General Information

This section covers the following topics:

- Introduction

- Prerequisites

- Documentation

- Migration Hints

- Compatibility

- End of Maintenance of Natural Versions

- End of Maintenance of Add-On Product Versions

- Natural and Other Software AG Products

- Information on Upcoming Versions

- Customer Change/Enhancement Requests

Introduction

These Release Notes describe the changes and enhancements provided with Natural Version 4.2.6 for Mainframes. Natural Version 4.2.6 contains all Zaps, `INPL` updates, early warnings and source changes applied to Natural Version 4.2.5 as error corrections.

Prerequisites

This section provides an overview of the prerequisites required for Natural Version 4.2.6.

- License Key File

- Operating/Teleprocessing Systems Required

- Database Management System Versions Required

- Assemblers Required

License Key File

A license key file is required. For further information, see *License Concept* in the *Installation* documentation.

Operating/Teleprocessing Systems Required

Natural Version 4.2.6 supports the following versions of the following operating/teleprocessing systems:

Product	Version
BS2000/OSD	5, 6, 7 or 8, Open Net Server 2.0 or above
z/OS	1.10, 1.11
z/VSE	4.2
z/VM	5.4, 6.1
Com-plete	See *Natural and Other Software AG Products*.
CICS/TS for z/OS	3.1, 3.2, 4.1
CICS/TS for VSE/ESA	1.1.1
CICS/VSE	2.3
IMS TM	9.1 (not supported with Natural for DB2 Version 4.3.1), 10.1, 11.1
*open*UTM	4, 5
TIAM	All versions available with OSD Version 5, 6, 7 or 8.

Software AG provides Natural support for the operating/teleprocessing system versions supported by their respective manufacturers. Generally, when an operating/teleprocessing system provider stops supporting a version of an operating system, Software AG will stop supporting that operating system version.

See the respective manufacturer's documentation for valid and supported combinations of the above mentioned operating/teleprocessing systems.

⚠ **Warning:**
Although it may be technically possible to run a new version of Natural on an old operating/teleprocessing system, Software AG cannot continue to support operating/teleprocessing system versions that are no longer supported by the system's provider. For legal reasons, Software AG does not support Natural Version 4.2.6 for operating/teleprocessing system versions that are not supported by their respective manufacturers for at least one year after the release of Natural Version 4.2.6. This restriction applies in particular to older versions of operating/teleprocessing systems not listed in the table above. Furthermore, Software AG cannot make any statement whether it is technically possible to run Natural Version 4.2.6 on any old operating/teleprocessing system version not listed above.

Database Management System Versions Required

Natural Version 4.2.6 supports the following versions of the following database management systems:

Product	Version
Adabas	See *Natural and Other Software AG Products*.
DB2 for z/OS	8.1, 9.1
DB2 Server for VSE and VM	7.3, 7.4, 7.5
DL/I	As delivered with the teleprocessing system IMS TM.
VSAM	As delivered with the operating system.
DFSMStvs	As delivered for the respective VSAM version, if transactional VSAM is to be used with Natural for VSAM.

Software AG provides Natural support for the database management system versions supported by their respective manufacturers. Generally, when a database management system provider stops supporting a version of a database management system, Software AG will stop supporting that database management system version.

See the respective manufacturer's documentation for valid and supported combinations of the above mentioned database management and operating/teleprocessing systems.

⚠ **Warning:**
Although it may be technically possible to run a new version of Natural using an old database management system, Software AG cannot continue to support database management system versions that are no longer supported by the system's provider. For legal reasons, Software AG does not support Natural Version 4.2.6 for database management system versions that are not supported by their respective manufacturers for at least one year after the release of Natural Version 4.2.6. This restriction applies in particular to older versions of database management systems not listed in the table above. Furthermore, Software AG cannot make any statement whether it is technically possible to run Natural Version 4.2.6 using any old database management system version not listed above.

Assemblers Required

Natural Version 4.2 requires one of the following assemblers for the assembly of its source modules:

- "HL" Assembler Version 1.5 or 1.6 (IBM),

- "Assembh" Assembler (Siemens).

It may be possible to assemble source modules with older assemblers; however, Software AG cannot guarantee this.

Documentation

A revised and updated documentation set is available with this Natural Version.

To review past versions of the documentation, link to the Software AG website Empower at *https://empower.softwareag.com/*. The documentation at this site will be updated as required.

