Natural

Configuration Utility

Version 8.4.1

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ADABAS & NATURAL

This document applies to Natural Version 8.4.1 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

This documentation describes the Configuration Utility which is used to modify global and local configuration files and to create or modify parameter files.

This documentation is organized under the following headings:

Starting and Terminating the Configuration Utility	How to start and terminate the Configuration Utility.
Elements of the Configuration Utility Window	General information on the menu bar, toolbar, parameters, context menus and status bar.
Working with the Configuration Utility	How to locate and change parameters, find parameters, and save changes. How to create, copy, paste, rename, delete, export and import parameter files, and how to use help.
Overview of Configuration File Parameters	Information on the parameters that can be set in the global and local configuration files. In this section you will also find information on the ***buffer pool assignments***.
Overview of Profile Parameters	Information on the profile parameters that can be set in the parameter files.
Invoking Natural with an Alternative Parameter File	How to invoke Natural Studio and Natural Runtime with your own customized parameter file.

See also: *Profile Parameter Usage* in the *Operations* documentation and *Parameter Reference*.

This utility is used to set the parameters in a Windows environment. If you are using Natural for Windows for remote development in conjunction with Natural's Single Point of Development (SPoD), see also the sections referring to parameter usage in the corresponding platform-specific *Operations* documentation.

Notes:

1. Parameter files are upward-compatible, but not downward-compatible. Once you have created a parameter file in a higher version of the Configuration Utility and you try to read it with a lower version, an error message will be displayed. To be able to read the file, **export** the file to the higher version and then **import** this file to the lower version of the Configuration Utility.
2. Parameter files are not compatible on different platforms. Therefore, it is not possible to copy them from one platform to another (for example, from Windows to UNIX or OpenVMS). If you want to use a parameter file on a different platform, **export** the file and then **import** this file on the target platform.

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Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
`Monospace font`	Identifies service names and locations in the format *`folder.subfolder.service`*, APIs, Java classes, methods, properties.
`Italic`	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 (...).

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2 Starting and Terminating the Configuration Utility

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Starting the Configuration Utility

A Natural folder automatically appears in the **Programs** folder of the **Start** menu after Natural has been installed. It contains the shortcuts for Natural, including the Natural Configuration Utility and Help. Several shortcuts are also available on your Windows desktop.

To start the Configuration Utility

- From the Windows **Start** menu, choose **All Programs > Software AG > Administration > Natural Configuration Utility** *n . n*.

  Note: The **Start** menu group name (by default, this is "Software AG") can be changed during the installation.

  The **Natural Configuration Utility** window appears. See *Elements of the Configuration Utility Window* for further information.

Terminating the Configuration Utility

When you terminate the Configuration Utility and you have not yet saved your changes, a dialog appears for each changed file asking whether you want to save now.

To terminate the Configuration Utility

- From the **File** menu, choose **Exit**.

  Or:

  Press ALT+F4.

  Or:

  From the Control menu, choose **Close**.

  Or:

  Choose the corresponding standard button at the right of the title bar.

Performing a Function while Starting the Configuration Utility

You can perform several functions automatically when starting the Configuration Utility.

Create a shortcut on your desktop for starting the Configuration Utility and invoke the properties of the shortcut. You can then specify the following functions after *natparm.exe* in the **Target** text box.

Function	Description
`exit`	**Terminates** the Configuration Utility.
`import=`*`parameter-file`*	**Imports** the specified parameter file.
`export=`*`parameter-file`*	**Exports** the specified parameter file.
`parm=`*`parameter-file`*	Selects the specified parameter file in the tree.
`save`	**Saves** a parameter file.
`save=`*`new-parameter-file-name`*	**Saves** a parameter file under a different name.

Multiple functions can be specified one after the other (see the examples below).

Examples

- Invoke the Configuration Utility and select the specified parameter file in the tree so that it can be edited immediately:

```
natparm.exe parm=parameter-file
```

- Invoke the Configuration Utility, select the specified parameter file in the tree, and save it as a new file with the specified name:

```
natparm.exe parm=parameter-file save=new-parameter-file-name
```

- Invoke the Configuration Utility, load and export the specified parameter file and terminate the Configuration Utility:

```
natparm.exe parm=parameter-file export=parameter-file exit
```

- Invoke the Configuration Utility, import the specified parameter file and save it under the name of the imported file:

```
natparm.exe import=parameter-file save
```

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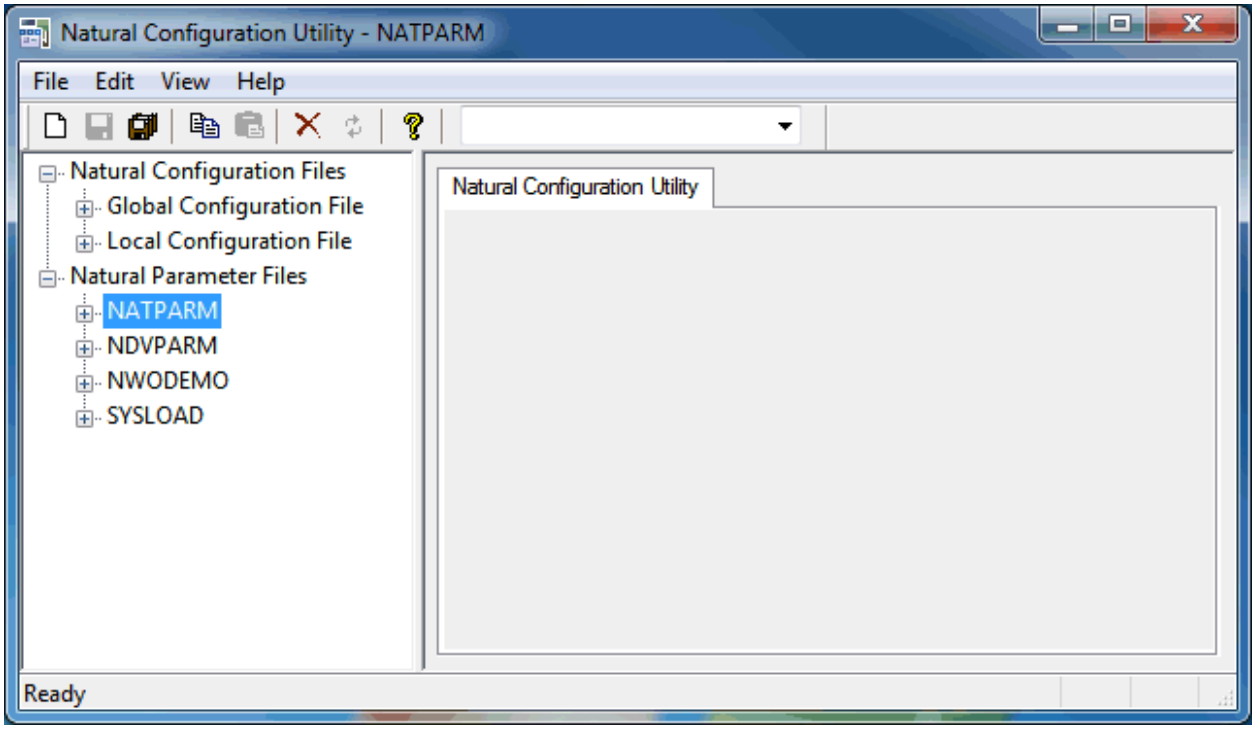
When you start the Configuration Utility, the name of the parameter file which is currently active is shown in the title bar. It is also selected in the tree.



Menu Bar

The following menus are available:

Menu	Using the commands in this menu, you can ...
File	Manage (for example, create or delete) parameter files and save the change to all parameter and configuration files.
Edit	Copy and paste parameter files, and search for parameters.
View	Show or hide the toolbar and status bar.
Help	Invoke the online documentation and display information about the Configuration Utility.

Many commands can also be chosen from a **toolbar** and/or **context menu**.

Toolbar

You can execute the most important functions using a toolbar button. When you move the mouse pointer over a toolbar, a brief description for the button is shown in the status bar.

The following toolbar buttons are available:

- **Create new parameter file**
- **Save selected parameter or configuration file**
- **Save all files**
- **Copy selected parameter file**
- **Paste copied parameter file**
- **Delete selected parameter file**
- **Restore last saved version of selected parameter or configuration file**
- **Display help**

The drop-down list box in the toolbar enables you to search for a specific parameter. See *Finding a Parameter*.

To switch the toolbar display on and off

- From the **View** menu, choose **Toolbar**.

  A check mark is shown next to this menu command when the toolbar is displayed in the Configuration Utility window.

