

Adabas Text Retrieval System

Installation on Windows

Version 2.3.3

December 2018

This document applies to Adabas Text Retrieval System Version 2.3.3 and all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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Preface

Hereafter, the generic term Adabas Text Retrieval will be used.

Adabas Text Retrieval is the heart of Software AG's text retrieval architecture. It offers the full range of functionality expected of powerful information retrieval systems. Applications which access both formatted and unformatted data simultaneously can be developed using Adabas Text Retrieval.

Since Adabas Text Retrieval is an extension of Software AG's database management system Adabas, it inherits such advantages as high-performance data compression, on to restart, automatic recovery and 24-hour operation.

Adabas Text Retrieval manages the index information and not the content of the data. This means that document contents can be stored at any location (Adabas, sequential files, CD-ROM, PC, etc.).

Adabas Text Retrieval can be used via its call interface from inside Natural or any third generation language such as C, COBOL or PL/1.

This documentation provides product-specific instructions for installing Adabas Text Retrieval.

This documentation is organized under the following headings:

System Requirements	Prerequisites for installing Adabas Text Retrieval
Installing Adabas Text Retrieval	How to install Adabas Text Retrieval
The Natural Demo Environment	How to set up the Natural demo environment

For important last-minute information, see the readme file that is provided with Adabas Text Retrieval. You can find it in the Adabas Text Retrieval product documentation at <https://empower.softwareag.com/>.

1 About this Documentation

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Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
Monospace font	Identifies service names and locations in the format <i>folder.subfolder.service</i> , APIs, Java classes, methods, properties.
<i>Italic</i>	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
Monospace font	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the symbol.
[]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

Online Information and Support

Software AG Documentation Website

You can find documentation on the Software AG Documentation website at <http://documentation.softwareag.com>. The site requires credentials for Software AG's Product Support site Empower. If you do not have Empower credentials, you must use the TECHcommunity website.

Software AG Empower Product Support Website

If you do not yet have an account for Empower, send an email to empower@softwareag.com with your name, company, and company email address and request an account.

Once you have an account, you can open Support Incidents online via the eService section of Empower at <https://empower.softwareag.com/>.

You can find product information on the Software AG Empower Product Support website at <https://empower.softwareag.com>.

To submit feature/enhancement requests, get information about product availability, and download products, go to [Products](#).

To get information about fixes and to read early warnings, technical papers, and knowledge base articles, go to the [Knowledge Center](#).

If you have any questions, you can find a local or toll-free number for your country in our Global Support Contact Directory at https://empower.softwareag.com/public_directory.asp and give us a call.

Software AG TECHcommunity

You can find documentation and other technical information on the Software AG TECHcommunity website at <http://techcommunity.softwareag.com>. You can:

- Access product documentation, if you have TECHcommunity credentials. If you do not, you will need to register and specify "Documentation" as an area of interest.
- Access articles, code samples, demos, and tutorials.
- Use the online discussion forums, moderated by Software AG professionals, to ask questions, discuss best practices, and learn how other customers are using Software AG technology.
- Link to external websites that discuss open standards and web technology.

Data Protection

Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

2 System Requirements

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Supported Operating System Platforms

Adabas Text Retrieval runs on all 32Bit and 64Bit Intel Windows systems.

Software Requirements

For the installation of Adabas Text Retrieval, the following software requirements apply:

- Adabas Version 6.5 and later versions
- - If using Adabas Text Retrieval within Natural, this version requires Natural Version 8.3 and later versions. Adabas and Natural must be installed before the installation of Adabas Text Retrieval.

Updating Adabas Parameters

For large production database applications, update the Adabas parameters in *adanuc*. as follows.

LAB	= 98304
LBP	= 6000000
LOGGING	= OFF
LP	= 400
LPXA	= 10
LS	= 100000
LWP	= 1000000
MGC	= 50
NC	= 1000
NH	= 10000
NISNHQ	= 10000
NOFLAG	
NT	= 6
NU	= 1000
TNAA	= 3000
TNAE	= 3000
TNAX	= 3000
TT	= 3000

The value of the `NU` parameter must be at least as large as that of the `NC` parameter.

The Directory Structure

The primary files in the directory structure are:

Directory	Description
Software AG	The root directory for Software AG products.
Software AG/trs	The top level Adabas Text Retrieval directory.
Software AG/trs/vnnn	The version-dependent directory of the product.

The files in the product subdirectories are as follows (below `trs/vnnn`):

Directory	File	Description
	README.TXT	Contains the latest technical details.
INSTALL	trsendv.cmd	Sets environment variables which are necessary for executing TRS.
inc	trsc.h	Header file to be included in applications written in C.
lib/lib32	trsc_stat.lib	Static library to be linked to applications written in C.
	trsc.dll	Shared library for applications built with C.
	trsc.lib	Shared library stub for applications built with C.
	nattr.dll	Shared library for Natural applications.
	trshypa6.dll	Hyper Exit for Adabas Version 6.
examples/c	trsmain.sln	Visual Studio Solution for compiling and linking the C program trsmain .
	trsmain.c	Example program for calling TRS from a C application.
	uextempl.c	Template file for User Exits.
examples/data	trs_dfnr.fdt	Adabas FDT for Document file.
	trs_dfnr.fdu	Adafdu control statements for Document file.
	trs_vfnr.fdt	Adabas FDT for Vocabulary file.
	trs_vfnr.fdu	Adafdu control statements for Vocabulary file.
	document.inp	Data file for the example applications.
	load_trs.cmd	Command script to load the Vocabulary and Document Files and Data into an Adabas database (Windows).
	out.028	Vocabulary file.
	out.029	Document file.
examples/natural		This subdirectory contains all the Natural sources needed to establish the Natural example application.
examples/natparm	TRSPARM.LST	Example Natural parameter file.

Directory	File	Description
examples/visualbasic	vbtrs32.bas	Example VisualBasic file.



Note: The lib32 directory contains the 32Bit variants of the libraries.

Migrating from Previous Versions

Due to some problems in heterogeneous environments (e.g., TRS on a swapping platform stores or retrieves data into or from a database on a non-swapping platform), the format of the D7 field has been changed from A12 to B12.

For this reason, the format of the D9 field has also been changed

```
from D9=D0(1,4),D1(1,2),D7(7,8)
to D9=D0(1,4),D1(1,2),D7(5,6)
```

The only way to migrate to the new format is to re-invert the documents.

This applies to Adabas Text Retrieval version 2.3.1 and later.

3 Installing Adabas Text Retrieval

- Installation Package 11
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If you have fulfilled the prerequisites described in the previous sections, you can proceed with the installation itself.

To perform the installation, you must be logged on as a user with administration rights.

Installation Package

The installation package containing the Software AG products Adabas Text Retrieval is available as compressed tar file.

Installation and Setup

- [General Installation and Setup](#)
- [Deinstalling Adabas Text Retrieval](#)

General Installation and Setup

➤ Unpack the downloaded installation package to disk

- 1 Download the installation package from the Software Download Center. The package names follow this naming rule:

```
<product>_<version>_<operating system id>_Any.<format>
```

where

<i><product></i>	= product three letter code like "TRS"
<i><version></i>	= current version of the product such as "2.3.3.04"
<i><format></i>	= "tz" for compressed tar format on UNIX, "zip" for zip format on Windows
<i><operating system id></i>	
AIX	IBM AIX on POWER architecture
HP11R	HP-UX 11 on PA-RISC architecture
HP11IT	HP-UX 11 on Itanium architecture
LNXAMD64	Linux on x64 architecture
LNXS390X	LNXS390X Linux on S390x architecture
SOL	Solaris on SPARC architecture
W64	Windows on x64 architecture

- 2 Change to the SAG home directory and extract the installation package with the following command:

```
UNIX: zcat TRS_2.3.3.04_<operating system id>_Any.tz | tar xvf -  
Windows: unzip TRS_2.3.3.04_<operating system id>_Any.zip
```

> Check README files

- If README files are included, read them before proceeding.

> Environment File *trsend*

- The INSTALL subdirectory of the TRS installation contains the environment file *trsend.cmd* with all necessary settings for TRS. This command script should be called before starting Natural or any other program using TRS.

- Review the contents of *trsend.cmd* and customize it as necessary.

For example, the Natural Demo Environment described in the following section is a 32bit application and uses *nattr.dll* in directory *lib32*.

Also, update the line

```
set PATH=%PATH%;%TRSDIR%\%TRSVERS%\lib
```

to

```
set PATH=%PATH%;%TRSDIR%\%TRSVERS%\lib32
```

> Set up the product

- You have completed the installation steps for TRS.

If this was a new installation, the license file has to be copied to the appropriate place.

1. Create directory `$SAG/common/LKey`.
2. Copy the *trs23.xml* license file to the directory.

Deinstalling Adabas Text Retrieval

Remove the trs/vnnn directory.

4 The Natural Demo Environment

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This part of the documentation describes how to establish the Natural demo environment on a Windows platform.

Creating the Adabas Environment

With a typical installation of Adabas, a demo database 12 has already been installed. You can use this database or create your own (for example with the `crdemodb` tool or Adabas Manager).

Note that the `MAXFILES` parameter must be set to at least 30.

Establishing the Natural Demo Environment

- [Load the file definition](#)
- [Start the TRS demo database](#)
- [The Natural demo environment](#)

Load the file definition

The information for the demo environment is contained in three logical Adabas files, which can be stored in one or more physical Adabas files:

- *vocabulary file (VFNR)*
- *document file (DFNR)*
- *document index (DSFNR)*

Adabas Text Retrieval is usually installed with two physical files, one for VFNR and one for DFNR/DSFNR. In all procedures, file numbers 28 and 29 were used as examples, but any valid file numbers can be specified. The same applies to the database ID. However, if you specify different numbers, then two Natural DDMs and two Natural programs must be adapted as described below.

The vocabulary file contains the word index. An example for a file layout is `trs_vfnr.fdu`. The necessary fields are described in section *File Structure* of the *Adabas Text Retrieval Reference Guide*. The document index file contains the internal document index created by Adabas Text Retrieval during the inversion process (also described in section *File Structure* of the reference information). The document file must contain user-defined formatted fields which are to be used for retrieval operations.