Migration Hints

The following hints are provided to simplify migration to a new Natural version or system maintenance (SM) level:

- Changes to Installation

- No Re-installation of Natural Subproducts Required when Installing a New Natural Version

- Using a Version 4.1 (or Older) FSEC File

- Special Purpose Zaps Replaced by Parameters

- Display List of Applied Special Purpose Zaps

- Purpose of Profile Parameter CP Changed

- Storage Requirements

- Storage Requirements for New Features

- Migrating to Natural under IMS TM (NII) Version 4.2

- Support of License Keys

- Migrating to Natural Advanced Facilities Version 4.2

Changes to Installation

This information is only for those users who do not use System Maintenance Aid (SMA).

The installation of Natural has changed. Please refer to the sample installation jobs supplied on the delivery tape.

No Re-installation of Natural Subproducts Required when Installing a New Natural Version

With Natural Version 4.1 or below, a new version of Natural had to be installed on an empty `FNAT` system file. As a consequence, all Natural related subproducts also had to be re-installed. With Natural Version 4.2, Natural can be installed on an existing Version 4.1 `FNAT` system file, which eliminates the necessity of having to re-install all Natural related subproducts and significantly reduces the time and effort needed to install a new Natural version. However, only defined product combinations for Natural Version 4.2 are allowed. For example, when upgrading a secured Natural Version 4.1 `FNAT` system file to Version 4.2, Natural Security Version 4.2 must be installed as well.

Using a Version 4.1 (or Older) FSEC File

An existing FSEC system file created with Natural Security Version 2.2, 2.3, 3.1 or 4.1 may be used with Natural Security Version 4.2 without migration. However, any changes to the FSEC system file should only be performed using Natural Security Version 4.2.

Special Purpose Zaps Replaced by Parameters

As of Version 4.2, special-purpose Zap NA63207 of Version 4.1 (which inhibits the removal of trailing blanks from print file records) is replaced by the keyword subparameter STRIP of the profile parameter PRINT.

Display List of Applied Special Purpose Zaps

The system command DUMP has been enhanced to display a list of all applied special purpose Zaps to ease migration from one system maintenance (SM) level to the next.

Purpose of Profile Parameter CP Changed

When migrating from Natural Version 4.1 to Version 4.2, please note that the purpose of the profile parameter CP has changed and that this parameter must be replaced by the keyword subparameter CPRPC of profile parameter RPC or macro NTRPC if your Natural application is using the Natural Remote Procedure Call (RPC).

In earlier Natural versions, the profile parameter CP was used to specify the name of the code page used by the Entire Conversion Service (ECS) and applied only to the Natural Remote Procedure Call when the transport protocol ACI (that is, EntireX Broker) was used. For this purpose, a new keyword subparameter (CPRPC) has been introduced for the Natural profile parameter RPC.

The profile parameter CP is now used in conjunction with the parameter macro NTCPAGE (in the source module NATCONFG) to specify the name of the default code page for Natural data or to automatically take the code page name from the user terminal.

Storage Requirements

Because the screen attributes had to be enhanced (and therefore their size increased) to support Unicode and the Web I/O Interface, the size of the attribute buffers used for screen I/O may increase depending on the number of fields on the screen.

Storage Requirements for New Features

The use of several new features requires additional working storage. In order to use these features, it may be necessary to increase the size of your threads.

Storage Requirements for New Statements

Approximately 420 KB of storage is required when the ICU Library is used to support Unicode or one of the following statements:

1. `REQUEST DOCUMENT`

2. `PARSE XML`

3. `MOVE ENCODED`

Additional storage may be required, depending on the size of the strings to be converted.

For using the `PARSE XML` statement, a minimum of 75 KB of storage is required in addition. The total amount of additional storage space needed will depend on the size of the strings to be parsed.

Storage Requirements for New Web I/O Interface

If the Web I/O Interface is used, additional storage requirements will depend on the following:

1. The screen size, which is determined by the Natural profile parameter `TMODEL` (where `TMODEL=0` necessitates the most and `TMODEL=2` the least storage space).

2. The size and number of Unicode fields to be displayed.

When you are using the Web I/O Interface with `TMODEL=0`, the minimum additional storage requirement is 11 KB. With `TMODEL=2`, the minimum additional storage requirement is 5 KB. These amounts of storage will be sufficient to display a map with approximately 100 fields where each field is of format/length U20.