Tree

The tree on the left side of the Configuration Utility window contains nodes for two different types of files:

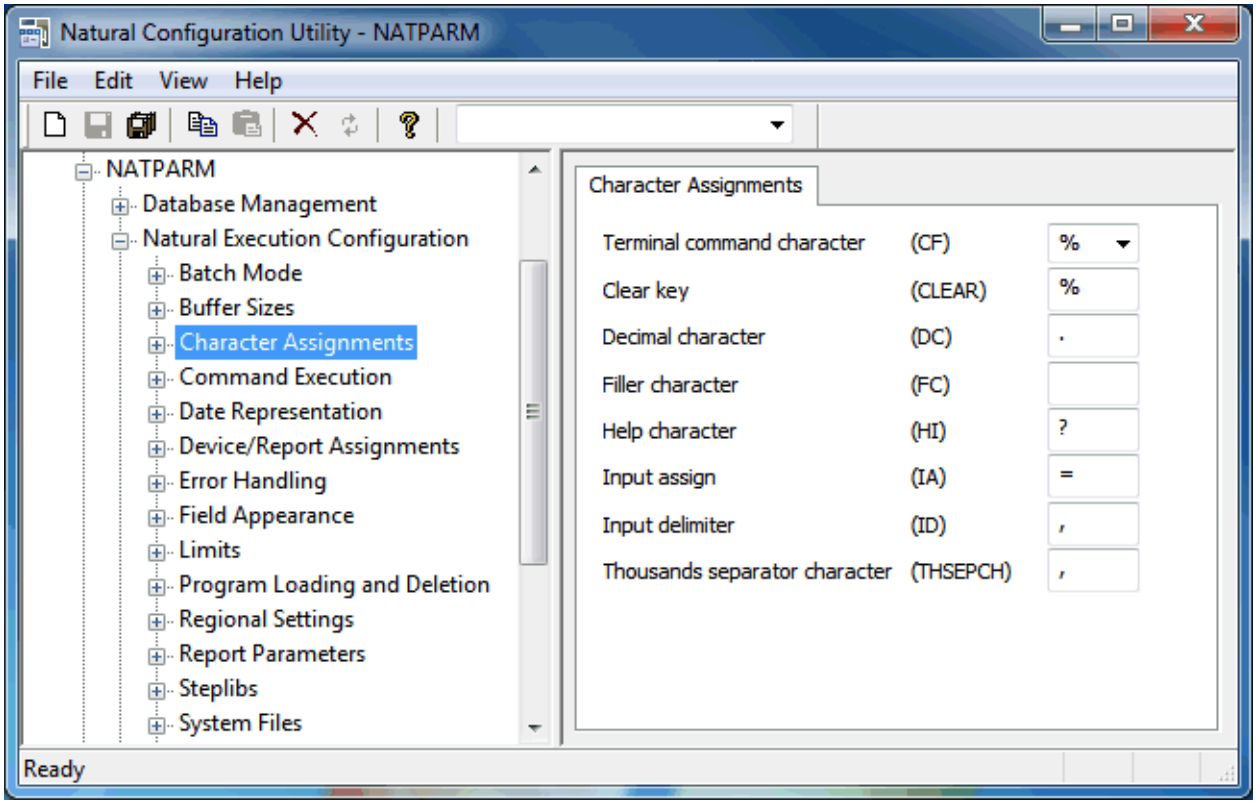
- **Natural Configuration Files**
  When you expand this node, you can modify global and local configuration files. See *Overview of Configuration File Parameters*.

- **Natural Parameter Files**
  When you expand this node, you can modify the profile parameters of the different parameter files. See *Overview of Profile Parameters*.

For information on how to change the parameter assignments and on how to create your own parameter files, see *Working with the Configuration Utility*.

Parameters

When you select a node for a category in the tree, the parameters are shown on the right of the window. In case of a parameter file, the names of the Natural profile parameters are shown in parenthesis on the right of the window, behind the label of the corresponding control. Example:



Context Menus

Context menus provide for selection the commands that are valid in the current context. The content of a context menu depends on the currently selected node in the Configuration Utility window.

To invoke a context menu

1 Select the node for which you want to invoke a context menu.

2 Click the right mouse button.

The context menu appears and you can now choose the required command.

Status Bar

The status bar is the horizontal information line at the bottom of the Configuration Utility window. It shows short help texts for the commands in the menu bar, toolbar and context menu.

To switch the status bar display on and off

- From the **View** menu, choose **Status Bar**.

  A check mark is shown next to this menu command when the status bar is displayed in the Configuration Utility window.

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Creating a New Parameter File

You can create your own parameter files and customize them to your requirements. You can then invoke Natural with one of these parameter files. See *Invoking Natural with an Alternative Parameter File* for further information.

Initially, each parameter file that you create contains Natural's default settings.

Tip: It is recommended that you create your own parameter file instead of modifying the default parameter file `NATPARM` which is delivered with Natural.

To create a new parameter file

1 From the **File** menu, choose **New**.

Or:

Choose the following toolbar button:

Or:

Press CTRL+N.

A new parameter file with the default name "NEW*n*" is now shown in the tree. The default name is selected so that you can immediately enter a new name. Any text you enter automatically deletes the selection.

2 Enter a name for the new parameter file.

3 Press ENTER.

Or:

Click any other position in the tree.

The parameters in the new file are set to the default values. You can set all parameters as required.

Note: You can also create a new parameter file by **copying** an existing file or by **saving** an existing file under a new name.

Locating and Changing a Parameter

You can locate a parameter in different ways:

- If you know in which parameter group and category the parameter can be found, you can expand the tree and locate the parameter as described below.
- If you do not know the parameter group and category, you can search for the parameter. See *Finding a Parameter*.

To locate and change a parameter

1. Expand the node for a global or local configuration file or for a specific parameter file.
2. For parameter files: expand the node for a parameter group (for example, **Natural Execution Configuration**).
3. Select the category containing the parameter that you want to change (for example, **Buffer Sizes**).

   The parameters are shown on the right of the window. In the case of a parameter file, the names of the Natural profile parameters are shown in parenthesis on the right of the window, behind the label of the corresponding control.

   Or:

   Expand the node for a category.

   Descriptions for the parameters are shown in the tree, below the node. When you select a description in the tree, all parameters for this group are shown on the right of the window. For the description that has been selected in the tree, the corresponding parameter is also selected on the right of the window and can be modified immediately.
4. Set the parameter to the required value. See *Overview of Configuration File Parameters* or *Overview of Profile Parameters* for further information.

   Notes:

   1. The following applies for check boxes: when a check box is selected, the corresponding parameter is set to "ON"; when a check box is not selected, the corresponding parameter is set to "OFF".
   2. A browse button, which shows three dots, is available for several parameters. When you choose this button, you can select the required setting(s) in a dialog box.

   When a parameter has been changed, an asterisk (*) appears next to the corresponding node name in the tree.

5 Save your changes as described in *Saving the Changes*.

Finding a Parameter

If you do not know in which category a parameter can be found, you can search for it. The search is always performed in the currently selected parameter file, global configuration file or local configuration file.

To find a parameter

1 Select a node which belongs to the parameter file or configuration file in which you want to search for the parameter.

2 From the **Edit** menu, choose **Find**.

Or:

Press CTRL+F.

When the toolbar is currently not shown, it is automatically activated and the drop-down list box containing the parameters is opened.

Note: When the toolbar is already visible, you can simply open the drop-down list box, without having to use the above command.

3 Select the parameter from the drop-down list box in the toolbar.

Note: When a configuration file is currently selected, you can select a category (for example, **Printer Profiles** which belongs to the global configuration file) from the drop-down list box.

The category containing the selected parameter is shown on the right of the window.

Saving the Changes

Different save commands are available. An asterisk (*) appears next to each node name in the tree where a parameter has been changed.

To save the changes for the selected configuration file or parameter file

1 Select the node for the file that you want to save.

2 From the **File** menu, choose **Save**.

Or:

Choose the following toolbar button:

Or:

Press CTRL+S.

To save a parameter file under a different name

1 Select the node for the parameter file that you want to save under a different name.

2 From the **File** menu, choose **Save As**.

A new parameter file with the default name "NEW*n*" is now shown in the tree. The default name is selected so that you can immediately enter a new name. Any text you enter deletes the selection automatically.

3 Enter a name for the new parameter file.

4 Press ENTER.

Or:

Click any other position in the tree.

To save the changes to all files

- From the **File** menu, choose **Save All**.

Or:

Choose the following toolbar button:

Restoring the Last Saved Version

It is possible to discard your changes and return to the last saved version.

To return to the last saved version of the selected configuration file or parameter file

1 Select the node for the file for which you want to discard your changes.

2 From the **File** menu, choose **Restore Saved**.

Or:

Choose the following toolbar button:

The settings of the last saved version are restored.

Copying and Pasting a Parameter File

You can also create a new parameter file by copying an existing file and pasting it in the tree.

To create a new parameter file

1 Select the node for the parameter file that you want to copy.

2 From the **Edit** menu, choose **Copy**.

Or:

Choose the following toolbar button:

Or:

Press CTRL+C.

3 From the **Edit** menu, choose **Paste**.

Or:

Choose the following toolbar button:

Or:

Press CTRL+V.

A new parameter file with the default name "NEW*n*" is now shown in the tree. The default name is selected so that you can immediately enter a new name. Any text you enter automatically deletes the selection.

4 Enter a name for the new parameter file.

5 Press ENTER.

Or:

Click any other position in the tree.

You can now set all parameters as required.