Load vocabulary file (28) and document file (29) by opening a command window in directory `%programfiles%\Software AG\TRS\version\examples\data`, and entering:

```
load_trs.cmd <dbid> <vfnr> <dfnr>
```

Start the TRS demo database

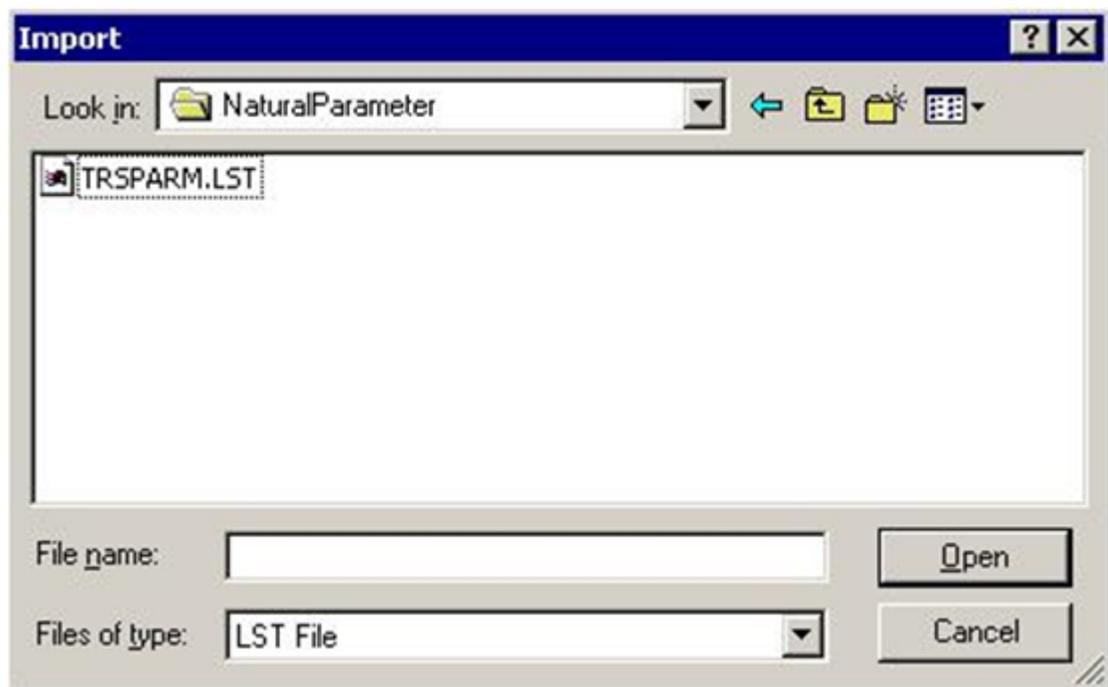
Create your ADAHYX_1 environment variable by adding the following settings to the section 'ENVIRONMENT' in the *DBnnn.INI* file of the appropriate database:

```
Name: ADAHYX_1  
Value: %programfiles%\Software AG\TRS\version\trshypa6.dll;trshypr
```

Start the database.

The Natural demo environment

1. Start the Natural Configuration Utility.
2. Create your own NATPARAM module. A standard Natural parameter file can be imported with natparm which has all TRS parameters set at default value.

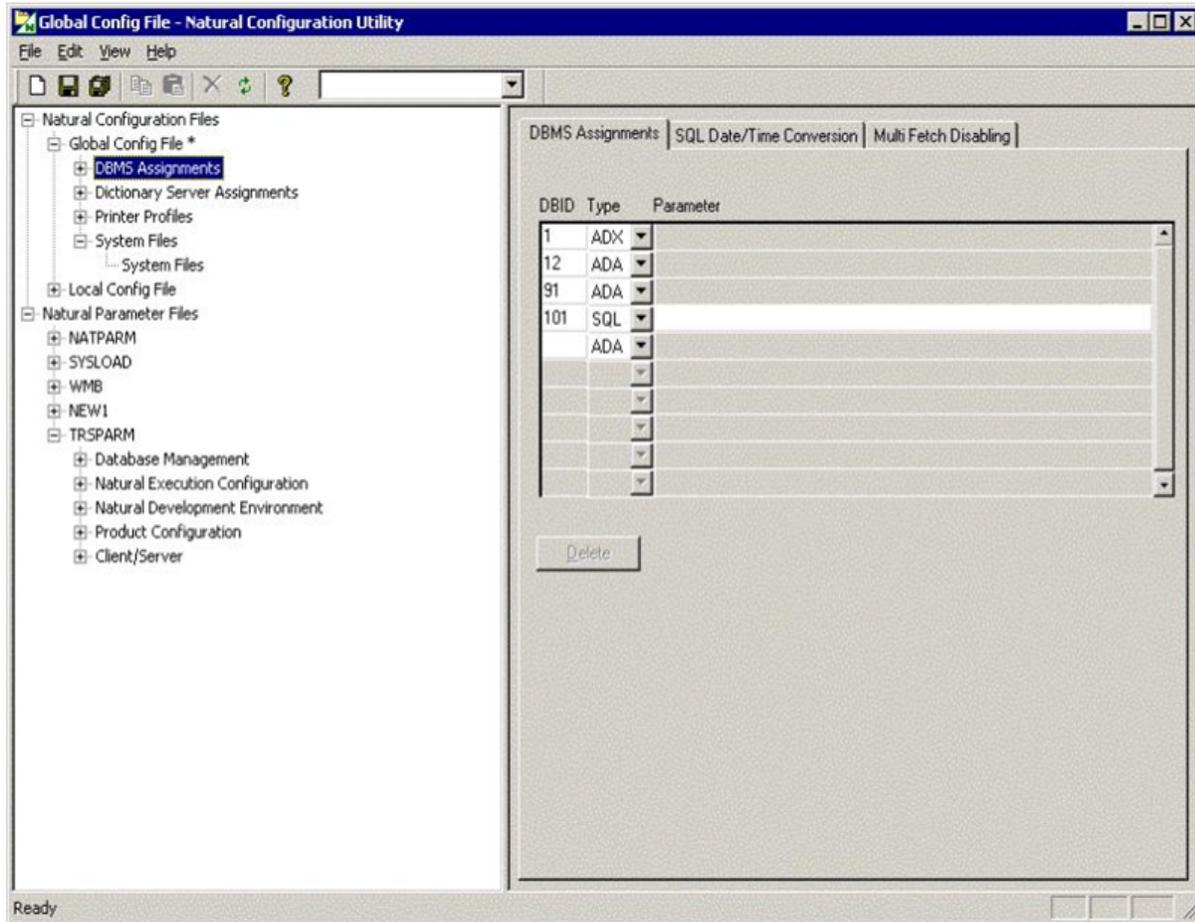


Import the example parameter file from

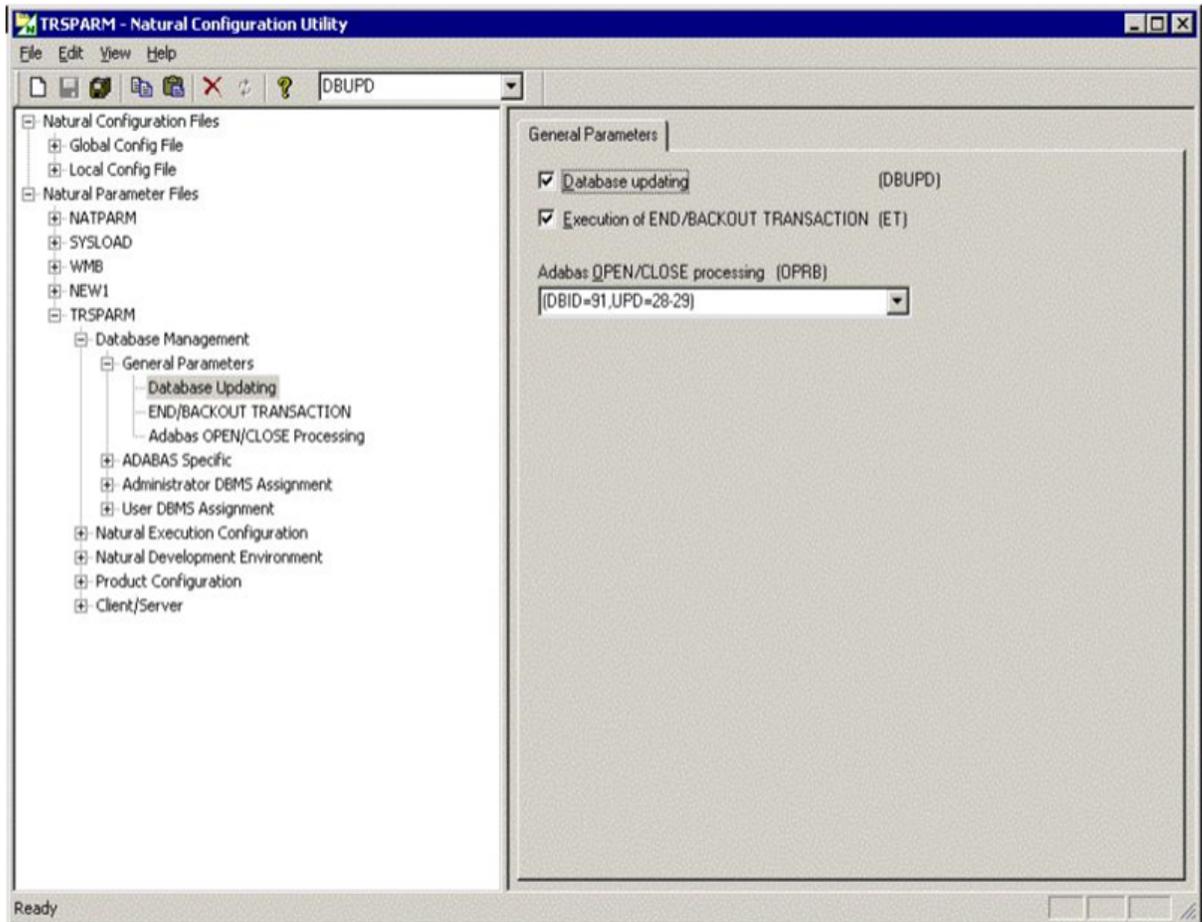
`%programfiles%\Software AG\TRS\version\examples\NaturalParameter`

3. Ensure that all required parameter entries comply with your TRS ID/file number settings and with your Natural settings (see the Global Configuration File).

