codes combinaison must exist into Constraint Table
1 = Code combinaison must not exist into Constraint Table
Tag [Complex]:
NAME: name of the new complex rule
EXECUTE: parameter **'Execute'**. Values:
0 = Before action rule
1 = Before check dimension
2 = Before rule validation
3 = Before importation
4 = After importation
TYPE: type of complex rule. Values:
0 = Action
1 = Condition
START: parameter **'After the'** for condition type. Values:
0 = First record
1 = Last record
TIME: parameter **'Time'** for condition type. Value: a number of months
SYNCHRO: parameter **'Synchro'**. Values:
0 = False
1 = True
SQL: parameter **'SQL Code'**. Value: a SQL request
Tag [Editor]:

NAME: name of the new editor rule
TYPE: type of editor rule. Values:
0 = Action New
1 = Action Dimension
2 = Action After
DIMENSION: parameter **'Dimension'**. Value: name of a valid Dimension for the Dataset
UNLOCK: parameter 'Unlock the record after importation'. Values:
0 = False
1 = True

SQL: parameter **'SQL Code'**. Value: a SQL request
Tag **[User]**:
MONTH: parameter **'Month'**. Value: the number of the month within a year
YEAR: parameter **'Year'**. Value: the value of a year
SQL: parameter **'Direct Condition'**. Value: a SQL request
Tag [External]:
BASE: parameter **'Database path'**. Value: an existing full path and filename of a database
Tag [Formula]:
AGREGATION: parameter 'Aggregation Formula'. Values:
First = aggregation on the first value
Last = aggregation on the last value

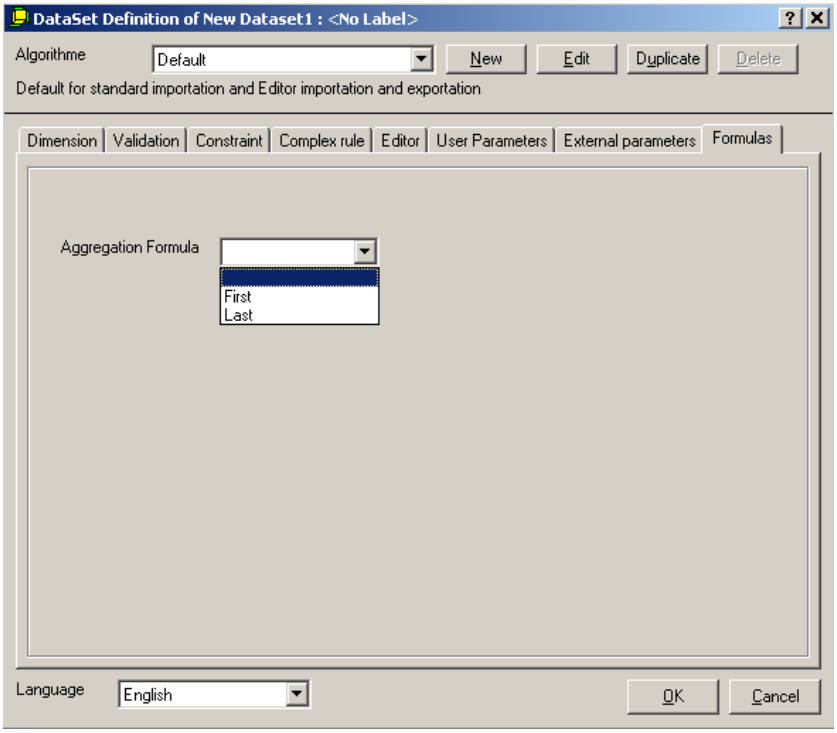
Note: Not all tags have to be present in the file, but if a tag is present, all its keys must be correctly filled.

21.44. The Formulas Tab

An aggregation formula allows the definition of the kind of aggregation to use for the doubloons, before the importation. There are two types of aggregation for the text values:

'First': the application uses the first record for the importation.
`Last': the application uses the last record for the importation.

The formulas tab looks like this:



The **'Aggregation Formula'** combo box is used to select the type of aggregation for the text value fields.

22. Dataset Scopes For Importing And Exporting Data

When you have created the new dataset, and created its structural definition, you will then be able to set the scope for each dictionary used within the dataset structure.

22.1. What is a scope?

The scope is the range of values in the dictionary that are either included as valid codes for the dataset or excluded.

The reason why you need to set scopes at all is because sometimes your datasets might only need to allow subsets of codes from a dictionary, rather than any code from within the dictionary.

For Example: If you have a dictionary of world countries, but your dataset was only for Scandinavian countries, you could set the scope of the dataset to only include the codes from the dictionaries that correspond to the Scandinavian countries. Therefore codes that belonged to countries which were not Scandinavian, would not be permitted.

When you set dataset scopes, you are defining the codes of the dictionaries that will be allowed when **importing data into a dataset.**

The scope settings for your dataset therefore act as a filter enabling you to import records that meet your user defined dictionary criteria.

Records containing dictionary codes that are not selected in the scope, will be rejected to the error file when importing.

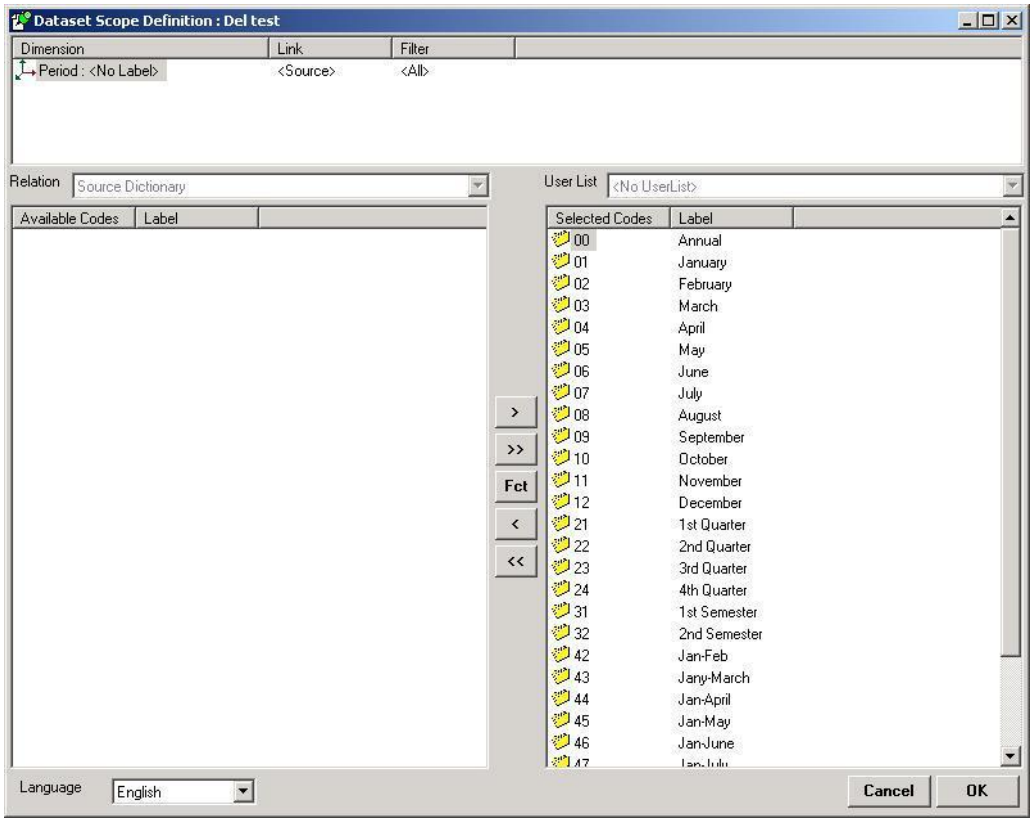
For example, when importing data from European countries – you can restrict the data that pass into a dataset to just European Union Member States, by ensuring that only the European Union Member States' country codes are selected in a dictionary of country codes.

Dataset Scopes can therefore be used to determine which records are loaded into different datasets and which records are filtered out, in accordance with the scope settings for the dictionaries that you specify.

22.2. How to set a dataset's scope

Select the dataset for which you wish to define the scope and either choose `**Dataset'** and then **'Scope'** from the shortcut menu, or click on the **'Dataset / View Scope'** button. 

The following screen is displayed.



You select the dictionary to work with, in the list of dictionaries that apply to the dataset. This list is displayed at the top of the screen (the list is labelled 'Dimension').

If you don't see the dictionary you want, it is because you have either selected the wrong dataset, or you have selected the right dataset, but you have not yet added the dimension to the structure of the dataset yet.

After you have selected the dictionary, the list of codes that are available for scope selection, for the selected dictionary is displayed in the right hand side of the window in the selected codes list.

N.B. By default all the codes are initially selected – so if you want to exclude codes – you must unselect them.

This is done by moving a code from the selected codes list to the available Codes list on the left hand side of the screen.

The buttons in the centre column panel are for moving the codes between the 'selected' and 'available' lists.

22.3. How to select and unselect scope codes

Select the code you wish to move by clicking on it. The code will be highlighted in the list to indicate it has been selected.

Tip ! If you want to select more than one code to move at a time try this : Hold down the 'Control' key on the Keyboard when selecting the codes. You can select adjacent codes or codes which are not adjacent using this method.

When you have selected your codes, move them by clicking on an appropriate button.

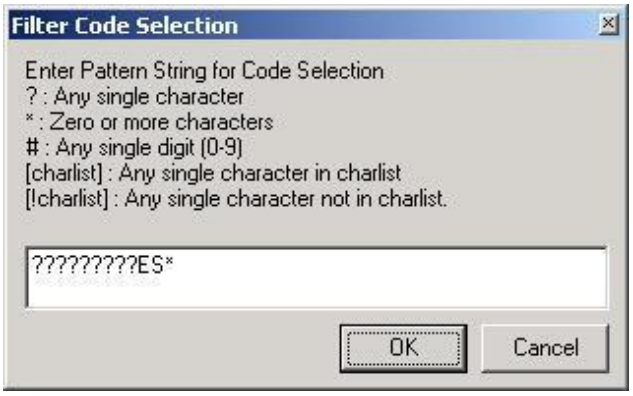
Use the '>' button to move a selected code, or many selected codes from the available list to the selected code list (left to right).

Use the '>>' button to move all of the codes from the available list to the selected code list (left to right).

Use the '<' button to move a selected code, or many selected codes from the selected list to the available code list (right to left).

Use the '>>' button to move all of the codes from the selected list to the available code list (right to left).

Use the 'FCT' button to 'Filter the Code Selection'. This useful feature enables you to set up 'Wildcard' type matches to search for codes.



N.B. It is the codes that are searched and not the labels!

Thus '*9*' will select all codes that include the number 9 somewhere.

ABC8* will select all codes that start with ABC8.

A?BF23 will select any codes that start with A and end in BF23, regardless of what their second digit is.

This feature can be useful when managing very large code lists.

When you have finished selecting the codes that you need for each dictionary for your dataset, click on the 'OK' button to save the selection.

If you don't want to save your selected codes you can click on the 'Cancel' button.

22.4. Changing the dictionary's label language.

Select the language that you need your dictionary labels to be displayed in from the drop down language label list at the bottom of the screen on the left hand side.

22.5. View scopes for exporting data

You can also set scopes for making exportation files as well as when importing data into a dataset. These scopes are defined in the same way, but you make them on the dataset View Tab.

When you make an extraction of data you have to set up a 'View' to specify the qualities/ characteristics of the data that you wish to extract.

For example: If you had a dataset of oil exports for all world countries and you wanted to extract from the dataset only records that belonged to countries within the European Union, you would define a view with the appropriate scope settings allowing only the inclusion of the European Union Member States. Those countries with oil fields, for example in the North Sea, would then be included.

View scopes are created the same way as dataset scopes, except that you access them via the view tab.

Select the dataset,
Select the dataset view tab,
Select an existing view or define a new view.
Select the 'Scope' shortcut menu option.
Select the dictionary.
Select the appropriate dictionary codes.
Click 'OK' to save the scope code selection, or 'Cancel' to cancel the selection.

22.6. The difference between dataset scopes and view scopes

The difference between dataset scopes and view scopes is, that dataset scopes are used for importing data into a dataset, whilst view scopes are used for exporting data (for more on exporting data see Chapter 18 exporting data.doc).

They are treated as separate items because your export views may be different from the import views – for example you might wish to import only EU Member States from a set of European countries when importing data into a dataset, and only want export to export Schengen zone countries when exporting data. In this case, you would need one set of scope codes to be set when importing data and another to be set when exporting data. Therefore these scope selections – even though from the same dictionary- are treated separately. The import codes are selected as 'Dataset' scopes and export codes are selected as 'View' scopes.

23.Importing Data

To import data to your EUROTRACE Dataset, click on the Dataset in the Dataset Tab window and choose import from the shortcut menu. This will start the Import Wizard and this screen will appear.

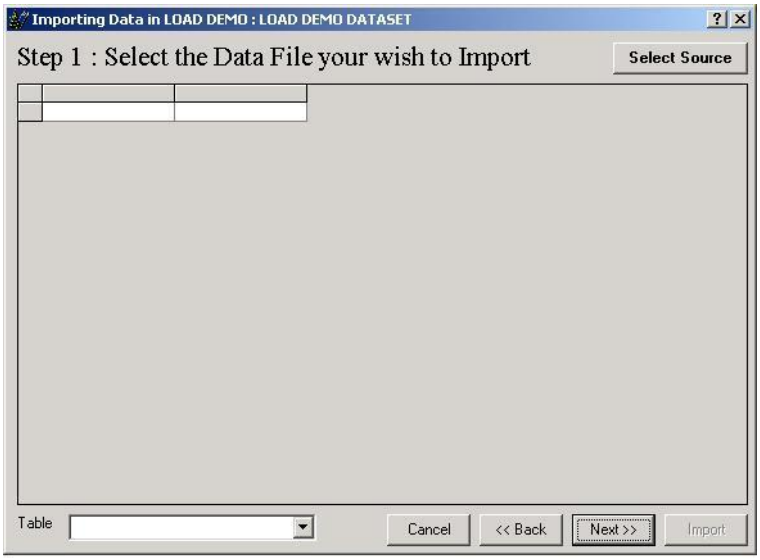
Select the type of import method you would like to use.

The Simple Importation Wizard should be used only when the EUROTRACE Dataset and the data table you are importing have **exactly** the same structure.

The Custom Importation Wizard should be used to import data tables to EUROTRACE Datasets when the structures are not exactly the same.

You can also select a previously saved import scheme – provided one exists already.

23.1. The Simple Import Wizard



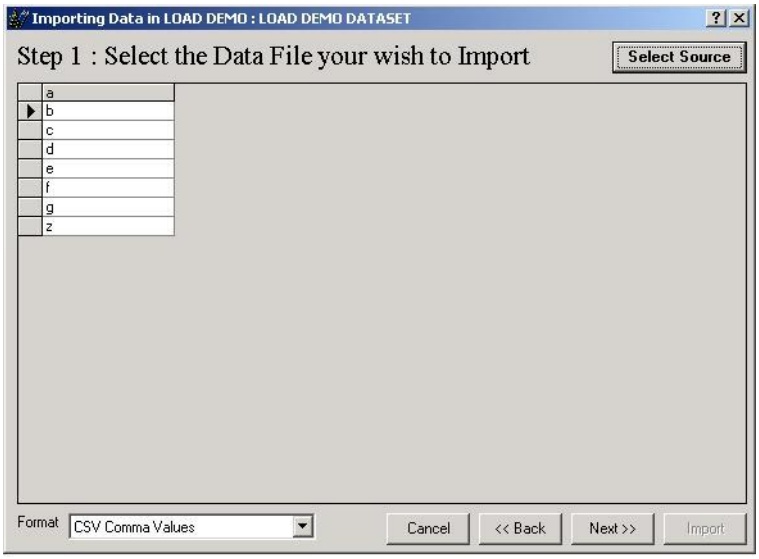
Only use this option when the structure of the data you are importing matches the structure of the Dataset. Click on the **'Next'** button to proceed to Step 1 entitled 'Select the Data File you wish to import'

Step 1 Select the Data File to Import

You must use click on the '**Select Source**' button at the top right hand corner of the window, and then navigate to the source file that can be in one of the following formats:

Microsoft Access Database
Microsoft Excel file
FoxPro Database
ODBC Data source
Text File

After you have chosen a data source file, you will see the contents of the file in the Import Wizard window.



You then have to select a format from the dropdown menu at the bottom left hand corner of the screen.

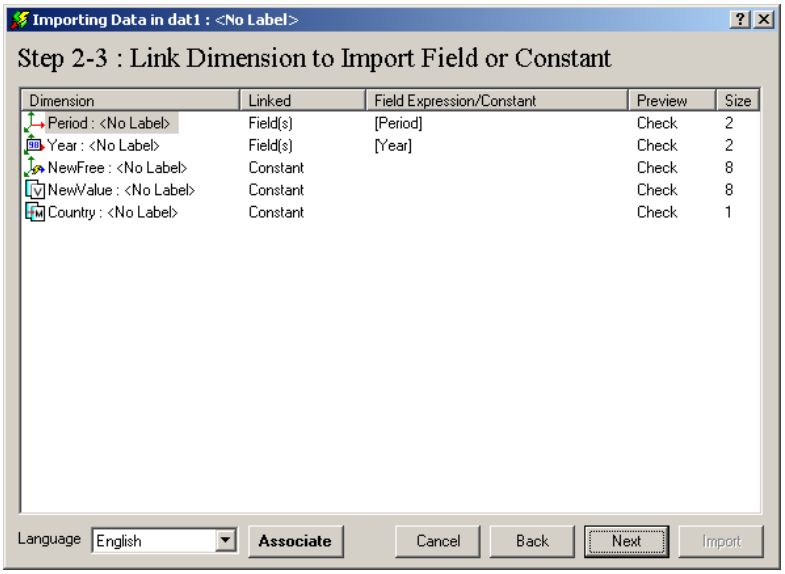
After you have selected the format, click on the button '**Next**' to go to Steps 2 and 3 of the Import Process.

Tip! When importing text files, an editable file with the .bki extension stored in the EUROTRACE domain directory can also be used to specify the text file structure.

Tip! Text files must be a DOS or MS Windows compatible format.

Steps 2/3 Link Dimensions to Import Fields or Constants

Steps 2 and 3 link your Dataset Dimensions to the fields to be imported. The Step 2 window will display a list of the Dimensions from your Dataset that should be automatically linked to the correct fields in the import table by using the type of Dimension and the naming. If in the import table there is a Dimension called TIME with a 7 digit alphanumeric structure, EUROTRACE will automatically try to split it into PERIOD and YEAR.

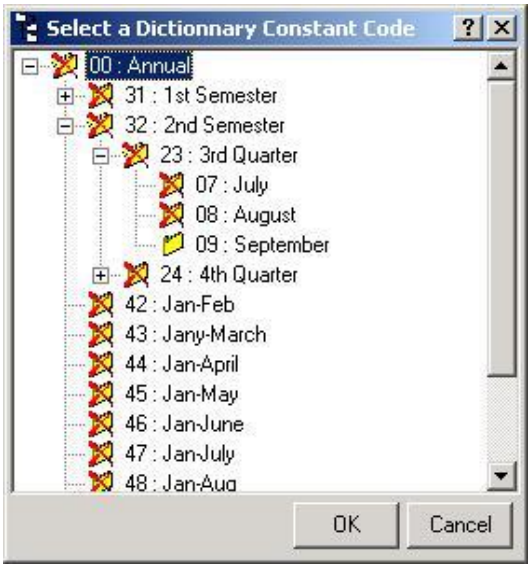


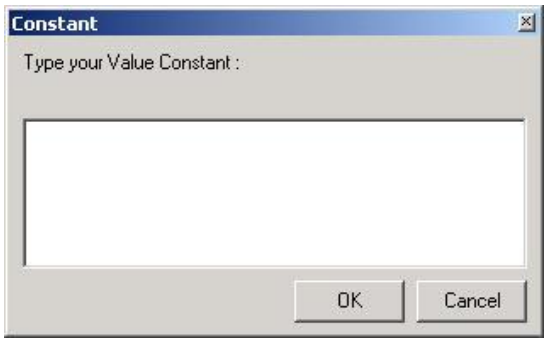
The linked fields are displayed in the **'Linked'** column. If no Association can be made automatically, the Dimension will be marked **'Constant'**.

If you wish to manually change the link, click on the **'Associate'** button.

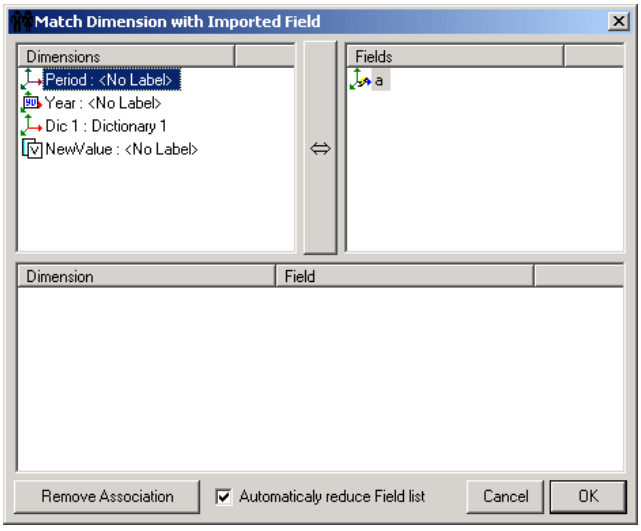
If you are not able to link some Dimensions, it is advisable to use the Complete Import Wizard.
(see Chapter 16)

To assign a fixed Field expression/constant, simply double-click on the dimension and select a code from the dictionary code selection window, or enter the constant in the constant window.





In order to link the remaining dimensions, select the dimension from the list on the left, then click on the fields you wish to link to from the list on the right and click on the bar in the centre to create the link.



If you make a mistake you can remove the link by clicking on the '**Remove Association**' button.

In the lower window you will see a list of the links you have created. Click on the '**OK**' button to return to the wizard.

For all unlinked Values, you may input a constant or leave blank and import as an empty field.

To input a constant value, double click in the column labelled 'Linked', for the item that you wish to add the constant to and then input the constant's value in the window.

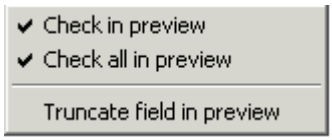
Click on the **'OK'** button to return to the Wizard.

For all unlinked dimensions you must select a constant value to be imported.

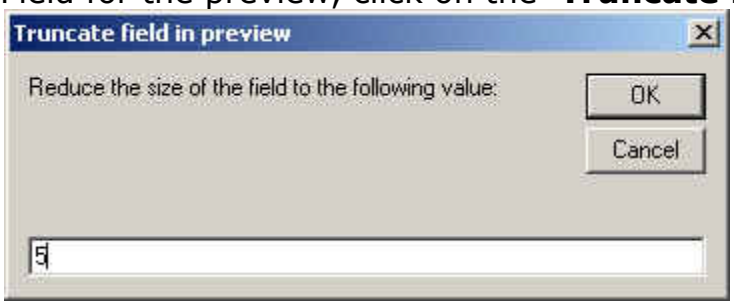
To select a constant, double click on the dimension and then select a code from the list. When selected, a red check mark will appear on the code.

Click on the **'OK'** button to return to the Wizard.