Renaming a Parameter File

You can rename the parameter files in the tree.

When you invoke Natural with a parameter file that has been renamed, make sure to changed its name in the corresponding shortcuts. See *Invoking Natural with an Alternative Parameter File* for further information.

To rename a parameter file

1 Select the node for the parameter file that you want to rename.

2 From the **File** menu, choose **Rename**.

Or:

Press F2.

The name is selected so that you can immediately enter a new name. Any text you enter automatically deletes the selection.

3 Enter a new name for the parameter file.

4 Press ENTER.

Or:

Click any other position in the tree.

Deleting a Parameter File

You can delete the parameter files in the tree.

When you invoke Natural with a parameter file that has been deleted, make sure to adapt the corresponding shortcuts. See *Invoking Natural with an Alternative Parameter File* for further information.

To delete a parameter file

1 Select the node for the parameter file that you want to delete.

2 From the **File** menu, choose **Delete**.

   Or:

   Choose the following toolbar button:

   Or:

   Press DEL.

Exporting a Parameter File

When you export a parameter file, a text file is generated which contains the values of the current parameter file. Such a text file can be used on Windows, UNIX and OpenVMS platforms; to use it there, you have to **import** it.

To export a parameter file

1 Select the node for the parameter file that you want to export.

2 From the **File** menu, choose **Export**.

   The **Export** dialog box appears. The name of the selected parameter file is proposed as the file name. The extension of the resulting file is "LST".

3 Optional. Specify another file name. You can also select another folder.

4 Choose the **Save** button to export the file.

   If you have not selected another folder, the file is stored in the Natural folder which has been defined for the temporary files. See also *Installation Assignments*.

Importing a Parameter File

You can import a parameter file which has previously been **exported**. The import generates a binary parameter file from the text file with the extension "LST" which has been generated during the export.

To import a parameter file

1 From the **File** menu, choose **Import**.

The **Import** dialog box appears.

2 Select the file that is to be imported. The extension of such a file is "LST".

3 Choose the **Open** button.

When a file with the same name does not yet exist, the imported parameter file is shown in the tree.

When a file with the same name already exists, you are asked whether you want to overwrite the existing file. When you choose not to overwrite the existing file, the new file is created with the name "NEW*n*".

Using Help

The **Help** menu provides different ways of accessing help for the Configuration Utility.

To access the Configuration Utility documentation

- From the **Help** menu, choose **Help Contents**.

  Or:

  Choose the following toolbar button:

To invoke context-sensitive help

1 Select the node or parameter for which you want to invoke context-sensitive help.

2 From the **Help** menu, choose **Context Help**.

Or:

Press F1.

To display information about the Configuration Utility

- From the **Help** menu, choose **About Natural Configuration Utility**.

  A dialog box appears, displaying information such as the current version number.

5 Overview of Configuration File Parameters

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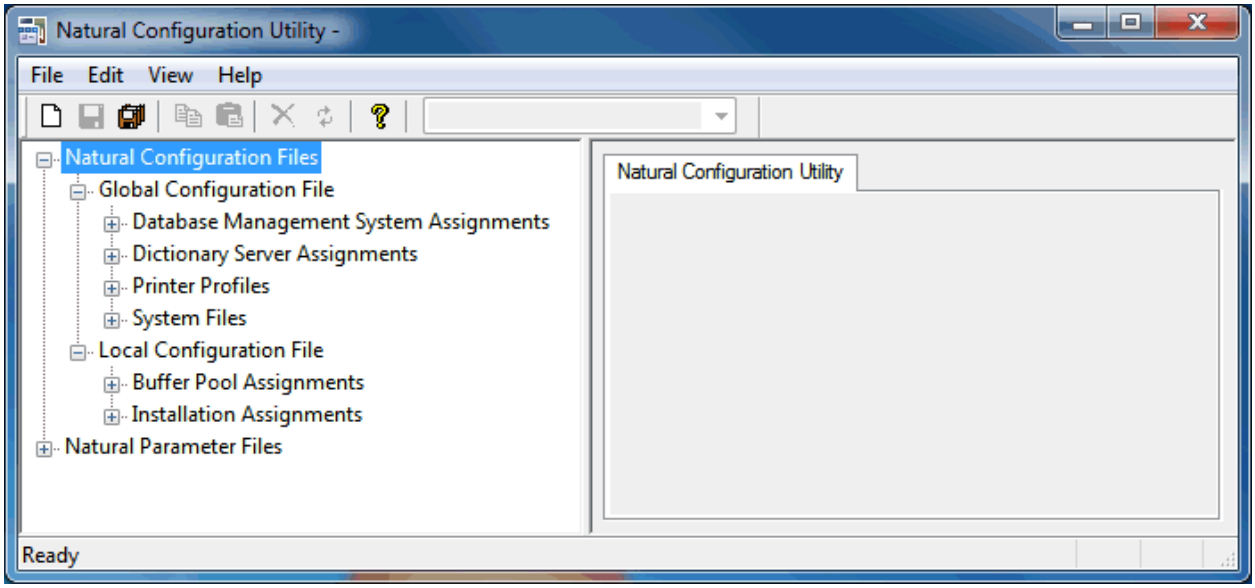
This chapter provides information on the parameters that can be set in the global and local configuration files.



The configuration files should only be modified by an administrator. They should only be changed with the Configuration Utility.

Global Configuration File

This parameter group contains the following categories:

- Database Management System Assignments
- Dictionary Server Assignments
- Printer Profiles
- System Files

Database Management System Assignments

The parameters which apply to the database management system assignments are arranged on the following pages:

- DBMS Assignments
- DBMS Tracing
- SQL Assignments

- XML Assignments

DBMS Assignments

A table is shown which is used to define the database ID with which the database is mapped in the DDM.

When DBMS assignments have already been defined, they are shown in the table.

DBID

The database ID.

Note: If you are using DDMs where the database ID is set to "0", a separate entry where the database ID is also set to "0" must exist, with the corresponding database type specified. This entry is used at compilation time in order to generate the corresponding database statements into the generated program (GP).

Type

Since the types of all databases which are to be accessed by Natural must be defined in the global configuration file, specify one of the following values for each database ID:

Value	Description
ADA	Adabas database server (this is the default).
ADA2	Adabas database server. This database type is provided for use with Adabas as of version 6 on Open Systems and Adabas as of version 8 on mainframes. In particular, it supports Adabas LA fields, Adabas large object fields and Natural view sizes greater than 64 KB. See also *Adabas Database Management Interfaces ADA and ADA2* in the *Programming Guide*.
SQL	Any SQL database that can be accessed using Entire Access, which is Software AG's common interface to various SQL database systems.
XML	Tamino database server.

Important: You must not define a database type for a DBID which has already been assigned to a system file in the global configuration file (see ***System Files***). If you do so, an error message will be issued at Natural startup, indicating an inconsistency in the system file setting and an error when reading the database assignments.

At compilation time, the profile parameter `UDB` is not used to determine the database type. `UDB` is only used at runtime to determine the database type. The database types must be the same at compilation time and at runtime.

Exception: For compatibility reasons, it is possible to use database type ADA at compilation time and ADA2 at runtime.

Parameter

Applies only to databases of the following types:

Type	Description
SQL	If your database type is SQL, specify the string (DBMS parameter) that is to be used to establish the connection to the database system with which you want to work. See *Natural and Entire Access* in the *Database Management System Interfaces* documentation for further information on how to access SQL-type database systems.
XML	If your database system is XML (Tamino), enter the URL of the Tamino database including the name of the collection which is to be accessed in this database. See *Natural for Tamino* in the *Database Management System Interfaces* documentation for further information on how to access Tamino databases.

DBMS Tracing

The settings for **Adabas Trace**, **SQL Trace** and **XML Trace** are for error diagnostics reasons. They should only be filled out when requested by Software AG support. Software AG support will provide valid values in this case.

SQL Assignments

The following tables are provided:

- **SQL date/time conversion**
  This table is used to specify the conversion masks for Entire Access.

  As Natural has only one specific time format, you must decide how this format should be interpreted in the context of SQL database access. There are several possibilities, however, there is only one possibility per SQL-type DBID which can be specified here.

  DBID
  Cannot be edited. Entries for the SQL-type databases defined in the **DBMS Assignments** table (see above) are automatically provided.

  Mask
  The value specifies the configuration for Entire Access. It also specifies the format used to retrieve the SQL information for `DATE`, `TIME` and `DATETIME` into fields of Natural data format A. The mask should match the RDBMS-specific configuration for the `DATE`, `TIME` or `DATETIME` character string representation.

  Date
  This mask (usually a sub-string of the `Mask` value) specifies the character string representation into which the fields of Natural data format D are converted during update or retrieval of SQL `DATE` columns.

  Time
  This mask (usually a sub-string of the `Mask` value) specifies the character string representation into which the fields of Natural data format T are converted during update or retrieval of SQL `TIME` or `DATETIME` columns.

Remark

You can enter your remarks here, for example, to document how the SQL `DATE` and `TIME` character string representation is configured on the database site.