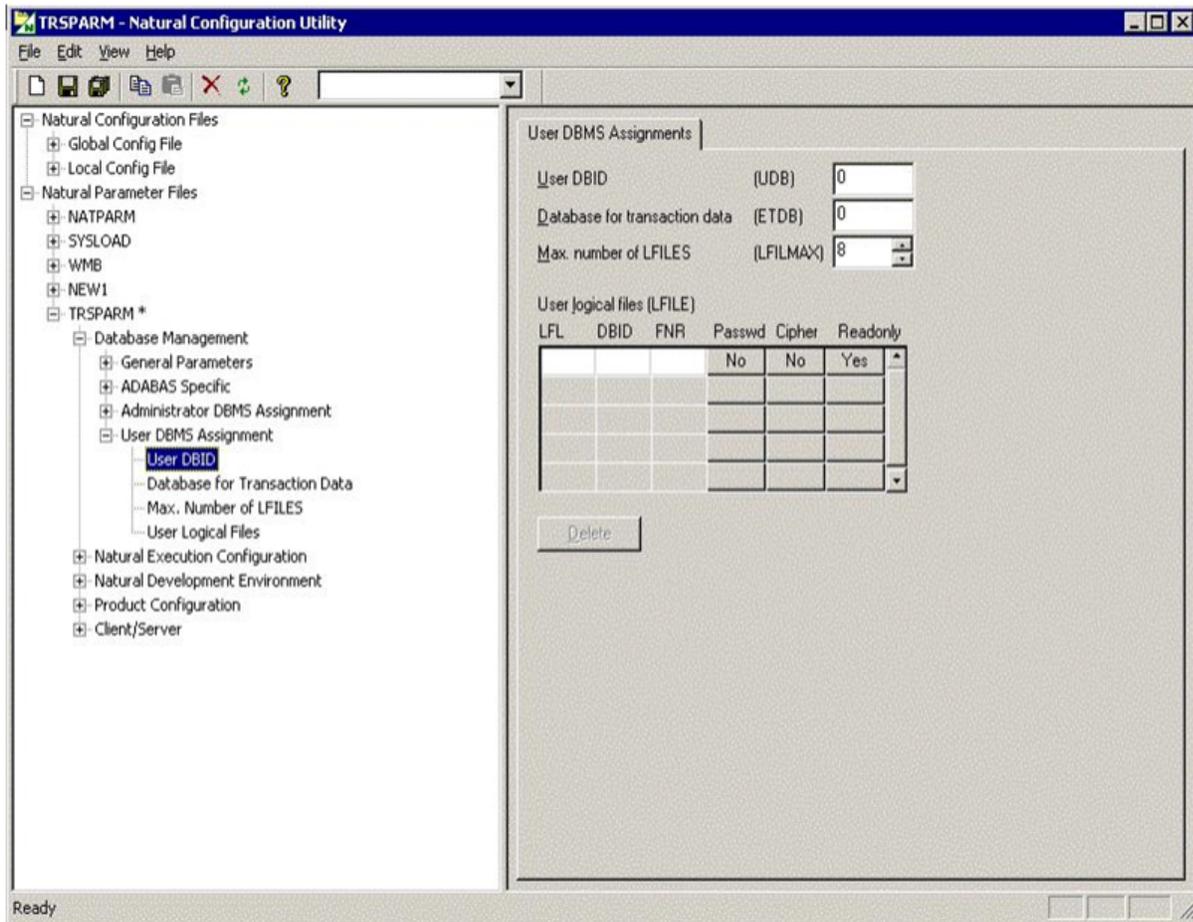
For the following test example it is assumed that the TRS database ID is set to 91; the vocabulary file is set to FNR=28 and the documentary file value is FNR=29. Natural system files are located in DB/FNR 99/100 (FNAT) and 99/101 (FUSER).



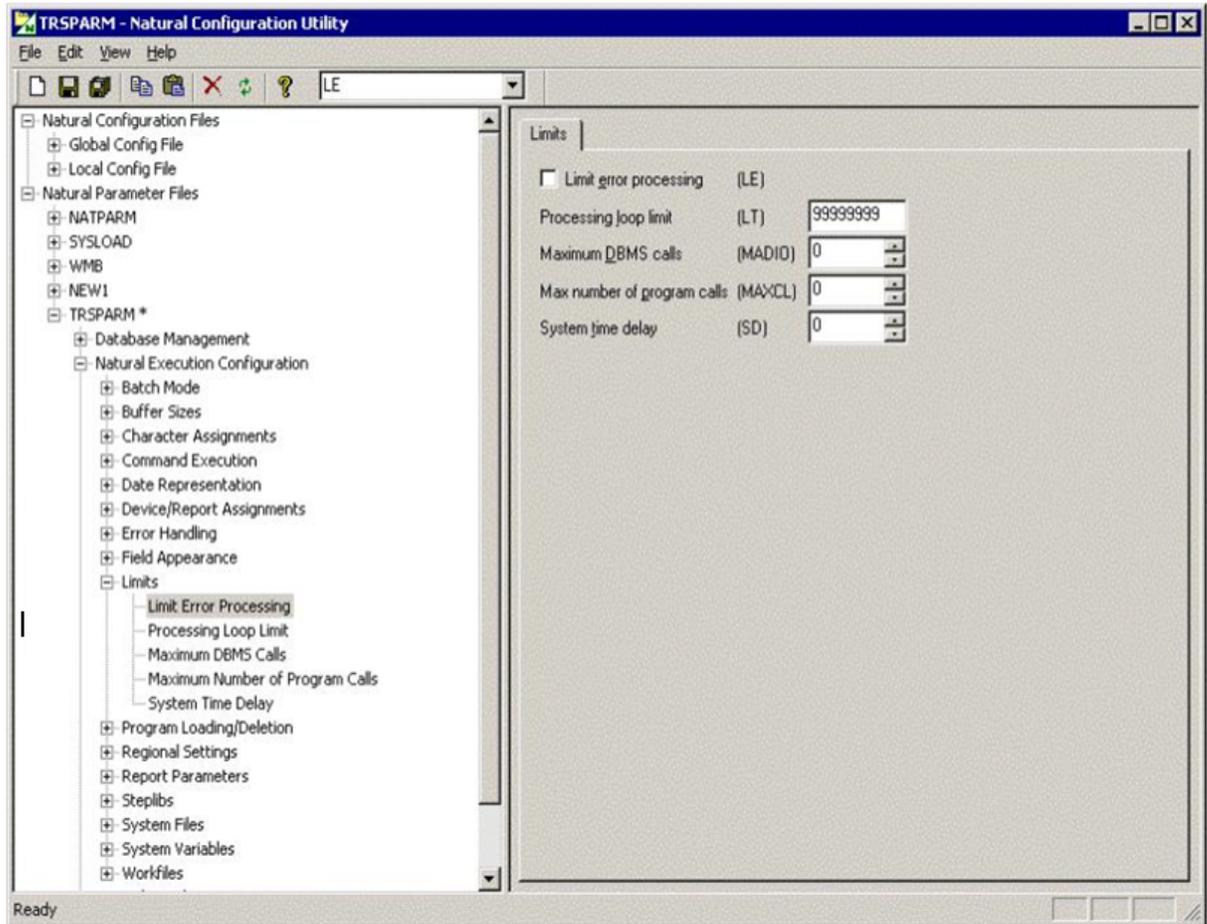
Enter the TRS DBID in the Global Config File.



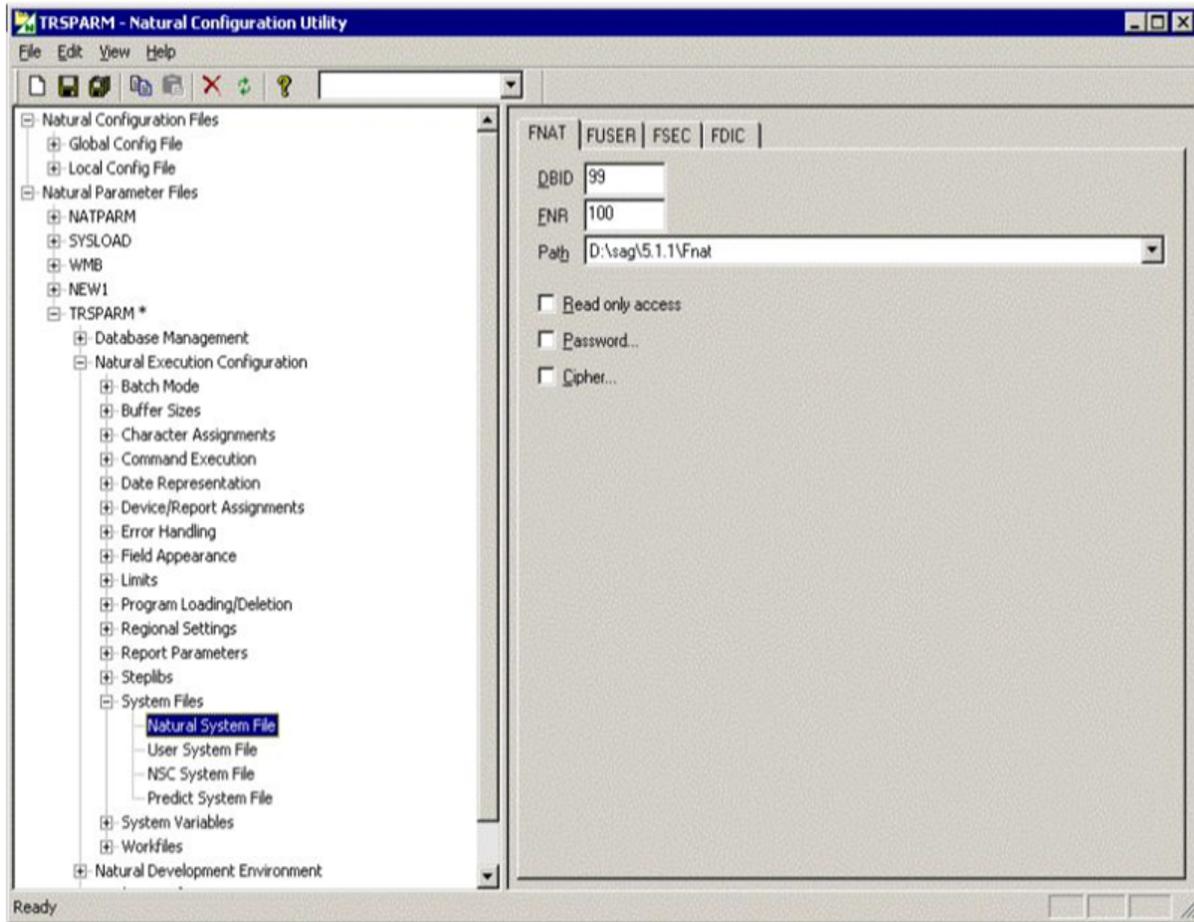
For DBMS, General Parameters, set OPRB to TRSDBID/FNRs 91/28 91/29.