Storage Requirements in Conjunction with Natural for Ajax

When you are using rich GUI applications involving the use of Natural for Ajax, the ICU library will also be required, and you should consider the storage requirements mentioned above.

Migrating to Natural under IMS TM (NII) Version 4.2

If you do not use SMA, you must add an `ENTRY CMSTART` statement to the link-edit of all NII front-ends (Job I070, Step 2510, 2530, 2550, Job I080, Step 2570 and 2572).

Support of License Keys

As of Natural Version 4.2.2, Natural supports the use of license keys. The new Natural program `NATQVS` can be used to display your machine characteristics in order to verify your current license. For further information, see *Licensing Natural* in the *Installation* documentation.

Migrating to Natural Advanced Facilities Version 4.2

Case 1

When upgrading from Natural Advanced Facilities Version 4.1, you need not generate a new spool file because the Adabas FDT used in Version 4.2 is compatible with the one used in Version 4.1.

Case 2

When upgrading from Natural Advanced Facilities versions prior to Version 4.1, you must generate a new spool file because the Adabas FDT used in Version 4.2 is not compatible with the one used in versions prior to Version 4.1. If you want to use the contents of such a spool file, its contents must be converted to the newly generated Version 4.2 spool file layout. This is done by using the CONVERT command in the library SYSPOOL. After conversion is complete, you must specify the general spool file options and the system-specific options for the spool server. See *Function 30.5* in the *Natural Advanced Facilities* documentation.

Compatibility

This section contains information on compatibility with earlier versions of Natural for mainframes as well as with Natural on other platforms.

- Applications Created with Previous Natural Versions

- Execute Applications Cataloged under Natural Version 4.2 with Natural Version 4.1

- Using a Version 4.1 FUSER File to be Shared by Natural Versions 4.1 and 4.2

- Number of Header Records for Natural Source Objects in FUSER/FNAT System File Increased

- Roll Server Startup Parameters

- Compatibility with Natural for Windows, UNIX and Linux

- Special-Purpose Zaps

- Zaps for Different System Maintenance (SM) Levels

- Handling of Maps Converted with Natural for MBCS

- PARSE XML Character Data Parsing

- Compatibility of Natural for DB2 Versions 4.2.6 and 4.3.1

Applications Created with Previous Natural Versions

Applications that were created with Natural Version 2.3, 3.1 or 4.1 for Mainframes can be executed with Natural Version 4.2 for Mainframes without any adjustments to the programs or any conversion or migration procedure being required. This applies also to programming objects that have been cataloged with the Natural Optimizer Compiler.

Execute Applications Cataloged under Natural Version 4.2 with Natural Version 4.1

If you want to use Natural Version 4.1 to execute applications that were cataloged under Natural Version 4.2, you have to recatalog the application with Natural Version 4.1.

When developing applications with Natural Version 4.2, you may use the `V41COMP` option of system command `COMPOPT`, which has been provided to reject syntax constructs that are supported by Version 4.2, but not by Version 4.1.

Using a Version 4.1 FUSER File to be Shared by Natural Versions 4.1 and 4.2

Note:
The maintenance for Natural Version 4.1.4 has ended on November 30, 2007. The following information is supplied for your convenience only, without any guarantee or warranty. Software AG will not be held liable for any damages or losses that might be caused to products, data or computer systems as a result of using this information.

If an existing Natural Version 4.1 `FUSER` system file is to be shared by Natural Version 4.1 and Version 4.2, you must upgrade your Natural Version 4.1 installation to Version 4.1.4.

Natural Version 4.1.4 Service Pack I003 or a subsequent Service Pack is required. Service Pack I003 and all subsequent Service Packs contain all the necessary Version 4.1 based solutions to provide for sharing an existing Natural Version 4.1 `FUSER` system file by Natural Version 4.1 and Natural Version 4.2.

A Natural Version 4.1.3 installation must be upgraded to Natural Version 4.1.3 Service Pack I005 (the final Service Pack) before Natural Version 4.1.4 Service Pack I003 or a subsequent Service Pack is applied (for more information, see the notes delivered with Natural Version 4.1.3 Service Pack I005). The Zaps NA64035 and NA64036 must also be applied to a Natural Version 4.1.3 installation.