For database systems that support a common data type both for date and for time, the hash character (#) can be used in the mask to skip non-relevant portions of `DATETIME` strings. For example, the following settings of the masks may be appropriate for the Microsoft SQL Server which supports a common `DATETIME` data type for date and time values:

```
Mask = YYYYMMDD HH:II:SS
Date = YYYYMMDD
Time = ##########HH:II:SS
```

- **SQL authorization**

This table is used to specify user IDs and passwords for an automatic login to an SQL database.

DBID

Cannot be edited. Entries for the SQL-type databases defined in the **DBMS Assignments** table (see above) are automatically provided.

Auto Login

When the check box in this column is selected, a non-interactive login is performed to the database by using the values from this table row. Furthermore, the evaluations of the environment variables `SQL_DATABASE_LOGIN`, `SQL_DATABASE_USER`, `SQL_DATABASE_PASSWORD`, `SQL_OS_USER` and `SQL_OS_PASSWORD` are suppressed.

Type

To define the kind of authentication to be performed for this DBID, specify one of the following values:

Value	Description
DB	Database authentication.
OS	Operating system authentication.
DB_OS	Both, database authentication and operating system authentication.

Please note that it depends on the database system which kind of authentication is available. Furthermore, there are restrictions concerning operating system authentication in Entire Access. See the Entire Access documentation for a more detailed description.

DB User

The user ID for database authentication.

DB Password

The password for database authentication.

OS User

The user ID for operating system authentication.

OS Password
The password for operating system authentication.

XML Assignments

A table is shown which is used to specify user IDs and passwords for an automatic login to a Tamino database.

DBID
Cannot be edited. Entries for the XML-type databases defined in the **DBMS Assignments** table (see above) are automatically provided.

Auto Login
When the check box in this column is selected, a non-interactive login is performed to the database by using the values from this table row. Furthermore, the evaluations of the environment variables `XML_DB_USER`, `XML_DB_PASSWORD`, `XML_HTTP_USER` and `XML_HTTP_PASSWORD` are suppressed.

DB User
The user ID for Tamino database authentication.

DB Password
The password for Tamino database authentication.

HTTP User
The user ID for web server authentication.

HTTP Password
The password for web server authentication.

Dictionary Server Assignments

With dictionary servers, you can access free rules and automatic rules maintained in Predict once you have access to Predict on a mainframe or UNIX host.

Note: A dictionary server (also referred to as Predict server) can be any Natural RPC server running in the same environment that Predict is installed in.

You can assign so-called dictionary servers (a free rule server and an automatic rule server) to one common logical server name. It is possible to define more than one logical server name where each name represents a different pair of free rule server and automatic rule server. The servers to be assigned can be located on different nodes.

In the global configuration file, you define all dictionary servers that are available for selection in the parameter file. The name of the logical server that is to be used must then be defined in the parameter file. See ***Remote Dictionary Access*** in the *Overview of Profile Parameters*.

You can specify the following information:

Name

Specify the name for a logical dictionary server. You can then specify the required information for the free rule server and automatic rule server in the corresponding text boxes (see below).

When you select the name of a previously defined a logical dictionary server from this drop-down list box, the text boxes for the free rule server and automatic rule server show the previously defined information for this logical dictionary server. You can modify or delete this assignment.

Free rule server

Specify the server name and node name for the server that is to be used for remote access to Predict free rules.

Automatic rule server

Specify the server name and node name for the server that is to be used for remote access to Predict automatic rules.

Printer Profiles

Printer profiles are used for printing additional reports, for hardcopies and for batch output generation. They recognize particular Natural field attributes and insert the appropriate control sequences (see below) as defined in the profile.

With the ability to translate Natural field attributes into escape sequences, you can control your printer in various ways by using the right profile name, and you can use the print features of a given device by using simple attributes in Natural programs.

Each profile that you define can be assigned to a Natural report number either statically by using the Configuration Utility (see ***Device/Report Assignments***), or dynamically by using the `DEFINE PRINTER` statement within a Natural program.

The parameters which apply to the printer profiles are arranged on the following pages:

- Printer Profiles
- TTY Printer Profiles
- GUI Printer Profiles

Printer Profiles

You can specify the following information:

Name

The name of the printer profile.

Method

You can choose the button in this column to toggle the print method for this printer profile.

Method	Description
TTY	Print data (text files) are sent directly to the spooler “as is”. Any printer command sequences need to be specified explicitly, either dynamically (as program data) or statically (via a printer profile). As such, the application has full control over the command sequences. This is a low-level print method that by-passes the printer driver. If you want to use this method, you have to specify all required information on the **TTY Printer Profiles** page.
GUI	Report data (page descriptions) are passed to the printer driver which converts the report data into a spool file, together with any necessary printer control sequences, in the appropriate form (PostScript, PCL, etc.). This is the normal way of printing under Windows. If you want to use this method, you have to specify all required information on the **GUI Printer Profiles** page.

TTY Printer Profiles

You can specify the following information:

Profile name

This drop-down list box contains all TTY-type profile names that have been defined on the **Printer Profiles** page. Select the name of the required profile. All information that you specify on this page, applies to the currently selected profile.

External character set

Optional. An external character set must be defined, for example, if a printer's character set is different from the system character set, or if you wish to preserve Unicode data by outputting the data in UTF-8 format.

You can specify the name of the external character set. If the name is "UTF-8", the data are converted into UTF-8 format. Otherwise, any name can be used, but it must agree with the name used in the character translation table definition in the file *NATCONV.INI*. For example, if the internal character set name (as defined near the top of the *NATCONV.INI* file) is "ISO8859_1" and you define "FRED" as the name of the external character set in the printer profile, a section with the following name must be defined in the file *NATCONV.INI*, otherwise no character translation is performed:

```
[ISO8859_1 -> FRED]
```

Note that, in the non-UTF-8 case, the data are first converted from the in-memory format (UTF-16) into the system code page, prior to any *NATCONV.INI*-based translation being applied.

For further information on the *NATCONV.INI* file, see *Support of Different Character Sets with NATCONV.INI* in the *Operations* documentation.

Printer control sequences

You can specify whether commands to be triggered at job, page or field level.

Column	Description	
Trigger	A triggering event controls the level on which specified printer control sequences are to be applied. Each row in this scrollable table applies to a specific triggering event:	
	JOB	Use this triggering event if you want your control sequences to apply to an entire print job. The specified control sequences will represent the job header and/or job trailer respectively.
	PAGE	Use this triggering event if you want the control sequences to apply to each physical output page. The specified control sequences will then represent the page headers and/or page trailers respectively.
	FIELD	Use this triggering event if you want the control sequences to apply to each field (regardless of its `AD`, `CD` or `PM` attributes).
	AD and **CD**	These triggering events stand for specific attributes of the session parameters `AD` (attribute definition) and `CD` (color definition). Use these triggering events if you want the control sequences to be applied at field level only. Any field in a Natural program with corresponding attributes will then cause these control sequences to take effect. See the *Parameter Reference* for details on these session parameters.
	PM=I	Use this triggering event if you want the control sequences to apply to each field with an opposing print direction to that of the page. See the session parameter `PM` (print mode) and the terminal command `%V` (control of print mode) for more information.
Leading	The leading control sequence is inserted immediately before the triggering event (for example, to define a job header or to set attributes for field representation).	
Trailing	The trailing control sequence is inserted immediately after the triggering event (for example, to define a job trailer or to reset attributes previously set).	

For each control sequence, you can specify the control characters in either alphanumeric or hexadecimal format.

Notes:

1. Blank characters must always be specified in hexadecimal format (^20). If they were entered directly, they would be confused with the blanks used to delimit tokens in the configuration file.
2. The escape character must always be specified in hexadecimal format (^1b) because this is a non-printable character.

Example

This example shows the PCL command for setting a proportional character spacing in both alphanumeric and hexadecimal format. The escape character "^1b", which must always be specified in hexadecimal format, corresponds to the decimal value 27.

Alphanumeric format:

```
^1b(s1P
```

Hexadecimal format:

```
^1b^28^73^31^50
```

GUI Printer Profiles

You can specify the following information:

Profile name
This drop-down list box contains all GUI-type profile names that have been defined on the **Printer Profiles** page. Select the name of the required profile. All information that you specify on this page, applies to the currently selected profile.

Margins
The page margins. You can specify (in points) an extra top, bottom, left and/or right page margin, relative to the top left-hand corner of the printable region.

Text color
The color to be used. You can select one of the following values:

Value	Description
Leave	Leave the color setting unspecified (a default setting is used).
Ignore	Ignore any color settings (that is, print everything in black).
Retain	Retain any color settings in your Natural program (as specified with the session parameter `CD`).

Attribute fonts
Fonts are always associated with a particular field representation attribute of the session parameter `AD`. You can define a different font for each attribute.