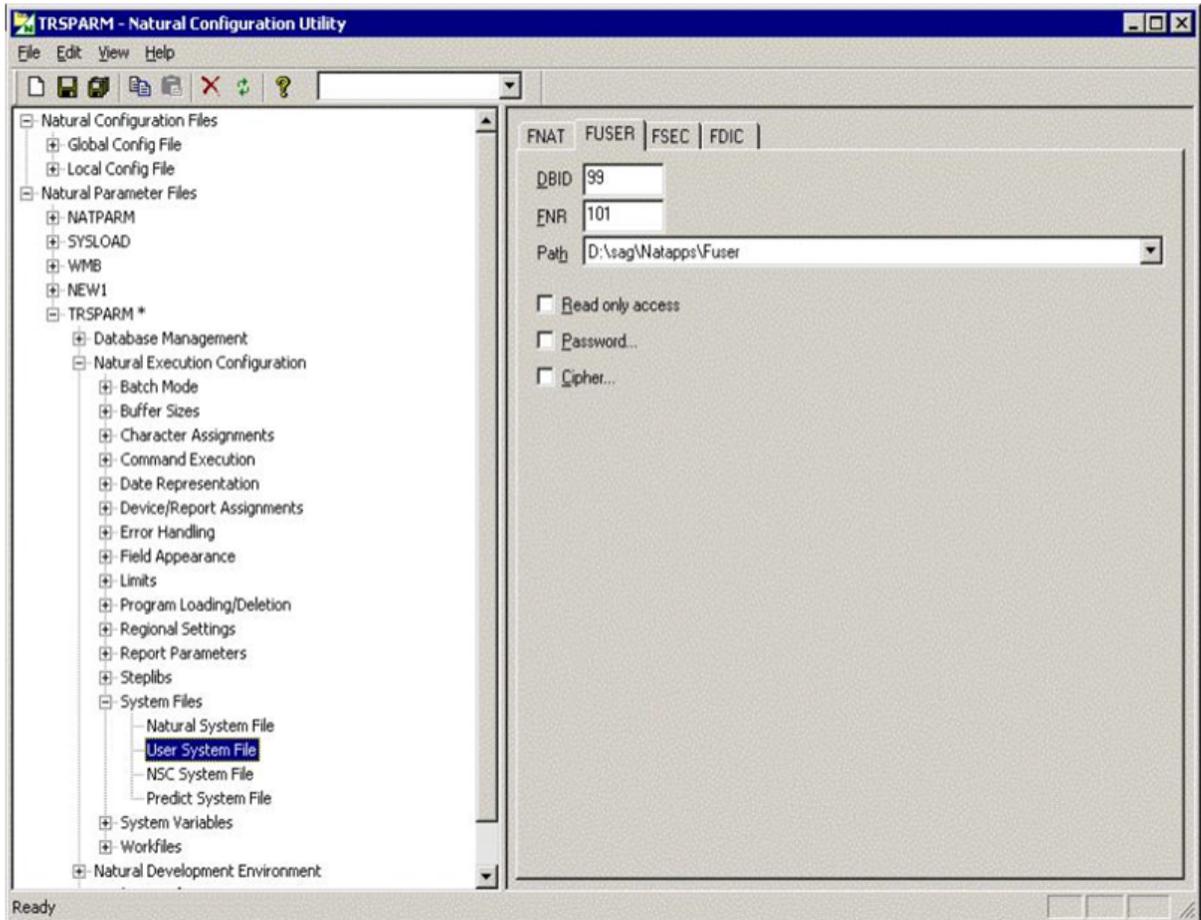


For User DBMS Assignments, set User DBID to UDB=0.

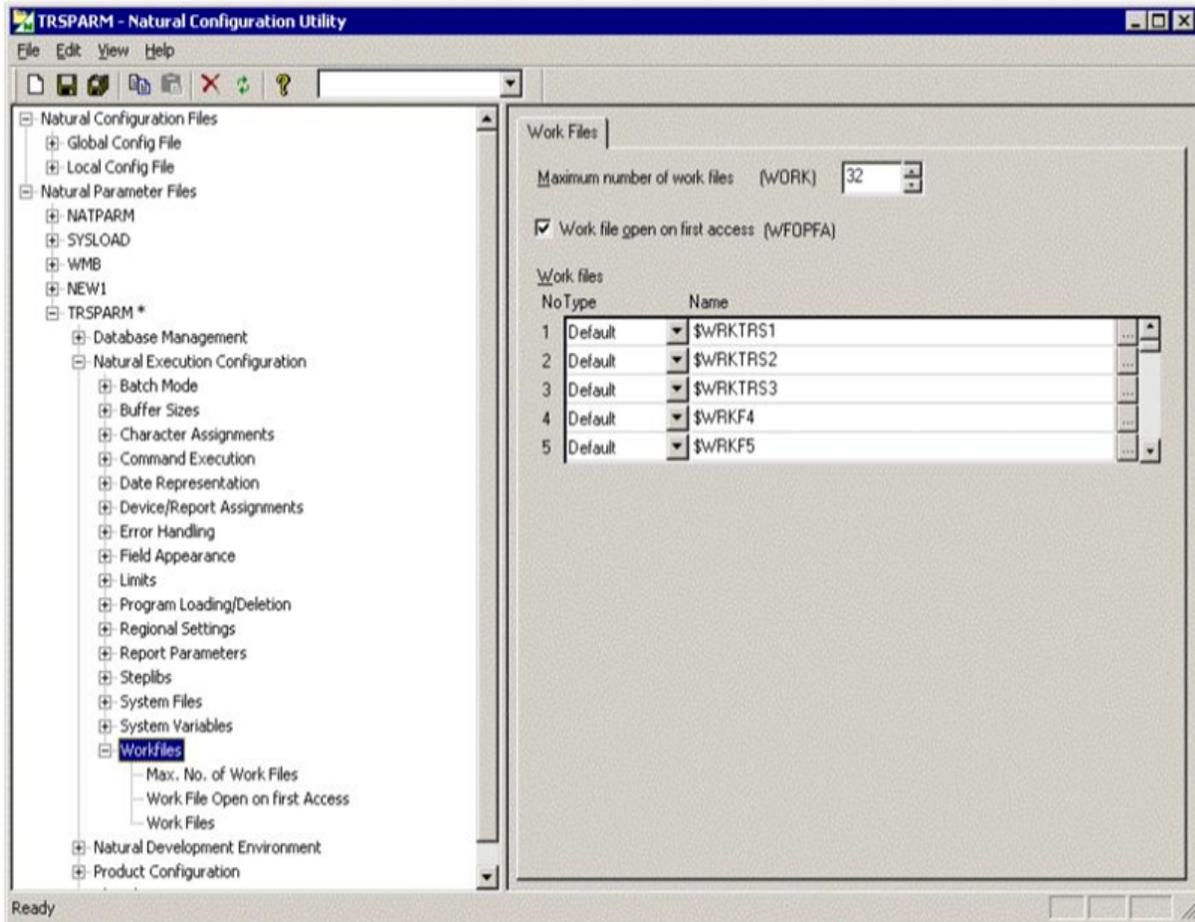


For Natural Execution Configuration, set Limits to Madio=0 and Maxcl=0.





For Natural System Files, ensure that your entries comply with your Natural settings (see the Global Configuration file).

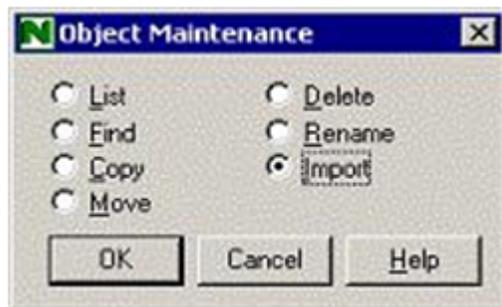


No modifications for the Work Files are necessary if you have imported the example parameter file from %programfiles%\Software AG\TRS\version\examples\Natural.

4. Save the Global Config File and your TRSPARM file.

Importing the TRS Demonstration Library

1. Start the Natural environment and enter SYSMAIN in the command line.



Select **Import** and choose **OK** to continue.

Object Maintenance - Import

Source

Path: AG\TRS\v232\examples\Natural

Name: *

Directory: [-d-]

Code: Source Cataloged

Target

Library: TRSDEMO

DBID: 99

ENR: 101

User ID:

Mode: Report Structure

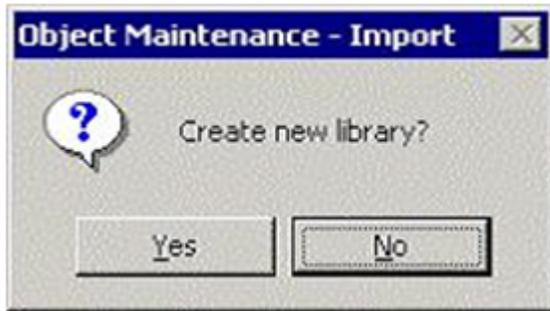
Confirm on replace

Object List ... Cancel Help

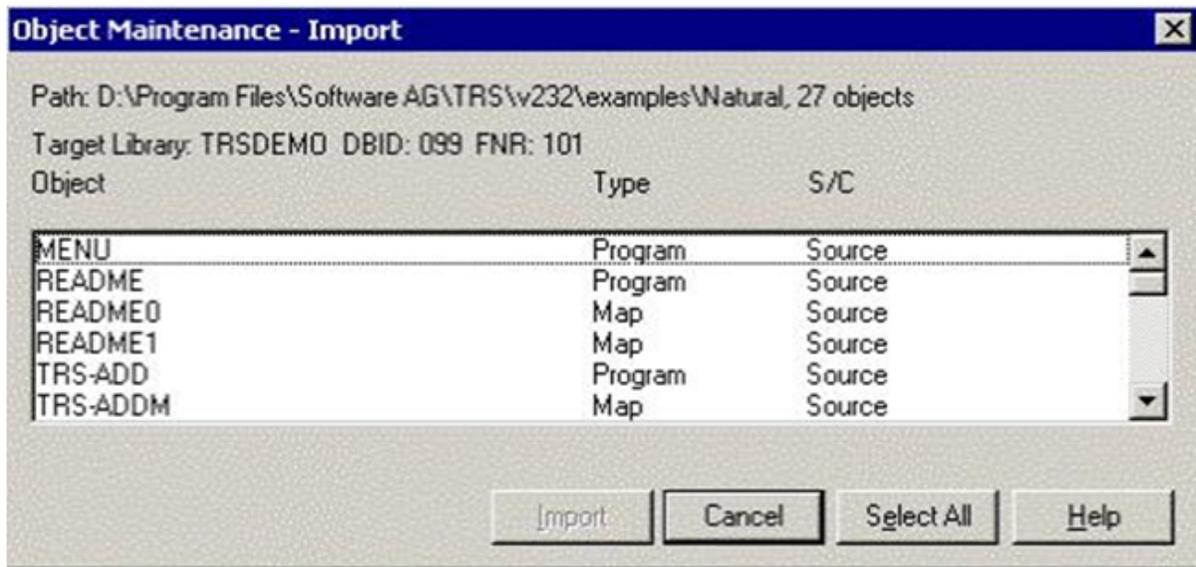
Enter/select the following settings:

Path:	%programfiles%\Software AG\TRS\v23304\examples\Natural
Name:	*
Library:	TRSDEMO (or any name of your choice)
DBID/FNR:	the DBID/FNR of your FUSER
Mode:	Structure

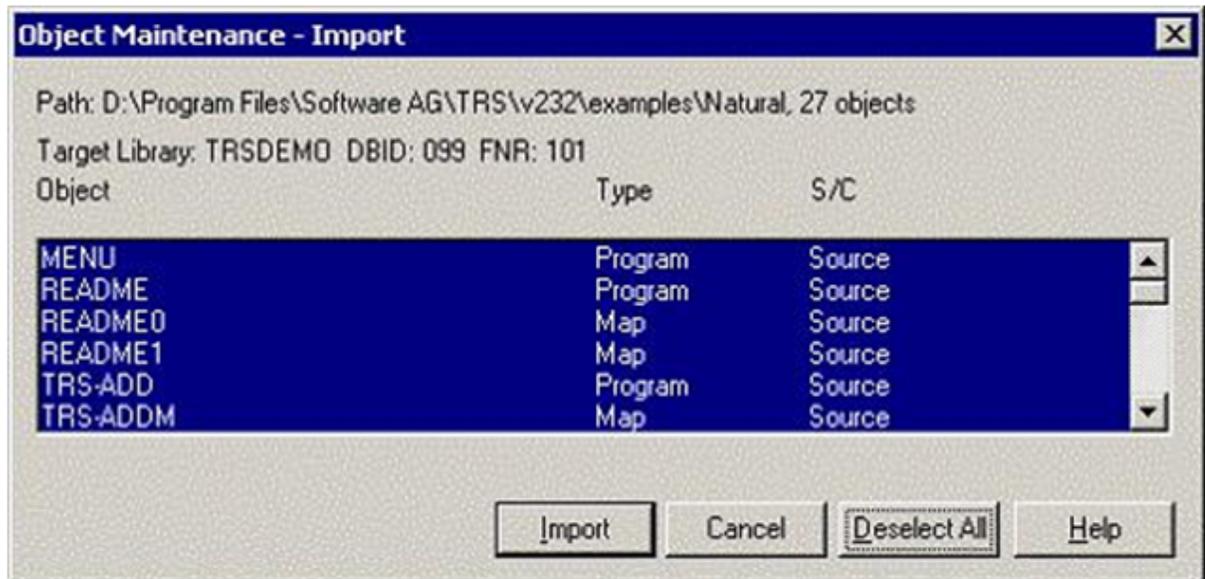
Choose **Object List** to continue.