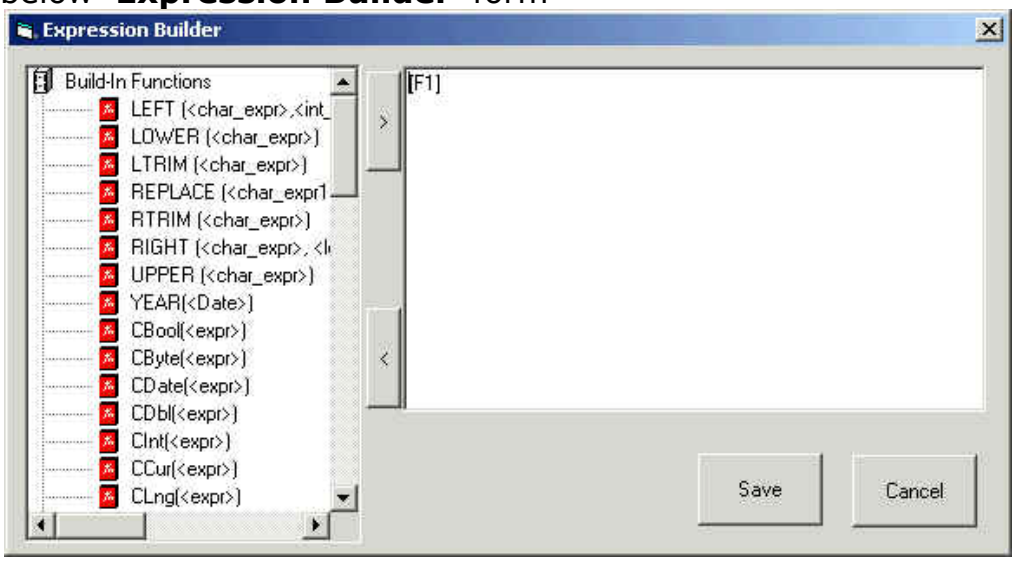
To assign a Field length or to check/ignore the Field in the **'Preview Conversion'** window, simply right-click on the dimension and a menu appears.



You can then check or uncheck a Field or all Fields. If you uncheck a Field, it will not appear in the **'Preview Conversion'** window. To assign a smaller length to a Field for the preview, click on the **'Truncate field in preview'** menu.

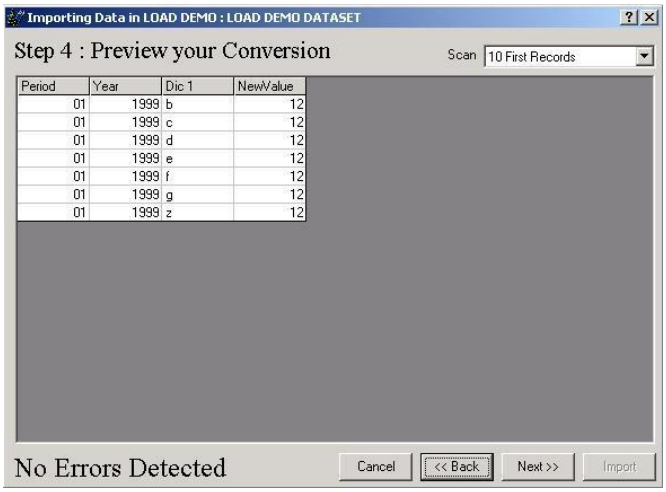


Enter a smaller length to the Field. This will increase the speed of the preview calculation. Click on the **'OK'** button to return to the Wizard.
Once you've linked at least one dimension, one click on a dimension will open the below **'Expression Builder'** form



This form allow you to use existing functions and expressions as well as saving your own customs functions. It also shows the syntax to use for each function.
One click on **'Save'** will save the content of right frame in the Expression/Constant column of the current dimension.
If, during the operation on the form you have saved an expression to your custom functions' list (clicking on <), clicking on 'Save' will also save the expression in the appropriate file for reuse.
After you have finished linking dimensions, click on the **'Next'** button to go to Step 4.

Step 4 Preview your Conversion



This screen will display a preview of the importation you have created, and will check if the structure type and size are correct.

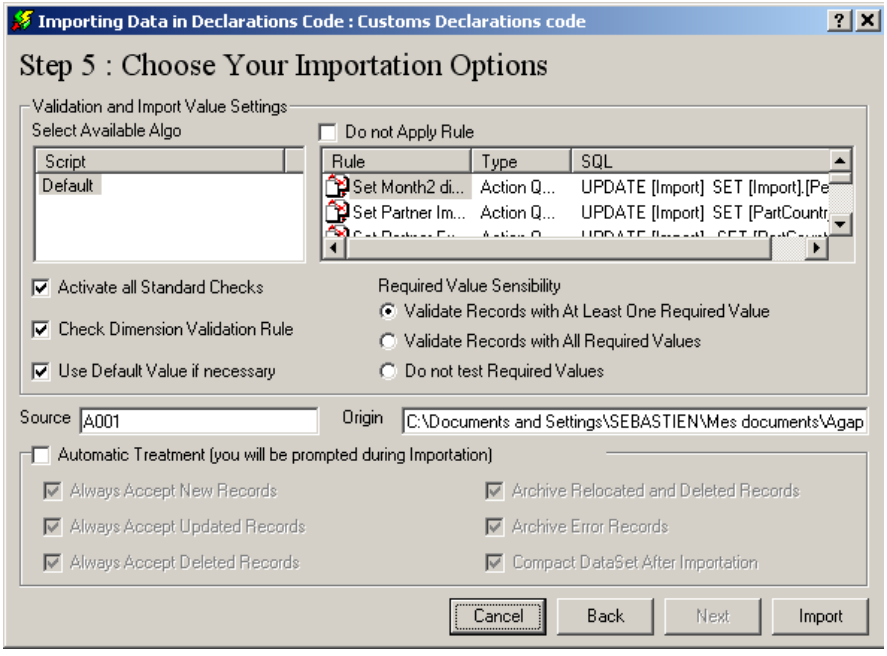
By default the first 10 records are displayed, if you wish to see more than 10 records you can select a **'New number'** from the drop down list at the top right hand of the window. Click on the **'Next'** button to continue.

If errors occur use the **'Prev'** button to go back to the previous step to redefine your import procedure.

Step 5 Choose your Import Options

The last step of the Import Wizard allows you to set options for the import.

If you have established Validation Rules for your Dataset, you will see them listed in the window.
Above the list of Rules you can select to apply the Rules or to disable them.



The following options are dependent on the definition of the dimensions:

Check Dimension Validation Rule If you have defined a validation rule for any of the dimensions in your dataset, you will be able to activate or disable them with this option.

Use Default value if necessary If you defined a default value, you will be able to toggle this option on or off.

'Required value sensibility' is used to determine the testing of records with values that are defined as 'required'. You may choose one of three options.

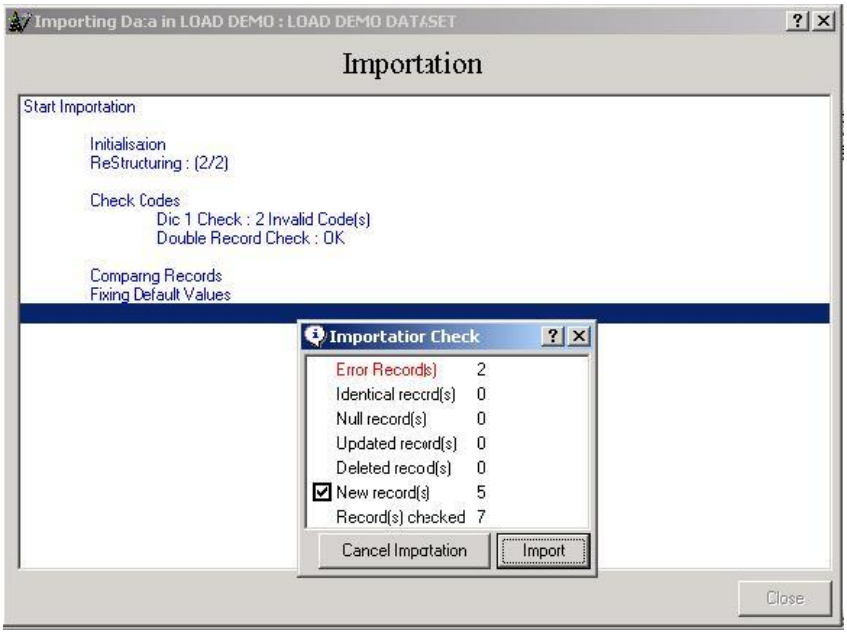
Validate records that contain at least one required value
Only validate records where all values are required values.
Do not test for required values.

'**Automatic Treatment (you will be prompted during Importation)'** At the bottom of the screen, you have options that you will be prompted for before any changes are made to the database, as well as archive options. This is off by default in which case EUROTRACE will automatically perform all the operations listed below. If you want EUROTRACE to prompt you for any or all of these operations, activate this option and then choose from the list below:

Always accept new records - All new records are added to the data file.
Always accept updated records - All old records will be replaced by the new ones.
Always accept deleted records - Deletes all records for empty import fields.
Archive Relocated and Deleted Records - Relocated and deleted records are stored in a separate History file.
Archive Error Records for Next Treatment - All error records are stored in a separate Error file.
Compact Dataset after Importation (MS Access only) - This will compact the data file, and could reduce the size of the data file by removing unnecessary information. This option should be used with care as it could take a long time to compact very large data files.

Starting the importation

When you are ready to start the importation, click on the **'Import'** button.
The Import Wizard will now begin importing data into your Dataset. You will see the screen shown below.
As the data are imported you will see the status of each step and any errors will also be displayed in the list.



Before the importation is complete you will be prompted in accordance with the options chosen in the previous step.

The window will display a summary of the importation process and give you the chance to disable one or more of the actions before clicking on the **'Import'** button to finish the importation process. You may also choose to cancel the import.
The last message will prompt you to compact the data file.
This could reduce the size of the data file by removing unnecessary information.

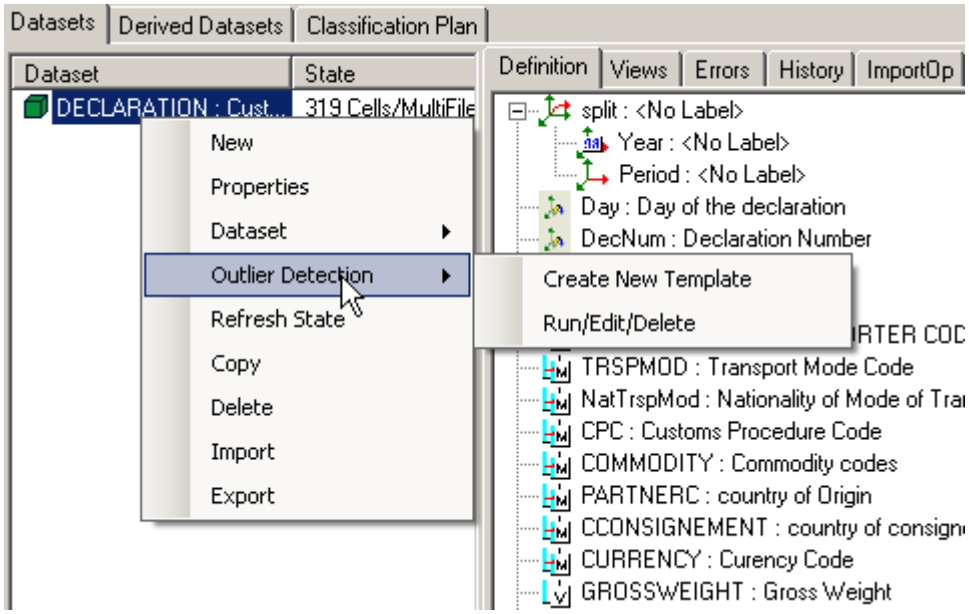
N.B. It can take a long time to compact very large data files.
The Simple Import Wizard will stop with the words "End Importation" in blue text on the screen. Click on the 'Close' button to return to the main screen.
If you have one or more errors in your importation file (as in the above example) you will be prompted automatically with the Error Management form in auto process mode (step are forced until errors are identified). If possible, correct errors and re-import data into your dataset.

24. Outliers detection

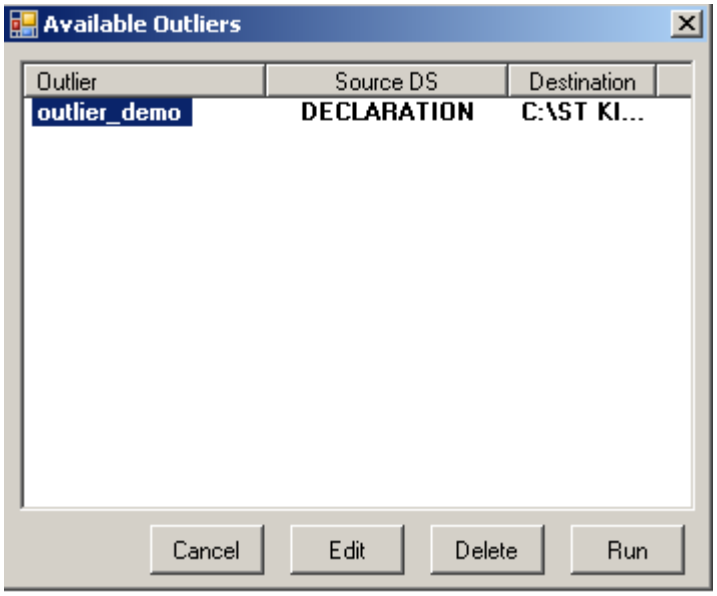
Outliers are values that seem extreme compared to the majority of other values in a given set. Extreme outlier values could be values that are in error. EUROTRACE can detect outliers for user defined periods and key dimensions set.

24.1. Outliers detection preparation

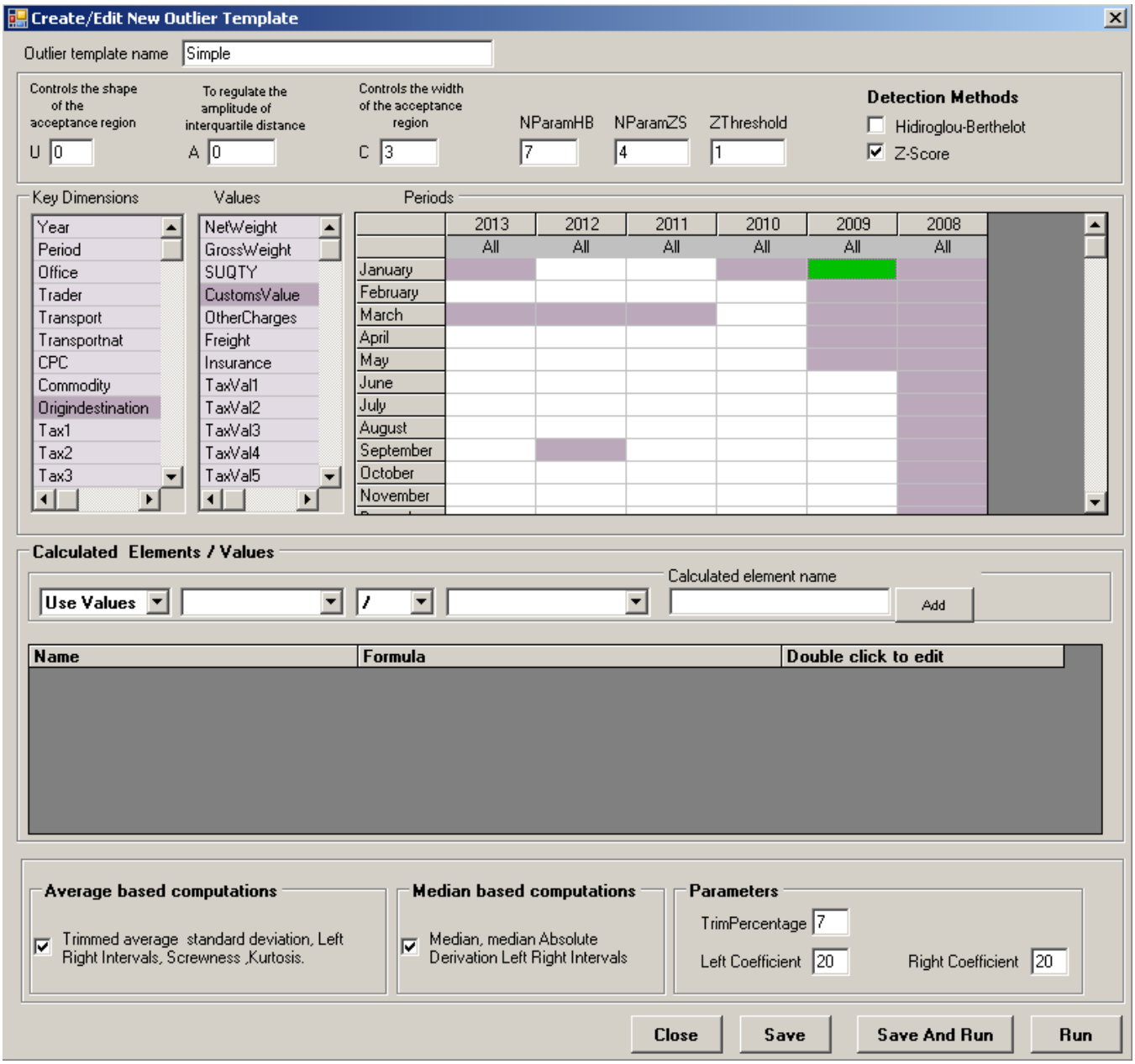
To open the outliers dialog, select the *Dataset – Outliers detection* menu item



You can either create a new outlier detection template template or manage the list of existing template by choosing "Run/Edit/Delete" which will open the following dialog:



When creating a new template, the following window will appear where you'll have to specify the detection method and parameters:



On the top there are the parameters specific for the calculation:

U This parameter controls the shape of the acceptance region. The value must be included in the range (0, 1)

A is a suitable positive number introduced in order to avoid the detection of too many outliers when the values are concentrated around their median; is set by default at 0.05

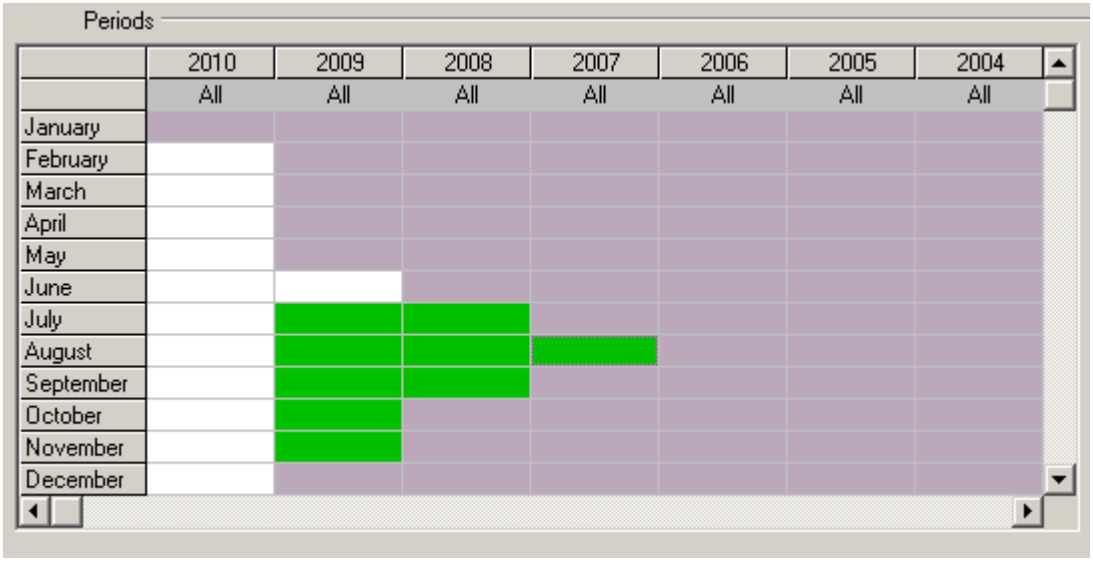
C is a parameter used for calibrating the acceptance region width. The value must be > 1.

NparamHB and NparamZS are the minimum number of records to be taken into account for the outlier detection range of acceptable values (respectively for the Hidiroglou-Berthelot and Z-score methods). A to small number of records selected will not enable a good (reliable) range of acceptable values.

Zthreshold is used as a threshold for the Z-score detection method. All observations with a Z-score greather than Z-threshold will be considered as an outlier.

The Key Dimensions and Values lists contain the dimensions of the dataset. You have to select the keys and values for which detect the outliers.

The right side of the dialog contains the years and periods for which the datasets contains data.You can select one single period clicking on the corresponding cell, or one year clicking on the *All* cell.The periods selected will be displayed in green.

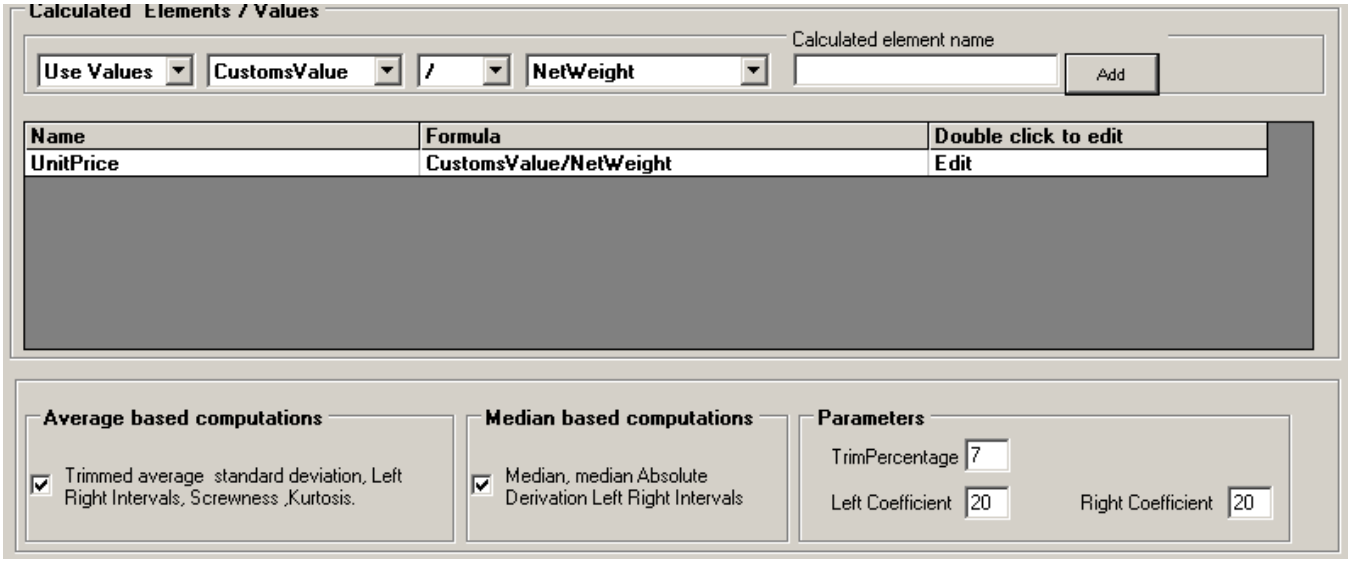


Additional computations

The last part of the dialog lets you define additional computations:

You can define new computed dimensions, for instance you want to compute outliers on the unit price, you can define a new dimension unit_price as value / quantity. Once the formula has been defined, click on **Add** to add it to the outlier detection template. You can update and delete these user defined formulas later with the **Delete** and **Update** buttons.

