

NatQuery

Version 4.2.x Release Notes

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Overview

The purpose of this document is to alert the reader to new features and enhancements that comprise the version 4.2.x release(s) of NatQuery. This document is intended to be cumulative in scope allowing the reader to see changes that have occurred in the version 4.2.x release(s) since the initial release of NatQuery version 4.2 on September 29th, 2005.

Changes made to preceding versions have been included in the most current release.

IMPORTANT NOTE IF CURRENTLY RUNNING NATQUERY 3.x.x:

If you are currently running any version of NatQuery that is version 3.x.x or higher, then you will need to do the following:

1. If you would like your users to be able to take advantage of the new Summary Processing feature of NatQuery, then you will need to set up a Production Summary Process JCL / Script template. An example template has been provided for mainframe systems, and NatWorks would be pleased to assist you in configuring the JCL / Script template.
2. If you are currently running NatQuery against a UNIX or Windows server that has ADABAS, then there have been some minor changes to the scripts that NatQuery uses to execute processes against the server.

If this situation applies to you, please contact NatWorks for specific script details.

IMPORTANT NOTE IF CURRENTLY RUNNING NATQUERY 2.x.x:

If you are currently running any version of NatQuery that is less than 2.4.2 – you will not be immediately able to use the 4.x version of NatQuery against any Environment Configuration created in your current version until a migration procedure is performed. Please refer to the NatQuery 2.4.2 Release notes for further information.

Summary of Changes for Release 4.2.5

NatQuery 4.2.5 was released on November 11, 2005 and contains the following Corrections and Enhancements.

Correction: NatCDC RDBMS Loading – ISN Reusage

In the case where SQL Server integration was occurring through NatCDC, and ISN reuse was turned on for the file in question, and additionally ISN was the key field being used for SQL Server integration, NatQuery was not sensitive to the fact that deleted records should be processed first. Because NatCDC in this case could produce output that contained both a delete and a store record for a given ISN, this could lead to situations where the SQL script generated by NatQuery would attempt to insert the new record (with a given ISN) before deleting the old record with the same ISN. This would lead to primary key violations when the script attempted those inserts.

This error has been corrected with the release of NatQuery 4.2.5, and deletes are performed before updates and inserts in all cases.

Summary of Changes for Release 4.2.4

NatQuery 4.2.4 was released on November 8, 2005 and contains the following Corrections and Enhancements.

Correction: Summary Processing With Decimal Fields (Mainframes Only)

In specific situations, an execution error (a NAT1500 with an S013) could occur with the execution of a Summary Process as a result of NatQuery incorrectly calculating the Logical Record Length that would be used in the execution JCL.

This error was caused by a miscalculation of the overall record length, caused by a miscalculation of the proper length of a decimal field (including the decimal position).

This error has been corrected with the release of NatQuery 4.2.4.

Summary of Changes for Release 4.2.3

NatQuery 4.2.3 was released on November 7, 2005 and contains the following Corrections and Enhancements.

Correction: Edit User Profile – Invalid Procedure Call

With the release of 4.2.2, a problem was introduced where a run-time Error 5 (Invalid procedure call or argument) could be encountered while modifying or creating a NatQuery User Profile where MVS or VSE was used and the selected integration method was Direct FTP.

This situation has been corrected in the 4.2.3 release of NatQuery.

Correction: DataStage DSX generation for Sign Information

When using NatQuery to generate DSX files for subsequent integration to IBM / Ascential's DataStage product, a DSX could be generated that was not properly sensitive to an administratively defined sign byte.

In this particular situation, the DSX file's DisplaySize would not reflect the existence of a sign position that would properly exist in the extracted data.

With the 4.2.3 release of NatQuery, NatQuery is now properly aware of an Administratively-signed Sign Byte, and will properly calculate the DisplaySize for a field requiring one.

Summary of Changes for Release 4.2.2

NatQuery 4.2.2 was released on October 31, 2005 and contains the following Corrections and Enhancements.

Correction: Global/File Variable Handling

By design, NatQuery would display any existing Global Variables when the File Variables function was invoked. This then allowed the Administrator to be reminded of their existence for possibly utilization of a Global Variable within the definition of a File Variable.

In previous versions of NatQuery, it was possible to initiate a Deletion or Modification of an existing Global Variable while administering File Variables for a specific file. While the Deletion / Modification could be initiated and appear to be executed successfully, the modification / deletion of the Global Variable definition would never physically occur. File Variable modification and deletion worked as expected within File Variable processing, as did Global Variable modification and deletion when this processing was invoked from within Global Variable processing.