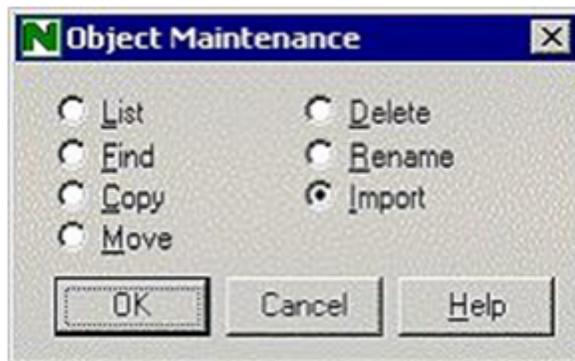
Choose **Yes** to continue.



Choose **Select All** to continue.



Choose **Import** to continue.

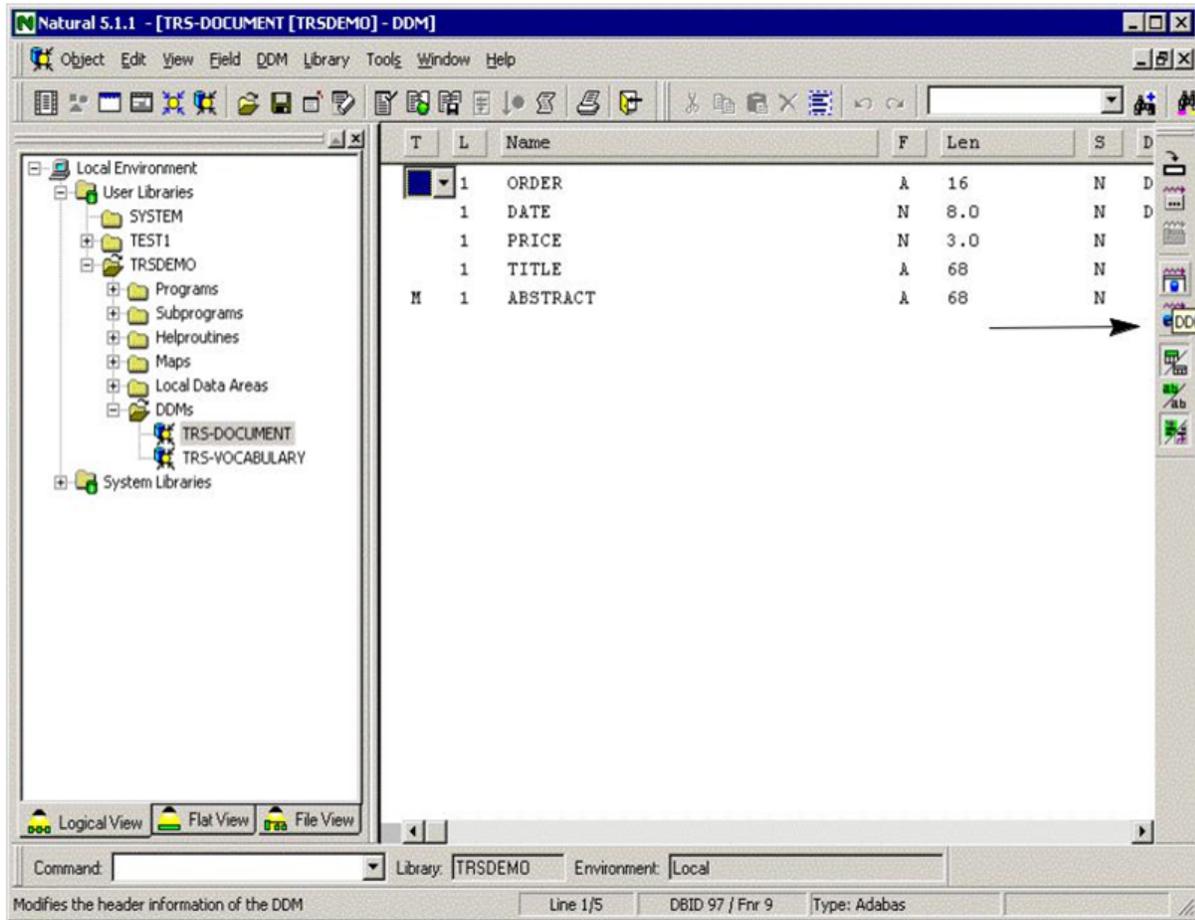


Choose **Cancel** to continue.

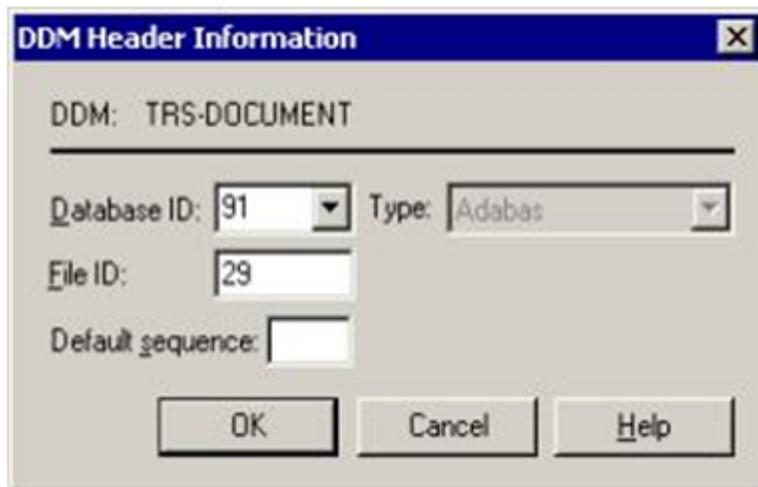
The new library TRSDEMO has now been imported.

Cataloging the Demo Application

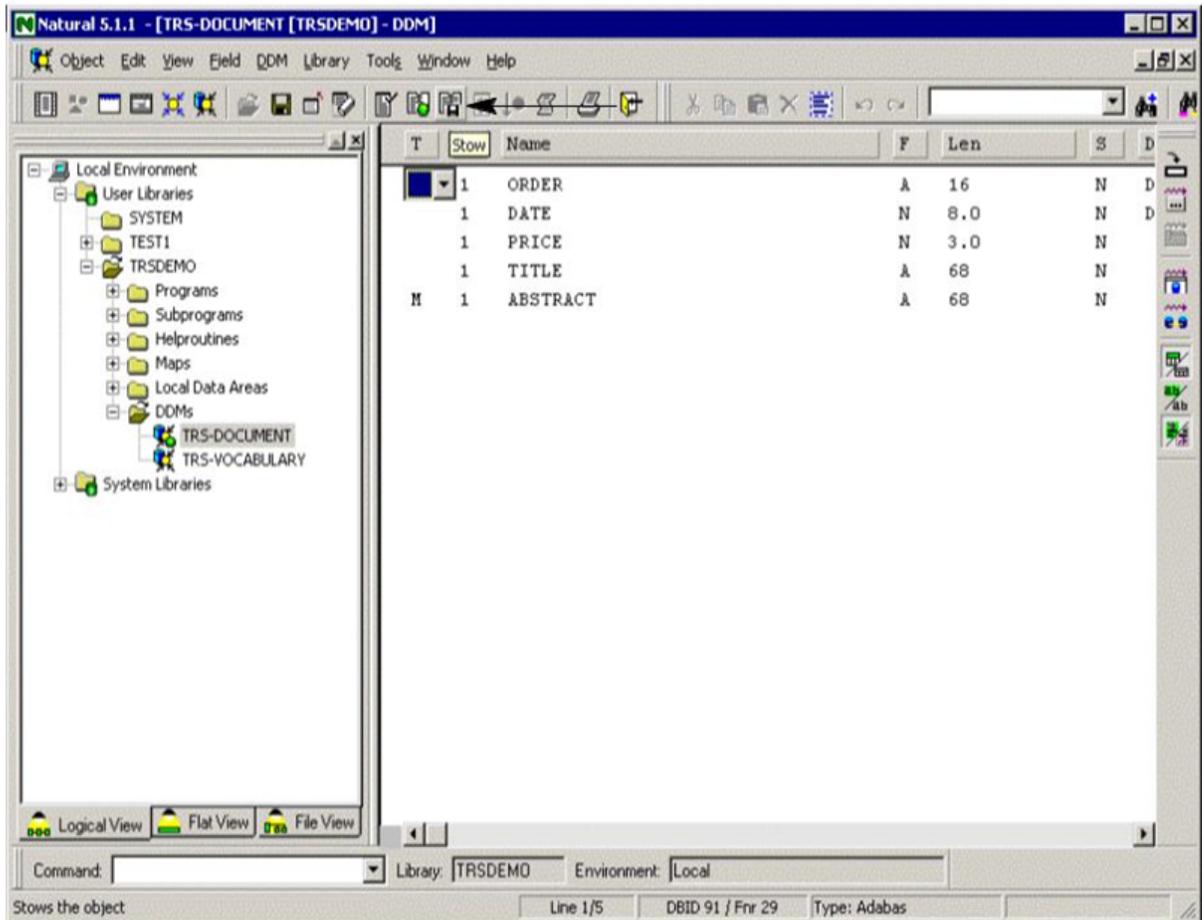
1. Open DDM TRS-DOCUMENT. Ignore Error NAT3148 and choose **OK** to continue.



Open DDM Header Information and modify DBID and FNR according to your settings.