You can also select the following additional calculations to appear in the outlier report: Trimmed average, Trimmed standard deviation (you have to define the percentage of trimming **TrimPct**), Left & Righ intervals (define **LC** & **RC** as left & right coefficient), Median, MAD (Median Absolute Deviation), Skewness and Kurtosis.

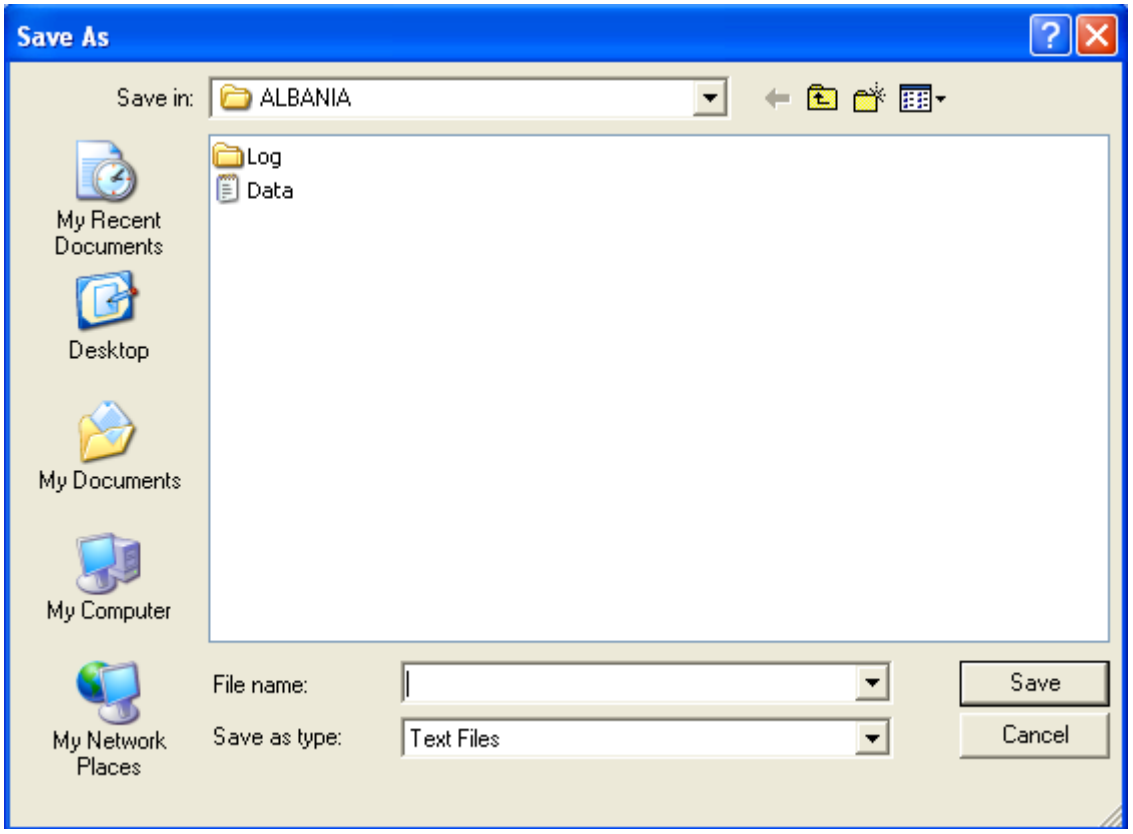


24.2. Outliers detection run

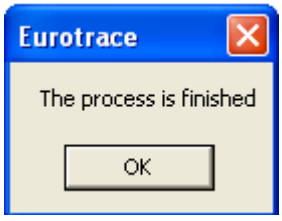
Click on Run to start the process. The computation can take some time, depending on the size of the dataset and the periods selected.

At the end of the process, the results are displayed and can be exported as text file.

To export the results click on the **Browse** button to select path and name for the output file.



Click on the Export button, and when the process is finished you will be prompted with a message:



Two files will be exported, one containing the outlier detection report and another one containing the computations.

Example:

Outlier detection report

ORIGINDESTINATION	CUSTOMSVALUE	UNITPRICE	Detection method
QO	115	8,2143	HB , ZS(1,00779671390491)
QO	2944	54,5185	ZS(1,27995365557438)
QO	3142	34,9111	ZS(1,44007192109467)
QO	3142	39,275	ZS(1,44007192109467)
QO	3481	21,097	ZS(1,71421379994002)
QO	4159	16,0579	ZS(2,26249755763071)

SR,CustomsValue

ORIGINDESTINATION	CUSTOMSVALUE	UNITPRICE	Detection method
SR	70614	5,5254	MZS(8,43181200760663)

Note the detection method(s) indicates which algorithm has marked the result as an outlier:

- HB: Hidiroglou-Berthelot
- ZS: Z-Score
- MZS: Median Z-Score

Computation report

SERIE NAME	MEDIAN	MAD	L_INTERVAL	R_INTERVAL
AE,CustomsValue	2377	1801	-51026,252	55780,252
AG,CustomsValue	228	125	-3478,5	3934,5
AI,CustomsValue	600	480	-13632,96	14832,96
AR,CustomsValue	8967	8898	-254876,496	272810,496
AT,CustomsValue	226	100	-2739,2	3191,2
BB,CustomsValue	1610,5	1264,5	-35884,454	39105,454
BR,CustomsValue	5901,5	5376,5	-153522,478	165325,478

25. Error, History, and Operations

25.1. How to Manage Errors

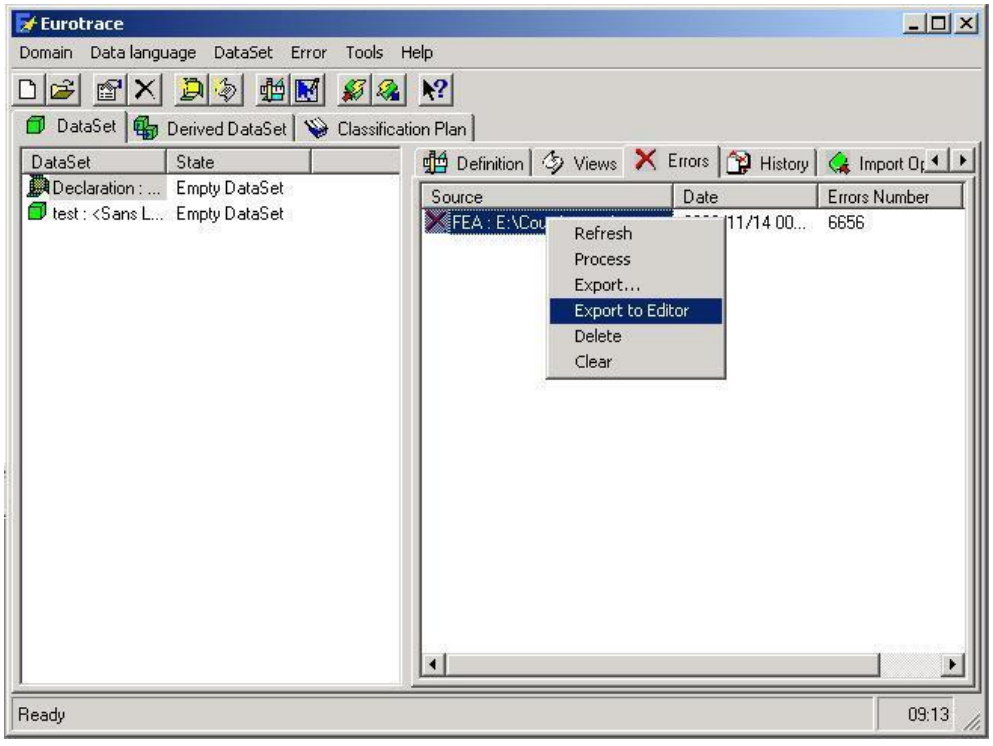
Errors are best corrected by using the Eurotrace Editor program, which has been designed to edit Eurotrace data easily.

The extracts of data are prepared in the Eurotrace DBMS program and then exported to the editor program via the Eurotrace .etc file format.

One type of data that can be exported to the Eurotrace Editor for correction is importation error data. These importation error data are listed in the dataset error tab.

N.B. Don't forget that the error data that are displayed in the error tab should be refreshed. Refreshing the data is discussed below.

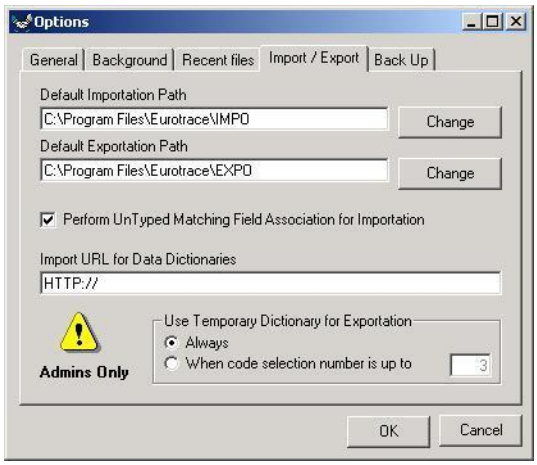
After refreshing the Error tab list you select the error data that you wish to work with and use the shortcut menu 'Export to Editor' option.



The Eurotrace DBMS then creates an editor file for the data you have selected.

You will be prompted to ask whether you want the file to automatically open the Eurotrace editor program if you have it installed.

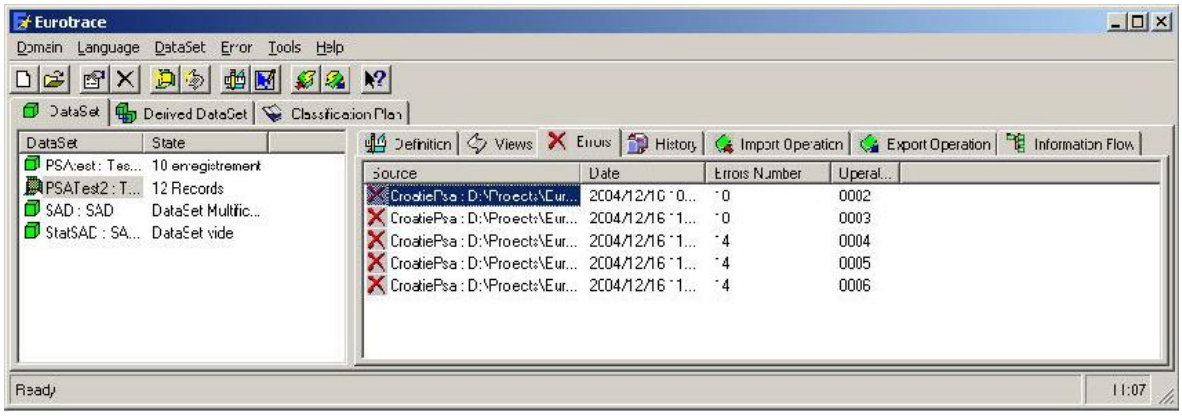
If you say 'yes' the editor will open and you can edit the file. If you say 'no' the file will be written to the location specified in 'Tools' Menu, 'Options' sub menu, 'Import / Export' Tab in the 'default exportation path'.



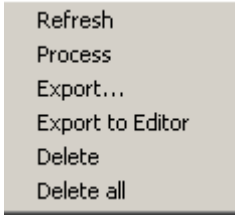
The file can then be opened with the editor and edited later on.
For more information on editing files see 'The Eurotrace Editor User Guide'.

25.2. The Error Tab

The Error tab contains a list of operations in which errors occurred while processing data. It also displays information on the source, date of the operation, and the number of records that were affected. These errors can be corrected directly by using the Eurotrace Editor.



When you right-click in the error window, you will see this menu. There is also an 'Error' drop down menu with the same options.



Refresh will update the list of entries in the window.

Process will open the Error Management Wizard

Export will allow you to export the error table to an .mdb file.

Export to Editor will allow you to export the error

table to an .etc file format suitable for loading into the Eurotrace editor.

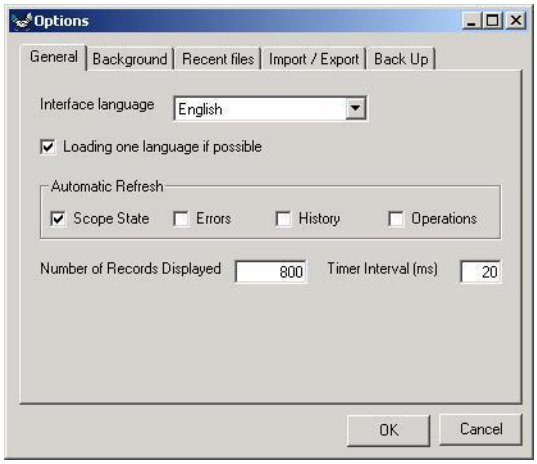
Delete is used to delete the selected entry.

Delete All will delete the **entire list** of entries.

Both 'Delete' and 'Clear' are deleting the selected entry in the list – in the case of 'Clear' that's all the entries in the list - but they are also deleting the underlying records which are in error. It is not just the items in the list that you are deleting but also the records in error as well.

N. B. Refresh is important. Eurotrace can work with either the automatic refresh switched on, or the automatic refresh switched off. The reason why this is switchable is because if the automatic refresh is switched on permanently it will refresh the refreshable lists every time you change screen. If you are accessing a large dataset via a network connection having to wait even just a few seconds for each manoeuvre is a nuisance, especially if you don't need to see updated lists at every manoeuvre. Therefore you have the option to disable the automatic refresh features and just use a manual refresh option as and when necessary. This is actually a much faster way to work especially with large datasets or slow networks as you only manually refresh as and when required.

To enable or disable the automatic refresh functionality use the 'Tools' menu, the 'Options' menu option and the 'General' Tab and use the Automatic refresh selection boxes.

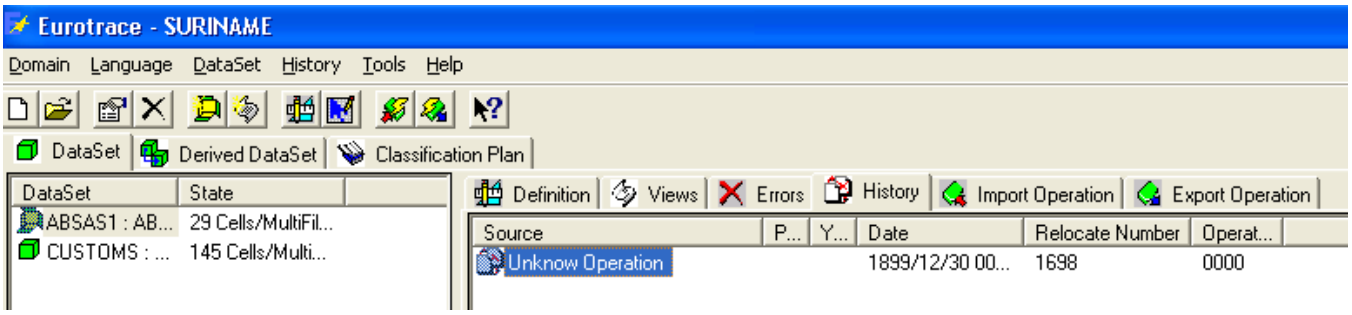


25.3. The History Tab

For each operation that caused records to be replaced, there will be an entry displayed in the **'History Tab'.** The entries show the number of old records stored in the history table.

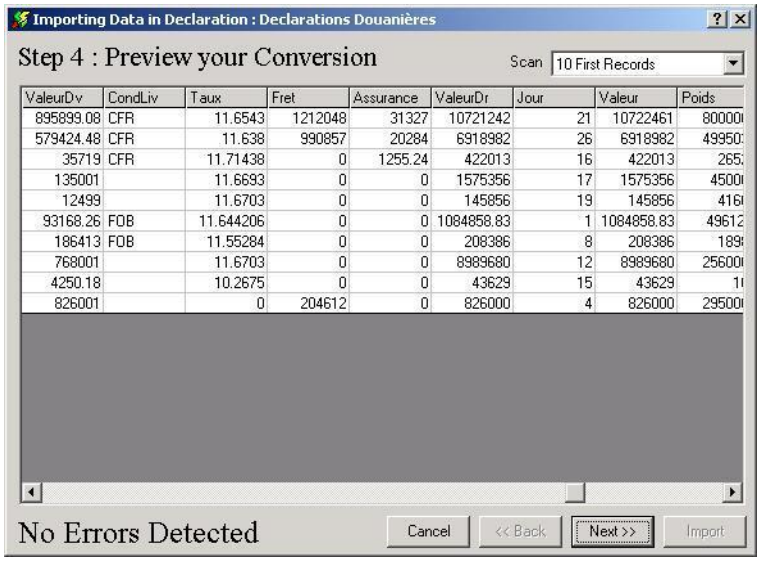
So when you replace a record in the dataset the old records that get replaced are moved to a history file. If you then delete this history file you delete the old replaced records.

If you restore the history file you put the original records back in the database and those records which are then replaced are put into a history file.

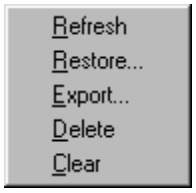


The **'Restore'** option in the right-click menu allows you to re-import the records to the database and therefore replacing the existing ones. These will then appear in the list of the History Tab.

If you click on the 'Restore' menu option you get taken to step 4 of the data Import Wizard.



You should continue as prompted by the Import Wizard making selections appropriate to your requirements.



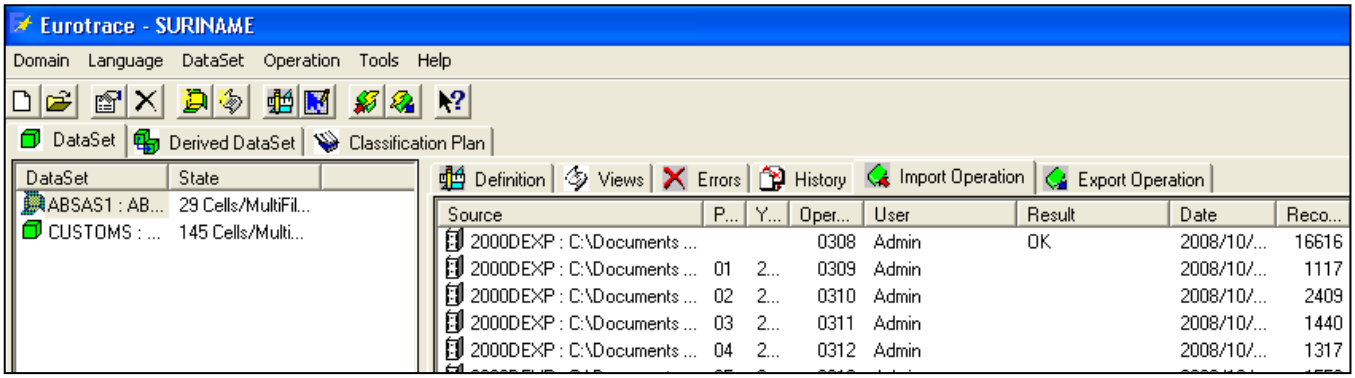
Export exports the data file via the Export Wizard.

Delete erases **the currently selected** history file.

Clear deletes **all of the history files** on the history Tab (and also the associated records in the dataset).

25.4. The Import Operation Tab

The import operation tab contains a list of import operations performed on the dataset with information on the type of operation, the results, the date of the operation and how many records were affected.



The operations right-click menu allows you to refresh the contents of the operations window or to delete entries from the list.

Refresh - refreshes the list.

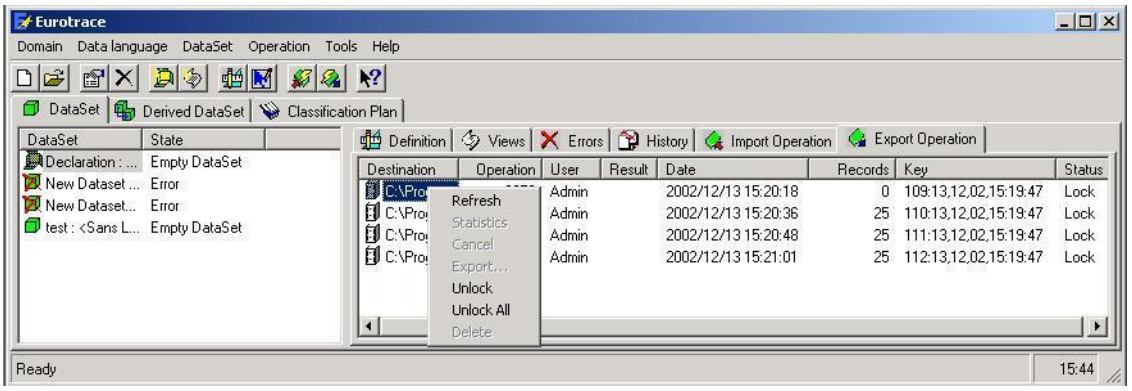
N.B. You can switch this to automatic under the 'Tools' Menu', 'Options' submenu, 'General Tab' , 'Refresh' option.

Cancel – undo the import operation.

Delete - deletes the selected import operation record in the import operation Tab. It doesn't delete data in the dataset.

25.5. The Export Operation Tab

The export operation tab contains a list of export operations performed on the dataset with information on the type of operation, the results, the date of the operation and how many records were affected.



Refresh - refreshes the list. N.B. You can switch this to automatic under the 'Tools' Menu 'Options' submenu 'General Tab' Refresh options.

Unlock – will remove the lock flag for the records for the selected Exportation operation.
When you make an export to the Editor – Eurotrace writes a lock flag against the exported records to lock these from change, by other users until the amended records are re-imported back from the Editor.
When you re-import the records back from the editor the Lock flag is removed enabling the records to be selected by other users.
Unlock is used to manually unlock Export operations records. This might be necessary for example, if the export file was lost or in some way damaged.

Unlock All – unlocks all of the records in the Export Operations Tab.
When you unlock a selected entry in the Operations table the entry disappears from the list. Similarly if you unlock all of the entries by using the 'Unlock all' option all of the entries will disappear from the list.

You are not deleting the data in the dataset, you are only deleting the records of the export operation in the export operation table – The data in the dataset are not deleted.

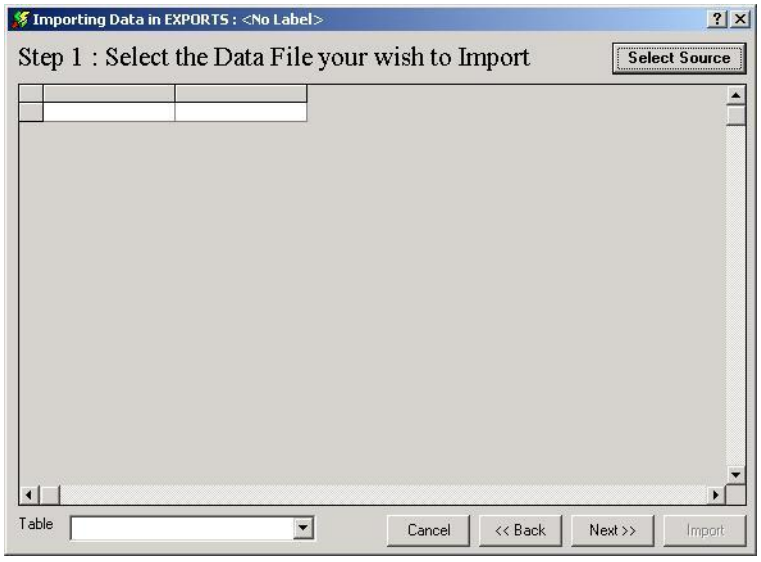
Delete - deletes the selected export operation record in the export operation Tab. It doesn't delete data in the dataset.

Statistics, Cancel and Export – menu options are not available in this release.