Certain Natural Version 4.2 features (such as Unicode format and X-arrays) supported by Natural Version 4.2 editors and utilities cannot be processed by the Natural Version 4.1 editors and utilities. To ensure that these features, if they are included in a Natural object that is to be processed by an editor or utility, are properly rejected or ignored by Natural Version 4.1 editors and utilities, Natural Version 4.1.4 Service Pack I003 or a subsequent Service Pack must be installed.

Natural Version 4.1.4 does not provide full support of the new Natural object type Adapter introduced with Natural Version 4.2.3. To provide for a restricted support of this object type in the system command `LIST` in Natural Version 4.1.4, Natural Version 4.1.4 Service Pack I008 or a subsequent Service Pack must be installed.

⚠️ **Warning:**
In addition, the increased number of header records for Natural source objects (see below) has required adaptations in Natural Version 4.1 utilities. If Natural Version 4.1.4 Service Pack I003 (or a subsequent Service Pack) is not applied, unpredictable results may occur if source objects saved with Natural Version 4.2 are accessed using Natural Version 4.1 editors or utilities.

Number of Header Records for Natural Source Objects in FUSER/FNAT System File Increased

If a Natural source object is saved with Natural Version 4.2, the number of header records is increased. These records contain information on date and time when the object was saved. If a source object was saved with Natural Version 4.2, it can be accessed with Natural Version 4.1 editors, utilities and user application programming interfaces without requiring any application adjustments. It is strongly recommended that Natural source objects are processed only through the available application

programming interfaces and that any direct access to the FUSER system file is avoided. The number of header records for cataloged objects remains unchanged.

Note:
The FDTs for the system files FUSER and FNAT remain unchanged.

Roll Server Startup Parameters

With Natural Version 3.1, the Roll Server supported a FORCE option as eighth positional start-up parameter. This parameter was dropped with Version 4.1 but tolerated and ignored by Version 4.1 and previous Version 4.2 Roll Servers. Since as of Natural Version 4.2.4 the eighth parameter is used to specify session inactivity time, older JCL that still includes a FORCE option will fail with message: RSM0069 jobname: Invalid non-activity time. In this case, correct your JCL by eliminating the old FORCE option. For information on the start-up parameters, see *Starting the Roll Server* in the *Operations* documentation.

Compatibility with Natural for Windows, UNIX and Linux

Natural Version 4.2 for Mainframes is syntax compatible with Natural for Windows, UNIX and Linux as of Version 5.1.1.

The following features available with Natural Version 6.1 for Windows, UNIX and Linux are available with Natural Version 4.2:

- X-arrays (extensible arrays)

- System variables *CURRENT-UNIT, *LBOUND, *TYPE, *UBOUND, *PARSE-COL, *PARSE-LEVEL, *PARSE-NAMESPACE-URI, *PARSE-ROW, *PARSE-TYPE

- Thousands separator for edit masks (see *Customizing Separator Character Displays*)

- Large constants

- REQUEST DOCUMENT statement

- PARSE XML statement

The following features are available both with Natural Version 4.2 for Mainframes and Natural Version 6.2 for Windows, UNIX and Linux:

- Unicode and Code Page Support

- System variables *CODEPAGE and *LOCALE

- Profile parameters CPCVERR, CPOBJIN, CPPRINT, CPSYNIN, SRETAIN

- New statements MOVE NORMALIZED and MOVE ENCODED

- EXAMINE statement clauses CHARPOSITION and CHARLENGTH

- New keyword parameter CPRPC of profile parameter RPC

The following features are available both with Natural Version 4.2 for Mainframes and Natural Version 6.3 for Windows, UNIX and Linux:

- New statement PROCESS PAGE

- New session parameter DL

Special-Purpose Zaps

The following table lists Version 4.1 special-purpose Zaps and their Version 4.2 successors.

Version 4.1 Zap	Version 4.2 Zap (4.2.3 or below)	Version 4.2 Zap (4.2.4 or above)	Function
NA61004	NA71002	NA74001	Allow 24:00 for hours in INPUT, IS(T) option and MOVE EDITED.
NA61005	NA71003	NA74011	Shift printouts one byte to the right for microfiche printing.
NA61006	NA71004	NA74007	Generate filler character blank instead of X'00'.
NA61059	NA71005	NA74002	Set indicator in buffer pool that an object is not found on the system file.
NA62122	NA71006	NA74003 *	Allow more than 128 entries in the fast locate table.
NA64257	NA73067	NA74004	Allow more than 128 entries in the subroutine cache.