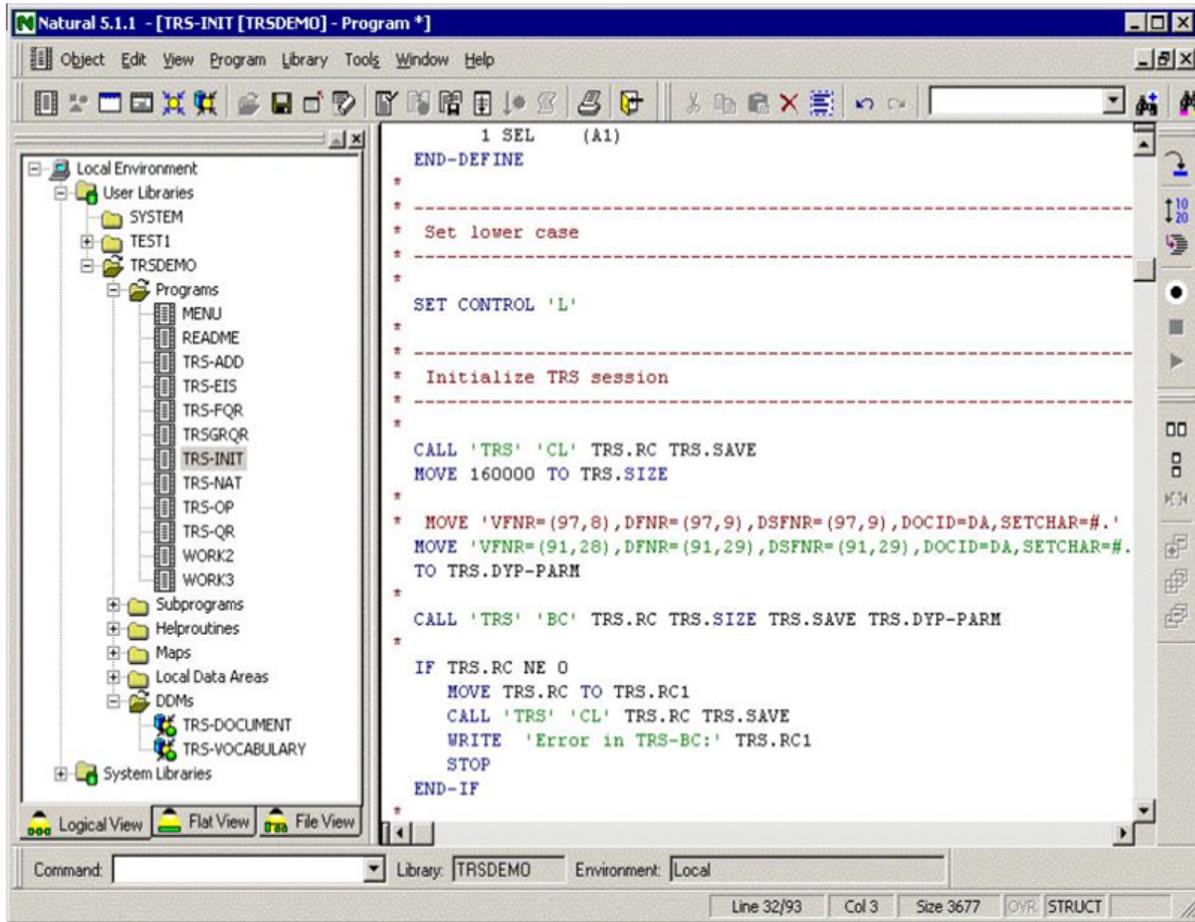


Choose **OK** to continue.

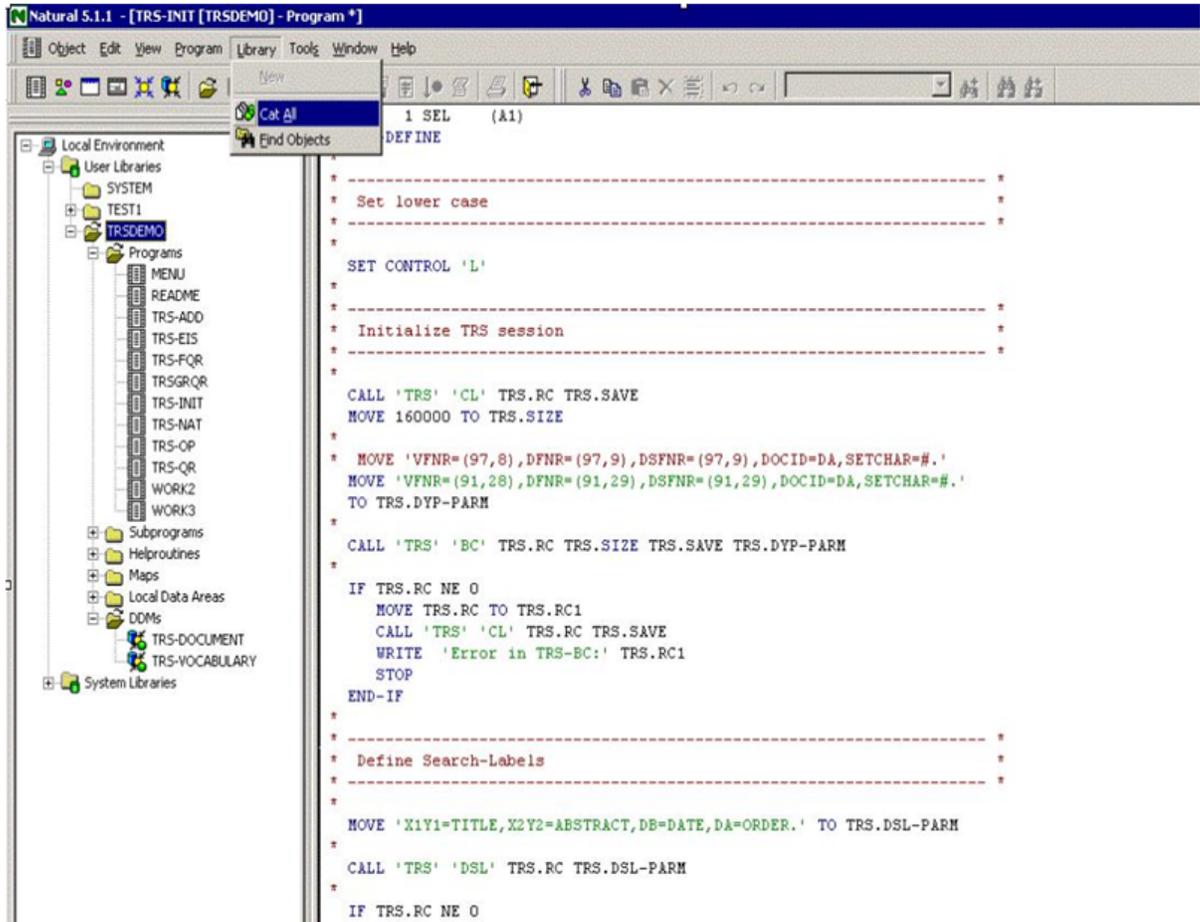


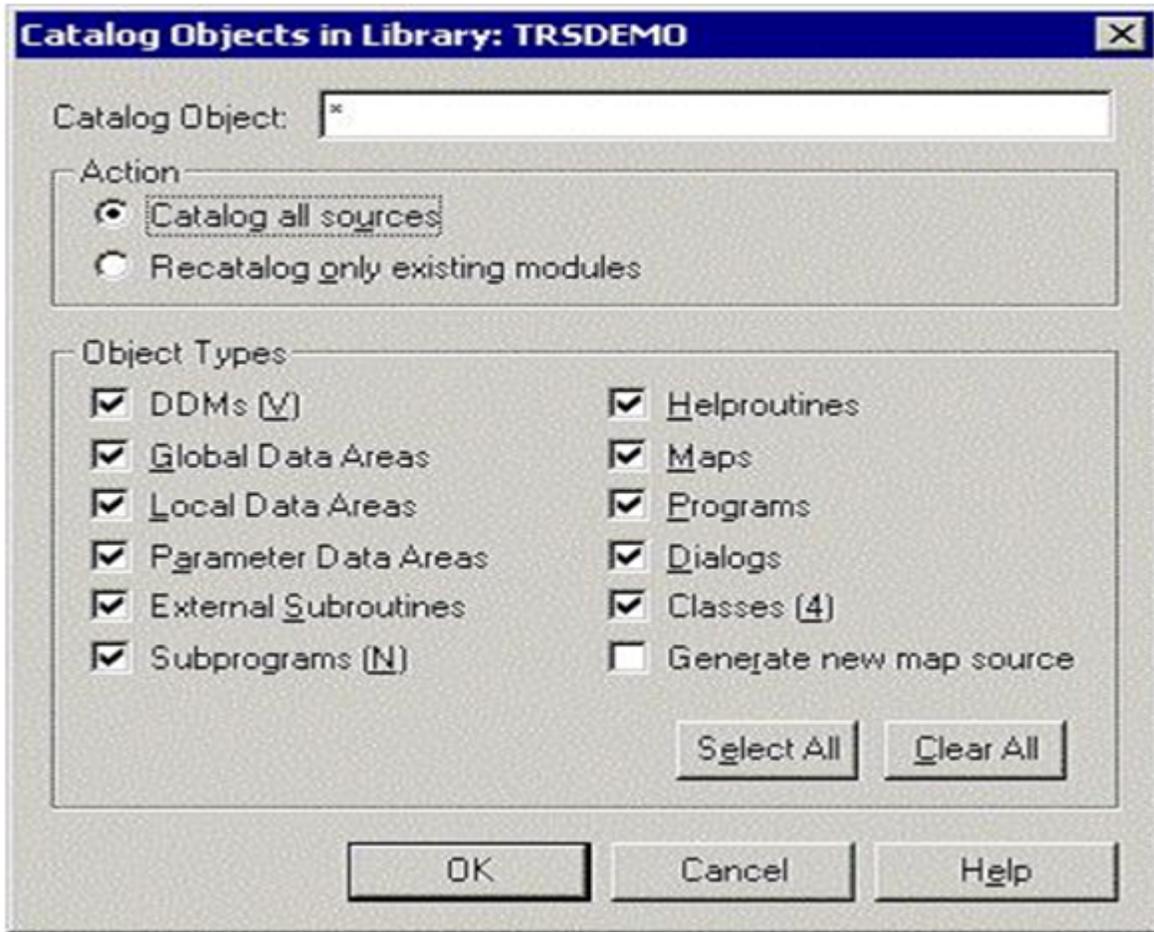
Stow the DDM.

2. Open DDM TRS-VOCABULARY and modify DBID/FNR accordingly. Stow the DDM.
3. Select program TRS-INIT and go to line 32; modify VFNR, DFNR/DSFNR according to your actual values and save the modified program (Stow will not work).