26.The Complete Import Wizard

Step 1 Select the data file to Import

From the Import Wizard screen select the Complete Wizard and click on the **'Next'** button to continue.

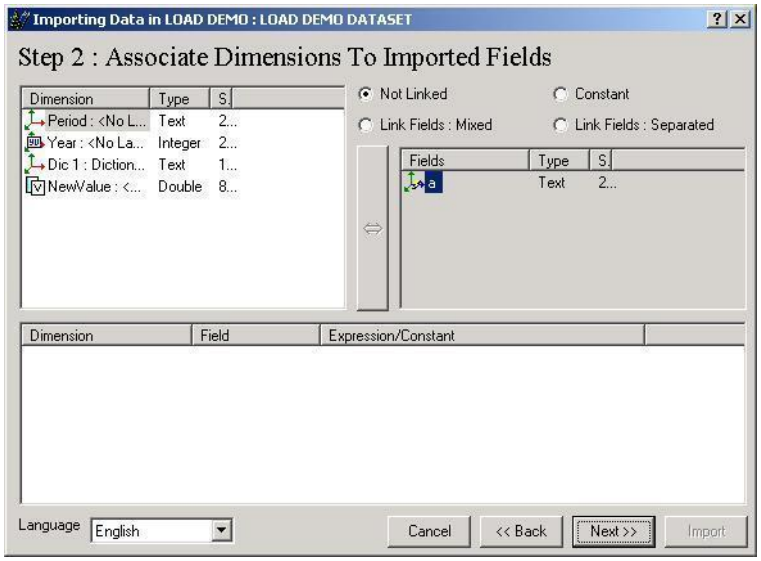


As with the Simple Import Wizard, select a data source and table to import and click on the **'Next'** button to go to Step 2.

Step 2 Associate Dimensions to Import Fields

Step 2 of the Complete Wizard lets you associate dimensions from your EUROTRACE data set to the import file fields.

You select a dimension from the list in the left-hand window, by clicking on it.



You choose the nature of the link to the data file. Do this by selecting one of the four options at the top right hand side of the window. You have the following choices:

Not linked

This option should be used when a dimension or value is not linked to any of the fields in the import file, but is dependent on other separated linked fields. If this is not the case, it should be marked 'constant'.

Constant

This option should be used when a dimension or value is to be filled by a user - defined constant. Setting the value for the constant is discussed on the next page (Editing Expressions and Constants).

Linked Fields: Mixed
This option should be used when a dimension or value of the dataset is linked to one or more fields of the import file. If it is linked to more than one, the data are associated (concatenated by default), and this expression can then be edited in the next step by double-clicking on the dimension.

Linked Fields: Separated

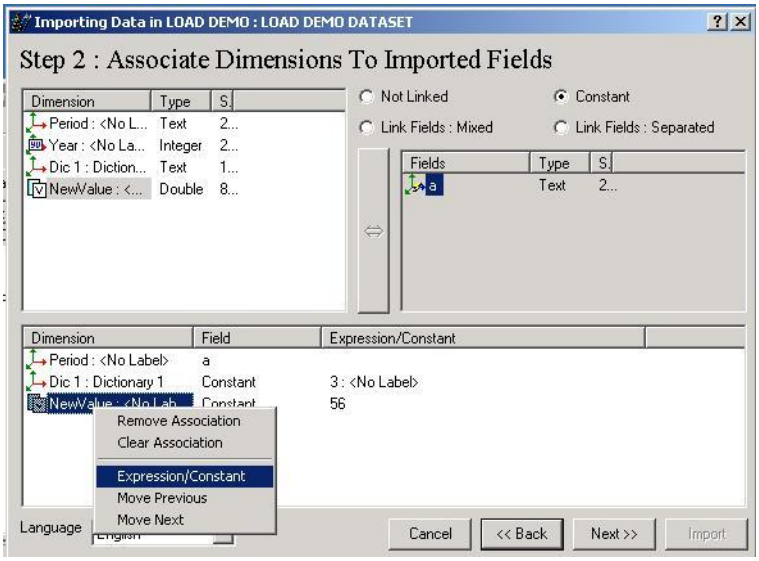
This option should be used when a dimension or value of the dataset is linked to more than one field of the import file, and you have dependent dimensions or values (not linked). This will allow you to generate multiple records by defining the dependencies between the dimensions and values. These dependencies can be established in Step 3.

You then select a dimension or value from the dataset (left side), and the type of association. If you choose a linked field type, you can then select the field(s) to be linked from the import table (right side) and click on the arrow bar in the middle to create the link.

The details of the link definition are displayed in the bottom section of the screen. You can remove an association or clear all associations by using the right-click menu.

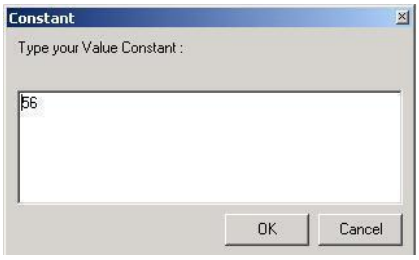
Editing Expressions and Constants

Being able to set the Expressions is a powerful feature as it enables you to perform complex calculations and transformations to the data as you import them.



You can edit expressions and constants by using the right-click menu, or by double-clicking on the value or dimension.

To input an expression for linked fields, type it in the window and then click on the **'OK'** button to confirm.



The expression will be displayed next to the dimension or value to which it will be applied.

Tip! Logical expressions **must** be used.

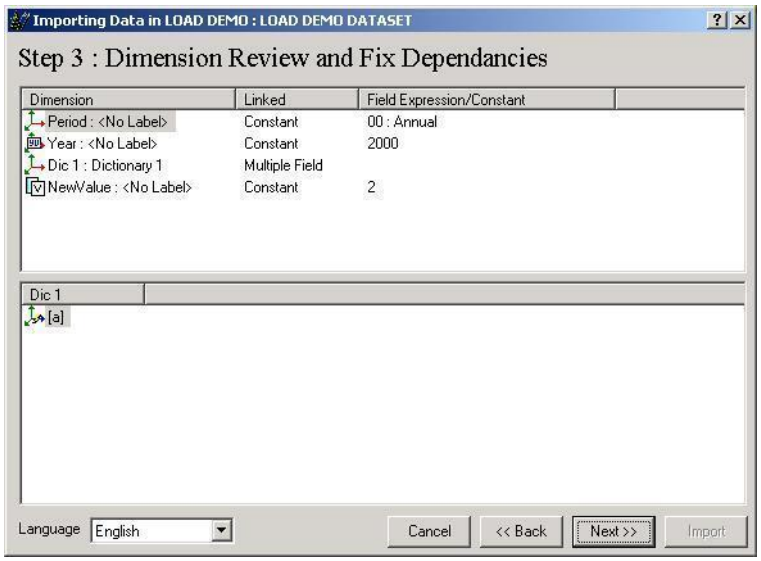
To edit or input a **Constant for Values**, simply type the constant in the window and click on the **'OK'** button to confirm.

To select a **Constant for Dimensions**, select the constant from the dictionary list that is automatically displayed when you double click on the dimension that you have defined as a constant and then click **'OK'** to confirm the setting.

The 'constant' / 'value' will be displayed in the screen next to the dimension.

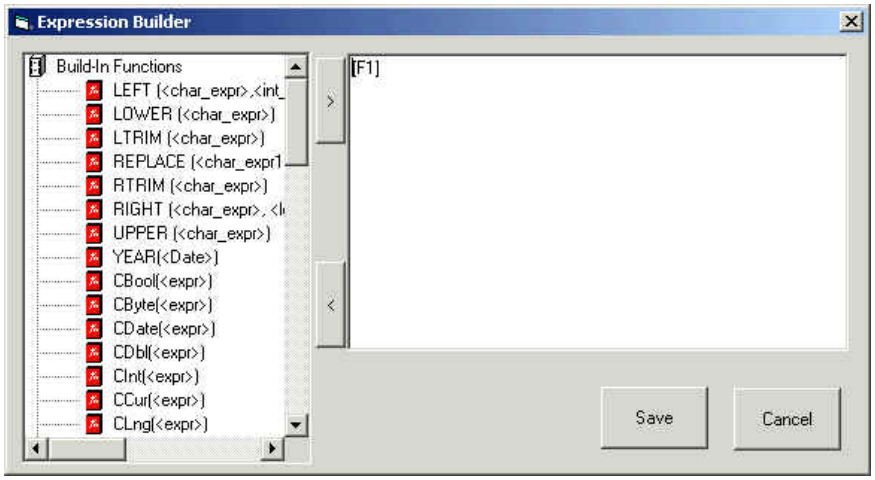
Step 3 Dimension Review and Fix Dependencies

This step will allow you to review all the links and fix the dependencies as well as to edit, or input, any required constants and expressions.



The top of the screen shows the linked fields and their expressions or constants.

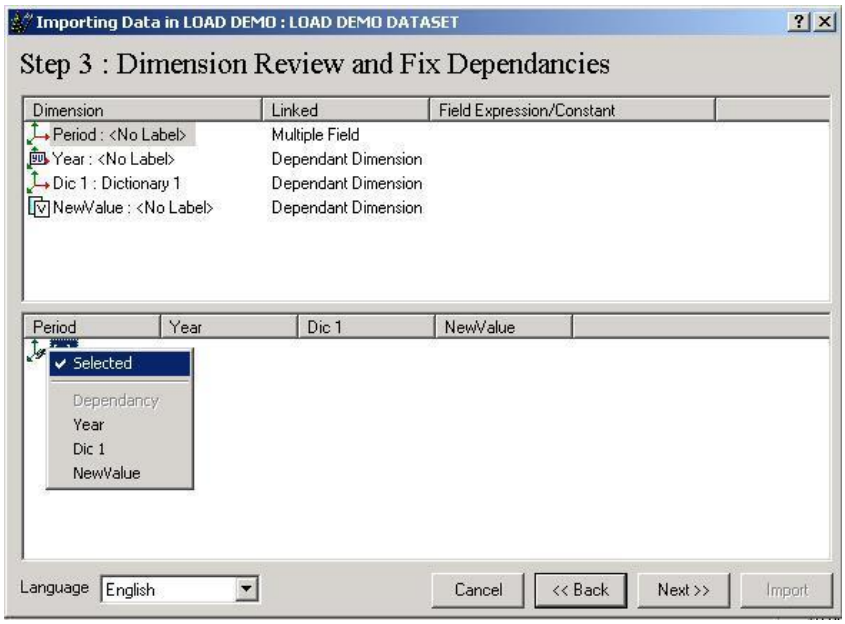
By double-clicking on the fields, you can edit constants and expressions with the **'Expression Builder'** form



This form allows you to use existing functions and expressions as well as saving your own customs functions. It also shows the syntax to use for each function.
One click on **'Save'** will save the content of right frame in the Expression/Constant column of the current dimension.
If, during the operation on the form you have saved an expression to your custom functions' list (clicking on <), clicking on 'Save' will also save the expression in the appropriate file for reuse.
Click on **'save'** or **'cancel'** to return to the import screen

The bottom half of the screen, when appropriate, displays the dimensions or values that were linked **'separated'** (see previous pages).

You can set the dependencies of these dimensions or values by right clicking on them and selecting the dependant dimensions or values from the bottom of the menu.



Enter a constant for that dimension or value (see previous page).

If you want to disable some of the combinations you can right-click and choose **'selected'** from the menu.

To re-enable it, just repeat the process.

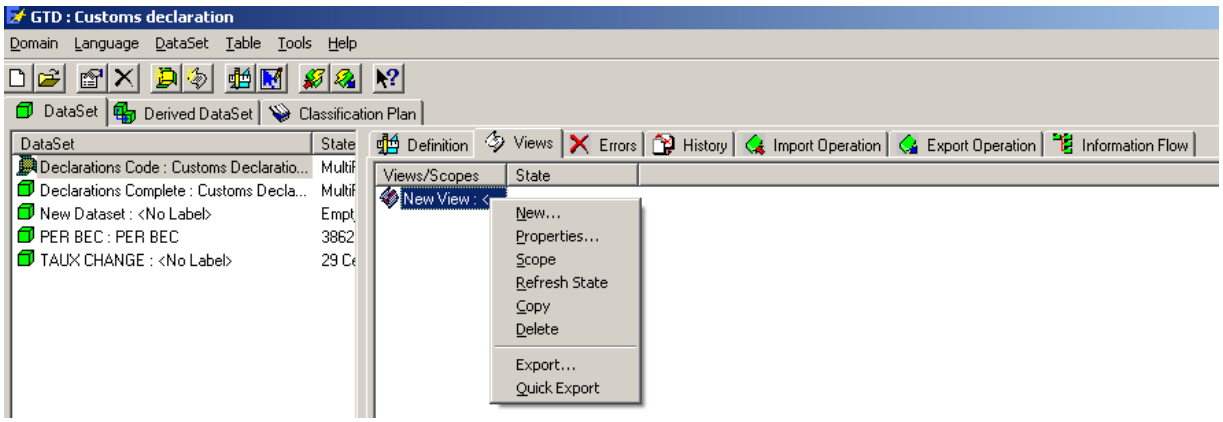
The rest of the Complete Data Wizard behaves in a similar way to the Simple import wizard.

Steps 4 and 5 (see The Simple Import Wizard)

27. Exporting Data

27.1. Defining Views

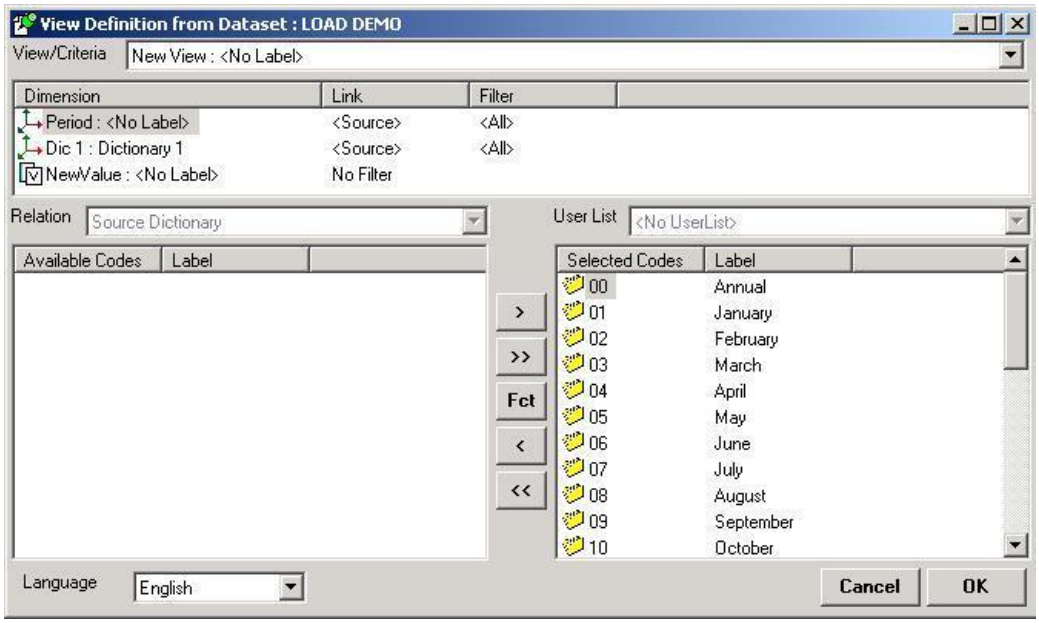
Before you can export data, you must define **'Views'**, of the information in your Dataset that specify the information that you wish to export.



From the main EUROTRACE screen, select the Views tab.

This window displays the views for each dataset and allows you to create, edit, and define the views you wish to export.

When you create a view of a dataset, by default, all of the cells of the dataset are selected to be included in the exportation. To edit the Scope selection, choose **'Scope'** from the right-click menu.



27.2. Creating EUROTRACE Editor forms

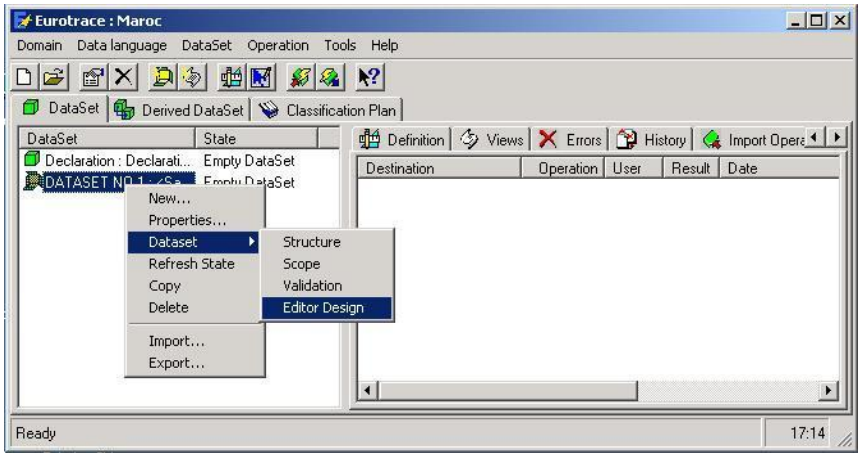
The EUROTRACE Editor works with Forms. These determine how the data, for a particular dataset, are displayed within the Editor.

Because you have to design at least one Form to be allowed to export data from a Dataset and because the Editor works only with EUROTRACE Exportation Files ('.etc' files), you must design at least one form for the Editor to work with in order to view these data.

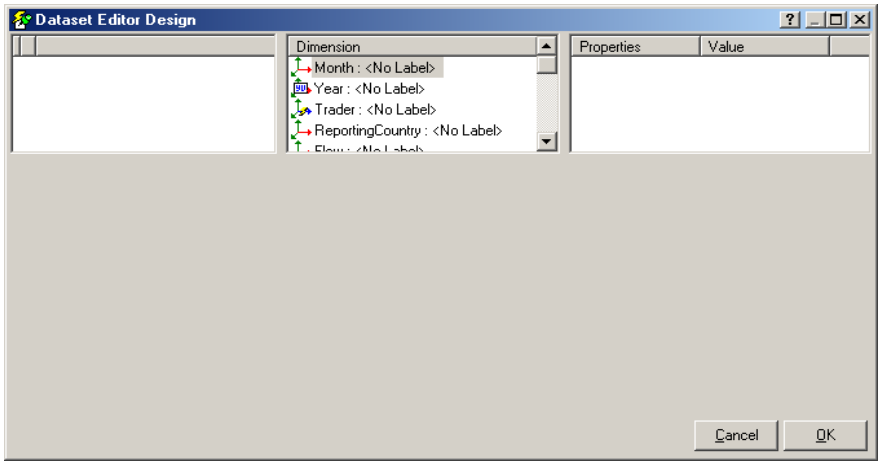
To design a Form, start the EUROTRACE DBMS Application, open the domain and select the dataset you wish to export from. You can then start the dataset form editor.

27.3. Starting the dataset form editor

Right click to gain access to the shortcut menu and select the 'Dataset' Menu option, and then the 'Editor design' sub menu option.



The editor design screen is displayed: if no form has been designed for the dataset, you get this screen:



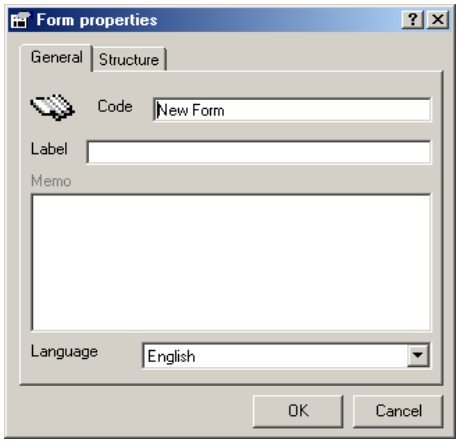
The top half of the screen shows three windows. The left window lists the available forms, the centre window lists the definition of the dataset that the form

belongs to, and the right window lists the control parameters for each control that appears on the form.

The bottom half of the screen shows the form.

27.4. To create a new form

In the left hand top list that displays the eventual existing forms, right click to access the shortcut menu and then access the 'New' menu option to create a new form: the following screen for the Form Properties is displayed.



You have to set at least the Code for the Form (it can be changed later). You can enter a Label that should shortly describe the Form, and a Memo if the administrator of the current domain activated the 'Memo' field.

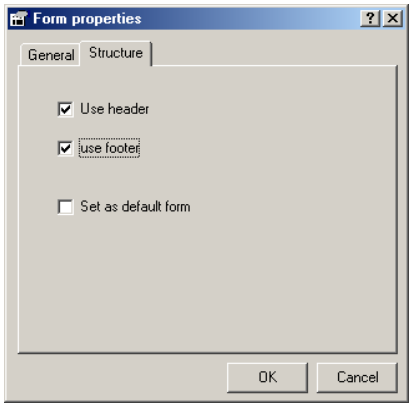
These fields can be set for the different data languages available within the domain.

Add a Header and/or a Footer Section to a Form
By default, a Form is composed of only one part called the 'Details Section'.

'Header Section' and 'Footer Section' are just subdivisions of a Form. This means that you will be allowed to make certain dimensions belong to the Header or the Footer in order to get more 'readability' when navigating through the records.

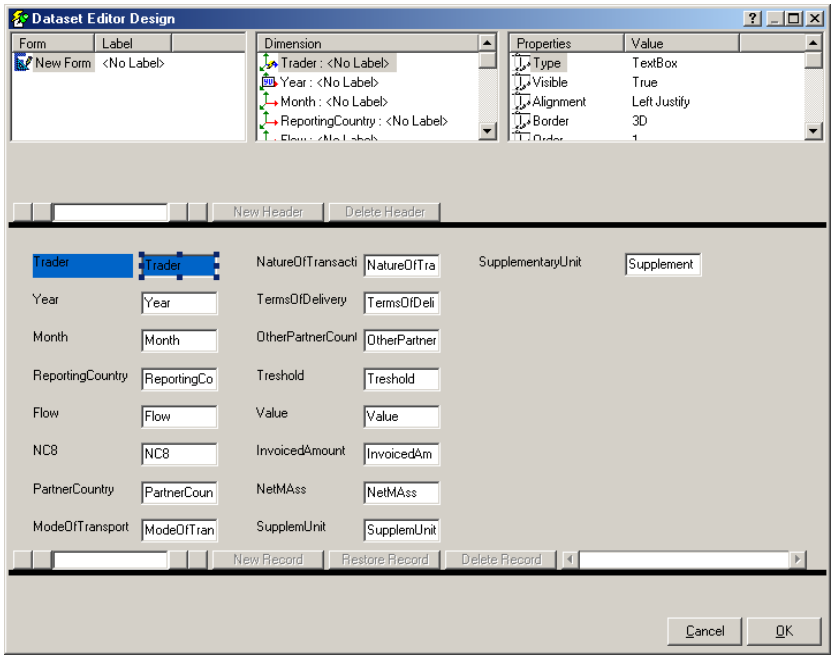
The difference between Headers and Footers is that Headers are indexed and enable you to jump quickly from one to another.
For example, a good idea is to store the dimensions that represent the key into the Header. Doing so, you can view all the records having the same key with a constant Header and you can thus focus on the Details Section.
Example: sometimes, the custom declarations have two 'levels': the main declaration and the items of the declaration. A good idea would be to put the 'declaration-level' items in the Header section and the 'item-level' items in the Details section.

Set these parameters when creating a Form by selecting the 'Structure' tab of the Properties window:



You can also specify the Form as the default one to be displayed when opening the extraction file.