* With Natural Version 4.2.6, Zap NA76021 must be applied instead of Zap NA74003.

Zaps for Different System Maintenance (SM) Levels

For technical reasons, it will not be possible to apply Zaps for Natural Version 4.2.4 or above to Natural Version 4.2.3 or below. This restriction will also be indicated in the Zap itself. A separate Zap will be provided for Natural Version 4.2.3 or below. Zaps for add-on products are not affected. INPL updates and source changes for base Natural and for Natural add-on products are not affected. See *Overview of New Natural Add-On Product Versions* for an overview of the add-on products.

Handling of Maps Converted with Natural for MBCS

Editing, compilation and execution of maps that have been converted with Natural for MBCS (product code NKA) require that Natural Version 4.2.4 or above is installed. It is not possible to edit, compile or execute these converted maps with Natural version 4.2.3 or below. See the *Natural for MBCS* documentation for more information.

PARSE XML Character Data Parsing

With Natural versions prior to Version 4.2.5, parsing of character data causes a break or a loop path if the parsed string contains whitespace characters or predefined XML entities. This problem has been solved with Natural Version 4.2.5. Correction of this problem also has ascertained compatibility with Natural for Windows, UNIX and Linux. For further information, see *Processing of XML Whitespace Characters and Predefined Entities* in the *Programming Guide*.

Compatibility of Natural for DB2 Versions 4.2.6 and 4.3.1

Installation of Natural for DB2 Version 4.2.6 and Version 4.3.1 comprises the installation of the following major components:

- Natural objects that are loaded into the FNAT system file.

- Modules that are linked to the Natural Nucleus (applies to both the environment-independent and the environment-dependent nucleus).

All installed components must be of the same Natural for DB2 Version. It is not possible to use, for example, the Natural objects of Natural for DB2 Version 4.2.6 together with the modules of Natural for DB2 Version 4.3.1.

⚠️ **Warning:**
Mixing components of different Natural for DB2 versions may lead to unpredictable results.

It is possible to execute user-created Natural objects that have been cataloged with Natural for DB2 Version 4.2.6 (or below) with Natural for DB2 Version 4.3.1.

⚠️ **Warning:**
User-created Natural objects that have been cataloged using Natural for DB2 Version 4.3.1 cannot be executed using Natural for DB2 Version 4.2.6.

End of Maintenance of Natural Versions

For Natural for Mainframes, the following end-of-maintenance dates apply:

Natural Version	End of Maintenance
4.2.4	With the release of Natural Version 4.2.6
4.2.5	October 31, 2010

End of Maintenance of Add-On Product Versions

For the Natural add-on unit versions listed below, the following end-of-maintenance dates apply:

Natural Add-on Unit Version	End of Maintenance
Natural ISPF Version 2.6.4	With the release of Natural ISPF Version 2.6.6
Natural Review Version 4.2.4	With the release of Natural Review Version 4.2.6
Super Natural Version 3.5.4	With the release of Super Natural Version 3.5.6
Natural ISPF Version 2.6.5	October 31, 2010
Natural Review Version 4.2.5	October 31, 2010
Super Natural Version 3.5.5	October 31, 2010
Natural for DB2 Version 4.3.1	With the maintenance end of Natural Version 4.2.6

Natural and Other Software AG Products

To use the following Software AG products with Natural Version 4.2.6, the following product versions (or above) are required:

Product	Prod. Code	Version
Adabas	ADA	8.1.3
Adabas CICS Interface	ACI	8.1.3
Adabas IMS TM Interface	AII	8.1.3
Adabas Online System	AOS	8.1.3
Adabas Review	REV	4.4.1 (4.3.2 for VM/CMS)
Adabas Text Retrieval	TRS	2.1.4
Adabas UTM Interface	AUT	7.4.4
Com-plete	COM	6.6.1 with SMARTS Version 3.3.1 Patch Level 1
Con-form	CMF	3.4.2
Con-nect	CNT	3.4.2
ConnecX SQL Engine	CXX	1.1.3
Entire Connection	PCC	4.5.2
Entire DB Engine	AER	1.5.5 with Zap EN53021 applied.
Entire Event Management	NCL	2.2.1 (2.1.2 for z/VSE)
Entire Net-Work	WCP	6.2.1 (This product is required if you are using Natural Security in a heterogeneous environment.)
Entire Operations	NOP	5.2.1
Entire Output Management	NOM	3.2.1
Entire System Server	NPR	3.4.2