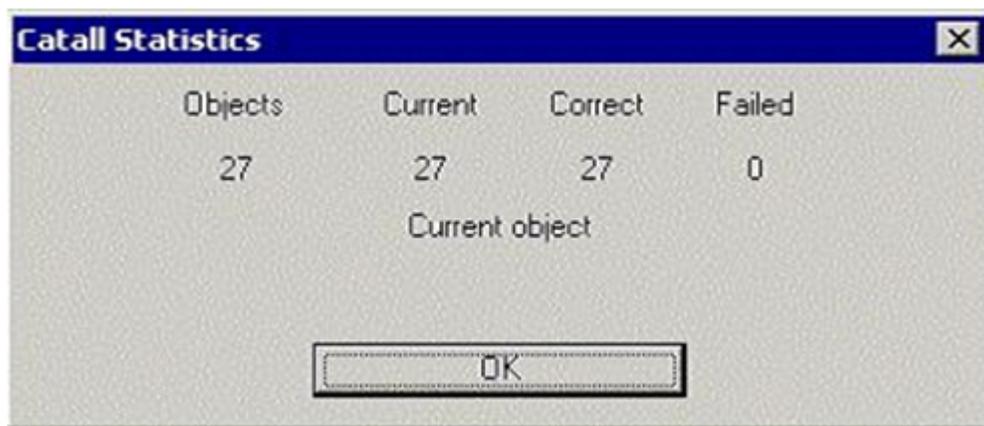


4. Select your library (TRSDemo in this example) and choose **Cat All**.





Select **Catalog all sources** and choose **OK** to continue.



Choose **OK** to continue.

Verifying the Installation

1. Start Natural.

Make sure that the appropriate environment is setup. Before starting Natural the *nattrs.dll* either has to be copied to the extlib directory of Natural or the NATUSER environment variable needs to be set to contain nattrs. For this the *trsenv.cmd* from the INSTALL subdirectory can be used.

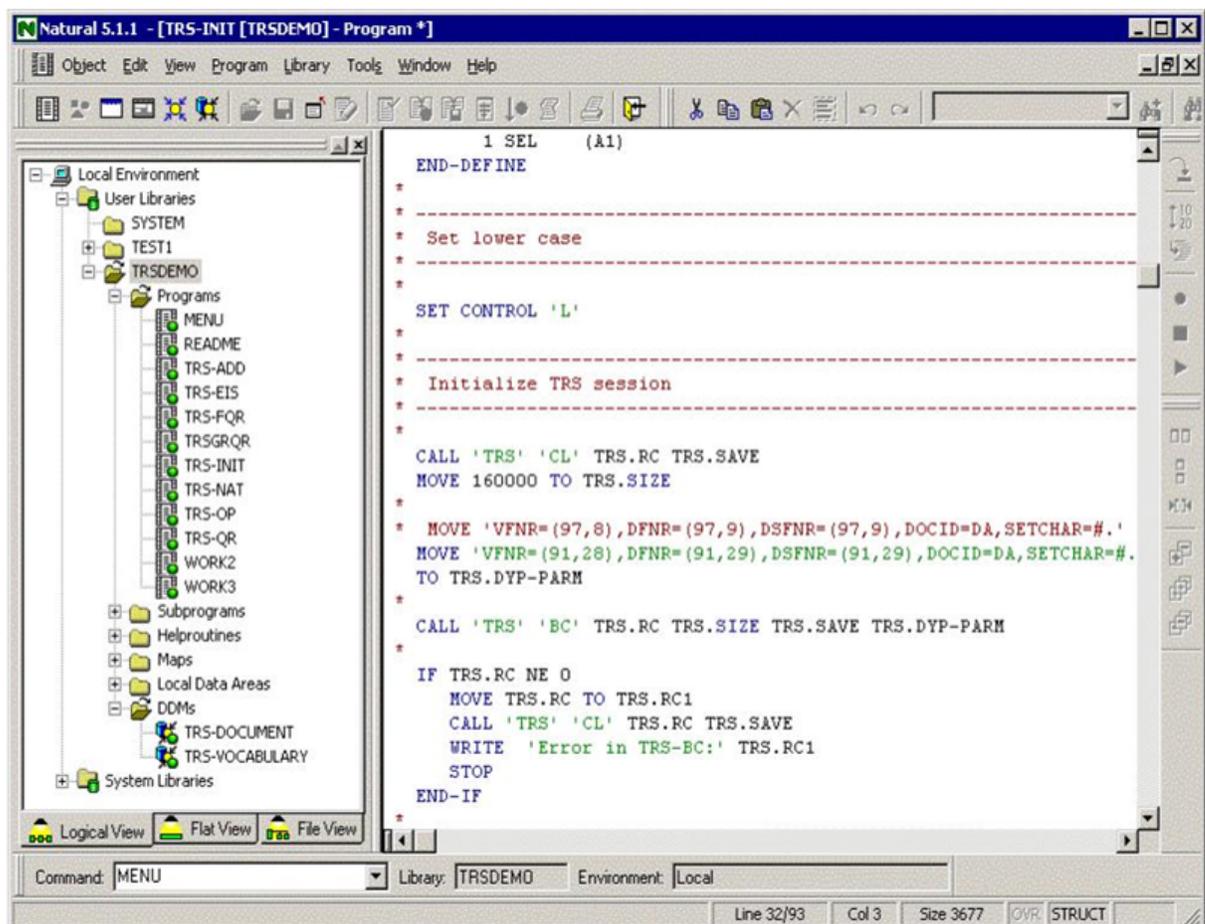
Note that Natural on Windows is a 32bit application and requires *nattrs.dll* in directory lib32. Also, in *trsenv.cmd* update the line

```
set PATH=%PATH%;%TRSDIR%\%TRSVERS%\lib
```

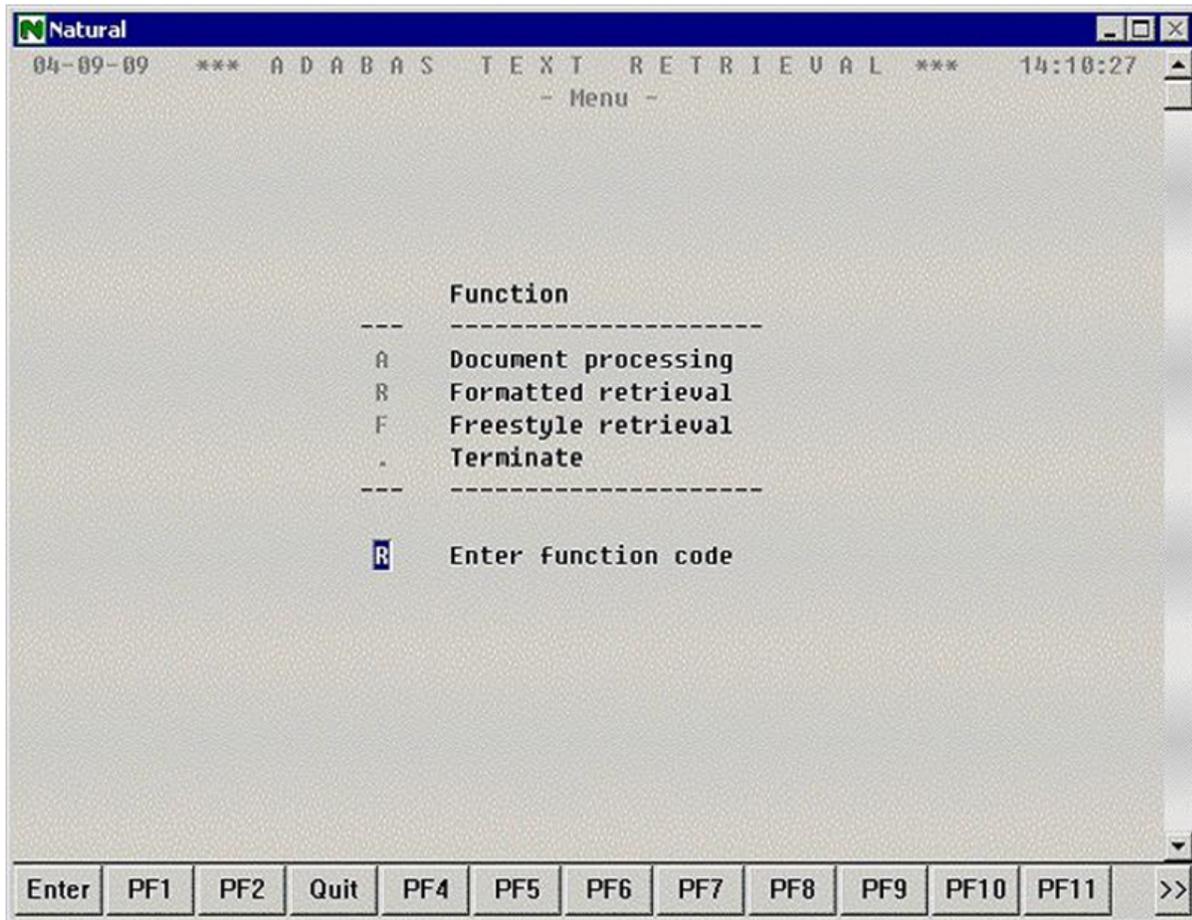
to

```
set PATH=%PATH%;%TRSDIR%\%TRSVERS%\lib32
```

2. Enter MENU in the command line.



3. Enter function code **R**.



4. For **Order**, enter

gt 0

The result should be 315.

The screenshot shows a terminal window titled 'Natural' with the following content:

```
04-09-09 *** ADABAS TEXT RETRIEVAL *** 14:13:22
- Find Document -
```

	Result
Order	
gt 0	315
Title	
<input type="text"/>	0
Abstract	
<input type="text"/>	0
Date	
<input type="text"/>	0
	Final Result: 315