When you have entered the settings of the form, click 'OK' to create it: originally, all the dimensions will be represented by a label which is the name of the dimension and a textbox containing the name of the dimension at this stage. Within the Editor, the textboxes will contain the values for the dimensions.



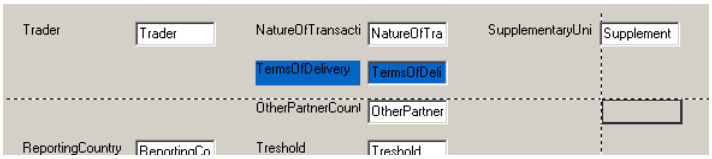
27.5. Set the section of the dimensions

The first 'logical' operation is to make the dimensions belong to the sections (if you chose to have a Header and / or a Footer Section(s).
To do that, right-click on the control: a contextual menu is displayed with the names of the sections. Select its new section: the control is then automatically moved to the upper left corner of that section.

Attention! As soon as you have assigned a control to a section, it will be no longer possible to delete that section by using the Properties windows of the form. If you want to do it, you first have to remove all the controls from that section.

27.6. Moving the controls

Click on the control and keep the left button of the mouse pressed: the control appears in blue and its border is represented by a black rectangle Keep the button pressed and move the cursor: the black rectangle moves with it, showing the new position of the control. When the new position is reached, release the button: the control itself is moved to that new position.



The dashed lines appearing in that process allow you to better align the controls.

27.7. Resizing the controls

It's also possible to redimension the controls and labels: by decreasing their size, you can spare some space and by increasing it, you can ensure that the values will be completely displayed.

Click on the control: it turns to blue, rounded by six small blue squares. Move your cursor to one of them (according to the direction for resizing). When the double arrow appears, click and keep the button pressed: the black rectangle appears and resizes automatically when you move the cursor. Then, release the button: the control itself is resized to the new dimensions.

27.8. Changing the appearance of items on a form

The aesthetics of the controls can be altered by right clicking in the corresponding control that appears in the top right hand window on the screen.

For example, you can change the appearance of a control box by selecting the control box by clicking on it in the form part of the screen and then by right clicking on an appearance related control parameter for the selected control box item in the scroll down list in the top right window of the screen.

Because these values are linked to the object selected on the form, changing the values in the list will change the appearance of the object on the screen.

27.9. Changing the type of the controls

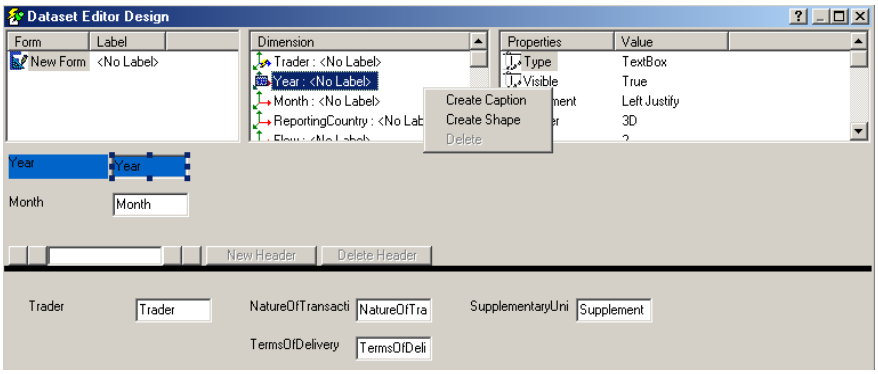
Sometimes it's a good idea to change the type of the control to make it reflect the nature of the dimension it represents.
For example, a dimension based on a quite small dictionary can be represented by a dropdown list or a classical listbox.

An extra text zone can be added by selecting the type called 'TextBox with Label': this extra label will contain the label of the codes.

The new settings are automatically applied to the controls.

27.10. Adding captions and shapes

Captions and shapes are frames you can add to the form. A caption can be displayed with a free label. A shape is only a frame. So, a caption without label is the same as a shape!
You can add captions and shapes by right clicking in the central top window and using ‘Add Captions’ or Add Shapes’ from the shortcut menu. This can be useful to group some 'topic-related' fields.
For example you could make a caption box with the text ‘Time’. You could then drag and place the year and period displays inside the caption box so that the caption box neatly groups the controls that output the form’s Time data.



To delete a shape or a caption, select it at the bottom of the list of dimensions, right-click on it and select 'Delete' (only captions and shapes can be deleted)

27.11. To select a previously created form

If one or more forms have already been designed for the dataset, the list of existing forms will be displayed in the top left hand window in the screen. To select a form for editing, click on the form in the list.

27.12. Copy a form

Select the form that you wish to copy in the list on the left hand top of the form, and then right click to access the 'Copy' shortcut menu option. Click on 'Copy' to copy the form. By default, the copy will be called 'Copy of *CodeOfOriginalForm*' where *CodeOfOriginalForm* is the code of the original Form.

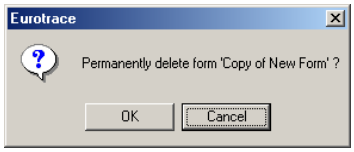
27.13. Save the new Forms

Save the new forms by clicking on 'OK'. If you click on 'Cancel', your modifications will be lost.

Attention! If new forms have been created (not yet saved) and you click on 'Cancel', you will be asked to delete or save these new forms.

27.14. Delete a form

Select the form that you wish to delete in the list on the left hand top of the form, and then right click to access the 'Delete form' shortcut menu option. Click on 'OK' to delete the form.

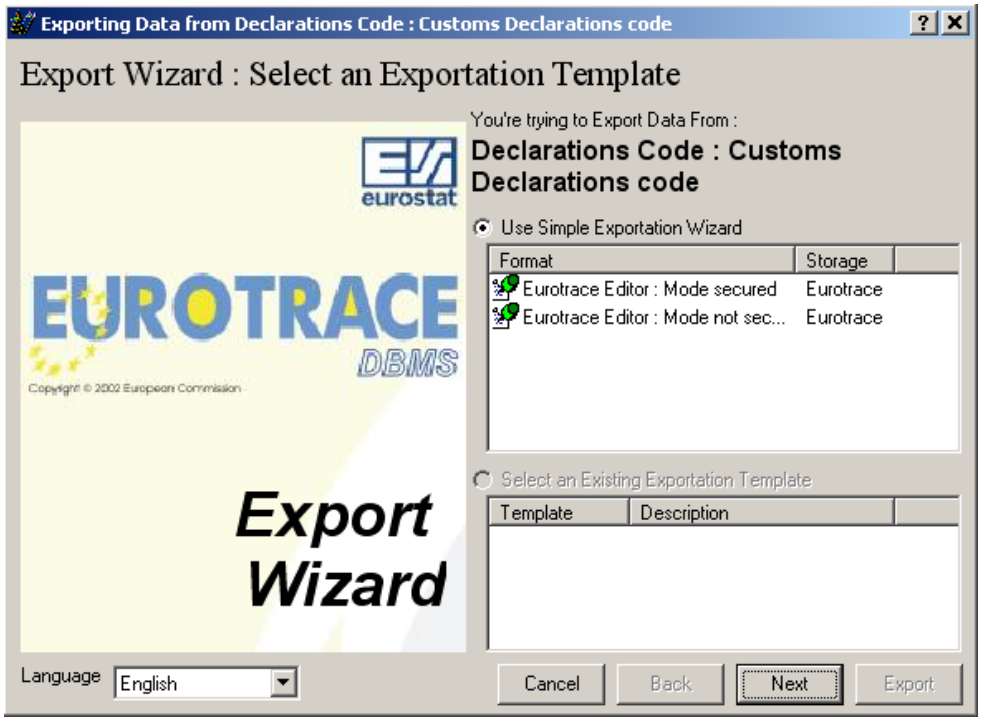


Attention: it's a definitive deletion!

27.15. The Export Wizard

The first screen of the Wizard allows you to select an Export type.

SAM Exportation
Eurotrace Editor

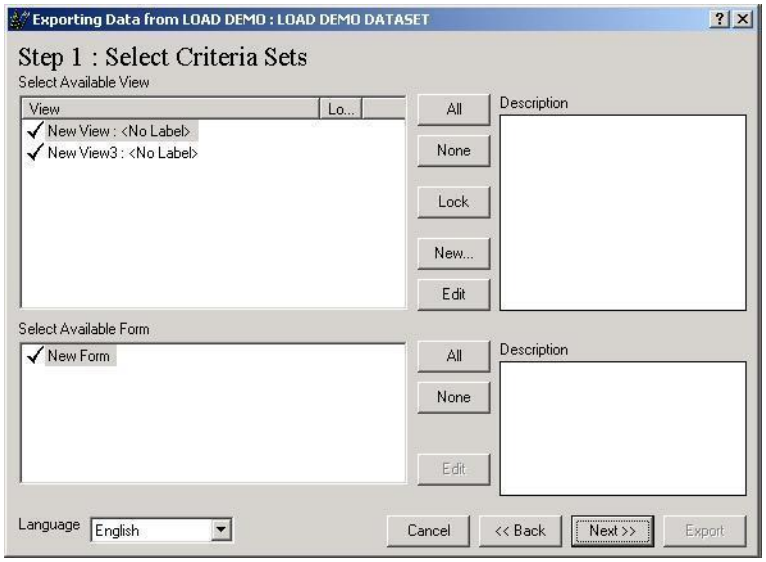


Choose an export format from the list and click on the **'Next'** button to continue.

N.B. If you don't see the Eurotrace Editor option, it is because you need to design a 'Dataset Form' first. To do this use the 'Dataset menu', then the submenu option called 'Dataset', then the submenu option called 'Editor Design'. Design and save a form. Then when you return to the export screen you will see the Eurotrace Editor Exportation type option as shown above.

Step 1 Select Criteria Sets

If you select the Eurotrace Export type you will see the following screen:



The screen displays the list of previously defined Views and Forms (made by using the dataset menu, then dataset submenu then Editor Design menu option).

You must select a view and a form to work with.

The buttons allow you to select all or none of the Views and all or non of the forms. You can select individual views and forms by clicking on them. Note that unselected views and forms remain unticked and that ticked views and forms indicate that they have been selected.

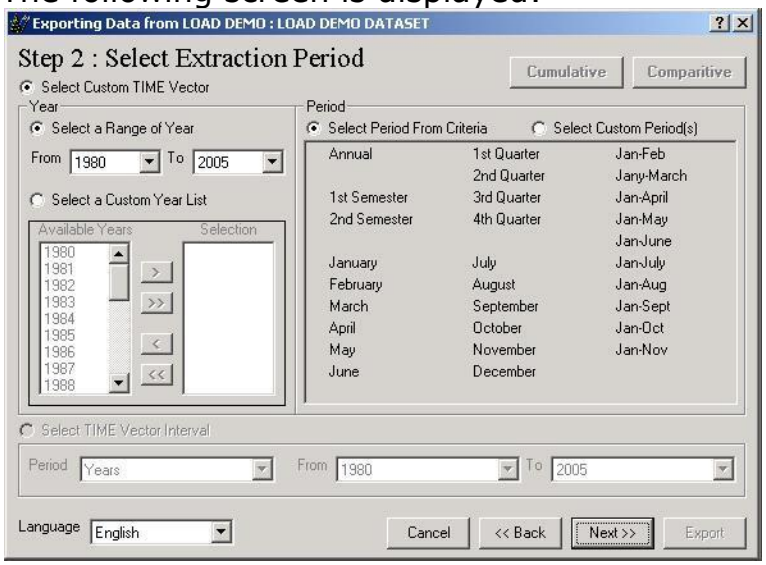
The Lock button locks the currently selected view so that it cannot be changed by editing. This in effect makes the view 'read –only'.

The description fields are for typing in memo text – useful for keeping track of events.

Click the 'Next' button to proceed to the next step when you have selected your view and form.

Step 2 Select an Extraction Period

The following screen is displayed:

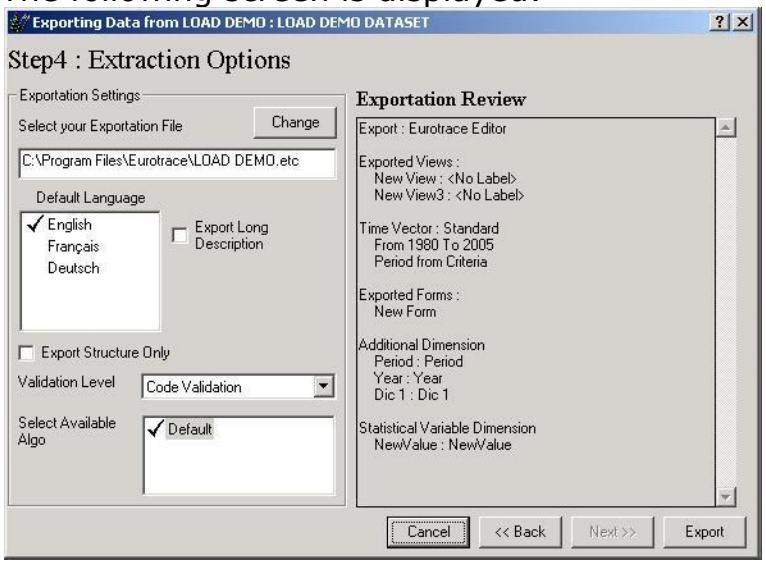


Select either a range of years or a Custom year or years from the list on the left hand side of the screen.

Either select 'Select Period from Criteria' to use the default view scope settings or select 'Select Custom Period(s)' to select the periods from the list of possible periods displayed in the right hand side of the screen.
Click the 'Next' button to proceed to the next step when you have selected your year and period.

Step 3 Extraction Options

The following screen is displayed:



You can set your exportation file path, choose your default language, and choose the validation level.

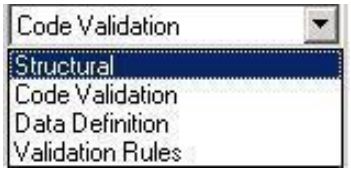
Click on the 'Change' button to set the exportation path.

Click on the language that you require in the list of languages. Selected languages are displayed with a tick.

The 'Export Long Description' option will export the memo field as well as the language.

The 'Export Structure' option exports just the structure only.

The Validation Level drop down list has four options:



Structural
This option validates only the record structure.

Code validation
This option validates the codes AND the record structure.

Data validation
This option validates the data AND the codes AND the record structure.

Validation Rules
This option validates the Validation Rules AND the data AND the codes AND the record structure.

When you have selected your exportation options click on the 'Export' button to begin the exportation.

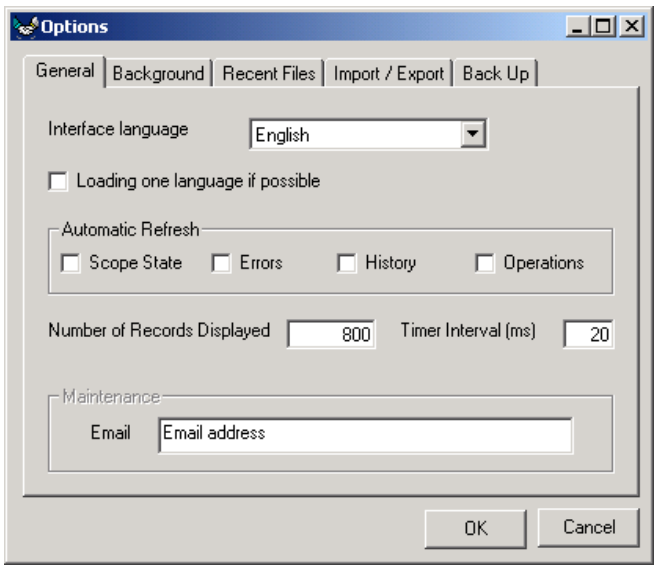
You have the option to automatically open the export under the Eurotrace Editor programme (you need this installed).

Click on the 'Close' button after the exportation has finished.

The Exportation process reports on screen during the export process and you can also see a summary of the export in the Exportation Operation Tab on the main screen. Right click and refresh this screen if necessary (you might not have the automatic refresh switched on as a default under the tools menu).

29. EUROTRACE system options

Eurotrace has a number of configurable system wide options. To set these optional parameters, use the 'Tools' menu and then the sub menu option called 'Options'. The following screen will be displayed:



29.1. The General Tab

Change the language of the Interface

To change the interface language – select the language from the drop down list box.

Automatically refresh lists

You may also choose to automatically refresh the entries in the Error, History, Operations and Scope tabs when loading a EUROTRACE domain. N.B. This automatic refresh option is available to switch on and off because having this feature switched on will extend the time it takes Eurotrace to load a domain.

Set the default number of records to be displayed

You can set the number of records that are to be displayed by typing the value in the 'Number of records displayed 'box'.

Set the Timer interval

You can set the Timer Interval in milliseconds by typing the value in the 'Timer interval (ms)'.

Load one Language if possible

You can get the software to load one language if possible by selecting the 'Loading one language if possible' check box'.

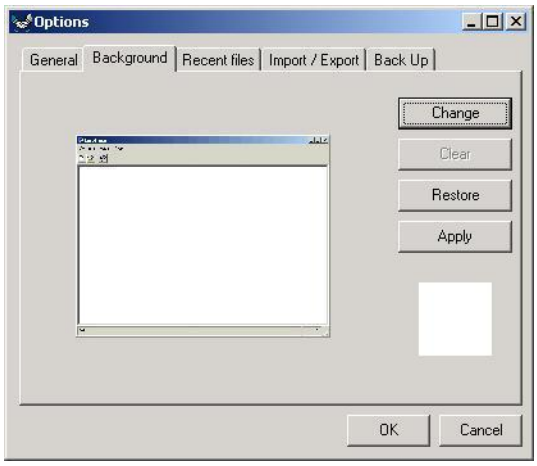
Maintenance frame

It contains an email address to which log files will be sent (Check domain from Tools menu)
N.B.: as the email address is stored in the domain database, it can be different for each domain and will not be available if no domain is opened.

29.2. The Background Tab

Change the background image

The 'Background' Tab on the options window will allow you to change the image that is displayed when you first open EUROTRACE.



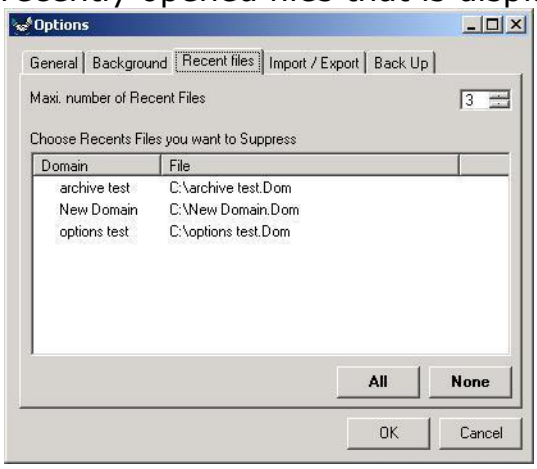
Use the 'Change' button to navigate and select a new image.

The image is a local image and will not be seen by other users who open the Domain.

29.3. The Recent Files Tab (MS ACCESS domains only)

Manage the list of recently opened files

The recent files tab on the options window will allow you to manage the list of recently opened files that is displayed in the file menu.



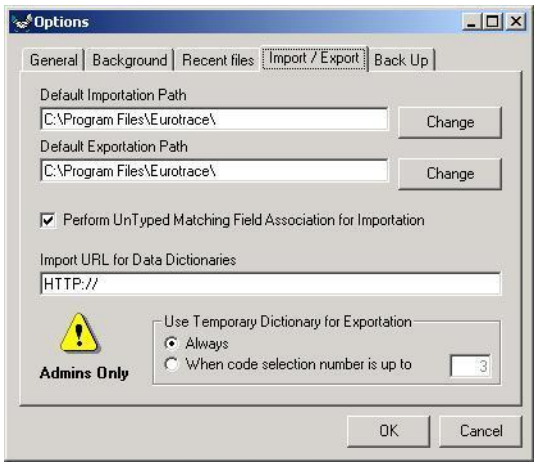
You may change the maximum number of recently opened files to a limit of 8 as well as suppress any or the entire list.

29.4. The Import/Export Tab

Set default paths

You can set the default paths for

Importation
Exportation
Import URL for data dictionaries.



Click on the 'Change' buttons to reset these, or type the URL path.

Perform untyped matching field associations

You can perform untyped matching field associations if you select the 'Perform UnTyped Matching Field Association for Importation' check box. This means that

when data are imported and Eurotrace tries automatically to match the imported data to the design of the dataset it will ignore the type of data when trying to make the match between the definition of the data set and the data that it is trying to import.

This might be useful if for example, you are trying to import a file with a column of numbers defined as Text Type, instead of being defined as Integers or long integer number type.

Ensure that temporary dictionaries are used for exportation

The database administrator can ensure that temporary dictionaries are used for exportation every time an exportation is made or only when the number of dictionary codes is equal to or greater than a selected number between 3 and 500.

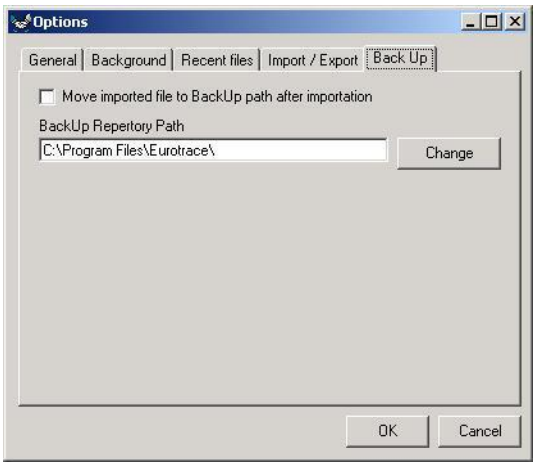
Select the option labeled 'Always' to always use Temporary dictionaries.

Select the option labelled 'When code selection number is up to' and then enter a number in the box to ensure that temporary dictionaries are used when the number of codes is equal to or exceeds the number you define.

29.5. The Back Up tab

Set the Backup repertory path

The back up tab allows you to set up the default locations that are used for the 'Backup Repertory Path'.



Use the 'Change' button to set this path. You can also flag a field to move the imported files to the Back Up path after importation.

30. Management of security by database administrators

30.1. How EUROTRACE manages security

Different users are assigned appropriate **user profiles** by the database administrator.

Each type of user profile has an associated set of **permissions.**

One profile (and its corresponding set of permissions) can be applied to many users.

A user profile can therefore be considered as a template of permissions.

By allocating the different users appropriate profiles (templates) the database administrator is in effect allocating the users appropriate sets of permissions.

These profiles which allocate the permissions can be managed by the database administrator. They can be created, copied, edited and deleted.

The database administrator therefore manages these profiles and establishes which users, get assigned which profiles, to determine their permissions.

There are therefore different types of user profile – with differing degrees of control that the database administrator can create and assign.

Advanced users will probably require more permissions and freedom than visitors or guests.

Therefore the concept of profile types is important. This is especially so because one profile type can be assigned to many users.

2 types of permissions are assigned for each type of profile

Each type of profile manages two types of permissions.

The permissions are split into two types: Object permissions and Data permissions.

Object permissions refer to permissions relating to the **structure** and definition of an object **but not the data** within the object. For example the structure of a dataset.

Data permissions refer to permissions relating to the **data** within an object **but not the structure** containing the object. For example the data within a dataset.

The database administrator can set the permissions for each type of permission within each profile, for each object, to allow specific activities, or to disallow specific activities.

For example the database administrator can grant someone the permission to delete data from a dataset (or dictionary, etc.), but not change its structural definition.

Summary
Profiles therefore allocate two types of permission for each type of object. Object definitions and data definitions.