Entire Transaction Propagator	ETP	1.5.2 Apply Zap ET52001 (for ETP); if you are using the additional Entire Transaction Propagator CICS Interface (ETC), apply Zap EZ52005 (for ETC) in addition.
EntireX Communicator	EXX	8.0 for z/OS 7.2.3 for z/VSE 7.1.4 for BS2000/OSD
Natural Advanced Facilities	NAF	4.2.6
Natural for Ajax	NJX	1.2.4
Natural Business Services	NBS	5.3.1
Natural CICS Interface	NCI	4.2.6
Natural Com-plete/SMARTS Interface	NCF	4.2.6
Natural Connection	NTC	4.2.6
Natural Construct	CST	5.3.1
Natural for DB2	NDB	4.2.6 or 4.3.1
Natural Development Server	NDV	2.2.6
Natural for DL/I	NDL	4.2.6
Natural Document Management	NDM	1.6.3 with Service Pack I001 applied.
Natural Elite	NER	3.1.1
Natural Engineer	NEE	6.2.1
Natural IMS TM Interface	NII	4.2.6
Natural ISPF	ISP	2.6.6
Natural Japanese Language Pack	NCJ	4.2.6
Natural for MBCS	NKA	4.2.6
Natural Optimizer Compiler	NOC	4.2.6
Natural Review	RNM	4.2.6
Natural SAF Security	NSF	4.2.6
Natural Security for Mainframes	NSC	4.2.6

Natural for SQL/DS	NSQ	4.2.6 **Note:** IBM also refers to SQL/DS as DB2 Server for VSE & VM.
Natural SQL Gateway	NSB	1.2.2
Natural TIAM Interface	NRT	4.2.6
Natural TSO Interface	NTI	4.2.6
Natural UTM Interface	NUT	4.2.6
Natural VM/CMS Interface	NCM	4.2.6
Natural for VSAM	NVS	4.2.6
Natural Web I/O Interface	NWO	1.3.5 (client) 1.1.5 (server)
Predict	PRD	4.5.2
Predict Application Control	PAC	2.6.1
Predict Case	PCA	2.5.2 with Service Pack I001 applied.
SMARTS	APS	3.3.1 Patch Level 1 for z/OS and z/VSE 2.7.2 Patch Level 16 for BS2000/OSD
Software AG Security eXtension	SSX	2.2.3 if Integrated Authentication Framework (IAF) is to be used. SSX is delivered together with the EntireX Communicator.
Super Natural	NSN	3.5.6
System Automation Tools	SAT	3.2.1

Although it may be technically possible to run versions of other Software AG products which are older than the ones listed above with a new version of Natural, this is not recommended because, for legal reasons, Software AG cannot continue to support such combinations and cannot make any statement whether it is technically possible to run a new version of Natural with versions of other Software AG products which are older than the ones listed above.

Information on Upcoming Versions

- Changes and Enhancements Planned for the Next Version of Natural

- Discontinued Delivery of Operating/Teleprocessing System Interfaces as Source

- Changes to SYSRPC Stub Generation

Changes and Enhancements Planned for the Next Version of Natural

With the next version of Natural, the following changes and enhancements will be provided:

- Discontinued Support of Utilities SYSTRANS and NATUNLD/NATLOAD
- Changed Default of Data Area Source Format
- Discontinued Support of V41COMP Compiler Option
- Discontinued Support of Profile Parameters SO and SI
- Discontinued Support of Natural Web I/O Interface Client on IIS

Discontinued Support of Utilities SYSTRANS and NATUNLD/NATLOAD

With the next version of Natural, the utilities SYSTRANS and NATUNLD/NATLOAD will cease to be available. The functionality provided by SYSTRANS and NATUNLD/NATLOAD is available with the Natural Object Handler which was introduced with Natural Version 4.1.

Please note that the documentation for the utilities SYSTRANS and NATUNLD/NATLOAD is no longer contained in the product documentation for this version, but can be found as a PDF book in the archive on the Natural Documentation CD.