Beginning with the release of NatQuery 4.2.2, NatQuery will now issue an error message to the user if a Global Variable is selected for deletion or modification through File Variable processing.

Correction: NatCDC RDBMS Loading – Use ISN Option

In previous versions of NatQuery, and exclusive to situations where ISN was used as a Primary Key, when NatQuery submitted a NatCDC request that was intended to load data into an RDBMS target, the Use ISN option (on the Data Model – Select Primary Key window) used a hard-coded value of 'PLOG_ISN' for the name of the ISN field. This value did not typically match the value for the name of the ISN field used for the initial data extract, and could result in the need for manual intervention before a generated CDC script would work.

This situation has been corrected with the 4.2.2 release of NatQuery – this field name is now a user option, and will default to the value of 'ISN'.

Correction: NatCDC RDBMS Loading – File Copy

In certain situations NatQuery would not copy the generated files for RDBMS loading of CDC data into the correct directory. While copies of the necessary files were located in the NatQuery Data Download path, they would need to be manually copied to the correct folder in order for the supplied batch file to properly perform the CDC process against the RDBMS target.

This situation has been corrected with the 4.2.2 release of NatQuery.

Correction: RDBMS Loading – Batch File Copy

In certain situations NatQuery would not copy a generated batch file to the specified Client's Path to Serve Directory. This typically occurred when a request was sent directly to the RDBMS target system.

This situation has been corrected with the 4.2.2 release of NatQuery.

Correction: Administer FTP Users – Duplicate File Error Message

In certain situations NatQuery would incorrectly generate a message that duplicate file references existed between different users. This error message was designed to prevent user files being overwritten by other users as they processed requests. However, in certain cases (submitting against Windows, UNIX, or Mainframes when submitting directly into a reader queue), users are allowed to have empty Request file references. NatQuery was incorrectly reporting this situation as an error.

This situation has been corrected with the 4.2.2 release of NatQuery.

Correction: Default Handling of User Request Files (UNIX & Windows Only)

When handling a processing request against a UNIX or Windows Natural server; a processing request is comprised of at least 4 physical files:

- A Script File
For UNIX this will be a file with a “.sh” extension, for Windows servers this will be a “.bat” extension.
- A File containing a generated Natural Program
This file will be given an “.nsp” extension; this file will typically be referenced by the Script File.
- A file containing a CMOBJIN input stream
This file will be given a suffix of “_CMOBJIN.TXT”; this file will typically be referenced by the Script File
- A file containing a CMSYNIN input stream
This file will be given a suffix of “_CMSYNIN.TXT”; this file will typically be referenced by the Script File

In previous versions of NatQuery, and because the initial use of a User Request File was only intended to point at a single file (which is the case for integration against mainframes), NatQuery disregarded whatever value was entered into either the JCL / Script reference or the FTP Reference for a user request. This is because NatQuery provided default names for all of the above four files, using a prefix that was equal to the value of the user's User-ID concatenated with the value of the Request Slot the request was placed into. So, if a user named

“ARAGORN” was submitting a request process, and this request was placed into Request Slot #1, the file name prefix would become “ARAGORN1”. The four files that comprised this request then would become “ARAGORN1.bat” (for Windows) or “ARAGORN1.sh” (for UNIX), as well as “ARAGORN1.nsp”, “ARAGORN1_CMOBJIN.TXT” and “ARAGORN1_CMSYNIN.TXT”.

To provide an Administrator greater flexibility in dictating the naming of files being placed on their UNIX or Windows servers NatWorks changed the behavior of how the Request Files would be named when NatQuery was used against a Windows or UNIX server environment with the release of 4.2.0.

With the release of 4.2.0, if a value existed in the FTP Reference of a Request File for a given Request Slot, then this value is used as a prefix (with the extensions or suffixes being applied as outlined above). If no value existed in the FTP Reference of a Request File, then the default naming as outlined above would apply.

Unfortunately – this new approach did not properly account for any existing customer who used NatQuery against a Windows or UNIX server, and who may have had incorrect values for a User Request File (for example a Request File being explicitly named with an extension).

With the new handling of Request File Naming introduced with 4.2.0, NatQuery at best could create file names that were not correct (for example a file named “ARAGORN1_REQ.TXT.BAT”), or in some unusual situations (such as with non-US Microsoft Windows operating systems), NatQuery could encounter a Runtime Error 5.

This situation has been corrected with the release of 4.2.2. Specifically, NatQuery will now disregard any extensions that may exist for any named Request File, and the Administer User process has been changed so that an edit will insure that no Request File name is specified.

This correction only applies to situation where NatQuery was used against UNIX or Windows servers.

Summary of Changes for Release 4.2.1

NatQuery 4.2.1 was released on October 25th, 2005 and contains the following Corrections and Enhancements.