By defining a profile and setting the object and data definitions for the profile, it is possible for the database administrator to allocate permissions to each user as appropriate.

Some users might require individual profiles with individual permissions relating to just one person in a specific role – whereas other users might be collectively allocated a profile that is relevant to their group as a whole and thus share the same profile's permissions.

Because managing these permissions for each user requires, first of all the definition of the permissions within the profile, and then the allocation of the profile to the user, we have decided to call the process 'profile management'.

The user cannot change the definition of the profiles or allocation of them – only the database administrator is allowed to change them.

Security is therefore allocated by the database administrator who

Defines the object and data permissions within a profile
Allocate a profile to the user(s) as appropriate.

Tip ! Granting all users access to change all areas of the system could be dangerous !

It's strongly recommended that the team should agree together what permissions they need in advance, so that the DBA can grant the required permissions and protect the parts of the domain that need to be protected from accidental update or deletion.

How you choose to protect your domain is up to you – but we would suggest that you do specifically consider which parts are confidential or 'mission critical' before setting up the permissions.

Remember that the security is allowing you to do three things:

It is allowing you to

protect the **structural definition** of the domains objects
protect the **data** within the domain
protect access to view and import or export **confidential data**

Before setting up a 'real' working domain it is important to consider how much security you need to achieve each of these objectives and how these security measures should be applied to the users.

30.1.1.1.1.

30.2. Which objects can be protected with security?

The objects upon which **both** object permissions, **and** data permissions can be granted are:

Domains
Classifications
Dictionaries
User lists
Relations
Datasets
Views
Rules
Derived datasets
System

The **object** permissions that the database administrator can grant for each type of object are:

View - all allocated users can **view** all the instances of **objects** of that type.

Create - all allocated users can **create** new instances of **objects** of that type.

Delete - all allocated users can **delete** all the instances of **objects** of that type.

Edit - all allocated users can **edit** all the instances of **objects** of that type.

The **data** permissions that the database administrator can grant for each type of object are:

View - all allocated users can **view** any **data** within objects of that type.

Create - all allocated users can **create** new instances of **data** within any objects of that type.

Delete - all allocated users can **delete** any of the instances of **data** in all objects of that type.

Edit - all allocated users can **edit** any of the **data** in objects of that type.

31. Tools Menu

The Tools menu contains several options enabling the users management (Under MS ACCESS only), the data access (direct access to the database tables, under MS ACCESS only) and the running of add-ins programs.

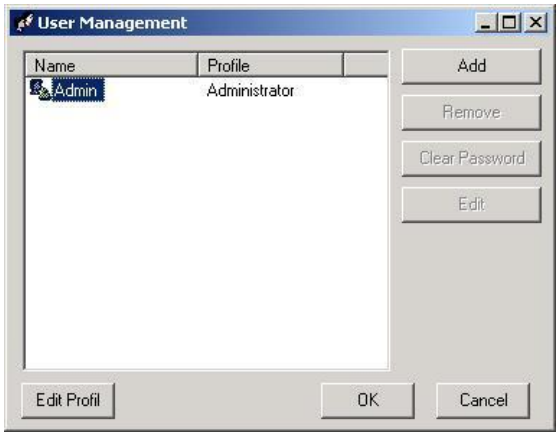
31.1. Creating, deleting, copying and renaming profiles (MS ACCESS only)

Open a previously created domain.

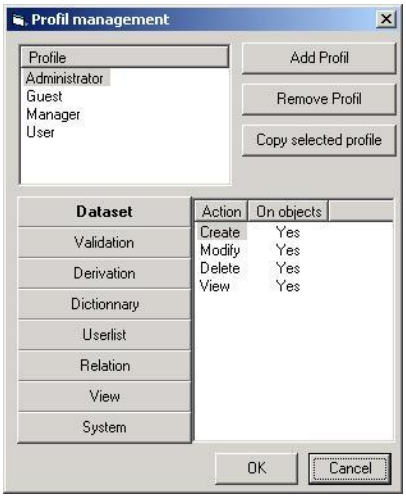
N. B. If you have just created a new domain - you have to first log out and re-log back into the domain. To do this use the 'Domain' Menu and log on as a different user' menu option and then log back in as 'Admin' using the Admin password you gave when creating the domain. Then you will be able to create delete copy and rename profiles. The system won't let you do this the first time you create a domain until you have logged out of the domain and then re-opened the domain.

Select the 'Users Definition' Menu option from the Tools Menu.

You will see the following screen:



Click on the button marked 'Edit Profile' to display the following profile management screen.



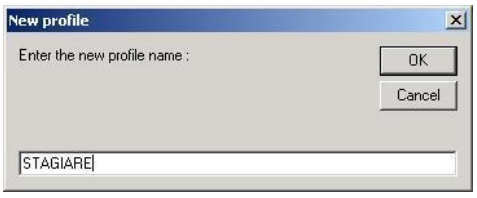
N.B. Please note that each time a new domain is created the system will automatically create 4 levels of profile each with its own set of default permissions. These 4 levels are:

Administrator:
Manager:
User:
Guest:

The Profile list displays a list of current profiles for the Domain. Click on a profile to select one. The right hand side of the screen shows the permissions granted for the selected profile. Three buttons above the permissions allow the database administrator to add a new profile, or remove or copy an existing profile.

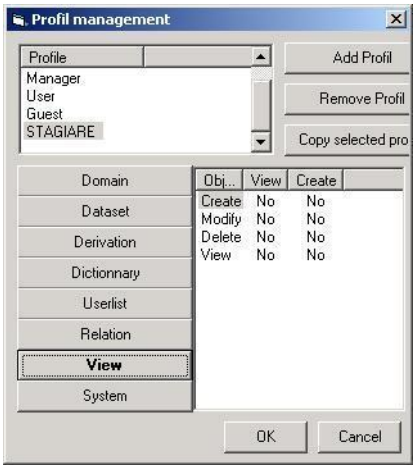
Adding a new profile

Click on the button marked 'Add Profile'



Enter the new Profile name i.e. 'Visitor' and the new profile is added to the list of profiles in the left hand window.

To set the permissions for the profile you must select the profile in the profile list by clicking on it.



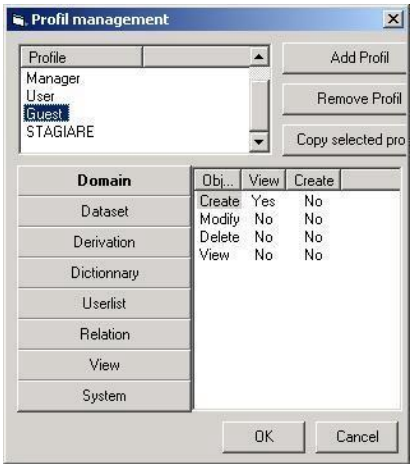
The right hand window will show that by default when you add a new domain all permissions are automatically refused (set to 'No'). These can be changed by clicking on the permissions as required to toggle them from a 'No' state to a 'Yes' state in order to grant the selected permission.

To change a "No' to a 'Yes' just click on the word 'No' and it will toggle to become a 'Yes'.

To change a "Yes' back to a 'No' just click on the word ''Yes' and it will toggle to revert back to a 'No'.

Remove a new profile

Select the Profile to be removed, by clicking on it in the left hand window.



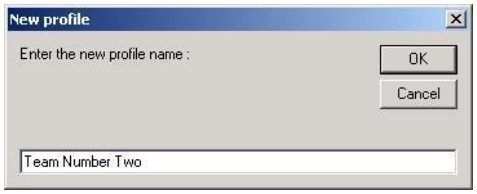
Click on the button marked 'Remove Profile'.

The profile is deleted. N.B You can't delete the four default profiles Admin, Manager, User, or Guest. These are protected.

Copy a selected new profile

Select the Profile to be copied, by clicking on it in the left hand window.

Click on the button marked 'copy Selected Profile'.



Enter the new Profile name i.e. 'Users level 2' and the new profile is added to the list of profiles in the left hand window.

Whenever you create a new Profile, remove a profile or copy and rename and existing profile, the domain's list of profiles is automatically updated. You can then assign the template to the users and grant them the permissions that they need.

When you have finished creating, copying and deleting your domain's profiles, click on the 'OK' button to return to the User Management screen.

31.2. Managing users – profiles and passwords.

The User Management screen is where the database administrator manages the users of the domain.

Open a previously defined domain.

Select the ‘Users Definition’ menu option from the ‘Tools’ menu.
The Users Management screen is displayed.

The Window lists all of the current users for the domain.

Adding a new user

To add a new user to the Domain, the database administrator should click on the ’Add’ button. The following small window appears with a drop down list box.

In the top box enter the name of the New User.

In the bottom drop down list box select the profile that you wish to assign to the user.

N.B. Remember that the profile that you assign will determine the permissions that the user has to change the structure of objects and also the data within the objects. It is therefore essential that you grant the appropriate rights by assigning an appropriate profile.

Click on the ‘OK’ button.

Removing a user

To remove a user, select them in the window list, then click on the button marked 'Remove'. The user will then be removed from the Domain and they will not be able to access the domain unless they are re-instated by the database administrator.

Changing a user's profile

To change the profile of a user by re- assigning their profile – select the user in the list and then click on the button marked 'Edit'.

The profile assignment window will display again and the database administrator can assign the existing user a different profile by selecting one from the drop down list.

Managing user's passwords

The database administrator has the power to clear an existing users password.

This means that if a user has forgotten their password the database administrator can clear their old password and let them log in to the domain and provide a new password.

To clear a user's password

Selects the 'User Definition' menu option from the 'Tools' menu.

Select the User from the list.

Click on the button labelled 'Clear Password'.

The password for that user is cleared and the next time the user logs into the domain they will be prompted to provide a new password.

N.B. If the 'Clear Password' button is Grey and unavailable it is because the user has not yet logged into the domain and provided a password, or you do not have database administrator status to use the function

32.Backing up and restoring domains.

Eurotrace has fast and efficient domain backup and restore functionality.

You can backup your entire domain and all its associated files in a directory path of your choosing. This may be a local path, or a network path to a location that is not on your PC.

Similarly you can navigate to a previously backed up domain and choose to restore it either locally on your PC, or to a different network location.

It is therefore possible to select a backed up domain on a colleague's PC and to restore the domain on a different colleague's PC. However most users would probably want to work with local Backups and locally re-installed domains.

Eurotrace manages the backup and restore by making use of 'Zipped' files. These zipped files contain all of the domain's files, in a single compressed file format. This considerably improves the performance of the Eurotrace backup and restore system as well as reducing network traffic when working with network locations.

All users normally have the rights and permissions granted from the database administrator to make a backup of the domain.

Restoring a previously backed up domain requires caution – because the user has the option to overwrite the existing domain (See restoring a Domain below). For this reason database administrators should think carefully about granting users the rights and permissions to restore and overwrite current data.

32.1. Creating a backup of a domain

Open the domain.

From the 'Tools' menu select the menu item 'Domain Backup/Restore'.

The following screen is displayed.

With the Backup Tab selected, click on the button marked 'Browse' and navigate to the location where you want to write your backup zip file of the Domain.

Type in the name that you wish to call the backup zip file and click on the button marked 'open'. Alternatively, just type in a DOS format path in the Archive File text entry box.

Remember that network locations are prefixed by two backwards slashes like this \\ and then the path. The Domain backup and restore screen is displayed with the path to the backup file that is to be created in the Archive file box.

Check that this is correct and then click on the button labelled 'Backup' in the bottom left hand corner of the screen.

If the file already exists, you will be asked whether you wish to overwrite the existing backup file.

If you want to overwrite the existing file click on the button labelled 'OK' if you wish to cancel the overwrite and give the backup file a different name – click on the cancel button and then rename the backup file and click on the backup button once more.

When the backup has been completed you will receive a message screen to confirm what has been backed up and where it was backed up.

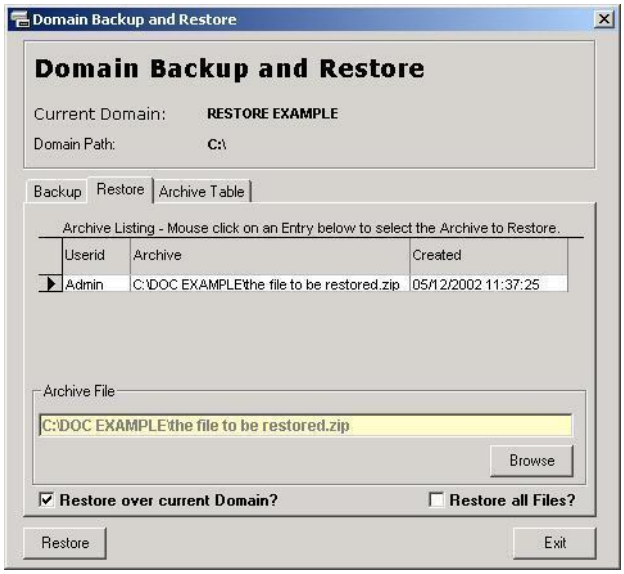
Now that the domain is safely backed up – you can restore it at some time in the future to another location.

32.2. Restoring a domain

When a Domain backup is made an archive listing is made. When you restore an archive, you can select the archive to be restored from this listing, or you can navigate to the file to be restored.

Select 'Domain Backup/Restore' menu option from the Tools Menu.

Select The Restore Tab.



To select the .Zip file to restore, click on the 'Browse' button. Navigate to and then select the file you wish to restore.

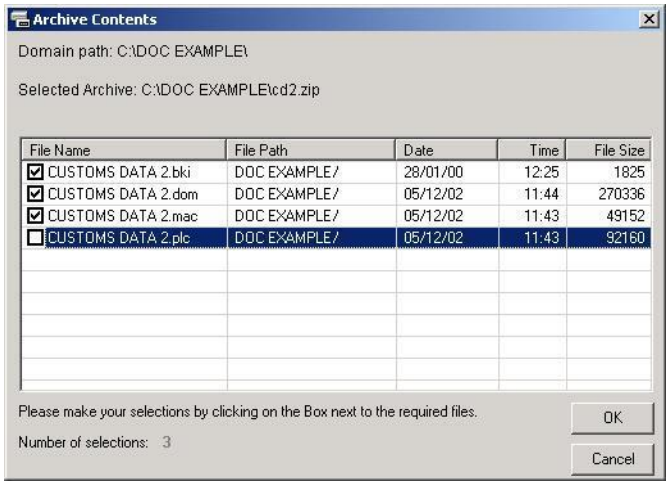
If you are sure that you want to overwrite the currently active domain click in the check box in the lower left hand corner of the screen.

The current domain will close.

Attention !
You now have the option to choose all of the domain to be restored (in which case, you select all of the files) or, alternatively you can choose to only restore selected files within the domain (in which case you select the appropriate files, when the above screen is shown).

This extra degree of flexibility could be useful to the more advanced database administrators.

You will be prompted to select the components to restore.



The backed up domain will be unzipped and will overwrite the existing domain if you had ticked the overwrite existing domain box in the previous step – if not a new domain will be created at the location that you specify when prompted.

When the domain has been restored, or when the selected components of the domain have been restored, you will see this message:

To open the restored domain you will need to navigate to its location , open it and provide the correct login and passwords.

Once you have provided the User ID and login password the restored domain will be the current domain.

N.B. If you applied password protection to your Domain when it was originally created **and** you clicked in the Domain Security Tab to save the password in the .PLC file, the domain will open, without you providing the domain password, after you have provided your User id and user password.

If you did not save the password in the .PLC file, you will have to provide the domain password to open the domain, after you have provided your user Id and your user password.

Therefore when you restore a domain – the same password protection is applied as when you open a domain normally.

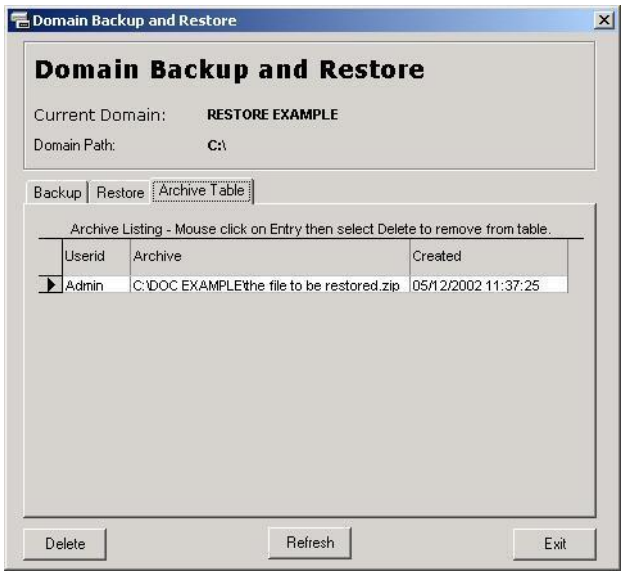
The process works in the same way as normally opening a domain. Whether or not you get prompted for a domain password, will depend upon whether you saved the password in the .PLC file or whether you did not save the password in the .PLC file.

For more on password protection of domains see the Chapter 9.3 Domain Security.

Essentially, then restoring a domain works just like normally opening a domain. The levels of security will be the same as those applied when you created the domain, and you will, or will not be, prompted for a domain password accordingly.

32.3. Managing the domain archive list

Use the 'Tools' Menu 'Backup / Restore' menu option and Archive List Tab to manage the contents of the archive list.



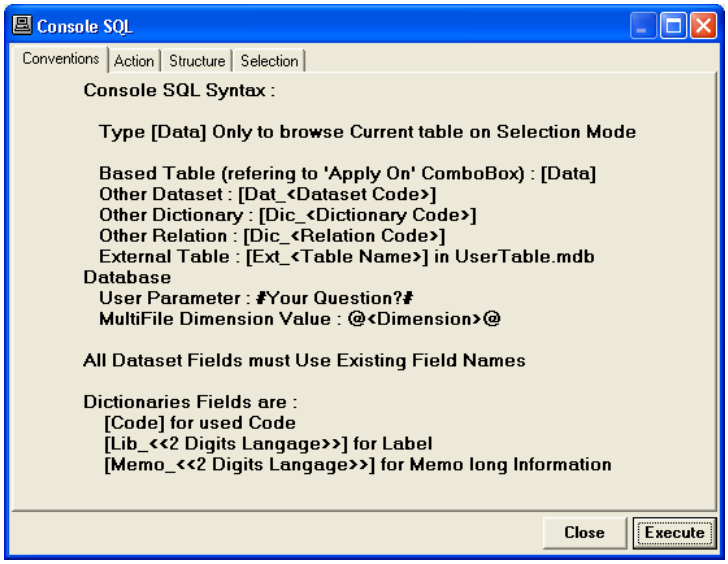
To delete an entry from the archive – select the entry to be deleted and click on the 'delete button'. The 'Refresh' button will ensure that you have the most up to date entries in the list, after you have deleted an entry.

The Exit button exits the Domain Backup and Restore facilities.

32.4. Direct data manipulation and text file interpreters

Under this sub section of the tools menu, several option for direct data access. These options are available only when the database is an MS ACCESS database.

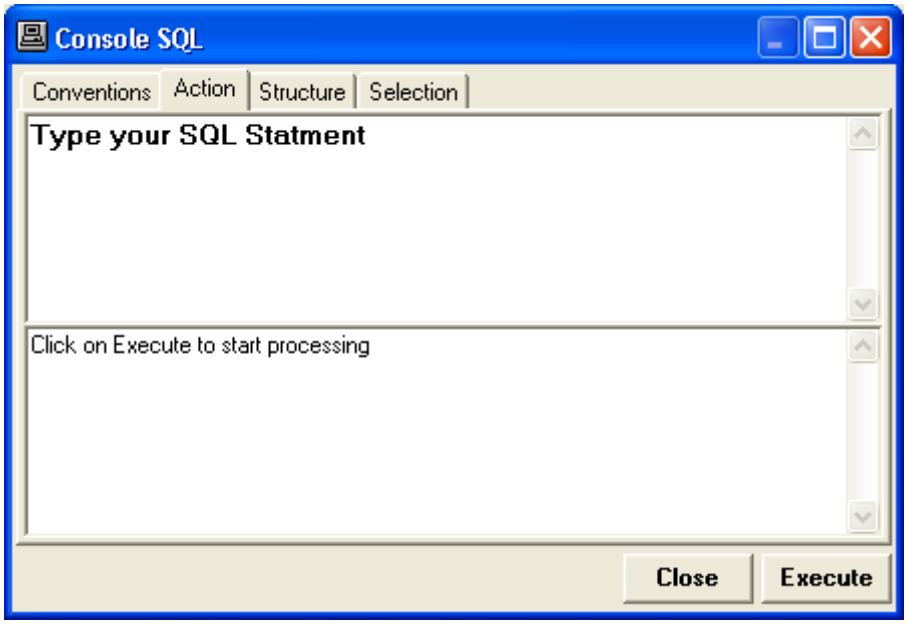
32.5. Console



When opening the console, the first tab is displaying the SQL syntax to be used for the data manipulation. In addition, the following tabs are availables:
Action
Structure
Selection
WARNING: The actions done via the console are under the responsibilities of the user. The integrity of the database can not be ensure by the system as it is a direct access to the data.

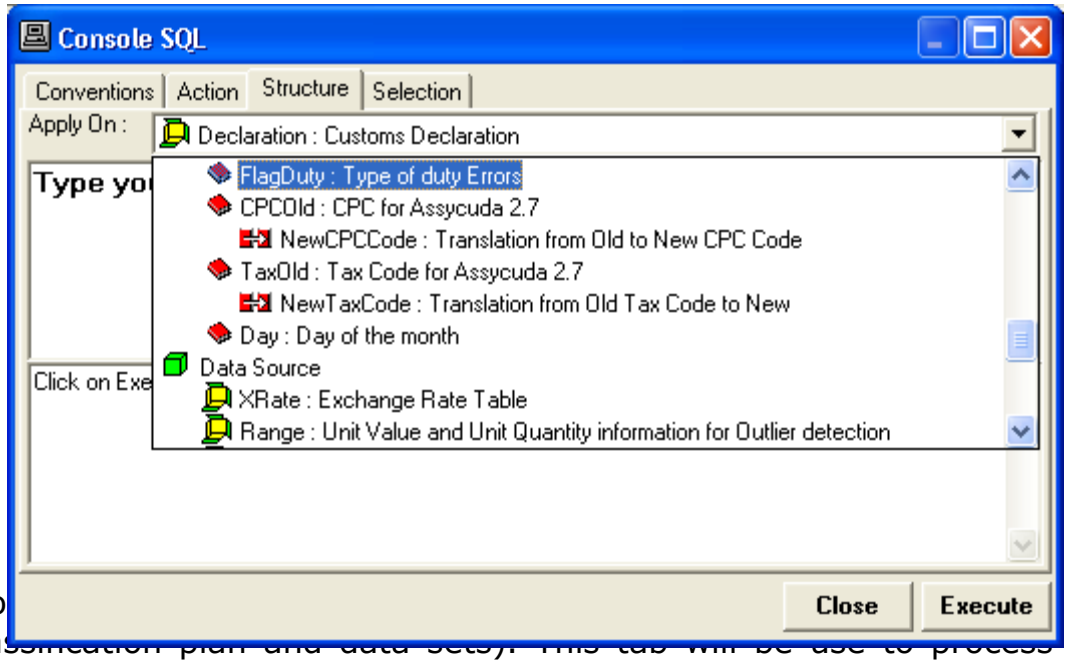
32.6. Action tab

The Action tab will display a text box where user can type the SQL for the data manipulation. When using this action tab, user must be aware of the "objects names" of the classification plan (Dictionaries and relations) and of the data sets.