The following options are available:

Option	Description
Display fonts for	Using this drop-down list box, you determine which fonts that are to be shown in the **Font** dialog box (which appears when you choose a **Set** button; see below). If you select **System**, only the screen fonts are shown. When you select one of the printers, any fonts that are installed on this printer are shown in addition to the screen fonts; this gives you access to more fonts, but has the disadvantage of making the profile printer-specific.
Fixed fonts only	When this check box is selected, only fixed fonts are shown in the **Font** dialog box (which appears when you choose a **Set** button; see below). When it is not selected, all fonts (fixed fonts and proportional fonts) are shown in the **Font** dialog box.
Extra leading	You can specify (in points) an extra vertical line spacing in addition to the default line spacing.

Option	Description
AD	When you choose the **Set** button for an attribute, the **Font** dialog box appears. This is a standard Windows dialog in which you can define a font, font style and size. When a **Clear** button is enabled, a font has been defined for the corresponding attribute; you can choose this button to remove the font definition.

System Files

A list of existing Natural system file assignments is shown.

The paths for all possible system files (that is: for all possible DBID/FNR combinations) are defined in the global configuration file. These must be valid paths which indicate the physical location of the system files on the disk.

You can specify the following information:

DBID
The database ID.

FNR
The file number.

Alias name
When you specify an alias name for a system file, this name is shown in Natural Studio's library workspace.

Path
The path to the system file.

The path to each defined system file is then available for selection in the parameter file. See ***System Files*** in the *Overview of Profile Parameters*.

Local Configuration File

This parameter group contains the following categories:

- Buffer Pool Assignments

- Installation Assignments

Buffer Pool Assignments

A table is shown which is used to define buffer pools. See also *Natural Buffer Pool* in the *Operations* documentation.

Note: When parameters are changed, it is strongly recommended to restart the buffer pool, as a new session might not be able to connect to the buffer pool otherwise.

You can specify the following information:

BP Name

The name of the Natural buffer pool. The name can be up to 8 characters long. The name of the default buffer pool is `NATBP`. See also `BPID` in the *Parameter Reference*.

Caution: Do not delete the default buffer pool `NATBP`, as it is possible that Natural may not function properly anymore.

BP Size

The size of the Natural local buffer pool. This setting is used during startup of the Natural buffer pool by the `NATBPSRV` server to create a global shared memory segment of the specified size.

Possible settings: 1 - 1024 MB.

Default setting for additional buffer pools: 1.

Resource Size

The size limit for resources that are loaded into the buffer pool. Resources that exceed this size are loaded directly from the file system whenever they are accessed by Natural. This option prevents the buffer pool from being filled with big resources. If 0 (zero) is specified, all resources are loaded into the buffer pool regardless of their sizes.

Possible settings: 1 - buffer pool size in KB.

Default setting: 0.

Maximum Users

The maximum number of users that can have simultaneous access to the buffer pool. This number determines the sizes of some internal tables stored inside the shared memory during startup.

Possible settings: 1 - 5000.

Default setting: 20.

Directory Entries

The number of directory entries. This value is used by the `NATBPSRV` server during the start of the buffer pool. If the maximum value has been reached, this value is automatically increased.

In case of a read-only buffer pool this value can be ignored because the number of directory entries is calculated on the basis of the preload list when the buffer pool is started.

Possible settings: 10 - 999999.

Default setting: 10.

Synchronize

You can choose the button in this column to toggle the setting for the buffer pool synchronization.

Setting	Description
Yes	Enable synchronization.
No	Disable synchronization (default).

For further information, see *Multiple Buffer Pools* in the *Operations* documentation.

Read Only

When this check box is selected, this is a special buffer pool which only allows read access. In this case, the value for the semaphore key is ignored.

For further information, see *Read-Only Buffer Pool* in the *Operations* documentation.

Alternate BP Name

For a read-only buffer pool, it is possible to define the name of an alternate buffer pool. The alternate buffer pool must also be a read-only buffer pool.

This text box is only active when the corresponding buffer pool is defined as a read-only buffer pool. In addition, at least two buffer pools must be defined as read-only buffer pools; otherwise it is not possible to select an alternate buffer pool from the drop-down list box.

For further information, see *Alternate Buffer Pool* in the *Operations* documentation.

Installation Assignments

You can specify the following:

Path to parameter

The location of the Natural parameter files.

Path to user profiles

The location of the Natural user profiles.

Global configuration file

The name and location of the global configuration file (default name is *NATCONF.CFG*).

Natural error file directory

The location of the Natural error files.

Natural I/O conversion table

The name of the file which contains the character translation tables used with the internal character set ISO-8859-1. By default, this file is called *NATCONV.INI*. See *Support of Different Character Sets with NATCONV.INI* in the *Operations* documentation for further information.

Natural TMP directory

The location of Natural temporary output.

Instead of defining a specific path (for example: *c:\SoftwaerAG\Natural\temp*), you can define an environment variable (for example: `%usertemp%=mytempdir`) and embed this variable in the path (for example: *c:\SoftwareAG\Natural\%usertemp%*). At runtime, the path will be used with the currently valid environment variable (for example: *c:\Natural\mytempdir*).

User-defined libraries

The location of user-defined Natural libraries.

Instead of defining a specific path (for example: *c:\SoftwareAG\Natural\<userid>\lib\<mylib>*), you can define an environment variable (for example: `%userlib%=<userid>\lib\<mylib>`) and embed this variable in the path (for example: *c:\SoftwareAG\Natural\%userlib%*). At runtime, the path will be used with the currently valid environment variable (for example: *c:\Natural\mylibdir*).

Note: If you want to specify several libraries, you have to separate the names with a semicolon, for example userlib1;userlib2;userlib3.

6 Overview of Profile Parameters

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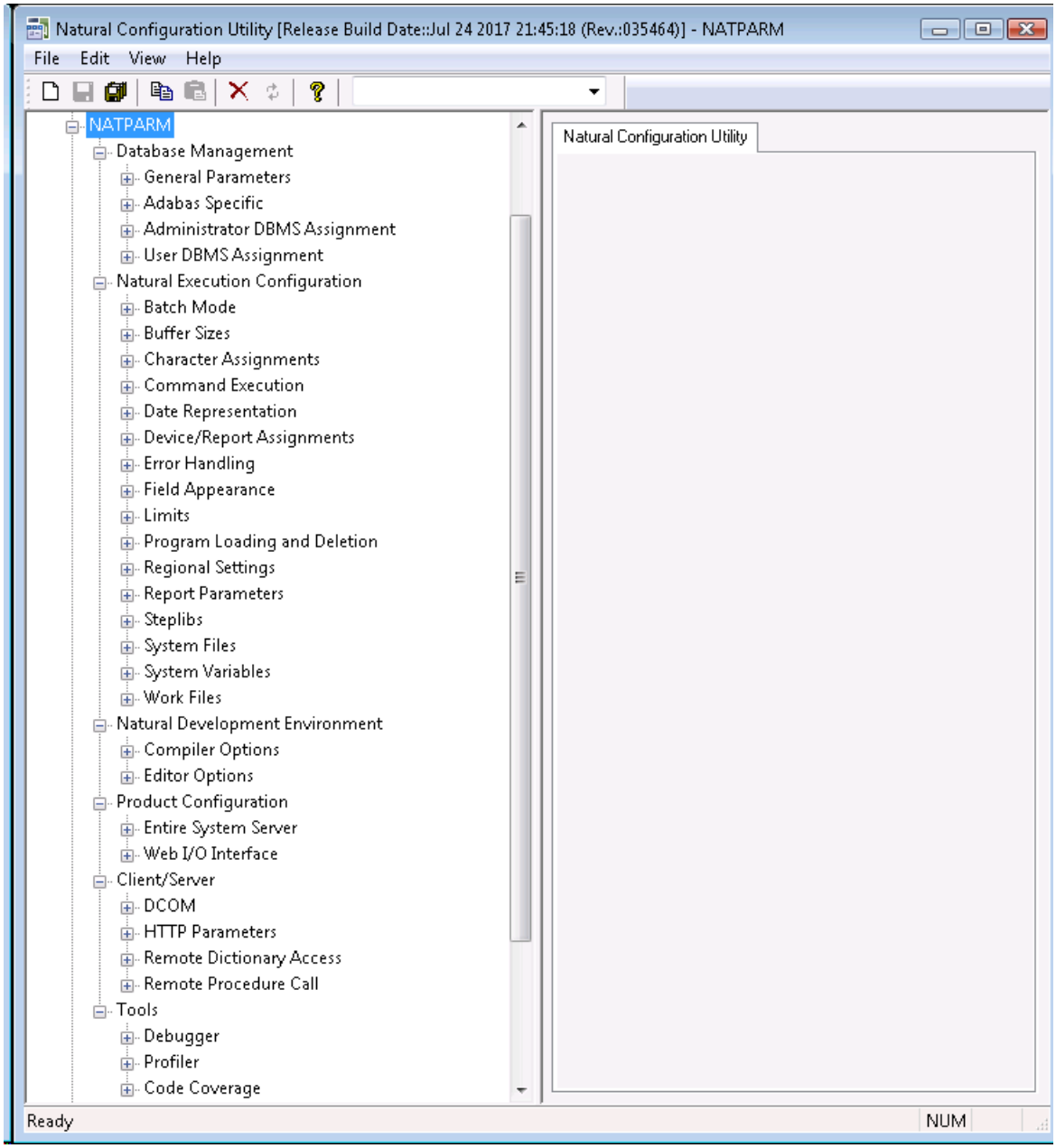
This chapter provides information on the profile parameters that can be set in the `NATPARM` parameter file (or an alternative parameter file).