Correction: Upload NatQuery Server Programs – Error 9

When using the Upload NatQuery Server Programs function against mainframe Natural environments, NatQuery could return an error 9 (Subscript out Of Range).

This error was inadvertently introduced with the release of NatQuery 4.2.0, and is corrected in the 4.2.1 release of NatQuery.

Correction: Expression Variables based on Recurring field with D Format

When attempting to utilize an expression variable that uses a (D) format field as an operand and this D format field was a recurring field, NatQuery could fail to properly resolve the variable's expression reference.

This error has been corrected with the 4.2.1 release of NatQuery.

Correction: Delete Query

In certain situations, when deleting an open Query from the File menu, NatQuery would display an error message containing the following text:

An Internal Error occurred while deleting the Query.
Error was: File not found

This situation did not cause any serious problems, but could create a situation where a RDBMS Loading Data Model file would be 'orphaned'. This could affect a future query with the same name that also was used for RDBMS Loading.

This situation has been corrected with the 4.2.1 release of NatQuery.

Enhancement: Loading data into Child RDBMS Tables

In previous versions of NatQuery, there was no option to remove / drop "empty" records when loading data from a staging table into child data tables. An "empty" record situation would occur for example when 5 occurrences of a PE field were requested for extraction, but the actual ADABAS record only had 3 occurrences (occurrences 4 and 5 would create "empty" rows when NatQuery loaded the data into Oracle or SQL Server.

With the 4.2.1 release of NatQuery, a Remove Empty Records option is available on a per-query

basis. When selected, this option causes NatQuery to generate a WHERE clause when INSERTING data into child tables; this WHERE clause prevents “empty” records from being SELECTED from the staging table and also from being INSERTED into these child tables.

This significantly improves performance of the data loading process; by default, this option will be On for a new query.

Summary of Changes for Release 4.2.0

NatQuery 4.2.0 was released on September 29th, 2005 and contains the following Corrections and Enhancements.

Correction: Linux/Unix Integration – Shell Scripts

In previous versions of NatQuery, when the communication mode was set to 'PC Network', NatQuery did not correctly build the shell script file for use in Linux/Unix integration. NatQuery was generating files that contained both a Carriage Return and a Line Feed combination (which is standard under Windows/DOS), but Linux/Unix systems only expect a Line Feed character (also known as a new line character).

This situation has been corrected with the 4.2.0 release of NatQuery.

Correction: Linux/Unix Integration – Remote Execution

When attempting to remotely execute a submitted Linux/Unix request under previous versions of NatQuery, certain situations existed where the remote execution command string would not be properly created. This created a situation where the remote execution failed, but produced no error message. The submitted request would never actually run, and no indication was given as to the nature of the error.

This situation has been corrected with the release of NatQuery 4.2.0, such that if a submitted remote execution should fail to run, the user will (at least) receive an error message.

Correction: Log File – Updating

Previous versions of NatQuery generated an incorrect call to SHCMD for handling appending the temporary log file to user log files in Unix/Linux environments. This meant that even if a request ran successfully, the user's log file would not be updated, and Check Server would report that there were no changes in the request status.

With the release of NatQuery 4.2.0, this situation has been corrected, and NatQuery generates the correct call to the USR1052N user exit that will update the user's log file.

Correction: Filter on Flattening

In previous versions of NatQuery, a situation could occur when a recurring field was flattened and that same field was also referenced multiple times in query selection logic. In this situation, NatQuery would prompt a user as to whether the Filter on Flattening should be used. If the user

answered 'No', they would be presented with the Filter on Flatten prompt again for as many times as the field was referenced in selection logic.

This bug did not affect the correct generation of Filter on Flatten processing, and did not occur if the user specified that Filter on Flattening should occur for the field in question (they answered 'Yes' to the Filter on Flatten prompt), or if the field in question was referenced only once in selection logic.

With the 4.2.0 release of NatQuery this situation has been corrected.

Correction: Date Handling – File Relationships

In previous versions of NatQuery, a file relationship that used a Super-Descriptor containing either an N8 or D field that was being set from a D or N8, respectively, would not properly move the value into the Super-Descriptor component. NatQuery generated an ASSIGN statement in this situation without being aware that a MOVE EDITED was required to properly handle the priming of such a Super-Descriptor component.

With the 4.2.0 release of NatQuery, this situation has been corrected, and NatQuery will generate a MOVE EDITED into a holding variable before generating the ASSIGN statement.