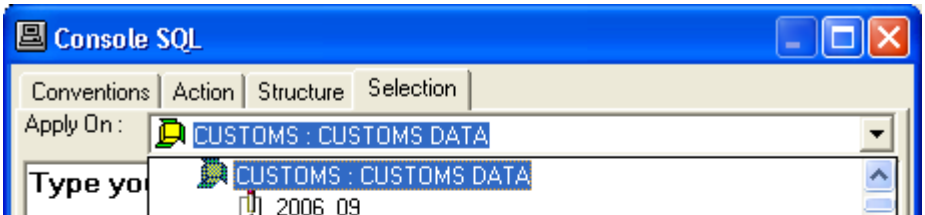


32.7. Structure tab

The Structure tab will display the list of all the "objects" available in the domain (Classification plan and data sets). The selection of an object in the list will enable the data manipulation of this specific object.



The Selectio the domain (Cla to a Select query.



32.9. Compact (MS ACCESS only)

This option, only available under MS ACCESS will compact the database.

32.10. Text file interpreters

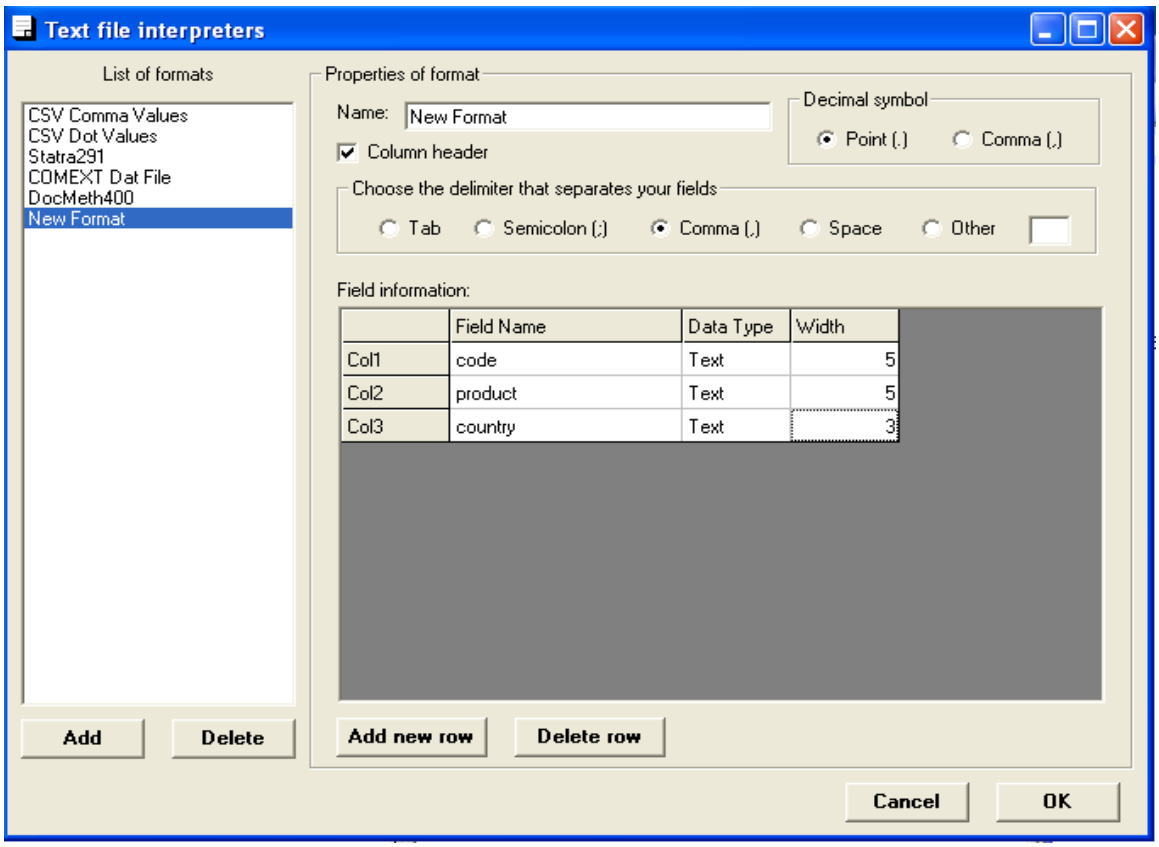
The text file interpreters will enable user to define text files structure. When the sources data file are in text format, Eurotrace need to “read” the structure of the text file. The text file interpreters dialog box will make easier the creation of the “BKI” file which describe the structure of the text files to be loaded into the system..

The interface allows:

To modify the different parameters contained in the 'schema.bki' file
To create a new import format
To delete an import format

For Oracle and SQL server domains, the modifications are applied to the BKI file stored in the system directory.

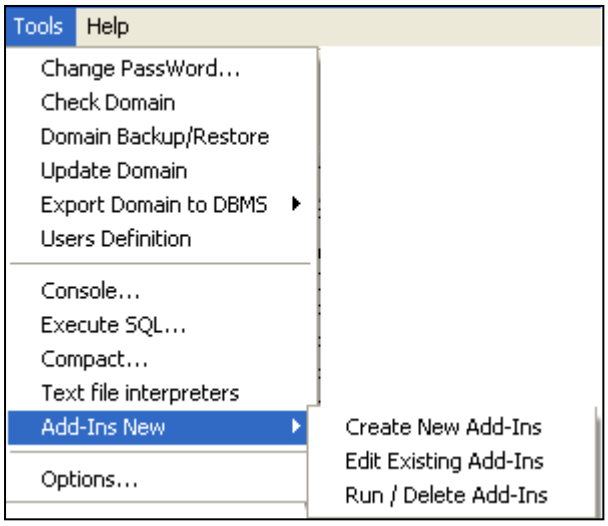
For Access domain, the modifications are applied to the BKI file stored with the DOM file.



The "Add" button create a new format
The "Add new row" button create a new column field. Double-clicking on the dialog is possible to choose name, data type and width of the new field.
Very important is the section "Choose the delimiter that separates your fields": choose the right fields separator (tab, comma etc) to allow the application to read correctly your input file.

33. New Add-Ins

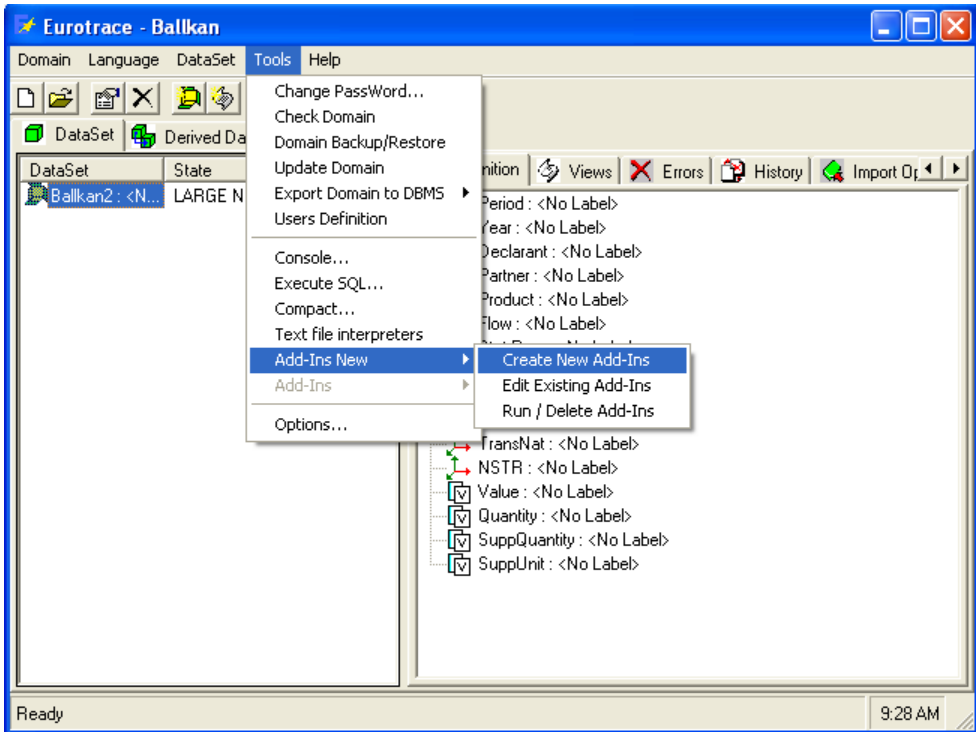
Eurotrace previously allowed to launch external programs from it's interface. These options were used to generate text files from datasets and /or to populate an existing dataset based on internal data source (other dataset). These functions can now be defined and executed within Eurotrace under the New Add-Ins function.



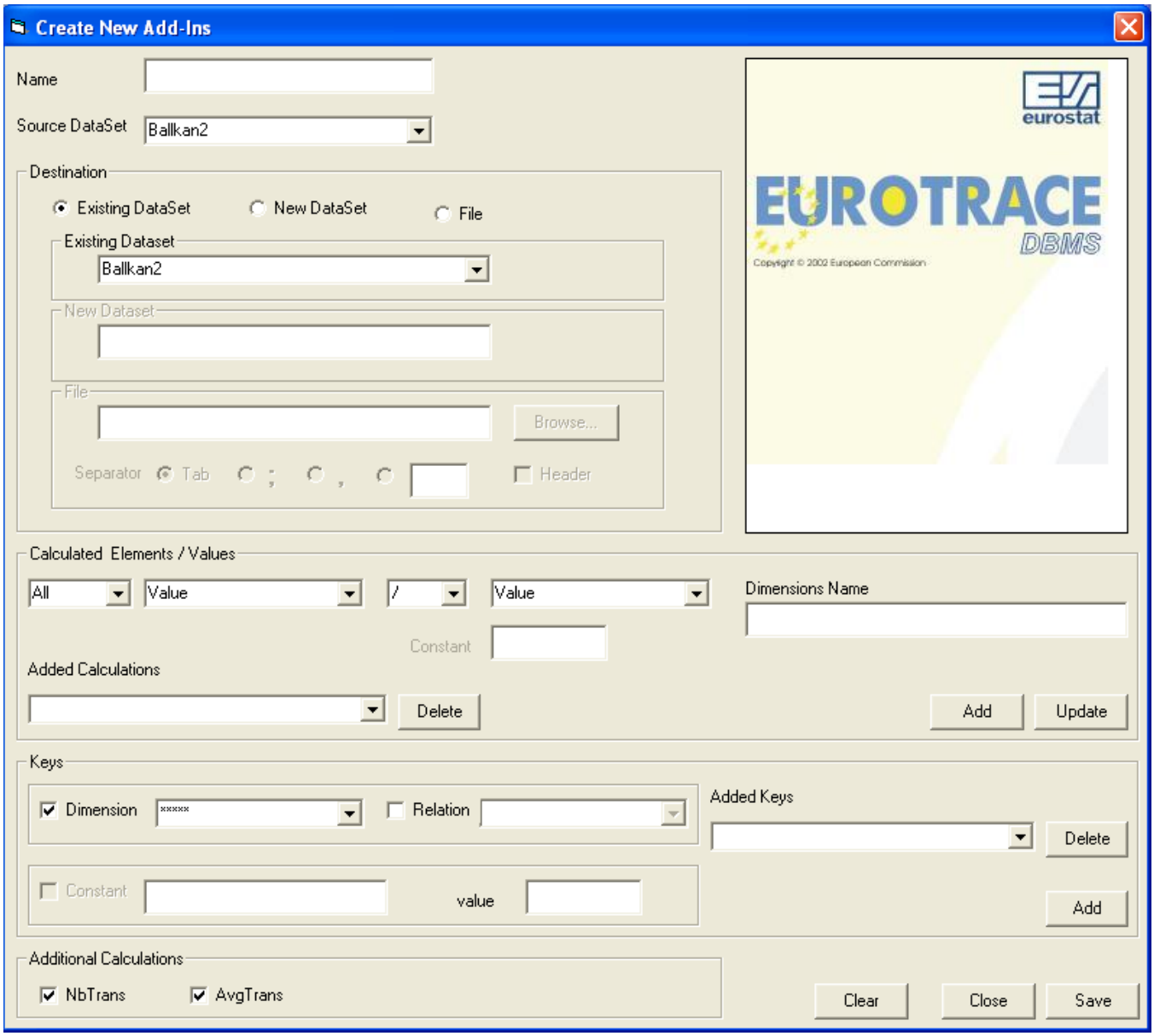
The User can create his own Add-Ins selecting dimensions and several operations between values.

33.1. Create a new Add-In

Select the menu item Tools - AddIns New – Create new AddIn



This action will open a new dialog to be used to set the informations needed to build the Add-In.



Insert the name for the Add-In in the Name field and select the source dataset on which the Add-In will be based from the *Source DataSet* drop-down list.

In the *Destination* section you choose the kind of output:
Existing Dataset: select from the drop-down list the existing dataset you wish as output
New dataset: insert into the *New Dataset* field the name for the output dataset. The structure of the new dataset will be created automatically saving the Add-In.
Text file: Browse the path and name for the output file clicking on the *Browse* button. Then choose the kind of separator between fields. If you want to include in the file an header with the columns title, select the *Header* box.

Select the values dimensions and the operations between the values in the *Calculated elements/Values* section.

In this sections are listed the value dimensions of the source dataset. The value dimensions can be selected as simple value or combined together using different kind of computations as shown in the drop-down list on the left of the section:

All (Minimum – Maximum – Average)

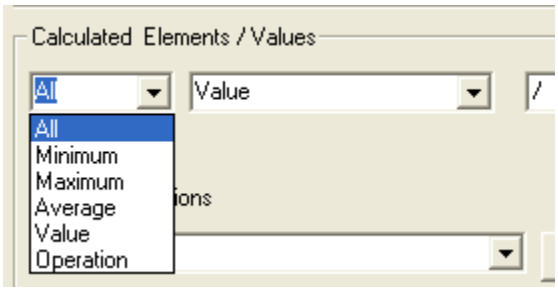
Minimum value of the computation

Maximum value of the computation

Average value of the computation

Value of the dimension

Operation value computed using the dimension and the constant value specified in the *constant* field



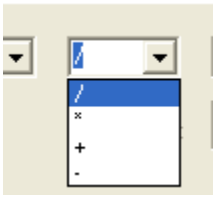
The list of operations allowed between values dimensions is shown in the drop-down list between the dimensions lists:

Multiply by

Divide by

Sum

Difference



For each calculated elements you want to add select first the kind of computation, e.g. *minimum*

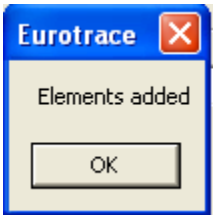
Select then from the dimensions drop-down list the first value to be used in the computation.

If the computation selected is **Value** click on the *Add* button to confirm the choice, if not select from the operations drop-down list the operation to be performed between values.

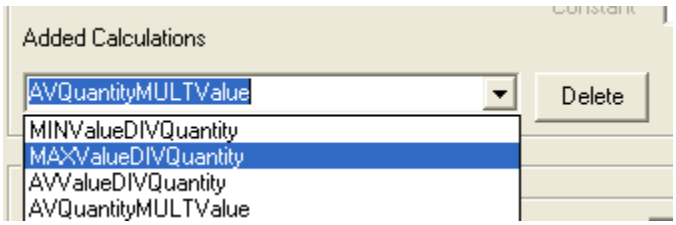
If the computation selected is **Operation** insert the constant value to be used in the constant field, then click on the *Add* button to confirm the choice.

If the computation selected is not **Operation,** select from the second dimensions drop-down list the second value to be used in the computation.

Click on the *Add* button to confirm the choice. You will be prompted with a confirmation message

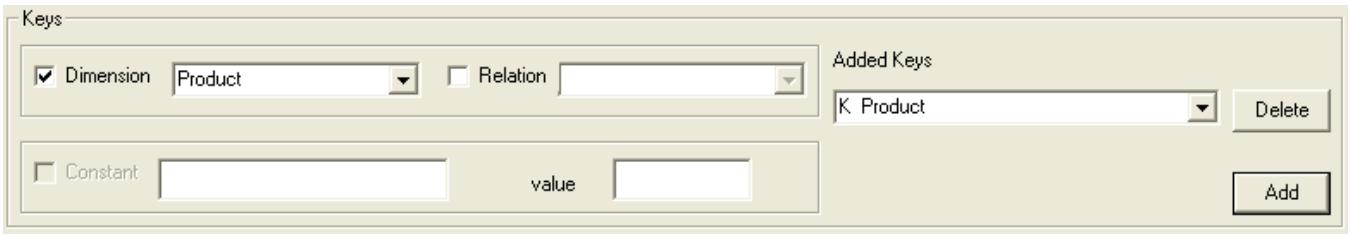


A default name is given to the computation that will correspond to a dimension in the dataset of destination. The name is added to the drop-down list *Added Calculation*, listing all the dimensions selected for the Add-In.

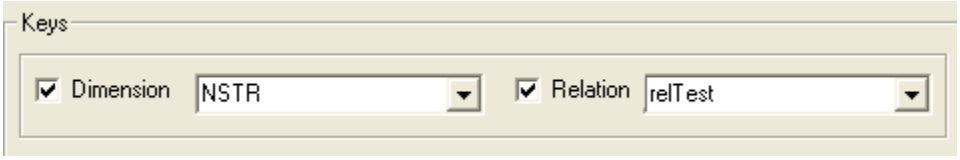


To **rename** a dimension select the dimension in the drop-down list *Added Calculation* and write a new name in the *Dimension Name* field.
Click on the *Update* button and the *Added Calculation* drop-down list will display the new name for the selected dimension.

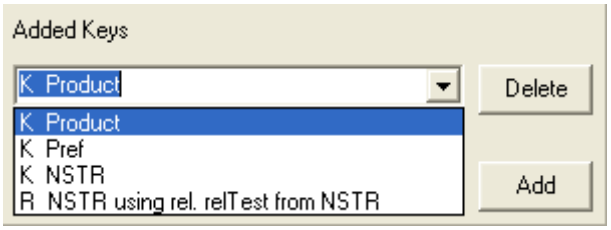
Now select the key dimensions for the Add-In in the *Keys* section.
In this sections are listed the key dimensions of the source dataset in the *Dimension* drop-down list.



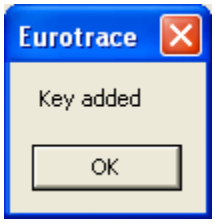
To use a relation for the selected key check the *Relation* option and select the proper relation from the *Relation* drop-down list.



Click on the *Add* button to confirm the choice.
The key is added to the drop-down list *Added Keys*, listing all the keys selected for the Add-In



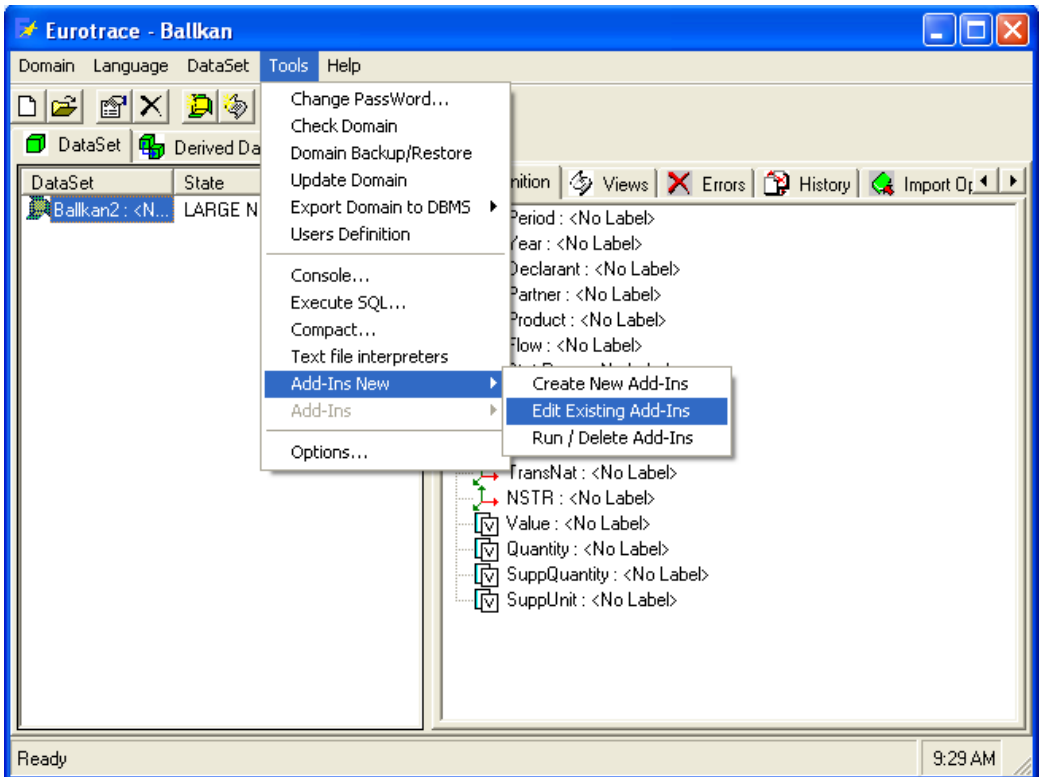
Then you will be prompted with a confirmation message.



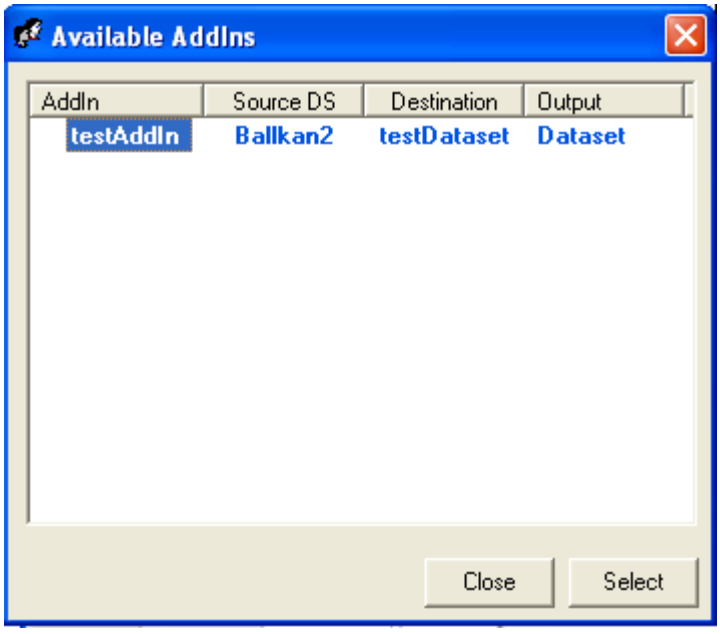
To confirm the selections and create the Add-In click on the **Save** button.
If you want to restart the procedure click on the *Clear* button. All the fields will be deleted and you can restart the selections.