When you expand the node for a parameter file, nodes for parameter groups are shown.

For a full description of all available profile parameters, see the *Parameter Reference*.

Database Management

This parameter group contains the following categories:

- General Parameters
- Adabas Specific
- Administrator DBMS Assignment
- User DBMS Assignment

See also: *Database Management System Assignments* in the global configuration file.

General Parameters

The following profile parameters apply to the supported database management systems.

Option	See the *Parameter Reference* for a description of this profile parameter
Database Updating	DBUPD
Execution of END/BACKOUT TRANSACTION	ET
ET at End of Program	ETEOP
ET upon Terminal I/O	ETIO

Adabas Specific

If Natural is used with Adabas, review the following profile parameters and, if necessary, adjust the default values to meet your specific requirements.

Option	See the *Parameter Reference* for a description of this profile parameter
Adabas Review Support	ADAPRM
Adabas User Identification	ETID
DB Time Limit	LDB
Multifetch	MFSET
Terminate when no ISN found with FIND statement	RCFIND
Terminate when no ISN found with GET statement	RCGET
Release ISNs	RI
Record Hold Processing	WH
Adabas OPEN/CLOSE Processing	OPRB

Administrator DBMS Assignment

The following profile parameters are used to assign administrator-specific database management system settings.

Option	See the *Parameter Reference* for a description of this profile parameter
Administrator Logical Files	LFILE
Translation of File Number	TF

User DBMS Assignment

The following profile parameters are used to assign user-specific database management system settings.

Option	See the *Parameter Reference* for a description of this profile parameter
User Database ID	UDB
Database for Transaction Data	ETDB
User Logical Files	LFILE

Natural Execution Configuration

This parameter group contains the following categories:

- Batch Mode
- Buffer Sizes
- Character Assignments
- Command Execution
- Date Representation
- Device/Report Assignments
- Error Handling
- Field Appearance
- Limits
- Program Loading and Deletion
- Regional Settings
- Report Parameters
- Steplibs
- System Files
- System Variables

- Work Files

Batch Mode

The profile parameters which affect the batch mode behavior of Natural are arranged on the following pages:

- Channels
- Appearance
- Frame Characters

See also *Natural in Batch Mode* in the *Operations* documentation.

Channels

Option	See the *Parameter Reference* for a description of this profile parameter
Input data file name	CMOBJIN
Input data code page	CPOBJIN
Input commands file name	CMSYNIN
Input commands code page	CPSYNIN
Output file name	CMPRINT
Output code page	CPPRINT
Natural log	NATLOG
Enable error processing	CC

Appearance

Option	See the *Parameter Reference* for a description of this profile parameter
Similar output	BMSIM
Display input data	ECHO
Display session-end message	ENDMSG
Display trailing blanks	BMBLANK
Display control characters	BMCONTROL
Display process time	BMTIME
Display window title	BMTITLE
Display Natural version	BMVERSION

Frame Characters

Option	See the *Parameter Reference* for a description of this profile parameter
Frame characters	BMFRAME

Buffer Sizes

Natural uses several buffer areas for the storage of programs and data. You may need to adjust their sizes in order to achieve maximum buffer efficiency.

Option	See the *Parameter Reference* for a description of this profile parameter
Storage for sort program	SORTSIZE
Source area size	SSIZE
Work area size	USIZE
SAG editor buffer pool size	EDTBPSIZE
SAG editor logical files	EDTLFILES

See also ***Buffer Pool Assignments*** in the local configuration file.

Character Assignments

The following profile parameters are used to change default character assignments.

Option	See the *Parameter Reference* for a description of this profile parameter
Terminal command character	CF
Clear key character	CLEAR
Decimal character	DC
Filler character	FC
Help character	HI
Input assign character	IA
Input delimiter character	ID
Thousands separator character	THSEPCH

Once a character has been defined to replace a default character, this character cannot be used as data.

Command Execution

The following profile parameters are used to control the execution of commands.

Option	See the *Parameter Reference* for a description of this profile parameter
Enable command mode	CM
Enable terminal command %% and %	ESCAPE
Disable Natural commands	NC
Dynamic recataloging	RECAT

Date Representation

The following profile parameters are used to control the representation of dates.

Option	See the *Parameter Reference* for a description of this profile parameter
Date format in output	DFOUT
Date format in STACK	DFSTACK
Date format in report titles	DFTITLE
Date format	DTFORM
Maximum year	MAXYEAR
Year sliding window	YSLW

Device/Report Assignments

These parameters are used to modify your screen and printer configurations as well as your report assignments.

Option	See the *Parameter Reference* for a description of this profile parameter
Override default report number	MAINPR
Devices	See *Device Assignments* below.
Reports	See *Report Assignments* below.

See also the profile parameter CMPRT*nn* which is used for additional reports in batch mode.

Device Assignments

The **Devices** group shows a scrollable list of configurable logical devices (`VIDEO` and the logical printers `LPT1` to `LPT31`) as used in the `DEFINE PRINTER` statement. The following information can be changed:

Method

The buttons in this column display the print method used for the corresponding print device. You can choose a button to toggle the print methods.

Print Method	Description
TTY	This is the raw printing method where the text output by the Natural program is essentially forwarded to the spooler in unaltered form. Any printer commands must either be output as data by the Natural program or statically defined in TTY printer profiles. The Windows printer driver is not used.
GUI	This is the preferred print method under Windows, whereby the output from the Natural program is passed through the Windows printer driver associated with the specified printer. Unlike the TTY method, no knowledge of printer commands is required, since these are automatically inserted by the printer driver.

Close mode

You can select a different close mode for each logical printer. Possible values in the drop-down list box are:

Close Mode	Description
Auto	Printers are automatically closed at the end of a program or when the execution of a called method is terminated. This is the default setting.
User	Closing of printers is controlled by the user. The printer is closed, if one of the following conditions is met: ■ a `CLOSE PRINTER` statement is executed, ■ a `DEFINE PRINTER` statement is executed, ■ the session terminates.

The following program example describes the user-controlled closing of printers. Note that the close mode must be first set in the parameter file.

```
DEFINE DATA
  LOCAL
  1 #OUT (A8)
END-DEFINE
*
#OUT := *PROGRAM
*
* Write to report with close mode "user"
WRITE (1) 'OUTPUT PROGRAM: ' #OUT
```

```
*
* Write to report with close mode "auto"
WRITE (2) 'OUTPUT PROGRAM: ' #OUT
*
* Close printer 1
* Printer 1 is user-controlled
CLOSE PRINTER (1)
*
END
```

Line Size

See the description of the `LS` parameter.

Page Size

See the description of the `PS` parameter.

Max. Pages

See the description of the `MP` parameter.

Setup

You can choose a button in this column invoke a print method-specific dialog box:

Print Method	Description
TTY	When you choose the **Setup** button for this print method, the **Setup TTY** dialog box appears in which you can specify the following options: **Physical specification** This corresponds to the printer name. Instead of selecting an existing physical printer specification from the drop-down list box, you can also enter a file name if you want your output to be written to a file. **Note:** A server printer can be specified via the UNC naming convention (*server-name**printer-name*). **Print to file** Using this check box, you can specify whether file I/O is to be used to access the specified device (e.g. for printers which are set up as file system shares). If this check box is not selected, the data is output via spooler API function calls.
GUI	When you choose the **Setup** button for this print method, the standard Windows **Print Setup** dialog box appears and you can select the Windows printer and associated print options such as page size and orientation. **Note:** If you wish to make use of the default Windows printer on each client computer at run-time, this dialog should not be used. Alternatively, if a specific printer has already been chosen (even in a previous session) for this logical device, the default printer can be implicitly re-selected by switching the print method to TTY, closing the application, re-opening the application and switching the print method back to GUI. Note that any print options for the default printer must be set by using a printer profile.

Note: The following applies to the print method TTY if the **Print to file** check box has been activated. As with work files, a file name can be defined by using environment variables. Any existing file of the same name at the specified location is normally overwritten, unless the entered file name is immediately prefixed by two right angle bracket characters (>>).

Report Assignments

The **Reports** group shows a scrollable list in which you can assign a Natural report number (report 1 to report 31) to a logical device name. The following information can be changed:

Device

For each report number, you can select another output medium. Possible values in the drop-down list box are:

Value	Description
LPT1 to **LPT31**	Outputs the report data to the corresponding physical device.
SOURCE	Outputs the report data to the source area. The user can then, for example, issue the `EDIT` command to open the output data in the editor and save it accordingly.
DUMMY	Report data are discarded.
INFOLINE	Report data are sent to the infoline. See also the description of the terminal command `%X`.

Report 0 is always implicitly assigned to `VIDEO` (that is, the output is shown on the screen). No other report number can be assigned to `VIDEO`.