Changed Default of Data Area Source Format

The default format for storing data areas in the FUSER system file is the format compatible with Natural Version 3.1. With the next version of Natural, the default will be changed to the new and extended format introduced with Natural Version 4.1.

Discontinued Support of V41COMP Compiler Option

The V41COMP compiler option of the system command COMPOPT will cease to be available. In Natural Version 4.2, this option is available to disallow the use of new Natural Version 4.2 programming language enhancements for compatibility purposes with Natural Version 4.1.

Discontinued Support of Profile Parameters SO and SI

With the next version of Natural, the profile parameters SO and SI will cease to be available. As of Natural Version 4.2.4, the functionality of these parameters is covered by the profile parameter SOSI.

Discontinued Support of Natural Web I/O Interface Client on IIS

With the next version of Natural, it will no longer be possible to use the Natural Web I/O Interface client with Microsoft Internet Information Services (IIS). IIS will no longer be supported.

Discontinued Delivery of Operating/Teleprocessing System Interfaces as Source

To ease installation and maintenance for the customer, Natural operating/teleprocessing system interfaces currently delivered as assembler source files will be delivered as load modules in future Natural versions. This will eliminate the necessity of manually entering source changes and subsequent assembly and linkage steps.

⚠️ **Warning:**
You should avoid customer specific changes to source files of Natural operating/teleprocessing system interfaces. Delivery of these source files may be discontinued without prior notice to ease installation and maintenance for customers. Do not use accidentally discovered information contained in internal Natural control blocks. Internal Natural control blocks may be changed without prior notice. Instead, front-end or back-end programs, documented Natural or Adabas user exits or user application programming interfaces (APIs) should be used.

Changes to SYSRPC Stub Generation

With the next version of Natural, the **Stub Generation** function of the SYSRPC utility will be changed to generate stub subprograms that are more compliant with EntireX RPC servers and the reliable RPC. If an EntireX RPC server is called by a Natural client, the parameter definitions on the **Stub Generation** screen must correspond to the IDL definition for the EntireX RPC server.

For compatibility reasons, an option will be provided to generate stub subprograms as in previous Natural versions.

Customer Change/Enhancement Requests

The following is an overview of the customer change/enhancement requests that have been implemented in Natural Version 4.2.6:

- Natural Related C/E Requests

- Add-On Product and Subproduct Related C/E Requests

Natural Related C/E Requests

The following is an overview of the enhancement proposals that have been implemented in base Natural Version 4.2.6:

Enhancement Proposal Number	Description
3551	Enhance error message NAT0393 to indicate the affected object. See *Changed/Enhanced Error Messages* in the section *Changes, Enhancements, New Features*.
-	Enhance error message NAT0283 to indicate the name of the offending variable. See *Changed/Enhanced Error Messages* in the section *Changes, Enhancements, New Features*.
-	Enhance error message NAT1155 to indicate the affected object. See *Changed/Enhanced Error Messages* in the section *Changes, Enhancements, New Features*.

Enhancement Proposal Number	Description
-	Enhance error message NAT9974 to facilitate debugging. See *Changed/Enhanced Error Messages* in the section *Changes, Enhancements, New Features*.
-	Enhance error messages NAT3000 - NAT3255 to display the Adabas subcode, if it is available. See *Changed/Enhanced Error Messages* in the section *Changes, Enhancements, New Features*.
-	Allow to define storage compression for individual Natural buffers. See *Parameter for Storage Compression Optimization for Individual Buffer Types* in the section *Changes, Enhancements, New Features*.
-	Enhance the **List Profiles** function of the SYSPARM utility to allow the selection of multiple profiles for processing. See *SYSPARM Utility* in the section *Changes, Enhancements, New Features*.
-	Enhance the SYSPARM batch support to allow updating of parameters by using a list of values. See *SYSPARM Utility* in the section *Changes, Enhancements, New Features*.
-	Enhance the **List Objects** function of the SYSBPM utility to display the Natural version under which an object was cataloged. See *SYSBPM Utility* in the section *Changes, Enhancements, New Features*.
5021	Enhance the SYSMAIN utility to check the contents of the SYSERR LAYOUT for source and/or target libraries. See *SYSMAIN Utility* in the section *Changes, Enhancements, New Features*.
3164	Provide an application programming interface (API) that returns enhanced information about active Natural objects. See *New Application Programming Interfaces* in the section *Changes, Enhancements, New Features*.
-	Provide an option in the program editor profile to remove empty lines from the sources of text objects. See *Program Editor* in the section *Changes, Enhancements, New Features*.
-	Enforce parameter settings for asynchronous sessions to prevent errors. See *Enforced Parameter Settings for Asynchronous Sessions* in the section *Changes, Enhancements, New Features*.
-	Provide the ability to apply a default profile for transactions or terminals for which no individual profile exists. See *Changed/Enhanced Parameters* in the section *Changes, Enhancements, New Features*.
-	Support processing rules for adapters. See *Support of Processing Rules in Objects of Type Adapters* in the section *Changes, Enhancements, New Features*.
-	Provide parameter check for adapters, maps, helproutines and subroutines similar to subprograms. See *Compiler Option PCHECK Enhanced* in the section *Changes, Enhancements, New Features*.