33.2. Edit an existing Add-In

To edit an existing Add-In select the menu item *Tools – Add-Ins New – Edit existing Add-Ins*

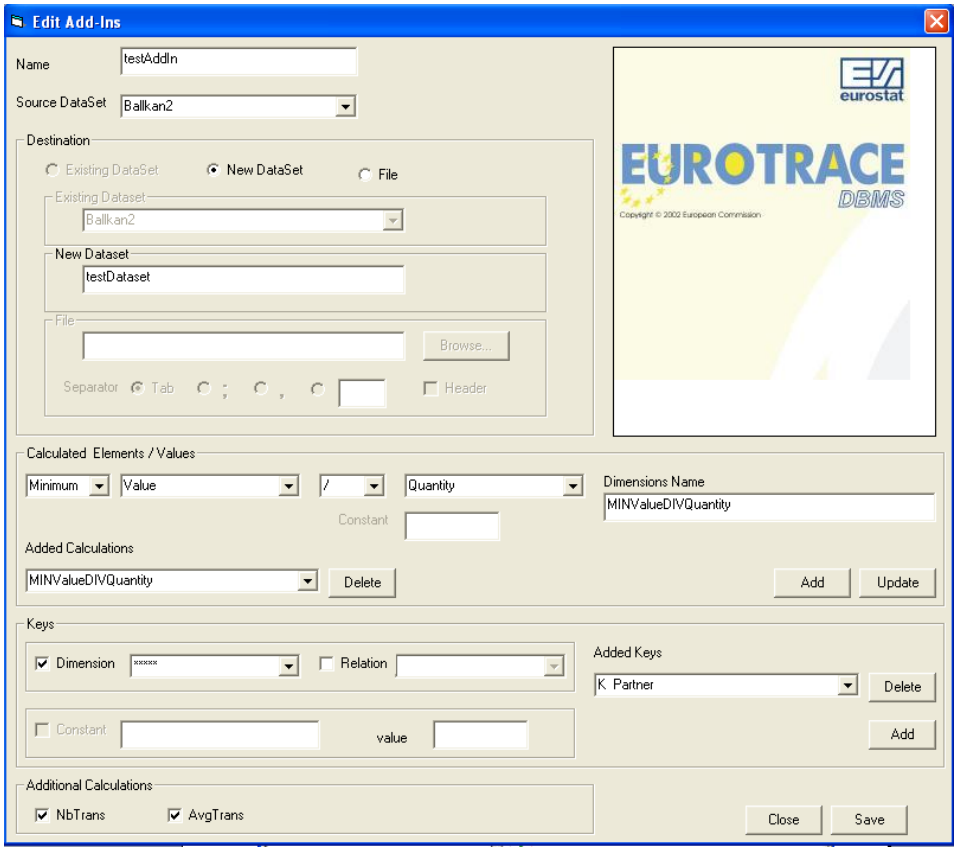


This action will open a new dialog with the list of available Add-Ins.



Select the Add-In you wish to edit and click on the *Select* button.

This action will open the Edit Add-Ins dialog with all the parameters of the selected Add-In.



To add a calculated element or key dimension just proceed as in the previous section *Create a new Add-In.*

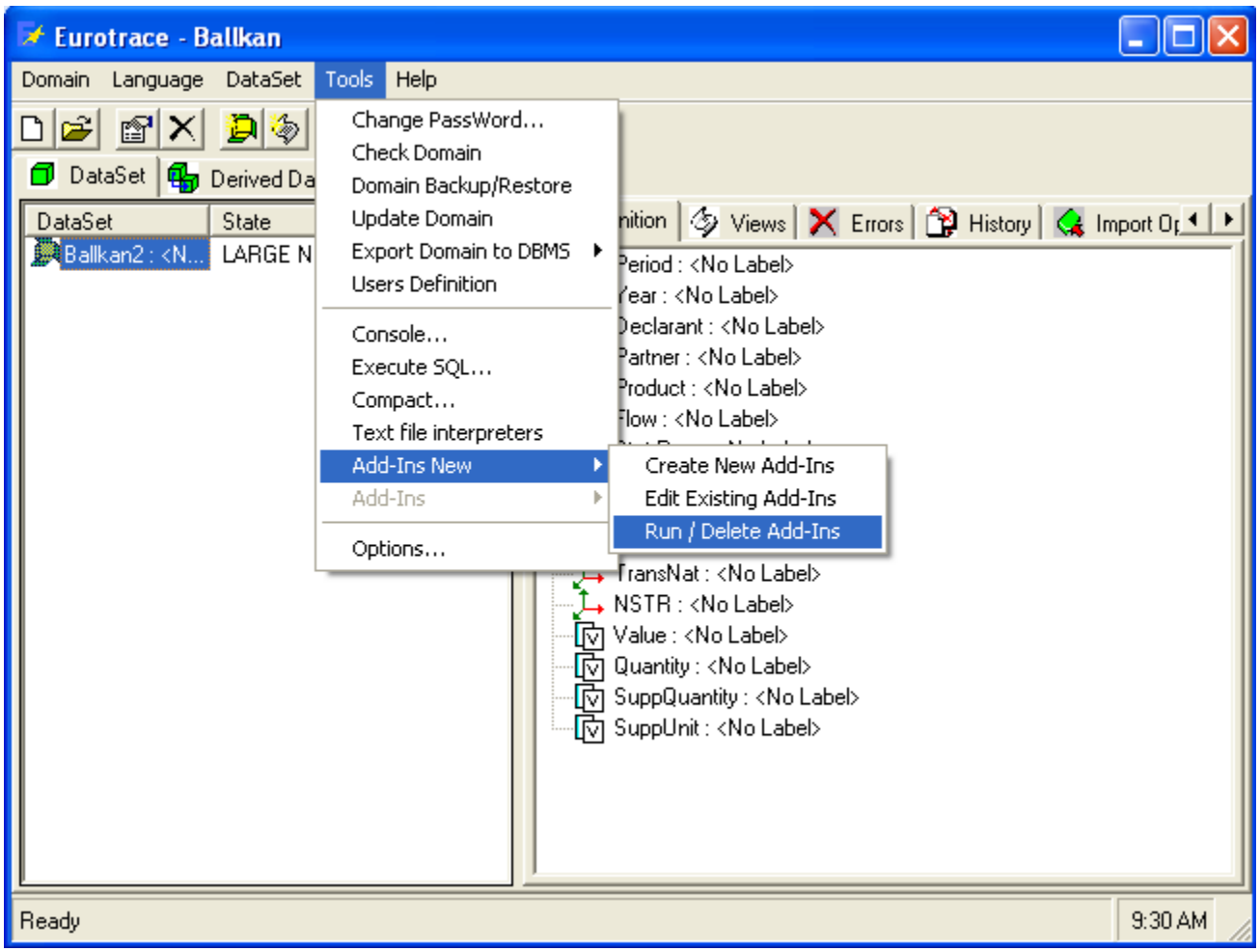
To **delete** a dimension, select the dimension in the drop-down list *Added Calculation.*
Click on the *Delete* button and on the *Yes* button to confirm the deletion.
The dimension will be removed from the *Added Calculation* drop-down list.

To **rename** a dimension select the dimension in the drop-down list *Added Calculation* and write a new name in the *Dimension Name* field.
Click on the *Update* button and the *Added Calculation* drop-down list will display the new name for the selected dimension.
To **delete** a key, select the key in the drop-down list *Added Keys.*
Click on the *Delete* button and on the *Yes* button to confirm the deletion.
The dimension has been removed from the *Added Keys* drop-down list.

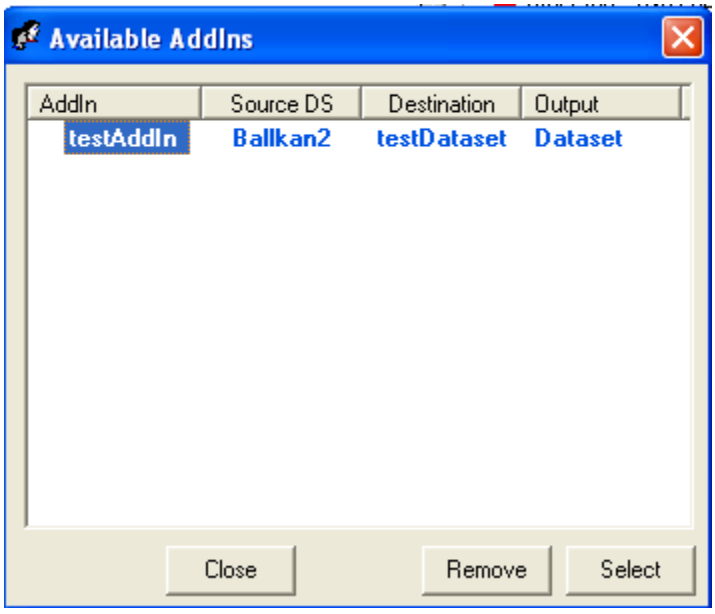
To save the changes click on the **Save** button.
To discard the changes, click on the **Close** button.

33.3. Delete an Add-In

To delete an Add-In click on the *Tools-AddIns-Run/Delete Add-Ins* menu item



This action will open a new dialog with the list of available Add-Ins.

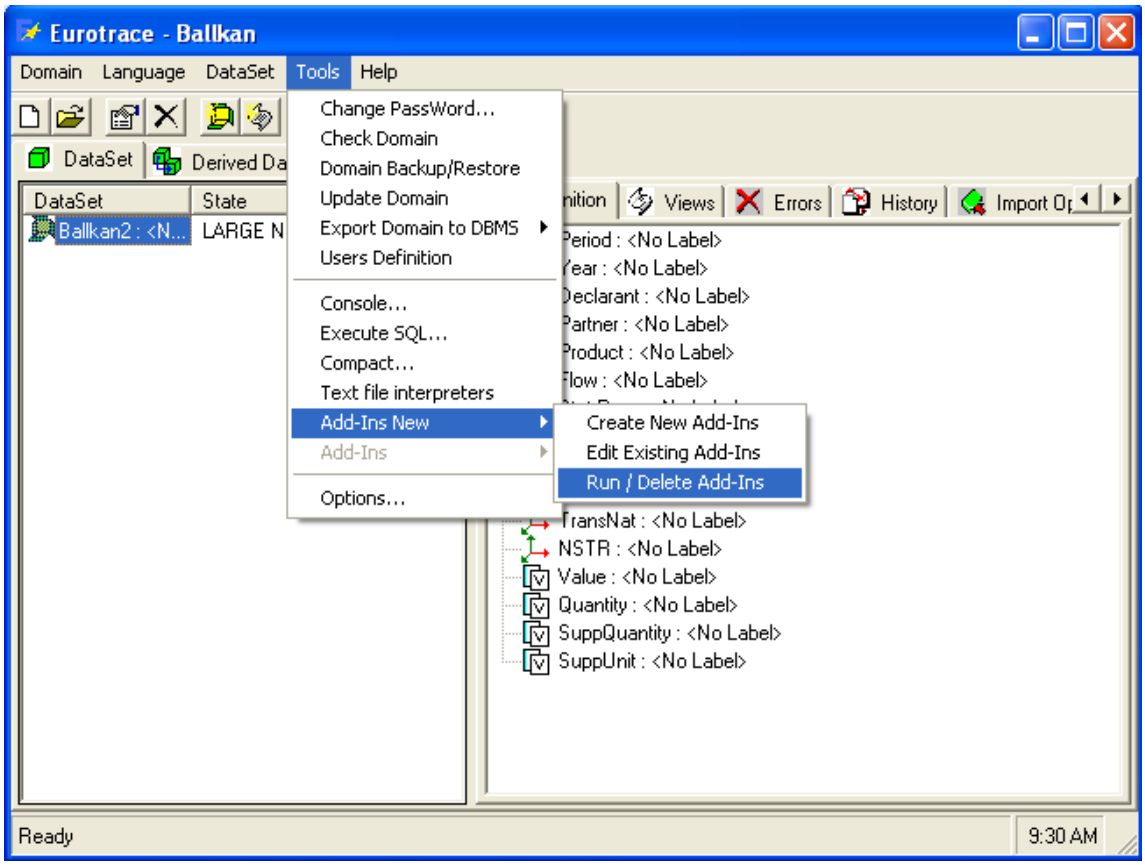


Select the Add-In you wish to delete and click on the **Delete** button.
Answer Yes to the question "Do you want to deleted the selected Add-In?"

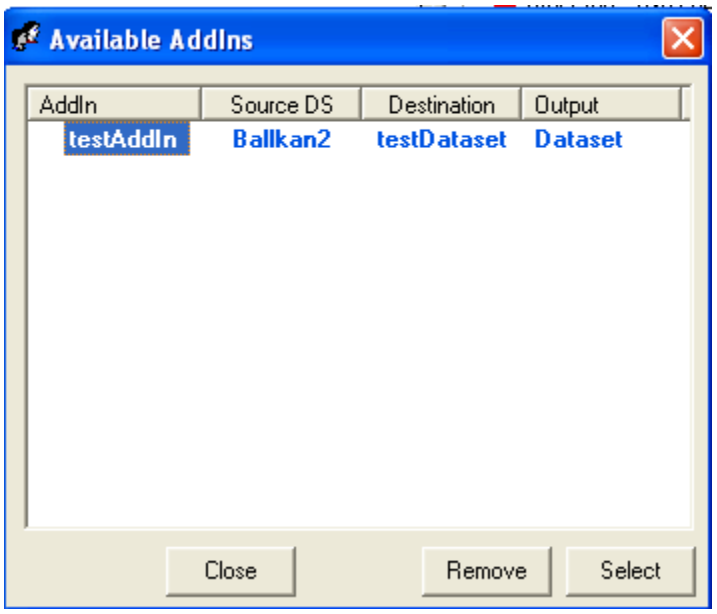
And the Add-In will be removed from the list.

33.4. Run Add-In

To run an Add-In click on the *Tools-AddIns-Run/Delete Add-Ins* menu item

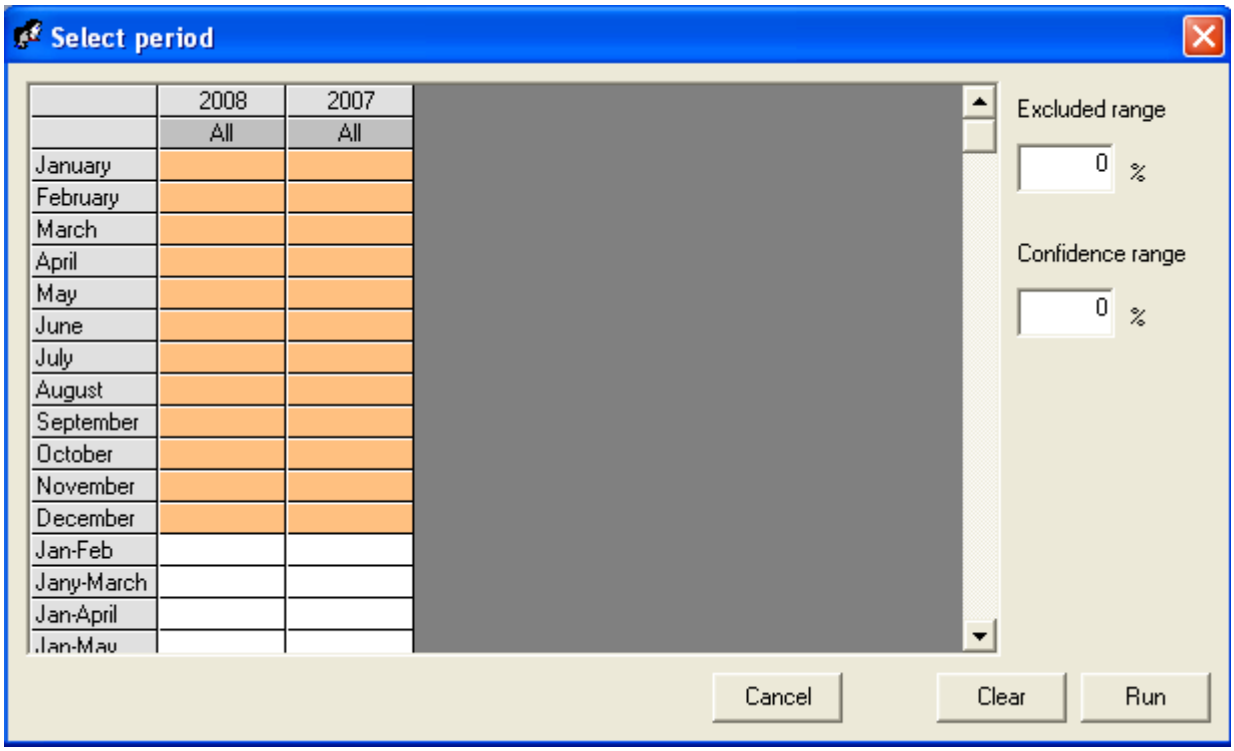


This action will open a new dialog with the list of available Add-Ins.



Select the Add-In you wish to delete and click on the **Select** button.

This action will open the *Select Period* dialog that displays the available periods and years for the selected Add-In



Choose the periods and years to be used for the computation. You can select one single period clicking on the corresponding cell, or one year clicking on the *All* cell. The periods selected will be displayed in green.

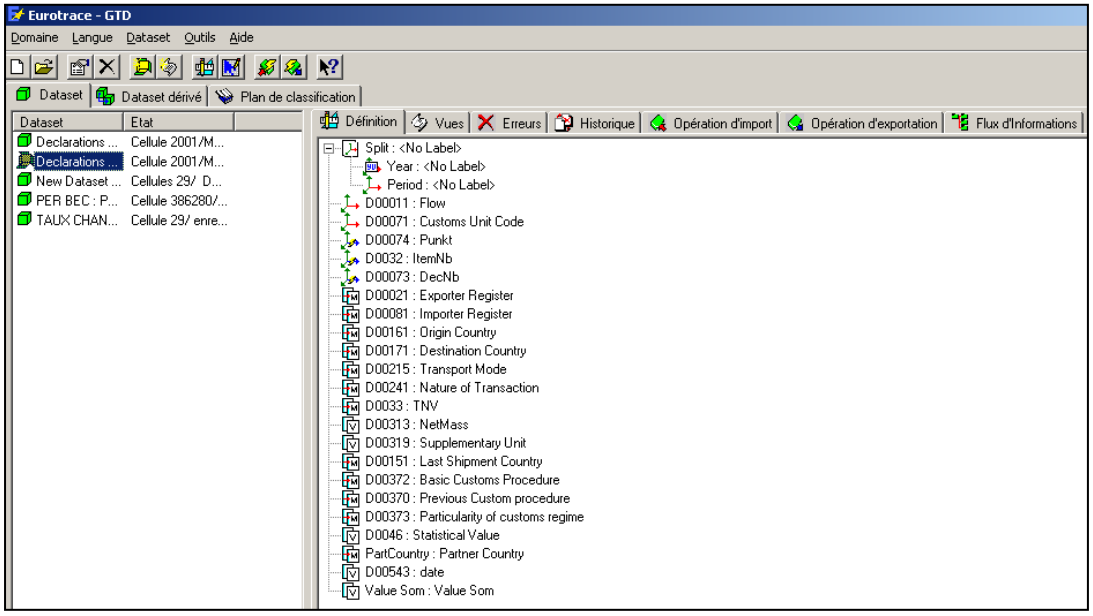
To start the process click on the **Run** button.

When the computation is finished the application displays the “Process terminated” message.

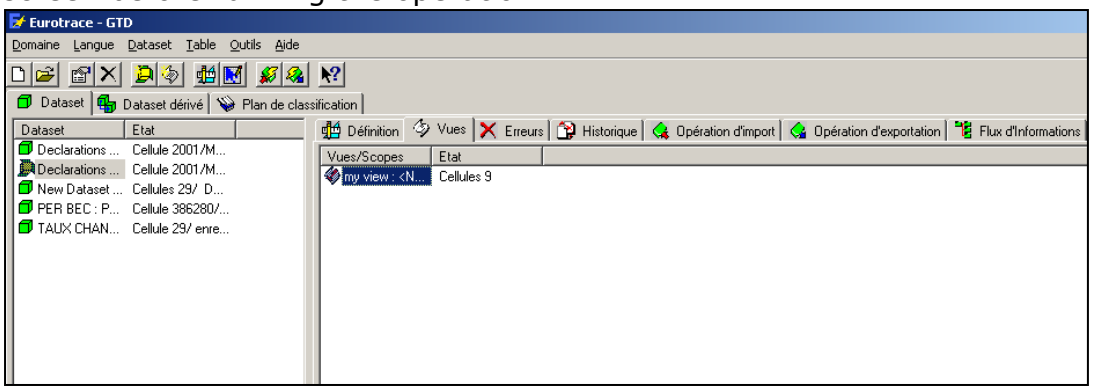
34. COMEXT Exportation

This functionnality allows the exportation of a Dataset in the COMEXT Matrix format. All the data can then be accessible to the COMEXT application. The user can export a full Dataset or a View of a Dataset.

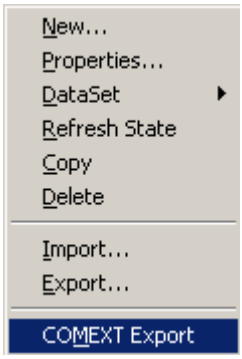
To export the full Dataset, don't select the View tab in the managing domain screen before running the operation.



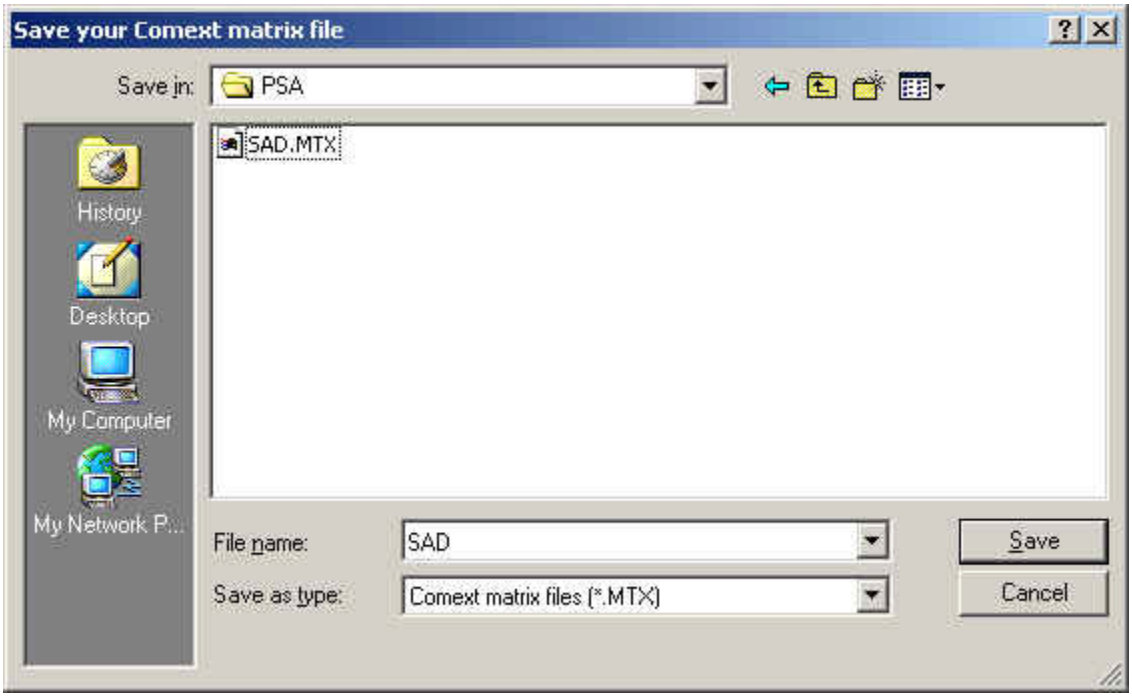
To export a View of a Dataset, select a View in the View tab in the managing domain screen before running the operation.



In the **'Dataset'** menu, select the **'COMEXT Export'** sub-menu.



Select the directory and the filename to store the exported Matrix file.



Click on **'Save'** to perform the exportation or on **'Cancel'** to cancel the operation.

Then the application performs the exportation to the COMEXT format and prompts a message to inform the user of the result of the operation.