Profile

In addition to the name of the logical device, you can assign a printer profile that has been defined in the **Printer Profiles** node of the global configuration file. All defined printer profiles can be selected from the drop-down list box. Select the blank entry if you do not want to use any of these profiles.

Important: Any specified printer profile must match the print method used at run-time. For example, if an attempt is made to use a GUI printer profile for a TTY logical device (or vice versa), the printer profile specification is ignored.

Error Handling

The following profile parameters are used to control error handling within Natural.

Option	See the *Parameter Reference* for a description of this profile parameter
Error processing for PA/PF keys	IKEY
Display system error messages in full	MSGSF
Automatic REINPUT	REINP
Sound terminal alarm	SA
Sound bell on syntax error	SNAT
Zero division	ZD
Suppress message number prefix NAT	NOAPPLERR
Allow runtime interrupt	RTINT

Field Appearance

The following profile parameters influence I/O handling.

Option	See the *Parameter Reference* for a description of this profile parameter
Control variable modified at input	CVMIN
Filler chars protected	FCDP
Enable lowercase	LC
Overwriting protected	OPF
Zero printing	ZP
Print mode	PM

Limits

The following profile parameters are used to prevent a single program from consuming an excessive amount of internal resources.

Option	See the *Parameter Reference* for a description of this profile parameter
Error on loop limit	LE
Processing loop limit	LT
Maximum number of DBMS calls	MADIO
Maximum number of program calls	MAXCL
System time delay	SD

Program Loading and Deletion

The following profile parameters are used to control the dynamic loading and deletion of programs.

Option	See the *Parameter Reference* for a description of this profile parameter
Dynamic loading of non-Natural programs	CDYNAM
Allow dynamic parameter	DYNPARM
Release GDA in utility mode	FREEGDA
Session termination on initialization error	ITERM
Persistent parameter module	PERSIST
Read only access to system files	ROSY
Buffer pool search first	BPSFI
Error transaction program name	ETA
Program command line parameter	PRGPAR
Program to receive control after Natural termination	PROGRAM
Natural stack command line	STACK

Regional Settings

The following profile parameters are used to control the country- or region-specific settings of Natural.

Option	See the *Parameter Reference* for a description of this profile parameter
Day differential	DD
Time differential	TD
User language	ULANG
Use UTF-8 format for sources	SUTF8
Retain source format	SRETAIN
Code page conversion error	CPCVERR
Default code page	CP
Substitution character	SUBCHAR

Report Parameters

The following profile parameters are used to control various attributes of Natural reports.

Option	See the *Parameter Reference* for a description of this profile parameter
Page eject	EJ
Numeric edit mask free mode	EMFM
Line size	LS
Page size	PS
Spacing factor	SF
Default input terminal mode	IM

Steplibs

The following parameters are used to manage the steplibs.

Option	See the *Parameter Reference* for a description of this profile parameter
***STEPLIB**	STEPLIB
Steplib Extension	For information on how to define additional steplibs and how to use the columns in this table, see *Additional Steplib Assignments* below.

Additional Steplib Assignments

You can define up to eight libraries that can be searched for objects which cannot be found in the current library. These additional steplibs are defined in a table. The steplib number is shown in the first column. The following information can be specified:

Name
The name of an existing library.

DBID
The database ID of the file system where the library is located.

FNR
The file number of the file system where the library is located.

Note: The following application programming interfaces are available for handling multiple steplibs: USR3025N (when Natural Security is not installed) and USR4025N (when Natural Security is installed).

System Files

The following profile parameters are used to specify the Natural system files. A page is provided for each parameter, on which you can specify DBID, FNR, path, read only access, password and cipher for each system file.

Option	See the *Parameter Reference* for a description of this profile parameter
FNAT (Natural system file for system programs)	FNAT
FUSER (Natural system file for user programs)	FUSER
FSEC (Natural Security system file)	FSEC
FDIC (Predict system file)	FDIC
FDDM (Natural system file for DDMs)	FDDM

If you select a path that has already been assigned to another system file, all relevant internal information of the first assignment is copied automatically to the new assignment.

The physical location of each system file is defined in the global configuration file. See *System Files* in the global configuration file.

System Variables

The following profile parameters are used to adjust Natural system variables for the start of a Natural session.

Option	See the *Parameter Reference* for a description of this profile parameter
Automatic logon	AUTO
Startup library	INIT-LIB
Startup program	STARTUP
User ID	USER

See also the *System Variables* documentation.

Note: You can use the command line parameter PARM to specify a specific Natural parameter file at session startup. This parameter can only be specified dynamically, therefore, it cannot be modified or viewed within the Configuration Utility.

Work Files

The following profile parameters can be used to specify work file settings.

Option	See the *Parameter Reference* for a description of this profile parameter
Entire Connection local NCF protocol	`NCFVERS`
Max. work file number	`WORK`
Alternate sort work file names	`TMPSORTUNIQ`
Work file open on first access	`WFOPFA`
Work files	For information on how to define work files and how to use the columns in this table, see ***Work File Assignments*** below.

See also the profile parameter `CMWRK`*nn* which applies to batch mode.

See also *Work Files* in the *Operations* documentation.

Work File Assignments

The work file assignments are shown in a scrollable list containing work files with the numbers 1 to 32. The work file number is shown in the first column. When a work file name has already been defined for a work file number, this information (path and name) is shown in the **Name** column.

The following information can be changed:

Type

For each work file number, you can select another work file type. Possible values in the drop-down list box are:

Work File Type	Description
Default	Determines the file type from the extension for upward compatibility.
SAG	Binary format.
ASCII	Text files with records terminated by a carriage return and linefeed (CR/LF). When you choose the browse button next to this drop-down list box, you can change the properties for this work file type: a dialog box appears in which you can specify the following information: **Code page** You can specify the code page that is to be used for writing the work file (ICU code page name; IANA name recommended). When a code page is not defined here, the default code page defined with `CP` is used.

Work File Type	Description
ASCII compressed	ASCII format where all trailing blanks are removed. When you choose the browse button next to this drop-down list box, you can change the properties for this work file type: a dialog box appears in which you can specify the following information: **Code page** You can specify the code page that is to be used for writing the work file (ICU code page name; IANA name recommended). When a code page is not defined here, the default code page defined with `CP` is used.
Entire Connection	With this work file type, you can read and write (for example, with the statements `READ WORK FILE` and `WRITE WORK FILE`) directly to a work file in Entire Connection format on the local disk. **Note:** No transfer to a PC is possible. The Entire Connection terminal is not used in this process.
Unformatted	A completely unformatted file. No formatting information is written (neither for fields nor for records). When you choose the browse button next to this drop-down list box, you can change the properties for this work file type: a dialog box appears in which you can specify the following information: **Code page** You can specify the code page that is to be used for writing the work file (ICU code page name; IANA name recommended). When a code page is not defined here, the default code page defined with `CP` is used.
Portable	Files which can handle dynamic variables exactly and can also be transported (for example, from a little endian machine to a big endian machine, and vice versa).
CSV	Comma-separated values. Each record is written to one line in the file. By default, a header is not written. The default character which is used to separate the data fields is a semicolon (;). When you choose the browse button next to this drop-down list box, you can change the properties for this work file type: a dialog box appears in which you can specify the following information: **Header** When set to "ON", a header with the Natural field names is written to the file. **Separator character** You can select a different separator character. If you require a separator character which is not listed in the drop-down list box, you can enter it in the text box of the drop-down list box. **Code page** You can specify the code page that is to be used for writing the work file (ICU code page name; IANA name recommended). When a code page is not defined here, the default code page defined with `CP` is used.

Note: The browse button next to this drop-down list box is only available for specific work file types. See the information in the above table.

For information on the work file formats which result from a specific work file type, see *Work File Formats* in the *Operations* documentation.

Close mode

You can select a different close mode for each work file. Possible values in the drop-down list box are:

Close Mode	Description
Auto	This is the default setting. Work files are automatically closed at the end of a program or when the execution of the first called method in a method call hierarchy is terminated and the first called method was called over COM. If the first called method was called locally (not over COM), the work files are not closed. Example: Method A (called over COM) invokes method B which in turn invokes method C. When the execution of method A is terminated, all work files are closed.
User	Closing of work files is controlled by the user. The work file is closed, if one of the following conditions is met: ■ a `CLOSE WORK FILE` statement is executed, ■ a `DEFINE WORK FILE` statement is executed, ■ the session terminates.