Correction: RDBMS Loading – Generation of Batch Files

In previous versions of NatQuery, a situation existed when performing an RDBMS Loading process where the user would be prompted if they wanted to perform the automatic loading of data into the target database system - if the user answered 'No', NatQuery would not generate a batch file, even if the Generate Batch File option had been specified in the RDBMS Integration Setup window.

With the release of NatQuery 4.2.0, this situation has been corrected. Batch files will always be generated, regardless of whether or not the user decides to have NatQuery perform the automatic loading of data.

Correction: Specified Occurrences Exceed Maximum Provided Values

In situations where the following events occurred:

- A user had built a query using the administratively defined maximum values for a recurring field (using either the 'Range' or 'Highest' qualifiers for the requested number of occurrences)
- The default maximum values were subsequently altered to be lower than the values specified in a query (either in Selection Logic or a user variable)

NatQuery would generate a query that would request the administratively defined maximum values, but would still use the occurrences that were previously specified for that field. This resulted in a Natural error. This situation did not arise for recurring fields that used the 'All' qualifier.

This situation has been corrected with the release of NatQuery 4.2.0, and users will be prompted to fix any erroneous occurrence references before being allowed to submit requests or list programs.

Enhancement: Request File Handling

With the 4.2.0 release of NatQuery, request file references may be handled one of two ways in most situations. In the situation where NatQuery is running against a mainframe, and requests are being submitted directly into a reader queue, such as JES or Power, request file references are not required or used at all.

NatQuery uses request file references differently, depending on what type of target system NatQuery is running against. In the case where NatQuery is running against a Windows or Open Systems (Unix/Linux) type system, request file references are used as a "base" file name, with the final file names being built from this base file name. Under MVS or VSE, NatQuery will only use request file names in the situation where "In-Direct FTP" has been selected as the Request Submission Option.

Enhancement: Customized Edit Masks

With the 4.2.0 release of NatQuery, customized edit masks may be specified for any field in a file, and this custom edit mask will override NatQuery's default edit mask handling. NatQuery previously only applied edit masks to fields where it was required in order to extract the data in a meaningful alphanumeric format. In addition, the edit mask applied by NatQuery could not be modified.

Both the length of the alphanumeric conversion field and the edit mask are specified by the NatQuery Administrator, and are applied to standard data extract requests as well as NatCDC post-processing programs. All fields may have an edit mask applied to them, so this opens up the possibility of applying an edit mask to alphanumeric fields as well.

Enhancement: NatCDC Module – Automatic Loading

With the release of NatQuery 4.2.0, the NatCDC Transport module provided to NatCDC customers can be automatically moved to the server and loaded into Natural on Open Systems and Windows platforms. Previous versions of NatQuery allowed only for MVS or VSE systems to be automatically loaded with the NatCDC programs.

Enhancement: Server Programs – Automatic Loading

In previous versions of NatQuery, the required server programs were generated (and optionally moved), but not automatically loaded in Open Systems or Windows environments. With the 4.2.0 release of NatQuery, these server programs may be automatically loaded into the appropriate Natural library, thus reducing setup time and simplifying the installation of NatQuery.

Enhancement: Selection Logic - Recurring Fields against List Variables

With the release of NatQuery version 4.2.0, recurring fields can now be compared against List Variables in Selection Logic.

Previous versions of NatQuery did not provide this functionality.

Enhancement: Advanced Query Save

In previous versions of NatQuery, the query save function did not save any information on the Send to Server, List Program Options, Concatenate/Flatten Fields, or Summary Processing windows. Any changes made in the course of submitting or listing a query program would have to be made each time the query was submitted or listed. This involved remembering exactly what settings were specified, and could be cumbersome if the desired options were significantly different from the default values.

With the release of NatQuery 4.2.0, the Advanced Query Save functionality captures changes made on the previously mentioned windows, as well as capturing dataset filenames entered in the course of handling extraction from sequential files. NatQuery will still use the default values specified in the NatQuery Configuration window the first time a user builds and then submits or lists a query, but on subsequent submissions or listings of the query, NatQuery will use the user-specified values (which may be different than the defaults, if the query has been saved).

Enhancement: Search Functionality

With the 4.2.0 release of NatQuery, additional Search buttons have been provided on field selection windows.

Enhancement: Expression Variables – Adding Multiple Occurrences

In previous versions of NatQuery, if a user desired to sum all occurrences of a recurring field, they were required to select each occurrence separately, as well as specify the addition operator for each field.

With the release of NatQuery version 4.2.0, the process of summing all occurrences of a recurring field has been streamlined. NatQuery detects the situation where multiple occurrences of a recurring field are selected while building an expression variable, and prompts the user if they would like to sum all occurrences of that field in the current expression variable. This drastically reduces the time needed to build such an expression variable.