Add-On Product and Subproduct Related C/E Requests

The following is an overview of the enhancement proposals that have been implemented in Natural add-on products and subproducts that are released in synchronism with Natural Version 4.2.6. These requests are sorted alphabetically by product name.

Product Name/Enhancement Proposal Number	Description
Natural for Ajax	
5344	Allow to check the modification status of a Natural operand that represents the value of the control. See *Natural for Ajax* in the section *Add-On Products*.
-	Allow to identify the operand that represents the value of the control that has the input focus. See *Natural for Ajax* in the section *Add-On Products*.
Natural for MBCS	
-	Provide uppercase English *Standard Natural Output Texts* as an option. See *Optional Uppercase Standard Natural Output Texts* in the section *Add-On Products*.
Natural Remote Procedure Call	
5547	Support long error message texts returned by an EntireX RPC server. See *System Command RPCERR Enhanced* in the section *Add-On Products*.
-	Allow for impersonation without password check. See *Impersonation without Password Check* in the section *Add-On Products*.
5756	Enhance the **Stub Generation** function of the SYSRPC utility to optionally generate stub subprograms that are more compliant with EntireX RPC servers. See *SYSRPC Stub Generation* in the section *Add-On Products*.
5780	Provide an application programming interface to set the user ID and ETID for Natural RPC servers which were configured with Impersonation = A (automatic logon). **Note:** This enhancement proposal has been solved partially. The task will be completed with the next version of Natural. For details, see *New RPC-Specific Application Programming Interface* in the section *Add-On Products*.
Natural Security	
3032	Retrieve information on users' access rights to a single module in a library. See *NSCXR* in the section *Add-On Products*.

Product Name/Enhancement Proposal Number	Description
4754	Suppress the execution of startup transactions in mapped environments on Natural Development Server clients. See *Suppress Startup Transaction in NDV Mapped Environment* in the section *Add-On Products*.
5021	Control the use of SYSERR direct commands. See *SYSERR - Direct Commands* in the section *Add-On Products*.
5382	Allow owners to perform a maintenance function and obtain the permission from a co-owner afterwards. See *Deferred Countersigning* in the section *Add-On Products*.
5479	Compare user-profile values with preset values. See *NSCADM* in the section *Add-On Products*.
5539	Control the execution of UNIX shell commands. See *Use of UNIX Shell Commands* in the section *Add-On Products*.
5545	List logon records in chronological order of time-stamps. See *Logon Records* in the section *Add-On Products*.
5607	Exclude libraries which require countersignatures from SYSMAIN/SYSOBJH processing. See *SYSMAIN and SYSOBJH - Exclude Library Profiles With Co-Owners* in the section *Add-On Products*.
Natural Web I/O Interface	
-	Allow for variable terminal screen sizes. See *Variable Terminal Screen Sizes* in the section *Add-On Products*.
-	Allow to define different styles for output fields. See *Different Styles for Output Fields* in the section *Add-On Products*.
-	For Natural maps, allow to configure the behavior of a double-click. See *Configurable Behavior of Double-Click* in the section *Add-On Products*.
-	For Natural maps, allow to configure that all function keys are to be shown. See *Show PF Keys with Numbers* in the section *Add-On Products*.
-	Allow to individually enable or disable rendering of certain display features, such as position of PF keys and the message line. See *Enhanced Web I/O Interface Screen Rendering* in the section *Add-On Products*.