The following program example describes the user-controlled closing of work files. Note that the close mode must be first set in the parameter file.

```
DEFINE DATA
  LOCAL
  1 #OUT (A8)
END-DEFINE
*
#OUT := *PROGRAM
*
* Write to work file with close mode "user"
WRITE WORK 1 'OUTPUT PROGRAM: ' #OUT
*
* Write to work file with close mode "auto"
WRITE WORK 2 'OUTPUT PROGRAM: ' #OUT
*
* Close work file 1
* Work file 1 is user-controlled
CLOSE WORK FILE 1
*
END
```

Attributes

You can define different attributes for each work file. You can specify one attribute for each of the following categories:

Category	Possible Attributes	Default Attribute	Description
Append mode	NOAPPEND or APPEND	NOAPPEND	Decides whether new data overwrites the current data in the work file or whether new data is appended at the end of the current data.
Keep/delete work file after close	KEEP or DELETE	KEEP	Decides whether the work file is kept after closing it or whether it is deleted.
Write byte order mark (BOM)	BOM or NOBOM	NOBOM	Decides whether a byte order mark is written in front of the work file data. Only available for the work file types which write code page data: ASCII, ASCII compressed, Unformatted and CSV. For these work file types, the attribute BOM can only be set, if the code page UTF-8 is defined for the work file (see the description of the **Type** column). If a work file of another type is written or a code page other than UTF-8 is defined, the specification of the attribute BOM is ignored during runtime. See also *Work Files and Print Files on Windows, UNIX and OpenVMS Platforms* in the *Unicode and Code Page Support* documentation.
Remove/keep carriage return	REMOVECR or KEEPCR	REMOVECR	Decides whether carriage return characters are removed when reading an ASCII work file or whether they are kept. Only available for the following work file types: ASCII and ASCII compressed. If one of the attributes is manually set for another work file type (not in the dialog box), it is ignored during runtime. **Caution:** Use KEEPCR with care. ASCII format is only recommended for alphanumeric data. Binary data should not be processed with ASCII work files. When you use KEEPCR, the work file record may include carriage return characters. The use of KEEPCR only makes sense when reading ASCII work files which have been written on UNIX or OpenVMS. It does not make sense to use KEEPCR with ASCII work files which have been written on Windows.

When you choose the browse button next to this text box, you can set these attributes in a dialog box. You can also set them in the table as described below.

You can enter a unique abbreviation for each attribute. The delimiter character can be one of the following: blank, comma(,) or semicolon (;). Example: "a, d" which stands for `APPEND` and `DELETE`.

You can only specify one attribute for each category. You can specify them in any sequence. When no attributes are specified in the table, the default values are used. You can also check the current values by invoking the dialog box.

Name

Specify the location (path and name) of the work file.

You can also choose the browse button next to this text box to select the work file from a dialog box.

See also *Defining Work File Names with Environment Variables* in the *Operations* documentation.

Natural Development Environment

This parameter group contains the following categories:

- Compiler Options
- Editor Options

Compiler Options

The following profile parameters are used to set options for the Natural compiler.

Option	See the *Parameter Reference* for a description of this profile parameter
Interpretation of database field short names	`DBSHORT`
Dump generation	`DU`
Length/format specification	`FS`
Keyword checking	`KCHECK`
Structured mode	`SM`
Syntax error control	`SYNERR`
Dynamic thousands separator	`THSEP`
Translate quotation marks	`TQMARK`
MASK compatible with MOVE EDITED	`MASKCME`
Maximum number of digits after decimal point	`MAXPREC`

Option	See the *Parameter Reference* for a description of this profile parameter
Parameter checking for CALLNAT statement	PCHECK
Internal sign representation of format P	PSIGNF
Endian mode	ENDIAN
Generation of global format identifiers	GFID
Active cross reference	XREF

See also *Compiler Options* in the section *Using Session Parameters* of the *Using Natural Studio* documentation and the description of the system command COMPOPT.

Editor Options

The following profile parameter is used to set an option for the Natural editor.

Option	See the *Parameter Reference* for a description of this profile parameter
Renumber line numbers in constants	RNCONST

Product Configuration

This parameter group contains the following categories:

- Entire System Server
- Web I/O Interface

Entire System Server

The following profile parameter is used in conjunction with Software AG's Entire System Server Interface.

Option	See the *Parameter Reference* for a description of this profile parameter
ESX database	ESXDB

Web I/O Interface

The following profile parameter is used for Unicode support with the Natural Web I/O Interface.

Option	See the *Parameter Reference* for a description of this profile parameter
Web I/O Interface	WEBIO

Client/Server

This parameter group contains the following categories:

- DCOM
- HTTP Parameters
- Remote Dictionary Access
- Remote Procedure Call

DCOM

The following profile parameters are used to provide DCOM support.

Option	See the *Parameter Reference* for a description of this profile parameter
Server name	COMSERVERID
Activation policy	ACTPOLICY
Automatic update of registry	AUTOREGISTER

HTTP Parameters

The following profile parameter is used to provide HTTP support.

Option	See the *Parameter Reference* for a description of this profile parameter
Timeout for REQUEST DOCUMENT	RQTOUT

Remote Dictionary Access

The following profile parameters are used for remote dictionary access.

Option	See the *Parameter Reference* for a description of this profile parameter
Name of logical dictionary server	USEDIC When a logical dictionary server has been defined in the global configuration file, you can select it from the drop-down list box. See *Dictionary Server Assignments* in the global configuration file.
Enable usage of repository	USEREP

Remote Procedure Call

The profile parameters which apply to the Natural Remote Procedure Call (RPC) are arranged on the following pages:

- RPC (General)
- RPC (Client)
- RPC (Server)
- RPC (RDS)

RPC (General)

These profile parameters apply to both client and server.

Option	See the *Parameter Reference* for a description of this profile parameter
Request buffer size	MAXBUFF
Code page	CPRPC

RPC (Client)

These profile parameters apply to the client only.

Option	See the *Parameter Reference* for a description of this profile parameter
Automated remote execution	AUTORPC
Retry service on alternative server	TRYALT
Send-buffer compression	COMPR
Request timeout	TIMEOUT
Default server	DFS
Library for service directory	RPCSDIR

RPC (Server)

These profile parameters apply to the server only.

Option	See the *Parameter Reference* for a description of this profile parameter
Start session as RPC server	SERVER
Logon required for server request	LOGONRQ
Server name	SRVNAME
Server node	SRVNODE
Server user ID	SRVUSER
Server wait time	SRVWAIT
Number of reconnect attempts	SRVRTRY
Wait time between attempts	
Server termination event	SRVTERM
Server commit time	SRVCMIT
Transport protocol	TRANSP
Trace level	TRACE
Trace on error	

RPC (RDS)

This profile parameter applies to the client only.

Option	See the *Parameter Reference* for a description of this profile parameter
Remote directory servers	RDS

Tools

This parameter group contains the following categories:

- Debugger
- Profiler

- Code Coverage

Debugger

The profile parameters which affect the Natural Debugger are arranged in the following categories:

- Compiler Options
- Debug Attach Settings

Compiler Options

This profile parameter is used to generate debug information.

Option	See the *Parameter Reference* for a description of this profile parameter
Generate debug information	GPGEN/DEBUGGER

Debug Attach Settings

The following profile parameter is used in conjunction with NaturalONE.

Option	See the *Parameter Reference* for a description of this profile parameter
Debug attach server parameters	DBGAT See also the information on debugging external Natural applications in the NaturalONE documentation.

Profiler

The parameters which affect the Natural Profiler are arranged in the following categories:

- Compiler Options
- General

- Events

Compiler Options

The following profile parameter is used to activate the Natural Profiler.

Option	See the *Parameter Reference* for a description of this profile parameter
Generate profiler information	`GPGEN/PROFILER`

General

The following profile parameter is used to profile a Natural session.

Option	See the *Parameter Reference* for a description of this profile parameter
General Natural Profiler parameters	`PROFILER`

Events

The following profile parameter specifies which events of a Natural session are profiled.

Option	See the *Parameter Reference* for a description of this profile parameter
Natural Profiler event selection parameters	`PROFILER(EVENT subparameter)`

Code Coverage

The profile parameters which affect the Natural code coverage are arranged in the following categories:

- Compiler Options
- General

Compiler Options

The following profile parameter is used to allow code coverage.

Option	See the *Parameter Reference* for a description of this profile parameter
Generate coverage information	GPGEN/COVERAGE

General

The following profile parameter specifies for which parts of a Natural session the code coverage information is to be generated.

Option	See the *Parameter Reference* for a description of this profile parameter
General Natural Coverage parameters	COVERAGE

7 Invoking Natural with an Alternative Parameter File

By default, Natural Studio and Natural Runtime are invoked with the parameter file `NATPARM`. When you have **created** your own customized parameter file, you can also invoke Natural Studio and Natural Runtime with this parameter file.

See also *Dynamic Assignment of Parameter Values* in the *Operations* documentation.

To invoke Natural Studio with an alternative parameter file

- Create a shortcut on your desktop for starting Natural Studio and invoke the properties of the shortcut. Then specify the following after *natural.exe* in the **Target** text box: `PARM=parameter-file`. Example:

```
"C:\SoftwareAG\Natural\Bin\natural.exe" PARM=myparm
```

To invoke Natural Runtime with an alternative parameter file

- Create a shortcut on your desktop for starting Natural Runtime and invoke the properties of the shortcut. Then specify the following after *naturalr.exe* in the **Target** text box: `PARM=parameter-file`. Example:

```
"C:\SoftwareAG\Natural\Bin\naturalr.exe" PARM=myparm
```