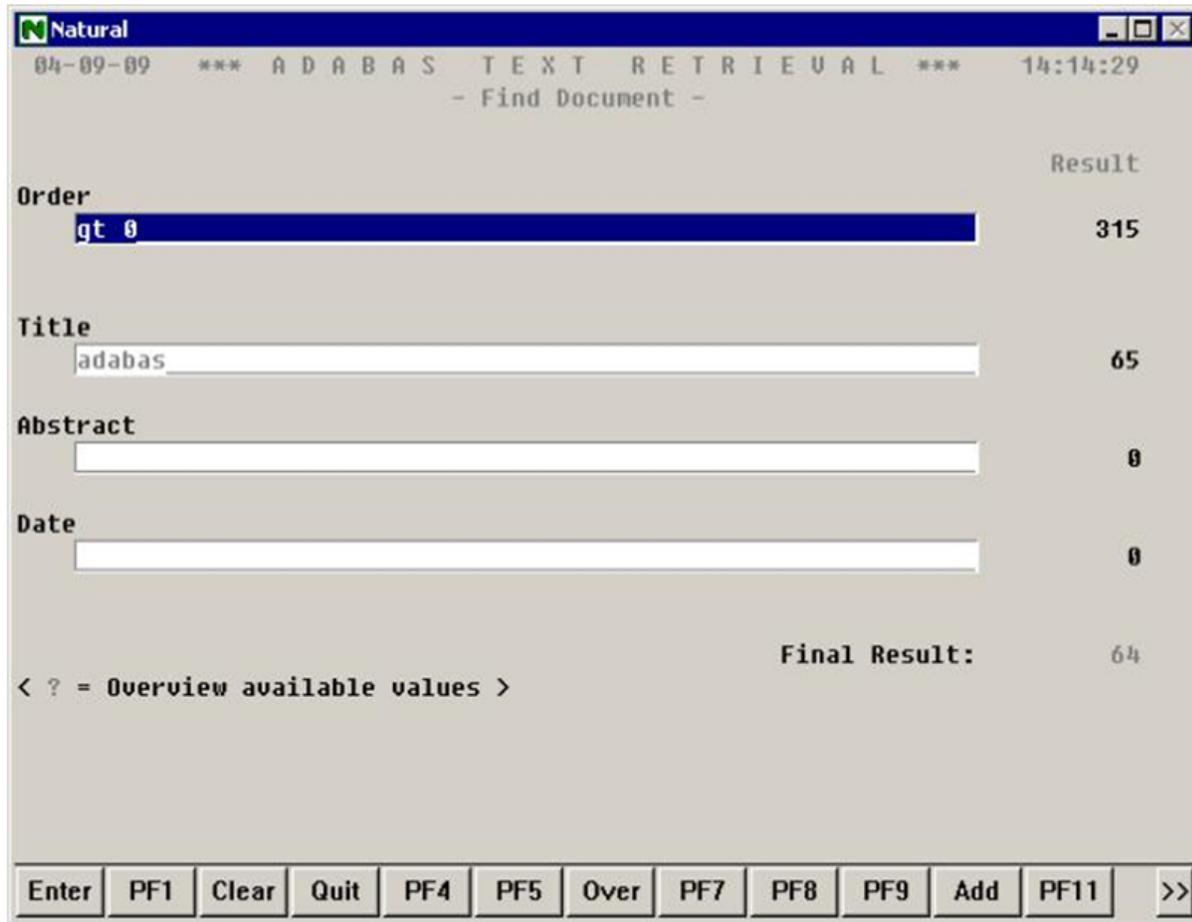
< ? = Overview available values >

Enter PF1 Clear Quit PF4 PF5 Over PF7 PF8 PF9 Add PF11 >>

5. For **Title**, enter

adabas

The result should be 65.



6. For **Abstract**, enter

ada,nat

The result should be 1.

The screenshot shows a terminal window titled "Natural" with the following content:

```
04-09-89 *** ADABAS TEXT RETRIEVAL *** 14:17:88
- Find Document -
```

	Result
Order	
gt 0	315
Title	
adabas	65
Abstract	
ada,nat	1
Date	
	0

Final Result: 1

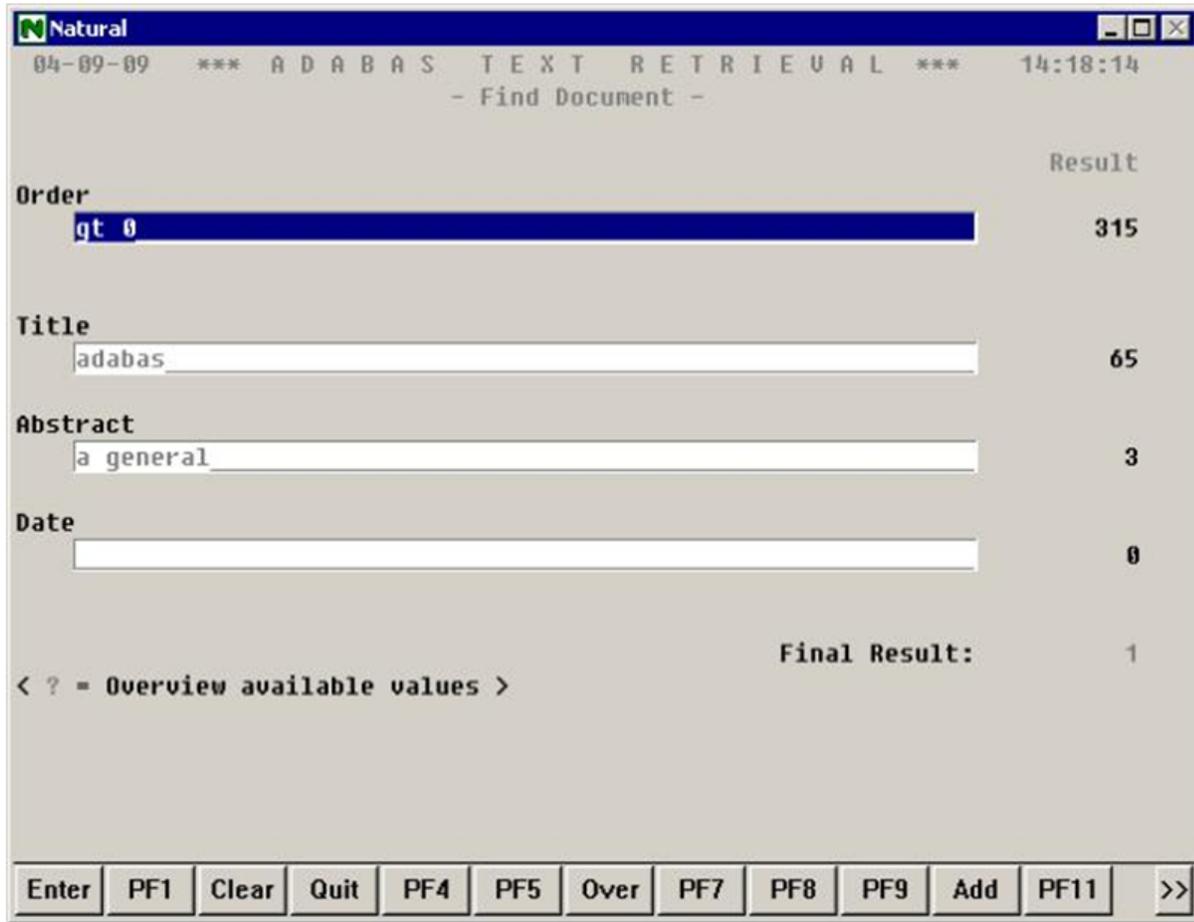
< ? = Overview available values >

Enter PF1 Clear Quit PF4 PF5 Over PF7 PF8 PF9 Add PF11 >>

7. For **Abstract**, enter

a general

The result should be 3.



8. For **Date**, enter

gt 0

The result should be 315.

The screenshot shows a terminal window titled "Natural" with the following content:

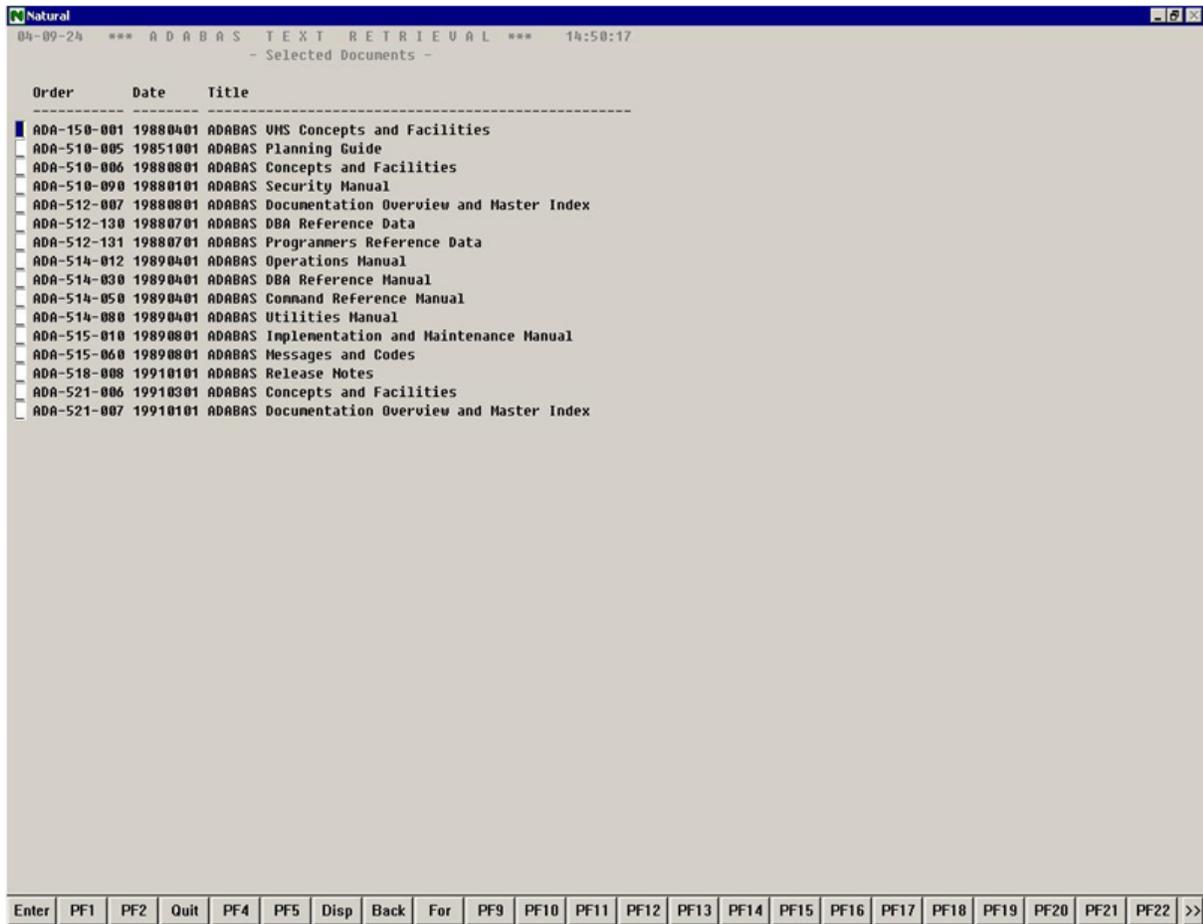
```
05-08-10 *** ADABAS TEXT RETRIEVAL *** 16:16:37
- Find Document -
```

	Result
Order	
<input type="text" value=""/>	0
Title	
<input type="text" value=""/>	0
Abstract	
<input type="text" value=""/>	0
Date	
<input type="text" value="gt 0"/>	315
Final Result:	
315	

< ? = Overview available values >

Enter PF1 Clear Quit PF4 PF5 Over PF7 PF8 PF9 Add PF11 PF12 PF13 PF14 PF15 PF16 PF17 PF18 PF19 >>

9. Choose **Over** to continue.



10. Choose **Display** to display the document.

```
Natural
04-09-24 *** ADABAS TEXT RETRIEVAL *** 14:53:57
- Show Document -

Order-Number      Date      Price
ADA-150-001      19880401  EURO

Title
ADABAS VMS Concepts and Facilities
Abstract
Provides a general introduction to ADABAS (VMS). Describes the
ADABAS database structure, data storage and access techniques, and
explains such key ADABAS terms as Associator, Data Storage, ISN,
and Descriptor. The ADABAS utilities and restart facilities are
also considered.
```

Enter	PF1	PF2	Quit	PF4	PF5	Disp	Back	For	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16	PF17	PF18	PF19	PF20	PF21	PF22	>>
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